Webex WFO User Guide

For Deployments with Classic WFM

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Configure Webex WFO

Use these sections in Webex WFO to set up how Webex WFO connects to your ACD and storage, and how the Webex WFO applications interact with your workforce.

Log in to Webex WFO

The login page allows you to log in using your Webex WFO credentials. There are three types of credentials that can be used, depending on how authentication has been configured for your system:

- Webex WFO default credentials
- Windows Active Directory credentials
- Single sign on (Security Assertion Markup Language, or SAML) credentials

> **NOTE** Administrators can sign in using their Webex WFO credentials even if Webex WFO authentication has been disabled and only SAML authentication is allowed. This enables them to configure SAML authentication if required.

The following table describes the fields on the Login page.

Field	Description
Language	Choose the language used in the Webex WFO interface. The language you choose is used throughout the site and persists from session to session for your user name. If you change the language selection, you must log out and log back in to Webex WFO for the language selection to be changed throughout the site.
Username	Your user name. This is the user name assigned to you by your administrator, or your Windows Active Directory user name. Use your email address if you received notification to login with an

Field	Description
	email address.
Domain	The Active Directory domain. This field is displayed only on systems that use Active Directory. Select the domain associated with your Active Directory user name and password.
Password	Your password. This is the password initially assigned to you by your administrator, or your Windows Active Directory password. This field is not required if you are logging in via single sign-on.
Forgot Password?	Reset your password.

Log in using Webex WFO or Windows (Active Directory) credentials

1. Enter your user name and password.
2. Click **Log In**.

Log in using single sign on

1. Enter your user name and click **Single Sign On**. You will be redirected to your identity provider's login page.
2. Enter your login credentials into your identity provider. You will be redirected back to Webex WFO .

> **NOTE** Your account becomes locked if you exceed the number of failed login attempts determined by your administrator. If your account is locked, you cannot log in using Webex WFO credentials or single sign-on until your account is unlocked by an administrator or your password is reset.

If you forget your password or your account is locked, you can reset your password.

Reset your password

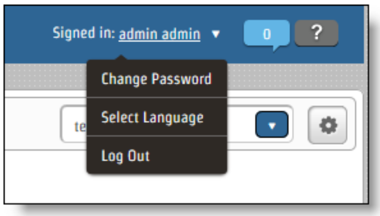
1. Click Forgot Password? on the Login page.
2. Enter your email address, click Email Password Reset, and follow the prompts. An email with instructions on how to reset your password will be sent to your email account.

Changing your password

You can change your password at any time.

Change your password

1. In the upper right corner of the page, click the drop-down arrow to the right of your user name and choose **Change Password**.



2. In the Change Password dialog box, type your current password, a new password, and the new password again to confirm it. The strength of the password is displayed as you enter the password.

   The password must meet minimum requirements for a Good or Strong password to be saved.

3. Click **Change Password**.

Password complexity requirements

Password complexity requirements are based on Microsoft's password policy:
https://technet.microsoft.com/en-us/library/hh994562.aspx.

The following rules apply when you create or edit a user, or when you change or reset a password.

- Passwords cannot contain any white spaces (blanks).
- Passwords must be at least eight characters long. Minimum length can be configured by an administrator.
- Passwords must contain characters from three of the following four categories:

Category	Description
Uppercase letters	A–Z Uppercase unicode characters: http://www.fileformat.info/info/unicode/category/Lu/list.htm
Lowercase letters	a–z Lowercase unicode characters:

Category	Description
	http://www.fileformat.info/info/unicode/category/Lu/list.htm
Numbers	0–9
Special characters	The following characters are allowed for a tenant database password: `! # $ % & ( ) , . / : ; = ? @ ^ ` |` The following characters are allowed for all other passwords: `! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [ ] ^ _ ` {	} ~`

These rules apply only where you configure a password that is controlled by Webex WFO. If a user enters a password for an external system that is not controlled by Webex WFO, Webex WFO will not validate the password (for example, ACD configuration).

> **NOTE** A user can be created without a password (manually or automatically via ACD sync). A user without a password cannot log in. That user must use the “Forgot Password” link and set up a password.

Logging out

To log out of Webex WFO, hover your mouse over your user name in the upper right corner of the page, and click Log Out. This returns you to the Login page.

To exit Webex WFO completely, close your browser.

Configure the tenant

Configuring the tenant involves the following:

- Configure aspects of the system that apply to all users and applications.
- Synchronize agent, team, and service queue data from your ACD.
- Select and configure an authentication method to verify the identity of anyone who wants to connect to Webex WFO.
- Configure your user-password policy to meet your organization’s security requirements.
- Enhance your tenant’s security by controlling (or “whitelisting”) which IP addresses users are allowed to access Webex WFO from.

- Set up Data Server features based on a contact center's geographic location.
- Connect to an active directory (AD) server in your environment for user authentication, sync, or both.

Configure an ACD

The ACD Configuration page lets you set up a connection between Webex WFO and one or more ACDs. Once an ACD has successfully synchronized, it cannot be deleted from Webex WFO.

Prerequisites

- You have the Administer ACD Configuration permission (see Manage roles and permissions).
- The Data Server service is installed on a server with access to the Webex WFO system before you test the ACD connection.

> **NOTE** The installation file for the Data Server service is located on the Downloads page (see Download Smart Desktop and Webex WFO Data Server installers). If the Data Server service is not installed when you test the connection, you receive the following error message: "Error: Please verify gathering service is running."

Page location

Application Management > Global > System Configuration > ACD Configuration

Procedures

Add an ACD

1. Select a tenant.
2. Click **Add**. The ACD Details dialog box opens.
3. Select the type of ACD from the **Select ACD** drop-down list.
4. Enter the ACD's name in the **Name** field.
5. Click **OK**. The ACD Details dialog box closes, and configuration options display on the ACD Configuration page.
6. Configure the ACD by completing the fields. See the links below for ACD-specific instructions.

- Connection settings for Cisco Unified Contact Center Enterprise
- Connection settings for Cisco Unified Contact Center Express
- Connection settings for Cisco Webex Contact Center
- Connection settings for Cisco Webex Contact Center 2.0
- Connection settings for Avaya CM with Contact Center Elite
- Connection settings for Avaya IP Office with ACCS
- Connection settings for Five9
- Connection settings for InContact
- Connection settings for generic ACDs
- Connection settings for Amazon Connect
- Connection settings for Serenova
- Connection settings for Eventide NexLog
- Connection settings for Twilio Flex
- Connection settings for UJET

7. Click **Test Connection** to ensure your entries are correct and Webex WFO is connected to the ACD.
8. When the connection tests successfully, click **Save**.

Delete or modify an ACD

- To delete an ACD, select the ACD, click **Delete**, and click **Yes**.
- To modify an ACD, select the ACD, edit the fields as desired, and click **Save**.
- To change the name of an ACD, select the ACD, click **Edit**, change the name in the **Name** field, click **OK**, and click **Save**.

Connection settings for Cisco Unified Contact Center Enterprise

The following fields appear if the ACD you select is Cisco Unified Contact Center Enterprise.

> **NOTE** If agents in your Unified CCE ACD are not configured to use a selected skill group as their default skill group, then they automatically belong to the ACD's default skill group. Historical data is not captured for the ACD default skill group but is for specific default skill groups. As a result, the agents' time is not correctly attributed to the service queue they support in Webex WFO. Set a

> selected ACD skill group that the agent primarily supports as their default skill group in order to report their productivity correctly. Note that if they handle calls for other service queues, their time might not be correctly attributed to the appropriate service queue.

Section	Description
Historical Reporting Interval	The historical data reporting interval that is configured in your Unified CCE system. If your ACD is configured to a 15-minute interval, you must select the 15-minute option to ensure that Webex WFO is compatible with your ACD and that all data is imported into Webex WFO. If the reporting intervals do not match, then the historical ACD data will not be captured correctly.
ACD Filtering	Use an ACD filter to limit the users who are synced from the ACD. For example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters. **IMPORTANT** If you only select the **Service Name** in the **Prefix Type** drop-down list, no teams or agents sync over. Any teams or agents already synced over are deactivated. If you change a filter that uses the **Service Name** in the **Prefix Type** drop-down list, all previously synced service queues stay active, even if they are not captured by the changed filter. **NOTE** If you only select the **Team Name** in the **Prefix Type** drop-down list, related service queues still sync over. If you change a filter that uses the **Team Name** in the **Prefix Type** drop-down list, any agents or teams no longer captured by the filter are deactivated.
IP Configuration	This is used to get historical data. HDS Primary IP Address or Hostname—The IP address or host name of the primary historical database server (HDS). HDS Secondary IP Address or Hostname— (Optional) The IP

Section	Description
	address or host name of the secondary historical database server. AWDB Primary IP Address or Hostname—The IP address or host name of the primary Admin Workstation database server (AWDB). AWDB Secondary IP Address or Hostname— (Optional) The IP address or host name of the secondary Admin Workstation database server. Unified CC Instance—The instance name of the Microsoft SQL Server for the Unified CCE database.
Authentication	This is used to get historical data. Select the authentication method the database login uses: NT—If you select NT Authentication, the following fields appear: ▪ Username ▪ Password ▪ Domain ▪ Peripheral ID—The ICM peripheral ID for the system. SQL—If you select SQL Authentication, the following fields appear: ▪ SQL User—The login name of the Webex WFO SQL user. ▪ Password—The password of the Webex WFO SQL user. ▪ Peripheral ID—The ICM peripheral ID for the system.
CTI Servers	This is used to get agent real-time data. Primary CTI IP Address or Hostname—The IP address or host name of the primary CTI server associated with the system. Primary CTI Port—The port of the primary CTI server associated

Section	Description
	with the system. Secondary CTI IP Address or Hostname—The IP address or host name of the secondary CTI server associated with the system. Secondary CTI Port—The port of the secondary CTI server associated with the system.
Departments	Enterprise Name—The name of the department or departments by the enterprise name. An enterprise name represents a tenant in a Cisco Hosted Collaboration Solution (HCS).
CDR Reconciliation Configuration	(Read only) CDR (call-detail record) Base—The folder on the Data Server where the Data Server imports CDR files from the Unified CCE ACD and uploads them to Webex WFO. Webex WFO creates a directory with an ACD-specific subdirectory that contains the cdrBase and uploadDir directories when the Regional Data Server Reconciliation Settings feature is enabled on a Data Server and the Unified CCE ACD is assigned to that feature. The base directory path that you enter along with the ACD unique identifier display below the field. The following subdirectories are created: ■ ACD-specific directory—This directory is named with a unique ACD server ID number. Because users can configure multiple ACD servers to use the same directory, a folder with a unique identifier is needed to make sure CDR files are uploaded to the correct ACD. The ACD-specific directory contains the following directories: ■ cdrdir—The Data Server places incoming CDRs from the Unified CM billing server in this folder. When configuring the Unified CM Billing Application Server, you must use the following name for the Directory

Section	Description
	Path parameter: /cdr/ ▪ CdrFailures ▪ uploaddir—The Data Server places reconciled CDR and Unified CCE data in this folder until the data is uploaded. ▪ UploadFailures **NOTE** This field is used for Quality Management purposes only.
Synchronization Interval	Interval (Minutes)—The length of the interval at which the ACD is synchronized with the Data Server. This is how often the Data Server attemps to synch the user, team, and service queue to Webex WFO.
Capture Settings	ACD Capture Delay—Select the amount of time WFM waits before pulling ACD statistics after an interval ends. The default delay is 15 minutes. Enable Data Recapture—Select this check box to recapture the entire previous day. If the agent routinely handles calls that last more than the maximum default delay, you can opt to recapture the entire previous day's data from midnight to midnight. The recaptured data overwrites what was captured during the day. This ensures that your statistics are correct and that the data for very long calls is in the correct interval. Recapture Time—Select the time to recapture the previous day's data from the ACD. The default is 03:00.

Connection settings for Cisco Unified Contact Center Express

The following fields appear if you select Cisco Unified Contact Center Express as the ACD.

Section	Description
ACD Filtering	Use an ACD filter to limit the users who are synced from the ACD. For

Section	Description
	example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters. IMPORTANT If you only select the **Service Name** in the **Prefix Type** drop-down list, no teams or agents sync over. Any teams or agents already synced over are deactivated. If you change a filter that uses the **Service Name** in the **Prefix Type** drop-down list, all previously synced service queues stay active, even if they are not captured by the changed filter. NOTE If you only select the **Team Name** in the **Prefix Type** drop-down list, related service queues still sync over. If you change a filter that uses the **Team Name** in the **Prefix Type** drop-down list, any agents or teams no longer captured by the filter are deactivated.
IP Configuration	Primary IP Address or Hostname—The IP address or host name of the primary Unified CCX server. Primary Instance Name—The name of the primary database for the Unified CCX database instance. Secondary IP Address or Hostname—The IP address or host name of the secondary Unified CCX server. Secondary Instance Name—The name of the secondary database for the Unified CCX database instance. The primary and secondary instance names are in the following format: `<hostname>_uccx` Where the host name is the name of the Unified CCX database server.

Section	Description
	IMPORTANT You must complete the IP Configuration fields for the following features: ▪ WFM—Historical Data Capture and Sync ▪ QM—Reconciliation and Sync
Authentication	Username—The user name of the historical reporting user in Unified CCX. ▪ Enter **uccxhruser**. This is the historical reporting user found in Unified CCX Administration > Tools > Password Management. Password—The password set in Unified CCX for the historical reporting user. **IMPORTANT** Before changing this password be aware that other applications may also use this account. Client Locale—The client locale that is configured in Unified CCX. The locale for US English appears by default in this field. If the client locale is changed in Unified CCX, then you must also manually change it here. Server Locale—The server locale that is configured in Unified CCX. The locale for US English appears by default in this field. If the server locale is changed in Unified CCX, then you must also manually change it here. **IMPORTANT** You must complete the Authentication fields for all QM and WFM features.
CTI Servers	Primary CTI IP Address or Hostname—The IP address or host name of the primary CTI server associated with the system. Primary CTI Port—The port of the primary CTI server associated

Section	Description
	with the system. Secondary CTI IP Address or Hostname—The IP address or host name of the secondary CTI server associated with the system. Secondary CTI Port—The port of the secondary CTI server associated with the system. **IMPORTANT** You must complete the CTI Servers fields for WFM Real-Time Adherence.
CDR Reconciliation Configuration	Webex WFO creates a directory with an ACD-specific subdirectory that contains the cdrBase and uploadDir directories when the Regional Data Server Reconciliation Settings feature is enabled on a Data Server, and the ACD is assigned to that feature. The base directory path that you enter along with the ACD unique identifier are displayed below the field. The ACD-specific directory is named with a unique ACD server ID number. Because users can configure multiple ACD servers to use the same directory, a folder with a unique identifier is needed to make sure CDR files are uploaded to the correct ACD. The ACD-specific directory contains the cdrBase and the uploadDir directories. (Read only) CDR Base—The path to the Unified CCX Call Detail Record (CDR) directory. The path you specify must be local to the Data Server. UNC paths are not supported. For example: cdrBase Webex WFO creates a directory with an ACD-specific subdirectory that contains the cdrBase and uploadDir directories when the Regional Data Server Reconciliation Settings feature is

Section	Description
	enabled on a Data Server, and the Unified CCX ACD is assigned to that feature. This generates the following path for the base directory: `C:\cdr\<ACD_ID>` CDR Directory—The path to the Call Detail Record (CDR) directory. This is where incoming CDRs from the Unified CM billing service resides. The path you specify must be local to the Data Server. When configuring the Unified CM Billing Application Server, you must use the following name for the Directory Path parameter: /cdr/. UNC paths are not supported. For example: cdrDirectory Upload Directory—The path to the upload directory. This is where reconciled CDR and Unified CCE or Unified CCX data resides until uploaded. The path you specify must be local to the Data Server. UNC paths are not supported. For example: uploadDir **IMPORTANT** You must complete the CDR Reconciliation Configuration fields for QM Reconciliation.
Synchronization Interval	Interval (Minutes)—The length of the interval at which the ACD is synchronized with the Data Server.
Capture Settings	ACD Capture Delay—Select the amount of time WFM waits before pulling ACD statistics after an interval ends. The default delay is 15 minutes. Enable Data Recapture—Select the check box to recapture data from the entire previous day. If you routinely handle calls that last more than the maximum default delay, you can opt to recapture the

Section	Description
	entire previous day's data from midnight to midnight. The recaptured data overwrites what was captured during the day. This ensures that your statistics are correct and that the data for very long calls is in the correct interval. Recapture Time—Select the time to recapture the previous day's data from the ACD. The default is set to 03:00. **IMPORTANT** You must complete the Capture Settings fields for WFM Historical Data Capture.

Connection settings for Cisco Webex Contact Center

NOTE Webex WFO currently refers to Cisco Webex Contact Center (CWCC) as Cisco Customer Journey Platform (CJP).

The following fields appear if you select **Cisco Customer Journey Platform** as the ACD.

Section	Description
ACD Filtering	**NOTE** This integration does not support the ACD Filtering feature. Use an ACD filter to limit the users who are synced from the ACD. For example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters.
Cisco Customer Journey Platform API	Cisco Customer Journey Platform API URL—The path to the CWCC API. Include the complete URL. **EXAMPLE** https://rest-sbxa.ccone.net/aws/api Cisco Customer Journey Platform Media API URL—The path to the CWCC Media API. Include the complete URL. **EXAMPLE** https://rd-sbxa.ccone.net/cri/get-decrypted-recording

<table>
<tr><th>Section</th><th>Description</th></tr>
<tr><td></td><td>User Name—The user name with access to the CWCC API and CWCC Media API.

API Key—The requesting API Key for the CWCC API and CWCC Media API.

Cisco Webex Contact Center 1.0 — Select this checkbox to enable API requests specific to Webex Contact Center 1.0 or newer.

Cisco Tenant ID — Enter the alphanumeric identifier of the Webex Contact Center tenant account.</td></tr>
<tr><td>Synchronization Interval</td><td>Interval (Minutes)—The length of the interval at which the ACD is synchronized with the Data Server.</td></tr>
<tr><td>Capture Settings</td><td>ACD Capture Delay—The amount of time WFM waits before pulling ACD statistics after an interval ends. The default delay is 120 minutes.

Historical data from CWCC may not be available for up to 120 minutes after an interval ends.

NOTE Enable Data Recapture—Select this check box to recapture data from the entire previous day.

If you routinely handle calls that last more than the maximum default delay, you can opt to recapture the entire previous day's data from midnight to midnight. The recaptured data overwrites what was captured during the day. This ensures that your statistics are correct and that the data for very long calls is in the correct interval.

Recapture Time—Enter the time to recapture the previous day's data from the ACD.</td></tr>
</table>

Section	Description
Enable RTE Messaging for Screen Recording	Enables the Smart Desktop to record screens for calls recorded by CWCC.

Integrating core configuration data

Webex WFO syncs the following core configuration data with equivalents from CWCC through three API requests.

Users

When Webex WFO imports a new user from CWCC, it creates a new Webex WFO user who has a CWCC user profile.

When someone changes user data in CWCC, the sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

NOTE Users with a Not Active status in CWCC are not imported unless they are restored.

Change in CWCC	Resulting Change in Webex WFO
New user is added	New user is added. Specifically, the sync service: ▪ Applies the CWCC user's first and last name to the Webex WFO user's first and last name. ▪ Applies the CWCC user's TID to the Webex WFO user's ACD ID. ▪ Sets the Webex WFO start dates for the company and department to the date that the sync occurred. ▪ Assigns the Webex WFO user to the default team. **NOTE** Webex WFO does not preserve the relationship between CWCC users and teams. See Teams. ▪ If the CWCC user is contact-center enabled, assigns the default agent role to the Webex WFO user. No other Webex WFO roles are synced with CWCC. **NOTE** If you remove the agent role from a Webex WFO user who is synced with a CWCC user who is contact-

Change in CWCC	Resulting Change in Webex WFO
	center enabled, the agent role is reassigned the next time Webex WFO syncs with CWCC.
User’s first or last name is changed	User’s first or last name is changed.
User is deleted	User is deactivated.

Teams

Webex WFO syncs with CWCC teams of any type (Capacity Based or Agent Based), as long as they are active. It does not preserve the relationship between CWCC users and CWCC teams. You must manually reassign users to teams in Webex WFO.

When team data is changed in CWCC, the sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in CWCC	Resulting Change in Webex WFO
New team is added	New team is added with the same name. This name is read-only.
Team name is changed	Team name is changed.
New user is added to a team	No change. Webex WFO does not preserve the relationship between CWCC users and CWCC teams.
User is removed from a team	No change. Webex WFO does not preserve the relationship between CWCC users and CWCC teams.
Team is deleted	No change.

You can create new teams in Webex WFO and assign users to them, but these new teams are not added to CWCC.

A Webex WFO user can belong to only one team.

Service Queues

Webex WFO syncs the following Entry Points/Queues from CWCC with service queues:

- Queues
- Outdial Queues

When either a queue or an outdial queue data is changed in CWCC, the sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in CWCC	Resulting Change in Webex WFO
New queue is added	First, a new service queue is added. Specifically, the sync service does the following: ■ Applies the CWCC queue name to the Webex WFO service queue name ■ Applies the queue TID to the Webex WFO service queue ID ■ (Read only) Gives the Webex WFO service queue a service queue type of Voice [Interactive] ■ (Read only) Gives the Webex WFO service queue a Source ACD of CWCC Second, a new skill mapping is added. Specifically, the sync service does the following: ■ Applies the CWCC queue name to the skill mapping name ■ Assigns the Webex WFO service queue that is associated with the CWCC queue to the skill mapping and gives it a priority of 1
Queue name is changed	Applies the new CWCC queue name to the Webex WFO service queue name only. Webex WFO does not apply the new CWCC queue name to the associated Webex WFO skill mapping.
Queue is deleted	No change. Neither the service queue nor the skill mapping is deleted.

Connection settings for Cisco Webex Contact Center 2.0

The following fields appear if you select Cisco Webex Contact Center 2.0 as your ACD.

Field	Description
ACD Name	A unique name for the ACD.
Username	Your Cisco Webex Contact Center username. This is a user email address associated with administrative credentials in Cisco Webex Contact Center.
API URL	The complete base URL of the Cisco Webex Contact Center API, including the protocol identifier.
Tenant ID	The alphanumeric identifier of the Cisco Webex Contact Center tenant account.
Products Enabled - Quality Management	Quality Management has been purchased as a Webex WFO product. Webex WFO offers support for Webex Contact Center 2.0 omnichannel systems. Webex Contact Center 2.0 voice, chat, and SMS channels are supported. This means call recordings, SMS transcripts, and chat transcripts can be ingested into Webex WFO.
Voice	Enables Webex Contact Center 2.0 voice channels.
Digital (Chat, SMS, Email, Social)	Enables Webex Contact Center 2.0 digital (chat, SMS) channels.
Metadata Mapping	(Optional) Allows you to map CWCC metadata to custom metadata labels in Webex WFO. See Sync Metadata to Webex WFO for more details. CWCC metadata values are synced with CWCC contacts into Webex WFO. The CWCC metadata values are mapped to metadata labels created in Metadata Manager (located at Application Management > QM > QM Configuration > Metadata Manager). After successfully mapped, metadata can be used to add a variety of trackable information to a contact in Webex WFO. Metadata fields can be found in the Details panel on the Media Player page (Interactions > open a contact). You can view, edit, or delete a metadata field from your system.

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Synchronization Interval (Minutes)</td><td>Indicates how often (in minutes) you want to sync users, teams, and service queues in Webex WFO with their equivalents in Cisco Webex Contact Center. For more information about syncing with Webex Contact Center, see Core Configuration Data.</td></tr>
<tr><td>Capture Delay (minutes)</td><td>Sets the amount of time you want WFM to wait before it imports ACD statistics after an interval ends.</td></tr>
<tr><td>Enable Data Recapture</td><td>(Optional) Select this check box if you want to recapture data from the entire previous day</td></tr>
<tr><td>Enable RTE Messaging for Screen Recording</td><td>(Optional) Allows you to record the screens of CWCC agents who are configured for screen recording in Webex WFO. For more information about screen recording, see QM Data.</td></tr>
<tr><td>Metadata Language Mapping</td><td> NOTE This section is available for cloud deployments only. This section appears when you select Digital in the Products Enabled section. Here, you can set the custom metadata that assigns a language to a text-based contact like an email or a chat message. The metadata options available come from the Metadata Mapping section. Webex WFO uses a text contact’s language to find results when you use the Text Search filter on the Interactions page. Webex WFO assigns a language to a text-based contact using the following information, in this order: <ol type="A">
A language that is already assigned to the contact when it is imported into Webex WFO.
A language assigned to a custom metadata field that you configure here (the Metadata Language Mapping section).
The fallback language that you configure in the Fallback text language section below.
The default language (English).</td></tr>
</table>

Field	Description
Fallback text language	**NOTE** This section is available for cloud deployments only. This section appears when you select **Digital** in the **Products Enabled** section. Select the language to assign to text contacts if they do not have an associated language when they are imported into Webex WFO and do not have a metadata value as defined in the **Metadata Language Mapping** section above. Webex WFO uses a text contact's language to find results when you use the Text Search filter on the Interactions page. Webex WFO assigns a language to a text-based contact using the following information, in this order: A. A language that is already assigned to the contact when it is imported into Webex WFO. B. A language assigned to a custom metadata field that you configure in the **Metadata Language Mapping** section above. C. The fallback language that you configure here (the Fallback text language section). D. The default language (English).
Authorization URL	**NOTE** This section only appears when you edit an existing ACD. It does not appear when you create a new ACD. The Webex WFO data servers connect with Webex Contact Center for an access token every twelve hours. If a token refresh failure occurs then the OAuth process breaks. Configuring this setting allows your system to reestablish the OAuth authentication in the event of a token refresh failure for a maximum of sixty days. A token refresh failure can occur for several reasons such as the following. ■ Changing the email address of the administrator account.

Field	Description
	■ Deactivating the account in Active Directory. ■ Changing the password in Active Directory. ■ Switching from Active Directory sync to single sign-on in your Cisco account. ■ Changing domains.

Connection settings for Avaya CM with Contact Center Elite

Prerequisites

The following configurations are required for Webex WFO QM to reconcile calls to your Avaya system.

- Enable special application: SA8702 - CDR Enhancements for Network. Contact an authorized Avaya account representative to obtain the license. This feature causes the UCID to follow the call.
- Enable special application: SA8201 - Start Time and 4-Digit Year CDR Custom Fields.
- An Avaya CM login with CDR access.
- CDR configured to save CDRs to disk.
- Trunks configured to generate CDR records.
- Individual extensions configured to generate CDR records, Intra-switch CDR. Call splitting must be enabled to have accurate times for parties that have dropped from a multiparty call. If not, end times register as the time the call ended, which is when all parties have dropped from the call.
- The following CDR Parameters must be configured in your Avaya system.
  - ucid
  - start-time
  - end-time
  - start-date(4) or start-date(4d)
  - end-date(4) or end-date(4d)
  - sec-dur
  - dialed-num

- calling-num
- in-crt-id

  IMPORTANT You must set this parameter as three characters. If this parameter is anything other than three characters, calls will not reconcile.

- out-crt-id

  IMPORTANT You must set this parameter as three characters. If this parameter is anything other than three characters, calls will not reconcile.

- return
- line-feed

Page location

Application Management > Global > System Configuration > ACD Configuration > select Avaya CM with Contact Center Elite as the ACD

The following fields appear if you select Avaya CM with Contact Center Elite as the ACD.

Field	Description
ACD Filtering	Use an ACD filter to limit the users who are synced from the ACD. For example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters.
Avaya CM with Contact Center Elite Configuration	SMS Server URL—URL for the SMS server. **IMPORTANT** You must complete this field for QM and WFM sync.
Avaya Communication Manager Information	Communication Manager IP Address—Avaya Communication Manager IP address or host name. Communication Manager Login—The user name of a user with access to the Avaya database. Communication Manager Password—The password of a user with

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td></td><td>access to the Avaya database.

Virtual Extension Prefix—The prefix used to identify virtual stations in the Avaya CM. Webex WFO syncs each station whose name begins with this prefix as a virtual extension device.

EXAMPLE The names of all virtual stations in your Avaya CM begin with “DMCC,” and you want to sync these stations with Webex WFO as virtual extension devices. In the Virtual Extension Prefix field, enter DMCC.

If you do not want to sync any stations as virtual extension devices, leave the Virtual Extension Prefix field blank.

CMS ACD ID—The ID for the CMS ACD.

Agent Name Format—Select the method for parsing agent names during ACD sync.

IMPORTANT
You must complete the Avaya Communication Manager Information fields for the following features:
■ WFM—Sync
■ QM—Sync and Avaya data sync</td></tr>
<tr><td>Real Time Adherence (RTA) Port</td><td>The port number for the Avaya RTA port.

IMPORTANT You must complete the Real Time Adherence (RTA) Port field for WFM real-time adherence.</td></tr>
<tr><td>Synchronization Interval</td><td>Interval (Minutes)—Enter how often, in minutes, the ACD is synchronized with the Data Server.</td></tr>
<tr><td>Avaya GIS Configuration</td><td>Directory—Enter the directory path from which the Data Server looks to import Avaya GIS data.</td></tr>
</table>

Field	Description
	NOTE Whatever path you enter here, Webex WFO creates a subfolder named with your business name. The port number for the Avaya RTA port. **IMPORTANT** You must complete the Avaya GIS Configuration fields for WFM historical data capture.
Avaya Call Management System (CMS) Connection Configuration	CMS Server Address—The hostname or IP address for the CMS server. CMS Username—The user name for the account used to access CMS data. CMS Password—The password for the account used to access CMS data. CMS Operating Timezone—The timezone that the CMS data is reported in. **IMPORTANT** You must complete the Avaya CMS Connection Configuration fields for QM ACD data sync.
CDR Connection Configuration	CDR Date Format—The format of the CDR date. CDR Gathering Method—The method used to gather Avaya CDRs: ▪ FTP (Default) ▪ Streaming (Reliable Session Protocol) CDR Server Address—IP address of the Avaya CM CDR server. CDR Access User Name—User name for the account used to access data on the Avaya CM CDR server. CDR Access Password—Password for the account used to access

Field	Description
	data on the Avaya CM CDR server. CDR Streaming Port—The port to listen on for Avaya CDR. CDR Operating Timezone—Time zone of the Avaya CM CDR server. Data Retention (Days)—Number of days data will be stored on the Avaya CM CDR server. **IMPORTANT** You must complete the CDR Connection Configuration fields for QM reconciliation and gateway recording.
CDR Parameter Layout	Data structure layout for the Avaya CM CDR server. **BEST PRACTICE** Copy the second page of CDR configuration settings into this field.

Connection settings for Avaya IP Office with ACCS

The following fields appear if Avaya IP Office with ACCS as the ACD.

Field	Description
ACD Filtering	Use an ACD filter to limit the users who are synced from the ACD. For example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters.
Avaya IP Office with ACCS Configuration	Server IP Address—The IP address for the ACCS server. Server Port—The port number for the ACCS server. Login Username—The user name of a user with access to the ACCS database. Password—The password of a user with access to the ACCS database.

Field	Description
Synchronization Interval	Interval (Minutes)—The length of the interval at which the ACD is synchronized with the Data Server.
Capture Settings	ACD Capture Delay—Select the amount of time WFM waits before pulling ACD statistics after an interval ends. The default delay is 15 minutes. Enable Data Recapture—Select this check box to recapture data from the entire previous day. If you routinely handle calls that last more than the maximum default delay, you can opt to recapture the entire previous day's data from midnight to midnight. The recaptured data overwrites what was captured during the day. This ensures that your statistics are correct and that the data for very long calls is in the correct interval. Recapture Time—Enter the time to recapture the previous day's data from the ACD. The default is 03:00.

Connection settings for Five9

Before you configure the connection settings for Five9, you need to log in to Five9 and create a new folder in Custom Reports. Then, you need to configure five custom Five9 reports for historical data capture and save each of them in this folder.

System administrators can configure Webex WFO to import call recordings from the Five9 VCC or to record calls with Smart Desktop. If Webex WFO imports call recordings from the Five9 VCC, it imports each segment of a transferred call as a separate contact, which it links to the other segments with an associated contact ID.

Field descriptions

The following fields appear if you select Five9 as the ACD.

ACD Filtering

Use an ACD filter to limit the users who are synced from the ACD. For example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters.

Five9 Web Services API

Field	Description
Admin Service	The path to the Admin Web Services API. The default path is the following: `https://api.five9.com/wsadmin/v9_5/AdminWebService`
Admin Service Qualified Name	The qualified name for the Admin Web Services API. The default name is the following: `https://service.admin.ws.five9.com`
Supervisor Service	The path to the Supervisor Web Services API. The default path is the following: `https://api.five9.com/wssupervisor/v9_5/SupervisorWebService`
Supervisor Service Qualified Name	The qualified name for the Supervisor Web Services API. The default name is the following: `http://service.supervisor.ws.five9.com/` User Name—The login name of the Admin Web Services API. The user must be assigned Full Administrator Permissions on the Roles tab in Five9's VCC Administrator in order for the getUsersInfo API request to return other users who have been assigned the Administrator role. **NOTE** You need a dedicated user name and password for the Data Server. If a user tries to log in to a softphone or administration using these credentials, the user will be kicked off when the Admin Web Services API uses these credentials for authentication on the Data Server.
User Name	The user name of a user who can access the Admin Web Services API.

Field	Description
Password	The password of the user who can access the Admin Web Services API. **NOTE** (System administrators only) The Password field is blank even if the tenant administrator has entered a password for the Admin Web Service API. If you enter a password, you overwrite any existing tenant password.
Domain ID	(RTE Messaging only) (System administrators only) The Five9 domain ID.
Detect Domain	(RTE Messaging only) (System administrators only) The button for retrieving the Five9 domain ID automatically. For this button to work, you must use Five9 Web Services API Version 9.5.
Five9 Call Variable ID	(System administrators only) The variable number for the Five9 CallId required by Smart Desktop to record calls. ▪ For tenants in the US and Canada, this value is found by default. The field can remain blank. ▪ For tenants outside of the US and Canada, you must enter a value.

Synchronization Interval

Field	Description
Interval (Minutes)	The length of the interval at which the ACD is synchronized with the Data Server.

Historical Data Capture

Field	Description
Report Folder	The name of the Five9 folder that you created to store the five custom Five9 reports required for historical data capture.

Field	Description
ACD Queue Skill Counts Report	The name of the custom Five9 report that you created for this field.
ACD Queue Skill Durations Report	The name of the custom Five9 report that you created for this field.
ACD Queue Agent Durations Report	The name of the custom Five9 report that you created for this field.
ACD Queue Agent Counts Report	The name of the custom Five9 report that you created for this field.
Agent Durations Report	The name of the custom Five9 report that you created for this field.

Media Download (System Administrators Only)

Field	Description
Choose Region	The region of the S3 bucket where Five9 saves your call recordings. If you use the current path from Five9, this region is US West (N. California).
S3 Bucket	The URL of the S3 bucket where Five9 saves your call recordings. Currently, this path is the following: `http://s3gwfive9.com`
IAM Access Key	The access key ID for your AWS account.
IAM Secret Key	The secret access key for your AWS account.
Media Folder	The name of the folder where Five9 saves call recordings for the tenant you have selected. To get the name of this folder, contact Five9 Customer Service. **EXAMPLE** D123/call

Capture Settings

Field	Description
ACD Capture Delay	Select the amount of time WFM waits before pulling ACD statistics after an interval ends. The default is 15 minutes.
Data Reporting Period	The length of time (in minutes) for which you are requesting data from Five9. Longer data reporting periods result in fewer requests with more data. Intervals that are too long result in large amounts of data being returned. The length of time you enter must be 30–1,440 minutes. Five9 limits the number of record requests that can be made per day, and it limits the number of records per report to 10,000. One agent represents one record per data reporting period. You should adjust the size of the data reporting period to balance the number of requests and the resulting report file size. **EXAMPLE** If the tenant has a data reporting period of 60 minutes, it can collect 416 one-hour periods (10,000 ÷ 24). If the tenant has a single skill group with 10 agents, it would have data for 41 days. If it had 10 skill groups, it would have data for 4 days.
Enable Data Recapture	Select this check box to recapture data from the entire previous day. If you routinely handle calls that last more than the maximum default delay, you can opt to recapture the entire previous day's data from midnight to midnight. The recaptured data overwrites what was captured during the day. This ensures that your statistics are correct and that the data for very long calls is in the correct interval.
Recapture Time	Enter the time to recapture the previous day's data from the ACD. The default is 03:00.

Messaging Settings (System Administrators Only)

Field	Description
RTE Messaging	The call recording architecture is real-time events messaging.
Legacy	The call recording architecture is browser-based.

Connection settings for Genesys Cloud

The Genesys Cloud ACD Configuration page allows a tenant administrator to create, edit, or delete a Genesys Cloud ACD. Configuring Genesys Cloud as an ACD in Webex WFO connects the two systems on the backend, thus allowing data to flow from Genesys Cloud to Webex WFO. The following fields appear if you select Genesys Cloud as your ACD.

Field	Description
Edit a Genesys ACD	Edit an existing Genesys Cloud ACD.
Create a Genesys ACD	Create a new Genesys Cloud ACD.
Delete a Genesys ACD	Delete an existing Genesys Cloud ACD.
ACD Name	
ACD Name	The name of your Genesys Cloud ACD.
Configure a Genesys ACD	
Genesys Client ID	The ID generated when you create a Genesys Cloud OAuth client.
Genesys Client Secret	The secret generated when you create a Genesys Cloud OAuth client.
Genesys Host URL	The domain name of your Genesys Cloud client.
Calabrio Configuration	
Calabrio API Username	Your Webex WFO service account username. This service account is also referred to as your tenant administrator account or API user account. This is required for uploading data to the correct tenant. This account needs to

Field	Description
	be created by a system administrator and the account resides in your tenant system. This tenant administrator account also needs to be given the correct permissions to upload data. Contact Cisco Support for assistance with creating this tenant administrator account. See Create an API user and Manage roles and permissions for more information.
Calabrio API User Password	The Webex WFO service account password.
Genesys Queues	
Add	The queue ID of the Genesys Cloud queue you want to import calls from. You must add at least one queue.
Metadata Mapping	
Add Mapping	This section allows you to define which Genesys Cloud metadata values are synced with Genesys Cloud contacts into Webex WFO. The Genesys Cloud metadata values are mapped to metadata labels created in Metadata Manager (located at Application Management > QM > QM Configuration > Metadata Manager). Metadata fields must first be created in Metadata Manager in Webex WFO (see Manage metadata fields for more information). Follow the Sync Genesys Cloud Metadata to Webex WFO procedure in the *RingCentral Engage Integration Guide* to map your Genesys Cloud metadata. After you map your Genesys Cloud metadata it can add a variety of trackable information to a contact in Webex WFO. Metadata fields can be found in the Details panel in the Media Player (Interactions > open a contact). You can view, edit, or delete a metadata field from your system.

Field	Description
Enable RTE Messaging for Screen Recording	
Enable RTE Messaging for Screen Recording	(Optional) Allows you to record the screens of Genesys Cloud users who are configured for screen recording in Webex WFO. See Screen Recording for more information. **NOTE** Enabling this check box is required for screen recording and screen recording pause and resume to function.

Connection settings for InContact

Webex WFO syncs with InContact to bring in user, team, and skill data. This data is maintained in InContact. If you change any of it in Webex WFO, those changes are not synced back to InContact.

The following fields appear if you select InContact as the ACD.

IMPORTANT You must complete these fields for all QM and Classic WFM features.

Field	Description
Vendor Name	The vendor name, provided by InContact.
Application Name	The application name, provided by InContact. **NOTE** The application needs to include the following API scope: AdminAPI, RealtimeDataAPI, and Reporting API.
Application ID	The application ID, provided by InContact.
User Name	Your user name, as configured in InContact.
Password	Your password, as configured in InContact.

Connection settings for generic ACDs

You can add one or more generic ACDs. Adding a generic ACD automatically creates an ACD Server ID, which is used as the source of historical data in a CSV file that is imported (see the *Webex WFO Data Import Reference Guide* for more information).

NOTE The ACD Server ID is not visible until you leave and then reopen the page.

Connection settings for Amazon Connect

The following fields appear if the ACD you select is Amazon Connect.

Section	Description
ACD Filtering	(Optional) The ACD filter limits the users who are synced from Amazon Connect. For example, you might configure a Team Name filter that allows the sync of users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters. **NOTE** Teams in Amazon Connect are structured in a hierarchy that can have up to five levels. In this hierarchy, lower-level teams are nested under higher-level teams: I. Main Team A. First Sub Team B. Second Sub Team Which agents the filter captures depends on which hierarchical level you filter at. If you filter at a higher-level team, you not only capture the agents in that higher-level team. You also capture every agent in every team that is nested under it. For example, if you filter at the level of the First Sub Team, you capture only the agents in that team. However, if you filter at the level of the Main Team, you capture both the agents in the Main Team and the agents in the First and Second Sub Teams.
Synchronization Interval	Interval (Minutes)—The length of the interval at which Webex WFO checks the Login/Logout Report folder in the S3 bucket for the Login/Logout report. Login Logout Report Folder—The path to the folder in the S3 bucket that contains the Login/Logout Report, which is used to sync Amazon Connect with Webex WFO. Exclude the S3 bucket prefix when you enter this path. See Integrate core Amazon Connect configuration data.
Amazon Connect	Choose Region—The region of your Amazon Connect instance. S3 Bucket—The URL of the S3 bucket that the Amazon Connect instance

Section	Description
	uses for data storage and as a destination for data streaming. See Configure the S3 bucket for the Amazon Connect instance. IAM Access Key—The access key ID of the IAM user who is assigned to a policy that grants read, write, and delete access to the S3 bucket that Webex WFO uses. IAM Secret Key—The secret access key of the IAM user who is assigned to a policy that grants read, write, and delete access to the S3 bucket that Webex WFO uses.
Historical Data Capture	Service Historical Report S3 Folder—The path to the folder in the S3 bucket that contains the Service Historical Report. Exclude the S3 bucket prefix when you enter this path. See Configure Amazon Connect reports for historical data capture. **EXAMPLE** ServiceName/InstanceName/ExportedReportsPrefix/ServiceQueueHistorical Agent Productivity Report S3 Folder—The path to the folder in the S3 bucket that contains the Agent Productivity Report. Exclude the S3 bucket prefix when you enter this path. See Configure Amazon Connect reports for historical data capture. **EXAMPLE** ServiceName/InstanceName/ExportedReportsPrefix/AgentProductivity Agent Productivity by Queue Report S3 Folder—The path to the S3 folder that contains the Agent Productivity by Queue Report. Exclude the S3 bucket prefix when you enter this path. See Configure Amazon Connect reports for historical data capture. **EXAMPLE** ServiceName/InstanceName/ExportedReportsPrefix/AgentProductivityByQue ue Agent Real Time Report S3 Folder—Enter the path to the folder that contains agent real-time data. Exclude the S3 bucket prefix. This path is case-sensitive. **EXAMPLE** connect/AcmeCo/RealTime Service Level Threshold—The service level seconds metric that you have selected

Section	Description
	when you created the report for the Service Historical Report S3 Folder field.
Real Time Data Capture	Kinesis Real Time Stream Name—The name of the data stream that you configured on the Amazon Kinesis dashboard. This is used to update the real-time status of your agents. Do not include the entire ARN when you enter this name. Only include the name you entered when you created the stream.
Recordings	S3 Folder for Recordings—The path to the folder in the S3 bucket that contains call recordings. Exclude the S3 bucket prefix when you enter this path. **EXAMPLE** ServiceName/InstanceName/Recordings S3 Folder for Contact Records—The path to the folder in the S3 bucket where the Kinesis Firehose places contact trace records (CTRs). Exclude the S3 bucket prefix when you enter this path. **EXAMPLE** ServiceName/InstanceName/CTRs
Enable RTE Messaging for Screen Recording	Enables the Smart Desktop to record screens for calls recorded by Amazon Connect.

Connection settings for Serenova

The following fields appear if you select Serenova as the ACD.

Section	Description
ACD Filtering	(Optional) Use an ACD filter to limit the users who are synced from the ACD. For example, you might configure a Team Name filter that allows you to sync users who belong to a team that matches a certain naming pattern. You can configure multiple ACD filters.
Serenova API	Serenova Base URL—The base API URL for your Serenova tenant. **EXAMPLE** https://api.cxengage.net

Section	Description
	Serenova Tenants—The master tenant and sub-tenants that you are adding through this ACD Configuration. See Serenova Tenants table.
Capture Settings	ACD Capture Delay—The amount of time Classic WFM waits before pulling ACD statistics after an interval ends. The default is 15 minutes.
Enable RTE Messaging for Screen Recording	Enable RTE Messaging for Screen Recording—Enables the Smart Desktop to record screens.

Serenova Tenants table

A Serenova system can contain a master tenant only, or it can contain a master tenant (a "parent" tenant) that has one or more sub-tenants ("child" tenants). The Serenova Tenants table enables you to integrate both system setups through a single ACD configuration. You can add the master tenant only, or you can add the master tenant and any number of its sub-tenants one at a time.

Adding a Serenova Tenant

Before you add a Serenova tenant, gather the following identifying information for each tenant you plan to add and store it in an easy-to-access location:

- Tenant ID
- API Key
- API Key Secret

See Gathering identifying information for a Serenova tenant.

To add a tenant to the Serenova Tenants table:

1. Click **Add**. The Serenova Tenants dialog box appears.
2. Complete the fields as described in the following table.

Field	Description
Name	The name of the master tenant or sub-tenant.

Field	Description
	BEST PRACTICE Enter the same name that the tenant has in your Serenova system.
ID	The Tenant ID of the Serenova tenant. Copy and paste this ID from the Serenova tenant. See To copy a Serenova tenant's Tenant ID:.
API Key	The API Key that is created for the tenant when you configure the API key in Serenova. Copy and paste this key from the Serenova tenant. See To create an API Key and API Key Secret for your Serenova tenant:.
API Secret	The API Key Secret that is created for the tenant when you configure the API key in Serenova. Copy and paste this key from the Serenova tenant. See To create an API Key and API Key Secret for your Serenova tenant:.

3. Click **OK**.

   If you are adding a master tenant and its sub-tenants through this ACD configuration, repeat the steps above for the master tenant and each of its sub-tenants.

Gathering identifying information for a Serenova tenant

The following procedures explain how to gather the Tenant ID, API Key, and API Key Secret that you need to add each tenant to the Serenova Tenants table.

To copy a Serenova tenant's Tenant ID:

1. Log in to Serenova.
2. Navigate to Configuration > Tenants.
3. In the Tenant Management table, double-click the tenant name. The Tenant pane appears.
4. In the Tenant pane, navigate to Details > Tenant ID.
5. Copy the Tenant ID.
6. When you configure the Serenova tenant in Webex WFO, paste the Tenant ID in the ID field.

To create an API Key and API Key Secret for your Serenova tenant:

1. Log in to Serenova.
2. Navigate to Configuration > API Key Management.
3. Click **Create**.
4. Configure the following fields for the API Key:
   - Name—A unique identifier for the key.
   - Role—Administrator.
5. Click **Submit**. The API Credentials dialog box appears.
6. Copy the API Key and the API Key Secret.

   NOTE When you click OK, you cannot see the API Key Secret again.

7. When you add the Serenova tenant in Webex WFO, do the following:
   - Paste the API Key in the API Key field.
   - Paste the API Key Secret in the API Secret field.

Syncing core configuration data

Webex WFO integrates the following core configuration data with equivalents from Serenova:

- Users
- Teams
- Service Queues and Skill Mappings

Users

In Serenova systems that contain a master tenant and sub-tenants, Serenova users can belong to any or all of the tenants in the system. As long as you integrate the master tenant and its sub-tenants through the same ACD configuration, Webex WFO will create only one Webex WFO user for each Serenova user.

If you add a master tenant and its sub-tenants through separate ACD configurations, Webex WFO will create a new Webex WFO user for each master tenant and each sub-tenant where a Serenova user appears. This can result in Webex WFO creating multiple Webex WFO users for a single Serenova user.

When Webex WFO imports a new user from a Serenova tenant, it creates a new Webex WFO user who has a Serenova user profile. The following table summarizes the Serenova user profile and how the values from that user profile are mapped to the new Webex WFO user.

Field	Definition
First Name	The first name of the user in the Serenova system.
Last Name	The last name of the user in the Serenova system.
Email Address	Not mapped.
Team Name	The default Webex WFO team.
Activated	The date that the user was added to Webex WFO from Serenova.
Deactivated	Not mapped. This field is updated if the Serenova user is disabled after being added to Webex WFO.
External User ID	The unique identifier of the user in Serenova.
Source	The origin of the user profile: ACD - <name of ACD configuration>.

When someone changes user data in Serenova, the sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in Serenova	Resulting Change in Webex WFO
New user is added	New user is added. Specifically, the sync service: ▪ Applies the Serenova user's first and last name to the Webex WFO user's first and last name. ▪ Applies the Serenova user's unique identifier (the external user ID in the user profile) to the Webex WFO user's ACD ID. ▪ Sets the Webex WFO start dates for the company and department to the date that the sync occurred. ▪ Assigns the Webex WFO user to the default team. **NOTE** Webex WFO does not preserve the relationship between Serenova users and Serenova groups, which are the Serenova equivalent of Webex WFO teams. See Teams.

Change in Serenova	Resulting Change in Webex WFO
	■ If the Serenova user has the agent role, assigns the default agent role to the Webex WFO user. ■ If the Serenova user has the supervisor role, assigns the default supervisor role to the Webex WFO user. **NOTE** Serenova users who have the administrator or the reporting role are not assigned any role in Webex WFO by the sync service.
User's first or last name is changed	User's first or last name is changed
User is disabled	User is deactivated

Teams

Webex WFO teams are synced with Serenova groups. Webex WFO teams do not preserve the relationship between Serenova users and Serenova groups.

When group data is changed in Serenova, the Sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in Serenova	Resulting Change in Webex WFO
New group is added	New team is added with the same name as the Serenova group. This name is read-only.
Group name is changed	Team name is changed.
New user is added to a group	No change. Webex WFO does not preserve the relationship between Serenova users and Serenova groups.
User is removed from a group	No change. Webex WFO does not preserve the relationship between Serenova users and Serenova groups.
Group is disabled	No change.

You can create new teams in Webex WFO and assign users to them, but these new teams are not synchronized back to Serenova.

Service Queues and Skill Mappings

Webex WFO service queues are synced with Serenova queues.

When a queue is changed in Serenova, the sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in Serenova	Resulting Change in Webex WFO
New queue is added	First, a new service queue is added. Specifically, the sync service does the following: ▪ Applies the Serenova queue name to the Webex WFO service queue name ▪ Applies the Serenova queue's unique identifier to the Webex WFO service queue's service queue ID ▪ (Read only) Gives the Webex WFO service queue a service queue type of Voice [Interactive] ▪ (Read only) Gives the Webex WFO service queue a Source ACD of Serenova Second, a new skill mapping is added. Specifically, the sync service does the following: ▪ Applies the Serenova queue name to the Webex WFO skill mapping name ▪ Assigns the Webex WFO service queue associated with the Serenova queue to the Webex WFO skill mapping and gives it a priority of 1
Queue name is changed	Applies the new Serenova queue name to the Webex WFO service queue name. **NOTE** Webex WFO does not apply the new Serenova queue name to the associated Webex WFO skill mapping.

Change in Serenova	Resulting Change in Webex WFO
Queue is disabled	No change. Neither the service queue nor the skill mapping is deleted.

Connection settings for Eventide NexLog

The following fields appear if you select Eventide NexLog as the ACD.

Field	Description
Contact Upload Delay	The length of the delay that is placed before each export interval. At each export interval, Webex WFO uploads all contacts that finish recording before this delay. Any contacts that finish recording after this delay are uploaded at the next export interval. **EXAMPLE** The Export Interval field is set to 00:30, and the Contact Upload Delay field is set to 5 minutes. At 12:30, the Data Server imports and uploads all contacts that finished recording at 12:25 or earlier. This ensures that Webex WFO uploads audio recordings for all contacts.
API URL	The base URL (including the protocol) of the Eventide NexLog API. **EXAMPLE** http://1.1.1.1 In the *NexLog API Manual* v2.8, this base URL is identified with the following variable: <PROTOCOL><ADDRESS>
Username	The login name of the Eventide user. This login name is case-sensitive. **NOTE** The *NexLog API Manual* v2.8 says that, to be authenticated, this user “must have the appropriate channel/resource permissions to access the requested recordings. By default an admin user will have permissions to all channels/resources.”
Password	The password of the Eventide user.

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Export Interval</td><td>The frequency that Webex WFO retrieves completed call recordings from Eventide. Format = HH:MM. Minimum = 00:15. Maximum = 23:45.

EXAMPLE You select 01:00. This means that Webex WFO imports all completed call recordings every hour.

If you select Grouped for Logging Type, the Export Interval setting must be greater than the Contact Group Length setting. Webex WFO crosses out Export Interval settings that are shorter than the Contact Group Length setting.</td></tr>
<tr><td>Logging Type</td><td>Whether Webex WFO assigns associated contact IDs to the call recordings that it imports from Eventide:
Default—Webex WFO does not assign associated contact IDs to any call recording.
Group—Webex WFO assigns the same associated contact ID to all call recordings that meet the Contact Group Length and Contact Group Metadata configurations.</td></tr>
<tr><td>Contact Group Length</td><td>The interval (1–30 minutes) that you want to use to associate Eventide call recordings in Webex WFO. Webex WFO assigns the same associated contact ID to all call recordings that begin in the same interval, even if Webex WFO imports the recordings at the end of different Export Intervals.

The Contact Group Length setting must be less than the Export Interval setting.

This field is available only if you select Grouped for Logging Type, and then it is required.</td></tr>
<tr><td>Contact Group Metadata</td><td>The metadata field from the Eventide API that you want to use to associate call recordings in Webex WFO.</td></tr>
</table>

Field	Description
	When you enter a metadata field in Contact Group Metadata, Webex WFO searches all call recordings in each Contact Group Length interval for that metadata field. If any call recordings in the same Contact Group Length interval have the same value in that metadata field, Webex WFO assigns the same associated contact ID to those call recordings. **NOTE** When Contact Group Metadata is configured, Webex WFO gives associated contact IDs only to call recordings that both begin in the same Contact Group Length interval and have the same value in the Contact Group Metadata field. For more information about the metadata fields that you can enter, see Entering metadata. This field appears only if you select Grouped for Logging Type, and then it is optional.

Entering metadata

Webex WFO can group call recordings with any standard or custom metadata field from Eventide. However, the metadata field that you enter in Webex WFO must be formatted as it appears in the Eventide API response.

In general, this means that the metadata field must be in lowercase and without quotation marks. See the Column Name column in the 4.5.1. V_RECORD section of the *NexLog API Manual* for a complete list of standard Eventide metadata fields.

The following table contains some example Eventide metadata fields and how those fields must be formatted in Webex WFO.

Field	Description
channelname	The name of the channel that the call was recorded on.
channelid	The channel number that the call was recorded on.
caller_id	The telephone number of the person who placed the call.

Connection settings for Twilio Flex

The following fields appear if you select Twilio as the ACD.

Click the **Twilio Config** button to access the Twilio Configuration page.

NOTE The available fields vary depending on if Quality Management (QM) and/or Classic Workforce Management (WFM) is selected as an enabled product.

Field	Description
Edit a Twilio ACD	Edit an existing Twilio Flex ACD.
Create a Twilio ACD	Create a new Twilio Flex ACD.
Delete a Twilio ACD	Delete an existing Twilio Flex ACD.
ACD Name	A drop-down list of available ACDs.

Twilio Flex Configuration Information

Field	Description
Twilio Account SID	The ID of the system where Twilio Flex is configured. This is similar to a Webex WFO Tenant ID. The string value must start with "AC."
Twilio Auth Token	(Optional) The authentication token, generated in Twilio, that Webex WFO uses to authenticate the Twilio Account SID.
Twilio Flex Workspace SID	The specific workspace Webex WFO pulls. There can only be one workspace Flex instance. Sub workspaces are not supported.
Twilio Flex Insights Username	(Classic WFM Only) The Twilio Flex Insights username that is used to pull historical data for Classic WFM.
Twilio Flex Insights Password	(Optional) (Classic WFM Only) The password for the Twilio Flex Inisights user account that is used to pull historical data for Classic WFM.

Field	Description
Time Zone	The time zone that matches the timezone configured in Flex Insights. By default this is set to the tenant's timezone.
Agent Name Format	The format for the first and last names of all agents.

Calabrio Configuration Information

Field	Description
Calabrio API Username	Your Webex WFO service account username. This service account is also referred to as your tenant administrator account or API user account. This is required for uploading data to the correct tenant. This account needs to be created by a system administrator and the account resides in your tenant system. This tenant administrator account also needs to be given the correct permissions to upload data. Contact Cisco Support for assistance with creating this tenant administrator account. See Create an API user and Manage roles and permissions for more information. This is required for both QM and Classic WFM.
Calabrio API User Password	The Webex WFO service account password.

Products Enabled

Field	Description
Quality Management	Quality Management has been purchased as a Webex WFO product. Webex WFO offers support for Twilio Flex omnichannel systems. Twilio Flex voice and chat channels are supported. This means both call recordings and chat transcripts are ingested into

Field	Description
	Webex WFO.
Voice	Enables Twilio Flex voice channels.
Digital (Chat, SMS, Email, Social)	Enables Twilio Flex digital (chat, SMS) channel(s). See About Webex WFO Digital Channel Support for more information.
Workforce Management	Classic Workforce Management has been purchased as a Webex WFO product.

Metadata Mapping

(Quality Management only) This section allows you to define which Twilio task attributes, including complex object-based attributes, are synced over with Twilio contacts if you have Quality Management enabled as a product. This is required in order to map additional Twilio Flex task attributes as custom metadata in Webex WFO. Enter the Twilio task attribute name exactly as it appears in the attributes of your Twilio tasks. For object-based attributes, enter them in the format <Object Name> and <Attribute Name> . Using the drop-down list, you can choose which custom metadata field a particular task attribute should be mapped to in Webex WFO.

Custom metadata fields must first be created in Metadata Manager (located at Application Management > QM > QM Configuration > Metadata Manager).

NOTE Metadata mapping is not supported for attributes nested more than one level below an object.

Enable RTE Messaging for Screen Recording

(Quality Management only) Selecting this check box allows screen recording for the configured ACD.

Metadata Language Mapping

(Quality Management only) This section appears when you select **Digital** in the **Products Enabled** section. Here, you can set the custom metadata that assigns a language to a text-based contact like an email or a chat message. The metadata options available come from the **Metadata Mapping** section.

Webex WFO uses a text contact’s language to find results when you use the Text Search filter on the Interactions page.

Webex WFO assigns a language to a text-based contact using the following information, in this order:

A. A language that is already assigned to the contact when it is imported into Webex WFO.

B. A language assigned to a custom metadata field that you configure here (the Metadata Language Mapping section).

C. The fallback language that you configure in the **Fallback text language** section below.

D. The default language (English).

Fallback text language

(Quality Management only) This section appears when you select **Digital** in the **Products Enabled** section. Select the language to assign to text contacts if they do not have an associated language when they are imported into Webex WFO and do not have a metadata value as defined in the **Metadata Language Mapping** section above.

Webex WFO uses a text contact's language to find results when you use the Text Search filter on the Interactions page.

Webex WFO assigns a language to a text-based contact using the following information, in this order:

A. A language that is already assigned to the contact when it is imported into Webex WFO.

B. A language assigned to a custom metadata field that you configure in the **Metadata Language Mapping** section above.

C. The fallback language that you configure here (the Fallback text language section).

D. The default language (English).

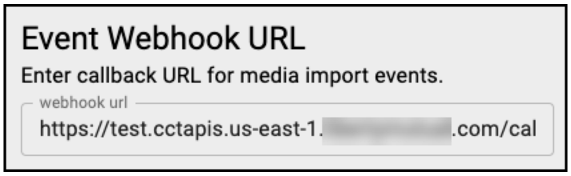
Twilio Voice Recording Encryption

Enabling Twilio Voice Recording Encryption allows Webex WFO to import encrypted voice recordings from Twilio. You need to enter your Twilio SID and private key in Webex WFO for processing. After processing, Webex WFO re-encrypts all recordings. In your Twilio system, you can find your SID on the Credentials page. Cisco keeps key information in Amazon Web Services Secrets Manager.

> **NOTE** This feature is not enabled by default. To request this feature, contact your account representative.

Event Webhook URL

The event webhook URL is the target URL Webex WFO sends contact status event messages to. The URL must be a fully-qualified absolute domain name. Configuring this field allows your tenant to receive a payload notification when a contact has been successfully uploaded and processed in Webex WFO. This means contact data and media has been downloaded, audio events processed, and encryption and encoding tasks have been completed.



The payload body of the contact status webhook event is as follows.

```
{
   "ccrId":0, // (int)
   "sessionId": "", // (string)
   "legId": "", // (string) - The same value as callId
   “tenantId”: 0, // (int)
   "status": "", // (string) - For example, ‘COMPLETE’ or ‘FAILED’
   "failureReason": "" // (optional string) - A human-readable reason for failure, not a pass-through API error or exception
}
```

BEST PRACTICE If your organization has security compliance requirements regarding recordings, you can delete source recordings in Twilio Flex as soon as you are notified a recording is encrypted and secured in Webex WFO.

Historical Data Capture

(Classic Workforce Management only) Configuring this section enables Webex WFO to look for the Twilio Flex Insights Classic WFM Historical Data Report to add task queues and real-time adherence data to the sync process. Your Twilio Flex account information you gathered as a prerequisite for Workforce Management is entered in the fields of this section.

Field	Description
Twilio Flex Insights Project ID	(Classic WFM only) The Flex Insights project ID for the Twilio Flex Insights project associated with the Twilio Account SID.

Field	Description
Agent Productivity Data Report ID	(Classic WFM only) The unique ID for the Agent Productivity Data report.
Queue Historical Data Report ID	(Classic WFM only) The unique ID for the Queue Historical Data report.
Service Queue	(Classic WFM only) (Optional) The Webex WFO service queue where agent productivity data not associated with a Twilio task queue is stored.

Agent State Mapping

(Classic Workforce Management only) This section allows you to map specific Twilio activities to specific Webex WFO states for adherence if you have Classic WFM enabled as a product. The “Hold” state is pre-configured and does not need to be mapped. Mappings can be edited or deleted by selecting the **Edit Mapping** or **Delete** icons to the right of the **Enable State Reason Code** sliders. Toggle the **Enable State Reason Code** slider to show the Twilio activity names in the Schedule Adherence drawer.

> **NOTE** The slider is only available for activities mapped to the Not Ready, Work Not Ready, and Work Ready states in Webex WFO.

Field	Description
Hold	The agent has placed the contact on hold. This is pre-configured and cannot be altered.
Logout	The agent has logged out of the ACD. In many ACDs, a numeric reason code might accompany this state to indicate the reason for the state change.
Not Ready	The agent is not accepting contacts from the ACD. In many ACDs, a numeric reason code might accompany this state to indicate the reason for the state change.
Ready	The agent is ready to accept contacts from the ACD.
Talking	The agent is on a contact. This is pre-configured.

Field	Description
Work Not Ready	The agent is doing after-contact work and will enter a Not Ready state when finished.
Work Ready	The agent is doing after-contact work and will enter a Ready state when finished.

Connection settings for UJET

The following fields appear if you select UJET as the ACD.

Ujet Configuration

Field	Description
UJET Username	The Company Key found in the Company Key & Secret Code section in UJET developer settings of the UJET system.
UJET Password	The Secret Code found in the Company Key & Secret Code section in UJET developer settings of the UJET system.
S3 Bucket	(Read-only) The Amazon S3 bucket where call data is exported.
S3 Security Role	(Read-only) The security role of your Amazon S3 bucket.
Domain	The domain information for your UJET system.

Webex WFO Configuration

Field	Description
Cisco API Username	Your Webex WFO service account username. This service account is also referred to as your tenant administrator account or API user account. This is required for uploading data to the correct tenant. This account needs to be created by a system administrator and the account resides in your tenant system. This tenant administrator account also needs to be given the correct permissions to upload data.

Field	Description
	Contact Cisco Support for assistance with creating this tenant administrator account. See Create an API user and Manage roles and permissions for more information.
Cisco API User Password	The Webex WFO service account password.

Enable RTE Messaging for Screen Recording

Field	Description
Enable RTE Messaging for Screen Recording	Select this checkbox to enable Webex WFO Smart Desktop for Screen Recording. See Screen Recording for more configuration details.

Configure global settings

Use the Global Settings page to configure aspects of the system that apply to all users and applications.

Prerequisites

- You have the Administer Tenant permission

Page location

Application Management > Global > Administration > Global Settings

Session Timeout (in minutes)

Users are automatically logged out after a period of inactivity. The Session Timeout field allows you to enter the length of time in minutes that a session should be idle before the user is automatically logged out. The default value = 60 minutes. The maximum value = 120 minutes which is 2 hours. Numeric characters only. Letters and special characters are not permitted. Any change in this setting takes place the next time a user logs in or refreshes a page.

Automatic User Creation

The Automatic User Creation check box controls whether new Webex WFO users are created when employees in your contact center log in to a PC where the Smart Desktop is installed.

- Cleared—(Default) New users are not created
- Selected—New users are created

BEST PRACTICE Most organizations should keep **Enable Automated User Creation** disabled. If you enable this setting, you risk duplicating users and then having to manually merge or delete the duplicated users. We recommend automatic user creation only for organizations that use end-point recording.

The following table describes what happens when a Windows user logs in to a PC where Smart Desktop is installed, depending on whether the Automatic User Creation check box is selected or cleared.

Automatic User Creation check box configuration	Login is associated with an active Webex WFO user	Result in PC and Webex WFO
Cleared	Yes	Webex WFO user is recorded by Smart Desktop as configured.
Cleared	No	No new Webex WFO user is added. Nothing is recorded by the Smart Desktop.
Selected	Yes	Webex WFO user is recorded by Smart Desktop as configured.
Selected	No	New Webex WFO user with a Recording user profile is added. New Webex WFO user is recorded by Smart Desktop as configured.

Client Auto Update

Select the Client Auto Update check box to enable automatic updates of Smart Desktop. When this feature is enabled, at log on and at random times between midnight and 1:00 AM, Smart Desktop compares versions with the version on the server and, if they are different, downloads the newer version and installs it to maintain compatibility. This feature is not supported when the Smart Desktop Client (SDC) is running on a server version of Windows. This includes VDI solutions that use a server OS to emulate an agent environment, such as Citrix, Amazon Workspace, and so on.

Select Recording Format

Select the recording format to be used to record audio contacts.

VP8 Codec Video Encoding

Internet Explorer has been deprecated; therefore, you can leave this box unselected.

Generate Recording Encryption Key

This option appears only when your role has the Administer Encryption Keys permission enabled.

All stored recordings are encrypted. You can generate a new recording encryption key at any time using the Generate button. Existing recordings are not re-encrypted when you generate a new key. The new key takes effect the next time the clients are updated or reinstalled.

The new encryption key is displayed when you generate it. This key can encrypt and decrypt your recording files, so be sure to keep this key in a safe place.

In cloud deployments, the available encryption method is RSA-2048 (with asymmetric keys) and AES-256 for media recorded by Webex WFO.

Time Zone

Select the time zone to be used as the default time zone for the customer. This time zone can be overridden by an individual user selecting a custom time zone on the Agent Schedules page.

Default Language

Select the language to be used as the default language for the customer. This language can be overridden by an individual user selecting a custom language when logging in.

User Profile Precedence

You can change the precedence of user profiles from external sources (ACD and Recording) by reordering them in the User Profile Precedence table.

> **NOTE** Override user profiles have the highest precedence by default. You cannot lower this precedence. If you want to identify a user with the values stored in an ACD or Recording user profile instead of the values stored in an Override use profile, you must manually delete that user’s Override user profile.

This reordering does the following:

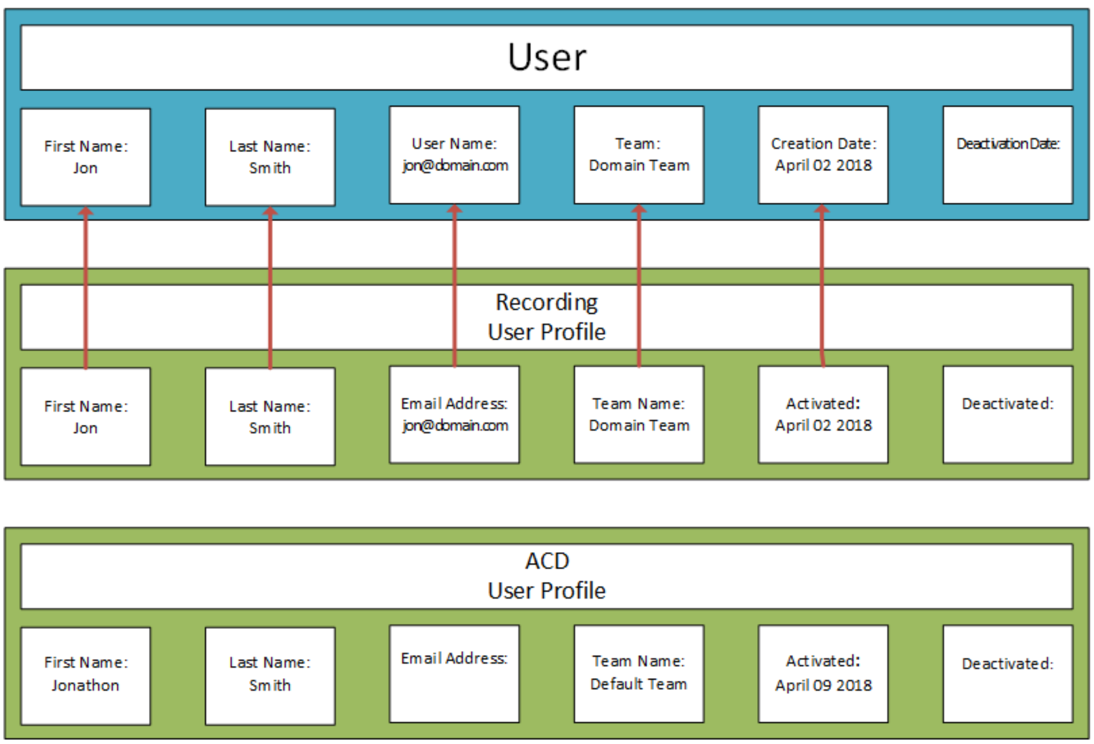
- It changes the order of the user profiles in the User Profiles table on the Users page.
- If a user has two user profiles with different values in any field, it can also change which value Webex WFO chooses to identify that user.

BEST PRACTICE Reordering the precedence of user profiles affects every user who has those user profiles. Set the precedence of user profiles once, when you first configure Webex WFO.

User profile precedence reordering example

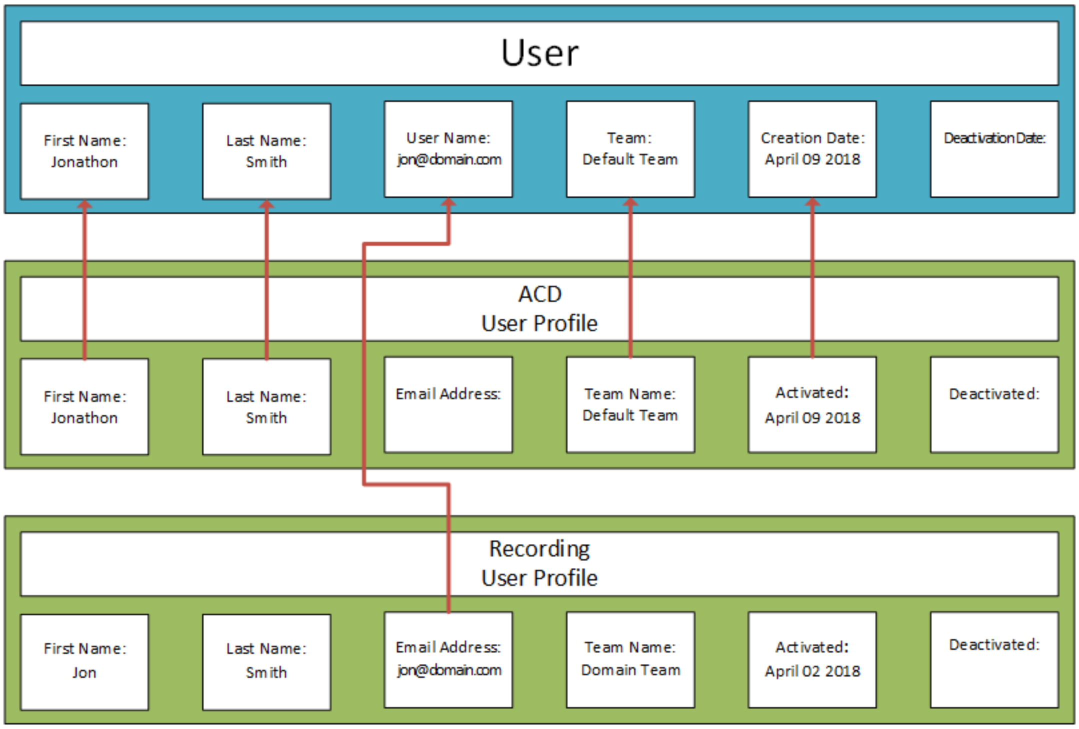
The following images show how a Webex WFO user's identity is modified when the precedence of that user's user profiles is reordered.

In the first image, the Recording user profile has a higher precedence than the ACD user profile, so Webex WFO selects values for most fields from the Recording user profile.



In the second image, the user profiles have been reordered so that the ACD user profile has a higher precedence than the Recording user profile. Now, Webex WFO selects values for most fields from the ACD user profile. This reordering changes the user's first name, team, and creation date.

The precedence of user profiles does not affect which value is selected from the External User ID field, even if a user has both a Recording user profile and an ACD user profile. Webex WFO maps the External User ID from the Recording user profile to the user's Windows Login, and it maps the External User ID from the ACD user profile to the user's ACD ID.



Dashboard Administration

The Dashboard Administration feature enables you to control which dashboard users see, based on their roles, as your contact center transitions from version 10.4 to version 11.0. By default, all users see the classic dashboard, which contains the same widgets they saw in version 10.4. When you move a role from the Classic Dashboard pane to the Data Explorer pane, then users with that role will see an updated dashboard that contains the new version of their widgets or a specific dashboard shared and tagged to be visible to that role.

Related topics

- Configure QM global settings
- Security Update: TLS 1.1 and weak SSL/TLS 1.2 ciphers will be deprecated

Download Smart Desktop and Webex WFO Data Server installers

Use the Downloads page to access the Webex WFO Smart Desktop and Webex WFO Data Server installers available for your tenant.

To download an installer that you want, click the link for it.

Page Location

Application Management > Global > Administration > Downloads

Download	Description
Webex WFO Data Server, Webex WFO Smart Desktop	The Data Server (CalabrioONEDataServerSetup_<TenantName>.exe) and Smart Desktop (CalabrioONEDesktopSetup_<TenantName>.exe) installers for this tenant. These installers are configured to connect to only the tenant that they are downloaded from. In multitenant environments, this means that they cannot be downloaded and transferred to another tenant. For more information about installing the Smart Desktop and Webex WFO Data Server, see the *Installation Guide for Cloud Deployments* .

Related topics

- Configure the Data Server
- Download Data Server logs
- Monitor Data Server status
- Monitor agents in real time

Associate phones with agents, recording groups, and recording types

After you sync devices through the Data Server (see Configure the Data Server), use the Device Associations page to associate devices from your ACD with Webex WFO users, recording groups, and recording types.

You cannot add new devices on this page. To add new devices, you must sync them through the Data Server.

Prerequisites

- Devices have been synced through the Data Server.
- You have the Configure Device Associations permission.
- You have scope over your entire contact center organization.
- To associate an agent with multiple devices, you must have Cisco UCCE version 12 or 12.5 as your ACD, and the devices must share the same ACD line (DN). Additional configuration within the Cisco ACD is needed.

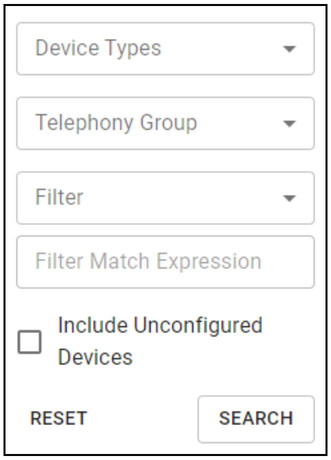
Page location

Application Management > QM > QM Configuration > Device Associations

Procedures

Search for a device

- Use the search menu to find devices whose associations you want to configure or edit. You can use the asterisk (*) wildcard in the **Filter Match Expression** field to represent any number of characters.



Associate an agent with multiple devices

1. After locating the devices (see Search for a device), select the agent from the **Agent** drop-down menu for both devices.
2. Click **Save**.

Edit device associations in bulk

You can edit the associations of existing devices only. You cannot add new devices via CSV import.

1. Click the options icon (three dots) and select **Export Devices**. A CSV file downloads to your device.
2. Edit the CSV file to associate the devices with users, recording groups, and recording types as desired.

   > **NOTE**
   > To associate a device with an agent, at least one of these fields must be populated:
   > - Username
   > - DomainName
   > - LastName
   > - FirstName
   >
   > To disassociate a device from an agent, delete the values in all four fields.

3. Click the options icon and select **Import Devices**.

4. Import the CSV file.
5. Click **Save**.

The following table describes which fields in the exported CSV file you can and cannot edit in order to associate devices.

Field	Editable?	Description
DeviceName	N	The name of the device in your call environment.
DeviceType	N	The type of device in your call environment.
Extensions	N	The extension associated with the device in your call environment.
VirtualDeviceName	N	The non-physical device associated with a physical recorded device in your recording environment.
TelephonyGroup	N	The telephony group associated with the device in your call environment.
DisplayID	N	The ID of the device in your call environment.
IsRecordingTones	Y	If TRUE, the device uses recording tones (not common).
Username	Y	The user name (email address) of the Webex WFO user who is associated with the device. This field is required.
DomainName	Y	The Windows login of the user associated with the device. This field is optional.
LastName	Y	The last name of the user associated with the device. This field is optional.
FirstName	Y	The first name of the user associated with the device. This field is optional.
MonitorServer	Y	Not used.

Field	Editable?	Description
RecordingCluster	Y	The recording group associated with the device. This value is not case-sensitive. The recording group must already exist in Webex WFO.
RecordingType	Y	The recording type associated with the device. The following are allowed values for this field: ▪ Event Notification ▪ Multiple Registration Recording ▪ Network Recording ▪ None ▪ Reconciliation ▪ Single Step Conference

Related topics

- Configure the Data Server —Sync devices into Webex WFO.

Configure Extension Mobility for Cisco Network Recording

Webex WFO supports two ways of configuring Extension Mobility (EM) for Cisco Network Recording. The terms used in this topic are those used in the current product. The terms used may differ depending on your product version. When configuring agents for Extension Mobility, note that if the user is on a phone call when they log out of a device, the recording will stop.

Standard Extension Mobility

This is the original way to configure EM in Webex WFO. It works for single cluster systems, and it is the recommended way to configure EM for those environments.

Device associations configuration

User Profile Configuration

- Associate a user with the user profile in Contact Devices
- Do not configure a recording group for the user profile

- The user profile does not need to be associated with the JTAPI user in Cisco Unified Communications Manager (Unified CM)

Device Configuration

- Associate devices with a default hoteling agent or leave them unassociated with any user
- Configure a recording group and recording type (Network) for the device
- Device must be associated with the JTAPI user in Unified CM

How it works

Detecting EM login and logout depends on the set of extensions that are changing on the device. This means that Webex WFO has two requirements for user profile extension configurations:

- The set of extensions on a user profile must uniquely identify that user profile
- The set of extensions on a user profile must be different from the extensions configured for any device that user profile might log in to

When an extension mobility profile logs in to or out of a device, the set of extensions on that device change. This is how logins and logouts are detected, and it is also how Webex WFO determines which user profile (if any) is logged in to the device. Each time the set of extensions changes on a device, Webex WFO checks to see if the set of extensions matches a user profile known by Webex WFO. If it does, Webex WFO associates the user on the user profile with the device. If the set of extensions on the device does not match any user profile, and there’s currently a user profile logged in to the device, then Webex WFO unassociates the user profile from the device.

Extension Mobility Cross-Cluster

This style of configuring EM was introduced to support Cisco's Extension Mobility Cross-Cluster (EMCC) feature. In order to use the EMCC feature, there is substantial configuration required in each of the Unified CM clusters. That is not covered here. Refer to the *Feature Configuration Guide for Cisco Unified CM* for your version for information on configuring EMCC.

NOTE The IP Phone Service Recording Controls is not supported in Cisco’s EMCC feature.

Device associations configuration

User Profile Configuration for User Profiles that log on to phones homed to other clusters

- Associate a user with the user profile in Contact Devices
- Configure user profile with a recording group and recording type (Network)
- User profile must be associated with the JTAPI user in Unified CM

Device Configuration for devices that User Profiles from this cluster will log in to

- Associate devices with a default hoteling agent or leave them unassociated with any user
- Configure a recording group and recording type (Network) for the device
- Device must be associated with the JTAPI user in Unified CM

How it works

Similar to standard configuration, correctly detecting EM login and logout depends on the current set of extensions on the device. The same configuration requirements apply:

- The set of extensions on a user profile must uniquely identify that user profile.
- The set of extensions on a user profile must be different from the extensions configured for any device that user profile might log in to.

Logging into a Home Cluster Device

- When a user profile logs into a device on its home cluster (as in the same Unified CM cluster the user profile is configured on), EM works the same as in the standard configuration.
- Calls are recorded using the recording group configured on the device the profile is logged in to.

Logging into a Remote Cluster Device

NOTE The Build in Bridge (BIB) must be enabled on the visiting cluster in the callManager service parameters before EMCC is configured.

- When a user profile logs in to a device that is on a remote cluster (as in a Unified CM cluster different from the one the user profile is configured on), the home Unified CM cluster creates a temporary phantom visiting device.
- The Cisco CTI Service detects the creation of this device. When the phantom device comes in service, Webex WFO checks the set of extensions to see if it matches a user profile that has a user and recording group associated with it.
- If it does, CTI registers the phantom device to record with the user and recording group configured on the matching user profile.
- When the user profile logs out of the remote device, the home Unified CM cluster removes the phantom device, and the Cisco CTI Service disposes it.

Related topics

- Associate phones with agents, recording groups, and recording types— Learn how to associate devices from your ACD with Webex WFO users, recording groups, and recording types.

Learn more about Webex WFO with TIP

With TIP, users receive timely contextual assistance based on their needs. This content sits within the application, giving users the advice they need when they need it. Use TIP to ease onboarding.

Information in TIP varies based on the Webex WFO permissions you have. Agents do not see as much content as administrators.

TIP cannot be turned off for individual users or roles.

Prerequisites

- Your organization uses Webex WFO Cloud.

Page location

All pages > star icon (lower right corner of the page)

Procedures

Access TIP

- Click the star icon (lower right corner of the page). TIP opens.

To do this	Go to this section in TIP
Take an orientation tour	Get Started This section is designed for people new to Webex WFO. Tours vary by page and are tied to users' permissions. Orientation tours are available in several languages based on the user's browser settings. See "Localization and supported languages" in the *Webex WFO Installation Guide for Cloud Deployments* for a list of available languages.

How data syncs between the ACD and Webex WFO

Webex WFO can synchronize data with some ACDs. For synchronization information on specific ACDs, see the integration guide for that ACD. The Sync Service automatically extracts the following information from an ACD and loads it into Webex WFO:

- Agents
- Teams
- Relationships between agents and teams
- Service queues

Once this information is loaded into Webex WFO, you can configure Webex WFO to generate forecasts and schedules for service queues.

> **NOTE** When the ACD syncs new data, such as new agents or teams, and you are already logged in, you cannot view them. Your scope is determined when you log in. Since these teams and users were created after you logged in, you will not have scope over them until you log out and then log in again.

> **NOTE** Any teams, agents, relationships, or service queues you create in Webex WFO are not synced back to the ACD. They are maintained only in Webex WFO.

How agent data syncs between the ACD and Webex WFO

Webex WFO assumes that every user imported from the ACD to Webex WFO is an agent. As a result, it creates a user record and a user profile and assigns the agent role to the user. Some ACDs can assign the supervisor role to users, and that role is assigned to the user in Webex WFO.

When someone changes user data in the ACD, the Sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in the ACD	Resulting Change in Webex WFO
New agent is added	New agent is added. Specifically, the Sync service: ▪ Applies the ACD agent first and last name to the Webex WFO agent first and last name. ▪ Applies the ACD login ID to the Webex WFO Employee ID and ACD ID. You can change the Employee ID but not the ACD ID. Changing the Employee ID has no effect on the ACD login ID. ▪ Sets the Webex WFO start dates for the company and department to the current date. ▪ Assigns the corresponding team to the agent as the agent's team. **NOTE** If the ACD does not have a team assigned to the agent, you can manually assign a team to the agent in Webex WFO.
Agent's first or last name is changed	Agent's first or last name is changed.
Agent is deleted	Agent status is set to Inactive.

How team data syncs between the ACD and Webex WFO

When team data is changed in the ACD, the Sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in the ACD	Resulting Change in Webex WFO
New team is added	New team is added with the same name.

Change in the ACD	Resulting Change in Webex WFO
	Makes any agent who is a member of the team in the ACD a member of the team in Webex WFO.
Team name is changed	Team name is changed.
New agent is added to the team	New agent is added to the team.
Team is changed	No change.
Agent is removed from a team	No change.

You can create new teams in Webex WFO and assign agents to them, but these new teams are not synchronized back to the ACD.

An agent can belong to only one team. If you move an agent from one team to another in Webex WFO, you do not affect that agent's team assignment in the ACD.

Synchronize service queue data

When service queue data is changed in the ACD, the Sync service detects it and makes several changes in Webex WFO. The following table summarizes these changes.

Change in the ACD	Resulting Change in Webex WFO
New service queue is added	New service queue is added. Specifically, the Sync service does the following: ■ Applies the ACD service queue name to the Webex WFO service queue description ■ Applies the ACD service queue ID to the Webex WFO service queue ID ■ Gives the new service queue a service queue type of Interactive/Voice New skill mapping is added. Specifically, the Sync service does the following:

Change in the ACD	Resulting Change in Webex WFO
	▪ Applies the ACD service queue name to the Webex WFO skill mapping name ▪ Applies the ACD service queue ID to the Webex WFO skill mapping number Creates a one-to-one mapping between the ACD skill mapping and the Webex WFO skill mapping.
Service queue name is changed	▪ Applies the new ACD service queue name to the Webex WFO service queue description (name) ▪ Applies the new ACD service queue name to the Webex WFO skill mapping name
Service queue is deleted	No change.

Configure an authentication method

Use the Authentication page to select and configure an authentication method to verify the identity of anyone who wants to connect to Webex WFO. Webex WFO supports three methods of authentication: Default Webex WFO Authentication, SAML Authentication, and Active Directory Authentication. On the Authentication page, you can configure and enable the default authentication method (see Enable default authentication and the SAML authentication method (see Configure SAML authentication). You can enable and configure the Active Directory authentication method only for on-premises deployments of Webex WFO on the Active Directory Configuration page, located under Application Management > Global > System Configuration > Active Directory Configuration (see Connect to an Active Directory server).

> **NOTE** Both the system administrator and the tenant administrator can configure SAML authentication for a particular tenant. If both administrators configure tenant-level SAML authentication for a particular tenant, Webex WFO uses the most recent configuration.
> If your system administrator enables system-wide SAML authentication, the tenant-level SAML authentication settings are overridden.

Webex WFO allows for mixed-mode authentication. This means you can enable multiple user-authentication methods simultaneously.

Prerequisites

You must have tenant permissions to configure and enable authentication.

Before you configure SAML authentication, configure an identity provider (IdP) that supports SAML 2.0 (see Configuring identity providers. When you configure the IdP, make sure you record the Issuer ID, the Single Sign On URL, and the Identity Provider Certificate and then store this data in an easy-to-access location. You use this information when you configure SAML authentication.

> **NOTE** Select and configure Okta or Active Directory Federation Services (ADFS) as your identity provider to authenticate user names and passwords for Webex WFO (the service provider).

Page location

Application Management > Global > Administration > Authentication

Procedures

You can use the Authentication page to enable/disable Webex WFO authentication or to enable/disable and configure SAML authentication.

Enable authentication

Webex WFO authentication is enabled by default.

1. Select the authentication method you want to enable.
   With Webex WFO you can enable multiple user-authentication methods simultaneously.
2. Click **Save**.

Disable authentication

1. Select the authentication method you want to disable.
   One authentication method must be enabled before you can click **Save**. To disable **Webex WFO Authentication**, you must first select **SAML Authentication**.
2. Click **Save**.

Configure SAML authentication using Okta as the IdP

Before performing this procedure, verify that you have configured Okta as the IdP. See Configuring Okta .

1. Select **Enable SAML Authentication**.
2. In the **Identity Provider** section, use the data you collected when you configured Okta as your IdP to configure the following fields.
   a. Enter a unique name for this IdP configuration in the **NAME** field.
   b. Enter the **ISSUER ID**. Paste the URL from the **Identity Provider Issuer** field in Okta.

c. Enter the **SINGLE SIGN ON URL**. Paste the URL from the **Identity Provider Single Sign-On URL** field on Okta.

> **NOTE** This URL is provided by the IdP and is not the same as the Single Sign On URL supplied by Webex WFO under **Service Provider**.

d. Import the **IDENTITY PROVIDER CERTIFICATE**.

- Click **Import** the certificate that you downloaded from the **X.509 Certificate** field in Okta.
- (Optional) Click **Export** to export an existing certificate.
- (Optional) Click **View Details** to view the details of the certificate.

3. (Optional) In the **Service Provider** section, the following steps are optional. Okta does not require a service provider certificate or private key.

> **NOTE** Webex WFO is the service provider, and the Authentication URL, Entity ID, and Single Sign On URL are read-only fields.

a. Select **Use Tenant Name in Entity ID** to prepend the name of the tenant to the tenant's public host name in the Entity ID.

b. Select the **SAML Signature Algorithm**.

c. Select the **SAML Digest Algorithm**.

d. (Optional) To opt out of signing the SAML token, clear the **Sign SAML Response** check box.

e. Import the **SERVICE PROVIDER CERTIFICATE**. You can use the default global certificate provided by Webex WFO (cloud deployments only) or upload a self-managed certificate and private key. See Managing service provider certificates for Webex WFO.

f.
- Import — Navigate to the self-managed service provider certificate that you want to import into Webex WFO.
- Export — Exports your current service provider certificate.
- View Details — Shows the details of the current service provider certificate: Issuer, Subject, Start Date, and End Date.
- Export Metadata — Exports the metadata for the current service.

g. Import the **PRIVATE KEY**. The private key for a self-managed service provider certificate. See Managing service provider certificates for Webex WFO.

4. Click **Save**.

Configure SAML Authentication using ADFS as the IdP

Before performing this procedure, verify that you have configured ADFS as the IdP. See Configuring ADFS .

1. Select **Enable SAML Authentication**.
2. In the **Identity Provider** section, use the data you collected when you configured ADFS as your IdP to configure the following fields.

   a. Enter a unique name for this IdP configuration in the **NAME** field.

   b. Enter the **ISSUER ID**. This is normally structured in the following way: `https://<Active Directory domain name>/adfs/services/trust`

   c. Enter the **SINGLE SIGN ON URL**. This is normally structured in the following way: `https://<Active Directory domain name>/adfs/ls`

   > **NOTE** This URL is provided by the IdP and is not the same as the Single Sign On URL supplied by Webex WFO under **Service Provider**.

   d. Import the **IDENTITY PROVIDER CERTIFICATE**.

   - Under Identity Provider Certificate, click **Import**.
   - Navigate to the identity provider certificate you exported when you configured ADFS, and then select it.
   - Click **Open**.
   - (Optional) Click **Export** to export an existing certificate.
   - (Optional) Click **View Details** to view the details of the certificate.

3. In the **Service Provider** section, perform the following steps:

   > **NOTE** Webex WFO is the service provider, and the Authentication URL, Entity ID, and Single Sign On URL are read-only fields.

a. (Optional) Select **Use Tenant Name in Entity ID** to prepend the name of the tenant to the tenant's public host name in the Entity ID.

b. Select the **SAML Signature Algorithm**.

c. Select the **SAML Digest Algorithm**.

d. (Optional) To opt out of signing the SAML token, clear the **Sign SAML Response** check box.

e. Import the **SERVICE PROVIDER CERTIFICATE**. You can use the default global certificate provided by Webex WFO (cloud deployments only) or upload a self-managed certificate and private key. See Managing service provider certificates for Webex WFO.

- Import — Navigate to the self-managed service provider certificate that you want to import into Webex WFO.
- Export — Exports your current service provider certificate.
- View Details — Shows the details of the current service provider certificate: Issuer, Subject, Start Date, and End Date.
- Export Metadata — Exports the metadata for the current service.

f. Import the **PRIVATE KEY**. The private key for a self-managed service provider certificate. See Managing service provider certificates for Webex WFO.

1. Click **Save**.

Enable default authentication

By default, user authentication and passwords are managed using Webex WFO. In systems that sync with an ACD, users are created and managed in the ACD, although you can still create users in Webex WFO (see Manage users).

NOTE Tenant administrators who have been added by a system administrator can always log in using their Webex WFO credentials. This is true even if Webex WFO authentication is disabled and another form of authentication (SAML or Active Directory) is enabled.

For system administrators, this selection is read-only.

Enable Webex WFO authentication

1. Select **Enable Webex WFO Authentication**.
2. Click **Save**.

Configure SAML authentication

Security Assertion Markup Language (SAML) authentication allows you to use common external identity providers (IdP) to authenticate user names and passwords for Webex WFO (the service provider, or SP). This method of user authentication and password management is commonly referred to as single sign-on (SSO).

If you are using SAML and you want to let your agents access their schedules outside of work through a third-party calendar such as Microsoft Outlook, Google Calendar, or Apple Calendar, select the "iCal Sync with SSO" check box on the Global Settings page for WFM (see Configure system-wide WFM settings). For more information about how to configure Webex WFO so that agents can access their schedules outside of work when SAML is enabled, see View your schedule in another calendar app.

> **NOTE** Tenant administrators who have been added by a system administrator can always log in using their Webex WFO credentials. This is true even if Webex WFO authentication is disabled and another form of authentication (SAML or Active Directory) is enabled.

Configuring identity providers

Webex WFO integrates with all IdPs that support SAML 2.0 authentication. The following general parameters apply when configuring the SAML assertion in an IdP.

For more information about configuring specific IdPs, see Configuring Okta and Configuring ADFS

Assertion Component	Configuration
Attributes	The IdP must send an assertion containing your users' email address as an attribute. This email address must match the address used for Webex WFO authentication. **EXAMPLE** The specific name of the email attribute depends on the IdP that you use. The following are examples: ■ EmailAddress ■ email ■ mail ■ User.email
Signatures	The SAML assertion must be signed. Assertions can be signed with the following algorithms:

Assertion Component	Configuration
	■ RSA-SHA1 ■ RSA-SHA256
Key sizes	Encrypted assertions are supported only with a maximum key size of 128 bits.

Webex WFO can integrate with both SP-initiated and IdP-initiated SAML, depending on the IdP that you use.

IdP	Supports SP-Initiated SAML	Supports IdP-Initiated SAML
Okta	Yes	Yes
ADFS	Yes	Yes
Azure	No	Yes
Other IdPs	Varies	Varies

NOTE For IdP-Initiated SAML using Azure AD, the Sign on URL field in the app in Azure AD must be empty.

Configuring Okta

BEST PRACTICE

Before you configure Okta, gather the following information from the Service Provider section on the Authentication page in Webex WFO and store it in an easy-to-access location:

- Single Sign On URL
- Entity ID

The following is an overview of how to configure Okta as your IdP:

1. Create an Okta app.
2. Configure the Okta app.
3. Gather information about the Okta app.
4. Configure Okta as an IdP in Webex WFO.

Create an app in Okta

1. Log in to Okta.

   NOTE You must be a Super Administrator in Okta to create and configure an app.

2. Navigate to Applications > Applications.
3. Click **Add Application**.
4. Click **Create New App**.
5. In the Create New Application Integration dialog box, configure the fields as follows.

Field	Configuration
Platform	Select **Web**.
Sign on method	Select **SAML 2.0**.

Configure the Okta app

1. In the General Settings tab, configure the fields as follows.

Field	Configuration
App name	Enter a unique name for Webex WFO.
App logo	(Optional) Upload an image to identify Webex WFO in Okta.
App visibility	(Optional) Limit who can see the image in Okta.

2. Click **Next**.
3. On the Configure SAML tab, configure the fields as follows.

   NOTE If Advanced Settings is hidden, click **Show Advanced Settings**.

Field	Configuration
General	
Single sign on URL	Copy and paste this URL from the Authentication page in

Field	Configuration
	Webex WFO. The URL is located in the Single Sign On URL field in the Service Provider section. Leave the **Use this for Recipient URL and Destination URL** check box selected (default).
Audience URI (SP Entity ID)	Copy and paste this ID from the Authentication page in Webex WFO. The URL is located in the Entity ID field in the Service Provider section.
Name ID format	Select **EmailAddress**.
Application username	Select **Email**.
Response	Select **Signed**.
Assertion Signature	Select **Signed**.
Signature Algorithm	Select either **RSA-SHA1** or **RSA-SHA256**.
Digest Algorithm	Select either **RSA-SHA1** or **RSA-SHA256**.
Assertion Encryption	Select **Unencrypted**.
Enable Single Logout	Leave the **Allow application to initiate Single Logout** check box cleared (default).
Authentication context class	Select **PasswordProtectedTransport**.
Honor Force Authentication	Select **Yes**.
SAML Issuer ID	Leave blank.
Attribute Statements	

Field	Configuration
Name	Enter a unique name.
Name format	Select **Unspecified**.
Value	Select **user.email**.

NOTE You do not need to configure any attributes in the Group Attribute Statements section.

4. Click **Next**.
5. In the Feedback tab, select the Feedback option that is appropriate to your company's use of Okta.

NOTE Your choice does not affect the ability of Webex WFO to use Okta as an IdP.

6. Click **Finish**.

Gather information for Webex WFO from the Okta app

1. Navigate to Applications > Applications, and then click the Okta app for Webex WFO.
2. Select the **Sign On** tab.
3. Click **View Setup Instructions**.
4. Gather information about the Okta app from the following fields:

Field	Instructions
Identity Provider Single Sign-On URL	Copy the URL and store it in an easy-to-access location.
Identity Provider Issuer	Copy the URL and store it in an easy-to-access location.
X.509 Certificate	Download the certificate and store it in an easy-to-access location.

5. Refer to Configuring an Authentication Method to configure an Okta identity provider with Webex WFO and enable SAML authentication.

Configuring ADFS

The following is an overview of how to configure single sign-on for Active Directory Federation Services (AD FS):

1. Configure Relying Party Trust for your identity provider.
2. Configure the LDAP email claim rule for the Webex WFO trust.
3. Configure the incoming claim transform rule for the Webex WFO trust.
4. Configure the secure hash algorithm and import your service provider certificate.
5. Export your identity provider certificate.
6. Configure an ADFS identity provider with Webex WFO and enable SAML authentication.

Configure Relying Party Trust for your identity provider

Configuring Relying Party Trust for your identity provider is a multistep procedure.

First, begin the Add Relying Party Trust Wizard.

1. Open the Windows Server AD FS Management Console.
2. Expand the **Trust Relationships** folder.
3. Right-click the **Relying Party Trusts** folder, and then click **Add Relying Party Trust** to begin the Add Relying Party Trust Wizard.
4. Click **Start**.

Next, configure Relying Party Trust with the Add Relying Party Trust Wizard.

1. Choose **Enter data about the relying party manually**, and then click **Next**.
2. Enter "Webex WFO" in the **Display name** field, and then click **Next**.
3. Choose **AD FS profile**, and then click **Next**.
4. Click **Next** on the **Configure Certificate** step. You do not need to specify an optional token encryption certificate.
5. Select the **Enable support for the SAML 2.0 WebSSO protocol** check box, enter the Single Sign On URL (found under **Service Provider** on the Authentication page), and then click **Next**.
6. Enter the Entity ID (found under **Service Provider** on the Authentication page) in the **Relying party trust identifier** field, click **Add**, and then click **Next**.
7. Choose **Permit all users to access this relying party**, and then click **Next**.
8. Click **Next** on the **Ready to Add Trust** step to complete configuration and add the relying party trust.

9. Select the **Open the Edit Claim Rules dialog for this relying party trust when the wizard closes** check box, and then click **Close**. The Edit Claim Rules window opens automatically.

Configure the LDAP email claim rule for the Webex WFO trust

1. Click **Add Rule...** under the **Issuance Transform Rules** tab in the Edit Claim Rules window.
2. Select **Send LDAP Attributes as Claims** from the **Claim rule template** drop-down list, and then click **Next**.
3. Enter "LDAP Email Address" in the **Claim rule name** field.
4. Select **Active Directory** from the **Attribute store** drop-down list.
5. Select **E-Mail Addresses** from the **LDAP Attribute** drop-down list.
6. Select **E-Mail Address** from the **Outgoing Claim Type** drop-down list.
7. Click **Finish** to complete configuration of this claim rule and add the incoming claim transform rule.

Configure the incoming claim transform rule for the Webex WFO trust

1. Click **Add Rule...** under the **Issuance Transform Rules** tab in the Edit Claim Rules window.
2. Select **Transform an Incoming Claim** from the **Claim rule template** drop-down list, and then click **Next**.
3. Enter "Transform Email Address" in the **Claim rule name** field.
4. Select **E-Mail Address** from the **Incoming claim type** drop-down list.
5. Select **Name ID** from the **Outgoing claim type** drop-down list.
6. Select **Transient Identifier** from the **Outgoing name ID format** drop-down list.
7. Choose **Pass through all claim values**.
8. Click **Finish** to complete configuration of this claim rule.
9. Click **OK** to finish editing claim rules and close the Edit Claim Rules window.

Configure the secure hash algorithm and import your service provider certificate

1. Open the Windows Server AD FS Management Console.
2. Double-click the Webex WFO trust you created in the above step to open the Webex WFO Properties window.
3. Click the **Advanced** tab, and then select **SHA-1** from the **Secure hash algorithm** drop-down list.
4. Click the **Signature** tab, and then click **Add...** and select your service provider certificate.

> **NOTE** If you don’t see your service provider certificate, you might need to select All files (*.*) in the file-type filter in the lower left corner of the window.

5. Click **OK** to finish editing the trust properties and close the Webex WFO Properties window.

Export your identity provider certificate

1. Open the Windows Server AD FS Management Console.
2. Expand the **Certificates** folder.
3. Double-click the Token-signing certificate to open the Certificate window.
4. Click the **Details** tab, and then click **Copy to File...** to begin the Certificate Export Wizard.
5. Click **Next** to continue.
6. Choose **Base-64 encoded X.509 (.CER)**, and then click **Next**.
7. Specify a unique file name and location to save the file, and then click **Finish**. A dialog box reporting that the export was successful should appear. Use the contents of the exported file to configure your IdP with Webex WFO.
8. Refer to Configuring an Authentication Method to configure an ADFS identity provider with Webex WFO and enable SAML authentication.

Field descriptions

The following fields appear when you select Enable SAML Authentication.

Service Provider

Field	Description
Authentication URL	(Read-only) The URL for Webex WFO that directs you to the single sign-on URL.
Entity ID	(Read-only) The entity ID provided by Webex WFO. Use this information to configure your IdP.
Use Tenant Name in Entity ID	Select this check box to prepend the name of the tenant to the tenant’s public host name in the Entity ID.
Single Sign On URL	(Read-only) The URL to send SAML responses to from the IdP. Use this information to configure the Assertion Consumer Service

Field	Description
	URL on your IdP. This URL supplied by Webex WFO is not the same as the Single Sign On URL provided by your IdP, which must be entered in the field under **Enable SAML Authentication**.
SAML Signature Algorithm	The Default algorithm is configured by your organization. Other supported algorithms are SHA1, SHA256, and SHA512.
SAML Digest Algorithm	The Default algorithm is configured by your organization. Other supported algorithms are SHA1, SHA256, and SHA512.
Sign SAML Response	This box is selected by default. Clear this if you do not want to sign the SAML response.
Service Provider Certificate	(Read only) The certificate to configure your IdP with Webex WFO. You can use the default global certificate provided by Webex WFO (cloud deployments only) or upload a self-managed certificate and private key. See Managing service provider certificates for Webex WFO. ▪ Import—Imports a self-managed service provider certificate into Webex WFO. ▪ Export—Exports your current service provider certificate. ▪ View Details—Shows the details of the current service provider certificate: issuer, subject, and start and end date. ▪ Export Metadata—Exports the metadata for the current service provider certificate.
Private Key	The private key for a self-managed service provider certificate. See Managing service provider certificates for Webex WFO. ▪ Import—Imports a new private key for a self-managed service provider certificate. The syntax of this private key must be PKCS 8.

Field	Description
	■ Delete—Deletes the existing private key.

Managing service provider certificates for Webex WFO

Not all IdPs or IdP configurations require service provider certificates.

IdP	Certificate Required
ADFS	Yes
Okta	No
Other IdPs	Varies by configuration.

If your IdP or IdP configuration requires a service provider certificate to integrate with Webex WFO, you have several options, depending on whether your Webex WFO deployment is in the cloud or on premises.

Deployment	Option
Cloud, On Premises	Use the default global certificate provided by Webex WFO.
Cloud, On Premises	Import a self-managed certificate and private key. The certificate can be self-signed or it can come from a third party (for example, Verisign or DigiCert). The syntax of the private key must be PKCS 8.
On Premises	On the server where you installed Webex WFO, save a self-managed certificate and private key in the shared configuration directory. This directory is the UNC path that was entered during Webex WFO installation. See the “Installing Webex WFO” section of the *Webex WFO Installation Guide for On Premises Deployments*. The certificate and private key must have the following names: ■ Certificate—serviceProvider.crt

Deployment	Option
	■ Private Key—serviceProvider.key The certificate can be self-signed or it can come from a third party (for example, Verisign or DigiCert). The syntax of the private key must be PKCS 8.

Repurpose an ACD ID

The Repurpose ACD ID feature enables you to reuse ACD IDs from your Avaya system in Webex WFO. While maintaining all your historical data, it removes the ACD ID association from an inactive user (for example, one who has left your contact center) and allows you to assign it to a new user. This feature is only available for Avaya systems.

When you repurpose an ACD ID, the following associations are removed from the inactive user:

- ACD ID
- User profile from the Avaya ACD

After the ID is repurposed, the inactive user is no longer synced with the ACD, and no further data for the inactive user is extracted from the ACD.

All future data that is extracted from the ACD for the repurposed ID will be associated with the new user.

Repurpose an Avaya ACD ID

1. In Webex WFO, navigate to the Users page, and then select the inactive user.
2. (Optional) Clear the **Activate this user** check box.

   BEST PRACTICE Repurposing users' ACD IDs does not affect their activation status. If users are no longer active in Webex WFO, deactivate them before you repurpose their ACD IDs.

3. Click **Repurpose ACD ID**.
4. Click **Save**.
5. Configure the new user in the ACD. The next time Webex WFO syncs with the ACD, a new user with the repurposed ID will be added in Webex WFO.

Configure the password policy

Use the Password Policy page to configure your user-password policy to meet your organization’s security requirements.

Field descriptions

NOTE These settings apply only to passwords managed by Webex WFO. Passwords handled by an external identity provider (IdP) via single sign-on adhere to that IdP’s unique password policy (see Configure an authentication method).

Field	Description
Minimum password length	The minimum number of characters a user’s password must be for your organization. The Webex WFO minimum password length is eight characters. Default value = 8.
Prevent reuse of the last ___ passwords	Select this check box to prevent users from setting a password that matches any of a specified number of previous passwords. Default value = 5
Require new password after ___ days	Select this check box to require users to set a new password after a specified number of days. You are notified upon login if your password is set to expire within seven days. If your password expires, you must set a new password the next time you log in. Default value = 90. **NOTE** If you shorten the expiration period, you can cause existing passwords to expire. For example, if you shorten the expiration period from 90 days to 60 days, passwords that are older than the new 60-day limit will become expired.
Lock user account after ___ failed login attempts	Select this check box to lock a user’s account after a specified number of failed login attempts. If a user’s account becomes locked, that user will be unable to log in until they reset their password, or an administrator unlocks the account or resets the password. Default value = 5.

Field	Description
	A user with the Administer Password Policy permission can unlock an account from the Users page (see Manage users). **NOTE** If a user's account is locked, login will be disabled through both Webex WFO and single sign-on. However, an account only becomes locked following failed Webex WFO login attempts. Failed single sign-on login attempts are handled by the IdP. **NOTE** This option is enabled by default for new customers starting with Version 10.0 Update 2017.9. Customers who configured their password policy before the release of Version 10.0 Update 2017.9 will maintain those settings.

Some additional password complexity requirements are not configurable. These requirements are described below.

Password complexity requirements are based on Microsoft's password policy: https://technet.microsoft.com/en-us/library/hh994562.aspx.

The following rules apply when you create or edit a user, or when you change or reset a password.

- Passwords cannot contain any white spaces (blanks).
- Passwords must be at least eight characters long. Minimum length can be configured by an administrator.
- Passwords must contain characters from three of the following four categories:

Category	Description
Uppercase letters	A–Z Uppercase unicode characters: http://www.fileformat.info/info/unicode/category/Lu/list.htm
Lowercase letters	a–z Lowercase unicode characters: http://www.fileformat.info/info/unicode/category/Lu/list.htm

<table>
<tr><th>Category</th><th>Description</th></tr>
<tr><td>Numbers</td><td>0–9</td></tr>
<tr><td>Special characters</td><td>The following characters are allowed for a tenant database password:
! # $ % & ( ) , . / : ; = ? @ ^ ` |<br>The following characters are allowed for all other passwords:<br>! " # $ % & ' ( ) * + , - . / : ; < = > ? @ [ ] ^ _ `
{ | } ~</td></tr>
</table>

These rules apply only where you configure a password that is controlled by Webex WFO. If a user enters a password for an external system that is not controlled by Webex WFO, Webex WFO will not validate the password (for example, ACD configuration).

NOTE A user can be created without a password (manually or automatically via ACD sync). A user without a password cannot log in. That user must use the “Forgot Password” link and set up a password.

Restrict access to specific IP addresses

On the Network Access page, tenant administrators can enhance their tenant’s security by controlling (or “whitelisting”) which IP addresses users are allowed to access Webex WFO from.

Tenant administrators can add one or more IP address ranges, and users can only access Webex WFO features if they log in to Webex WFO from an IP address within the configured ranges. If users log in to Webex WFO from an IP address that is not within the configured ranges, they receive an error message and cannot log in.

IP address ranges whitelisted by a tenant administrator apply to that tenant only. System administrators can whitelist additional IP ranges, and IP ranges whitelisted by a system administrator apply to all tenants in the system. If both a tenant administrator and a system administrator whitelist IP ranges, users can access Webex WFO from both the tenant whitelist and the system whitelist.

Webex WFO currently supports whitelisting only for IPv4 addresses.

NOTE Tenant administrators who have been added by a system administrator can access their tenant from any IP address, even an IP address that is not whitelisted. This ensures that tenant administrators can access their tenant even if there is an incorrect whitelisting configuration.

Enable whitelisting

1. Select **Enable Whitelist Access Restriction**.
2. Click **Add IP Range**. The Add IP Range dialog box appears.
3. In the Name field, enter a unique name for the IP address range.
4. In the IP Range Start field, enter the first valid IPv4 address that you want to include in the range.
5. In the IP Range End field, enter the last valid IPv4 address that you want to include in the range.

   > **NOTE** You must enter an IP address in the IP Range End field. If you enter the same IP address that you entered in the IP Range Start field, users can only access Webex WFO from that IP address.

6. Click **Add**.
7. Click **Save**.

IP Address Ranges table

The IP Address Ranges table enables you to monitor, edit, and delete the IP address ranges that tenant administrators have whitelisted.

> **NOTE** System administrators can also whitelist IP address ranges. IP address ranges whitelisted by a system administrator apply to all tenants in the system, but the ranges that they whitelist do not appear in the tenant's IP Address Ranges table. For a complete list of whitelisted IP address ranges, contact your system administrator.

Field	Description
Name	The name of the IP address range.
IP Range Start	The first IP address that is included in the range.
IP Range End	The last IP address that is included in the range.
Actions	▪ Edit icon—Enables you to change the name, start, or end of an existing IP range. ▪ Delete icon—Removes an existing IP range from the whitelist. Any users who currently log in to Webex WFO from the IP addresses included in this range will not be able to access Webex WFO features from those IP addresses.

On-premises deployments

If your company is not using the Apache load balancer configuration that is packaged with the Webex WFO installation, you must set the X-Forwarded-For (XFF) header of your load balancer to the IP address of the original client.

Related topics

- Security Update: TLS 1.1 and weak SSL/TLS 1.2 ciphers will be deprecated

Configure the Data Server

The Data Server Configuration page enables you to set up Data Server features based on a contact center's geographic location. For example, you can configure a contact center in New York differently than a contact center in California. This allows each site to operate with minimal WAN traffic.

> **NOTE** WFM interprets all timestamps in Avaya historical data files as being in the tenant time zone.

Navigate to Application Management > Global > Administration > Downloads to download the Webex WFO Data Server. Information on how to install the Webex WFO Data Server can be found in "Installing the Webex WFO Data Server" in the *Webex WFO Installation Guide*.

Prerequisites

- You have the Administer Tenant or Update Tenant permission.

Page location

Application Management > Global > System Configuration > Data Server Configuration

Data Server configuration in multi-tenant environments

Some data server features are not available in multi-tenant environments. In such an environment, the following configuration options do not appear on the Data Server Configuration page:

- Regional Data Server Reconciliation Settings
- Data Server Device Sync Settings
- Recording SIPREC Signaling Server Settings
- Recording CTI Signaling Server Settings
- Recording Capture Server Settings

Field descriptions

Use the Data Server Configuration page to configure and maintain the data server features. For more information about how to configure the Data Server for a specific ACD, see the following pages or the ACD's integration guide or tech note if available:

If your organization has any of the following integrations, consult that ACD's integration guide for additional data server configurations specific to the ACD.

- Cisco Unified Contact Center Enterprise
- Cisco Unified Contact Center Express
- Cisco Webex Contact Center

The fields on the Data Server Configuration page are described below.

Select Data Server Configuration

Select the URL for the contact center data server whose regional features you want to configure.

Display Name

Enter the display name of the data server you selected.

Regional Data Server ACD Sync Settings

Select the Enable Sync check box to enable ACD synchronization on the regional data server, and then use the Available and Assigned panes to assign servers to ACD synchronization.

Regional Data Server ACD Capture Settings

Select the Enable Capture check box to enable ACD capture on the regional data server, and then use the Available and Assigned panes to assign servers to ACD capture.

Regional Data Server Real-Time Event Settings

Select the Enable Real-Time Events check box to enable real-time events on the regional data server, and then use the Available and Assigned panes to assign servers to real-time event capture.

Regional Data Server Staged Upload Settings

Select the Enable Staged Upload check box to enable staged uploads on the regional data server, and then configure the tenant's staged upload settings. For more information about Stage Upload, see Configure staged upload.

> **NOTE** Enabling this component alone does not cause agent PCs to use Stage Upload. Agents must also be associated with the Staged Upload Data Server through Teams or the IP Address Filter and one or more correctly configured rules in the QM Workflow Daily Event.

Field	Description
Location	The UNC path to the storage location. A UNC path requires the following format: \\ComputerName\SharedFolder\Resource **NOTE** If the UNC path is changed, the recordings on the previous staged upload location must be moved manually. The UNC path and user name must be accessible by both the Webex WFO Desktop installed on the agent's desktops and the Data Server.
Username	The user name of the user who administers the staged upload server.
Password	The password of the user who administers the staged upload server.

Staged Upload IP Address Filter Configuration

This section is visible only when staged upload is enabled. Enter ranges of IP addresses in CIDR notation that include the IP addresses of the agent PCs with Smart Desktop that you want to use Staged Upload. Any agent whose PC has an IP address that is included in the IP Address Filter is associated with the Stage Upload Data Server.

> **NOTE** Agents who are associated with the Staged Upload Data Server by IP address will use Staged Upload only if they are also associated with a correctly-configured QM Workflow Daily Event. For more information about Two-Stage Upload, see "Configuring the Staged Upload Component" in the *Design Guide for On-Premises* or *Cloud Deployments*.

Enter an IP address range and click Save. You can add multiple ranges, which are listed in the pane above the entry field. Once added to the pane, you can also edit or delete a range. Click the pencil icon to edit the range, and click the X icon to delete the range.

Regional Data Server Reconciliation Settings

Select the Enable Reconciliation check box to enable the reconciliation of the data server. Move the servers that are to be reconciled from the Available pane to the Assigned pane.

Active Directory Sync

Select the Enable Sync check box to enable Webex WFO to match and syncWebex WFO users with Active Directory users. See Connect to an Active Directory server.

Data Server Device Sync Settings

Select the Enable Device Sync to enable syncing selected ACDs via the selected data server. Move the servers that are to be synced from the Available pane to the Assigned pane.

Recording SIPREC Signaling Server Settings

Select the Enable SIPREC Signaling check box to enable SIPREC signaling services. Enter the host name or IP address of the data server where the SIPREC Signaling service is installed.

NOTE This location must be accessible by the installed instances of Smart Desktop.

Recording CTI Signaling Server Settings

Select the Enable CTI Signaling check box to enable CTI signaling services. Enter the host name or IP address of the data server where the CTI Signaling service is installed.

NOTE This location must be accessible by the installed instances of Smart Desktop.

Recording Capture Server Settings

Select the Enable Audio Recording check box to enable network recording instead of or in addition to endpoint recording (via Smart Desktop). Then enter the following information:

- Host name or IP address of the data server on which the capture server is installed. This address must be accessible by the installed instances of Smart Desktop.
- Enter the folder file path where recording files are to be temporarily stored before upload. This folder must be accessible by a user with Local System credentials.

Media Import Server Settings

Select the Enable Media Import check box to enable the import of recording files from an external location. Move the ACDs that are the sources of the recordings from the Available to the Assigned pane.

Regional Data Server GIS File Location

Enter the path to the directory from which the Data Server imports files. If you are using the default location (..\reports) under the Data Server installation directory, the field can remain blank.

Local Web Service Settings

Select the Enable Local Web Service check box to enable API integration on this data server. If enabled, you have the option to enable the following:

- Cisco IP Phone Services Controls—Select this check box to allow Cisco-enabled recording controls from supported Cisco devices.

  NOTE See Configure Cisco IP Phone Services Controls for the configuration procedure.

- Simplified Recording Controls API—Select this check box to use the native data server authentication for Cisco recording controls.

SFTP Configuration

Enter the data required to configure your secure FTP server.

Field	Description
Host Name	The secure FTP server host name.
Username	The user name of the user who administers the SFTP server.
Password	The password of the user who administers the SFTP server.

HRMS Configuration

Select the Enable HRMS Export to enable this data server to export data. If you have multiple data servers, only one should be enabled to export data.

Configure Cisco IP Phone Services Controls

The Cisco IP phone services controls component enables Cisco recording controls from supported Cisco devices. Follow the steps detailed below to configure Cisco IP phone services in Webex WFO and Cisco Unified Communications Manager.

Prerequisites

- You need to have Web Access over HTTP enabled on the devices where you plan to use the Cisco IP Phone Service Recording Controls.
- You need a Webex WFO Data Server.

Page location

Application Management > Global > System Configuration > Data Server Configuration

Procedures

Configure IP Phone Service recording controls in Webex WFO

1. Under **Local Web Service Settings**, select the **Enable Local Web Service** check box to enable API integration on this data server.
2. Select the **Enable Cisco IP Phone Service Controls** check box.
3. Configure all other fields as desired. See Configure the Data Server for more information.
4. Click **Save**.

Enable and start the Webex WFO Data Server Web Services service

The Webex WFO Data Server Web Services service is disabled by default.

1. Navigate to **Services** in your Server Manager application. Right-click the **Calabrio ONE Data Server Web Services** service, and then select **Properties**. The **Properties** pop-up displays.
2. Within the **General** tab, select **Automatic** from the **Startup type** drop-down list.
3. Click **OK**. The **Services** page displays.
4. Right-click **Calabrio ONE Data Server Web Services**.
5. Click **Start**.

Add a phone service in Cisco Unified Communications Manager

This procedure is conducted in Cisco Unified Communications Manager Administration. See “Phone Service Addition” in *Cisco Unified IP Phone Services Application Development Notes for Cisco Unified Communications Manager and Multiplatform Phones* for more information on configuring Cisco IP Phone Services.

1. Navigate to **Device** > **Device Settings** > **Phone Services**.
2. Enter the values for the parameters detailed below to configure for Cisco Recording Controls IP Phone Service.

Parameter	Value
Service URL	http://<Data Server IP Address>:8080/recordingcontrolsservlet
Service Category	XML Service
Service Type	Standard IP Phone Service

Subscribe a device to the phone service

To use a Cisco IP Phone Service a device must first be subscribed to it.

1. Navigate to the Phone Configuration screen. Select **Subscribe/Unsubscribe Services** from the **Related Links** drop-down list.
2. Select the service, then click **Next**.
3. Click **Subscribe**.

Related topics

- Configure the Data Server

Data Server settings for a Serenova ACD

Configure a Data Server for a Serenova ACD

1. Select the Data Server that you want to use for the Serenova ACD.
2. Configure the following settings.

Setting	Configuration
Regional Data Server ACD Sync Settings	Select the **Enable Sync** check box, and then move the Serenova ACD from **Available** to **Assigned**.

3. Click **Save**.

Connect to an Active Directory server

You can use a connection to an Active Directory (AD) server in your environment for user authentication, sync, or both. Authentication is available only for on-premises deployments of Webex WFO.

To unlink synced users, go to Unlink synced users.

NOTE Importing multiple Active Directory certificates is not supported. When you import a new certificate any existing certificate is overwritten by the new certificate.

Page location

Application Management > Global > System Configuration > Active Directory Configuration

Prerequisites

- At least one configured AD domain exists.
- Each AD domain has at least one configured user path.
- The Webex WFO server is in the same domain as the user.

Procedures

Configure Active Directory

> **NOTE** For more information about any of the fields on this page, go to About Active Directory configuration in the *Webex WFO User Guide*.

1. Select **Create New Active Directory Configuration**.
2. Enter the Domain Name, Host Name, Port, User Name, and Password in the Active Directory Authentication section.
3. (Optional) Select the **Use SSL** check box, and then import the certificate.
4. (Sync only) Enter the Root DN, Organizational Units, and Synchronization Interval (Minutes) in the Active Directory Sync section.
5. (Sync only) Select the property to match the AD user with the Webex WFO user from the **User Profile Matching Property** drop-down list.

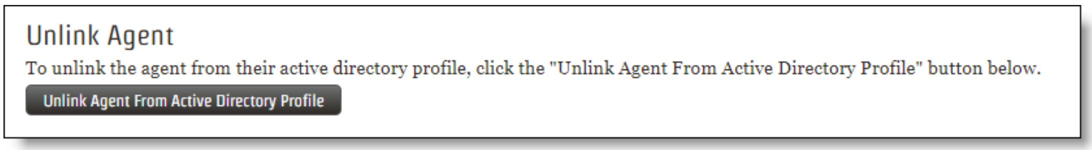
   > **NOTE** After the AD sync is set up, the matching property allows you to verify that the sync is working and unlink users. Select **Default** to link users by Windows login.

6. Click **Test Connection** to ensure that your AD connection is configured correctly.
7. Click **Save**.
8. (Sync only) Navigate to Application Management > Global > System Configuration > Data Server Configuration.
9. (Sync only) Select the data server for AD sync from the **Select Data Server Configuration** drop-down list.
10. (Sync only) In the **Active Directory Sync** section, select the **Enable Active Directory Sync** check box, and then move the AD server from **Available** to **Assigned**.
11. (Sync only) Click **Save**.

Verify that AD sync is working

You can verify the AD sync after the synchronization interval has passed.

1. Navigate to Application Management > Global > User Configuration > Users.
2. Select a user who has the same identity as an AD user, based on the matching property that you selected in step 6 above. If the Unlink Agent section (below) appears on the screen, AD sync is working.



Unlink synced users

When a Webex WFO user and an AD user are unlinked, the following happens:

- Changes to properties in the AD do not transfer to Webex WFO.
- The user's Windows login can be edited.
- Webex WFO retains the Recording user profile and all the values stored in it.

1. In Webex WFO, navigate to Application Management > Global > User Configuration > Users.
2. If necessary, select the **Edit an existing user** radio button.
3. Select the user to unlink from the **Select User** drop-down list.
4. Click **Unlink Agent from Active Directory Profile** (in the Unlink Agent section). A warning message appears.
5. Click **Yes**.
6. Change the matching property field so that the Webex WFO user no longer has the same identity as the AD user.

   The following table describes how to change the Webex WFO user, depending on which matching property you selected when you linked the users.

Matching Property	Change
First Name / Last Name	Change the value in the First Name or Last Name field.

Matching Property	Change
Employee ID	Change or delete the value in the Employee ID field.
Default	Change or delete the value in the Windows Login field.
User Name	Change the value in the User Name field.

7. Click **Save**.
8. (Optional) To permanently unlink users, change the equivalent properties in the AD. If you do not change the AD information, the Webex WFO user might be matched with the AD user again the next time the sync runs.

Related topics

- About Active Directory configuration in the *Webex WFO User Guide*—Learn more about how Active Directory configuration works.

About Active Directory configuration

The Active Directory Configuration page lets you create or edit a connection between Webex WFO and an Active Directory (AD) server in your environment. You can use this connection for user authentication, sync, or both.

Note the following parameters when configuring the connection with the AD server, whether for authentication, sync, or both:

- At least one configured AD must exist.
- Each AD domain must have at least one configured user path.
- The Webex WFO server must be in the same domain as the user.

Authentication

AD authentication enables you to use AD users and passwords for authentication in Webex WFO. It is available only for on-premises deployments of Webex WFO.

Sync

AD sync enables Webex WFO to sync Webex WFO users with AD users. When AD sync is configured, Webex WFO matches existing Webex WFO users with existing AD users. Then, whenever an AD user’s first name, last name, employee ID, or email address is changed, Webex WFO also changes the corresponding values of the matched Webex WFO user.

- AD sync does not add or deactivate Webex WFO users.
- If Webex WFO cannot match an AD user with any existing Webex WFO user, it does not add a new Webex WFO user.
- If an AD user who is synced with a Webex WFO user is deleted in AD, Webex WFO does not deactivate the Webex WFO user.

You can review which AD users are matched with Webex WFO users and which ones are not on the Active Directory Sync page (see Review Active Directory sync results).

Matching users

The following list provides an overview of how Webex WFO matches users.

1. The administrator configures the AD connection, including the organizational units that contain the users to be synced.
2. The administrator selects one of four matching properties: Default, Employee ID, First Name / Last Name, or User Name. If the administrator selects Default, Webex WFO uses the Default matching property only. If the administrator selects First Name / Last Name, Employee ID, or Email, Webex WFO first uses the Default matching property, then uses the selected matching property.
3. Each matching property designates a field on the Users page and an equivalent property in AD. Webex WFO compares Webex WFO users and AD users based on the values that the field and the property contain. When exactly one user in Webex WFO and one user in AD have the same value, Webex WFO matches the users.

   The following table describes which field and which equivalent property must have the same value for Webex WFO to match users.

Matching Property	Users Page	AD Property	Notes
Default	Windows Login	User logon name (pre-Windows 2000)	If selected, Webex WFO matches users with the Default matching property only. AD has two user logon name properties: the “User logon name property” (<user>@<domain>) and the “User logon name (pre-Windows 2000)” property (<domain>\<user>). Webex WFO matches users on the “User logon name (pre-Windows 2000)” property only. If you edit the “User logon name (pre-Windows 2000)” property in AD after users are matched, Webex WFO unmatches the AD user from the Webex WFO user, regardless of the matching property that Webex WFO used to match them originally.
First Name / Last Name	First Name	First name	If selected, Webex WFO first matches users with the Default matching property, then with the First Name / Last Name matching property.
	Last Name	Last name	First Name / Last Name is not case-sensitive. If multiple Webex WFO users have the same First Name and Last Name as a single AD user, Webex WFO does not match the AD user with any Webex WFO user.

Matching Property	Users Page	AD Property	Notes
Employee ID	Employee ID	employeeID	If selected, Webex WFO first matches users with the Default matching property, then with the Employee ID matching property. If multiple Webex WFO users have the same Employee ID as a single AD user, Webex WFO does not match the AD user with any Webex WFO user.
User Name	User Name	E-mail	If selected, Webex WFO first matches users with the Default matching property, then with the User Name matching property.

4. For each Webex WFO user whom Webex WFO matches with an AD user, Webex WFO does the following:
   - Adds a Recording user profile, if the user does not already have one.

   - Populates any of the following fields in the Recording user profile whose equivalent properties are configured in AD: First Name, Last Name, Email Address, External User ID, and Employee ID.
   - Disables editing the Windows Login field on the User's page.
5. If the Recording user profile has the correct precedence, Webex WFO transfers the values from the Recording user profile to the Webex WFO user.

> **NOTE** If an Override user profile does not already exist, Webex WFO does not create one. This means that the values in the Recording user profile can overwrite the identity traits of a user who was manually created in Webex WFO, including first name, last name, user name, and employee ID. For more information about user profiles, see Manage user profiles and Configure global settings, "User Profile Precedence."

Syncing matched users

When someone changes a matched user in AD, Webex WFO detects it and makes several changes. The following table summarizes these changes.

Change in AD	Resulting Change in Webex WFO
"First name" property is changed	First name in the Recording user profile is changed. If the Recording user profile has the correct precedence, the user's first name is also changed on the User's page.
"Last name" property is changed	Last name in the Recording user profile is changed. If the Recording user profile has the correct precedence, the user's last name is also changed on the User's page.
"employeeID" property is changed	Employee ID in the Recording user profile is changed. If the Recording user profile has the correct precedence, the user's employee ID is also changed on the User's page.
"E-mail" property is changed	Email address in the Recording user profile is changed. If the Recording user profile has the correct precedence, the user's user name is also changed on the User's page.
"User logon name (pre-Windows 2000)" property is changed	The user is unmatched.

Unmatching synced users

If you no longer want a Webex WFO user to be linked with an AD user, you can unlink them. When a Webex WFO user is unlinked from an AD user, Webex WFO stops updating the user and the user's Recording user profile when properties are changed in AD, and it enables the user's Windows login for editing.

Unmatching a Webex WFO user does not delete the Recording user profile or delete any of the values stored in it, nor does it prevent the Webex WFO user from being matched with the AD user again the next time that sync runs. To permanently prevent Webex WFO from matching users, you must also change the Webex WFO user before sync runs again so that the Webex WFO user no longer has the same identity (as determined by the matching property that is currently selected) as the AD user.

Field descriptions

The fields on the Active Directory Configuration page are described below.

Active Directory Authentication

Field	Description
Domain Name	The domain of AD. This domain must be unique among any other AD domains. This domain must also match the domain of a user's Windows login as configured in the Windows Login field on the Manage users page.
Host Name	The host name or IP address of the AD server.
Port	The port used to access the AD server. The default is port 389, or 636 if you are using SSL. The Webex WFO server must allow socket communication on this port to be able to access the AD server for user authentication.
User Name	The Windows login of a user with read access to the AD database. This user name is used to verify configuration information and validate user paths.
Password	The password for the user with read access to the AD database.
Authentication Enabled	Select this check box to enable AD authentication. Leave this check box cleared if you are using AD sync only.
Use SSL	Select this check box to use Secure Socket Layer (SSL) for the connection to the AD server. Selecting this option changes the

Field	Description
	default port number in the Port field.
Certificate	(Appears when you select **Use SSL**) The certificate that provides the AD identity and public key for SSL communication. Contact your AD administrator for the location of the certificate for AD. In many cases, this certificate is issued by the Certificate Authority on the AD machine.

Active Directory Sync

Field	Description
Root DN	The domain component of the distinguished name of the organizational unit that stores the AD users who you want to sync with Webex WFO users. **EXAMPLE** You want to sync AD users who are stored in an organizational unit that has the following distinguished name: `ou=Agents,ou=Users by Role,ou=User Accounts,dc=example,dc=com` You enter `dc=example,dc=com` in the Root DN field.
Organizational Units	The distinguished name of the organizational unit that stores the AD users, minus the domain component. To specify multiple organizational units in the same domain, separate their distinguished names (minus the domain component) with a semicolon. **EXAMPLE** You want to sync AD users who are stored in an organizational unit (Agents) that has the following distinguished name: `ou=Agents,ou=User`

Field	Description

	`Accounts,dc=example,dc=com`
	You enter the following text in the Organizational Units field:
	`ou=Agents,ou=User Accounts`
	Then, you decide you want to also sync AD users who are stored in another organizational unit, Supervisors. This organizational unit is in the same domain, and it has the following distinguished name:
	`ou=Supervisors,ou=User Accounts,dc=example,dc=com`
	You edit the text in the Organizational Units so that it reads as follows:
	`ou=Agents,ou=User Accounts;ou=Supervisors,ou=User Accounts`
	The table on the Active Directory Sync page contains all AD users who are located in the organizational units that you designate, both those who are matched with Webex WFO users and those who are not. See Review Active Directory sync results .

Synchronization Interval (Minutes)	The frequency in minutes that Webex WFO syncs with AD. Webex WFO also updates the table on the Active Directory Sync page according to this interval. The minimum is 10 minutes.
User Profile Matching Property	The matching property or properties that Webex WFO uses to determine whether a Webex WFO user and an AD user have the same identity. If you select Default, Webex WFO matches users with the Default matching property only. If you select First Name / Last Name, Employee ID, or Email, Webex WFO first matches users with the Default matching property, then matches users with the selected matching property.

Field	Description
	Changing the matching property does not unmatch users who are already matched.

Review Active Directory sync results

Use the Active Directory Sync page to check which users from Active Directory (AD) are and are not matched with Webex WFO users or to export the list of AD users as a CSV file. A **Matched** status indicates the AD user is matched with a Webex WFO user. A **Not Matched** status indicates the AD user is not matched with any Webex WFO user.

By checking the results of your Active Directory synchronization you can verify:

- Everything synced as intended.
- Users were matched who should be unmatched:

  If you no longer want a Webex WFO user to be linked with an AD user, you can unlink them. When a Webex WFO user is unlinked from an AD user, Webex WFO stops updating the user and the user's Recording user profile when properties are changed in AD, and it enables the user's Windows login for editing. See Connect to an Active Directory server for more information on unlinking users.
- Users were unmatched but should be matched. If so, ensure active directory was correctly configured. See Connect to an Active Directory server

Prerequisites

- A configured Active Directory
- The Administer Active Directory Authentication permission
- The Administer Tenant permission

Page location

Application Management > Monitoring > Active Directory Sync

Procedures

Filter results

To narrow the results of your Active Directory synchronization, select the desired filter from the **Filters** drop-down list.

> **NOTE** The filter does not affect which users are included in the CSV file.

Export results

To export the synchronization results in a CSV file format, click **CSV Export**.

A CSV file is created that contains all AD users, both matched and unmatched, where:

- Active Directory Login is the "User logon name (pre-Windows 2000)" property of the AD user.
- SMTP Address is the "E-mail" property of the AD user.
- Status

> **NOTE** Your AD configuration determines the users who appear in the table, the frequency that Webex WFO updates the table, and the properties that Webex WFO uses to match users.

Related topics

- Connect to an Active Directory server
- Create and edit users
- Manage roles and permissions

Configure storage

Configuring storage involves the following:

- Choose which storage location Webex WFO uses to store a team's audio and screen recordings and Analytics data, based on the age of the recording and data files.
- Add one or more storage locations outside of Webex WFO.
- Define how long certain types of WFM data are retained.
- Save or delete your storage preferences.

Configure storage profiles

On the Storage Profiles page, you can choose which storage location Webex WFO uses to store a team's audio and screen recordings and Analytics data, based on the age of the recording and data files. This lets you keep older recordings and Analytics data that you do not need to access immediately in long-term, lower-cost storage locations while keeping newer recordings and data in storage locations that cost more but allow immediate or instant access.

Also, you can associate a compression rate for audio recordings with each storage location. This lets you lower your storage costs by converting audio recordings into higher-compression file types when they are moved into longer-term storage locations.

Page location

Application Management > Global > System Configuration > Storage Profiles

Storage overview

Webex WFO Cloud uses intelligent tiering for storage with a single price per GB per month for your total usage. New files and files that have been accessed recently are available immediately. Older files that have not been accessed recently are retrieved from a slightly slower storage tier that they may have been moved to. Older files typically only take a few seconds to be retrieved.

Understanding storage profiles

A storage profile is assigned to a team either by default or manually, and the policies in that storage profile determine where the recordings and Analytics data associated with that team's users are stored.

Webex WFO can have up to two preconfigured storage profiles: Default Storage Profile and WAV Storage Profile.

You can select one storage profile as the default. The default storage profile is automatically assigned to all teams that have not had a storage profile manually assigned to them. If you change the default storage profile, the storage profile of all teams that have been assigned to a default storage profile also changes. Teams that have been manually assigned to a storage profile are not affected by the change of the default storage profile.

Root recordings use the default storage profile only. (See How root calls and reconciliation work.)

For more information about how to manually assign a storage profile to a team, see Manage teams .

Understanding storage policies

A storage profile is made up of at least one storage policy. A policy controls the following:

- The storage location where the audio recordings, screen recordings, and Analytics data associated with a storage profile are kept
- How long the recordings and data are kept in the storage location
- The compression rate of the audio recordings that are associated with a storage profile

If you select different Media Quality compression rates for a storage profile's policies, audio recordings are converted when they change storage locations.

You can change the media quality of the default policy, but you cannot remove it, and you cannot edit its Audio, Screen, or Analytics fields.

Each policy contains the following fields.

Storage Location

Once a policy takes effect, Webex WFO places the recordings and Analytics data associated with the storage profile in the policy's storage location.

Storage locations have the following types.

NOTE The system administrator configures the locations and types that are available.

- ($$)—The storage is in a medium-cost location. Recordings and Analytics data stored in locations of this type can be accessed immediately.
- ($$$)—The storage location is high-cost network storage. Recordings and Analytics data stored in locations of this type can be accessed instantly.

The order of a storage profile's policies determines the order that Webex WFO stores recordings and Analytics data in each storage location:

- Top—Webex WFO begins by storing recordings and Analytics data in this policy's storage location.
- Middle—Webex WFO stores recordings and Analytics data in a middle policy's storage location after it stores them in the storage location of the policy above but before it stores them in the storage location of the policy below.
- Bottom (Default)—Webex WFO finishes by storing recordings and Analytics data in this policy's storage location.

Audio

The Audio field controls how long (in days, months, or years) Webex WFO stores audio recordings in a policy's storage location. The maximum amount of time that Webex WFO can store audio recordings for all the policies in a profile appears in the Total Available Storage field.

Media Quality

The Media Quality field controls the compression rate of audio recordings in a policy's storage location:

- Low Compression (WAV)
- Med Compression (Opus - Stereo)
- High Compression (Opus - Mono)

> **NOTE** From Webex WFO Version 10.3.1 onward, Low Compression (16-bit WAV) is the default. Audio recordings created before the release of Version 10.3.1 are stored in Med Compression (Opus - Stereo).

If you select different media quality compression rates for the policies in a storage profile, audio recordings are converted when they change storage locations. Order the policies in a storage profile so that audio recordings are converted from a lower to a higher compression rate. Webex WFO can convert audio recordings from a higher to a lower compression rate, but doing so does not improve the quality of audio recordings.

Screen

The Screen field controls how long (in days, months, or years) Webex WFO stores screen recordings in a policy's storage location. The maximum amount of time that Webex WFO can store screen recordings for all the policies in a profile appears in the Total Available Storage field.

Analytics

The Analytics field controls how long Webex WFO stores Analytics data in a policy's storage location. The maximum amount of time that Webex WFO can store Analytics data for all the policies in a profile appears in the Total Available Storage field.

Procedures

Create a new storage profile

The order that you add policies to a storage profile determines their order on the page. The default policy is always below all other policies. When you add a new policy, Webex WFO inserts it above the default policy and below any policies that you have added already. You cannot reorder policies after you add them.

> **NOTE** Root recordings use the default storage profile only. (See How root calls and reconciliation work.)

1. Select **Create a new storage profile**.
2. In **Name**, enter a unique name for this storage profile.
3. (Optional) If you want this storage profile to be automatically assigned to all teams that do not have a storage profile manually assigned, select **Default**.

   > **NOTE** Only one storage profile can be the default. When you make a storage profile the default, it replaces the current default storage profile.

4. Configure the default policy.
5. (Optional) Click **Add storage policy** for each policy that you want to add, and then configure the policies.

   > **NOTE** To create a policy that moves files without changing the file format, select **No change (move only)** from the **Media Quality** drop-down list. If you are working with the default storage profile, this option is not available for the top policy on the page. (This is because the top policy is the default, and the default policy needs to control storage, not movement.) For more information about how to configure policies based on their order, see Understanding storage policies.

6. Click **Save**.

Edit an existing storage profile

You can edit the storage policies in an existing storage profile, but you cannot reorder them.

1. Select **Edit an existing storage profile**.
2. Select the storage profile that you want to edit.
3. (Optional) To change the name of the storage profile, edit the **Name** field.
4. (Optional) If you want this storage profile to be automatically assigned to all teams that do not have a storage profile manually assigned, select **Default**.

   > **NOTE** You cannot manually clear the Default check box on the current default storage profile. To change the default storage profile, select the Default check box on the storage profile that you want to make the default.

   > **NOTE** Root recordings use the default storage profile only. (See How root calls and reconciliation work.)

5. (Optional) Edit the policies that you want to change.

> **NOTE** Editing an existing storage policy can cause Webex WFO to move or convert large numbers of audio recording, screen recording, and Analytics data files. For more information about how editing an existing storage policy can impact the files associated with a storage profile, see Understanding storage policies.

6. Click **Save**.

Move files without changing the file format

1. Select **Edit an existing storage profile**.
2. Select the storage profile from the **Choose Profile** drop-down list.
3. Select the files' destination from the **Storage Location** drop-down list.
4. Select **No change (move only)** from the **Media Quality** drop-down list.

> **NOTE** If you are working with the default storage profile, this option is not available for the top policy on the page. If necessary, click **+ Add Storage Policy** to add an additional storage policy that allows you to move files.

5. Click **Save**.

Add external storage locations

The External Storage page lets you add storage locations outside of Webex WFO. External storage is available as Amazon S3 buckets. You can use these external storage locations for several purposes:

- Set the long-term extended storage of audio and screen recordings after they have reached the end of their retention period (see Configure QM archive settings)
- Export audio and screen recordings in bulk (see Export contacts in bulk)

Unlike the Webex WFO-hosted storage locations where you store audio recordings, screen recordings, and Analytics data during their retention period (see Configure storage profiles), your organization needs to create and manage these external storage locations independently. You cannot associate external storage locations with a storage profile.

Prerequisites

- You have the Administer Tenant permission.
- You have the name of your organization's Amazon S3 bucket. This is where Webex WFO exports your files.

- If you are using role assumption to grant access to your Amazon S3 bucket, you have the ARN for a role that is assigned the following:
  - A policy with these permissions for your S3 bucket: ListBucket, GetBucketLocation, and PutObject
  - A trust policy that allows a Cisco production AWS account to assume a role. Contact Cisco Support for the Cisco AWS account information to use in the trust policy.
- If you are not using role assumption to grant access to your Amazon S3 bucket, you have the access key and a secret key of an IAM user that is assigned to a policy that has these permissions for your S3 bucket: ListBucket, GetBucketLocation, and PutObject. Webex WFO accesses your S3 bucket with this user's keys.

> **EXAMPLE**
>
> The following policy grants the required permissions. You can assign this IAM user to a similar policy.
>
> ```
> {
> “Version”: “<current policy language version>”,
> “Statement”: [
> {
> “Sid”: “Bucket”,
> “Effect”: “Allow”,
> “Action”: [
> “s3:ListBucket”,
> “s3:GetBucketLocation”
> ],
> “Resource”: [
> “arn:aws:s3:::<name of your S3 bucket>”
> ]
> },
> {
> “Sid”: “BucketContents”,
> “Effect”: “Allow”,
> “Action”: [
> “s3:PutObject”
> ],
> “Resource”: [
> “arn:aws:s3:::<name your S3 bucket>/*”
> ]
> }
> ]
> }
> ```

Page location

Application Management > Global > System Configuration > External Storage

Procedures

Add an Amazon S3 bucket as an external storage location using role assumption

1. Select **Create External Storage Location**.
2. In the **Name** field, enter a unique name for the S3 bucket.

   > **NOTE** This name identifies the external storage location in Webex WFO. It can be different from the name of the S3 bucket.

3. From the **Type** drop-down list, select **Amazon S3 (Immediate Access)**.
4. Configure the **AWS Storage Configuration** section as follows. The values for the fields listed below come from your organization's AWS instance. Find the values and enter them into each of the fields listed below in Webex WFO.

   > **NOTE** Refer to AWS documentation for more information on creating an IAM role or managing access keys for IAM users.

Field	Description
Use AWS IAM Role Assumption	Keep this check box selected.
Bucket Name	Enter the name of the S3 bucket. This name is case-sensitive.
Choose Region	Select the Amazon region where the S3 bucket is located.
Role ARN	The Amazon Resource Name (ARN) for the role in your AWS account that grants access to the S3 bucket (or more generally, the AWS services) Webex WFO accesses. This role ARN should be in the standard AWS format: arn:aws:iam::<CUSTOMER_AWS_ACCOUNT_ NUMBER:role/<ROLE_NAME>

5. Click **Save**. The page refreshes.
6. Select the storage location you just created from the **Choose a storage location to edit** drop-down list.
7. In the **AWS Storage Configuration** section, select **Show external ID**.

8. In AWS, configure your role's Trust Policy to use the string of numbers and letters in the **External ID** field.

   IMPORTANT The connection will not work until you complete this step.

   EXAMPLE

   This is an example of a trust policy that you can add to the role:

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
            "Effect": "Allow",
            "Principal": {
                "AWS": "<Workforce Optimization account ARN>"
            },
            "Action": "sts:AssumeRole",
            "Condition": {
                "StringEquals": {
                    "sts:ExternalId": "<Workforce Optimization-
generated external ID>"
                }
            }
        }
    ]
}
```

9. (Optional) To verify your settings, click **Test Connection**.

Add an Amazon S3 bucket as an external storage location without using role assumption

1. Select **Create External Storage Location**.
2. In the **Name** field, enter a unique name for the S3 bucket.

   NOTE This name identifies the external storage location in Webex WFO. It can be different from the name of the S3 bucket.

3. From the **Type** drop-down list, select **Amazon S3 (Immediate Access)**.
4. Configure the **AWS Storage Configuration** section as follows. The values for the fields listed below come from your organization's AWS instance. Find the values and enter them into each of the fields listed below in Webex WFO.

   NOTE Refer to AWS documentation for more information on creating an IAM role or managing access keys for IAM users.

Field	Description
Use AWS IAM Role Assumption	Clear this check box.
Bucket Name	Enter the name of the S3 bucket. This name is case-sensitive.
Choose Region	Select the Amazon region where the S3 bucket is located.
IAM Access Key	Enter the access key ID of the IAM user who is assigned to a policy that grants the permissions required to access the S3 bucket.
IAM Secret Key	Enter the secret access key of the IAM user who is assigned to a policy that grants the permissions required to access the S3 bucket.

5. Click **Save**.
6. (Optional) To verify your settings, click **Test Connection**.

Generate a new external ID for an existing Amazon S3 storage bucket

If the external ID that Webex WFO uses becomes compromised, you can generate a new one. An external ID is like a password for your organization's AWS account role. It is a unique identifier in AWS that Webex WFO uses when assuming the role in your AWS account for cross-account role access.

1. Select **Edit External Storage Location**.
2. Select the storage location from the **Choose a storage location to edit** drop-down list.
3. In the **AWS Storage Configuration** section, click **Generate new external ID**. A confirmation message appears.
4. Click **Yes**.
5. In AWS, configure your role’s Trust Policy to use the new external ID in the condition element.

IMPORTANT The connection will not work until you complete this step.

EXAMPLE

This is an example of a trust policy that you can add to the role:

```
{
    "Version": "2012-10-17",
    "Statement": [
        {
```

```
                "Effect": "Allow",
                "Principal": {
                    "AWS": "<Workforce Optimization account ARN>"
                },
                "Action": "sts:AssumeRole",
                "Condition": {
                    "StringEquals": {
                        "sts:ExternalId": "<Workforce Optimization-
generated external ID>"
                    }
                }
            }
        ]
    }
```

6. (Optional) To verify your settings, click **Test Connection**.

Related topics

- Configure QM archive settings
- Export contacts in bulk
- Configure storage profiles

Configure QM archive settings

The Archive Configuration page allows you to save or delete your QM archive preferences. Use this page if you want to keep audio and screen recordings after they have reached the end of their retention period. The files exported to the archive server will contain one CSV file and all the related audio and screen recordings. The screen and audio files are decrypted.

> **IMPORTANT** The Archive Configuration page is deprecated. It is available only to existing Cisco customers who are already using it. If you need to keep contacts beyond their retention period, we encourage you to use the Bulk Contact Export feature. See Export contacts in bulk.

Prerequisites

- External storage
- The Administer QM permission

Page location

Application Management > QM > QM Contact Flows > Archive Configuration

Procedures

Configure QM archive preferences

1. Select a configured external storage location from the **External Storage** drop-down list.

   NOTE External Storage is configured at Application Management > Global > System Configuration > External Storage.

2. Select a format from the **Video Format** drop-down list.

   Listed are m4v and webM, the format options for video files only. *M4v* is a video container format similar to MP4. M4v files have the option of DRM copy protection. *WebM* video streams are compressed with the VP8 or VP9 video codecs.

3. Select a format for audio files only from the **Audio Format** drop-down list.

   WAV audio files are lossless and uncompressed. *WebMA* audio streams are compressed using the Vorbis or Opus audio codecs.

4. Select an **Archive Time**. The time of day when the archive process runs. The format is HH:MM.

   NOTE The archive process runs once a day only. If you change this setting to a later time after the process runs, it will not run at the new time until the next day.

5. Select an **Archive Mode** from the drop-down list.

   Archive Mode options are Audio and Full. *Audio* exports the audio recordings only. *Full* exports audio and screen recordings.

6. Enter a **Filename Pattern**.
7. Click **Save**.
8. (Optional) Click **Delete** to remove your archive preferences.

Related topics

- Export contacts in bulk
- Add external storage locations
- Configure storage profiles

Configure Quality Management

The QM menus in Application Management enable you to configure the basic parameters of Quality Management in your contact center. Configuring Quality Management involves the following:

- Configure settings for Quality Management that apply to all users.
- Configure QM for recording.
- Integrate Webex WFO with one or more external survey providers to distribute post-call customer surveys after a contact has ended and collect the responses.

Configure QM global settings

Use the QM Global Settings page to configure settings for Quality Management that apply to all users. Changed settings do not take effect until the users log in again.

Prerequisites

You have the Administer QM permission.

Page location

Application Management > QM > QM Configuration > Global Settings

Note the following information about several fields on this page:

- Screen Recording Extension—When you enter a value in this field, after-call-work screen recording continues when a new call starts unless you select **Stop Extended Screen Recording on new call**. This additional screen recording can consume storage resources.

  > **IMPORTANT** The **Stop Extended Screen Recording on new call** setting does not work with CCaaS ACD integrations.

- Screen Recording Quality—The quality level you select results in recordings files that are approximately the sizes below. Your organization’s recording environment and the content of your screen recordings can significantly affect these sizes.
  - Good: 2.1 MB per minute per monitor
  - Better: 2.8 MB per minute per monitor
  - Best: 3.3 MB per minute per monitor
- Talk Over Events—The amount of time, in seconds, that talk over must take place to register as a talk over event. Enter 0 to ignore talk over events.

- Silence Events—The amount of time, in seconds, that silence must pass to register as a silence event. Enter 0 to ignore silence.
- Root Audio Recording Retention Time—To see audio root recordings on the Interactions page, use the Search Scope filter and select Root Calls.
- Root Screen Recording Retention Time—Screen root recordings never appear on the Interactions page.
- Non-Call Contact Retention Time—Non-call contacts have no audio or screen recordings associated with them. These contacts are usually created manually by clicking Create Contact on the Interactions page.
- First Calling/First Called—The first calling number and the first called number are both captured at the start of a call. A number is not captured if its check box is cleared. Instead, the second calling number or the second called number is captured.
- Display Contacts in User's Time Zone—This check box controls the Date and Time Zone fields on the Interactions and Contact Queue pages. All time filters (for example, Time Range) always search for contacts in the time zone of the capture source, even if this check box is selected.
- Smart Desktop Client - Screen Recording Priority—After saving any change to this setting, you must log in to the server where the CTI service is running and restart the CTI service for the change to take effect.
- STUN/TURN Server—After you make any changes to this server, restart the recording clients (Smart Desktop Capture and Virtual Record Server).

About screen recording priority

Smart Desktop Client - Screen Recording Priority allows you to select a preferred priority of which screen is recorded for screen monitoring when the same user is logged into both a thin client and an end-point (PC) concurrently. Meaning, the same user's AD login is used to sign into both an end-point and a thin client at the same time. Webex WFO registers **Thin Client Users** as Smart Desktop Client (SDC) connections to server operating systems such as Windows Server 2016. Webex WFO registers **End-Points Users (PC)** as SDC connections to desktop operating systems such as Windows 10. With screen monitoring, you can view an agent's screen activity, whether or not that agent is on a call. See Monitor agents in real time for more information about Live Screen Monitoring.

If the connection to a selected priority is lost, Webex WFO won't start recording on a different priority setting until the next active call.

EXAMPLE If **Thin Client Users** is selected as your screen recording priority, and the connection to your thin client is lost during a call, Webex WFO won't start recording on the lower, **End-Points Users (PC)**, priority until a new call starts.

NOTE If Screen Recording Priority is changed while an agent is on a call, the change does not affect that call but will take place with subsequent calls after the call has ended.

Related topics

- Configure global settings—Configure system-level settings

Configure QM for recording

Configuring QM for recording entails the following:

- Set up a connection between Webex WFO and one or more ACDs.
- Access the Webex WFO Smart Desktop and Webex WFO Data Server installers available for your tenant.
- Configure at least one signaling source, one signaling group, one signaling server, one recording group, and your contact center devices.
- Monitor the status of the active and standby signaling and record servers in telephony groups.
- Configure and manage metadata fields in your system.

Manage telephony servers

Use the Telephony Monitoring page to monitor the status of the active and standby signaling and record servers in telephony groups.

If you have a primary and backup signaling server, you can use this page to switch call processing to the backup server prior to performing maintenance on the primary server. At the beginning of this workflow, the primary server is in Active status, and the backup server is in Standby status.

NOTE Only servers in Active/Standby pairs can be placed in maintenance mode.

Place a server into Maintenance mode

1. Select a telephony group.
2. Select the server you want to put into Maintenance mode.

   NOTE The server to be placed into Maintenance mode must be in Active status.

3. Click **Maintenance**.

   When you click Maintenance, the backup server changes from Standby mode to Active mode, and the active server changes from Active mode to Draining mode. The calls that were already on this server continue to be processed until done ("draining" the server), at which time the server goes into Maintenance mode. New calls are directed to the new active server, which begins processing them.

   Once the server is in Maintenance mode, maintenance can be performed and the server rebooted if necessary. When maintenance is complete, the server goes into Standby mode.

Activate a server in Standby mode

1. Select the server in Standby mode that you want to activate.
2. Click **Active**.

   When you click Active, the server changes from Standby mode to Active mode, and the active server changes from Active mode to Draining mode. The calls that were already on this server continue to be processed until done, at which time the server goes into Standby mode. New calls are directed to the new active server, which begins processing them.

Field descriptions

The Telephony Monitoring page displays the status for both signaling servers and recording servers. The fields in these sections are defined in the tables below:

Field	Description
Filters	Select a telephony group from the drop-down list.
Component	The type of server: signaling or recording.
Priority	The priority of the server: Primary, Secondary, or Backup.
Server Name	IP address or server name of the signaling or recording server.
Group	Name of the signaling or recording group. **NOTE** The name of the group should indicate whether the group is a signaling or recording group.
State	Indicates if the server is connected or not connected.
Status	Current status for the server:

Field	Description
	■ Active = Server is active and processing calls. ■ Inactive = Server is not active. ■ Standby = Server is running and ready to be activated. ■ Draining = Server is processing data in queue and not accepting new data. ■ Maintenance = Server is down for maintenance.
Calls	Number of calls being processed by each server.
Last Updated	The date and time the server information was updated in the table displayed in GMT.
Maintenance Status	Current maintenance status for the signaling or recording server: ■ Active = Server is active and processing calls. ■ In Maintenance = Server is in maintenance.

Manage custom metadata fields

The Metadata Manager page is used to configure and manage custom metadata fields in your system.

Metadata allows you to add information to a customer conversation. The metadata can be captured from your ACD and other applications to pass the data to the following APIs:

- Schedule Details by Agents and Date API
- Shifts by Agent API

Webex WFO also displays these metadata fields in the Details panel in the Media Player.

Prerequisites

- You have the Administer Metadata Fields permission and Send Metadata Command permission.
- To view custom metadata you need the View Custom Metadata permission.
- To edit custom metadata you need the Edit Custom Metadata permission.

Page location

Application Management > QM Configuration > Metadata Manager

Procedures

Metadata fields you configure are displayed in a table. Use the table to view, edit, or delete a metadata field from your system.

NOTE Webex WFO supports up to 100 custom metadata fields per tenant.

Add a new metadata field

1. Complete the fields as described below
2. Click **Save**. The new metadata field appears in the table.

Edit a metadata field

1. Double-click the metadata field in the table.
2. Edit the fields on the page as needed.
3. Click **Save**.

Delete a metadata field

1. Double-click the metadata field in the table.
2. Click **Delete**.

The fields on the Metadata Manager page are described below.

Field	Description
Metadata Key	(Automatically generated) A unique identifier for the metadata field, used by APIs. The metadata key is generated based on the text you enter in the Metadata Label field. Spaces are replaced with hyphens, and “-key” is added at the end. For example, if you enter **example text** in the Metadata Label field, the Metadata Key field displays **example-text-key**. The Metadata Key field does not allow ampersands (&) or equal signs (=). If those symbols appear in the Metadata Label field, they are removed automatically in the Metadata Key field. Max characters = 39.

Field	Description
Metadata Label	The name associated with the metadata field that appears in search results and contact information.
Metadata Type	The type of information contained in the metadata field: date, hyperlink, number, or text.
ACD Data	This field is only applicable to on-premise deployments of Webex WFO. Identifies the metadata imported from the ACD. Webex WFO reconciles ACD data by matching contact information in Webex WFO with call information stored in the ACD and changes the contact information in Webex WFO. The data is updated periodically. When you map metadata to ACD Data, you must select Text in the Type field.
Data Explorer Key	(Optional) A unique identifier to map metadata with Data Explorer. You can map up to 20 metadata fields with Data Explorer.
Encrypted Check Box	(Optional) Select this option if you want to report on contacts based on custom metadata fields. If you select this box, Webex WFO encrypts the metadata when stored. The Encrypted check box is enabled only if the Exportable check box is cleared. **NOTE** You cannot search for encrypted metadata.
Exportable Check Box	If selected, you can export the metadata via Webex WFO or an API. This check box is selected by default.
Read Only	If selected, the metatdata is read-only. You cannot add or edit metadata to a contact through Webex WFO. **NOTE** If the metadata is ACD data, this check box is selected by default and is disabled.

Related topics

- Export contact metadata
- Edit custom metadata associated with a contact
- View data associated with a contact
- Add metadata tags to data sets and collections
- Delete or update multiple contacts at once

Cisco metadata fields

The following metadata fields are available with Cisco ACDs.

Field	Description
AgentPeripheralNumber	Peripheral number of the agent who handled the call. **NOTE** Can be null when the source or destination party is unmonitored or if the agent is not logged in.
AgentSkillTargetID	Identifies which agent handled the call. This value is unique among all skill targets in the enterprise. It is taken from the Agent table in the Unified ICM central database. AgentSkillTargetIDs are generated automatically when the agent is first configured in the Agent Configuration window of Unified ICM Configuration Manager. **EXAMPLE** 5001
CallReferenceID	Unique identifier of the call in a Unified CM cluster.
CallGUID	Global unique call identifier.
DateTime	Date and time that the Termination_Call_Detail table record is generated by the Peripheral Gateway (PG). The Termination_Call_Detail table record is generated by the PG when the call has either physically left the PG (for example, IVR routes the call to an agent) or when wrap-up is completed for the call after the call has left the agent device (either by disconnect or through transfer completion).

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>DigitsDialed</td><td>Digits dialed for an outbound call initiated on the ACD. These digits are not provided by all ACDs. Currently, only IVRs, the Aspect CallCenter, and the DEFINITY ECS provide values in the DigitsDialed field.

If a call is translation routed, the receiving PG also reports this field even though the call is inbound.</td></tr>
<tr><td>Duration</td><td>Duration of the call in seconds. This is the time that the switch is processing the call.

The Duration field comprises several fields of the Termination_ Call_Detail table:

LocalQTime + RingTime + TalkTime + WorkTime + HoldTime + DelayTime + NetQTime</td></tr>
<tr><td>PeripheralCallKey</td><td>Identifier assigned to the call by the peripheral (ACD, IVR). The range and type of value used in this field varies depending on the type of peripheral. This can be one of the following:
An original call, a transfer, and a consultative call as three separate calls (e.g., Call IDs 1001, 1002, 1003)
All three calls as a continuation of the same call (e.g., Call IDs 1001, 1001, 1001)
The original and transfer as the same call, but the consultative call as a second call (e.g., Call IDs 1001, 1002, 1001)
The original call as one call and the original and transfer as another call (e.g., Call IDs 1001, 1002, 1002)
These values used might not be unique, depending on the peripheral’s implementation. For example, the Aspect CallCenter and the DEFINITY ECS ACDs reuse identifiers in this field.</td></tr>
</table>

Field	Description
RecoveryKey	Unique ID assigned to each record and used internally by Unified ICM/Unified CCE to track the record.
RingTime	The number of seconds that the call spent ringing at the agent's teleset before it was answered. Ring time occurs after any DelayTime and LocalQTime. For diverted calls (that is, calls that rang at an agent's teleset before being redirected on failure to answer), RingTime is the sum of the time that the call spent ringing at each teleset.
TalkTime	The cumulative time, in seconds, that the call was in a talking state on the destination device. TalkTime is a completed call time, not an agent state time. The cumulative time, in seconds, that the call was in a talking state on the destination device. TalkTime is a completed call time, not an agent state time. **NOTE** In the Termination_Call_Detail, Skill_Group, and Agent_Skill_Group tables, TalkTime does not include HoldTime; however, in the Services and Route tables, TalkTime does include HoldTime.
Variable1	Variable used for call segmentation. Can also contain data entered during call wrap-up. This field maps to Aspect variable A.
Variable2	Variable used for call segmentation. This field maps to Aspect variable B.
Variable3	Variable used for call segmentation. This field maps to Aspect variable C.
Variable4	Variable used for call segmentation. This field maps to Aspect variable D.

Field	Description
Variable5	Variable used for call segmentation. This field maps to Aspect variable E.
Variable6	Variable used for call segmentation.
Variable7	Variable used for call segmentation.
Variable8	Variable used for call segmentation.
Variable9	Variable used for call segmentation.
Variable10	Variable used for call segmentation.
WrapupData	Data entered by the agent during call wrap-up. **NOTE** WorkTime is used to calculate Duration in the Termination_Call_Detail table and HandleTime in the Unified ICM Service, Route, and Call_Type tables.

How root calls and reconciliation work

A root call is a recording made via Gateway Recording. This recording is not associated with any user and must be reconciled to associate the root recording with an agent. Reconciled recordings can be used with Quality Management and Analytics.

A root call is a recording of the entire call from the time it enters the gateway until the time it leaves the gateway, including transfers and consultations that can involve multiple people.

NOTE You cannot use Gateway Recording with hoteling users. (See Manage hoteling users .)

Reconciliation is the process of associating root calls with agents and screen recordings by looking at PBX/ACD Call Detail Records (CDRs), Webex WFO agent-to-device associations, and end user login events. The reconciliation process runs every 10 minutes against calls that are at least 20 minutes old. Reconciliation creates assigned calls that are copies of the root call segments that belong to specific agents. Webex WFO runs reconciliation automatically.

You can view root calls in the Recording Contacts window (see Find contacts).

Webex WFO handles root calls according to the default storage profile only. If you create any additional storage profiles, they do not apply to root calls. (See Configure storage profiles .)

Configure telephony groups

Telephony groups are the backbone of an organization's recording infrastructure. Use the Telephony Groups page to create, edit, and delete telephony groups, signaling groups, and recording groups.

A telephony group consists of at least one signaling source, one signaling group, one signaling server, one recording group, and your contact center devices. You can add backups for any of these items. Adding backups is optional, but we recommend it for resiliency purposes.

NOTE Some telephony group types do not support a backup signaling source.

Different configurations of telephony groups, signaling groups, and recording groups are supported based on the telephony group type. The tables below describe telephony group configuration and CTI service details based on telephony group type.

Avaya Aura CM

Telephony Groups	1 or more
Signaling Groups per Telephony Group	1 or more
Recording Groups per Signaling Group	1 or more
CTI Service Notes	Each CTI service in the signaling group can be assigned a single AES DMCC Server.

Avaya SBC

Telephony Groups	1 or more
Signaling Groups per Telephony Group	1 or more
Recording Groups per Signaling Group	1 or more
CTI Service Notes	N/A

Cisco Unified Communications Manager

Telephony Groups	1 or more
Signaling Groups per Telephony Group	1 or more
Recording Groups per Signaling Group	1 or more

Cisco Unified Communications Manager (cont'd)

CTI Service Notes	Each CTI service in a signaling group can have a separately administered list of Unified CM CTI Managers to connect to for JTAPI.

Other

Telephony Groups	1 or more
Signaling Groups per Telephony Group	1
Recording Groups per Signaling Group	1
CTI Service Notes	N/A

Prerequisites

You have the Configure Telephony Groups permission

Page location

Application Management > QM > QM Configuration > Telephony Groups

Procedures

Configure a telephony group

1. Enter a unique name for the telephony group.
2. Select the platform type for the telephony group.
3. Click **Add**. Additional fields appear on the page.
4. Complete configuration under the **Telephony** tab according to the specified telephony group type.
    - Avaya Aura CM—See Configure Avaya Communication Manager.
    - Avaya SBC SIPREC—See Configure Avaya SBCE for SIPREC recording.
    - Cisco Unified Communications Manager (Unified CM)—See Configure Cisco Unified Communication Manager .
    - Genesys—See Configure Genesys .

5. Click **Next** to continue to signaling group configuration.

Configure a signaling group

1. Enter a unique name for the signaling group.
2. Click **Add**.
3. Enter the configuration details for the signaling group according to the table below.
4. Click **Next** to continue to recording group configuration.

Signaling group configuration

Field	Description
Primary QM Signaling Data Server	
Primary QM Signaling Data Server	The data server of the primary signaling service. The drop-down list is populated with data servers configured with the CTI or SIPREC signaling (depending on the telephony group type). This signaling service can only belong to a single signaling group.
Primary JTAPI CTI Manager primary signaling server	(Unified CM only) The data server of the primary CTI Manager for the primary QM signaling data server. The CTI Manager is a service that runs on Unified CM and handles JTAPI events for every Unified CM in the cluster. The drop-down list is populated with the Unified CM servers configured under the Telephony tab.
Backup JTAPI CTI Manager primary signaling server	(Unified CM only) The data server of the backup CTI Manager for the primary QM signaling data server. The drop-down list is populated with the Unified CM servers configured under the Telephony tab.
Backup QM Signaling Server	
Backup QM Signaling Data Server	(Optional) The data server of the backup signaling service. The drop-down list is populated with data servers configured with the

Field	Description
	CTI or SIPREC signaling (depending on the telephony group type). This signaling service can only belong to a single signaling group. The signaling service remains on the backup server until you manually initiate failover to the primary server.
Primary JTAPI CTI Manager backup signaling server	(Unified CM only) (When configuring a backup signaling server only) The data server of the server for the primary CTI Manager for the backup QM signaling data server. The CTI Manager is a service that runs on Unified CM and handles JTAPI events for every Unified CM in the cluster. The drop-down list is populated with the Unified CM servers configured under the Telephony tab.
Backup JTAPI CTI Manager backup signaling server	(Unified CM only) Only available when configuring a backup signaling server. The name of the CTI Manager for the backup QM signaling data server. The drop-down list is populated with the Unified CM servers configured under the Telephony tab.

Configure a recording group and assignments

1. Enter a unique name for the recording group.
2. Click **Add**.
3. Select the recording group and the priority for each Record server host name and IP address.
4. Click **Save**.

> **NOTE**
> When configuring recording groups, remember the following points:
>
> - If you have users in a Gateway recording or CUBE recording environment who require screen recording, you must create a recording group that connects to a CTI server and has no Record servers assigned to it.

- You can assign one or more Record servers to a recording group. A recording group requires at least one primary Record server.

  Signaling services exhaust the capacity of the primary Record servers before sending calls to secondary Record servers. If the primary signaling server is disabled (due to manual shutdown or system error), the secondary signaling server still sends calls to the primary Record servers unless the primary Record servers are also unavailable.
- A Record server can belong to only one recording group.
- You can move Record servers between recording groups.

Change the settings for a telephony group

- Select the telephony group, edit as needed, and then click **Save**. The table below shows when your changes take effect.

Telephony Group Type	Service	To apply configuration settings
Avaya SBC	Avaya SBC SIPREC	Restart the service.
	Network Recording Service	No restart required. The next polling period applies the configuration settings.
Avaya Aura CM	CTI Service	Restart the service.
	Webex WFO (VoIP Devices)	Reload the VoIP Device window.
	Network Recording Service	No restart required. The next polling period applies the configuration settings.
	Sync service	No restart required. The next synchronization applies the configuration settings.
Unified CM	Recording CTI	Restart the service.

Telephony Group Type	Service	To apply configuration settings
	Service	
	Webex WFO (VoIP Devices)	Reload the VoIP Device window.
	Desktop Recording service	Restart the service.
	Network Recording service	Restart the service. If you add a backup Recording CTI Service from the postinstall.exe while in Update Mode, you must restart the Network Recording service.

Enable a secure AES connection

To use AES encryption, you need to ensure that the AES connection is secure.

1. Log in to the AES server (for example, http://10.192.252.186).
2. Navigate to Security > Certificate Management > CA Trusted Certificates, and export the Avaya HDTG Product Root.
3. Copy the Avaya HDTG Product Root certificate and paste into a file. Name the fie `aes.cer`.
4. Move the `aes.cer` file to the `<data server>\bin\resources` directory.
5. Restart the CTI Service.
6. CTI service will check for aes.cer, then create an Avaya.JKS in the same folder, which it will then use to securly connect to AES.

   After the system creates the Avaya.JKS file, login to Webex WFO and go to Application Management > QM Configuration > Telephony Groups.
7. Open the Avaya Telephony Group, select `Use Secure Connection`, and change the port to 4722.
8. Restart CTI service again.

Related topics

- Configure Avaya Communication Manager
- Configure Avaya SBCE for SIPREC recording
- Configure Cisco Unified Communication Manager
- Configure Genesys

Configure Avaya Communication Manager

In an Avaya Communication Manager (CM) environment, you can configure the connection information for the Avaya Application Enablement (AE) Services and DMCC associated with the telephony group.

Setting the Avaya DMCC device password

Use the fields in this section to configure the passwords for Avaya DMCC devices. Avaya passwords can be from three to seven digits in length. If you use more than seven digits in your extensions, you will need to configure passwords to be compatible with Avaya standards.

- Click **Use Device Extension** to set passwords if your extension is between three and seven digits.
- Click **Use Static Password** if you want to use a single password for all of your devices. When you click this button, QM displays a text box to allow you to add the three to seven digit password.
- Click **Use Custom Pattern** to select a custom device password pattern for setting the passwords of your Avaya devices based on your extensions. The password must be between three and seven digits. If your extensions have more than seven digits, this functionality allows you to convert your device numbers to acceptable Avaya passwords. Key the pattern in the Custom Pattern field.

The custom Avaya DMCC password pattern functionality uses two wildcard characters to represent your extensions:

- F—first (or leading) digits
- L—last (or trailing) digits

You can also insert static digits 0 to 9 in the password pattern.

Click the question mark for examples of using custom password patterns.

Field	Description
Device Password	The default password for all devices.

Field	Description
	NOTE If you change a password, you must restart all associated signaling services.
Associated Avaya ACD	The ACD with which this telephony group is associated.
Enable Free Seating	Select this check box to record agents by user name or agent-ID instead of by a physical channel number.
Recording Skill Hunt Group	The extension associated with the Hunt Group. A Hunt Group is a collection of users handling similar types of calls. **NOTE** If you are using free seating, the Hunt Group must contain all the extensions that you want to record.
Device Synchronization Data Server	The data server used to synchronize Avaya CM devices.
Switch Connection Name	The switch name or IP address of the switch connection. **NOTE** This field is case-sensitive.
HOSTNAME / IP ADDRESS	The host name or IP address of the AE Services Device, Media, and Call Control (DMCC). The DMCC controls the media (that is, it handles the RTP). The Monitoring and Recording CTI Service connects to it. **BEST PRACTICE** Use a host name in all instances where you are required to specify a host name or IP address, if possible.
Port	The port for the Application Enablement Services server. The default port number is 4721.
User Name	The name of a user created in the AES Management Console that has the CT User attribute set to Yes. **NOTE** If you change a user name or password, you must restart all associated signaling services.

Field	Description
Password	The password for the account used to access the server. **NOTE** If you change a user name or password, you must restart all associated signaling services.
Use Device Extension	Select this check box to use a device's extension as the password for DMCC configurations. If you do not select the check box, the DMCC uses the default password for all devices entered in the Device Password field. The device password is also known as Security Code in the Avaya CM Station configuration.
Generate CDRs from Signaling Events	Select this check box to start generating contact detail records (CDRs) for an existing ACD integration with the CTI server. Webex WFO does not use these CDRs for reconciliation unless you also select Use CDRs for Reconciliation check box.
Use CDRs for Reconciliation	Select this check box to use the CDRs generated by the CTI server for reconciliation instead of the CDRs imported from the ACD. This check box displays after you check the Generate CDRs from Signaling Events check box.

Configure Avaya SBCE for SIPREC recording

To configure Avaya SBCE for SIPREC recording in Webex WFO, you must configure a data server and a telephony group. A telephony group consists of at least one signaling source, one signaling group, one signaling server, one recording group, and your contact center devices. You can add backups for any of these items. Adding backups is optional, but we recommend it for resiliency purposes.

Different configurations of telephony groups, signaling groups, and recording groups are supported based on the telephony group type. For Avaya SBCE, the following table details the minimum number of groups that can be configured. The SIPREC service uses Port 5060.

Telephony Groups	1 or more

Signaling Groups per Telephony Group	1 or more
Recording Groups per Signaling Group	1 or more
CTI Service Notes	N/A

NOTE

When configuring recording groups remember the following points:

- If you have users in a gateway recording environment who require screen recording, you must create a recording group that connects to a CTI server and has no Record (Audio Capture) servers assigned to it.
- You can assign one or more Record servers to a recording group. A recording group requires at least one primary Record server.

  Signaling services exhaust the capacity of the primary Record servers before sending calls to secondary Record servers. If the primary signaling server is disabled (due to manual shutdown or system error), the secondary signaling server still sends calls to the primary Record servers unless the primary Record servers are also unavailable.
- A Record server can belong to only one recording group.
- You can move Record servers between recording groups.

Prerequisites

- You have the Administer Tenant and Configure Telephony Groups permissions. For more information on Webex WFO permissions, see Manage roles and permissions .
- You have created at least two Webex WFO data servers:
  - One that you will use for syncing users and devices and for reconciliation.
  - One that you will use for SIPREC and voice recording. You can use two separate servers for SIPREC and voice recording if needed.
- (Screen recording only) You have created a CTI data server that is dedicated to screen recording. This server is in addition to the two servers listed above, for a total of at least three data servers. If your organization is not recording screens, this server is not necessary.
- You have configured an Avaya ACD.

- You have configured Avaya Communication Manager (CM). See the Avaya DevConnect Application Notes for configuration instructions.
- You have configured Avaya Application Enablement Services (AES). See the Avaya DevConnect Application Notes for configuration instructions.
- You have enabled the UCID parameter in Avaya SBCE. See chapter 19 of *Administering Avaya Session Border Controller for Enterprise* for more information.

Page Locations

- Application Management > Global > System Configuration > Data Server Configuration
- Application Management > QM > QM Configuration > Telephony Groups

Procedures

Configure the data server for syncing users and devices and for reconciliation

1. On the Data Server Configuration page, select the data server that is dedicated to syncing users and devices and to reconciliation from the **Select Data Server Configuration** drop-down list.
2. In the **Regional Data Server ACD Sync Settings** section, select **Enable Sync** and move the configured Avaya ACD from **Available** to **Assigned**.
3. In the **Regional Data Server Reconciliation Settings** section, select **Enable Reconciliation** and move the configured Avaya ACD from **Available** to **Assigned**.
4. In the **Data Server Device Sync Settings** section, select **Enable Device Sync**.
5. Click **Save**.

Configure the data server for SIPREC and voice recording

If needed, you can use two separate servers here: one for SIPREC and the other for voice recording.

1. On the Data Server Configuration page, select the data server that is dedicated to SIPREC and voice recording from the **Select Data Server Configuration** drop-down list.
2. In the **Recording SIPREC Signaling Server Settings** section, select **Enable SIPREC Signaling**. An empty text field appears.
3. Enter the data server's IP address in the text field.
4. In the **Recording Capture Server Settings** section, select **Enable Audio Recording**. Two empty text fields appear.

5. Enter the data server's IP address or hostname in the first text field.
6. In the second text field, enter the directory location where recording files are stored temporarily before being uploaded.
7. Click **Save**.

Configure the CTI data server for screen recording

Follow these steps if your organization is recording agents' screens. If you are not recording screens, skip this step.

1. On the Data Server Configuration page, select the CTI data server that is dedicated to screen recording from the **Select Data Server Configuration** drop-down list.
2. In the **Recording CTI Signaling Server Settings** section, select **Enable CTI Signaling**. An empty text field appears.
3. Enter the IP address or hostname for the server that is dedicated to reconciliation in the text field.
4. **Click Save.**

Create the telephony group for SIPREC and voice recording

1. On the Telephony Groups page, enter a name for the group in the **Telephony Group Name** field.
2. Select **Avaya SBC SIPREC** from the **Telephony Group Platform Type** drop-down list.
3. Click **Add**. Additional fields appear.
4. Enter a name for the signaling group in the **Signaling Groups** field.
5. Click **Add**.
6. Select the server that is dedicated to SIPREC and voice recording from the **Primary QM Signaling Data Server** drop-down list.
7. Click **Next**.
8. Enter a name for the recording group in the **Recording Group Name** field.
9. Select the group that you just created.
10. In the **Recording Groups Assignment** table, locate the server that is dedicated to SIPREC and voice recording, and select the recording group that you just created from the **Recording Group** drop-down list next to that server.
11. Select **Primary** from the **Priority** drop-down list.

12. Click **Save**.
13. Restart the server that is dedicated to SIPREC and voice recording.

Create the telephony group for screen recording

If your organization is recording agents' screens, you need to set up an additional telephony group. If you are not recording screens, skip this procedure.

1. On the Telephony Groups page, enter a name for the group in the **Telephony Group Name** field.
2. Select **Avaya Communication Manager** from the **Telephony Group Platform Type** drop-down list.
3. Click **Add**. Additional fields appear.
4. In the **Device Password** section, select **Use Static Password**.
5. Enter the device password in the **Password** field.
6. Select the Avaya ACD that you configured from the **Associated Avaya ACD** drop-down list.
7. Select the data server that is dedicated to syncing users and devices from the **Device Synchronization Data Server** drop-down list.
8. In the **Application Enablement Services Information** section, enter the AES switch name in the **Switch Connection Name** field.
9. Enter the AES hostname or IP address in the **Hostname / IP Address** field.
10. Enter the port number used by AES in the **Port** field.
11. (Optional) If you have enabled encryption to the AES connection port, select **Use Secure Connection**.
12. In the **User Credentials** section, enter the **User Name** and **Password** for an AES user account.
13. Click **Add**.
14. Click **Next**.
15. Enter a name for the signaling group in the **Signaling Groups Name** field.
16. Click **Add**. Additional fields appear.
17. Select the CTI data server from the **Primary QM Signaling Server** drop-down list.
18. Select the Avaya AES server from the **AES Server** drop-down list.
19. Click **Save**.

Related Topics

- Associate phones with agents, recording groups, and recording types — After syncing devices, you can use this page to associate devices from your ACD with Webex WFO recording groups, recording types, and users.
- Manage roles and permissions — Learn more about the prerequisite permissions.
- Configure telephony groups
- Configure the Data Server

Configure Cisco Unified Communication Manager

The CUCM Telephony Platform Configuration options appear when you add or edit a telephony group with a Cisco Unified Communications Manager (Unified CM) telephony type. It allows you to configure a Cisco Unified CM cluster.

The Cisco Unified CM window also allows you to configure the following users:

- Simple Object Access Protocol (SOAP) Administrative XML Layer (AXL) user
- Unified CM Java Telephony Application Programming Interface (JTAPI) user

These users are used by the Computer Telephony Integration (CTI) service to log in to Unified CM.

A Unified CM cluster is comprised of a set of Unified CM servers that share the same database and resources and have one or more CTI Managers. The CTI Manager is a service that runs on Unified CM and handles JTAPI events for every Unified CM in the cluster (see Configure telephony groups).

You can specify one or more Unified CM telephony groups. A Unified CM telephony group requires at least one CTI Manager.

Installing JTAPI

During the installation process, Webex WFO installs the JTAPI.JAR file from the JTAPI client in `C:\Program Files\Common Files\Calabrio ONE\Data Server\CtiSignalling\lib`. Click **Download/Install JTAPI** on each of the signaling servers for the Unified CM telephony group. Optionally, you can manually install the JTAPI.JAR file by copying and pasting it in the correct directory.

Field descriptions

Field	Description
Enable Network Recording	Select this check box to enable network recording for the Unified CM telephony group. When the check box is selected, the Recording CTI service will listen for SIP messages. **NOTE** The Recording CTI service and CUBE SIP CTI, Sonus SIPREC, or Acme SIPREC service will interfere with each other while listening for SIP messages if the Enable Network Recording check box is selected. **EXAMPLE** You are recording voice through Gateway Recording (using the CUBE SIP CTI or Acme SIPREC service) and recording screen from a single server. **NOTE** CUBE recording does not capture call direction. The Contact Direction for CUBE recordings will be shown as “Outbound.”
SOAP AXL Access Username	The AXL (Administrative XML Layer) authentication user name on the publisher for this cluster used to synchronize Unified CM devices. This user name is created when you configure Unified CM. **NOTE** If you change a user name or password, you must restart the associated data server.
SOAP AXL Access Password	The AXL authentication password on the publisher. This password is created when you configure Unified CM.
Version	The Unified CM version on the publisher. **NOTE** You cannot configure new telephony groups for unsupported versions of Unified CM. If your organization uses Unified CM version 14, select **12.5** from the **Version** drop-down list.

Field	Description
JTAPI Access Username	The JTAPI user name for CTI. All phone devices, used for recording or monitoring, are associated with this application user (end user). The Recording CTI service logs into the Unified CM with this user. The user name must be between one and 32 alphanumeric characters. **NOTE** If you change a user name or password, you must restart all associated signaling services.
JTAPI Access Password	The JTAPI user's password for CTI. This must be between one and 32 alphanumeric characters.
Device Synchronization Data Server	The data server that is used to synchronize devices.
Secure SIP Setup	Generate a certificate and keystore if you are using secure session initiation protocol (SIP). See Generate a certificate for secure SIP.
Telephony Group Servers	
Publisher and Subscribers	A list of available server host names/IP addresses. You can enter one publisher Unified CM, and one or more subscriber Unified CMs. Choose which host name/IP address is associated with the publisher CTI Manager service. All other Unified CMs are associated with a subscriber CTI Manager service.
Host Name	The host name or IP address of the publisher or subscriber (if any) Unified CM. When using host names, verify the server can resolve the name of the subscribers. If the host name cannot be resolved, the Recording CTI service cannot log in.

Generate a certificate for secure SIP

1. Click **Generate SIP Trunk Certificate**. The Generate Certificate For Secure SIP dialog box appears.
2. In **Subject Name**, enter a unique name and store it in an easy-to-access location. When you configure the SIP Trunk Security Profile in CUCM, you must enter this name in the X.509 Subject Name field.
3. Click **Generate Certificate**. A ZIP file containing two files downloads:
   - sip.keystore—This file contains the keystore. Copy the keystore, and then paste it in the following location on the Signaling Server:

     ```
     C:\Program Files\Common Files\Calabrio ONE\Data
        Server\config
     ```

   - sip_certificate.pem—This file contains the public certificate. Upload the certificate to CUCM.

Configure Genesys

Use this page to configure the connection information for a Genesys call environment.

> **NOTE** You will need to copy Genesys library JAR files to the following folder:
>
> `C:\Program Files/Common Files/Calabrio ONE/Data Server\CtiSignaling\lib\`

Field descriptions

Field	Description
Hostname/IP Address	The host name/IP address of the telephony server.
Port	The port number for the telephony server.
Client Name	(Optional) The client name for the call environment.
Client Password	(Optional) The client password for the call environment.
User Data Key	The user data key defined in the Genesys system.
Metadata Name	The metadata field with which to associate the Genesys user data key. You must create a custom metadata field for this function. For

Field	Description
	more information about creating new metadata fields, see Manage custom metadata fields.
Generate CDRs from Signaling Events	Select this check box to start generating contact detail records (CDRs) for an existing ACD integration with the CTI server. Webex WFO does not use these CDRs for reconciliation unless you also select Use CDRs for Reconciliation check box.
Use CDRs for Reconciliation	Select this check box to use the CDRs generated by the CTI server for reconciliation instead of the CDRs imported from the ACD. This check box displays after you check the Generate CDRs from Signaling Events check box.

Add post-call surveys to contacts

You can integrate Webex WFO with one or more external survey providers to distribute post-call customer surveys after a contact has ended and collect the responses. Survey responses can provide valuable information about your customers' contact experiences and general perceptions about your organization, as well as help you target contacts for evaluation. Responses can be reviewed in the Post-Call Survey tab in the media player, and the Recent Surveys widget. The survey score and other survey-related fields also appear on the Interactions and your Contact Queue. See "Importing Post Call Survey IVR Data" in the *Webex WFO Data Import/Export Reference Guide* for more information on importing using CSV files.

Surveys and survey questions are created using an external survey provider. You can integrate Webex WFO with the following survey providers:

- Qualtrics (online)
- SurveyMonkey (online)

Configuring online survey providers

Online survey providers Qualtrics and SurveyMonkey deliver surveys to customers by email. Survey distribution requests and response retrieval are executed on a user-defined schedule. You can also import an IVR using the Generic Import Service (GIS).

NOTE

You must set up the regional data server GIS file location on the Data Server Configuration page before you import your generic IVR (see Configure the Data Server). Use this file location for import files:

```
C:\Program Files\Common Files\Calabrio ONE\Data Server\GIS\NewImport
```

After files are successfully imported, they will be moved to this folder:

```
...\GIS\NewImport\archives\<archive date>\<file name>
```

You must set up your online survey provider before configuring it with Webex WFO. To configure Webex WFO with a Qualtrics account, you must have the following:

- Each survey must have a configured “Embedded Data” question that has type `cid`.
- A configured Qualtrics account and user name
- A custom API token
- The Library ID for the account
- The Message ID for the survey-delivery message

To configure Webex WFO with a Survey Monkey account, you must have the following:

- A configured SurveyMonkey developer account and user name
- A developer API token
- The developer API key
- The developer API shared secret code

Generic IVR provider connections are created automatically when the IVR is imported. The post call survey administrator can specify which survey identifier the form uses. The following table lists the survey identifier fields:

Field	Description
contactId	The ID number of the contact.
associatedCallId	The ID number of the associated call. This is the default.

You must also create a custom email metadata field in Metadata Manager (see Manage custom metadata fields) with which to mark calls for survey distribution (see Marking contacts for online survey distribution below).

Create a custom email metadata field

1. Navigate to Application Management > QM Configuration > Metadata Manager.
2. Enter a unique value for key in the Metadata Key field (for example, “SurveyEmail”).
3. Enter a unique value for the label in the Metadata Label field. This can be, but does not have to be, the same as the Metadata Key.
4. Select **Text** from the Metadata Type drop-down list.
5. Select **None** from the ACD Data drop-down list.
6. Click **Save**.

For more information about creating a custom metadata field, see Manage custom metadata fields.

Configure your online survey provider with Webex WFO

1. Choose **Create a new survey form** from the What Do You Want To Do? section.
2. Select your online survey provider (Qualtrics or SurveyMonkey) from the drop-down list.
3. Set the survey distribution request/response retrieval schedule, in minutes. This value determines how frequently Webex WFO checks for contacts that require a survey, and whether there is any new survey-response data available. If contacts awaiting a survey are found, a survey distribution request is sent to the survey provider according to your survey distribution request workflow.
4. Select the custom email metadata field that you created in the above section with which to mark calls for survey distribution.
5. Enter a unique name for this survey-provider connection.
6. Enter the survey-provider account information. This information must be collected from the survey provider.
    a. Enter the user name and token for the configured survey-provider account.
    b. (Qualtrics only) Enter the Library ID and Message ID.
    c. (SurveyMonkey only) Enter the API Key and Shared Secret.
7. Click **Save**.

Test your survey provider connection and view surveys

1. Choose **Edit an existing survey form** from the What Do You Want To Do? section.
2. Click **Test Connection & View Surveys**. Upon successful connection, the surveys configured with the survey provider appear at the bottom of the page. You can click on each survey to view the individual questions.

After you set up and test your survey-provider connection, you must create a workflow to determine which survey should be requested for different contacts that have been marked for survey distribution. This is particularly useful when you have different survey providers and/or surveys for contacts.

You must also use the workflow to identify a survey question as the Voice of the Customer (VoC) question. The customer’s response to this question determines whether the associated contact should be marked for evaluation.

Set up a survey distribution request workflow

1. Navigate to the Workflow Administration page.
2. Choose whether to create an end-of-interaction or daily event. An end-of-interaction event prepares the survey request immediately after a contact is marked for survey distribution. A daily event prepares the survey requests for all contacts marked for survey distribution each day.
3. Select the workflow rule to which you want to apply the survey form action. Select the default rule to use a single survey form for all contacts that are marked for survey distribution, or create and select a new rule to define the contact conditions for a particular survey form.
4. If you created a new workflow rule, define the contact conditions for the survey form you want to distribute.
5. Select the “Set the survey form to <survey form>” check box in the Actions section.
    a. Select the survey from the drop-down list.
    b. Select the Voice of the Customer (VoC) question. You can only select questions that are in a numeric-answer format.
    c. Set the threshold to mark for evaluation. If the customer’s response to the VoC question meets this threshold, the associated contact is marked for evaluation.
6. Enter the email information for delivering the survey.
    a. Enter the Send From email address. This is the email address that the survey is delivered from.

b. Enter the Reply To email address. This is the email address that the survey recipient responds to. This is generally the same as the Send From address, but does not have to be.

c. Enter the Sender Name. This is the name that the email appears to be from to the recipient.

d. Enter the subject line for the email.

7. Click **Save**.

For more information about configuring workflows, see Automate QM workflows.

Marking contacts for online survey distribution

Once you have created the custom Email metadata field, configured one or more survey providers with Webex WFO, and set up a survey distribution workflow, you can mark a contact for online survey distribution by entering the customer's email address into the custom Email metadata field. This can be done by the agent using the Metadata command in the Recording Controls application or by any user with access to the custom metadata fields in the Media Player's Details tab.

When you enter the customer's email address into this field, that contact is marked for survey distribution. According to the user-defined distribution request schedule, Webex WFO then sends a request to the survey provider for the appropriate survey to be sent to that address as determined by your configured workflows.

> **NOTE** With SurveyMonkey, there might be a delay between the time a survey distribution request is received and when the survey is distributed.

Related topics

- Configure predictions—Use survey data to predict contacts' net promoter score.

Configure Workforce Management

The WFM menus in Application Management are used to configure the WFM application of Webex WFO. You have access to the WFM application if you are licensed for it.

> **NOTE** Your administrator role can access only the features and permissions enabled by your service provider. This section might list features and permissions that are not available to you in Webex WFO.

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Configure service queues

The pages in the Service Queues section of Application Management enable you to configure the service queues in your contact center.

Manage directory numbers

> **NOTE** Directory numbers are used only in Avaya ACDs. If you do not have a configured Avaya ACD, you will not see anything related to directory numbers in Webex WFO.

A directory number (DN) is a phone number customers use to connect to a specific service queue. The ACD actually routes calls received on a specific DN to a specific service queue.

You can create a DN in WFM to achieve the following results:

- Duplicate the DNs used in the ACD and collect historical data for them.
- Route a DN to go to specific service queues at different times during the day. If you do so, the historical data for those service queues will include the calls received through the DN.
- Route a DN to go to specific service queues when all agents in the first service queue are busy.

WFM captures the following data from a DN and compiles it with the associated service queue:

- Contacts Offered
- Contacts Accepted
- Contacts Abandoned
- Contacts Blocked
- Average Speed of Answer
- Quality of Service (Service Level)

> **NOTE** Using DN data rather than service queue data can provide more accurate information for forecasting in service queue overflow conditions. With service queue overflow, each contact is associated with the service queue it ended up on as opposed to the service queue that it was originally intended for. This can have a negative impact on forecasting. You can avoid this situation by using DNs.

Prerequisites

Your system uses a configured Avaya ACD.

Page location

Application Management > WFM > Service Queues > Directory Numbers

Procedures

Managing directory numbers

Use the Directory Numbers page to create, edit, and delete DNs.

> **BEST PRACTICE** Do not delete DNs. If you delete a DN, all the historical data associated with it is lost.

The fields on the page are described below.

Field	Description
ACD Server	The ACD that is the source of the directory number data. In a synced system, this field is autofilled. In a non-synced system, the ACD must be selected manually. The default in a non-synced system is Generic.
Directory Number	The DN. It must be identical to the DN in the ACD.
Description	A description of the DN.
Service Queues	One or more service queues associated with this DN. Once you have assigned a service queue, enter the start time and end time and days of the week that the service queue handles calls from the DN. At least one day must be selected.

Manage service queue types

A service queue type describes the kind of contact a service queue handles.

- Interactive contacts—Agent/customer contacts that occur in real time, such as calls and chats.
- Non-interactive contacts—Agent/customer contacts that do not occur in real time, such as email, tweets, social media, and faxes.

Service queue types allow you to group similar service queues together into service queue groups and virtual service queues and to generate forecasts for similar service queues.

WFM comes with two system service queue types: Voice and Email. If you are upgrading from a previous version of WFM that allowed you to configure service queues for calls or email, then those service queues are automatically assigned the Voice or Email service queue type.

There are limitations on what you can do with a service queue type once it has been created.

- You cannot change its contact type.
- If a service queue type is assigned to a service queue, you cannot delete it.
- You cannot edit or delete the system service queue types (Voice and Email).

Creating, editing, and deleting service queue types

Use the Service Queue Types page to configure and maintain service queue types.

Create a new queue type

1. Choose **Create a new service queue type**.
2. Enter a unique name for the service queue type that describes the kind of contact a service queue handles. Max characters = 50.
3. Choose the contact type: interactive or non-interactive.
4. Click **Save**.

Edit an existing service queue type

1. Choose **Edit or delete an existing service queue type**.
2. Select the desired service queue type from the drop-down list.
3. Edit the service queue type’s name as desired. If the service queue type has been assigned to service queues, the service queue type name change will be applied to those service queues. You cannot change the contact type.
4. Click **Save**.

Delete an existing service queue type

1. Choose **Edit or delete an existing service queue type**.
2. Select the desired service queue type from the drop-down list.
3. Click **Delete**.

Manage service queues

A service queue is a group of agents to which contacts are routed. It is generally associated with a specific skill. In WFM, you schedule agents to support service queue requirements. For this reason, WFM makes service queues the focal point for schedules and forecasts.

Synced/Non-synced environments

Service queues can be created in WFM or synced from your ACD.

- In environments with synchronized ACDs, WFM imports service queue data from the ACD via the Sync service. Imported service queue data that cannot be changed in WFM (the service queue name and ID) is read-only on the Service Queues page. That data can only be changed in the ACD. Service queues you create in WFM exist only in WFM and are not added to the ACD (see Synchronize service queue data).
- In environments with non-synchronized ACDs, the service queues you create in WFM must have the same names and IDs as are set up for them in your ACD. This enables WFM to associate the historical data imported from the ACD into WFM with the correct service queue.

Virtual service queues

A virtual service queue is a collection of service queues with the same service queue type. Virtual service queues exist only in WFM.

> **NOTE** Do not make a synced service queue a virtual service queue. Select this check box only if you created the service queue in WFM.

A virtual service queue begins to gather historical data from the component service queues after you create it. If historical data already exists for the component service queues, and you want to associate their cumulative historical data with the virtual service queue, you can submit a historical data merge request (see Merge historical data).

> **NOTE**
> You can also submit a historical data merge request if you want to recompute the historical data for a virtual service queue because you have done either of the following to the virtual service queue:

- Added service queues with historical data
- Deleted service queues with historical data

Create a virtual service queue when you want to generate a single forecast, distribution, or schedule for a group of like service queues. The following are examples of some situations where a virtual service queue is useful.

EXAMPLE A contact center has one service queue for premium customers and another for regular customers. Premium customers reach an agent faster and receive higher value services. The agents who handle customer calls are members of both service queues. Creating a virtual service queue that is comprised of the premium and regular customer service queues simplifies scheduling.

EXAMPLE An organization has IT help desks in multiple locations. The contact center uses a service queue for each location to account for multiple time zones and to allow reporting by location. The contact center routing consolidates the agents from each location into a single pool and distributes calls to the next available agent regardless of location. By grouping the service queues into a virtual service queue, WFM can schedule the agents as a single group in a pattern that is consistent with the routing and time zones.

Precision queues

A Unified CCE precision queue is a more detailed contact routing method than that used by a service queue. It is based on multiple agent attributes and proficiencies that are configured in Cisco Unified Intelligent Contact Management (Unified ICM). Precision queues help route calls to the most qualified agent available.

For information about configuring precision queues, consult your Cisco Unified ICM documentation.

WFM treats precision queues like service queues (”skill groups,” in Unified CCE terminology). When WFM is synced with Unified CCE, WFM creates a service queue and skill mapping for each Unified ICM skill group and precision queue. An exception to this is if there are multiple Unified Communications Manager (Unified CM) peripheral gateways set up in Unified ICM. In this situation, for each precision queue and peripheral gateway, WFM creates a service queue. That is:

> number of Unified CM peripheral gateways × number of PQs = number of service queues created in WFM

In systems with multiple peripheral gateways, the service queues created in WFM are named as follows:

> <PG ID>.<precision queue name>

WFM captures precision queue historical data in the same way it captures service queue historical data.

NOTE At this time, WFM ignores any of the detailed agent attributes and proficiencies that are used by Unified CCE to route calls.

Field descriptions

Use the Service Queues page to create, edit, and delete service queues.

You are prevented from deleting a service queue that has any scheduled activity (except for Available and Not Available) or if any of the following are true:

- It is in a virtual service queue
- It is in a workflow
- It is referenced in Agent Schedules
- It is a main service queue
- It is referenced by a schedule request

BEST PRACTICE Do not delete service queues. If you delete a service queue, all the historical data and agent schedules associated with it are lost.

The fields on the Service Queues page when you edit or delete an existing service queue, or when you create a new service queue, are described below.

Service Queue Information

Field	Description
Service Queue Name	The service queue's name. In synced systems, the name is created and maintained in the ACD.
Source ACD	The ACD that is the source of the service queue data. In a synced system, this field is autofilled. In a non-synced system, the ACD must be selected manually. The default in a non-synced system is Generic.
Service Queue ID	The unique ID that identifies the service queue. In synced systems, the ID is created in the ACD. Once an ID is assigned to a service queue, it cannot be changed.
Do not generate forecasts or schedules for this service queue check box	Select this check box to deactivate the service queue. It will no longer be available when generating distributions, forecasts, strategic forecasts, and schedules. However, you can still view its historical data.

Field	Description
	NOTE If you select this check box, be sure to remove the service queue from all multiskill groups it is associated with. If you do not, a schedule request for those multiskill groups will fail.

Service Queue Type

The service queue type describes the kind of contacts this service queue handles. See Manage service queue types.

Time Zone

Select the time zone to use when scheduling the service queue. The service queue opening and closing hours are interpreted by this time zone. By default, this is the default time zone configured for your company on the Global Settings page (see Configure global settings).

Redistribution Type

(Non-interactive service queues only) The redistribution type that determines how non-interactive contacts that arrive during the service queue's closed hours are redistributed among target intervals for forecasting purposes. Target intervals are determined by the handling threshold. Your options are the following:

- None—Contacts that arrive during closed hours are ignored and not redistributed (default).
- Proportional—Contacts are redistributed proportionally among target intervals based on the target intervals' distribution ratios.
- Even—Contacts are redistributed evenly among the target intervals.

In the Handling Threshold field, enter the amount of time in which contacts must be handled, in minutes. Valid values are from 0 to 4,320 minutes (72 hours).

Parameters

Field	Description
Service Queue Priority	The service queue priority: any number from 0 to 999, with 0 being the highest priority. The service queue priority allows WFM to resolve scheduling conflicts when agents are assigned to multiple service queues. **EXAMPLE** You designate some of your agents to support two service queues. If WFM generates the schedules for the two service queues and discovers that there are not enough agents to

Field	Description
	support all forecast requirements for both, it compares the priority value of each service queue and schedules agents for the service queue with the highest priority first.
Average Talk Time	The average amount of time, in seconds, that a contact lasts for this service queue. WFM uses this information to determine the number of agents needed to meet requirements when it generates a distribution for this service queue. You can opt to let WFM calculate this value for you automatically when it generates a distribution by selecting the check box in the Service Queue Standard Times section of the Distribution Request page.
Average After Contact Work Time	The average amount of time, in seconds, that an agent spends in after contact work for this service queue. WFM uses this information to determine the number of agents needed to meet requirements when it generates a distribution for this service queue. You can opt to let WFM calculate this value for you automatically when it generates a distribution by selecting the check box in the Service Queue Standard Times section of the Distribution Request page.
Service Level Objective	(Interactive service queues only) The percentage of contacts to be answered within a specified number of seconds. The number of seconds must be greater than zero. WFM uses this goal to determine the number of agents needed to meet requirements when it generates a distribution and forecast for the service queue.
Forecast Precision Level Percentage	(Read-only) The value calculated when you run a forecast accuracy computation request for the service queue. If you have not done this, then the value displayed is zero percent. The forecast precision level is a measure of how accurate a forecast was. This value is calculated by comparing forecasted contact volume with actual contact volume. **EXAMPLE** If the forecast precision level is 105 percent, the forecasted contact volume was 5 percent greater than the actual contact volume.

Opening and Closing Hours

The days and hours of operation of the service queue. A check mark indicates that the service queue is active (or 'open') on a particular day of the week. The hours of operation are in 24-hour format, and must be in multiples of five minutes. If anything else is entered, the value is rounded to the nearest five minutes. The exception is the value 23:59, meaning midnight.

Minimum Scheduling Block Duration

Select the "Enforce a minimum scheduling block duration" check box to set the minimum block of time this service queue can be scheduled for. Valid values range from five minutes (00:05) to 16 hours (16:00), in five-minute increments.

This setting is optional. Consider using it if you have agents who support multiple service queues and you do not want them switching between service queues too frequently. You do not need to use this setting if your agents support a single service queue or if they are able to easily switch back and forth between the service queues they support.

The minimum scheduling block duration applies only to schedules run using the Balanced scheduling method. If you run a schedule using the Prioritized scheduling method, this setting is disregarded. Other instances where the minimum scheduling block duration is ignored when changing schedules include:

- Agent schedule edits
- Optimizing schedules
- Changes as a result of messaging requests
- Copying schedule activities

The minimum duration is followed when running a Balanced method schedule, even if it means an agent cannot be scheduled for best coverage, for all of the agent's service queues, or at all if the minimum cannot be met. Coverage can be negatively affected, especially if the minimum duration is set higher or close to the duration of the minimum work shift length.

> **NOTE** Using this setting will lengthen the time it takes to run your schedules, especially if your schedules are complex (for example, they include many agents, service queues, and work conditions, and use variable work shifts).

> **NOTE** If this service queue is part of a multiskill group, and the service queues in that group have different minimum schedule block durations, then the longest duration configured is used for the multiskill group.

Maximum Scheduling Percentage by Shift

Select the “Enforce a maximum scheduling percentage” check box to set the maximum percentage of time in an agent’s shift that can be allocated to support this service queue. Valid values range from 1–99 percent.

This setting is optional. Consider using it if you have agents who support multiple service queues and you want to specify how much of their work shift can be scheduled to support this service queue. You do not need to use this setting if your agents support a single service queue or a multiskill group, or if there is no reason to limit how much time they spend supporting this service queue.

> **NOTE** An agent will not be scheduled for the week if the only options available violate the configured maximum scheduling percentage.

The maximum scheduling percentage applies only to schedules run using the Balanced scheduling method. If you run a schedule using the Prioritized scheduling method, this setting is disregarded. Other instances where the maximum scheduling percentage is ignored when changing schedules include:

- Agent schedule edits
- Copying schedule activities
- Changes as a result of approved schedule trades and offers
- Updating schedules using Schedule History and Restore
- Optimizing schedules

Multiskill Groups

This section displays the name of each multiskill group that this service queue is a part of. Assign a priority (from 0 to 999, with 0 being the highest) to each multiskill group. The priority you assign here helps to determine how agents are scheduled to support the service queues that make up the multiskill groups.

Skill Mappings

Assigns one or more skill mappings to the service queue and sets their priorities (0–999, with 0 being the highest). You can assign one, multiple, or all skill mappings to the service queue.

Skill mappings link agents to service queues. In order for agents to be scheduled to support this service queue, both the agents and the service queue must be assigned to the same skill mapping. Assigning a priority to each skill mapping allows WFM to resolve scheduling conflicts when agents with multiple skills belong to multiple service queues.

Virtual Service Queue

Select the check box if this service queue is a virtual service queue (see Virtual service queues). Once you do this, a service queue selection pane opens so you can assign service queues to be members of the virtual service queue. The available service queues all have the same service queue type.

> **NOTE** Do not make a synced service queue a virtual service queue. Select this check box only if you created the service queue in WFM.

> **NOTE** In order to make changes to a virtual service queue, all the source service queues in the virtual service queue must be within your view and scope. If they are not, they do not appear in the list of source service queues and you are blocked from making any changes to the virtual service queue.

Main Service Queue

Makes this service queue the main service queue for one or more agents. You can search for agents with the basic or advanced filter, and you can assign one, multiple, or all agents to the main service queue.

> **NOTE** Assigning an agent to a main service queue automatically removes any previous main service queue assignments for that agent.

Scheduling Order

The order in which agents are scheduled for the service queue. WFM compares the agents based on this order and schedules the highest-priority agents first. If you want to reset the order to the system default, click the Restore Default button.

The criteria used are the following:

- Maximum hours available—The sum of the maximum number of hours an agent can be scheduled each day of the week
- Minimum hours available—The sum of the minimum number of hours an agent can be scheduled each day of the week
- Maximum hours per week—The maximum number of hours per week configured for the agent’s work shift (from the Work Shifts page)
- Minimum hours per week—The minimum number of hours per week configured for the agent’s work shift (from the Work Shifts page)
- Rank—The agent’s ranking in the contact center based on expertise (from the Agents page)
- Company start date—The date the agent started working for the company (from the Agents page)
- Department start date—The date the agent started working for the department (from the Agents page)

Default Shrinkage Scenario

Select the default shrinkage scenario, which applies the shrinkage adjustment factor to the forecast. A service queue can be assigned to only one shrinkage scenario.

Agents Adjustment Factor

Enter a value to adjust the way the system forecasts the number of agents to schedule. This factor is intended to represent the efficiency of the agents working a specific service queue. (Note that this is different from the efficiencies due to multi-skilling.)

- Example of a situation that calls for an adjustment factor less than 1—a chat service queue that allows agents to answer concurrent chats. The agents on this service queue are more efficient. If they are able to answer twice as many chats as phone calls, then an appropriate adjustment factor might be 0.5.
- Example of a situation that calls for an adjustment factor greater than 1—an inbound call service queue that generates followup work (such as outbound calls, research, and emails) on a case-by-case basis. The agents working on this service queue are only partially available for the incoming phone calls. In this case, a scheduler should enter a value that reflects the number of agents needed to complete one hour of incoming phone calls.

Activity Metadata

(Optional) Assigns default metadata values to, or removes default metadata values from, any or all of the following activities:

- In Service
- Overtime
- Closed Service

For more information about configuring metadata values for activities, see Manage activity metadata values.

Color

The color that represents this service queue in the schedule. This color is used only for in-service scheduled activities. Closed service queue and overtime scheduled activities for the service queue use standard, non-editable colors.

Manage service queue groups

A service queue group is a collection of individual service queues of the same service queue type. When service queues are combined into one service queue group, all the data for the individual service queues is rolled up into a total number for each metric.

Field descriptions

Use the Service Queue Groups page to create, edit, and delete service queue groups.

The fields on the Service Queue Groups page when you edit or delete an existing service queue group, or when you create a new service queue group, are described below.

Field	Description
Color	The color that represents this service queue group in the schedule.
Select Service Queue Type	The service queue type for the service queue group.
Service Queue Group Name	The name of the service queue group.
Service Queues	The service queues that you can assign to the service queue group. You can assign one, multiple, or all service queues to the service queue group. The listed service queues belong to the same service queue type as the type you selected.

Manage skill mappings

Skill mappings provide links between service queues and agents. The agents assigned to a skill mapping generally have the same skills.

To schedule an agent to support a service queue, you must assign the agent to the skill mapping or multiskill group associated with the service queue. You can assign an agent to more than one skill mapping.

IMPORTANT Agents not assigned to a skill mapping or a multiskill group cannot be scheduled.

NOTE When WFM imports service queue information from synced ACDs, it automatically creates a skill mapping for each service queue on a one-to-one basis. The skill mapping has the same name as the service queue, and the service queue is automatically assigned to it. The sync happens only once. If you delete the skill mapping, it will not be recreated the next time synchronization occurs.

The service queues assigned to the skill mapping are prioritized. This enables WFM to resolve scheduling conflicts when agents are assigned to multiple service queues. Agents will be scheduled for the highest priority service queue first.

EXAMPLE You designate some of your agents to support two service queues and assign a priority to each service queue. When WFM generates the schedules for the two service queues and discovers there are not enough agents to support all forecast requirements for each service queue, it compares the priority value assigned to the service queues. WFM then schedules agents for the service queue with the highest priority first. If a service queue has more than one skill mapping or multiskill group, agents associated with the higher skill mapping or multiskill group priority will be scheduled before agents associated with the lower skill mapping or multiskill group priority.

Field descriptions

Use the Skill Mappings page to create, edit, and delete skill mappings.

NOTE In environments that sync with the ACD, any new skill mappings you create in WFM are not added back into the ACD.

BEST PRACTICE When you configure the synced skill mapping, change its name to distinguish it from its service queue. Do not delete skill mappings. If you delete a skill mapping, all the historical data associated with it is lost.

The fields on the Skill Mappings page are described below.

Field	Description
Skill Mapping Name	The unique name of the skill mapping.
Service Queues	The service queues assigned to the skill mapping.
Priority	The selected service queue’s priority, from 0 to 999, with 0 being the highest priority. This priority enables WFM to resolve scheduling conflicts when agents are assigned to multiple service queues.
Agents	The agents assigned to the skill mapping. The assigned agents can be scheduled for the assigned service queues.

Manage multiskill groups

Multiskill groups are used to schedule agents to support multiple service queues during the same period of time. A multiskill group is made up of a number of service queues. Each service queue is weighted by percentage to indicate how much of an agent’s time is spent supporting that service queue within the multiskill group.

Scheduling agents for multiskill groups is reflected in calculations such as Agents Scheduled and Service Level Scheduled. Because the agents split their time among multiple service queues, their contribution to each service queue by percentage is reflected in these calculations.

Field descriptions

Use the Multiskill Groups page to create, edit, and delete multiskill groups.

BEST PRACTICE Do not delete multiskill groups. If you delete a multiskill group, all the agent schedules associated with it are also deleted.

The fields on the Multiskill Groups page when you edit or delete an existing multiskill group, or when you create a new multiskill group, are described below.

Field	Description
Activity Metadata	(Optional) Assigns default metadata values to, or removes default metadata values from, any or all of the following activities: ▪ In Service ▪ Overtime ▪ Closed Service For more information about configuring metadata values, see Manage activity metadata values.
Agents	The agents who you can assign to the multiskill group. You can search for agents with the basic or advanced filter, and you can assign one, multiple, or all agents to the multiskill group. **NOTE** An agent can belong to only one multiskill group. Assigning an agent to a multiskill group automatically removes any previous multiskill group assignments for that agent. You are not warned if an agent belongs to another multiskill group or if they are removed from a multiskill group that they have previously been assigned to.
Color	The color that represents this multiskill group in the schedule.
Multiskill Group Name	The multiskill group’s name.

Field	Description
Service Queues	The service queues that you can assign to the multiskill group. You can assign one, multiple, or all service queues to the multiskill group. Each service queue must be assigned a weight (percentage). The weight is the percentage of time that an agent assigned to this multiskill group spends supporting that service queue. The weights must add up to 100 percent. **NOTE** If a service queue is deleted or has the "Do not generate forecasts or schedules for this service queue" check box selected, its weighting is not automatically redistributed to the other service queues in the multiskill group.

Manage service queue closed dates

Use the Service Queue Closed Dates page to designate dates on which a service queue is closed and therefore not able to handle customer contacts. Typical closed dates are national holidays.

Closed dates should not be used for days when the service queue is routinely closed. For example, a service queue might be open Monday through Friday and closed on Saturday and Sunday. This is more appropriately configured on the Service Queues page in the Opening and Closing Hours section (see Manage service queues).

In WFM, all service queues are assumed to be open every day of the year unless configured otherwise.

If closed dates are the same from year to year for a service queue, or the same for multiple service queues, you can configure them for one service queue and then copy them to other years and other service queues.

NOTE Designating a day as closed changes the forecast for that day to zero contacts. However, it does not affect any schedule that is already generated for that day. If agents are scheduled to work on a day that is designated as closed, they remain scheduled for that day. A solution for this situation is to create an exception and assign it to the service queue for that day. If a date is designated as closed after the forecast has been generated, the Schedule service still treats the forecast for that date as zero even if the forecast shows positive values.

BEST PRACTICE Update a service queue's closed dates at least once a year.

Copying closed dates

Once you have configured closed dates for a service queue and saved the record, you can copy those closed dates to another year for the same service queue or to any year for another service queue.

Copy a service queue’s closed dates to another year

1. Select **Copy closed dates to a service queue**.
2. Select the service queue and year with the closed dates that you want to copy. The dates that will be copied appear in the **Assigned Closed Dates** pane.
3. In the **Copy To** section, select the same service queue that you selected in step one, and then select the target year.
4. Click **Save**.

Copy a service queue’s closed dates to another service queue

1. Select **Copy closed dates to a service queue**.
2. Select the service queue and year with the closed dates that you want to copy.
3. Select the target service queue and target year.
4. Click **Save**.

Field descriptions

Use the Service Queue Closed Dates page to create, edit, remove, and copy closed dates.

The fields on the page when you assign closed dates to a service queue are described below.

Field	Description
Assigned Closed Dates	The calendar that you can use to assign closed dates.
Service Queue	The service queue that you want to assign closed dates to.
Year	The year that you want to assign closed dates to.

The fields on the page when you copy closed dates to a service queue are described below.

Field	Description
Assigned Closed Dates	(Read only) The closed dates that will be copied.
Copy to Queue	The service queue that you want to copy closed dates to.
Copy to Year	The year that you want to copy closed dates to.

Field	Description
Service Queue	The service queue whose closed dates you want to copy.
Year	The year whose closed dates you want to copy.

Configure shrinkage

Contact center shrinkage is how much time is lost in the contact center due to unscheduled activities. Reasons for shrinkage include a wide range of events that result in agents not being available to help customers during their normal schedule. Depending upon the time frame being evaluated and what is currently scheduled, shrinkage events can include (but are not limited to) vacations, meetings, projects, sick time, and training.

The shrinkage percentage is used to take this into account when running a schedule. When shrinkage percentages are applied, the schedule overstaffs the service queue by the shrinkage percentages you configure for each interval.

The number of agents available to work when a schedule is run is typically not the same as the actual number of agents available once that future date arrives. This is due to predictable and unpredictable activities that cause these agents to no longer be available to work. The percentage difference between the two numbers is the shrinkage percentage.

> **EXAMPLE** On September 1, a schedule is run for the week of September 21. On August 31, Agents A, B, and C submitted time off requests for September 23. Only Agent A’s request was approved on September 1 before the schedule was run, and so Agent A is not considered available to work on that day. Agent B’s and Agent C’s time off requests were not approved until September 3, and so were scheduled to work on September 23 despite their pending time off requests when the schedule was run. When those requests are approved on September 3, the number of agents scheduled to work on September 23 shrinks by two agents.

The shrinkage feature enables you to configure shrinkage percentages by interval for the current week and for up to 11 weeks into the future (for a total of 12 weeks). Each week, the shrinkage percentage lessens as a schedule week approaches the current day. This is because activities (such as time off) that remove agents from the pool of available agents are added to the schedule, and you do not need to allow for the same amount of shrinkage each week. You become more certain of the number of agents available to be scheduled as you draw closer to the schedule week.

You can create an unlimited number of shrinkage categories that are appropriate for your contact center, although there is a limit of 10 shrinkage categories per shrinkage week. A shrinkage week details shrinkage percentages per interval per day of the week. You can create an unlimited number of shrinkage weeks. You can then go on to create shrinkage scenarios. The shrinkage scenarios apply shrinkage weeks in sequence from the current week to up to 11 weeks in the future for specific service queues.

Manage shrinkage categories

Shrinkage categories define the reasons agents are unavailable to handle contacts during their shift. Use the Shrinkage Categories page to create, edit, and delete an unlimited number of shrinkage categories.

Up to 10 shrinkage categories can then be associated with a shrinkage week (see Manage shrinkage weeks) and up to 12 shrinkage weeks can be assigned to a shrinkage scenario (see Manage shrinkage scenarios).

Create a new shrinkage category

1. Select the option **Create a new shrinkage category**.
2. Enter a unique name for the new category.
3. Click **Save**.

Edit or delete an existing shrinkage category

1. Select the option **Edit or delete an existing shrinkage category**.
2. Choose the shrinkage category you want to edit or delete from the **Select Shrinkage Category** drop-down list.
3. Edit the shrinkage category as needed, and then click **Save**, or click **Delete** to delete it.

Manage shrinkage weeks

Shrinkage weeks specify which shrinkage categories and shrinkage percentages are applied to 30-minute intervals for each day of the week. You can assign up to 10 shrinkage categories per day per week.

Use the Shrinkage Weeks page to create, edit, and delete an unlimited number of shrinkage weeks. You can also copy an existing shrinkage week and save it with another name. One reason to use the copy function is if a new shrinkage week is almost identical to an existing shrinkage week and would require only small modifications of that existing week to configure it correctly.

Create a new shrinkage week

1. Select the option **Create a new shrinkage week**.
2. Enter a unique name for the shrinkage week.
3. Select a day of the week in the Weekday Selection section.

   > **NOTE** If the shrinkage on multiple days of the week is identical, you can use Ctrl+Click to select those days. The shrinkage categories and shrinkage percentages you configure are applied to each day simultaneously.

4. Select up to 10 shrinkage categories from the Shrinkage Categories Available pane and use the right arrow to move them to the Assigned pane.

   Each shrinkage category you select is added as a column in the Intervals table.

5. For each 30-minute interval you want to apply shrinkage to, double-click the cell in the appropriate shrinkage category column and enter a percentage value from 1–99.

   > **NOTE** No individual table cell can have a value greater than 99 percent, and no interval row total can exceed 99 percent.

6. Select another day of the week and configure shrinkage categories and percentages for that day until you have configured every desired day of the week. You are not required to configure shrinkage for every day of the week.
7. Click **Save**.

Edit or delete an existing shrinkage week

1. Select the option **Edit or delete an existing shrinkage week**.
2. Choose the shrinkage week you want to edit or delete from the **Name** drop-down list.
3. Edit the shrinkage week as needed, and then click **Save**, or click **Delete** to delete it.

Copy an existing shrinkage week

1. Select the option **Copy a shrinkage week**.
2. Choose the existing shrinkage week you want to copy from the **Shrinkage Week** drop-down list.
3. Enter a unique name for the new shrinkage week in the **Name** field.
4. Click **Save**.

Manage shrinkage scenarios

Shrinkage scenarios are applied when forecasts are run. A shrinkage scenario consists of up to 12 shrinkage weeks in a specified order (from the current week, or Week Number 0, to twelve weeks out, or Week Number 11) that are applied to selected service queues when the forecast is run.

Use the Shrinkage Scenarios page to create, edit, or delete shrinkage scenarios.

Create a new shrinkage scenario

1. Select the option **Create a new shrinkage scenario**.
2. Enter a unique name for the scenario in the **Name** field.
3. Select the shrinkage weeks for this scenario by moving them from the Available pane to the Assigned pane. You can assign a maximum of 12 weeks (numbered 0–11), with Week 0 being the current week. You can assign the same shrinkage week multiple times, with the week occupying different positions in the numbered list. If a week has no expected shrinkage, assign the **No shrinkage** week.

NOTE If your forecast is for a period longer than 12 weeks, shrinkage Week Number 11 is applied to the balance of the forecast period.

EXAMPLE

The following is an illustration of how shrinkage weeks might be assigned. Note that some shrinkage weeks are repeated and that there is no shrinkage expected in Week 0.

Assigned	Week Number
No shrinkage	0
Shrinkage Week B	1
Shrinkage Week F	2
Shrinkage Week G	3
Shrinkage Week A	4
Shrinkage Week C	5
Shrinkage Week N	6
Shrinkage Week M	7

Assigned	Week Number
Shrinkage Week Z	8
Shrinkage Week K	9
Shrinkage Week A	10
Shrinkage Week D	11

4. Select the service queues that will use this shrinkage scenario when forecasted.

> **NOTE** This shrinkage scenario is the default scenario for the service queues you select, although the default can be overridden with another scenario when requesting a forecast. A service queue can be assigned to only one shrinkage scenario. If you assign a service queue to a second shrinkage scenario, the service queue is automatically unassigned from the first shrinkage scenario.

5. Click **Save**.

Edit or delete an existing shrinkage scenario

1. Select the option **Edit or delete an existing shrinkage scenario**.
2. Choose the shrinkage scenario you want to edit or delete from the **Shrinkage Scenario** drop-down list.
3. Edit the shrinkage scenario as needed, and then click **Save**, or click **Delete** to delete it.

Manage agent schedules

The pages in the Schedule Management section of Application Management enable you to manage agent schedules.

Integrate with a human resource management system

Use the HRMS Integration page to enable integration between your human resource management system (HRMS) and WFM and to select the time of day when you want user vacation data to be exported from WFM to your HRMS.

> **BEST PRACTICE** Consult the *Data Import Reference Guide* before integrating an HRMS with WFM.

When you integrate your HRMS with WFM, data is exchanged as follows. In this way, the vacation information contains current information for each vacation type.

- Vacation plans are imported from the HRMS to WFM throughout the day, whenever a GIS file is made available to Webex WFO. For more information on when HRMS data is imported to Webex WFO, consult the *Webex WFO Data Import/Export Reference Guide*.
- The number of vacation hours used by agents are exported from WFM to the HRMS once per day, at the time configured on this page. Multiple exports on the same day are not supported.

NOTE All agents must be assigned a Full Time Equivalent (FTE) profile in order for their vacation plans to be imported from the HRMS. See Manage full time equivalent profiles for more information.

NOTE If an import file includes agents and vacation types that do not exist in Webex WFO, those records will be skipped during the import. The skipped records are listed in the import log.

For systems that use HRMS integration, vacation plans information is configured with the HRMS. Systems that do not have HRMS integration use vacation plans created on the Vacation Plans page (see Manage vacation plans).

Procedures

Enable HRMS integration

- Select the **Enable HRMS Integration with WFM** check box.

Configure when WFM vacation data is exported to your HRMS

- In the **Export Time** field, enter the time when user vacation data will be exported from WFM to your HRMS.

  NOTE If this time is changed after the initial configuration, it does not take effect for 24 hours.

Import file details

The following table displays the details of the import file sent from the HRMS to WFM.

IMPORTANT Every column header is required to be present in the import file, even if data is not required to be present for that column. If a column header is missing, then the import will fail.

Element	Description
File Location	C:\Program Files\Common Files\Webex WFO\Data

Element	Description
	Server\gis\vacationreports\<tenant>
File Name	VacationHours_From_HRMS
File Header	VACATION FROM HRMS DATE: <date>
Column Headers	login Data optional. This is the email address that users enter when they log in to Webex WFO. Although login and employeeId are individually optional, you are required to include data in at least one of these two columns. Otherwise, the data import file will not be processed.
	vacationTypeLabel Data required. The data value entered for vacationTypeLabel in all rows must match exactly the vacation type name as configured in Webex WFO (Application Management > Vacation Planning > Vacation Types). This value cannot contain commas.
	availableHours Data required. This is the number of hours of vacation available to the agent.
	totalEarnedHours Data optional. This is the total number of vacation hours earned by the agent for the year. If the optional totalEarnedHours field is not included in the file, Webex WFO defaults its values to zero and overwrites the existing values. This can result in a negative value when calculating the hours used for an agent. If the field is included in the file, the value entered cannot exceed 9999.
	employeeId Data optional. Although login and employeeId are individually optional, you are required to include data in at least one of these two columns. Otherwise, the data import file will not be processed.

The following is an example of an import file.

```
VACATION FROM HRMS DATE: 2018-04-19
   login,vacationTypeLabel,availableHours,totalEarnedHours,employeeId
   smithj@example.com,Floating Holiday,16,24,john.smith
   smithj@example.com,Vacation,120,160,john.smith
   jonest@generic.com,Vacation,70,80,teri.jones
   adamsb@generic.com,Vacation,120,120,betty.adams
```

NOTE Data elements are limited to 2 digits to the right of the decimal point. If there are more than 2 digits, the value will be rounded to 2 digits before import. Errors in records are logged in the log file.
Commas that are part of the HRMS import data must be escaped with a backslash (for example, “3\,000”) in order to be treated as literals and not file delimiters.

Export file details

The following table displays the details of the export file sent from WFM to the HRMS.

Element	Description
File Location	C:\Program Files\Common Files\Webex WFO\Data Server\gis\vacationreports\<tenant name>
File Name	vacation_<date>_WFM
File Header	VACATION FROM WFM DATE: <date>
Column Headers	login date vacationTypeLabel usedHours requestedHours approvedHours employeeId acdId

- All agents that have a vacation plan via the import file (see Import file details) are included in the export file.
- Only dates with usedHours in the past 7 days are included in the export for each agent.

- If a date has usedHours for an agent for at least one vacation type, then all vacation types are shown in the file, even if no hours were used on that date. In that case, the usedHours field displays a dash (—).
- The requestedHours and approvedHours fields appear only on the last date that is reported for each agent. These values are not tied to a specific date since they are totals for all future dates.
- If an agent does not have any used hours for any vacation type in the 7 day period, then a date row is inserted for yesterday for each vacation type and requestedHours and approvedHours are reported there.

The output export file contains the following for each vacation type:

- Used Hours: The hours used for the date on the row. This value is based on the duration of vacation type exceptions in the agent’s schedule for the date. Vacation type exceptions are configured on the Webex WFO Vacation Types page (Application Management > Vacation Planning > Vacation Types).
- Requested Hours: The total hours that are pending and not yet approved at the current time.
- Approved Hours: The total approved hours. For partial day requests, the duration of the request is used. For all-day requests, the duration is calculated as Minimum Hours Per Week ÷ 5 as defined in the agent’s Full Time Equivalents Profile, configured on the Webex WFO Full Time Equivalents Profiles page (Application Management > Vacation Planning > Full Time Equivalents Profiles).

The following is an example of an export file.

```
VACATION FROM WFM DATE: 2018-04-20
   login,date,vacationTypeLabel,usedHours,requestedHours,approvedHours,
   employeeId,acdId
   smithj@example.com,2018-04-13,Floating Holiday,8.0,-,-,john.smith,2
   smithj@example.com,2018-04-13,Vacation,-,-,-,john.smith,2
   smithj@example.com,2018-04-15,Floating Holiday,-,-,-,john.smith,2
   smithj@example.com,2018-04-15,Vacation,8.0,16.0,8.0,john.smith,2
   jonest@example.com,2018-04-14,Vacation,4.0,-,-,teri.jones,1
   jonest@example.com,2018-04-15,Vacation,8.0,-,-,teri.jones,1
   adamsb@example.com,2018-04-19,Vacation,-,-,-,teri.jones,1
```

In this example, vacation hours are reported as follows.

Employee	Vacation Hour Usage
smithj	■ Used 8 hours of Floating Holiday on April 13. ■ Used 8 hours of Vacation on April 15. ■ Has 16 hours of requests for Vacation that are pending approval on or after April 20. ■ Has 8 hours of requests for Vacation that are approved on or after April 20. ■ Has no approved or pending requests for a Floating Holiday on or after April 20.
jonest	■ Used 4 hours of Vacation on April 14. ■ Used 8 hours of Vacation on April 15. ■ Has no approved or pending requests for a Floating Holiday on or after April 20.
adamsb	■ Has no used hours in the 7-day period starting April 13. ■ Has no approved or pending requests for a Floating Holiday on or after April 20.

Customize when schedules are released

By default, an agent's schedule becomes visible based on the Global Setting: Number of Weeks Visible in Agent Schedules. Use the Schedule Release Profiles page to adjust the schedule release cycle for individual date ranges and agents.

Schedule release profiles override the default schedule release and can be used to delay and/or provide advance schedule visibility for one or more date ranges. Schedules for dates not specified in a schedule release profile continue to become visible according to the default Global Setting: Number of Weeks Visible in Agent Schedules.

Create and assign a schedule release profile

1. Enter a unique name for the schedule release profile.
2. Under Manage Schedule Release Dates, click **Add Date**.
    a. Enter the Start Date and End Date of the range of dates for which you want to adjust schedule visibility.

   b. Enter the Release Date on which you want to release the schedule for the specified range of dates.

   > **NOTE** A schedule release profile can include multiple date ranges with separate release dates.

3. Under Assign Agents, select one or more agents to assign to this schedule release profile.
4. Click **Save**.

> **EXAMPLE** If today is November 1 and the Global Setting: Number of Weeks Visible in Agent Schedules is set to six weeks, an agent's schedule for November 1–December 12 is visible by default. If you want to provide agents advance schedule visibility for December 18–31, create a schedule release profile with a Start Date of 2016-12-18 and an End Date of 2016-12-31. Set the Release Date on which you want to release the schedule for these dates. Schedules for all other dates continue to become visible according to the six-week default.

An agent can only be assigned one schedule release profile, which may include multiple date ranges with individual release dates. You can see which schedule release profile an agent is assigned (if any) or assign a new schedule release profile on the Users page (see Manage users).

If you want to automatically assign a particular schedule release profile to new agents, you can select it in WFM Global Settings: Schedule Release Profile (see Configure system-wide WFM settings).

> **NOTE** Adjusting schedule visibility might impact an agent's ability to request a schedule trade, schedule offer, or mentoring request. For an agent to make a request of these types, the schedule date (or dates, if trading schedules for different days) must be visible to both the requesting agent and the responding agent.

Field descriptions

Field	Description
Schedule Release Profiles	
Select Schedule Release Profile	("Edit or delete an existing schedule release profile" only) The name of the schedule release profile you want to edit.
Edit Name	A unique name for this schedule release profile.

Field	Description
Manage Schedule Release Dates	
Start Date	The first day in a range of dates for which you want to specify schedule release.
End Date	The last day in a range of dates for which you want to specify schedule release.
Release Date	The date on which you want to release schedules for the indicated range of dates. This date can be different for each range in the table.
Add Date	Create an additional range of dates for this schedule release profile.
Delete Selected	Remove the selected date ranges from the table. To select all rows, select the check box at the top of the table.
Assign Agents	
Available/Assigned	A list of the available and assigned agents for this schedule release profile. An agent can only be assigned to one schedule release profile at a time.

Limit a supervisor’s ability to edit schedules

An administrator might want to limit a supervisor’s ability to edit agent schedules for various reasons. For example, a supervisor might be in training and not yet experienced enough to have full access to schedule editing. The Schedule Editing Rules page allows you to assign a schedule editing rule to specific supervisors that manages their editing capabilities.

You can configure a rule to prevent supervisors from the following actions:

- Inserting any activities, or only inserting certain kinds of activities
- Trading schedules
- Changing schedules using the Find Optimal Time feature
- Moving various types of activities (for example, lunches or breaks) by more than a specified number of minutes
- Changing schedules using the Optimize Schedules feature

- Restoring a previous schedule using the Schedule History and Restore feature
- Adding, editing, or deleting activity notes on exceptions or projects in Agent Schedules

> **NOTE** A schedule edit rule overrides the Administer WFM and Administer Schedules permissions. For example, these permissions grant access to the Schedule History and Restore feature, but if you apply a rule that limits access, the supervisor cannot access that feature from either Application Management or Agent Schedules despite having those permissions.

If you just assign a schedule editing rule to a supervisor, then that supervisor is prevented from doing whatever task you have set limits on or from moving activities by more than a specified amount of time. However, you can create a workflow that will allow a supervisor to perform a task but will defer the resulting schedule changes from taking place until they have been manually approved. This is done by use of a workflow.

> **NOTE** A supervisor subject to a manual approval workflow cannot save changes to a schedule if the supervisor uses custom filtering (the Custom option at the bottom of the filter list that allows you to select a combination of teams, service queues, service queue groups, and skill mappings to filter the Agent Schedule page). The save action will work if the supervisor filters the page by only one team, service queue, or skill mapping.

> **NOTE** If a supervisor who is subject to a schedule editing rule edits an exception or project and at the same time edits or adds an activity note, the activity note will not be displayed when the approving supervisor views the edit for approval. When the edit is approved, the note will not be saved.

Setting up a workflow is optional. You do not need a workflow for a change that meets the rule requirements to take effect (for example, a supervisor who is limited to moving a break no more than 30 minutes is allowed to move a break 15 minutes), However, setting up a workflow enables WFM to check coverage and staffing. If that is important in your contact center, set up workflows along with schedule editing rules.

Creating a workflow

You can set up a schedule edit workflow on the Workflows page (Application Management > Activities > Workflows) that can approve, deny, or force manual handling for schedule changes. For more information about how to configure a workflow, see Automate handling of agent requests.

When creating a schedule edit workflow, use the following options:

- Choose a Schedule Edit event.
- Assign the appropriate supervisors in the Assign Users section.
- Choose the Manual Handling, Approve, or Deny action.

The workflow runs when the supervisor clicks **Save** after making edits on the Agent Schedules page. If the action chosen for the workflow is Manual Handling, the changes will not go into effect until they are manually approved by an administrator or scheduler on the Schedule Edit Management page (see Approve or deny schedule changes made by supervisors).

Managing schedule editing rules

Use the Schedule Editing Rules page to create, edit, and delete schedule editing rules.

Create a new schedule editing rule

1. Choose the **Create new schedule editing rule** option.
2. Enter a unique name for the rule.
3. Select the activities you want to prevent supervisors from performing in the “Prevent user from doing” pane. You can prevent supervisors from inserting all or some types of new activities, trading schedules, and finding optimal times.
4. Select the existing activities you want to prevent or limit supervisors from moving in the schedule more than a specified number of minutes. For example, select “Breaks by more than” and enter **15** in the minutes field to limit a supervisor from moving a break more than 15 minutes earlier or later in the schedule. To prevent the supervisor from moving breaks at all, enter **0** in the minutes field.
5. Assign supervisors to the rule by selecting them in the Available pane and moving them to the Assigned pane. Only supervisors are listed in the Available pane.
6. Click **Save**.

Edit or delete an existing schedule editing rule

1. Choose the **Edit or delete existing schedule editing rule** option.
2. Select the desired rule from the Schedule Editing Rule drop-down list and do one of the following:
    a. Edit the rule as desired, and then click **Save**.
    b. To delete the rule, click **Delete**, and then click **Yes** to confirm the deletion.

Work with historical data

The pages in the Historical Data section of Application Management enable you to capture, merge, and edit historical data.

View and edit historical data

Use the View and Edit Historical Data page to display, enter, and edit the historical data for a specific service queue and date.

> **NOTE**
> All historical data is displayed in your organization's default time zone, which is displayed at the top of the historical data table. The historical data is not displayed in the time zone configured for the selected service queue.
>
> Webex WFOconverts historical data to the appropriate time zone when generating distributions.

WFM requires historical data to generate distributions, forecasts, and schedules and to calculate statistics. The more accurate the historical data is, the more accurate forecasts and schedules will be. However, sometimes historical data for a service queue is incomplete, inaccurate, or missing entirely. When this happens, you can enter the missing data manually or edit inaccurate existing data.

Reasons you might want to edit or enter historical data include the following:

- To correct data that is inaccurate due to system or network issues
- To adjust data that is unusual due to an infrequent event, such as a marketing campaign
- To input missing data when contact volume is normal but no data was captured because the system or network was down
- To create data when historical data is either unavailable or missing, such as when you first install WFM
- To support forecasting and scheduling for non-interactive service queues (such as those that handle email and social media)

> **NOTE**
> The Generic Interface Services (GIS) API can also be used to add historical data from any ACD to the WFM database. The GIS API is part of WFM and requires no separate installation or executable to function. See the *Data Import Reference Guide* for more information.
>
> If you have an Avaya ACD, you also have the option to view historical data for directory numbers (DNs). However, you cannot edit DN data in WFM.

Once you have completed the historical data parameters, a table is displayed with the requested data, if any exists. If none exists for a service queue, you can enter data for that service queue and a specific day at the Interval zoom level.

You can copy and paste data in the table using standard Windows shortcut keys.

- Click and drag with your mouse to select specific rows and columns in the table or a spreadsheet, or press Ctrl+A to select the entire table or spreadsheet.
- Use Ctrl+C to copy the selected cells to the clipboard in tab separated value (TSV) or comma separated value (CSV) format. This action copies both editable and read-only columns if you are copying data from within the table.
- Use Ctrl+V to paste the contents of the clipboard into table cells. You can paste into a specifically chosen group of cells, or just select the cell that becomes the upper-left corner of your pasted data. The data is pasted into the selected cells, unless the selected column is read-only. You cannot paste copied data into read-only columns. If the copied data is too big to fit into the selected paste area, paste expands the selection to the size of the data on the clipboard. For example, if you select a 2 × 2 area but the data on the clipboard is 3 × 3, then it will paste 3 × 3. The pasted data is highlighted in the table.

Field descriptions

Field	Description
Service Queue	The service queue for which you want to view and/or edit historical data.
Directory Number	(Avaya ACD only) The directory number for which you want to view data.
Zoom Level	The level of detail you want to use to view the data. Your choices are: ■ I—By interval ■ D—By day ■ W—By week ■ M—By month ■ Y—By year **NOTE** Data can be edited only at the Interval zoom level.
Date	The day for which you want to view and/or edit historical data. Appears only when the Interval zoom level is selected.
Start Date/End Date	The start/end date of the period for which you want to view and/or edit historical data.

Field	Description
	Appears only when the Day, Week, Month, or Year zoom level is selected. **NOTE** When you view rolled up data at the Weekly or Monthly level, the data displayed is based on the configured start day of the week that the date you select falls into. So, if the configured start day of the week is Monday and you select a Wednesday-to-Wednesday date range, the data displayed is Monday-to-Monday totals.

Historical data table fields

The fields in the historical data table are described below. The table shows the definition of the field for both interactive service queues and non-interactive service queues.

For more information about interactive and non-interactive service queues, see Manage service queue types.

Field	Description
Contacts Offered	The number of ACD calls/contacts routed to the service queue during the interval.
Contacts Handled	The number of ACD calls/contacts the agents completed during the interval.
Contacts Abandoned	The number of ACD calls routed to the service queue during the interval that were abandoned (the caller hung up while in queue or while ringing at the agent's phone). Calls are counted for the interval when the caller hangs up.
Contacts Answered	The number of ACD calls/contacts answered in the service queue during the interval. Calls are counted in the interval in which the agent answered them.
Total Answer Time	The amount of time that all calls/contacts were in the queue and answered in the interval.
Average Talk Time	▪ Interactive service queues—The average amount of time spent

Field	Description
	talking and on hold for all calls handled in the interval. ■ Non-interactive service queues—The average amount of time spent working on each contact for all contacts handled in the interval.
Average Work Time	Average amount of after-contact work for each contact for all contacts handled in the interval.
Service Level Percentage	The percentage of contacts that met the service level objective for the interval.
Maximum Contacts in Queue	The maximum number of contacts in the service queue for the day.

Merge historical data

Use the Historical Data Merge Request page to merge the historical data that the service queues in a virtual service queue had gathered individually before they were added to a virtual service queue.

A virtual service queue begins to gather historical data from the component service queues after you create it, so you only need to submit a historical data request in the following situations:

- The component service queues had individually gathered historical data before you added them to a virtual service queue, and you want to associate their cumulative historical data with their virtual service queue.
- You either add service queues with historical data to, or delete service queues with historical data from, a virtual service queue, and you want to recompute the historical data for the affected virtual service queue.

The historical data for the individual service queues is preserved after the merge, so if you delete a service queue from the virtual service queue, it is still available for use.

Field descriptions

Field	Description
Start Date	The start date for the historical data merge request.
End Date	The end date for the historical data merge request.

Field	Description
Virtual Service Queue	A list of the available and assigned component service queues from which to merge historical data. The assigned service queues must have historical data for the selected date range.
Run Date	The date you want to run the request.
Run Time	The time you want to run the request.

Calculate the accuracy of past forecasts

Forecast accuracy is the ratio of the forecasted contact volume to the actual contact volume. A forecast accuracy compilation request calculates this ratio for one or more service queues based on historical data. It cannot tell you how accurate a forecast will be in the future. It can only evaluate the accuracy of forecasts in the past.

EXAMPLE If the forecast precision level percentage for a service queue is 105 percent, it means that the forecasted contact volume was 5 percent greater than the actual contact volume.

The value calculated by this request is displayed on the Service Queues page in the Forecast Precision Level Percentage section.

Use the Forecast Accuracy Compilation Request page to generate a forecast accuracy compilation request.

Field descriptions

Field	Description
Start Date	The start date for the forecast accuracy compilation request.
End Date	The end date for the forecast accuracy compilation request.
Service Queues	The service queues for which you want to generate a forecast accuracy compilation. The assigned service queues must have forecasts generated for the selected date range.
Run Date	The date you want to run the request.
Run Time	The time you want to run the request.

Capture historical data

Use the Capture Historical Data page to run a request to capture historical data from your ACD and import it to WFM. This might become necessary in certain circumstances such as, you want to import historical data from your ACD for the period before you installed WFM, or you want to fill gaps in your historical data that occurred because of interruptions in the connection to your ACD after you installed WFM.

NOTE This feature is not available for Avaya ACDs or ACDs that are classed as “generic” during a WFM installation.

NOTE When capturing historical data, past adherence and conformance (ACC) data is recalculated only if schedules or real-time data has changed since the last time ACC data was calculated.

BEST PRACTICE Capturing data from the ACD can put a heavy load on the system. If you are requesting a large amount of data, run this request when the contact center is closed or during a quiet period.

Prerequisites

- A WFM license
- The Administer WFM permission
- The Administer Schedules permission
- System Administrator access
- A configured ACD

Page location

Application Management > Historical Data > Capture Historical Data

Procedures

Run a request to capture historical data

1. Select and configure the fields as desired.
2. Click **Run**.

Related topics

- Configure an ACD
- Import historical data

Import historical data

Use the Import Historical Data page to import historical data in the form of a CSV file to a selected ACD. This page is an alternative to using the WFM Historical Import Template (WHIT) executable to import your historical data (see the *Webex WFO Data Import Reference Guide* for more information).

NOTE If you host your own data server, you can use WHIT to import historical data to the Cloud. If you use a data server hosted by Webex WFO in the cloud, you must use this page to import historical data.

Import historical data

1. Click **Choose File**, and then navigate to the location where your CSV file is stored. Click **Open** to load the file into the page.
2. From the **Select Destination ACD** field drop-down list, select the ACD you want to import the historical data to.
3. From the **Time Zone** drop-down list, select the time zone you want applied to the historical data. The default value is UTC. The Tenant option is the tenant time zone set for the tenant by the system administrator on the Tenants page.
4. Map the fields in your CSV file to the import fields listed on the page. Set the data type for the date and period fields.
5. Click **Import**.

Field descriptions

The fields in your CSV file should contain the following data. The field can be named anything, since it will be mapped to the import field before import. The fields can be in any order in the CSV file.

IMPORTANT The file must include either the serviceName or the serviceNumber, but not both.

Import Field Name	Description
abandonedCalls	(Required) The total number of abandoned calls in the service queue during the period.

Import Field Name	Description
ASA	(Optional) The average speed-of-answer in seconds in the service queue during the period.
avgACWTime	(Required) The average after call work time in seconds for all calls handled in the service queue during the period. It includes all time spent on calls handled in this period, including time spent in other periods.
avgTalkTime	(Required) The average talk time in seconds for all calls handled in the service queue during the period. This value includes all time spent on calls handled in this period, including time spent in other periods. For example, if you received only one call in this period and it lasted 45 minutes, then the average talk time is 45 ÷ 1 minutes = 45 minutes = 2700 seconds.
contactsInQueue	(Optional) The maximum number of contacts in queue in the service queue during the period. This applies only to non-interactive service queues.
date	(Required) The date of the data.
handledCalls	(Required) The total number of calls processed in the service queue during the period.
occupancyRatio	(Optional) The occupancy ratio for the service queue during the period. This value is expressed as an integer from 1 to 100.
period	(Required) The 30-minute interval in the day for the data, in HH:MM format.
qtyOfAgents	(Optional) The number of agents in service in the service queue during the period.
receivedCalls	(Required) The total number of calls received in the service queue during the period.
serviceLevel	(Optional) The service level percentage for the service queue during the period. This value is expressed as an integer from 1 to 100.
serviceName	The service queue’s name. This field is required if the serviceNumber is

Import Field Name	Description
	not included in the file.
serviceNumber	The service queue's ID in the ACD. This field is required if the serviceName is not included in the file. **NOTE** If this ID contains leading zeros (for example, 00005), this can cause the import to fail. These IDs should not contain leading zeros to prevent the issue from occurring.
transferredCalls	(Optional) The total number of calls transferred in the service queue during the period.

Create descriptions for reason codes

Use the Reason Code Descriptions page to create reason code description sets and then associate those sets with one or more service queues. Reason codes (also known as "aux codes" or "NR codes") originate in your ACD. If you have multiple ACDs, you need to set up different reason code description sets for the service queues in each of those ACDs.

Once you have configured descriptive text for your reason codes, those descriptions will appear in the Agent Schedules Adherence drawer and in the Real Time Adherence dashboard widget instead of numeric reason codes.

> **NOTE** The reason code descriptions displayed for an agent are those from the service queue that is that agent's main service queue. If the agent does not have a main service queue, then no reason code descriptions are displayed.

> **NOTE** If a reason code description set is modified, the changes are reflected in both current and historical data. Older versions of the set are not archived.

Your role requires the Administer WFM permission to create and manage reason code sets and the Edit Schedules permission to view reason codes in the Adherence drawer.

Create a reason code description set

1. Select the **Create a new reason code description set** option.
2. Enter a unique name for the new reason code description set.

3. Click **Add Row**. In the new row in the table, enter the reason code ID and a text description. The description can be a maximum of 20 characters long, and contain special characters except for a comma (,) or a pound sign (#).

   NOTE A description is not required—you can add a row with just the reason code ID.

4. Continue to add rows with reason code IDs and descriptions until the set is complete.
5. Click **Save**.

Edit an existing reason code description set

1. Select the **Edit or delete a reason code description set** option.
2. Select the set you want to edit from the Reason Code Description Set Name drop-down list.
3. You can do the following edits:
   - Edit the table row to change the reason code number or description.
   - Delete a row by selecting the row and clicking **Delete Row**.
   - Rename the reason code description set.
4. Click **Save**.

Delete an existing reason code description set

1. Select the **Edit or delete a reason code description set** option.
2. Select the set you want to edit from the Reason Code Description Set Name drop-down list.
3. Click **Delete**.

   NOTE When a reason code description set is deleted, historical, current, and future reason codes will display the reason code ID and not the reason code description for any service queues that were assigned to the deleted set.

Assign a reason code description set to one or more service queues

1. Select the **Assign a reason code description set to one or more service queues** option.
2. Select a reason code description set from the drop-down list.
3. Select an ACD from the ACD drop-down list.
4. The service queues displayed in the Available pane are those within your Main View and that are associated with the ACD you selected. Move the service queues you want to assign this set to from the Available pane to the Assigned pane. Service queues that have already been assigned to the set

are displayed in the Assigned pane.

> **NOTE** A reason code description set can be assigned to multiple service queues, but a service queue can have only one reason code description set assigned to it.

5. Click **Save**.

Customize adherence state mappings

Use the Adherence State Mapping page to specify which agent states and reason codes determine whether an agent is in adherence for a scheduled activity, and which schedule activities are used to calculate agent adherence percentages.

The default settings are the most common method for calculating adherence, and it is not necessary for you to change them. However, the settings can be customized for your contact center if desired.

Agents are shown as in adherence if they are in one of the agent states mapped to a specific scheduled activity. If they are in an agent state not mapped to the scheduled activity, they are shown as out of adherence.

Prerequisites

Ensure the ACD connection is configured and delivering real-time data with the reason codes to WFM.

Page location

Application Management > WFM > WFM Configuration > Adherence State Mapping

Procedure

Perform the following procedure to manage the adherence state mappings.

Manage adherence state mappings

1. For each schedule activity, configure at least one agent state you want considered to be in adherence. The agent state is used to calculate adherence to the schedule activity. If you need to add an agent state field, click **Add**. If you need to delete an agent state field, select the field, and then click **Delete**.
2. Configure the reason codes you want to consider as being in adherence for the schedule activities that use reason codes. Valid values are any alphabetical characters, numbers 1–65535, and symbols except the comma.

- A blank field indicates all reason codes are considered.
- A hyphen between numbers indicates a range. “1–3” means reason codes 1, 2, and 3 are considered.
- A comma between numbers or alpha strings indicates specific numbers and strings. “1,3,5,email,@chat” means reason codes 1, 3, 5, email, and @chat are considered.
- You can use a combination of a range of numbers and specific numbers and character strings (for example, “1–5,7,9,12,email,follow-up work”).
- (Optional) Prepend the reason code with the ACD ID and a pound sign to distinguish reason codes that originate in different ACDs (see below for more information).

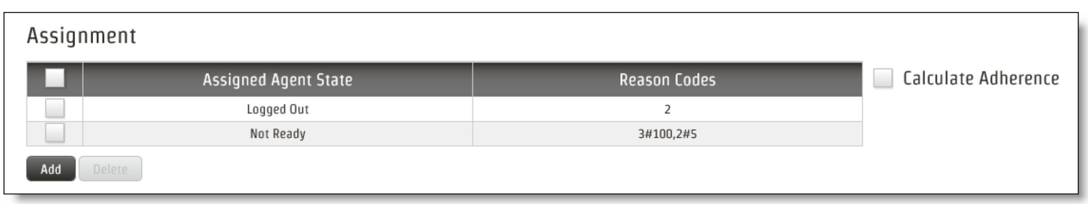
3. Select the Calculate Adherence check box next to the activity to include time adherence data for that schedule activity when agent adherence percentages are calculated.
4. Click **Save** to save your changes.

NOTE To revert the adherence state mapping settings to the default configuration, click **Reset**.

Example

BEST PRACTICE

In the following figure, an administrator has mapped two ACD agent states, Logged Out (with reason code 2) and Not Ready (with reason codes 3#100 and 2#5), to the Assignment schedule activity. This means that when an agent is scheduled with an assignment activity, that agent must be in the Logged Out agent state with reason code 2 or the Not Ready agent state with reason code 100 (in ACD 3) or 5 (in ACD 2) to be in adherence. Any other agent state or reason code during the scheduled time will result in the agent being shown not in adherence.



The administrator has not selected the Calculate Adherence check box. This means that whether or not users are in adherence for the Assignment schedule activity, it will have no bearing on that agent’s adherence percentage score.

ACD IDs and reason codes

If your system has multiple ACDs, you might need to indicate which ACD a reason code belongs to. For example, if Reason Code 6 is present in both ACD 1 and ACD 2, but means something different in each, you need to distinguish between them.

To do this, when entering a reason code for the Not Ready or Logged Out agent states, use this format:

<ACD ID>#<reason code>

The ACD ID used is the ID configured on the ACD Configuration page (see Configure an ACD).

> **EXAMPLE** Both ACD 2 and ACD 3 use reason code 23, but they do not mean the same thing. To assign the 23 reason code that is configured in ACD 2 to the Logged Out agent state, enter **2#23** in the Reason Codes field.

If a reason code means the same thing in multiple ACDs, or is unique to one ACD only, it is not necessary to add the ACD ID to the reason code. If you want to indicate a range of reason codes within a specific ACD, add the ACD ID and pound sign before the first reason code in the range: **3#1–5**.

> **NOTE** Reason codes appear elsewhere in Cisco, such as in the Adherence Details drawer on the Agent Schedules page, but the ACD ID that you add to them here does not. The ACD ID is necessary only when configuring adherence state mapping in multiple ACD environments.

Adherence state mapping for non-interactive service queues

You can calculate Adherence for non-interactive service queues (for example, those that handle customer email). Because the default settings are intended for service queues that support interactive customer contacts, you must configure custom mappings of all ACD states that agents are allowed to be in when handling non-interactive contacts.

> **EXAMPLE**
>
> Your contact center may want to map the following agent states to the In Service activity for a service queue that supports non-interactive customer contacts:
>
> - Ready Available
> - Talk
> - After Contact Work
> - Hold
> - Out of Service (reason code 10)
> - Not Ready (reason code 20)

Configure system-wide WFM settings

Use the Global Settings page to set up system-wide parameters for WFM. These parameters are described below.

NOTE Users must refresh or restart their browsers for global settings changes to take effect.

First Day of the Week

The first day of the week for the schedule. The default value is Sunday.

NOTE If you do change this setting after you have already set up and assigned work shift rotations, you will have to create new work shift rotations to incorporate the change.

If agents have completed dynamic scheduling, you will have to reschedule all the dynamic scheduling.

Number of Schedule Weeks Visible to Agents

The number of future weeks displayed when agents access their schedules.

Vacation Start Month

(Systems without HRMS integration only) The month that is the beginning of the vacation year. On the first day of this month, available vacation hours are reset to the hours configured in the vacation plans assigned to agents.

Paid FTE per Day

The default number of paid hours per day worked by a full time equivalent. This value is used for vacation planning, strategic planning, and strategic forecasting purposes only.

Paid FTE per Week

The default number of paid hours per week worked by a full time equivalent. This value is used for strategic planning and strategic forecasting purposes only.

In Service FTE per Day

The default number of in-service hours per day worked by a full time equivalent. This value is used for the agent summary totals in production and named forecasts.

FTE Days per Week

The default number of in-service hours per week worked by a full time equivalent. This value is used for the agent summary totals in production and named forecasts.

Agent Schedule Conflict Warning

When the “Enable warnings for Agent Schedule page edit conflicts” check box is selected, proposed schedule edits on the Agent Schedules page that might overwrite all or part of an existing activity trigger a warning message. The person editing the agent schedule has the option to proceed with the edit despite possible conflicts, move the existing activity, or cancel the schedule edit.

When the check box is cleared (default), the agent schedule is edited without any warning of schedule conflicts.

Time Off Allotments

The Display Unit field sets the format that users see time off allotments in: either FTEs (full time equivalents) or hours.

Select the “Allow agents to view time off allotments” check box if you want to let your agents see the time off allotments that are available when they request time off. If this check box is selected, a button called “Time Off Allotments” appears on the Time Off Request dialog box.

> **NOTE** The time off allotments in a Time Off Request are always displayed as FTEs even if the display unit is set to hours.

Workflow Wait List Reevaluation Time

This sets the daily time at which the workflow wait list is reevaluated for possible action.

Forecasted Contacts Displayed as Decimals

Select the “Enable forecasted contacts as decimals” check box to allow the value used when importing, displaying, and editing Forecasted Contacts to contain up to two decimal places. When the check box is cleared (default), forecasted contacts are displayed as integers.

> **NOTE** If this feature is disabled after data with two decimal places has been entered in a distribution or forecast, those values are rounded to the nearest integer. If the feature is re-enabled, the entered decimals are displayed again, unless a value was manually edited, in which case the decimals are lost. Calculations are performed using decimals even if those decimals are not displayed.

Real Time Adherence Refresh Rate

Use this setting to select how frequently real time adherence data is updated in dashboard widgets and in agent schedule coverage drawers. The default value is 30 seconds. The interval you choose does not affect the real-time capture of historical data.

> **NOTE** This can fluctuate a few seconds above or below the configured refresh rate due to environmental factors such as network and request processing, as multiple requests can be sent out at different times resulting in different refresh rates in the Adherence drawer.

Adherence and Conformance Calculation Settings

The Adherence and Conformance Calculation (ACC) by default is done nightly at 4:00 AM (customer time) and defaults to recalculating the last five days. This provides updated agent adherence and conformance scores based on recent changes to schedules that were edited after they were generated. This setting allows you to change these default values to values that work better for your contact center.

In the Historical Calculation Window field, enter the number of days in the past for which WFM calculates historic adherence and conformance percentages. Recalculating these percentages every day allows for corrections in agent schedules to be factored into the calculation to ensure agent percentages are correct. Maximum value = 45 days.

> **NOTE** If your agent adherence details retention period is shorter than the number of days you configure for historical calculation (see Define the WFM retention period), the days outside the retention period are not recalculated.

In the Calculation Time field, select the time of day when adherence and conformance percentages are calculated. Default = 4:00 AM.

Other Agent Schedule Details

When the “Restrict schedule view to shift start/stop time only” check box is selected, the start and stop times for the agent’s scheduled activity are hidden from agents when they are viewing other agent’s schedules. Only the agent’s shift start and stop times will be visible.

Enable Agent-to-Agent Comments

Select the “Allow agent-to-agent comments” check box to enable agents to enter comments in mentoring, schedule trade, and schedule offer requests that can be read by other agents. Comments are enabled by default.

When the check box is cleared, agents can no longer enter comments in those types of requests or a description in a mentoring request. They can still see comments from higher-level users, such as supervisors, and write comments to supervisors in time off and exception requests. If the check box is cleared after comments have been entered, those comments will still be visible, but they cannot be edited.

Divide Precision Queue Abandoned Calls

(Applicable only if you use a Cisco Unified Contact Center Enterprise ACD) Select the “Divide precision queue abandoned calls” check box to divide the total number of abandoned calls among the service queues WFM creates when you use Unified CCE precision queues. The number of calls is split as evenly as possible among the service queues, and they will always add up to the total number of abandoned calls for the precision queue. If the check box is not selected and you do have a Unified CCE ACD and precision queues, WFM allots the total number of abandoned calls to each service queue, which results in inaccurate forecasts and reports.

iCal Sync with SSO

If your environment uses SAML authentication, select the "iCal Sync with SSO" check box to allow your agents to access their schedules outside of work through a third-party calendar application such as Microsoft Outlook, Google Calendar, or Apple Calendar. Webex WFO makes the Mobile Calendar option available to agents on the My Schedule toolbar, which provides them with a unique URL that they can use to create a subscription to their work schedule in their calendar application.

When you clear this check box, Webex WFO removes the Mobile Calendar option from the My Calendar page, and it deactivates any URLs that agents are currently using. Agents can no longer create new subscriptions, and Webex WFO no longer updates their third-party calendars.

For more information about how to configure Webex WFO so that agents can access their schedules outside of work when SAML authentication is enabled, see View your schedule in another calendar app.

Schedule Release Profile

(Optional) The schedule release profile that applies to new agents by default. If this setting is left blank, all schedules are displayed to new agents according to the WFM global setting Number of Weeks Visible in Agent Schedules. See Customize when schedules are released.

Maximum Schedule Optimization Attempts

Enter the maximum number of attempts WFM makes (1–30) to move activities in order to optimize schedules. Schedule optimization is triggered by the Optimize Schedules action on the Agent Schedules page.

Define the WFM retention period

Use the Retention page to define how long certain types of WFM data is retained. Note that long retention times, especially for large contact centers, require more system storage. See the *Webex WFO Design Guide* for sizing guidelines.

> **NOTE** A retention period of 0 indicates no data is retained. Setting a retention period switches retention on. Maximum retention periods are configured by the system administrator. You can configure retention periods from 0 up to, but not more than, those maximums.

The data you can set retention periods for are described below.

Agent Adherence Detail

Agent state data needed to calculate adherence. This data includes every phone state entered by every agent for every day. The default retention period = 0.

WFM Forecast, Schedule, Request and Historical Data

This data includes:

- Forecasts
- Schedules
- User requests (for example, Messaging requests from agents)
- Assigned exceptions
- Historical service data
- Agent productivity data

The default retention period = 0.

WFM Troubleshooting Data

This data includes:

- GIS agent productivity and service historical data files imported into WFM by the GIS Connector Tool
- Vacation report files imported from the HRMS

The default retention period = 0.

Schedule Revision History

History of the changes made to all agent schedules so schedules can be reverted to previous versions if necessary. The default retention period = 7 days.

Manage activity metadata values

Activity metadata values are additional information that you can use to categorize the various activities that make up agent schedules. These activities include lunches, breaks, exceptions, projects, assignment-type work shifts, overtime, in-service time, and closed-service time.

Activity metadata appear as preconfigured fields that analysts later select from a drop-down list. You can report on activity metadata in Data Explorer, but they do not appear in .

Prerequisites

You have the Administer Schedules and Administer WFM permissions.

Page location

Application Management > WFM > Activities > Activity Metadata

Procedures

Create a new activity metadata value

1. Select **Create a new activity metadata value**.
2. Enter the metadata name in the **Value** field.
3. Click **Save**. A confirmation message displays.

Edit an existing activity metadata value

1. Select **Edit or delete an existing activity metadata value**.
2. Select the value that you want to edit, and then edit it as desired.
3. Click **Save**. A confirmation message displays.

   NOTE
   Editing metadata values does not change metadata values for activities that have already been added to an agent’s schedule. To change the metadata value for an activity that is in an agent’s schedule, edit the metadata value and then do either of the following:

   - Submit a new schedule request
   - Insert a new activity into the agent’s schedule

Delete an existing activity metadata value

NOTE You cannot delete metadata values that are assigned to activities that are in agents’ schedules.

1. Select **Edit or delete an existing activity metadata value**.
2. Select the metadata value that you want to delete.
3. Click **Delete**. The Activity Metadata dialog box displays.
4. Click **Yes**. The Activity Metadata dialog box closes, and a confirmation message displays.

Assign a default activity metadata value to lunches and breaks

1. Select **Assign a default activity metadata value to lunches and breaks**.
2. Select the default metadata value that you want to assign to lunches and/or breaks.
3. Click **Save**. A confirmation message displays.

Remove a default metadata value from an activity

You remove a default metadata value from an activity on the same page where you assigned it.

1. Navigate to the page where you assigned the default metadata value.
2. Clear the **Activity Metadata** field.
3. Click **Save**.

> **NOTE**
> Removing a default activity metadata value does not remove the metadata value from activities that have already been inserted in an agent’s schedule. To remove a default metadata value from an activity that is in an agent’s schedule, remove the activity metadata value on the page where you assigned it and then do either of the following:
>
> - Submit a new schedule request
> - Insert a new activity into the agent’s schedule

Related topics

For more in-depth information about activity metadata, see About activity metadata.

You can assign a default metadata value to each individual activity that you create:

- Manage exceptions—Assign a default metadata value to an exception.
- Manage multiskill groups—Assign a default metadata value to In Service, Overtime, or Closed Service activities for each multiskill group.
- Manage projects—Assign a default metadata value to a project.
- Manage service queues—Assign a default metadata value to In Service, Overtime, or Closed Service activities for each service queue.
- Create work shifts—Assign a default metadata value to a work shift.

About activity metadata

Among many other uses, activity metadata values are useful for integrating Webex WFO with your human resources management system (HRMS).

> **EXAMPLE** You create metadata values that are the same as the pay codes that you use in your HRMS and assign these metadata values to the activities in agents' schedules. Then, using the Shifts by Agent API, you export this data from Webex WFO and import it into your HRMS so that you pay agents correctly for the work they complete.

Assigning default activity metadata values

Once you create metadata values, you can assign default metadata values to breaks and lunches on the Activity Metadata page. You can also assign a default metadata value to each individual activity that you create:

- Manage exceptions—Each exception activity
- Manage multiskill groups—In Service, Overtime, and Closed Service activities for each multiskill group
- Manage projects—Each project activity
- Manage service queues—In Service, Overtime, and Closed Service activities for each service queue
- Create work shifts—Each assignment-type work shift

Unlike breaks and lunches, each individual activity that you create on the pages listed above can have a different default metadata value.

> **EXAMPLE** You have already created two metadata values on the Activity Metadata page, Meet123 and Time456. On the Exceptions page, you create two different exceptions, Meetings and Time Off. You can assign a different metadata value to each: Meet123 to Meetings and Time456 to Time Off.

Overriding default metadata values

You can override default metadata values by changing or removing them when you do the following:

- When you insert any activity on the Agent Schedules page (see Insert an activity).
- When you add a break- or lunch-type activity on the Work Conditions page (see Manage work conditions).

A metadata value assigned to an activity when you insert an activity on the Agent Schedules page or when you add an activity on the Work Conditions page does not become the default metadata value for that activity. You can only change the default metadata value for an activity on the appropriate page in Application Management.

If you do not assign a default metadata value to an activity, the metadata value field is blank if you insert that activity on the Agent Schedules page or if you add that activity on the Work Conditions page. You can still assign a metadata value to an activity that does not have a default metadata value, but that metadata value only applies to the activity that you are currently adding, not to others that you add in the future.

Field descriptions

The table below describes the fields on the Activity Metadata page when you edit, delete, or create an activity metadata value, or when you assign a default activity metadata value to lunches and breaks. All fields are optional.

Field	Description
Break	The default metadata value for breaks.
Lunch	The default metadata value for lunches.
Value	The name of the metadata value. Max characters = 50.

Configure Teleopti

Use the Teleopti Configuration page to add a **Teleopti WFM** link in the Webex WFO top menu. When agents or supervisors click this link, they go to their Teleopti site.

Prerequisites

- Your organization has a cloud implementation.
- Your organization uses Teleopti for agents or supervisors.
- You have the Update Tenant permission in Webex WFO.

Page location

Application Management > Global > System Administration > Teleopti Configuration

Procedures

Allow agents and supervisors to link to Teleopti through Webex WFO

1. Select the Webex WFO tenant from the **Choose a Tenant** drop-down list.
2. Select the **Enable Teleopti Navigation** check box.
3. Enter the tenant's Teleopti URL in the **Teleopti URL** field.
4. Click **Test URL**. The website opens in a new tab.
5. Click **Save**.

Remove the Teleopti WFM link

1. Select the Webex WFO tenant from the **Choose a Tenant** drop-down list.
2. Deselect the **Enable Teleopti Navigation** check box. The **Teleopti URL** field disappears.
3. Click **Save**.

Configure Analytics

Use the Analytics Configuration page to set up account-wide Analytics parameters.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have at least one of these permissions:
  - Administer Speech Analytics
  - Administer Speech to Text Analytics
  - Administer Desktop Analytics
  - Administer Text Analytics
- You need Analytics dashboard(s) available if you choose to share them.

Page location

Application Management > Analytics > Analytics Configuration

Procedures

Share dashboards

Dashboards that are shared can be viewed by all users.

1. In the **Share Dashboard** section, select **Enable dashboard sharing**.
2. Click **Save**.

Configure the length of data retention

Use the **Analytics Data** fields to configure the length of time in days, months, or years that you want to retain Analytics data.

When the Index Maintenance task runs, Webex WFO clears Analytics data that is older than the retention period you set.

> **NOTE** By default, the Index Maintenance task runs at 2:00 AM. The system administrator can reschedule the Index Maintenance task to run at a different time on the Task Management page.

Reducing a retention period after it has been initially set can result in the deletion of data. Increasing a retention period will result in a larger use of storage space. Changing this value should be considered carefully. The default maximum data retention period is 24 months. However, your system administrator can raise or lower this default value as required for your company.

Set desktop capture interval

Use the **Minutes** field under Desktop Capture Data Upload to choose the interval, in minutes, at which desktop capture data is uploaded. The default interval is 10 minutes.

> **NOTE** Desktop capture data is uploaded at the specified interval even if the user is not logged in.

Related topics

- Analytics dashboards overview
- Identify websites and apps to be tracked by Analytics

Administer and maintain Webex WFO

Administering and maintaining Webex WFO entails the following:

- Monitor the status of the configured Data Servers.
- Configure the gamification feature.
- Establish goals for the key performance indicators (KPIs) you want to make available for monitoring in a Data Explorer report or dashboard.
- Search, review, and identify changes made by users or the system in Webex WFO, forming an “audit trail.”
- Monitor client connections to the Webex WFO server.
- Monitor the status of scheduled bulk contact exports.
- Inform users about system events via notifications.

Monitor Data Server status

The Data Server Status page allows you to monitor the status of the configured Data Servers. You can view if the connection status is currently connected or disconnected, and you can view the date and time of the last received event for each data server.

Page location

Application Management > Global > Monitoring > Data Server Status

Procedures

View data server status

A list of configured data servers displays. Click **Refresh** to update the list. Among the fields for each data server are:

- **Connection** — The connection status of the configured Data Server, which can either be connected or disconnected.
- **Enabled Features** — A list of the configured Data Server configuration features found on the Configure the Data Server page.
- **Data Server** — Displays the shared server ID from the database.
- **Actions** — Click **Edit** to go to the Data Server Configuration page.

Related topics

- Configure the Data Server —Learn how to configure data servers for tenants.

Download Data Server logs

On the Data Server Logs page, you can request log files from the data servers in your system, monitor the progress of the logs as they are compressed into a ZIP file, and download the logs when they are ready. If the Retrieve Data Server Logs Error and Retrieve Data Server Logs Success notifications are enabled, you can also download the logs from the notification you receive when Webex WFO has finished processing your request.

You can request logs for only one Data Server at a time.

Prerequisites

You have the Agent Monitoring permission.

Page location

Application Management > Global > Monitoring > Data Server Logs

Procedures

Download Data Server logs

The Data Server Logs page has three sections: Data Server Logs, Log Filter, and Log Requests.

1. In the Data Server Logs table, select the Data Server with the logs you want to retrieve.

   Logs can have a **Connected** status of **True** or **False**. *True* indicates the Data Server is connected. *False* indicates the Data Server is disconnected. You cannot request logs for shared Data Servers or for Data Servers that have a Connected status of false.

   > **NOTE** In the **Version** field, if the version of the Data Server is earlier than 10.3.4, Webex WFO does not add your request to the Log Requests table. Instead, you receive a notification when the logs are ready to be downloaded. To be notified, you must be enabled to receive the Retrieve Data Server Logs Error and the Retrieve Data Server Logs Success notifications (see Configure notifications).

2. Configure the **Log FilterDate Range** (optional, leave the **Start Date** and **End Date** fields blank to request the entire log) and **File Type**.

   The File Type options are as follows:

- **ctiService.dbg** — The debug log files for the CTI service.
- **ctiService.log** — The log files for the CTI service.
- **dataGathering.dbg** — The debug log files for the Data Gathering service.
- **dataGathering.log** — The log files for the Data Gathering service.
- **siprec.dbg** — The debug log files for the SIPREC service.
- **siprec.log** — The log files for the SIPREC service.
- **voiceRecordServer.dbg** — The debug files for the Voice Record Server service.
- **voiceRecordServer.log** — The log files for the Voice Record Server service.

3. Click **Request Logs**. Webex WFO adds your request to the Log Requests table. Logs can have the following statuses: **Success**, **Timed Out**, and **In Progress**. You can also receive an error message. Check that the data server is connected if you receive an error message.

4. Once your request has a status of Success, click the **Download** icon. The logs are downloaded as a ZIP file named data_server_logs_<request number>.zip.

   You can download the logs for up to three days after your request.

Related topics

- Configure the Data Server —Learn more about data server configuration for tenants.
- Monitor Data Server status

Configure gamification

The Performance Management section of Application Management is used by administrators to configure product performance features. Performance Management allows you to configure the gamification feature.

Collect performance data for gamification

You can use agent adherence data from WFM and agent performance data from QM evaluations in gamification.

Prerequisites

You have the Administer Gamification and/or the Administer Schedules permission.

Page location

Application Management > Global > Performance Management > Collect Performance Data

Procedures

Collect historical performance data immediately

Follow these steps if you are getting started with gamification and have preexisting data metrics.

1. Select the **Collect Data Now** option.
2. Select the performance metric to collect from the **Select Performance Metric** drop-down list.

   > **NOTE** Quality gathers data from agent QM evaluations. Adherence gathers agent adherence data from WFM.

3. Enter the collection period start and end dates.
4. Select the group, team, or agents you want to capture data for. Use Ctrl+Click to select multiple agents or Ctrl+Shift to select a range of agents.
5. Click **Retrieve Performance Data**. The **Request Queued** dialog box opens.
6. Click **Close**.

Set recurring data collection

Follow these steps to set the time every day when performance data is captured automatically.

1. Select the **Schedule Data Collection** option.
2. Select the performance metric to collect from the **Select Performance Metric** drop-down list.
3. Select the time of day to collect the performance data.
4. Click **Save**. A confirmation message displays.

Related topics

- Configure gamification points—Create and manage gamification points
- Configure gamification levels—Create and manage gamification badge levels
- Manage gamification performance categories —Specify the data that recurring data collection captures

Configure gamification levels

Agents can be awarded new badges when they reach the specified point value for a level of achievement. The Gamification Levels page allows you to create level groups, associate a badge with each level, and define a period range for each level. The period range (in days) for each level allows you to control how far back to gather data for scoring.

Page location

Application Management > Global > Performance Management > Levels

You can define at least three levels and at most ten levels. Note that levels are numbered zero through nine. The point value for Level 0 is always defined as "- -," which indicates any point values lower than Level 1, including negative point values.

Configure gamification levels

1. Choose **Create new badge level**.
2. Enter a unique name for the level ranges.
3. Enter a period range (in days) from which you want to collect scoring data.
4. Select the level that you want to edit.
5. Enter the minimum point value for this level in the **Points** field.
6. Select the badge to award for this level.
7. Click **Save**.

Field descriptions

Field	Descriptions
Select Level	("Edit or delete an existing badge level" only) The existing badge level you want to edit.
Level	The name of this set of badge levels.
Level Range Definition	
Enter the period range for this level	The number of days from which you want to collect scoring data.

Field	Descriptions
Add Level	Add a badge level to the table.
Level	(Read-only) The badge level number.
Points	The number of points required to achieve this level.
Badge	The badge graphic associated with this level.

Related topics

- Configure gamification points—Create and manage gamification points
- Manage gamification performance categories —Specify the data that recurring data collection captures
- Collect performance data for gamification

Manage gamification performance categories

The Performance Categories page allows you to define a gamification performance group and assign agents to that performance group.

Page location

Application Management > Global > Performance Management > Performance Categories

Create a performance group and assign agents

1. Choose **Create a new performance group**.
2. Enter a unique name for the performance group.
3. Select the performance metric by which to measure agents in this group.
4. Select the level group you want to use to define levels.
5. Select the point range configuration you want to use to define point values.
6. Select the agents you want to add to this performance group. You can select groups and teams and use the **Filter** fields to search by name. Use Ctrl+Click to select multiple agents.
7. Click **Save**.

Field descriptions

Field	Description
Select Performance Group	("Edit or delete an existing performance group" only) The performance group you want to edit.
Performance Group Name	The name for this performance group.
Group Settings	
Select Performance Metric	The metric you want to use to score agents. ▪ Adherence—Agent adherence data from WFM ▪ Quality—Agent performance data from QM evaluations
Select Level	The set gamification badge levels for this performance group.
Select Point Range	The ranges of scores and assigned point values for this performance group.
Performance Group Participants	
Group/Team/Agent	The groups, teams, and agents assigned to this performance group.

Related topics

- Configure gamification points—Create and manage gamification points
- Configure gamification levels—Create and manage gamification badge levels
- Collect performance data for gamification

Configure gamification points

Gamification is based on agent achievements as measured by points. Use the Points page to manage point values. Agents can be awarded different numbers of points for their adherence and/or evaluation scores that fall into specified ranges.

Page location

Application Management > Global > Performance Management > Points

You must define two or more ranges with associated point values. You can define points for up to 10 ranges.

Configure point values

1. Choose **Create new point range values for a metric**.
2. Enter a unique name for the point range values.
3. Select the range in the table that you want to edit.
4. Enter an ending value in the **End** field. Start and end values can be positive or negative and are inclusive.

   NOTE The value in the start field is read-only. For the first entry in the table, the start value "--" indicates anything below the first end value. For subsequent ranges, the start value is determined by the previous end value. For the last entry in the table, the end value "--" indicates anything above the last start value.

5. Enter a point value to assign for this range of scores. Point values can be positive or negative. A range's point value must be between the preceding and following ranges' point values.
6. Press **Enter**.
7. Click **Add Range** to add any additional rows to the table.
8. Click **Save**.

EXAMPLE

The table below is an example configuration of point ranges.

Range Start	Range End	Points
--	10	–5
11	20	–3
21	40	0
41	60	1
61	90	3
91	--	5

Field descriptions

Field	Description
Select Point Range	("Edit or delete existing point range values" option only) The existing set of point ranges you want to edit.
Point Range Name	The name for this range of scores and assigned point values.
Point Ranges	
Start	(Read-only) The numerical value at the beginning of the selected range of scores. It is determined by the previous range's end value. This number can be positive or negative and is inclusive.
End	The numerical value at the end of the selected range of scores. This number can be positive or negative and is inclusive. It must be greater than that range's start value.
Points	The point value earned for scores in the selected range. This number can be zero, negative, or positive. **NOTE** There is an important difference between "0 points" and "no points." A value of "0 points" means that the agent scored a zero, based on the points system that was defined. A value of "no points" means that there was no metric data for an agent on a particular day and scoring could not be done.
Add Range	Add an additional point range row to the table.

Related topics

- Configure gamification levels—Create and manage gamification badge levels
- Manage gamification performance categories —Specify the data that recurring data collection captures
- Collect performance data for gamification

Configure KPIs

The **Key Performance Indicators (KPIs)** page is used to establish goals for the KPIs you want to make available for monitoring in a Data Explorer report or dashboard.

Prerequisites

- You have the Administer Tenant permission.

Page location

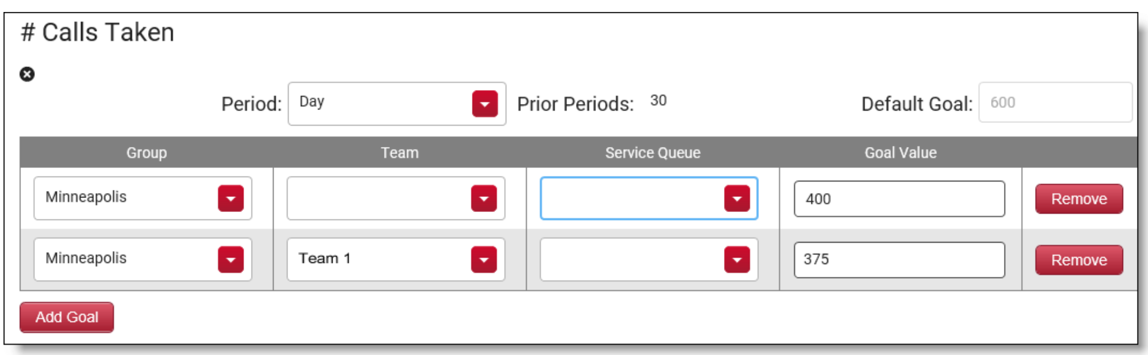
Application Management > Global > Administration > Key Performance Indicators (KPIs)

All KPIs have a default goal, but that goal can be very broad, so it might not add value in reporting without refining it by adding specific goals more appropriate for your contact center. When you add a goal to a KPI, you can further refine the goals for specific areas of your contact center, such as a group or team. For example, the Adherence % goal for Team A might be different from that for Team B, since they handle very different types of contacts. A KPI can have multiple goals, based on your unique requirements.

A KPI is hierarchical in nature. That is, when you set a goal and do not specify a group or team, the goal applies to all groups and teams in your entire contact center. If you specify a group, the goal applies only to that group and all teams that belong to it. If you specify both a group and a team, then that goal applies only to that team. A more specific goal overrides a less specific goal.

EXAMPLE

Group Minneapolis is comprised of Teams 1, 2, and 3. As shown in the graphic below, a goal of 400 calls taken per day has been set for the group and all its teams. However, Team 1 handles more complex issues, so a goal of 375 calls taken per day is set for Team 1 only. This goal overrides the goal set at the group level. Since no goals have been set specifically for Teams 2 and 3, they inherit the group's goal of 400 calls taken per day.



The KPIs available for configuration are built into Data Explorer as a type of measure. See Create a report and Configure enterprise KPIs for more information.

Configure a KPI goal

1. Select the KPI you want to configure from the **Add KPI** drop-down list, and then click **Add KPI**. The KPI is added to the page in alphabetical order with one blank row.
2. Complete the fields to configure the KPI goal. The only field required is **Goal Value**. All others are optional. Not all fields are available for every KPI.

Field	Description
Period	(Optional) Select the unit of time (“period”) for the KPI.
Prior Periods	(Optional) Enter the number of prior periods for the KPI. For example, if the period selected is “Day” and the prior periods entered is “30,” then the trend comparison of the KPI is for the prior 30 days.
Default Goal	(Read only) The default goal of the KPI. This value is set with the KPI in Data Explorer. The default goal can be very broad, so it might not add value in reporting without refining it by adding specific goals.
Group	(Optional) Select the group for the goal. The available groups are those configured on the Groups page (see Manage groups .
Team	(Optional) Select the team for the goal. The available teams are those configured on the Teams page (see Manage teams).
Service Queue	(Optional) Select the service queue for the goal. The available service queues are those configured on the Service Queues page (see Manage service queues).
Form	(Optional) Select the evaluation form for the goal. The available forms are those configured on the Evaluation Form

Field	Description
	Manager page (see Manage evaluation forms).
Goal Value	(Required) Enter the goal for the KPI.

3. If you want to add another goal for the KPI, click **Add Goal**. If you need to remove a goal row from the KPI, click **Remove** next to that row.
4. When you have finished adding goals, click **Save**.

Remove a KPI from the page

- Click the **X** icon beneath the KPI name to remove the KPI from the page. When you remove the KPI, it reverts to using its default goal in reporting.

  NOTE If you remove every goal row from a KPI, the KPI is automatically removed from the page. A KPI must have at least one goal row to remain on the page.

Audit user and system changes

The Audit page lets you search, review, and identify changes made by users or the system in Webex WFO, forming an “audit trail.” When a user makes a change in Webex WFO, Webex WFO adds an entry to the Audit Trail table. This entry records who made the change (the user) and what the user changed (the object). Webex WFO retains information on the Audit Trail table indefinitely.

NOTE “Users” include system tasks (for example, syncing with an ACD) as well as logged in Webex WFO users. “Objects” include anything that you can create or edit in Webex WFO (for example, roles).

NOTE Not all objects in Webex WFO are audited, and the audit trail excludes changes made by system tasks. You can select **Include system events** to include changes made by system tasks.

Prerequisites

You must have supervisor or tenant permissions to view audit trails.

Page location

Application Management > Global > Monitoring > Audit

Procedures

You can use the Audit Filter to include only changes that meet specific criteria based on changes that specific users made or changes that were made to specific objects. The audit filter enables you to limit which entries Webex WFO displays in the Audit Trail table. The table contains an entry for each audited change in Webex WFO.

Add a filter:

1. Click **Filter**. The filter pane appears.
2. Configure the filter fields.
   You can filter the entries in the audit trail to find any or all of the following:
   - Users who made changes. You can filter by first name, last name, group name, and Email address.
   - APIs that were called to make changes. The audit trail includes all changes made by API calls to this endpoint.
   - Dates that changes were made.
   - Objects that were changed. The audit trail includes changed object types and how an object changed.
3. Click **Filter Results**.

> **NOTE** To be included in the filter results, entries must match the values in every field that you configure.

Remove a filter:

1. Click **Filter**. The filter pane appears.
2. Click **Clear filters**.

View additional details about a change:

1. Click on a entry from within the Audit Trail table to view additional details about what was changed.
2. To return to the audit trail table, click the entry again.

Best practices

- Wild card characters do not work within the fields. You must know the field value that you want to audit and enter the complete value name and be sure to spell the value name correctly. Abbreviated forms of a value name does not work.
- You use the Entity Label, Field Label, and Field Value fields to find specific objects that were changed so that the user who changed them can be identified. You must use these fields together. You cannot use them separately.
    - Entity Label—The changed object's type.
    - Field Label—The identification method that you want to use to find the changed object.
    - Field Value—The unique identifier of the changed object.

  EXAMPLE

  You want to find who added a permission to a role named "Agent," and you want to search for this role by name. You take the following actions:

    - In the Entity Label drop-down, you select **Role**.
    - In the Field Label drop-down, you select **Name**.
    - In the Field Value field, you type **Agent**.

  The following examples show how to configure these fields to find specific core configuration, WFM, and QM objects.

    - The Core Configuration example demonstrates how to find a user who changed a common core configuration object.
        - Entity Label: Select **Person**.
        - Field Label: Select **Login**.
        - Field Value: Enter the user name of the user who was changed.
    - To find which user changed a common WFM object such as work shifts.
        - Entity Label: Select either **Fixed Work Shift** or **Variable Work Shift**, depending on the type of the work shift that you want to find.
        - Field Label: Select **Name**.
        - Field Value: Enter the name of the work shift that was changed.

- To find which user changed common QM objects such as retention or an ACD configuration.

  Retention:

  - Entity Label: Select **Retention Policy**.
  - Field Label: Select **Name**.
  - Field Value: Enter the name of the retention policy that was changed.

  ACD Configuration:

  - Entity Label: Select **Server**.
  - Field Label: Select **ID**.
  - Field Value: Enter the Enter the ID of the ACD.

  > **NOTE** To find the ID of an ACD, navigate to **Application Management** > **ACD Configuration**. The ID of an ACD is included after its name in the **Select ACD** table.

- When viewing additional details about an object in the audit trail the details refer to objects in Webex WFO by an internal ID and not a name. The following table describes common phrases that refer to internal IDs and where to find those IDs in Webex WFO.

Common Phrase	Description
"A Person identified by the id of <ID>"	On the Users page, export users. In the exported CSV file, this ID appears in the User ID column. **NOTE** This ID is an internal Webex WFO ID, not the user's ACD ID or employee ID.
"A Group/Team identified by the id of <ID> was updated"	On the Groups page, export groups. In the exported CSV file, this ID appears in the Group ID column.
"A Group/Team identified by the id of <ID> was updated"	On the Teams page, export teams. In the exported CSV file, this ID appears in the Team ID column.

Monitor connections to the Webex WFO server

Use the Desktop Monitoring page to monitor client connections to the Webex WFO server. From the Desktop Monitoring page you can discover the connection status of multiple tenants, download the logs of your Smart Desktop instance, and view other connection details to troubleshoot customer issues.

NOTE The Desktop Monitoring page does not provide screen monitoring functionality.

Prerequisites

- You have the View Desktop Monitoring permission.
- One or more tenants are configured.
- The Desktop Client Async Logs Error and Desktop Client Async Logs Success notifications are configured to retrieve logs.

Page location

Application Management > Global > Monitoring > Desktop Monitoring

Procedures

Filter connections

You can filter the information displayed in the table by tenant and the connection and activation status of the tenant's installed instances of Smart Desktop. You can also sort the information displayed by clicking a column header in the table.

1. Click **Show Filters**.
2. Select or clear the check box next to the desired filter options. By default, all options are selected and the time period is set for the last seven days.

Retrieve Smart Desktop logs

With the **Get Logs** button, you can retrieve a ZIP file of the logs for each Smart Desktop instance that is connected to your tenant's Webex WFO server.

1. Locate the Smart Desktop instance you want logs from, and then click **Get Logs**. You will receive a notification when a ZIP file of the logs is ready to download.

> **NOTE** To be notified, you must be enabled to receive the Desktop Client Async Logs Error and the Desktop Client Async Logs Success notifications (see Configure notifications). If these notifications are disabled, you will receive the following error message:
> You will need to subscribe to the ‘desktop client async logs success’ and ‘desktop client async logs error’ notifications to receive these logs.

2. Open the notification, and then follow the instructions to download the ZIP file.

Field descriptions

The fields on the Desktop Monitoring page are described below.

Field	Description
Select Tenant	(System administrators only) Select the tenant whose connections you want to view. You can also select All to view connections for all tenants.
Select Client Version	Select the version of Smart Desktop you want to view. You can also select All to view connections for all versions of Smart Desktop.
Reset	Restores the default filter selections.
Export	Export the displayed desktop monitoring data as a CSV file called MachineDetails.csv. You are given the option to open the file or save it to your Downloads folder.
Status	The status of a specific installation of Smart Desktop. ▪ Green—Connected and the installed version is the active version. ▪ Yellow—Connected and the installed version is not the active version. ▪ Red—Connected and there is an alert. ▪ Gray—Disconnected.
Tenant Name	The name of the tenant.
Machine Name	The network name for the client.
Machine ID	The universally unique identifier (UUID) of the user’s machine.

Field	Description
IP Address	The IP address of the user's machine.
Activated Client Version	The Smart Desktop version currently running on the client's PC.
Installed Client Version	The latest Smart Desktop version downloaded to the agent's PC. If the Active Client Version and Installed Client Version match, the agent is using the most current version of Smart Desktop.
Connected	Indicates that Smart Desktop is currently connected to the Webex WFO server.
Logs	The Get Log button generates a request for the logs of the Smart Desktop instance.
Config	The **Edit Config** button allows you to view and edit the logging level, number of debug files, and the size of those debug files for this instance of Smart Desktop.

Related topics

- Configure notifications

Monitor scheduled bulk contact exports

Use the Bulk Contact Export Audit page to monitor the status of scheduled bulk contact exports.

> **IMPORTANT** Webex WFO has released an updated version of the bulk contact export audit monitoring page. The monitoring table you see on the page varies depending on if the updated version has been rolled out to your organization.

A bulk contact export has two stages: the *task* (optional) and the *upload*. During the *task* stage, Webex WFO converts files from the format in which they were recorded to the format in which they will be stored in the external storage location.

If you do not set the export to convert files, Webex WFO skips this step. During the *upload* stage, Webex WFO moves the files to the external storage location.

Prerequisites

- You have configured an external storage location for exported contacts to go to.
- You have created a recurring or ad hoc bulk contact export. (Create these on the Interactions page.)
- (To see exports created by other people in your organization) You have the View Bulk Contact Export permission.

Page location

Application Management > Global > Monitoring > Bulk Contact Export Audit

Procedure

Access exported files

Exported files are located in the Exports folder on your configured external storage location. The files are ZIP files in CSV format. File names use the following naming convention: <“immediate” or “scheduled”>-<saved search name>-<datestamp>-<timestamp>

Updated bulk contact export audit monitoring table

Column	Description
Date	The date and time the export was created.
Name	The name given to the export by the person who created it.
Status	The current state of the export job.
Contacts Evaluated	The total number of contacts that Webex WFO has processed. Webex WFO evaluates the search results to determine which contacts are valid, which means the contacts do have audio to export. The number of contacts evaluated may differ from the number of contacts exported if the results have valid and invalid contacts.
Invalid Contacts	The number of contacts that were deemed invalid after evaluation and are not be submitted for processing. An example of an invalid contact is a contact that does not have media to export.
Contacts Submitted	The total number of contacts submitted for a bulk contact export.

Column	Description
Contacts Exported	The number of files Webex WFO has successfully exported to your organization's external S3 bucket.
Job Owner	The name of the person who created the bulk contact export job.

Classic Bulk contact export monitoring audit table

Column	Description
Date	When the export was created.
Name	The name given to the export by the person who created it.
Export Status	The status of the export. **NOTE** If the status is Failed, the most common reason is problems communicating with the external storage location. Verify that it is possible to transfer files based on the credentials provided with a third-party tool (for example, Filezilla).
Task Count	The number of audio or video files that Webex WFO has attempted to convert, including failed conversions.
Tasks Queued	The number of files waiting to be converted to the export file format.
Tasks in Progress	The number of files currently being converted to the export file format.
Tasks Finished	The files that were successfully converted to the export file format.
Uploads Queued	The files that are waiting to be moved to the external storage location.
Uploads Succeeded	The files that were successfully moved to the external storage location.
Uploads Failed	The files that Webex WFO was unable to move to the external storage location.

Related topics

- Add external storage locations—Create locations for exported files to go to.
- Export contacts in bulk—Create bulk contact exports.
- Configure QM archive settings
- Configure storage profiles
- Manage roles and permissions —Learn more about the Bulk Contact Export and View Bulk Contact Export permissions.

Configure notifications

Webex WFO can inform users about system events via messages called notifications.

The notifications can be in real time or delivered in summary form on a schedule you set up.

Notification recipients are organized in notification groups. The group defines the type of event that triggers a notification, the members of the group (just yourself or multiple members), how often you receive notifications, and the method used to send them.

Your access to what you can configure and the method of delivery depends on your login and the permissions configured for your role. Those permissions define which system events you can be notified about.

Login Type	What You Can Configure
Non-administrator users	Notifications for yourself via alert or email Notifications for yourself via alert, email, or mobile notification. (Mobile notifications are for cloud deployments only.)
Administrators	■ Notifications for yourself via alert or email ■ Notifications for a group via email

Field descriptions

The fields on the Notifications page are described below.

Field	Description
Notification Scope	Choose the scope of the notification group: notifications just for yourself or notifications for multiple users.
Notification Group Name	A unique name for the notification group.
Notification Types	Select the type of notifications you want to receive. The types available to you are determined by the permissions set for your role on the Roles page.
Real Time Notifications	Complete this section to receive notifications in real time.
Summary	Complete this section to receive notifications as summaries.
Delivery Method	Choose the method you want to use to receive notifications. If you opt for email delivery and the notifications are just for you, not for multiple users, the email address used is the one configured for you on the Users page in the Username field. To receive mobile notifications, you need the “Calabrio ONE mobile app access” permission.
Email Distribution List	(“These notifications are sent to multiple users” option only) In the field below the list pane, enter an email address, and then click **Add**. Once in the list pane, you can click the pencil icon to edit an address or the X icon to delete an address.
Number of Notifications	Defines how many notifications Webex WFO sends for an event. The system reports some events as they occur, while others are reported every time the system polls. By specifying this number you can make sure you are not sent many notifications for the same event.
Summary Configuration	Select the conditions under which you want to receive a summary report.

Field	Description
Schedule	Use this section to configure the delivery of notification summaries.
Send Summaries Every <time period>	Enter how often Webex WFO sends a summary to you. The default time period is every 24 hours.
Starting Date and Time	The date and time the summary period starts.

Notification types

There are three types of notifications:

- Informational—An expected event has taken place
- Warning—A condition exists that will lead Webex WFO to stop working if it is not corrected
- Error—A condition currently exists that could cause Webex WFO to stop working

Notifications can be sent in the following ways:

- Alerts displayed in the application
- Emails sent to a designated distribution list
- Mobile notifications sent to your mobile device (cloud deployments only)

Tenant administrator and user notifications

This table lists the notification types available when you log into Webex WFO as a tenant administrator or other user.

Notification	Description and Solution
Agent Login (Support)	**Informational:** An agent has logged in to Webex WFO. **Solution:** No action needed.
Agent Logout (Support)	**Informational:** An agent has logged out of Webex WFO. **Solution:** No action needed.

Notification	Description and Solution
Analytics Data Server Error (Support)	**Error:** The Analytics Data Server is not communicating with the Analytics grid server. **Solution:** Check the Analytics Data Server logs, and verify its connectivity. Check if the database is accessible.
Approaching low disk space (Support)	**Solution:** Free up used disk space or add additional storage.
Approaching recording capacity (Support)	**Solution:** Add another Record server.
Bulk Contact Export Error (Business)	**Error:** Webex WFO failed to transmit the bulk contact export file. **Solution:** Verify the bulk contact export target location settings.
Bulk Contact Export Success (Business)	**Informational:** Your Webex WFO bulk contact export request was successful. **Solution:** No action needed.
Capture Plugin Data Server Error (Support)	**Error:** The capture Data Server is not communicating with the Webex WFO Application server. **Solution:** Check the capture Data Server logs, and verify its connectivity. Check if the database is accessible.
Capture Request (Business)	**Informational:** Your Webex WFO capture request for WFM historical data was successful. **Solution:** No action needed.

Notification	Description and Solution
Cisco JTAPI Install Failure (Support)	**Error:** Your Cisco JTAPI installation has failed. **Solution:** Review your Cisco JTAPI installation procedures and retry the installation.
Cisco JTAPI Install Success (Support)	**Informational:** You successfully installed Cisco JTAPI. **Solution:** No action needed.
Client Installation Error (Support)	**Error:** Webex WFO was not installed correctly on desktop. **Solution:** Verify the Smart Desktop installation. Refer to the *Installation Guide for Cloud Deployments* for more information.
Contact Goal All Users Completed (Business)	**Informational:** Alerts the goal creator and all users assigned to a Contact Goal when all tasks in the Contact Goal are completed. **Solution:** No action needed.
Contact Goal Completed (Business)	**Informational:** An agent has successfully completed his or her Webex WFO QM contact goals. **Solution:** No action needed.
Contact Goal Created (Business)	**Informational:** You have successfully created a Webex WFO contact goal. **Solution:** No action needed.
CTI Plugin Data Server Error (Support)	**Error:** The CTI Data Server is not communicating with the Webex WFO Application server.

Notification	Description and Solution
	Solution: Check the CTI Data Server logs, and verify its connectivity. Check if the database is accessible.
Data Server Connected (Support)	**Informational:** A Data Server has been connected to Webex WFO. **Solution:** No action needed.
Data Server Disconnected (Support)	**Error:** A Data Server is not communicating with the Webex WFO Application server. **Solution:** Check the Data Server logs, and verify its connectivity. Check if the database is accessible.
Data Server Missed Heartbeat (Support)	**Error:** A CTI Server, SIPREC Signaling Server, or Recording Server has been disconnected from the wfoadapter server for at least ten minutes. A tenant task checks the server connection every five minutes. If the connection fails two of these checks, Webex WFO sends this alert and continues to send the alert every five minutes until the server is reconnected. **Solution:** Check that the server computer is running. Check that the server service is running. Check that the server computer is connected to the network and can access the wfoadapter server via the network.
Delayed Storage Retrieval Complete (Business)	**Informational:** Your data in storage has been successfully retrieved. **Solution:** No action needed.
Desktop Client Async Logs Complete (Support)	

Notification	Description and Solution
Desktop Client Async Logs Error (Support)	
Distribution Request (Business)	**Informational:** A Webex WFO WFM user has made a distribution request. **Solution:** No action needed.
Evaluation Appeal Request (Business)	**Informational:** Either of the following occurred: ▪ A user appealed an evaluation that you completed. ▪ A user appealed an evaluation completed by someone else, but you have both scope over the evaluated contact and the Edit Any Evaluation permission. **Solution:** Review the evaluation and any comments entered by the user.
Evaluation Audit (Business)	**Informational:** An evaluation you are associated with has been updated. This notification is sent to both the agent associated with the contact and the person who updated the evaluation. **Solution:** No action needed.
Evaluation Needs Approval (Business)	**Informational:** A Webex WFO QM user has completed an evaluation. **Solution:** Save the evaluation.
Exceeded low disk space (Support)	**Solution:** Free up used disk space or add additional storage.
Exceeded recording capacity (Support)	**Solution:** Add another Record server.

Notification	Description and Solution
externalStorageLocationError (Support)	**Error:** During a run of the Archive Contact Handler task, Webex WFO encountered an error connecting to an external storage location. **Solution:** Check the configuration of your external storage location and test your connection to it.
Failed to Capture Desktop (Support)	**Error:** A Webex WFO QM user cannot make desktop recordings. **Solution:** Verify the Webex WFO Smart Desktop configuration.
Failed to Record Screen (Support)	**Error:** The alert reads as follows: **EXAMPLE** Desktop Event: <version number> - Screen Recording failed to start. This notification occurs when a user has failed to record screen for a single call. The user is configured correctly to record screen, and the Smart Desktop attempted to record screen, but the attempt was unsuccessful. **Solution:** If the problem occurs consistently for a single device using Desktop Recording, verify the installation of the service on that PC. Uninstall the Smart Desktop, restart the PC, and reinstall the Smart Desktop on the affected PC. Contact Support if the problem persists.
Failed to Record Voice (Support)	This notification is caused either by an error originating from Smart Desktop or from CTI Signaling.

Notification	Description and Solution
	Smart Desktop **Error:** If Smart Desktop is the cause of the error, the alert reads as follows: **EXAMPLE** Desktop Event: <version number> - Voice Recording failed to start. This notification occurs when a user has failed to record voice for a single call. The user is configured correctly to record voice, and the Smart Desktop attempted to record voice, but the attempt was unsuccessful. **Solution:** If the problem occurs consistently for a single device using Desktop Recording, verify the installation of the service on that PC. Uninstall the Smart Desktop, restart the PC, and reinstall the Smart Desktop on the affected PC. Contact Support if the problem persists. If this problem occurs on many phones in a Server Recording environment, verify the service is not running near capacity and that the configuration is correct. Contact Support if the problem persists. **CTI Signaling** **Error:** If CTI Signaling is the cause of the error, the alert reads as follows: **EXAMPLE** Signaling Server Event: Voice recording failed to start. This notification occurs when the CTI Signaling server

<table>
<tr><th>Notification</th><th>Description and Solution</th></tr>
<tr><td></td><td>could not initiate a call with an associated recording server. The “Details” line of the event message indicates one of two categories for this failure:

“Details: No SIP INVITE”—This error occurs when the CTI Signaling server did not receive a SIP INVITE message from the CTI signaling JTAPI source.

▪ Solution: If this problem persists, check the CTI data server logs to ensure the CTI data server is receiving SIP signaling messages from the CTI signaling source.

“Details: No connected client”—This error occurs when the Signaling server is not connected to any recording server associated with the device.

▪ Solution: Check the CTI data server logs to find out what recording servers are associated with this device. Ensure they are running, and the signaling server and recording servers are connected.</td></tr>
<tr><td>Forecast Accuracy Request (Business)</td><td>Informational: A Webex WFO WFM user has made a forecast accuracy request.

Solution: No action needed.</td></tr>
<tr><td>Forecast Request (Business)</td><td>Informational: A Webex WFO WFM user has made a forecast request.

Solution: No action needed.</td></tr>
<tr><td>FTP Plugin Data Server Error (Support)</td><td>Error: Webex WFO was unable to transfer data from the data server.</td></tr>
</table>

Notification	Description and Solution
	Solution: Check the Data Server error logs. Verify communication with the data server.
Historical Data Import Error (Support)	**Error:**Webex WFO detected an error attempting to load historical data. **Solution:** Check Data Server error logs, consult your system administrator, and restart the service.
Historical Merge Request (Business)	**Informational:** A Webex WFO WFM user has made a historical data merge request. **Solution:** No action needed.
Major record server overload (Support)	**Solution:** Add another Record server or contact Webex WFO support.
Major recording upload backup (Support)	**Solution:** Add another Record server or contact Webex WFO support.
Messaging Request (Business)	**Informational:** A messaging request that you submitted has been approved or denied. This includes when an Intraday Dynamic Scheduling event selection has been approved. **Solution:** No action needed.
Metric Statistics (Support)	**Informational:** A Webex WFO WFM user has made a metric statistics request. **Solution:** No action needed.
Minor record server overload (Support)	**Solution:** If you receive this notification frequently, add another Record server or contact Webex WFO support.

Notification	Description and Solution
Minor recording upload backup (Support)	**Solution:** If you receive this notification frequently, add another record server or contact Webex WFO support.
My Scored Evaluation (Business)	**Informational:** An evaluation of a contact that you handled has been completed or edited. **NOTE** If the evaluation requires approval, you receive this notification when the evaluation has been approved. **Solution:** No action needed.
No Phone Detected (Support)	**Error:** The Smart Desktop listened for a daisy-chained phone but did not find one after six minutes. This results in the service not recording. The most likely cause is the phone is not properly daisy-chained to the PC or the device is not configured to send its RTP traffic to the PC. This is a useful message for deployments or if the phones are continuously connected to the PCs that record them. If PCs are routinely disconnected from the phones, you might want to consider disabling this problem. **Solution:** Disable this problem if PCs are disconnected from phones. Otherwise, check the configuration of the device in Unified CM and verify ‘SPAN to PC Port’ is set to ‘Enabled.’ Check the physical connection between the PC and phone to verify they are daisy-chained correctly. See the Webex WFO*Installation Guide for Cloud Deployments* for information on configuring the hardware for Desktop Recording.

Notification	Description and Solution
QM Voice Processing (Business)	**Informational:** An agent has logged on to Webex WFO. **Solution:** No action needed.
Reconciliation Completed (Business)	**Informational:** This notification alerts you every time a reconciliation job completes successfully. It includes the job number and the job's start and end time. **NOTE** To assign this notification, you must have the Administer QM and the Receive Business Notifications permissions. Only assign this notification if your contact center has a recording architecture that requires reconciliation. **Solution:** No action needed.
Recording Export (Business)	**Informational:** Your contact export request completed successfully, and your contact is ready for download. **Solution:** No action needed.
Recording Maximum Length Error (Support)	**Error:** A recording has reached your organization's maximum call length as configured on the QM Global Settings page. **Solution:** Review the recording to determine whether the contact was actually longer than your max call length or whether the recording length is an error and the recording should have stopped sooner. If the recording length is an error, that usually means that Webex WFO did not receive a call end event from your signaling provider. If you get this notification

Notification	Description and Solution
	multiple times, there may be a problem with your signaling provider.
Retrieve Data Server Logs Error (Support)	**Error:** Your request for Webex WFO Data Server logs could not be completed. **Solution:** Verify the Data Server connectivity. Check if the database is accessible. if the issue persists, contact Support.
Retrieve Data Server Logs Success (Support)	**Informational:** Your request for Webex WFO Data Server logs completed successfully. **Solution:** No action needed.
Schedule Change (Business)	**Informational:** Someone (such as a scheduler or analyst) has made a change to your schedule, for example, moved your break time. **Solution:** No action needed.
Schedule Reminder (Business)	**Informational:** This is a reminder about an upcoming scheduled activity. Reminders are sent only to Webex WFO users who are currently logged in. They are sent 15 minutes before the activity is due to start. **Solution:** No action needed.
Schedule Request (Business)	**Informational:** This is a notification to a Webex WFO user who made a schedule request that the request has been approved or denied. **Solution:** No action needed.
Shift Budget Analysis Request	**Informational:** A Webex WFO WFM user has made

Notification	Description and Solution
(Business)	a shift budget analysis request. **Solution:** No action needed.
Signaling Server Active (Support)	**Informational:** A signaling server has become active. **Solution:** No action needed.
Signaling Server Forced Standby (Support)	**Error:** The signaling server has entered forced standby and is inactive. **Solution:** Check the signaling server logs for further information.
Signaling Server Uncontrolled Failover (Support)	**Error:** The active signaling server failed, and the standby signaling server is now active. **Solution:** Check the signaling server logs for further information.
Signaling Server Maintenance Failover (Support)	**Error:** The active signaling server entered maintenance mode, and the standby signaling server is now active. **Solution:** Check the signaling server logs for further information.
Signaling Server Telephony Provider Failed (Support)	**Error:** The signaling server lost its connection to the telephony provider and is inactive. **Solution:** Check the signaling server logs for further information.
stagedUploadServerConnectionFailure (Support)	
Strategic Forecast Request (Business)	**Informational:** A Webex WFO WFM user has made

Notification	Description and Solution
	a strategic forecast request. **Solution:** No action needed.
Sync Plugin Data Server Error (Support)	**Error:** The Sync service has failed. **Solution:** Perform the following steps: 1. Verify that the Sync service is running. 2. Verify that you can communicate with the server on which the Sync service is installed. 3. Check the Sync service logs.
Two Stage Plugin Data Server Error (Support)	**Error:** An error has occurred in the two-stage data upload process. **Solution:** Check the Data Server logs. If the issue persists, contact Support.
Unexpected Error on Desktop (Support)	**Error:** An unexpected error occurred executing a task. **Solution:** Check the desktop debug file for the reason associated with this error. Restart the agent's desktop. If the issue persists, contact Support.
Voice Packets Not Received (Support)	**Error:** Webex WFO has not received packets on the SPAN port. When you are monitoring an agent's customer contact, you can hear nothing. After 15 seconds, an error message indicates no packets are being received. Your attempt to record the agent's customer contact results in an empty recording. **Solution:** Verify the following:

Notification	Description and Solution
	■ PC Port ■ PC Voice VLAN Access ■ Span to PC Port ■ Device Security Mode Also, verify the configuration of the agent's phone codecs.

Delete or update multiple contacts at once

Use the Bulk Contact Operations page to delete multiple contacts, change multiple contacts' retention policies, or update custom metadata for multiple contacts at one time instead of working with contacts one at a time on the Interactions page.

> **NOTE** This is a new feature that is not yet generally available. If you would like early access to this feature, contact your Cisco Account Manager.

Prerequisites

- Your organization uses Webex WFO Cloud. Bulk Contact Operations is not available for on-premises deployments.
- The Bulk Contact Operations page has been enabled for your organization.
- You have at least one of these permissions:
  - Bulk Delete
  - Bulk Update Retention
  - Bulk Update Metadata
- You have a CSV file that contains a list of contact IDs that you want to work with. At a minimum, this file must include a Contact ID column header. It can include other column headers, but these are not required. One way to create this file is to export a list of contacts that you want to work with from the Interactions page. See Export contact metadata for instructions. Your export must include the Contact ID column.

- (To update retention policies for contacts) Your organization has created at least one retention policy on the Retention page. See Manage data retention policies for QM and Analytics for more information.
- (To update or clear custom metadata for contacts) Your organization has created custom metadata on the Metadata Manager page. See Manage custom metadata fields for more information.

Page location

Application Management > QM > QM Contact Flows > Bulk Contact Operations

Procedures

Delete multiple contacts

IMPORTANT Deleting contacts is permanent. You cannot undo this action.

1. Select **Bulk delete contacts**.
2. Click **Choose File** and upload the spreadsheet of contacts that you want to delete. A list of the contacts appears on the right side of the page.
3. In the **Reason** field, enter why you're deleting the contacts. This reason will be visible to anyone who runs a report on bulk tasks.
4. Click **Submit**. The **Delete contacts?** window opens.
5. Click **Confirm**. The window closes, and a confirmation message appears.

Update the retention policy for multiple contacts

1. Select **Bulk update contact retention policy**.
2. Click **Choose File** and upload the spreadsheet of contacts that you want to update. A list of the contacts appears on the right side of the page.
3. Select the retention policy to apply to the contacts from the **Retention Policy** drop-down list.
4. In the **Reason** field, enter why you're assigning the retention policy to the contacts. This reason will be visible to anyone who runs a report on bulk tasks.
5. Click **Submit**. The **Update contact retention policies?** window opens.
6. Click **Confirm**. The window closes, and a confirmation message appears.

Update custom metadata for multiple contacts

IMPORTANT Updating custom metadata is permanent. You cannot undo this action.

1. Select **Bulk update contact metadata**.
2. Click **Choose File** and upload the spreadsheet of contacts that you want to update. A list of the contacts appears on the right side of the page.
3. In the **Update metadata** section, select the metadata field you want to update from the **Metadata Field** drop-down list. The options in this list come from the Metadata Manager page.
4. Enter the value that you want to assign in the **Metadata Value** field.

   > **EXAMPLE** Your organization uses a custom metadata field called “Customer Loyalty Tier” that helps assign customers who have the highest loyalty level to concierge support. You need to assign the Silver loyalty level to a set of contacts. In the **Update metadata** section, you select Customer Loyalty Tier from the **Metadata Field** drop-down list and enter Silver in the **Metadata Value** field.

5. (Optional) To update additional metadata for these contacts, repeat steps 3 and 4.
6. In the **Reason** field, enter why you are updating the metadata for these contacts. This reason will be visible to anyone who runs a report on bulk tasks.
7. Click **Submit**. The **Update contact metadata?** window opens.
8. Click **Confirm**. The window closes, and a confirmation message appears.

Clear metadata for multiple contacts

Remove any values for a specific metadata field from contacts.

IMPORTANT Clearing a metadata field is permanent. You cannot undo this action.

1. Select **Bulk update contact metadata**.
2. Click **Choose File** and upload the spreadsheet of contacts that you want to update. A list of the contacts appears on the right side of the page.
3. In the **Clear metadata** section, select the metadata field whose value you want to clear from the **Metadata Field** drop-down list. The options in this list come from the Metadata Manager page.

   > **EXAMPLE** Your organization uses a custom metadata field called “Customer Loyalty Tier” that helps assign customers who have the highest loyalty level to concierge support. You need

remove the loyalty level from a set of contacts. In the **Clear metadata** section, you select ustomer Loyalty Tier from the **Metadata Field** drop-down list. When this job finishes nning, the Customer Loyalty Tier field for these contacts is blank.

4. In the **Reason** field, enter why you are clearing the metadata field for these contacts. This reason will be visible to anyone who runs a report on bulk tasks.
5. Click **Submit**. The **Update contact metadata?** window opens.
6. Click **Confirm**. The window closes, and a confirmation message appears.

View a record of bulk tasks

Run a report that lists bulk contact updates, who ran them, and why.

1. Select **Report on bulk jobs**.
2. In the **Date Range** fields, select the start and end dates for the time period you want to report on.
3. Click **Run**. A list of bulk jobs appears on the right side of the page.
4. (Optional) To download a list of the contact IDs included in a job, click the job’s number in the **Job ID** column.

Related topics

- Customize the columns on the Interactions page—Ensure that the Contact ID column is part of your exported file.
- Export contact metadata—Create the list of contacts that you want to process in bulk.
- Manage data retention policies for QM and Analytics—Create rules that govern how contact data is stored.
- Manage custom metadata fields—Create information to attach to contacts.

Manage users

How licenses work

Licenses grant you legal access to use Webex WFO. You use licenses to link the functionality of Webex WFO with its roles and permissions.

Licensing model

Cisco has a licensing model with subscription billing and uncommitted licenses for Webex WFO-hosted deployments.

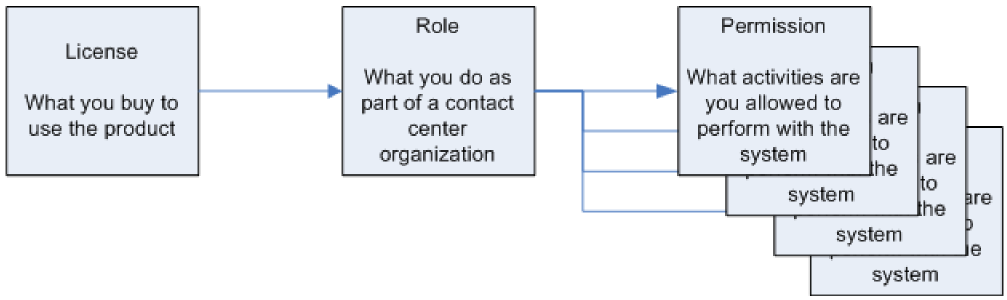
When you purchase a subscription to Webex WFO, you agree to what Cisco calls a “minimum monthly commitment”: a minimum number of seats bought at a particular price. If you use more seats than you agree to in your monthly commitment, Cisco bills you for each of them. This is called an “uncommitted license.”

Cisco bills you periodically, on a monthly, quarterly, or annual basis.

> **EXAMPLE** You have a minimum monthly commitment of 100 QM seats, which satisfies your requirements from February to October. Your contact center is busier during the holiday season (November through January). During this time, you use 150 QM seats, and for these three months you are billed for 100 seats at the committed license rate and for 50 seats at the uncommitted license rate.

Licensing, roles, and permissions

Licenses are linked to the roles that users have in the system. The access that users have to Webex WFO functionality is based on their role and the permissions associated with their role. For more information about assigning roles and permissions, see Manage roles and permissions.



Each active Webex WFO user is associated with one or more licenses and can have one or more roles. Each individual license is called a seat. License seats are counted by the number of active users with that licensed role. All customers must have a set number of seats and licenses for each active user.

Active users can be licensed and have access to Webex WFO. Inactive users cannot be licensed or have access to Webex WFO. When you switch an active user to inactive, their license becomes available, and you can reassign it to other users.

The following types of licenses are available:

- Data licenses
- Webex WFO Access licenses
- Administration licenses
- Usage licenses
- Bot Analytics licenses
- Insights licenses

Data licenses

Webex WFO users who have capture functions (primarily contact center agents) are associated with a data license. The default agent role is automatically associated with this license type. Data licenses include the following:

- Compliance Recording (CR)—Users can be audio recorded and can review their own contacts.
- Quality Management (QM)—Users can be recorded and evaluated and can review their own contacts and evaluations (QM Data licenses include CR).
- Workforce Management (WFM)—Users can be scheduled and can access schedule modification functions.

- Analytics Essentials—Users can be analyzed and can review analytics data created by their contacts. Users' audio contacts are transcribed and automatically summarized with Interaction Summary. Users can see agent and customer sentiment and AI reasoning.
- Analytics Enterprise—Includes all Analytics Essentials, and users also have access to Auto QM and Trending Topics. Additionally users have trend analysis, which allows you to track changes in sentiment during an interaction.
- Desktop Analytics—Users can monitor agents' desktop activity and application usage. This license is available as an add-on to Cisco Compliance Recording (CR), Quality Management (QM), or Workforce Management (WFM).
- Monitoring—Users can view agents' screens live. This license is available as an add-on to Cisco Compliance Recording (CR) or Workforce Management (WFM).
- Data Management—This license is no longer sold.

> **NOTE** Users with data licenses have limited access to Webex WFO functionality. They are restricted to reviewing their own data.

Webex WFO access licenses

For each system, Cisco provides up to five Webex WFO access licenses. The Webex WFO access license provides a majority of permissions that allow these roles to have access to the full application.

Bot Analytics license

With a Bot Analytics license, users can monitor and improve the performance and quality of their conversational AI products.

Insights licenses

Insights is Cisco's premier business intelligence product. Insights licenses give users access to Insights. Anyone who needs to create or view Insights content must have an Insights license. A single role needs only one of the two Insights licenses listed below, but each license must be assigned to at least one role.

- Insights Reader—Users can view Insights dashboards that are created and shared with them by someone with an Insights Author license.
- Insights Author—Users can create and share Insights analyses and dashboards.

Multiple-role user examples

The following are examples of licensing for users who have more than one role.

Example 1: A QM agent who is also an evaluator

A user has an evaluator role associated with a Webex WFO access license and an agent role associated with a Quality Management license to capture their own contacts. The evaluator role has some agent functionality and some supervisor functionality. This user is using two licenses: one for Quality Management and one for Webex WFO access. In this case, the number of seats available for the Quality Management license and the number of seats for the Webex WFO access license both decrease by one. If this user only requires voice recording, a Call Recording license could be used instead of a Quality Management license.

Example 2: A QM agent who is also scheduled using WFM

A user has an agent role associated with a Quality Management license and a Workforce Management license. This allows the agent's contacts to be captured and allows the agent's work hours to be scheduled. It also enables the agent to review their own contacts and evaluations or to make changes to schedules. This user consumes two licenses.

Features available with QM and Analytics licenses

The table below lists the features that are available with different licenses.

Feature	Compliance Recording (CR)	Quality Management (QM)	Analytics Essentials	Analytics Enterprise	Desktop Analytics	Monitoring
Record audio or import audio from an ACD	X	X				
Import interactions from digital channels	X	X	X	X		
Screen recording		X				
Evaluations		X				
Reporting in either Data Explorer or	X	X	X	X	X	

Feature	Compliance Recording (CR)	Quality Management (QM)	Analytics Essentials	Analytics Enterprise	Desktop Analytics	Monitoring
Insights						
Live screen monitoring		X				X
Desktop monitoring	X	X			X	X
Contact Queue		X				
Automated pause and resume of recording		X				
Create and edit custom metadata associated with contacts		X				
Create and edit evaluation forms		X				
View standard evaluations		X				
Create and view post-call surveys		X				
Export contacts	X	X				

Feature	Compliance Recording (CR)	Quality Management (QM)	Analytics Essentials	Analytics Enterprise	Desktop Analytics	Monitoring
QM views	X	X				
QM workflows	X	X				
Contact tagging	X	X				
Agent Explorer			X	X	X	
Transcription			X	X		
Sentiment analysis						
Sentiment analysis - Agent and Customer			X	X		
Sentiment analysis - Trend analysis*				X		
Interaction Summary			X	X		
Desktop activity tracking and analytics			X	X	X	
Application usage			X	X	X	

Feature	Compliance Recording (CR)	Quality Management (QM)	Analytics Essentials	Analytics Enterprise	Desktop Analytics	Monitoring
Desktop manager			X	X	X	
Auto QM				X		
Trending topics				X		

*Trend analysis allows you to track changes in sentiment during an interaction.

Related topics

- Manage roles and permissions —Create roles and set permissions for access to Webex WFO

Create and edit users

Choose “Create a new user” to create a new user in Webex WFO. You can also choose “Edit an existing user” to edit or deactivate any user already in the system. The fields on Create/Edit user pages are described below.

Page location

Application Management > Global > User Configuration > Users

NOTE In synced systems, if you want to deactivate a user, you must delete the user in the ACD first and then deactivate the user in Webex WFO. The Sync service does not deactivate users from Webex WFO when they are deleted in the ACD, so it must be done manually.

IMPORTANT A user's email addresses must be valid and configured on the customer SMTP prior to adding a new user to Webex WFO or updating an existing user's email address in Webex WFO. Otherwise, Webex WFO cannot send emails to the user's email address. This message is only applicable to organizations that have configured users to receive activation and welcome emails to set their passwords.

Field	Description
Select User	(”Edit an existing user” option only) The user you want to edit. By default, the list displays only active users. To view both active and inactive users, select the “Show inactive users” check box.
First Name	The user’s first name.
Last Name	The user’s last name.
User Name	The user’s email address.
Windows Login	The user’s login name for Microsoft Windows. If you are using Active Directory, include the domain name: `<domain name>\<login name>`
Employee ID	(Optional) The employee ID of the user. If you need to integrate with an HRMS that does not use an ACD ID or an email address as a unique identifier you can identify users by adding their employee ID in this field.
Account Status	Unlock a user’s account. A user’s account is locked when that user exceeds the maximum number of login attempts allowed. See Configure the password policy.
Password	Create a password for the user. Once this password is set, the user can reset it to be more personalized or memorable, using the “Signed in” button on the toolbar. As you set the password, Webex WFO displays a password strength bar below this field. Passwords should be at least “strong.” For more information about password complexity requirements and how to set up rules for passwords, see Configure the password policy.

Field	Description
Confirm Password	Re-enter the password exactly as you entered it in the Password field.
User Profiles	(Read-only) This table summarizes the user's identity in external sources. See Manage user profiles .
Activate this user	Select this check box to activate the user. The user cannot log in until the user account is activated. Clear the check box to deactivate the user. The user cannot log in once the user account is deactivated.
Repurpose ACD ID	(Avaya ACD-synced users only) Click this button to remove the ACD ID association from an inactive user. This allows you to re-assign the ACD ID to a new user.
Unlink Agent	(AD-synced users only) If you no longer want a Webex WFO user to be linked with an AD user, you can unlink them. When a Webex WFO user is unlinked from an AD user, Webex WFO stops updating the user and the user's Recording user profile when properties are changed in AD, and it enables the user's Windows login for editing. See Connect to an Active Directory server.
Creation Date	(Read-only) The date the user record was created.
Deactivation Date	(Read-only) The date the user record was deactivated. As long as a record is active, this field is not visible. When this field is visible, it displays the date of the most recent deactivation. This field only appears when you clear the "Activate this user" check box.
Roles	To assign roles, you must have the Assign User Roles permission. If you

Field	Description
	do not have the Assign User Roles permission and you create a new user, Webex WFO automatically gives the new user the default agent role. Only users with the Assign User Roles permission can change this assignment. Select one or more roles for this user. In a synced system, the user is automatically assigned the agent role. A tenant administrator can assign the administrator role to an existing or new user. That user's scope cannot exceed the tenant administrator's scope. An administrator can only assign a scope that they themselves have. This applies to all levels, whether the role is a tenant administrator, group administrator, or team administrator. If you select the "Enable scheduling for this user" check box (WFM only), you can configure these additional items. If a user is an active agent and is then assigned an additional role (for example, is promoted to supervisor), and that user is no longer required to work as an agent, you should deactivate the user's agent record and unassign the user's agent role. Otherwise, Webex WFO might not function correctly.
Team	Assign the user to a team.
Associated Groups and Teams	(QM and Analytics only) Select the groups and teams that are within the user's scope. You must select at least one group and one team. The user must belong to that group and team. Scope defines the groups and teams within the role's control. For WFM, the scope is also defined by the view assigned to the user. See Manage groups , Manage teams , and Manage views . **EXAMPLE** If a supervisor is assigned to groups A and B, the

Field	Description
	supervisor's scope includes all the agents in both groups. Groups and teams are hierarchical. If a group is in a user's scope, all teams under that group are then in their scope. Group 1 consists of Teams 1 and 2. If you assign Group 1 to a user, Teams 1 and 2 are automatically in the user's scope. If you explicitly assign Team 1 and Team 2 to a user under Associated Teams, it does not change anything because the teams are already in the user's scope. Additionally, if you remove Team 1 from Associated Teams, Team 1 remains in the user's scope because Team 1 belongs to Group 1. If a team is designated as a user's team, then that user has read–write access to schedules in the Agent Schedules application. Also, if an agent's team is part of a supervisor's team, then the supervisor has access to that agent's requests in the Messaging application.
WFM Views	To assign WFM views on the Users page, you must have the Edit WFM Views permission. WFM views are used to manage visibility into WFM activities. If using WFM features, the user must be assigned to one view, and one view must be designated as the Main View. Otherwise, this field is optional.
QM Views	To assign QM views, you must have the Edit QM Views permission. QM views are used to manage the scope of contacts that are filtered by the view (in addition to contacts returned by the user's group or team scope).
Agent's Calls Require	Select this check box if:

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Reconciliation</td><td>The agent uses gateway recording, not endpoint recording or Smart Desktop, for all audio recordings
The agent is not associated with a device that is listed on the Device Associations page.
In this configuration, all the agent’s calls must be reconciled in order to associate the call metadata with the recording.</td></tr>
<tr><td>Display Time Zone</td><td>Select the time zone for this user from the drop-down list. The user will see the following pages in this time zone:
Agent Schedules
Forecasts
Copy Schedule Activities
Messaging
Select the user’s local time zone.

Display Time Zone defaults to the organization’s time zone, which is configured on the Global Settings page (see Configure global settings).

If the Display Contacts in User’s Time Zone check box is selected, the user will also see the Date, Time, and Time Zone fields on the Interactions and Contact Queue pages in this time zone.</td></tr>
<tr><td>Enable Scheduling for this user</td><td>Select this check box to enable this user for scheduling. Users cannot be scheduled unless scheduling is enabled for them.</td></tr>
<tr><td>ACD ID</td><td>The agent’s ID as assigned in the ACD. This number is used to connect synced agent records between the ACD and WFM, and WFM uses this number to identify the agent. In synced systems, this value comes from the ACD and should not be changed.</td></tr>
</table>

Field	Description
	In a non-synced system, if the agent is an ACD agent, enter the agent's ID as assigned in the ACD. If the agent is not an ACD agent, enter a unique number in a range that will never conflict with any ID assigned to an ACD agent.
ACD Server	The ACD server in which the user is set up.
Scheduling Time Zone	The time zone used to schedule the agent. If not set, the time zone used for scheduling is the customer's time zone, which is configured on the Global Settings page (see Configure system-wide WFM settings). For more information on scheduling time zones, see About time zones. A user's scheduling time zone should be set up as soon as possible since changing it later can have an impact on schedules. If you do change the scheduling time zone after it is initially configured, the user should resubmit dynamic availability, dynamic scheduling, intraday dynamic scheduling, and requests that have not yet been approved. Also, any assigned exceptions should be deleted and reassigned.
Company Start Date	The date the agent started employment with the company. WFM uses this value to define scheduling priorities. The agent will not be scheduled before this date.
Company End Date	(Optional) The date the agent will end employment with the company. The agent will not be scheduled after this date. Use this field when you know the agent's termination date.
Department Start Date	The date the agent started working in the contact center. WFM uses this value to define scheduling priorities.
Rank	(Optional) A whole number from 0 to 99999 used to rank agents

Field	Description
	based on their seniority and expertise. WFM uses this value to define scheduling priorities. The exact meaning of rank depends on the service that your contact center provides. If you do not enter a rank, WFM treats it as 99999.
Main Service Queue	The agent’s primary service queue.
Work Condition Profile	The work condition profile that determines which work conditions can be applied to this agent’s schedule.
Skill Mappings	Assign the agent to one or more skill mappings. The skill mappings that you choose determine which service queues the agent can be scheduled for. Both the agent and the service queue must be assigned to the same skill mapping in order for the agent to be scheduled for that service queue. Skill mappings are not used if the agent is assigned to a multiskill group.
Standard Work Shift Rotation	Assign work shift rotations to the agent. When creating a work shift rotation, the first work shift moved to the Assigned pane is dated with the start date of the current week. Every subsequent work shift assigned is dated with the next week’s date. There can be no gap in weeks from one work shift to the next. An agent’s dynamic scheduling work shifts are ignored by WFM when doing work shift rotations. If automatic work shift rotation is not enabled when running a schedule, there must be a work shift configured for the specific week of the schedule in order for this agent to be scheduled. Use the up and down arrows to reorder the work shifts in the rotation. The work shifts move up and down by half steps. One

Field	Description
	click up, and the selected work shift is concurrent with the work shift above, making it a split shift. Click up again, and the work shift moves to the week before the work shift above and assumes that work shift's date, and all work shifts below redate themselves accordingly. The same goes for using the down arrow. If the agent has completed dynamic scheduling for a specific week, the dynamic scheduling work shift is used for that week instead of these assigned/rotated work shifts. See Work Shift Rotation Example.
Copy Work Shift Rotations	Copy this agent's work shift rotation to one or more selected agents. This will replace those agents' previous work shift rotations. You must first save this agent record before you can perform the copy.
Other Work Shifts	Other types of work shifts assigned to the agent that contribute to the creation of the agent's schedule.
Assigned Exceptions	This table displays all exceptions assigned to the agent. If an assigned exception is edited or deleted on the Agent Schedules page, those changes (with the exception of mentoring activities) are reflected in this table. By default, the table is sorted by date in descending order, so the most current date is at the top. The table can be sorted by any column. Exceptions that have notes associated with them have a shaded triangle in the upper right corner of the exception name field. Hover over the name to read the note. You can delete exceptions from the table by selecting the check box next to the exception and clicking Delete. Delete is not enabled

Field	Description
	until you select at least one exception. Delete assigned exceptions from the Agent Schedules page because deleting an assigned exception here deletes the exception from the current agent schedule as well as from future schedules. However, when deleted from the current schedule, the agent is left with a gap where the assigned exception had been. In order for the agent to be continuously scheduled, you must rerun the schedule or fill in the gap with another activity on the Agent Schedules page. Assigned exceptions are not updated in this table if a schedule is restored from history (see Undo a schedule change).
Vacation Hours	This table displays the agent’s current vacation hours status. If Webex WFO is integrated with an HRMS, the totals are as of the last import of vacation data from the HRMS. ■ Hours Earned—Comes from the vacation plan assigned to the agent, or if HRMS integration is enabled, from the HRMS (see Integrate with a human resource management system). ■ Hours Used—Calculated from the exceptions mapped to the vacation types that have been used and approved for the agent. ■ Hours Approved But Not Yet Taken—Calculated from the exceptions mapped to the vacation types that have been used and approved for the agent. FTE is used when the request is an entire-day request and falls on a day that has not been scheduled yet (that is, a schedule has not yet been for the week and the agent). When this occurs, the hours are the minimum hours for the week from the agent's FTE profile, divided by 5. ■ Hours Remaining—Calculated by subtracting the Hours Used and Hours Approved But Not Yet Taken from the Hours Earned. If Webex WFO is integrated with an HRMS, It does not subtract

Field	Description
	exceptions that are manually inserted into past schedules from Hours Remaining.
Schedule Release Profile	(Optional) The schedule release profile to which this agent is assigned. If this setting is left blank, all schedules are displayed to this agent according to this WFM global setting: Number of Weeks Visible in Agent Schedules. See Customize when schedules are released.
Maximum Staffing Group	(Optional) The maximum staffing group to which this agent belongs. See Limit the number of agents to schedule for more information.

Create an API user

If you plan to use Webex WFO APIs for third-party integrations, Cisco recommends that you create an API user account. You configure an API user the same as a system administrator, but the purpose of this user is to enable third-party applications to authenticate with Webex WFO.

NOTE To create this user, you must have the default system administrator role or a role with equivalent permissions. This role consumes one System Administrator license.

For more information on authorizing and authenticating a user with Webex WFO, see Authorize API in the API Reference Guide.

If you run into any issues, contact Support for assistance.

Create an API user account

1. Start Webex WFO and log in as a system administrator.

   NOTE If you are logging into the product for the first time, create an additional Administrative account.

2. Navigate to Application Management > Global > User Configuration > Users.
3. Select the **Create a new user** option and complete the following fields in the User Information section.

- **First Name** and **Last Name**—Enter a first and last name that identifies the purpose of the user. For example, enter **API** as the First Name and **User** as the Last Name.
- **User Name**—Enter a valid email address. This is the user's Webex WFO user name that will be used to log in.

4. Enter a password that meets your tenant's password complexity requirements in the **Password** field.
5. In the **Roles** field, assign the user to the default system Administrator role.
6. Set the **Team** field to Default Team. You can set this value to an alternate team is you prefer.
7. Select the Associated Groups and Teams that this account should have scoping over. You can select individual teams, a Group name, or a Tenant name as a group. Selecting a Tenant name highlights all teams within that group.

11. In the WFM Views field, assign **EnterpriseView** as the main view. This allows the user to see all users.
12. Click **Save** in the upper, right corner of the user interface.

Related topics

View the *Webex WFO API Reference Guide*.

Import and export users

Select the "Import and export users" option to import new or edited users or export existing users. The import and export data is in CSV format.

> **NOTE**
>
> The date format in the CSV files might be changed by a spreadsheet application such as Microsoft Excel to the format that is set in the application as the default. Be aware of this possibility and make sure that the date columns are configured so that the date format is correct. The supported date formats are:
>
> - DD/MM/YYYY
> - MM/DD/YYYY
> - YYYY-MM-DD
> - YYYY/MM/DD

Once you have configured how your import file fields are mapped to the Webex WFO fields, you can save that mapping for reuse.

Prerequisites

- To import users, you must have the Assign User Roles permission.
- If the import file contains any values in the Views column, you must have the Edit WFM Views permission.
- If the file contains any values in the QM Views column, you must have the Edit QM Views permission.

Procedures

Export user data

- Click **Export**. Webex WFO downloads the file to your PC. By default, the file is named **people.csv**.

Import user data

1. Click **Choose File**, navigate to the CSV file that contains the import data, and then click **Open** to display the file column headers. See CSV file format for details on the CSV file requirements.
2. Map the required Webex WFO import fields to the appropriate field in the CSV file, and then configure that field's data type.
3. Click **Import**.

> **NOTE** Existing users' data is updated with the values in each column. If a column is left blank or the column is deleted from the import file, any existing data in that column is deleted in Webex WFO.

Save a mapping schema for reuse

1. Click **Choose File**, navigate to your CSV file, and then click **Open** to display the file column headers.
2. Map the required Webex WFO import fields to the appropriate field in the CSV file, and then configure that field's data type.
3. Enter a name for the mapping in the **Mapping Name** field.
4. Click **Save**. This mapping schema will then be available for reuse in a future import.

CSV file format

The CSV file can include columns for the following data in any order. The Email, First Name, and Last Name columns are required; all others are optional. The columns are listed in alphabetical order in this table.

The columns in the CSV file can use the names listed in this table or names that you choose. For example, **Email** could be **Email Address**. The column names listed here are the ones used in the Webex WFO database. If you use different column names, you must map each custom name to the appropriate Webex WFO name.

> **IMPORTANT** A user's email addresses must be valid and configured on the customer SMTP prior to adding a new user to Webex WFO or updating an existing user's email address in Webex WFO. Otherwise, Webex WFO cannot send emails to the user's email address. This message is only applicable to organizations that have configured users to receive activation and welcome emails to set their passwords.

Column Header	Description
ACD ID	The user's ID within the ACD.
ACD Server ID	The ID of the ACD that is the source of data for the user.
Activated	The date the user was activated.
Company End Date	The date the user left the company.
Company Start Date	The date the user started with the company.
Deactivated	The date the user was deactivated. To activate a deactivated user when importing users, set this date to **12/31/2999**.
Department Start Date	The date the user started with the department.
Display Time Zone	The user's display time zone. For a list of valid names to use when importing users, see Time zone names.
Email	(Required) The user's email address.
Employee ID	The user's employee ID.

Column Header	Description
Enable Scheduling	Indicates if the user can be scheduled. True/False.
First Name	(Required) The user's first name.
Full Scope	When set to TRUE, the user has scope over all groups, teams, and users. When set to FALSE, the user's scope is as configured in the Scope Teams and Scope Groups fields.
Last Name	(Required) The user's last name.
Locale	The language used by the user.
Login	The user's login ID.
Main View	The user's main view in WFM.
Max Staffing Group	The maximum staffing group to which the user is assigned.
Member Group	The group to which the user belongs.
QM Views	The views assigned to the user in QM.
Rank	The user's rank within the contact center.
Roles	The roles assigned to the user. Multiple roles are separated by a semicolon.
Schedule Release Profile	The schedule release profile assigned to this user.
Scheduling Time Zone	The time zone used to schedule the agent.
Scope Groups	The groups within the user's scope. Multiple groups are separated by semicolons.
Scope Teams	The teams within the user's scope. Multiple teams are separated by semicolons.
Skill Mappings	The skill mappings assigned to this user.

Column Header	Description
Team	The user's assigned team.
User ID	The user's ID in Webex WFO. You can identify the ID number by exporting user data and viewing it in the resulting CSV file. If the user is a new user, the User ID must be set to 0 (zero) or the import will fail.
Views	The views that the user is assigned in WFM.
Work Condition Profile	The work condition profile assigned to this user.

Time zone names

The following is a list of allowable time zone names that can be entered in the Users import/export CSV file.

ACT	AET	Africa/Abidjan
Africa/Accra	Africa/Addis_Ababa	Africa/Algiers
Africa/Asmara	Africa/Asmera	Africa/Bamako
Africa/Bangui	Africa/Banjul	Africa/Bissau
Africa/Blantyre	Africa/Brazzaville	Africa/Bujumbura
Africa/Cairo	Africa/Casablanca	Africa/Ceuta
Africa/Conakry	Africa/Dakar	Africa/Dar_es_Salaam
Africa/Djibouti	Africa/Douala	Africa/El_Aaiun
Africa/Freetown	Africa/Gaborone	Africa/Harare
Africa/Johannesburg	Africa/Juba	Africa/Kampala
Africa/Khartoum	Africa/Kigali	Africa/Kinshasa
Africa/Lagos	Africa/Libreville	Africa/Lome
Africa/Luanda	Africa/Lubumbashi	Africa/Lusaka
Africa/Malabo	Africa/Maputo	Africa/Maseru

Africa/Mbabane	Africa/Mogadishu	Africa/Monrovia
Africa/Nairobi	Africa/Ndjamena	Africa/Niamey
Africa/Nouakchott	Africa/Ouagadougou	Africa/Porto-Novo
Africa/Sao_Tome	Africa/Timbuktu	Africa/Tripoli
Africa/Tunis	Africa/Windhoek	AGT
America/Adak	America/Anchorage	America/Anguilla
America/Antigua	America/Araguaina	America/Argentina/Buenos_Aires
America/Argentina/Catamarca	America/Argentina/ComodRivadavia	America/Argentina/Cordoba
America/Argentina/Jujuy	America/Argentina/La_Rioja	America/Argentina/Mendoza
America/Argentina/Rio_Gallegos	America/Argentina/Salta	America/Argentina/San_Juan
America/Argentina/San_Luis	America/Argentina/Tucuman	America/Argentina/Ushuaia
America/Aruba	America/Asuncion	America/Atikokan
America/Atka	America/Bahia	America/Bahia_Banderas
America/Barbados	America/Belem	America/Belize
America/Blanc-Sablon	America/Boa_Vista	America/Bogota
America/Boise	America/Buenos_Aires	America/Cambridge_Bay
America/Campo_Grande	America/Cancun	America/Caracas
America/Catamarca	America/Cayenne	America/Cayman
America/Chicago	America/Chihuahua	America/Coral_Harbour
America/Cordoba	America/Costa_Rica	America/Creston
America/Cuiaba	America/Curacao	America/Danmarkshavn
America/Dawson	America/Dawson_Creek	America/Denver

America/Detroit	America/Dominica	America/Edmonton
America/Eirunepe	America/El_Salvador	America/Ensenada
America/Fort_Wayne	America/Fortaleza	America/Glace_Bay
America/Godthab	America/Godthab	America/Goose_Bay
America/Grand_Turk	America/Grenada	America/Guadeloupe
America/Guatemala	America/Guayaquil	America/Guyana
America/Halifax	America/Havana	America/Hermosillo
America/Indiana/Indianapolis	America/Indiana/Knox	America/Indiana/Marengo
America/Indiana/Petersburg	America/Indiana/Tell_City	America/Indiana/Vevay
America/Indiana/Vincennes	America/Indiana/Winamac	America/Indianapolis
America/Inuvik	America/Iqaluit	America/Jamaica
America/Jujuy	America/Juneau	America/Kentucky/Louisville
America/Kentucky/Monticello	America/Knox_IN	America/Kralendijk
America/La_Paz	America/Lima	America/Los_Angeles
America/Louisville	America/Lower_Princes	America/Maceio
America/Managua	America/Manaus	America/Marigot
America/Martinique	America/Matamoros	America/Mazatlan
America/Mendoza	America/Menominee	America/Merida
America/Metlakatla	America/Mexico_City	America/Miquelon
America/Moncton	America/Monterrey	America/Montevideo
America/Montreal	America/Montserrat	America/Nassau
America/New_York	America/Nipigon	America/Nome
America/Noronha	America/North_Dakota/Beulah	America/North_ Dakota/Center
America/North_Dakota/New_	America/Ojinaga	America/Panama

Salem

America/Pangnirtung	America/Paramaribo	America/Phoenix
America/Port-au-Prince	America/Port_of_Spain	America/Porto_Acre
America/Porto_Velho	America/Puerto_Rico	America/Rainy_River
America/Rankin_Inlet	America/Recife	America/Regina
America/Resolute	America/Rio_Branco	America/Rosario
America/Santa_Isabel	America/Santarem	America/Santiago
America/Santo_Domingo	America/Sao_Paulo	America/Scoresbysund
America/Shiprock	America/Sitka	America/St_Barthelemy
America/St_Johns	America/St_Kitts	America/St_Lucia
America/St_Thomas	America/St_Vincent	America/Swift_Current
America/Tegucigalpa	America/Thule	America/Thunder_Bay
America/Tijuana	America/Toronto	America/Tortola
America/Vancouver	America/Virgin	America/Whitehorse
America/Winnipeg	America/Yakutat	America/Yellowknife
Antarctica/Casey	Antarctica/Davis	Antarctica/DumontDUrville
Antarctica/Macquarie	Antarctica/Mawson	Antarctica/McMurdo
Antarctica/Palmer	Antarctica/Rothera	Antarctica/South_Pole
Antarctica/Syowa	Antarctica/Vostok	Arctic/Longyearbyen
ART	Asia/Aden	Asia/Almaty
Asia/Amman	Asia/Anadyr	Asia/Aqtau
Asia/Aqtobe	Asia/Ashgabat	Asia/Ashkhabad
Asia/Baghdad	Asia/Bahrain	Asia/Baku
Asia/Bangkok	Asia/Beirut	Asia/Bishkek

Asia/Brunei	Asia/Calcutta	Asia/Choibalsan
Asia/Chongqing	Asia/Chungking	Asia/Chungking
Asia/Colombo	Asia/Dacca	Asia/Damascus
Asia/Dhaka	Asia/Dili	Asia/Dubai
Asia/Dushanbe	Asia/Gaza	Asia/Harbin
Asia/Hebron	Asia/Ho_Chi_Minh	Asia/Hong_Kong
Asia/Hovd	Asia/Irkutsk	Asia/Istanbul
Asia/Jakarta	Asia/Jayapura	Asia/Jerusalem
Asia/Kabul	Asia/Kamchatka	Asia/Karachi
Asia/Kashgar	Asia/Kathmandu	Asia/Katmandu
Asia/Kolkata	Asia/Krasnoyarsk	Asia/Kuala_Lumpur
Asia/Kuching	Asia/Kuwait	Asia/Macao
Asia/Macau	Asia/Magadan	Asia/Makassar
Asia/Manila	Asia/Muscat	Asia/Nicosia
Asia/Novokuznetsk	Asia/Novosibirsk	Asia/Omsk
Asia/Oral	Asia/Phnom_Penh	Asia/Pontianak
Asia/Pyongyang	Asia/Qatar	Asia/Qyzylorda
Asia/Qyzylorda	Asia/Rangoon	Asia/Riyadh
Asia/Riyadh87	Asia/Riyadh88	Asia/Riyadh89
Asia/Saigon	Asia/Sakhalin	Asia/Samarkand
Asia/Seoul	Asia/Shanghai	Asia/Singapore
Asia/Taipei	Asia/Tashkent	Asia/Tbilisi
Asia/Tehran	Asia/Tel_Aviv	Asia/Thimbu
Asia/Thimphu	Asia/Tokyo	Asia/Ujung_Pandang

Asia/Ulaanbaatar	Asia/Ulan_Bator	Asia/Urumqi
Asia/Vientiane	Asia/Vladivostok	Asia/Yakutsk
Asia/Yekaterinburg	Asia/Yerevan	AST
Atlantic/Azores	Atlantic/Bermuda	Atlantic/Canary
Atlantic/Cape_Verde	Atlantic/Faeroe	Atlantic/Faroe
Atlantic/Jan_Mayen	Atlantic/Madeira	Atlantic/Reykjavik
Atlantic/South_Georgia	Atlantic/St_Helena	Atlantic/Stanley
Australia/ACT	Australia/Adelaide	Australia/Brisbane
Australia/Broken_Hill	Australia/Canberra	Australia/Currie
Australia/Darwin	Australia/Lindeman	Australia/Hobart
Australia/LHI	Australia/North	Australia/Lord_Howe
Australia/Melbourne	Australia/Queensland	Australia/NSW
Australia/Perth	Australia/Tasmania	Australia/South
Australia/Sydney	Australia/Yancowinna	Australia/Victoria
Australia/West	Brazil/DeNoronha	BET
Brazil/Acre	BST	Brazil/East
Brazil/West	Canada/East-Saskatchewan	Canada/Atlantic
Canada/Central	Canada/Newfoundland	Canada/Eastern
Canada/Mountain	Canada/Yukon	Canada/Pacific
Canada/Saskatchewan	Chile/Continental	CAT
CET	CST	Chile/EasterIsland
CNT	Cuba	CST6CDT
CTT	EET	EAT
ECT	EST	Egypt

Eire	Etc/GMT+0	EST5EDT
Etc/GMT	Etc/GMT+11	Etc/GMT+1
Etc/GMT+10	Etc/GMT+3	Etc/GMT+12
Etc/GMT+2	Etc/GMT+6	Etc/GMT+4
Etc/GMT+5	Etc/GMT+9	Etc/GMT+7
Etc/GMT+8	Etc/GMT-10	Etc/GMT-0
Etc/GMT-1	Etc/GMT-13	Etc/GMT-11
Etc/GMT-12	Etc/GMT-3	Etc/GMT-14
Etc/GMT-2	Etc/GMT-6	Etc/GMT-4
Etc/GMT-5	Etc/GMT-9	Etc/GMT-7
Etc/GMT-8	Etc/UCT	Etc/GMT0
Etc/Greenwich	Etc/Zulu	Etc/Universal
Etc/UTC	Europe/Athens	Europe/Amsterdam
Europe/Andorra	Europe/Berlin	Europe/Belfast
Europe/Belgrade	Europe/Bucharest	Europe/Bratislava
Europe/Brussels	Europe/Copenhagen	Europe/Budapest
Europe/Chisinau	Europe/Guernsey	Europe/Dublin
Europe/Gibraltar	Europe/Istanbul	Europe/Helsinki
Europe/Isle_of_Man	Europe/Kiev	Europe/Jersey
Europe/Kaliningrad	Europe/London	Europe/Lisbon
Europe/Ljubljana	Europe/Malta	Europe/Luxembourg
Europe/Madrid	Europe/Monaco	Europe/Mariehamn
Europe/Minsk	Europe/Oslo	Europe/Moscow
Europe/Nicosia	Europe/Prague	Europe/Paris

Europe/Podgorica	Europe/Samara	Europe/Riga
Europe/Rome	Europe/Simferopol	Europe/San_Marino
Europe/Sarajevo	Europe/Stockholm	Europe/Skopje
Europe/Sofia	Europe/Tiraspol	Europe/Tallinn
Europe/Tirane	Europe/Vatican	Europe/Uzhgorod
Europe/Vaduz	Europe/Volgograd	Europe/Vienna
Europe/Vilnius	Europe/Zaporozhye	Europe/Warsaw
Europe/Zagreb	GB-Eire	Europe/Zurich
GB	Greenwich	GMT
GMT0	Iceland	Hongkong
HST	Indian/Chagos	IET
Indian/Antananarivo	Indian/Comoro	Indian/Christmas
Indian/Cocos	Indian/Maldives	Indian/Kerguelen
Indian/Mahe	Indian/Reunion	Indian/Mauritius
Indian/Mayotte	IST	Iran
Israel	JST	Jamaica
Japan	MET	Kwajalein
Libya	Mexico/General	Mexico/BajaNorte
Mexico/BajaSur	Mideast/Riyadh89	Mideast/Riyadh87
Mideast/Riyadh88	MST7MDT	MIT
MST	NST	Navajo
NET	Pacific/Apia	NZ
NZ-CHAT	Pacific/Chuuk	Pacific/Auckland
Pacific/Chatham	Pacific/Enderbury	Pacific/Easter

Pacific/Efate	Pacific/Funafuti	Pacific/Fakaofo
Pacific/Fiji	Pacific/Guadalcanal	Pacific/Galapagos
Pacific/Gambier	Pacific/Johnston	Pacific/Guam
Pacific/Honolulu	Pacific/Kwajalein	Pacific/Kiritimati
Pacific/Kosrae	Pacific/Midway	Pacific/Majuro
Pacific/Marquesas	Pacific/Norfolk	Pacific/Nauru
Pacific/Niue	Pacific/Palau	Pacific/Noumea
Pacific/Pago_Pago	Pacific/Ponape	Pacific/Pitcairn
Pacific/Pohnpei	Pacific/Saipan	Pacific/Port_Moresby
Pacific/Rarotonga	Pacific/Tarawa	Pacific/Samoa
Pacific/Tahiti	Pacific/Wake	Pacific/Tongatapu
Pacific/Truk	PLT	Pacific/Wallis
Pacific/Yap	Portugal	PNT
Poland	PST	PRC
PRT	Singapore	PST8PDT
ROK	SystemV/AST4ADT	SST
SystemV/AST4	SystemV/EST5	SystemV/CST6
SystemV/CST6CDT	SystemV/MST7	SystemV/EST5EDT
SystemV/HST10	SystemV/PST8PDT	SystemV/MST7MDT
SystemV/PST8	Turkey	SystemV/YST9
SystemV/YST9YDT	US/Alaska	UCT
Universal	US/Central	US/Aleutian
US/Arizona	US/Hawaii	US/East-Indiana
US/Eastern	US/Mountain	US/Indiana-Starke

US/Michigan	US/Samoa	US/Pacific
US/Pacific-New	W-SU	UTC
VST		WET
Zulu		

Manage multiple users

Use the “Manage multiple users” option to change the activation status and assign roles to multiple users at once.

Manage multiple users’ activation status

1. From the Action field, select **Manage Activation Status**.
2. Move users between the Inactive and Active panes as desired to change their activation status.
3. Click **Save**.

Assign roles to multiple users

NOTE To assign roles to multiple users, you must have the Assign User Roles permission.

1. From the Action field, select **Assign Roles**.
2. From the Assign Roles field, select the role you want to assign to users.
3. Move users from the Available pane to the Assigned pane as desired to assign to those users the role you selected.
4. Click **Save**.

Manage user profiles

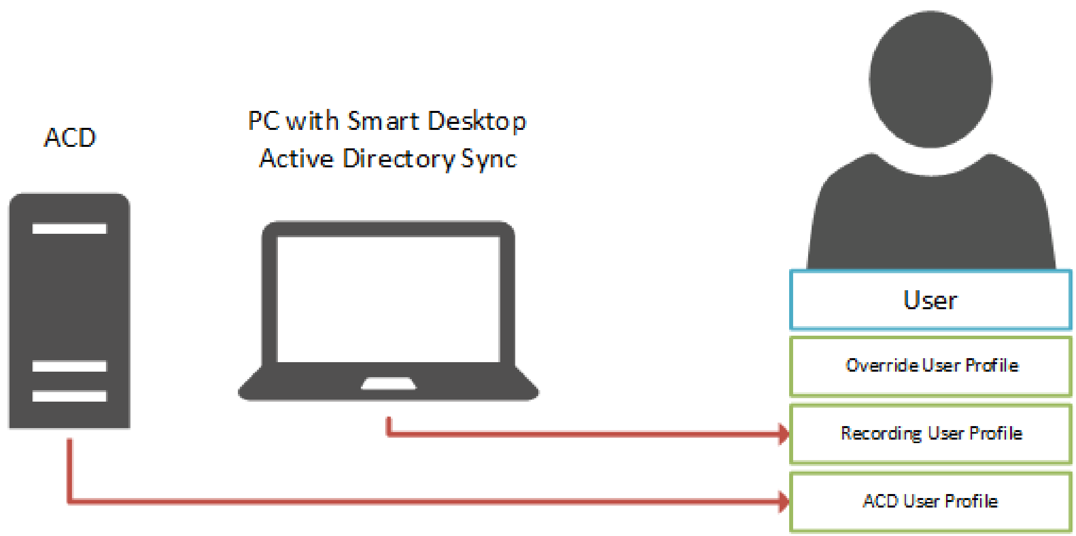
User profiles contain several fields (including first name, last name, and external ID) that summarize a user’s identity in external sources such as an ACD, a PC with Smart Desktop, or Active Directory. When a Webex WFO user is added from an external source, Webex WFO selects values from these fields and transfers that identity to the new Webex WFO user.

There are three categories of user profiles:

- ACD user profiles
- Recording user profiles
- Override user profiles

A single Webex WFO user can have all three user profiles at once. However, a user cannot have more than one ACD user profile, even if the user is merged with another user who has an ACD user profile (see Merge users).

User profiles have "precedence." Their importance is ranked in the User Profile table from highest (top) to lowest (bottom). When a user has more than one user profile, and those user profiles contain conflicting values in the same field, this precedence determines which values Webex WFO selects to identify that user in Webex WFO (see User profiles example).



ACD user profiles

Users who are added through syncing with an ACD have ACD user profiles. An ACD user profile summarizes a user's identity in the ACD and transfers that identity to the associated Webex WFO user.

When changes are made to a user in the ACD, the values in the ACD user profile of the associated Webex WFO user are updated the next time that sync occurs. These changes are also transferred to the Webex WFO user, unless the Webex WFO user has another user profile (Recording or Override) that has a higher precedence and contains conflicting values in one or more fields.

Webex WFO creates a separate ACD user profile for each ACD that it imports users from. It distinguishes multiple ACD user profiles by appending the name of the ACD (as entered on the ACD Configuration page) to the user profile source.

EXAMPLE

Webex WFO imports users from an Amazon Connect ACD that is named “Amazon” and a Cisco Webex Contact Center ACD that is named “Cisco.” This results in two user profiles that have the following sources:

- ACD - Cisco
- ACD - Amazon

An ACD user profile can have a higher or a lower precedence than another ACD user profile or a Recording user profile. This precedence can be changed in the User Profile Precedence table on the Global Settings page (see Configure global settings). ACD user profiles cannot have a higher precedence than Override user profiles.

Recording user profiles

A Recording user profile summarizes a user’s identity in Active Directory and transfers that identity to the associated Webex WFO user.

Recording user profiles are added in the following situations:

- A new user is added by logging in to a PC with Smart Desktop
- An existing user is synced with Active Directory
- A new or existing user is given a Windows login

A Recording user profile can have a higher or a lower precedence than an ACD user profile. This precedence can be changed in the User Profile Precedence table on the Global Settings page (see Configure global settings). Recording user profiles cannot have a higher precedence than Override user profiles.

Override user profiles

An Override user profile preserves any changes that you make to users whose identities are created from ACD or Recording user profiles, ensuring that the values you enter in Webex WFO replace (or “override”) those imported from the ACD, PC with Smart Desktop, or Active Directory.

A user has an Override user profile after any of the following occur:

- The user already has a Recording or an ACD user profile, and you edit one of the values that came from one of these user profiles.

  NOTE You cannot edit the first name or last name of a user who is synced with an ACD. If the ACD syncs the relationship between users and teams, you cannot edit the team, either.

- You merge a user that you manually created in Webex WFO with a user who has a Recording or an ACD user profile.

  > **NOTE** Webex WFO removes any existing override user profiles from both the primary user and the secondary user before they are merged. For more information about merging users, see Merge users .

- You update an existing user through user import.

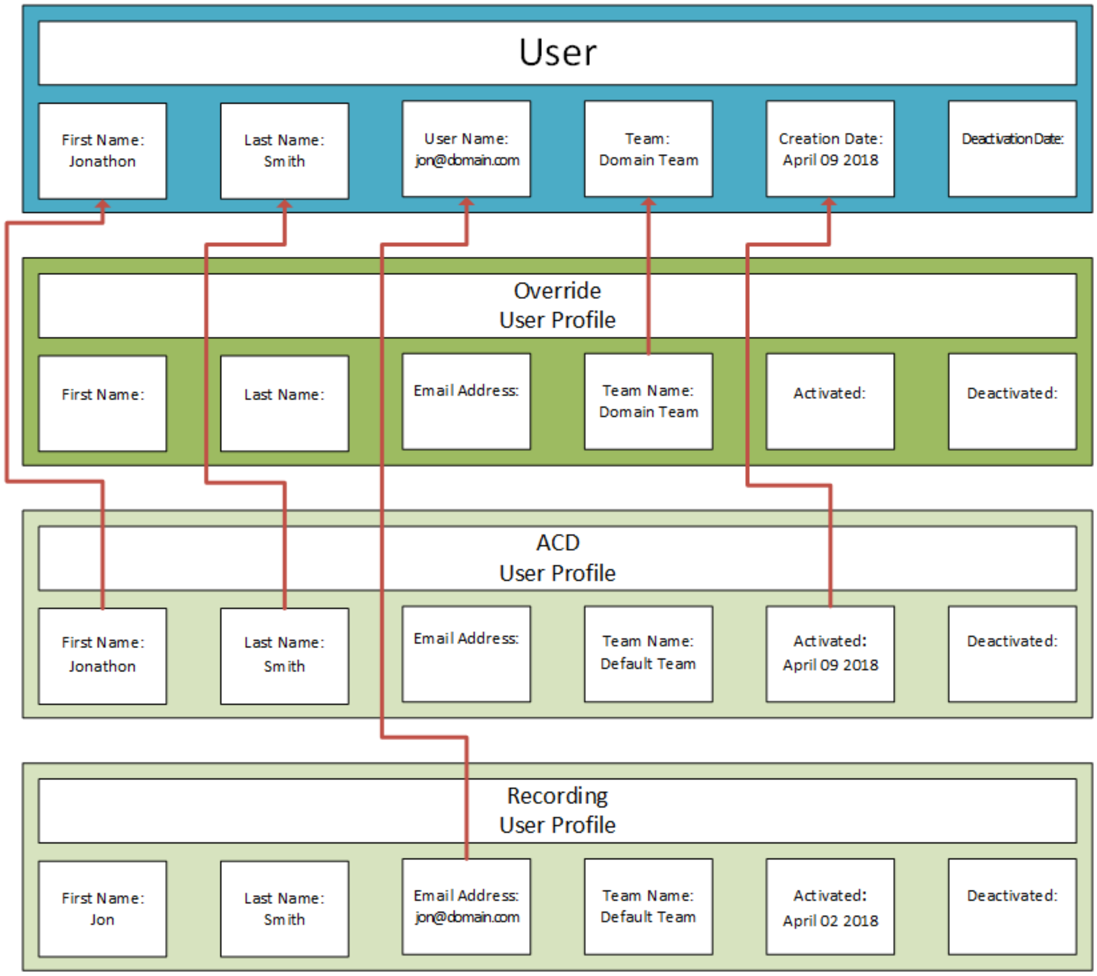
A user cannot have an Override user profile only.

Override user profiles have the highest precedence by default. You cannot lower this precedence. If you want to identify a user with the values stored in an ACD or Recording user profile instead of the values stored in an Override use profile, you must manually delete that user's Override user profile.

User profiles example

The following image shows how a Webex WFO user's identity is created from the values contained in three user profiles. The user profiles are ranked according to their precedence, as they are in the User Profiles table: from highest (Override) to lowest (Recording). To create the Webex WFO user's identity, Webex WFO selects the first non-blank value for each field from the profile with the highest precedence.

> **NOTE** The precedence of user profiles does not affect which value is selected from the External User ID field, even if a user has both a Recording user profile and an ACD user profile. Webex WFO maps the External User ID from the Recording user profile to the user's Windows Login, and it maps the External User ID from the ACD user profile to the user's ACD ID.



If you want to change the precedence of the ACD and Recording user profiles, you can rearrange them in the User Profile Precedence table on the Global Settings page (see Configure global settings).

BEST PRACTICE Reordering the precedence of user profiles affects every user who has those user profiles. Set the precedence of user profiles once, when you first configure Webex WFO.

Field descriptions

The following fields appear in the User Profiles table. All fields are read-only.

NOTE The values contained in an ACD user profile depend on the ACD. Not all ACD user profiles contain values for all fields.

Field	Description
First Name	ACD and Recording—The first name of the user in the external source. Override—The first name of a user who was created in Webex WFO, not added from an external source.
Last Name	ACD and Recording—The last name of the user in the external source. Override—The last name of a user who was created in Webex WFO, not added from an external source.
Email Address	ACD and Recording—The email address of the user in the external source. Override—The email address that was entered and saved for the user on the Users page.
Team Name	ACD—In ACDs that sync the relationship between users and teams , the team of the user in the ACD. In ACDs that do not sync the relationship between users and teams, the default team. Recording—The default team. Override—The name of the team that was selected and saved for the user on the Users page.
Activated	ACD and Recording—The date that the user was added to Webex WFO from the external source. Override—The date that a user who was created in Webex WFO, not added from an external source, was activated.
Deactivated	ACD and Recording—The date that the user was deactivated or deleted in the external source. Override—The date that the user was deactivated in Webex WFO.
External User ID	ACD—The unique identifier of the user in the ACD. Recording—The user’s Windows login credentials. Override—The ACD ID of a user who was created in Webex WFO, not

Field	Description
	added from an external source.
Source	The origin of the user profile: ACD, Recording, or Override.

Merge users

You can merge users when you want to do the following:

- Link users with PC logins to users created by the ACD or created manually in Webex WFO
- Link users created manually in Webex WFO to users created by the ACD
- Link ACD-synced users who have been deleted or deactivated with ACD-synced users who recently have been added

In each case, after the merge, one of the users will remain active and the other will be inactive.

> **BEST PRACTICE** If a PC has Webex WFO Smart Desktop installed, a corresponding user is created in Webex WFO with the Agent role when anyone logs into that PC if they do not already exist in Webex WFO. This is done so users can be recorded without additional configuration. However, if these users will be synced, it is best to sync them and configure them with their ACD account, so a merge is not required later.

Prerequisites

- You have the Administer Tenant and Administer Org. Structure permissions

Page location

Application Management > Global > User Configuration > Merge Users

Procedures

Webex WFO supports the following types of merges:

- Merge one active ACD-synced user with another active non-ACD-synced user into one user
- Merge one active ACD-synced user with another deactivated ACD-synced user into one user
- Merge many active, individual ACD-synced users, each with a related active non-ACD-synced user, at the same time

Merge two users

If both users are active, one must *not* be synced from an ACD. You can merge two ACD-synced users if one is active and the other is deactivated.

1. Select **Merge duplicate users into a single user**.
2. In the **Primary User** field, click the person icon and select the user to keep active.
3. In the **Duplicate User** field, click the person icon and select the duplicate user to merge into the primary user.
4. Click **Save**. A confirmation dialog opens.
5. Click **Yes**.

Merge multiple duplicate users

Both sets of users must be active. One set of users must *not* be synced from an ACD.

1. Select **Merge multiple duplicate users at once**. Webex WFO looks for possible matches based on first name and last name. Results appear in the table. The arrow points to the primary user, who will remain active after the merge. This user's name also appears in bold.
2. (Optional) To remove a set of duplicates from the merge, clear the check box next to the name.
3. (Optional) To change which user is the primary user, click the arrow. The arrow changes directions, and the other user's name now appears in bold.
4. Click **Save**. A confirmation dialog opens.
5. Click **Yes**.

Merge two ACD-synced users

You can merge two ACD-synced users only if you do one of the following first:

- Deactivate the duplicate user on the Users page (Application Management > Global > User Configuration > Users)
- Delete the duplicate user in the ACD

> **BEST PRACTICE** Delete duplicate users in the ACD instead of deactivating them on the Users page. Deactivating users does not delete them in the ACD. If you merge a duplicate user that you have deactivated in Webex WFO but not deleted in the ACD, that user will reappear in Webex WFO the next time the ACD syncs with Webex WFO.

If both the primary and the duplicate users are active and synced from the ACD, Webex WFO displays an error message and prevents the merge.

1. Select **Merge duplicate users into a single user**.
2. In the **Primary User** field, click the person icon and select the user to keep active.
3. Select **Show inactive users**.
4. In the **Duplicate User** field, click the person icon and select the duplicate user to merge into the primary user.
5. Click **Save**. A confirmation dialog opens.
6. Click **Yes**.

How merge users works

The following sections describe what happens to user information and user data when you merge users.

User information

If the users you select have conflicting user information, the duplicate user’s information overwrites and deletes the primary user’s information except for the ACD ID. All information except the ACD ID is removed from the duplicate user, which is also deactivated.

NOTE If both the primary user and the duplicate user are synced with an ACD, both users keep their original ACD IDs. The primary user’s ACD ID is not overwritten and deleted, and the duplicate user’s ACD ID is not removed.

The following table describes what happens to the primary and duplicate users’ information when they are merged.

User Information	Primary User Before Merge	Duplicate User Before Merge	Primary User After Merge (Active)	Duplicate User After Merge (Inactive)
First Name	Bob	Robert	Robert	—
Last Name	S	Smith	Smith	—
Team	Team A	Team B	Team B	—
(ACD-synced users only) ACD ID	5000	5001	5000	5001

User data

When you merge users, the duplicate user's data either overwrites and deletes the primary user's data or is combined with the primary user's data.

The change that happens depends on whether the data is from QM or WFM:

- QM—Everything except the primary user's device associations is combined with the duplicate user's data. The duplicate user's device associations overwrite and delete the primary user's device associations.
- WFM—Everything except the primary user's user requests, alerts, views, schedule offers, and schedule trades is overwritten and deleted by the duplicate user's data. The primary user's user requests, alerts, views, schedule offers, and schedule trades are combined with the duplicate user's data.

The following example illustrates what happens when the duplicate user's QM data is merged into the primary user's QM data.

QM User Data	Primary User Before Merge	Duplicate User Before Merge	Primary User After Merge (Active)	Duplicate User After Merge (Inactive)
Call recordings	Primary user's call recordings	Duplicate user's call recordings	Primary user's and duplicate user's call recordings	—
Evaluation forms	Primary user's evaluation forms	Duplicate user's evaluation forms	Primary user's and duplicate user's evaluation forms	—
Device associations	Primary user's device associations	Duplicate user's device associations	Duplicate user's device associations	—

The following example illustrates what happens when the duplicate user's WFM data is merged into the primary user's WFM data.

WFM User Data	Primary User Before Merge	Duplicate User Before Merge	Primary User After Merge (Active)	Duplicate User After Merge (Inactive)
Work shifts	Primary user's work shifts	Duplicate user's work shifts	Duplicate user's work shifts	—
Skill mappings	Primary user's skill mappings	Duplicate user's skill mappings	Duplicate user's skill mappings	—
Alerts	Primary user's alerts	Duplicate user's alerts	Primary user's alerts and duplicate user's alerts	—

NOTE If the duplicate user is configured in the Real Time Adherence Widget, agent state changes stop updating in the widget after the merge. You must replace the duplicate user with the primary user in order to see updated agent states in the widget for that user. (See Available WFM widgets for more information about the widget.)

IMPORTANT Data Explorer does not support user merge. We do not recommend merging users who are responsible for creating reports and dashboards in Data Explorer. If you merge a user who owns reports or dashboards in Data Explorer with a user who does not, Webex WFO does not transfer ownership of the reports or dashboards from the deactivated user to the active user.

Override user profiles

Webex WFO removes any existing override user profiles from both the primary user and the secondary user before they are merged.

Related topics

- Create and edit users
- Import and export users
- Configure an ACD

Manage hoteling users

A hoteling user is a generic profile that is assigned to a device (see Associate phones with agents, recording groups, and recording types) in the case that no user logs in. If you choose not to assign a device to a specific agent, you can assign it to a hoteling user.

Field	Description
Select User	(”Edit or delete an existing user” only) The hoteling user you want to edit.
First Name	The first name of the hoteling user.
Last Name	The last name of the hoteling user.
User Name	The user’s email address. This becomes the user’s Webex WFO user name and is used to log in.
Windows Login	The user’s Windows login credentials. In an Active Directory environment, this is the user’s Active Directory user name.
Account Status	The user’s account status (locked or unlocked). Use this field to change a user’s account status if the account has become locked due to unsuccessful login attempts.
Team	The team for the hoteling user.

Manage roles and permissions

A role is a collection of permissions.

A permission controls the pages and actions that are available to a user who has been assigned a role. For example, if a user is assigned the supervisor role and the supervisor role includes the Create Contact permission, then that user can create contacts. Users can be assigned one or multiple roles and, as a result, can access all the features associated with those roles and permissions.

Webex WFO includes three default roles: administrator, agent, and supervisor. You cannot delete default roles, but you can rename them and change the optional permissions associated with them.

NOTE Some permissions are required for the default roles. These cannot be changed.

Prerequisite

- You have the Administer Roles permission

Page location

Application Management > Global > User Configuration > Roles

Webex WFO licensing

A license defines which roles are entitled to use specific Webex WFO functionality. For example, if the Access license is assigned to the supervisor role, then supervisors can monitor and evaluate agents.

NOTE All roles must be associated with one or more license types.

A specific number of seats or user licenses are available for each product, role, and license type. Each active Webex WFO user is associated with one or more licenses, and each active user can have one or more roles. License seats are counted by the number of active users specified with that licensed role.

NOTE Beginning with Webex WFO Version 10.0, all customers must have a set number of seats and licenses for each active user.

The following types of licenses are available, based on the user's role:

- Data license
- Access license
- Administration license
- Usage license
- Performance Coaching license

  IMPORTANT Performance Coaching is not currently available for purchase.

- Bot Analytics license
- Insights licenses

See How licenses work for more information on licensing.

Procedures

Create a new role

1. Click **Create New Role**.
2. Enter the name of the role.
3. Click **Save**.

New roles that you create are added to the list of roles.

Change the name of a role

1. Select a role from the Roles table, and then click **Edit** (the pencil icon).
2. Enter the new name of the role.
3. Click **Save**.

Delete a role

- Select a role from the Roles table, and then click **Delete** (the X icon).

  > **NOTE** Default roles cannot be deleted.

Associate a role to a license type

- In the Licenses table, select or clear the check box for each license type under the column for a specific role that you want to associate to that license type.

  > **NOTE** The **Used** and **Available** fields indicate the number of seats you have used and the total number of seats to which you are entitled.

  > **NOTE** If your organization has the Interaction Summary license, **Interaction Summary** appears in this table. You do not need to assign this license to any roles to use Interaction Summary.

Edit a role's permissions

- In the Permissions table, select (assign) or clear (unassign) the check box for each permission under the column for a specific role.

If you select a permission that requires other permissions, the required permissions are automatically selected.

Permissions

The permissions table lets you assign specific permissions to default and custom roles.

The Permissions table separates permissions by category. The headings below correspond to the permissions table categories.

Application Management

Permission	Details	
Administer QM	Description	Allows you to manage QM applications.
	Page Access	Application Management > QM Configuration > Global Settings Application Management > QM Contact Flows > Retention
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Agent Monitoring	Description	Allows you to monitor an active agent’s screen and/or audio, as well as collect agent logs.
	Page Access	Application Management > Monitoring > Agent Monitoring
	Licenses	Webex WFO Access, Monitoring
	Related Permissions and Notes	To monitor agents in real time, you also need the Live Audio Monitoring permission (for audio monitoring) and/or the Live Screen Monitoring permission (for screen monitoring).

Permission	Details	
Administer WFM	Description	Allows you to manage WFM applications.
	Page Access	Application Management > User Configuration > Views Application Management > Service Queues Application Management > Forecasts Application Management > Schedule Configuration Application Management > Schedule Management Application Management > Dynamic Scheduling Application Management > Activities Application Management > Historical Data Application Management > WFM Configuration Application Management > Vacation Planning Application Management > Strategic Planning Schedules and Planning > Schedule Edit Management
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer WFM Workflows	Description	Allows you to access the Workflows page and grants Enterprise view for that page only so that administrators who do not normally have the Enterprise view can administer WFM workflows.
	Page Access	Application Management > User Configuration > Activities > Workflows
	Licenses	Webex WFO Access
	Related Permissions and Notes	This permission is independent of the Administer WFM permission, but you should assign this permission together with the Administer WFM or Administer Schedules

Permission	Details	
		permission.
Administer Roles	Description	Allows you to create roles and modify permissions associated with those roles.
	Page Access	Application Management > User Configuration > Roles
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer Tenant	Description	Allows you to perform administrative tasks for the tenant.
	Page Access	Application Management > User Configuration > Merge Users Application Management > Administration > Global Settings Application Management > Administration > Downloads Application Management > Administration > Key Performance Indicators (KPIs) Application Management > System Configuration > Data Server Configuration Application Management > System Configuration > External Storage Application Management > Analytics > Analytics Configuration
	Licenses	—
	Related Permissions and Notes	To access the Analytics Configuration page, you also need the Administer Analytics permission.
Administer Org.	Description	Allows you to manage the groups, teams, and users that are

Permission	Details
Structure	within your scope.

Permission	Details	
	Page Access	Application Management > User Configuration > Groups Application Management > User Configuration > Teams Application Management > User Configuration > Users Application Management > User Configuration > Merge Users
	Licenses	Webex WFO Access
	Related Permissions and Notes	You must have several additional permissions to take the following actions on the Users page: ■ To assign roles, you must have the Assign User Roles permission. If you do not have the Assign User Roles permission and you create a new user, Webex WFO automatically gives the new user the default agent role. Only users with the Assign User Roles permission can change this assignment. ■ To assign WFM views on the Users page, you must have the Edit WFM Views permission ■ To assign QM views, you must have the Edit QM Views permission ■ To import users, you must have the Assign User Roles permission. If the import file contains any values in the Views column, you must have the Edit WFM Views permission. If the file contains any values in the QM Views column, you must have the Edit QM Views permission. ■ To assign roles to multiple users, you must have the Assign User Roles permission If a user is assigned the Administer Org. Structure permission before Webex WFO is upgraded to Webex WFO Version 10.4.3 or later, the Assign User Roles, Edit WFM Views, and Edit QM Views permissions are also assigned to that user by

Permission	Details	
		default.
Receive Business Notifications	Description	Allows you to subscribe to business notifications. These notifications relate to daily operations within a contact center.
	Page Access	(Business notifications only) Application Management > Monitoring > Notifications
	Licenses	Compliance Recording, Quality Management, Workforce Management, Analytics, Desktop Analytics, Monitoring, Webex WFO Access
	Related Permission and Notes	See Configure notifications for a complete list of business notifications.
Receive Support Notifications	Description	Allows you to configure how support notifications are sent for troubleshooting purposes.
	Page Access	(Support notifications only) Application Management > Monitoring > Notifications
	Licenses	Administrative License: System Administrator
	Related Permissions and Notes	—

Permission	Details	
View API Documentation	Description	Allows you to view the API documentation.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer ACD Configuration	Description	Allows you to set up a connection between Webex WFO and the ACD.
	Page Access	Application Management > System Configuration > ACD Configuration
	Licenses	—
	Related Permissions and Notes	—
Administer Distribution List	Description	Allows you to manage distribution lists.
	Page Access	—
	Licenses	Administrative License: System Administrator
	Related Permissions and Notes	—

Permission	Details	
View Audit Information	Description	Allows you to view the Server Status and Notifications.
	Page Access	—
	Licenses	—
	Related Permissions and Notes	—
Bulk Import	Description	Allows you to import data using the various import APIs.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	See the *Webex WFO API Reference Guide* for more details.
Administer Password Policy	Description	Allows you to manage password policy settings and to unlock user accounts.
	Page Access	Application Management > Administration > Password Policy
	Licenses	—
	Related Permissions and Notes	—

Permission	Details	
View Desktop Monitoring	Description	Allows you to view the Desktop Monitoring page.
	Page Access	Application Management > Monitoring > Desktop Monitoring
	Licenses	Monitoring, Desktop Analytics, Analytics
	Related Permissions and Notes	—
Administer Encryption Keys	Description	Allows you generate new storage file encryption keys.
	Page Access	Application Management > Administration > Global Settings
	Licenses	—
	Related Permissions and Notes	—
Administer Active Directory Authentication	Description	Allows you to create and edit Active Directory connections.
	Page Access	Application Management > Active Directory Configuration
	Licenses	
	Related Permissions and Notes	—

Permission	Details	
Administer Gamification	Description	Allows you to manage gamification for agents.
	Page Access	Application Management > Performance Management
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View Gamification	Description	Allows you to view gamification.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Mobile Device Access	Description	Allows you to enable access to a limited mobile version of the Webex WFO website. This permission does not affect the mobile app (see Mobile App Access).
	Page Access	—
	Licenses	Call Recording, Quality Management, Workforce Management, Desktop Analytics, Analytics, Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
View/Update Hoteling Users	Description	Allows you to view, edit, and create hoteling users
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View Evaluator Details	Description	Allows you to view the following details about a contact's evaluator: ■ Evaluator first name ■ Evaluator last name ■ Evaluation date ■ Evaluation approved by
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	—
Assign User Roles	Description	Allows you to assign roles to users on the Users page in any of the following ways: ■ Editing an existing user ■ Creating a new user ■ Assigning roles to multiple users ■ Importing users

Permission	Details	
		NOTE If the import file contains any values in the Views column, you must have the Edit WFM Views permission. If the file contains any values in the QM Views column, you must have the Edit QM Views permission.
	Page Access	Application Management > User Configuration > Landing Page **NOTE** This is a new feature that is not yet generally available. If you would like early access to this feature, contact your Cisco Account Manager.
	Licenses	—
	Related Permissions and Notes	To access the Users page, you must have the Administer Org. Structure permission
Edit WFM Views	Description	Allows you to assign WFM views to users on the Users page in any of the following ways: ■ Editing an existing user ■ Creating a new user ■ Importing users
	Page Access	—
	Licenses	—
	Related Permissions and Notes	To access the Users page, you must have the Administer Org. Structure permission To import users, you must have the Assign User Roles permission. If the import file contains any values in the Views column, you must have the Edit WFM Views permission.

Permission	Details	
		To see the Views page and select a WFM View to edit, you must have the Administer WFM permission.
Edit QM Views	Description	Allows you to assign QM views to users on the Users page any of the following ways: ■ Editing an existing user ■ Creating a new user ■ Importing users
	Page Access	—
	Licenses	—
	Related Permissions and Notes	To access the Users page, you must have the Administer Org. Structure permission To import users, you must have the Assign User Roles permission. If the import file contains any values in the Views column, you must have the Edit QM Views permission.
Mobile App Access	Description	Allows you to log in to and use the Webex WFO mobile app. This permission does not affect the mobile version of the Webex WFO website (see Mobile Device Access).
	Page Access	—
	Licenses	Data Licenses: Compliance Recording, Quality Management, Workforce Management, and Analytics Webex WFO Access Administrative License: Tenant Administrator
	Related Permissions and Notes	—

<table>
<tr><th>Permission</th><th colspan="2">Details</th></tr>
<tr><td rowspan="4">Administer WFM Agents</td><td>Description</td><td>Allows you to edit WFM agent scheduling attributes on the Users page if a user is enabled for scheduling and is not inactive. Attributes you can edit are:
▪ Scheduling Time Zone
▪ Seniority
▪ Main Service Queue
▪ Work Condition Profile
▪ Skill Mappings
▪ Standard Work Shift Rotation
▪ Copy Work Shift Rotations
▪ Other Work Shifts
▪ Assigned Exceptions
▪ Vacation Hours
▪ Schedule Release Profile
▪ Maximum Staffing Groups
This permission also allows you to view attributes that affect all users and QM user attributes.</td></tr>
<tr><td>Page Access</td><td>Application Management > User Configuration > Users</td></tr>
<tr><td>Licenses</td><td>Data Licenses: Workforce Management
Webex WFO Access</td></tr>
<tr><td>Related Permissions and Notes</td><td>This permission is not automatically enabled in any of the default roles. If a role includes the Administer Org Structure permission, you do not need to enable this permission because the Administer Org Structure permission grants full access to the Users page.
Permissions that allow you to edit general, QM, or WFM user</td></tr>
</table>

Permission	Details	
		attributes (Edit WFM Views, Edit QM Views, Administer Password Policy, and Administer Org Structure) supersede this permission. This permission does not allow you to create a new user, select or edit an inactive user, edit or create a new hoteling user, manage multiple users, or import/export users.

Dashboard

Permission	Details	
View QM Dashboard	Description	Allows you to view the QM widgets in the Data Explorer dashboards.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	To view some QM widgets, you also need the View Evaluation Scores and View Contact Goal permissions.
Administer Dashboards	Description	Allows you to configure the Analytics, QM, and WFM dashboards.
	Page Access	—
	Licenses	—
	Related Permissions and Notes	You must also have the View QM Dashboard and the View WFM Dashboard permissions.
View WFM	Description	Allows you to view the WFM widgets in Data Explorer

Permission	Details	
Dashboard		dashboards. You can also edit Schedule permission required for two WFM widgets.
	Page Access	—
	Licenses	Data Licenses: Workforce Management Webex WFO Access
	Related Permissions and Notes	—

Recordings Admin

Permission	Details	
View Recycle Bin	Description	Allows you to search the recycle bin contents from the Interactions page and restore contacts so that the recordings can be played.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Delete Contact	Description	Allows you to delete contacts.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	You must also have the View Recycle Bin permission.

Permission	Details	
Administer Workflow	Description	Allows you to access and configure workflows for QM
	Page Access	Application Management > QM Configuration > Workflow Administration
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer Metadata Fields	Description	Allows you to access and configure metadata.
	Page Access	Application Management > QM Configuration > Metadata Manager
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer Evaluation Forms	Description	Allows you to configure evaluation forms.
	Page Access	Application Management > QM Configuration > Evaluation Form Manager
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer Recording Sites	Description	Allows you to select a recording site for a team, if the user has multiple sites.
	Page Access	—

Permission	Details	
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Administer Contact Goals	Description	Allows you to view contact goals on the Contact Goal Administration page.
	Page Access	Application Management > QM Contact Flows > Contact Goal Administration
	Licenses	Webex WFO Access
	Related Permissions and Notes	To create or edit contact goals, you also need the Create Contact Goal permissions.
Configure Telephony Groups	Description	Allows you to configure telephony groups, signaling groups, and recording groups.
	Page Access	Application Management > QM Configuration > Telephony Groups
	Licenses	Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
Configure Device Associations	Description	Allows you to configure devices in your call center.
	Page Access	Application Management > QM Configuration > Device Associations
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
AdminReconTasks	This permission is not currently used.	

Desktop Client

Permission	Details	
Capture Desktop Analytics	Description	Allows agents' desktop activity to be automatically captured.
	Page Access	—
	Licenses	Compliance Recording, Quality Management, Desktop Analytics, Analytics Essential, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	Agents must also have the Capture Desktop Events permission.

Permission	Details	
Record Screen	Description	Automatically records screen activity on the user’s desktop.
	Page Access	—
	Licenses	Data Licenses: Quality Management Analytics Essential, Analytics Enterprise
	Related Permissions and Notes	The agent must also have the Capture Contacts permission. To enable screen recording on a user’s desktop, Smart Desktop must be installed, and you must also enable one of the following permissions: ▪ Record Voice—Required when you want to automatically record both voice and screen during a call ▪ Recording Start Stop Screen—Required when you want the user to control when screen recording starts and stops using Recording Controls
Record Voice	Description	Automatically records audio. This permission is needed for all voice recording architectures, not just those that use Smart Desktop. Without this permission, users’ audio will not be recorded.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording, Quality Management
	Related Permissions and Notes	The agent must also have the Capture Contacts permission. With architectures using Smart Desktop, Smart Desktop must also be installed on the user’s desktop for recording to occur.
Live Screen Monitoring	Description	Allows you to live monitor a user’s screen. Allows agents’ screens to be monitored via the Agent Monitoring page. Both the agent and the monitor must have this permission for live screen monitoring to work.

Permission	Details	
	Page Access	—
	Licenses	Data Licenses: Quality Management, Monitoring Webex WFO Access
	Related Permissions and Notes	Monitors also need the Agent Monitoring permission.
Live Audio Monitoring	Description	Allows you to live audio monitor a user's calls. Allows agents' audio to be monitored via the Agent Monitoring page. Both the agent and the monitor must have this permission for live audio monitoring to work.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	Monitors also need the Agent Monitoring permission.
Record On Demand (RTP Signaling)	Description	Enables the Record On Demand recording mode in Smart Desktop. This mode enables the agent to record only the segments of calls that are explicitly specified when using Recording Controls.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions	—

Permission	Details	
	and Notes	
Capture Desktop Events	Description	Allows desktop events on agents' desktops to be automatically captured.
	Page Access	—
	Licenses	Compliance Recording, Quality Management, Desktop Analytics, Analytics Essential, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	Agents must also have the Capture Desktop Analytics permission.

Recording Contacts

Permission	Details	
View Contacts	Description	Allows you to search all recording contacts within your scope from the Interactions page.
	Page Access	Interactions
	Licenses	Data Licenses: Compliance Recording, Quality Management, and Analytics Webex WFO Access
	Related Permissions and Notes	—
View Scored Contacts	Description	Allows you to only search contacts that have been scored (evaluated) from the Interactions page.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access

Permission	Details	
	Related Permissions and Notes	—
Export Recordings	Description	Allows you to export recordings from the Interactions page.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission.
View Custom Metadata	Description	Allows you to view custom metadata in the Interactions page and the Media Player.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission.
Edit Custom Metadata	Description	Allows you to edit custom metadata in the Interactions page and the Media Player.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management

Permission	Details	
		Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts and View Custom Metadata permissions.
Tag Contact	Description	Allows you to tag a contact using the Recording Controls.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	To tag a contact with the Recording Controls, Smart Desktop must be installed.
Create Contact	Description	Allows you to create a non-call contact on the Interactions page.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission.
View Analytics Data for Contacts	Description	Allows you to see the Analytics Net Promoter Scores (NPS) and Eval Predictive Scores (EPS) data for contacts within your scope on the Interactions page.

Permission	Details	
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View Root Recordings	Description	Allows you to view root recordings.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	—
Untag Contact	Description	Allows you to untag a tagged contact.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
Mark For Training	Description	Allows you to mark a contact for review in training.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	By default, all users can mark a contact for training. If you do not require all users to mark contacts for training, clear this check box. You must also have the View Contacts, and Tag Contacts or Untag Contacts permissions.
View All Training Contacts	Description	Allows you to view all contacts marked for training across the tenant.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission.
Bulk Contact Export	Description	Allows you to export audio files, contact details, and metadata from the Interactions page on a scheduled or ad-hoc basis. You can only view and interact with your own bulk contact exports.
	Page Access	—
	Licenses	Data Licenses: Call Recording, Quality Management Webex WFO Access

Permission	Details	
	Related Permissions and Notes	Disabled by default. Paired together, the Bulk Contact Export and View Bulk Contact Export permissions allow you to create your own bulk contact exports and view all bulk contact exports for your organization.
View UnReconciled Root Recordings	Description	Allows you to see all root recordings unconditionally.
	Page Access	—
	Licenses	Data Licenses: Call Recording, Quality Management Webex WFO Access
	Related Permissions and Notes	Disabled by default. You must also have the View Root Recordings permission.
View Bulk Contact Export	Description	Allows you to view the bulk contact exports of everyone in your organization. You cannot create bulk contact exports with this permission.
	Page Access	—
	Licenses	Data Licenses: Call Recording, Quality Management Webex WFO Access
	Related Permissions and Notes	Disabled by default. Paired together, the Bulk Contact Export and View Bulk Contact Export permissions allow you to create your own bulk contact exports and view all bulk contact exports for your organization.

Permission	Details	
Bulk Delete	Description	Allows you to delete contacts in bulk.
	Page Access	Application Management > QM Contact Flows > Bulk Contact Operations **NOTE** This is a new feature that is not yet generally available. If you would like early access to this feature, contact your Cisco Account Manager.
	Licenses	Data Licenses: Call Recording, Quality Management
	Related Permissions and Notes	To use all the features on the Bulk Contact Operations page, combine this permission with the Bulk Update Retention and Bulk Update Metadata permissions.
Capture Contacts	Description	Allows agents' contacts of any type to be imported into Webex WFO. This permission is required for any kind of contact capture or recording.
	Page Access	—
	Licenses	Data Licenses: Call Recording, Quality Management
	Related Permissions and Notes	This permission is a prerequisite for the Record Voice and Record Screen permissions.
View All HR Contacts	Description	Allows you to view all contacts marked for HR across the tenant.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission.

Permission	Details	
Mark For HR	Description	Allows you to mark a contact for review in HR.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access **NOTE** Requires at least one of these licenses.
	Related Permissions and Notes	Enables administrators to define which roles have the ability to mark a contact for review in HR. If you do not require all users to mark contacts for HR, clear the Mark for HR check box. You must also have the View Contact permission.
ViewNotProcessedReason	Description	This permission is not currently used.
Include Self Scope in QM Views	Description	If your access to Webex WFO is governed by QM Views, this permission lets you see and play your own contacts, plus any contacts that meet the QM View criteria. See Manage views .
	Page Access	—
	Licenses	Data Licenses: Call Recording, Quality Management
	Related Permissions and Notes	You must also have the View Contacts permission. By default, this permission is not assigned to any roles.
Bulk Update Retention	Description	Allows you to update the retention policy for multiple contacts at once.
	Page Access	Application Management > QM Contact Flows > Bulk Contact Operations **NOTE** This is a new feature that is not yet generally available. If you would like early access

Permission	Details	
		to this feature, contact your Cisco Account Manager.
	Licenses	Data Licenses: Call Recording, Quality Management
	Related Permissions and Notes	To use all the features on the Bulk Contact Operations page, combine this permission with the Bulk Delete and Bulk Update Metadata permissions.
Bulk Update Metadata	Description	Allows you to update the custom metadata that is associated with multiple contacts at once.
	Page Access	Application Management > QM Contact Flows > Bulk Contact Operations **NOTE** This is a new feature that is not yet generally available. If you would like early access to this feature, contact your Cisco Account Manager.
	Licenses	Data Licenses: Call Recording, Quality Management
	Related Permissions and Notes	To use all the features on the Bulk Contact Operations page, combine this permission with the Bulk Delete and Bulk Update Retention permissions.

Recording Contact Evaluations

Permission	Details	
Create Evaluation Comment	Description	Allows you to create comments in the Evaluation Form window in the Media Player.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related	You must also have the View Contacts and View Evaluations

Permission	Details	
	Permissions and Notes	permissions.
Approve Contact Evaluation	Description	Allows you to approve the evaluation for a contact from the Media Player.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts and View Evaluations permissions.
Evaluate Contact	Description	Allows you to evaluate a contact in the Media Player and to view the Evaluation panel for unscored contacts.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts and View Evaluations permissions.
Edit Evaluation Comment	Description	Allows you to edit comments in an Evaluation Form window in the Media Player.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related	You must also have the View Contacts, Create Evaluation Comment, and View Evaluations permissions.

Permission	Details	
	Permissions and Notes	
View Evaluations	Description	Allows you to view contact evaluations in the Media Player.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission
Self-Evaluate Contact	Description	Allows you to evaluate your own contacts.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts and Evaluate Contact permissions.
Self-Approve Contact Evaluation	Description	Allows you to approve your own contact evaluation.
	Page Access	—
	Licenses	Data Licenses: Quality Management
	Related Permissions and Notes	You must also have the View Contacts and View Evaluations permissions.
Edit Any Evaluation	Description	Allows you to edit an evaluation you have completed and to see the following details about a contact's evaluator:

Permission	Details	
		■ Evaluator name ■ Evaluation approved by
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	—

Recording Contact Calibrations

Permission	Details	
Calibrate Contact	Description	Allows you to mark a contact for calibration on the Interactions page and to perform a calibration evaluation.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts permission.
Self-Calibrate Contact	Description	Allows you to calibrate your own contacts.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Contacts and Calibrate Contact permissions

Contact Goals

Permission	Details	
Create Evaluation Goal	Description	Allows you to create and assign evaluation tasks (ad-hoc) and contact goals.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	To create contact goals, you also need the Administer Contact Goals permission.
Create Calibration Goal	Description	Allows you to create and assign calibration tasks (ad hoc) and contact goals.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	To create contact goals, you also need the Administer Contact Goals permission.
Create Review Goal	Description	Allows you to create and assign review tasks (ad-hoc) and contact goals.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	To create contact goals, you also need the Administer Contact Goals permission.

Permission	Details	
View Contact Goal	Description	Allows you to access the Contact Queue and view the Contact Goal Progress widget.
	Page Access	Contact Queue Dashboard > Contact Goal Progress widget
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related Permissions and Notes	—

Survey

Permission	Details	
Administer QM Surveys	Description	Allows you to configure external post-call survey providers.
	Page Access	Application Management > QM Contact Flows > Post Call Survey
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View Survey Results	Description	Allows you to view customer survey result data in the media player, contact table, and reports.
	Page Access	—
	Licenses	Data Licenses: Quality Management Webex WFO Access
	Related	You must also have the View Contacts permission.

Permission	Details
	Permissions and Notes

Schedule

Permission	Details	
View Schedules	Description	Allows users to view the My Schedule and My Availability pages.
	Page Access	Schedules and Planning > My Schedule Schedules and Planning > My Availability
	Licenses	Data Licenses: Workforce Management Webex WFO Access
	Related Permissions and Notes	—
Edit Schedules	Description	Allows users to view agent schedules and take the following actions: Insert Activity, Trade Schedule, Find Optimal Time, and Optimize Schedules. Allows users to view reason codes in the Adherence drawer.
	Page Access	Schedules and Planning > Agent Schedules
	Licenses	Webex WFO Access
	Related Permissions and Notes	You must also have the View Schedules permission.
Plan Schedules	Description	Allows user to access the Planning (including the Forecast, Distribution and Schedule pages) page and to create an Intraday Dynamic Scheduling event.

Permission	Details	
	Page Access	Schedules and Planning > Planning Schedules and Planning > Intraday Dynamic Scheduling
	Licenses	Webex WFO Access
	Related Permissions and Notes	You must also have the View Schedules permission. To configure the elements of a schedule (including work shifts, exceptions, shrinkage categories, shrinkage weeks, and shrinkage scenarios), users need the Administer WFM and Administer Schedules permissions.
Administer Schedules	Description	Allows schedulers and analysts to edit schedules and configure schedule elements.
	Page Access	Application Management > Administration Application Management > System Configuration Application Management > Performance Management Application Management > Monitoring Application Management > Service Queues (except for Service Queue Types page) Application Management > Forecasts Application Management > Schedule Configuration Application Management > Schedule Management Application Management > Dynamic Scheduling Application Management > Activities (except the Exception Types and Workflows pages) Application Management > Historical Data Application Management > WFM Configuration (except for Global Settings, HRMS Configuration, and Retention pages; read-only access to the Adherence State Mappings page) Application Management > Vacation Planning (except the Vacation Types page)

Permission	Details	
		Application Management > Strategic Planning Schedules and Planning > Schedule Edit Management The Administer Schedules permission grants read-only access to Adherence State Mapping page. Application Management > Strategic Planning Application Management > Vacation Planning (Except the Vacation Types page) Schedules and Planning > Schedule Edit Management
	Licenses	Webex WFO Access
	Related Permissions and Notes	This permission can be combined with other permissions (for example, Administer Messaging, Plan Schedules, and Administer Org. Structure) to create a custom scheduler role. You must also have the Edit Schedules permission in order to view the Agent Schedules page.

Messaging

Permission	Details	
Update Messaging Requests	Description	Allows you to submit and update a messaging request.
	Page Access	Messaging
	Licenses	Data Licenses: Workforce Management Webex WFO Access
	Related Permissions and Notes	Update Messaging Requests is necessary to interact with Messaging.

Permission	Details	
Administer Messaging	Description	Allows you to approve and administer requests.
	Page Access	Messaging
	Licenses	Webex WFO Access
	Related Permissions and Notes	—

Analytics

Permission	Details	
View System Analytics	Description	Allows you to create and manage data sets on Analytics dashboards.
	Page Access	Analytics Dashboard
	Licenses	Desktop Analytics, Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Administer Desktop Analytics	Description	Allows you to create, view, edit, and delete Desktop Analytics tasks on the Analytics Task Manager page.
	Page Access	Application Management > Analytics > Task Manager Application Management > Analytics > Desktop Manager Application Management > Analytics > Field Manager Application Management > Analytics > Analytics Configuration
	Licenses	Desktop Analytics, Analytics Essentials, Analytics Enterprise,

Permission	Details	
		Webex WFO Access
	Related Permissions and Notes	—
Administer Speech Analytics	Description	Allows you to view and delete Phonetics Analytics tasks on the Analytics Task Manager page. **NOTE** Because Phonetics Analytics has been retired, you cannot create or edit Phonetics Analytics tasks even if you have this permission.
	Page Access	Application Management > Analytics > Task Manager Application Management > Analytics > Analytics Configuration
	Licenses	Analytics, Webex WFO Access
	Related Permissions and Notes	—
Administer Speech to Text Analytics	Description	Allows you to create, view, edit, and delete Speech-to-Text (Transcription) tasks on the Analytics Task Manager page.
	Page Access	Application Management > Analytics > Task Manager Application Management > Analytics > Analytics Configuration
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Administer	Description	Allows you to create, view, edit, and delete Text Analytics tasks

Permission	Details	
Text Analytics		on the Analytics Task Manager page.
	Page Access	Application Management > Analytics > Task Manager Application Management > Analytics > Analytics Configuration
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
View Desktop Analytics	Description	Allows you to view the Desktop Analytics features.
	Page Access	Agent Explorer Analytics Dashboard
	Licenses	Desktop Analytics, Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
View Speech Analytics	Description	Allows you to view the Speech Analytics features.
	Page Access	Analytics Dashboard
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
View Speech to Text Analytics	Description	Allows you to view the Transcription panel in the Media Player and to search for words in transcribed audio.

Permission	**Details**	
	Page Access	Analytics Dashboard
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
View Trending Topics	Description	Allows you to view all Trending Topics pages.
	Page Access	Analytics > Trending Topics
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Edit Trending Topics	Description	Allows you to edit (for example, group and ungroup topics) in the Trending Topics tool.
	Page Access	Analytics > Trending Topics
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—

Permission	**Details**	
View Trending Topics Notification	Description	Allows you to configure the conditions that trigger daily notifications.
	Page Access	Analytics > Trending Topics
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Edit Trending Topics Notification	Description	Allows you to edit the conditions that trigger daily notifications.
	Page Access	Analytics > Trending Topics
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
View Text Analytics	Description	Allows you to view the Text Analytics features.
	Page Access	Analytics Dashboard
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
View Analytics	Description	Allows you to view all aspects of the Analytics features.
	Page Access	Analytics Dashboard
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Administer Analytics	Description	Allows you to access some Analytics APIs. When combined with the Administer Tenant permission, allows you to configure Analytics.
	Page Access	Application Management > Analytics > Analytics Configuration
	Licenses	Analytics Essentials, Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	To access the Analytics Configuration page, you also need the Administer Tenant permission.
Administer Predictive Analytics	Description	Allows you to create, view, edit, and delete Predictive Evaluation Score (PES) and Predictive Net Promoter Score (PNPS) tasks on the Analytics Task Manager page.
	Page Access	Application Management > Analytics > Task Manager
	Licenses	Analytics Essentials, Analytics Enterprise,Webex WFO Access
	Related Permissions and Notes	—
Administer Analytics Phrases	Description	Allows you to create and edit phrases and phrase categories on the Phrase Manager page.

Permission	Details	
	Page Access	Application Management > Analytics > Phrase Manager
	Licenses	Analytics Essentials, Analytics Enterprise,Webex WFO Access
	Related Permissions and Notes	—

Reporting

Permission	Details	
View QM Reports	Description	Allows you to view QM reports.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management Webex WFO Access
	Related Permissions and Notes	You must also have the View Organization permission.
Administer QM Reports	Description	Allows you to administer QM reports.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
View WFM Reports	Description	Allows you to view WFM reports.
	Page Access	—
	Licenses	Data Licenses: Workforce Management Webex WFO Access
	Related Permissions and Notes	—
View WFM Admin Reports	Description	Allows you to view WFM Strategic Planning reports.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View Supervisor Reports	Description	Allows you to view WFM supervisor reports.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
View QM Evaluation Reports	Description	Allows you to view QM evaluation reports.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View QM System Reports	Description	Allows you to view QM system reports.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
View QM Survey Reports	Description	Allows you to view QM survey reports.
	Page Access	—
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Advanced Reporting API	Description	Allows you to access the API needed for Data Explorer.
	Page Access	—
	Licenses	—
	Related Permissions	—

Permission	Details	
	and Notes	
Home Page	Description	Gives you to read-only access to your home page dashboard and its contents.
	Page Access	Home Page
	Licenses	Data Licenses: Quality Management and Workforce Management Webex WFO Access
	Related Permissions and Notes	This permission is backward compatible to the legacy permissions it replaces: View QM Dashboard, View WFM Dashboard, and Administer Dashboards.
Data Explorer	Description	Gives you read-only access to the Data Explorer asset browser page.
	Page Access	Data Explorer
	Licenses	Webex WFO Access
	Related Permissions and Notes	—
Content Creation	Description	Enables you to create, update, and delete Data Explorer reports and dashboards.
	Page Access	Data Explorer > Reports
	Licenses	Webex WFO Access
	Related Permissions and Notes	Data Explorer

Permission	Details	
Content Publishing	Description	Enables you to share reports and dashboards that you own to sharing groups you belong to.
	Page Access	Application Management > Data Management > Sharing Groups
	Licenses	Webex WFO Access
	Related Permissions and Notes	Content Creation

Recording Controls

Permission	Details	
Send Pause / Resume Command	Description	Pauses and resumes the user's call recordings. This permission is needed for any pause-and-resume architecture for recordings, both automated and manual (via the Recording Controls page).
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	—
Send Login / Logout Command	Description	Associates and un-associates the user with a device extension for network recording. This permission is useful for situations like hot-desking where an agent might not use the same phone every day.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related	—

Permission	Details	
	Permissions and Notes	
Send Metadata Command	Description	Adds metadata to a user's call recording. This permission is needed for any recording architecture that adds metadata to calls, both automated and manual (via the Recording Controls page).
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	—
Send Tag Command	Description	Tags a user's call recordings. This permission is needed for any recording architecture that tags calls, both automated and manual (via the Recording Controls page).
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	—
Send Segment and Delete / Save Command	Description	Starts and stops recording call segments (and saves and deletes call segments). This permission is needed for any recording architecture that uses these actions, both automated and manual (via the Recording Controls page).
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management

Permission	Details	
	Related Permissions and Notes	—
Send Start Screen / Stop Screen Command	Description	Starts and stops a screen-only recording. This permission is needed for any recording architecture that uses these actions, both automated and manual (via the Recording Controls page).
	Page Access	—
	Licenses	Data Licenses: Quality Management
	Related Permissions and Notes	—
Pause / Resume Buttons	Description	Allows you to use the Pause and Resume buttons on the Recording Controls page.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	You must also have the Send Pause / Resume Command permission.
Login / Logout Buttons	Description	Allows you to use the Log In and Log Out buttons on the Recording Controls page.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	You must also have the Send Login / Logout Command permission.

Permission	Details	
Add Metadata Button	Description	Allows you to use the Add Metadata button on the Recording Controls page.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	You must also have the Send Metadata Command permission.
Tag Button	Description	Allows you to use the Tag button on the Recording Controls page.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	You must also have the Send Tag Command permission.
Segment and Delete / Save Buttons	Description	Allows you to use the "Segment and Delete" and "Segment and Save" buttons on the Recording Controls page.
	Page Access	—
	Licenses	Data Licenses: Compliance Recording and Quality Management
	Related Permissions and Notes	You must also have the Send Segment and Delete / Save Command permission.
Start / Stop Screen Buttons	Description	Allows you to use the Start Screen and Stop Screen buttons on the Recording Controls page.
	Page Access	—

Permission	Details	
	Licenses	Data Licenses: Quality Management
	Related Permissions and Notes	You must also have the Send Start Screen / Stop Screen Command permission.

Bot Analytics

Permission	Details	
View Experience Automation	Description	View top level metrics such as BES/BAS/$ per Automated Conversation
	Page Access	Experience & Automation
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure Experience Automation
Configure Experience Automation	Description	Configure the targets for BES/BAS/$ per Automated Conversation, Topics
	Page Access	Configuration > Experience & Automation
	Licenses	Bot Analytics
	Related Permissions and Notes	View Experience Automation
View Conversation Distribution	Description	View total conversations and how they are distributed between between digital assistant & live agents
	Page Access	Conversation Distribution
	Licenses	Bot Analytics

Permission	Details	
	Related Permissions and Notes	
View Conversation Topics	Description	View all content on the Conversation Topics page
	Page Access	Conversation Topics
	Licenses	Bot Analytics
	Related Permissions and Notes	Edit Conversation Topics
Edit Conversation Topics	Description	Blacklist, merge, and rename topics
	Page Access	Configuration > Conversation Topics
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics
View Conversation Topics Metrics Analysis	Description	View the breakdown of BES & BAS signals for each topic
	Page Access	Conversation Topics > Metrics Analysis tab
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics

Permission	Details	
View Conversation Topics Transcripts	Description	View transcripts within topics
	Page Access	Conversation Topics > Transcripts tab
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics
View Conversation Topics Related Topics	Description	View additional conversation topics that were identified after the main topic
	Page Access	Conversation Topics > Related Topics
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics
View Conversation Topics Grouped Topics	Description	View topics that have been merged together and define one main topic
	Page Access	Conversation Topics > Grouped Topics
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics

Permission	Details	
View Conversation Topics Entities	Description	View entities (keywords) that came up in transcripts within the topic
	Page Access	Conversation Topics > Entities
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics
View Conversation Topics Intents	Description	View the intents that were triggered within the topic
	Page Access	Conversation Topics > Intents
	Licenses	Bot Analytics
	Related Permissions and Notes	View Conversation Topics
View Impact Analysis	Description	View the side-by-side comparison of several metrics for a single or multiple topics between two date ranges
	Page Access	Impact Analysis
	Licenses	Bot Analytics
	Related Permissions and Notes	

Permission	Details	
View Aggregated Metrics	Description	View common aggregated metrics
	Page Access	Aggregated Metrics
	Licenses	Bot Analytics
	Related Permissions and Notes	
View Transcript Search	Description	View transcript search
	Page Access	Transcript Search
	Licenses	Bot Analytics
	Related Permissions and Notes	
View VAA Overview	Description	View the Virtual Agent Analytics overview with all message level metrics
	Page Access	Overview
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure VAA

Permission	Details	
View VAA Performance Comparison	Description	View message level metrics daily, monthly, quarterly, or yearly
	Page Access	Performance Comparison
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure VAA
View VAA Response Performance	Description	View responses and next actions after response was shown
	Page Access	Response Performance
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure VAA
View VAA Unclassified Messages	Description	View messages causing no-match to intent, categorized by topic
	Page Access	Unclassified Messages
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure VAA, Edit VAA Unclassified Messages
Edit VAA Unclassified Messages	Description	Categorize no-match to intent messages into existing intent or new intents
	Page Access	Unclassified Messages
	Licenses	Bot Analytics
	Related	Configure VAA, View VAA Unclassified Messages

Permission	Details	
	Related Permissions and Notes	
View VAA Intent Performance	Description	View intent level metrics
	Page Access	Intent Performance
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure VAA
View Bot Management Report	Description	View uploaded bot management reports
	Page Access	Bot Management Report
	Licenses	Bot Analytics
	Related Permissions and Notes	
View Bot Performance Report	Description	View uploaded bot performance reports
	Page Access	Bot Performance Report
	Licenses	Bot Analytics
	Related Permissions and Notes	

Permission	Details	
Configure VAA	Description	Configure targets within VAA
	Page Access	Configuration > Virtual Agent Analytics
	Licenses	Bot Analytics
	Related Permissions and Notes	View VAA Overview, View VAA Performance Comparison, View VAA Response Performance, View VAA Unclassified Messages, View VAA Intent Performance
View Company Configurations	Description	View company specific thresholds
	Page Access	Company Configurations
	Licenses	Bot Analytics
	Related Permissions and Notes	Edit Company Configurations
Edit Company Configurations	Description	Configure company specific thresholds
	Page Access	Company Configurations
	Licenses	Bot Analytics
	Related Permissions and Notes	View Company Configurations

Permission	Details	
View Alert Notification	Description	View alerts tab when a signal threshold is triggered
	Page Access	Alert Notifications tab
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure Alert Notification
Configure Alert Notification	Description	Configure the thresholds for alerts
	Page Access	Configuration > Overall Bot Metrics, Configuration > Topic Metrics
	Licenses	Bot Analytics
	Related Permissions and Notes	View Alert Notification
View Transcript Summary	Description	View summarized transcripts
	Page Access	Transcript Search
	Licenses	Bot Analytics
	Related Permissions and Notes	Configure Transcript Summary

Permission	Details	
Configure Transcript Summary	Description	Configure the prompt that generates the summarize transcripts
	Page Access	Configuration > Summary Generation Prompt
	Licenses	Bot Analytics
	Related Permissions and Notes	View Transcript Summary
View Activity Notifications	Description	View activity notifications such as when an action is taken like blacklist, merge, rename
	Page Access	—
	Licenses	Bot Analytics
	Related Permissions and Notes	

Insights

Permission	Details	
View Content	Description	Allows you to view Insights dashboards that are shared by other people in your organization.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards
	Licenses	Insights Author, Insights Reader

Permission	Details	
	Related Permissions and Notes	You must have the Insights Reader license and at least one “View [Product] Data” permission.
View Analytics Data	Description	Allows you to view dashboards and analyses created with Analytics data. When combined with the Create Content permission, allows you to use Analytics datasets to create analyses.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards
	Licenses	Insights Author, Insights Reader
	Related Permissions and Notes	You must also have the View Content permission. Your organization must have a Cisco Analytics license.
View Classic WFM Data	Description	Allows you to view dashboards and analyses created with Classic WFM data. When combined with the Create Content permission, allows you to use Classic WFM datasets to create analyses.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards
	Licenses	Insights Author, Insights Reader
	Related Permissions	You must also have the View Content permission. Your organization must have a Cisco Classic WFM license.

Permission	Details	
	and Notes	
View QM Data	Description	Allows you to view dashboards and analyses created with QM data. When combined with the Create Content permission, allows you to use QM datasets to create analyses.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards
	Licenses	Insights Author, Insights Reader
	Related Permissions and Notes	You must also have the View Content permission. Your organization must have a Cisco QM license.
View WFM Data	Description	Allows you to view dashboards and analyses created with WFM data. When combined with the Create Content permission, allows you to use WFM datasets to create analyses.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards
	Licenses	Insights Author, Insights Reader
	Related Permissions and Notes	You must also have the View Content permission. Your organization must have a Cisco WFM license.

Permission	Details	
Create Content	Description	Allows you to create analyses and dashboards.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards Insights > Analyses Insights > Datasets
	Licenses	Insights Author
	Related Permissions and Notes	You must have the Insights Author license and at least one “View [Product] Data” permission. When you add this permission to a role, the role automatically gets the View Content permission as well.
Share Content	Description	Allows you to share analyses and dashboards that you create with other people in your organization.
	Page Access	Insights > Favorites Insights > Recent Insights > My folders Insights > Shared folders Insights > Dashboards
	Licenses	Insights Author
	Related Permissions and Notes	You must also have the Create Content permission and at least one “View [Product] Data” permission.

Permission	Details	
Administer Insights	Description	This permission is not currently used.
	Page Access	—
	Licenses	Insights Author
	Related Permissions and Notes	—

Data Management

Permission	Details	
Delivery Management	Description	Allows you view information about the current information space and to opt in and opt out of receiving scheduled reports by email from other users.
	Page Access	Data Explorer > Settings
	Licenses	Data Management
	Related Permissions and Notes	
Report Delivery	Description	Allows you to configure and manage when and to whom a report that you own is emailed.
	Page Access	Share option on the context menu that appears when you right-click a report you own on the Data Explorer > Reports page.
	Licenses	Data Management
	Related Permissions and Notes	
Data Library	Description	Allows you read-only access to the Data Library page to view

Permission	Details	
		details about collections and their data sets.
	Page Access	Data Explorer > Data Library
	Licenses	Data Management
	Related Permissions and Notes	
Data Library Design	Description	Allows you to create, read, update, and delete data libraries owned by you.
	Page Access	
	Licenses	Data Management
	Related Permissions and Notes	
Data Library Publishing	Description	Allows you to share data collections to sharing groups in which you are a member.
	Page Access	
	Licenses	Data Management
	Related Permissions and Notes	
Data Task Administration	Description	Allows you to manage agents and tasks in any information space you own.
	Page Access	Application Management > Data Management > Data Task Management

Permission	Details	
	Licenses	Data Management
	Related Permissions and Notes	
Sharing Groups Administration	Description	Allows you to create and manage groups of users created for purposes of sharing content.
	Page Access	Application Management > Data Management > Sharing Groups
	Licenses	Data Management
	Related Permissions and Notes	
Data Management System Administration	Description	Allows you to create and manage real-time tasks
	Page Access	Application Management > Data Management > Real-Time (RT) Job Management
	Licenses	Data Management
	Related Permissions and Notes	
Data UDM Administration	Description	Allows you to add and manage tenants in the Unified Data Mart.
	Page Access	Application Management > Data Management > Unified Data Mart
	Licenses	Data Management
	Related Permissions and Notes	

Permission	Details	
Manage Infospace	Description	Grants access to the business intelligence lifecycle management features.
	Page Access	Settings
	Licenses	Data Management
	Related Permissions and Notes	Deploy Infospace
Deploy Infospace	Description	Grants users who can manage infospaces the right to deploy information spaces to other user accounts.
	Page Access	Settings
	Licenses	Data Management
	Related Permissions and Notes	Manage Infospace

Auto QM

Permission	Details	
View Auto QM	Description	Allows you to view the Auto QM panels in the Media player.
	Page Access	Analytics > Auto QM
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
Edit Auto QM	Description	Allows you to run Auto QM tasks and override the AI score.
	Page Access	Analytics > Auto QM
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
View Auto QM Dashboards	Description	Allows you to view Auto QM dashboards.
	Page Access	Analytics > Auto QM
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Edit Auto QM Dashboards	Description	Allows you to edit Auto QM dashboards.
	Page Access	Analytics > Auto QM
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—

Permission	Details	
View Auto QM Notification	Description	Allows you to view all daily notifications in the Auto QM dashboard.
	Page Access	Analytics > Auto QM
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—
Edit Auto QM Notification	Description	Allows you to configure the conditions that trigger daily notifications.
	Page Access	Analytics > Auto QM
	Licenses	Analytics Enterprise, Webex WFO Access
	Related Permissions and Notes	—

Assign landing pages to users

Select the page that people see when they first log in to Webex WFO. This page can be a Webex WFO page or an Insights dashboard.

NOTE This is a new feature that is not yet generally available. If you would like early access to this feature, contact your Cisco Account Manager.

Prerequisites

- Your organization uses Webex WFO Cloud. This page is not available for on-premise deployments.
- You have the Assign User Roles permission.
- To view a Webex WFO page as their landing page, users must have permission to access that page. See Manage roles and permissions .

- To assign an Insights dashboard as a landing page, you must have access to Insights. See Give users access to Insights.
- To view an Insights dashboard as their landing page:
  - Users must have access to Insights. See Give users access to Insights.
  - The dashboard must be shared with you (if you did not create it) and with the people who will get it as their landing page. See Grant individual Insights users and groups access to a dashboard in Insights.

Page location

Application Management > Global > User Configuration > Landing Page

Procedures

Assign a Webex WFO page as the landing page for a user role

1. Select the role in the **Roles** table.
2. In the **Landing Pages** table, select the page. The page name appears next to the role in the **Roles** table.

   NOTE Not every Webex WFO page can be a landing page. The available pages are a curated list.

3. Click **Save**. When people with this role next log in to Webex WFO, they will land on this page. If a user is assigned multiple roles that have different landing pages, they will see the landing page assigned to the role that was most recently created.

Assign an Insights dashboard as the landing page for a user role

1. Select the role in the **Roles** table.
2. Click **Insights Dashboards**. A list of dashboards that you created or that have been shared with you appears.
3. In the **Landing Pages** table, select the dashboard. The dashboard name appears next to the role in the **Roles** table.
4. (Optional) To view the dashboard, click the eye icon next to its name. The dashboard opens in a new tab.

5. Click **Save**. When people with this role next log in to Webex WFO, they will land on this dashboard. If a user is assigned multiple roles that have different landing pages, they will see the landing page assigned to the role that was most recently created.

Remove a landing page from a role

If a role is not assigned a landing page, people with that role see the first page in the Webex WFO top menu (from left to right) that they have permission to see.

1. Click the trash can icon next to the role name in the **Roles** table.
2. Click **Save**.

Related topics

- Manage roles and permissions —Create roles
- Create and edit users —Assign roles to users
- Give users access to Insights
- Grant individual Insights users and groups access to a dashboard in Insights

Give users access to Data Explorer

With access to Cisco Data Explorer, people can view reports and dashboards assigned to them, view shared reports and dashboards created by others, and create their own reports and dashboards. You can vary people’s level of access by role.

Prerequisites

- Users and roles have been created.
- you have the Administer Roles permission.

Page location

Various. See the procedures below for page locations.

Procedures

Assign Data Explorer permissions to user roles

1. Go to Application Management > User Configuration > Roles.
2. Select the following permissions to assign to roles as desired:

Permission	Description
Data Explorer	Gives people read-only access to the Data Explorer asset browser page (the list of reports and dashboards).
Content Creation	Allows people to create, update, and delete Data Explorer reports and dashboards.
Content Publishing	Allows people to share reports and dashboards that they own to sharing groups they belong to.

3. Click **Save**.

Make a dashboard the default homepage for a role

When people with a specific role log in to Webex WFO, this dashboard will be the first thing they see. If you tag multiple dashboards with the same role, people with this role can navigate between the different dashboards.

PREREQUISITE

- The role does not have the Data Explorer, Content Creation, or Content Publishing permissions.
- (For customers transitioning from version 10.4 to cloud) The role is assigned to Data Explorer homepage dashboards: On Application Management > Global > Global Settings > Dashboard Administration, move the role to **Data Explorer**.
- You own the dashboard. To make a dashboard that you don’t own into a default homepage, copy the dashboard.

1. On the Data Explorer page, right-click the dashboard and select **Tag** from the drop-down list. The **Tags** window opens.
2. Enter **c1_role_** and then the name of the role.

IMPORTANT The role name must match the name that your organization uses. A list of roles is available on Application Management > Global > User Configuration > Roles.

To add a role whose name is one word, enter the name.

EXAMPLE **c1_role_Agent**

To add a role whose name is multiple words separated by spaces, enclose the tag in double quotes.

EXAMPLE **“c1_role_East Coast Team Leader”**

To add multiple roles at the same time, enter them one after the other separated by a space.

EXAMPLE **c1_role_Evaluator “c1_role_East Coast Agent”**

3. Click **Add Tag**.
4. Click **OK**. The **Tag** window closes.

Related topics

- Manage roles and permissions —A list of all the permissions that apply to QM and Analytics and what they do.
- Manage the list of Data Explorer dashboards and reports—Learn how to restrict access to specific reports and dashboards by role.

Turn off Data Explorer

If your organization has transitioned to Insights and is ready to remove Data Explorer before Cisco automatically decommissions it, follow the steps below.

Prerequisites

- To turn off Data Explorer for Call Recording, QM, Analytics, and Classic WFM users, you have the Administer Roles permission.

Page location

Various. See the procedures below for page locations.

Procedures

Turn off Data Explorer for Call Recording, QM, Analytics, and Classic WFM users

1. Go to **Application Management** > **Global** > **User Configuration** > **Roles**.
2. In the **Permissions** table, clear the check boxes for the following permissions for each role:
   - In the **Dashboards** section:
     - View QM Dashboard
     - Administer Dashboards
     - View WFM Dashboard
   - In the **Reporting** section:
     - Advanced Reporting API
     - Data Explorer
     - Content Creation
     - Content Publishing
   - In the **Data Management** section: Clear all the permissions in this section.
3. Click **Save**. When users next log in, they will land on the first page in the top menu (from left to right) that they have permission to access. For most people, this is the Interactions page. They will not see **Data Explorer** in the top menu.

NOTE You cannot remove any permissions from the Super Administrator role. This role is built into WFM and cannot be edited.

Related topics

- Give users access to Insights
- Manage roles and permissions

Manage teams

A team is a collection of one or more agents.

The Teams page allows you to manage teams for synced and non-synced systems. You can also import and export teams.

In a synced system, teams are created in the ACD and synced to Webex WFO. The sync is one way from the ACD to Webex WFO. If a team has agents assigned to it in the ACD, then those agents are assigned to that team in Webex WFO. For these teams, you cannot change the team name or the agents assigned to the team.

> **BEST PRACTICE** When the ACD is synced with Webex WFO, do not create teams in Webex WFO because these teams will not be synced with the ACD.

In a non-synced system, you can create and manage teams in Webex WFO as desired.

Field definitions

Use the Teams page to create, edit, import, or export teams. If your ACD syncs team data with Webex WFO, consult the documentation to understand how that affects any changes you make here.

The fields on the Teams page are described below.

Field	Description
Team Name	Enter a name for the team. The team name cannot be the name an existing group, an existing team, or the name of the tenant this team is part of. Synced team names are read-only.
Select Team	Select an existing team. The list displays active teams by default.
Show inactive teams	Select this check box to display both active and inactive teams in the Select Team field. “Inactive” appears next to inactive teams in the Select Team list. When cleared, only active teams appear in the Select Team field. This field appears only when you are editing an existing team.
Activate this team	To activate the team, select this check box. Teams are activated by default. Clear this check box to deactivate the team.
Creation Date	(Read-only) The date the team record was created.
Deactivation Date	(Read-only) The date the team record was deactivated. As long as the team record is active, this field is not visible. When this field is visible, it displays the date of the team record’s most recent

Field	Description
	deactivation. This field only appears when you clear the “Activate this team” check box.
Group	Select the group in which this team should be placed.
Agents	Assign the desired agents to the team. In a synced system, you cannot change the list of agents assigned to the synced team.
Include this team in productivity reports	Select this check box if you want this team’s statistics to be included when the Webex WFO capture service compiles productivity statistics.
Stage Upload Location	Select this check box to associate the team and Stage Upload Data Server. This check box is available only if the Staged Upload component is enabled for a Data Server in your system. Users who are assigned to this team will use Staged Upload only if they are also associated with a correctly-configured QM Workflow Daily Event. For more information about Two-Stage Upload, see “Configuring the Staged Upload Component” in the *Design Guide for Cloud Deployments*.
Storage Profiles	Select a storage profile to associate with this team. The default storage profile for this field is the default set in Storage Profiles (Application Management > System Configuration > Storage Profiles). If you change the storage profile for the team, new recordings are stored in the new storage profile, but existing recordings remain in the original storage profile.

Import and export teams

Select the “Import and export teams” option to import new or edited team or export existing teams. The import and export data is in CSV format.

The columns can use the field names below as the header names or you can use field names you choose (for instance, “Name” could be “Team Name”). The column names listed here are the names used in the Webex WFO database. If you use different column names you must map each custom name to the appropriate Webex WFO name.

Once you have configured how your import file fields are mapped to the Webex WFO fields, you can save that mapping for reuse.

Export team data

- Click **Export**. Webex WFO downloads the file (named teams.csv) to your PC in CSV format.

Import team data

1. Click **Choose File**, navigate to your team CSV file, and then click **Open** to display the file column headers. The file can use the default column header names below or you can use header names you choose (for instance, “Name” could be “Team Name”). If you use different column header names you must map each custom name to the appropriate Webex WFO name.

Column Header	Description
Team ID	The team’s ID in the ACD. You can identify the ID number by exporting team data and viewing it in the resulting CSV file. If you import a team with a Team ID that already exists in the database, the imported data for that Team ID overwrites the data in the database. If the team is a new team, the ID must be set to 0 (zero) or the import will fail.
Name	The name of the team.
Activated Date	The date the team was activated.

Column Header	Description
Deactivated Date	The date the team was deactivated.
Parent Group ID	The group to which the team belongs.
Productivity Compilation	(False/True) Indicates if the team's statistics are to be included when the Capture service compiles productivity statistics.

2. Map the required Webex WFO import fields to the appropriate field in the CSV file, and then configure that field's data type.
3. Click **Import**.

Save a mapping schema for reuse

1. Click **Choose File**, navigate to your team CSV file, and then click **Open** to display the file column headers.
2. Map the required Webex WFO import fields to the appropriate field in the CSV file, and then configure that field's data type.
3. Enter a name for the mapping in the **Mapping Name** field, and then click **Save**. This mapping schema will be available for reuse in a future import.

Manage groups

A group is a collection of one or more teams.

Field definitions

Use the Groups page to create, edit, import, and export groups.

> **NOTE** Groups can be deactivated but not removed. They are retained for historical purposes and are available in reports, contacts, analytics, and so on.

The fields on the Groups page are described below.

Field	Description
Group Name	Enter a name for the group. The group name cannot be the name of an existing group, an existing team, or the name of the tenant this

Field	Description
	group is part of.
Select Group	Select an existing group. The list displays active groups by default.
Show inactive groups	Select this check box to display both active and inactive groups in the Select Group field. “Inactive” appears next to inactive groups in the list of groups. When cleared, only active groups appear in the Select Group field. This field only appears when you are editing an existing group.
Activate this group	Select this check box to activate the group. Groups are activated by default. Clear this check box to deactivate the group.
Teams	Assign one or more teams to this group.
Creation Date	(Read-only) The date the group record was created.
Deactivation Date	(Read-only) The date the group record was deactivated. When a record is active, this field is not visible. When this field is visible, it displays the date of the group’s most recent deactivation. This field only appears when you clear the “Activate this group” check box.
Teams	Assign one or more teams to this group by moving the teams from the Available pane to the Assigned pane.

Import and export groups

Select the “Import and export groups” option to import new or edited groups or export existing groups. The import and export data is in CSV format.

Export group data

- Click **Export**. Webex WFO downloads the file (named groups.csv) to your PC.

Import group data

1. Click **Choose File**, navigate to your group CSV file, and then click **Open** to display the file column headers. The file must include columns for the following data in any order. The columns can use these names as the header, or a name you choose (for instance, “Name” could be “Group Name”). If you use different column names, you must map each custom name to the appropriate Webex WFO name.

Column Header	Description
Group ID	The group’s ID in the ACD. You can identify the ID number by exporting group data and viewing it in the resulting CSV file. If the group is a new group, the ID must be set to 0 (zero) or the import will fail.
Name	The name of the group.
Activated Date	The date the group was activated.
Deactivated Date	The date the group was deactivated.

2. Map the required Webex WFO import fields to the appropriate field in the CSV file and configure that field’s data type, or select an existing mapping from the **Use Existing Mapping** drop-down field..

> **NOTE** If you are creating a new mapping, once you have configured how your import file fields are mapped to the Webex WFO fields, you can name the mapping and then save it for reuse.

3. Click **Import**.

> **NOTE** If you import a group with a Group ID that already exists in the database, the imported data for that Group ID overwrites the data in the database.

Manage views

A view controls the scope of access a user has in WFM and QM. In WFM, a user assigned to a view has access only to the entities (such as contacts, teams, service queues, service queue groups, multiskill groups, skill mappings, work conditions, work shifts, exceptions, and projects) assigned to that view according to the permissions of their role.

A user's scope is determined on login. If new entities are created after login (for example, users or teams added by syncing with the ACD), the user's scope will include those entities only after logging out and logging back in.

Page location

Application Management > Global > User Configuration > Views

> **NOTE** Contacts previously recorded and tagged with metadata used for a QM view will be included in the returned results for the view. The first time you access contacts using a QM view, you will experience a delay, as the application performs its initial database search for that view.

> **NOTE**
> If your organization uses QM views instead of configuring user scope via the Users page, the Organization filter on the Interactions page works like this for users who have a QM view assigned but no assigned scope:
>
> - The Group and Team drop-downs are set to All and cannot be changed.
> - The Agent drop-down shows all agents' names.

> **NOTE** To let agents view and play their own contacts in addition to any contacts that meet the QM View criteria, assign them the Include Self Scope in QM Views permission. See Manage roles and permissions.

An entity can be included in multiple views, and a user can be assigned to multiple views.

The WFM system view is called EnterpriseView. This view cannot be renamed or deleted. You can use this as your primary view or create new views to suit your needs. QM does not have a system view.

Field descriptions

Use the Views page to create, edit, and delete WFM or QM views. The fields on the Views page are described below.

Fields for WFM views

Field	Description
View Name	Choose a unique name for the view or select an existing view. EnterpriseView is a system view and cannot be renamed or deleted.
Activate	Select the Activate check box to activate the view. A view cannot be used unless it is activated.
Users	Select the users to assign to the view.
Teams	Select the teams to assign to the view.
Multiskill Groups	Select the multiskill groups to assign to the view.
Service Queues	Select the service queues to assign to the view.
Service Queue Groups	Select the service queue groups to assign to the view.
Skill Mappings	Select the skill mappings to assign to the view.
Work Conditions	Select the work conditions to assign to the view.
Work Shifts	Select the work shifts to assign to the view.
Exceptions	Select the exceptions to assign to the view.
Exception Types	Select the exception types to assign to the view. Exception types are required so agents can submit requests (see Requests).
Projects	Select the projects to assign to the view.
Vacation Types	Select the vacation types to assign to the view. Agents must have all the vacation types in their view that are in their vacation plan. Otherwise they cannot select the missing vacation type when submitting a time off request.
Dynamic Work Rules	Select the dynamic work rules to assign to the view.

Field	Description
Dynamic Scheduling Events	Select the dynamic scheduling events to assign to the view.
Scoping Conditions	Use the fields in this section to create rules for defining the metadata for limiting the scope for this view.
Match Any or Match All	Indicates whether the rule is a logical OR (Match Any) or a logical AND (Match All).
Add Rule	Adds a line of conditions to define the rule.
Metadata Field	Select a metadata field from the drop-down list. You can use this field to specify a scope outside of your team and group.
Condition	Select the operation to apply to the condition from the drop-down list.
Value	Enter the value with which you want to filter the metadata. You cannot use wildcards when entering this view.

Fields for QM views

Field	Description
View Name	Choose a unique name for the view or select an existing view. **NOTE** EnterpriseView is a system view and cannot be renamed or deleted.
Activate	Select the Activate check box to activate the view. A view cannot be used unless it is activated.
Scoping Conditions	Use the fields in this section to create rules for defining the metadata for limiting the scope for this view. - Match Any or Match All drop-down list—Indicates whether the rule is a logical OR (Match Any) or a logical AND (Match All).

Field	Description
	■ Add Rule button—Adds a line of conditions to define the rule. You can add multiple rules. ■ Metadata Field—Select a metadata field from the drop-down list. Use this field to specify a scope outside your team and group. ■ Condition—Select the operation to apply to the condition from the drop-down list. ■ Value—Enter the value with which you want to filter the metadata. Note that you cannot use wild cards when entering this value. To delete a rule, click the **X** next to the desired rule.

Record and evaluate contacts

Recording and evaluating contacts entails the following:

- Find contacts within your scope by using one or more filters.
- Play contacts with the Media Player
- Assign and share contacts.
- Evaluate customer conversations (both audio recording and non-call contacts).
- Analyze evaluation data
- View an agent's status, listen in on a call, and view the agent's screen in real time.
- Create contacts manually.

Record contacts

Recording contacts entails the following:

- Determine which recordings to keep and delete, based on workflow rules, and specify how long the recordings are retained.
- Remove recordings from agent PCs immediately after a contact completes and store them on a Data Server in your contact center until a scheduled time, when a QM Workflow event runs and uploads them to the cloud.
- Proactively manage which contacts are automatically recorded and which contacts are automatically excluded from being recorded.
- Manually record a contact.

> **NOTE** Using multiple methods of triggering pause and resume (such as Recording Controls, web events, APIs, and third-party signaling) at the same time can result in unpredictable behavior. To avoid these issue uses, only one method on a call at a time.

Automate QM workflows

Use the Workflow Administration page to determine which recordings to keep and which recordings to delete based on workflow rules, and to specify how long the recordings are retained. You can also use workflows to perform other tasks, such as assigning evaluations.

End of Interaction and Daily are the two event types that specify when a workflow is set to run. Once you select an event type, you then further configure the workflow's rules. Rules are evaluated and followed in the order they appear on the Workflow Administration page until a matching rule is found. There is a **Default (locked)** rule that is always the last rule in the list. It can be modified, but it cannot be deleted.

Once the rules are set, you then create one or more conditions that the rule must follow. When the conditions for a rule are met, the actions configured for that condition are followed. These actions can range from inserting metadata, recycling contacts, keeping a percentage of recordings, and more.

Prerequisites

- You have the Administer Workflow permission
- Create an active evaluation form if you want to assign a default evaluation form as a workflow action

Page location

Application Management > QM > QM Contact Flows > Workflow Administration

Procedures

To create a complete workflow you must create a rule, create conditions for that rule, and then set up actions for the conditions you created.

Create a new rule

When you create a rule, you are creating a container for the conditions you want for your workflow.

1. Select **End of Interaction Event** or **Daily Event**.

   End of Interaction Event—The workflow processes the recording at the end of a call.

   Daily Event—The workflow processes all recordings once a day. If there are calls still being recorded when the Daily Event workflow is executed, those calls will be uploaded when the next Daily Event runs.

2. (Daily Events only) Enter the time for the Daily Event to run in the **Time** field.

Time —The time when workflow processing starts. This is also the start time for the recordings retention period. If the time is changed, the new time goes into effect immediately, and calls will be processed using the new time.

3. Enter a name for the rule in the **Name** Field.
4. Click **Save Rule**. The rule is added to the workflow.

> **NOTE** Selecting **Save Rule** does not save the entire workflow. Save workflows by clicking the **Save** button.

5. Select the rule from the **Rules** list.
6. (Optional) Use the keyboard arrows to change the order of the rules. Rules are generally followed in the order they appear on the Workflow Administration page.

Delete a rule

You can delete one rule at a time.

1. Select a rule from the **Rules** list.
2. Click **Remove Rule**.
3. Click **Save**.

Create conditions for a rule

Each rule follows a set of conditions.

1. In the **Conditions** section, select **All** or **Any** from the **Match** drop-down list. When one or more conditions are set to an **Any** or **All Match** category, those conditions form a condition group.

   All—The workflow must match all conditions in the condition group.

   Any—The workflow must match any of the specified conditions in the condition group.

2. In the **Conditions** section, select an option from the **Condition** drop-down list.
   - **Agent**, **Group**, or **Team**—You can select the name of an agent, group, or team as the value. The condition applies to the call recordings of this specific agent, group, or team only. If the name of the agent, group, or team is edited, Webex WFO automatically updates the value in your condition to match the new name.
   - **Call Direction**—You can select **Inbound** or **Outbound** as the value. The condition applies to all inbound or outbound call recordings.

- **Contact Type**—You can select **Call**, **Screen Only**, **Email**, **Text**, **Chat**, or **SMS** as the value.
- All others—You can enter a string as the value. The condition applies to all call recordings that contain the specified string in their metadata.

3. Select an option from the **Operator** drop-down list.
   - **Contains**—Search for values that contain the string in the Value field. This field is not case-sensitive. Contains implicit wildcards before and after the entered text. The asterisk (*) and question mark (?) wildcards are allowed.
   - **Contained in list**—Loads values from a file in a single column of values (or CSV). This automatically creates an Any condition group with the values. Each value allows the asterisk (*) and the question mark (?) wildcards.
   - **Is**—Search for an exact match. The asterisk (*) and the question mark (?) wildcards are allowed.
   - **Equals**—Search for score values that match your specified value. Number conditions allow "Less than" (<), "Greater than" (>), and "Equals" (=) operators.

     > **NOTE** When you use the Equals operator, the Value field is case-sensitive. If you are uncertain about the case of the string in the Value field, use the "Contains" operator.

   - **Begins With**— Search for values that begin with the string in the Value field.
   - **Less than**—Search for score values that are less than your specified value.
   - **Greater than**—Search for score values that are greater than your specified value.
   - **<metadata operator>**—Choose the metadata field to use. The value works like an "Is" operator that allows asterisk (*) and question mark (?) wildcards.
4. Select an option from the **Value** drop-down list. You can either select an option or enter a string, depending on the condition.

   Wildcards can be used for both "Is" and "Contains" operators. "Contains" has implicit asterisk wildcards at the beginning and end of the text.

   - The asterisk wildcard (*) can represent any quantity of any characters, as long as the other characters in the string match.

     > **EXAMPLE** 61* matches any number that starts with 61, such as 6124, 61555, and 613.

- The question mark wildcard (?) can replace a single character in a string.

> **EXAMPLE** 61?? matches any number that starts with 61 and is four digits long, such as 6124, 6125, and 6126.

5. (Optional) Click **+** to add a condition, **–** to delete a condition, or to create a new condition group and repeat steps 1 through 4 for the new condition or condition group.
6. Click **Save**.

Create actions for a condition

Actions define what happens when the conditions for a rule are satisfied.

1. Select and configure one or more of the following actions.
    - **Retention Policy** — An option for **Keep <n> % of random voice**, **matching screen**, and **unmatched screen recordings**. Choose the retention policy for the contacts that meet the workflow rules. The retention policy determines how long recordings are kept. The retention time starts based on the contact's start time.

      > **NOTE** Only one retention policy is allowed per contact.

    - **Retention Policy** — An option for **Keep <n> % of random voice recordings**, **matching screen recordings**, **unmatched screen recordings**, and **text interactions**. Choose the retention policy for the contacts that meet the workflow rules. The retention policy determines how long recordings or text records are kept. The retention time starts based on the contact's start time.

      > **NOTE** Only one retention policy is allowed per contact.

    - **Keep <n> % of random voice recordings Keep <n> % of <type> voice recordings** — Keeps the specified percentage of voice recordings that match the specified type of contact.
    - **Keep <n> % of random matching screen recordings Keep <n> % of <type> screen recordings**— Keeps the specified percentage of matching screen recordings that match the specified type of contact.
    - **Keep <n> % of random unmatched screen recordings Keep <n> % of <type> unmatched screen recordings**— An unmatched screen is recorded without audio for screen-only contacts. This action keeps the specified percentage of unmatched screen recordings that match the specified type of contact.

- **Keep 100% of text interactions**—Use this action for text contacts. The 100% setting cannot be changed.
- **Immediate Upload** — An option for **Keep <n> % of random voice**, **matching screen**, and **unmatched screen recordings**. Audio recordings and screen recordings (matched or unmatched) associated with this workflow are immediately uploaded after the workflow completes. In an End of Interaction workflow, the recording is uploaded immediately after the recording ends. In a Daily workflow, the recording is uploaded when the daily workflow is scheduled to run. If this option is not selected, the normal upload setting rules are in effect. This option applies to all recording types. If you change this option during the day, the change goes into effect immediately.

  Files that are uploaded immediately can affect bandwidth.

  > **BEST PRACTICE** If you are using Desktop Recording without a staged upload server, select Immediate Upload to limit the potential loss of audio recordings that are waiting to be uploaded when an agent's PC shuts down.

- **Recycle Immediately** — Voice recordings, screen recordings, and text records go immediately to the recycle bin and are not processed by any other event.

  A typical example is for Do Not Keep phone numbers in the End Of Interaction event. Contacts that have these phone numbers as Calling/Called should not be recorded. Selecting Recycle Immediately sends them to the recycle bin, and they are not processed again in the Daily Event. This prevents a Do Not Keep list from being maintained in both End Of Interaction and Daily events.

- **Insert Metadata** — Allows you to insert the text specified in the field into the user-defined metadata field for the contacts that meet the workflow. You can Manage custom metadata fields from the Metadata Manager page.
- **Set the evaluation form to <Evaluation Name>** — Select the evaluation form that you want to associate with contacts that meet the workflow.
- **Set the reason for the interaction to <Reason>** — Choose the reason that will be associated with this recording. If you do not choose a reason, Archive is assigned by default.
- **Set the survey form to <Survey Name>** — Select the survey form you want to associate with contacts that meet the workflow conditions.

You must also select the Voice of the Customer (VoC) question and the evaluation threshold for that question. The VoC question must have a numeric answer format. If the customer's response for the VoC meets the evaluation threshold you define, the associated contact is marked for evaluation.

Survey forms are sent by email. Enter the Send From email, Reply To email, sender name, and email subject. For more information about sending survey forms, see Configuring online survey providers.

> **NOTE** If the value of this field is set to IVR, the **Send From Email**, **Reply To Email**, **Sender Name**, and **Email Subject** fields are not available.

2. Click **Save**.

Field descriptions

Use the Workflow Administration page to create, edit, or delete a workflow.

Configuring rules

Configure the rules for the workflow.

Field	Description
Reset	Restore the last saved changes to the section.

Configuring conditions

Configure the conditions for the workflow. The conditions determine which contact meets a rule.

Field	Description
Import	Browse to a CSV or TXT file that contains a single column of data based on the selected condition. This button appears only when the operator is "Contained in list."
<number> Rows	(Read-only) Displays the number of rows in the imported CSV file.
	(Export Table Data to CSV) Export the selected data to CSV.

The following conditions are available by default. You can also select any custom metadata that you add.

Condition	Description
Agent	Applies only to the specific agent that you select as a value. The operator is Equals by default and cannot be changed.
Group	Applies only to the specific group that you select as a value. The operator is Equals by default and cannot be changed.
Team	Applies only to the specific team that you select as a value. The operator is Equals by default and cannot be changed.
Agent First Name	Applies to all users’ first names that match the operator you select and the value you enter.
Agent Last Name	Applies to all users’ last names that match the operator you select and the value you enter.
Agent Username	Applies to all users’ Windows logins that match the operator you select and the value you enter. In an Active Directory environment, this condition is the Active Directory login of your users.
Agent Email	Applies to all users’ user names that match the operator you select and the value you enter. In Webex WFO, this condition is the email address of your users.
Team Name	Applies to all teams that match the operator you select and the value you enter.
Group Name	Applies to all groups that match the operator you select and the value you enter.
Call Direction	Applies to all calls that match the direction you select: inbound or outbound.
Call Duration (seconds)	Applies to all calls whose length matches the operator you select and the value you enter.

Condition	Description
Calling Number	Applies to all calls whose calling number matches the operator you select and value you enter.
Called Number	Applies to all calls whose called number matches the operator you select and the value you enter.
Phone Number	Applies to all calls whose calling number or called number matches the operator you select and the value you enter.
Agent Length of Employment (days)	Applies to all agents whose length of employment matches the operator you select and value you enter.
Contact Type	Applies to all contacts whose type matches the value you select.

Configuring actions

Configure the actions for the workflow. The actions define what happens to contacts that satisfy the rules.

Field or button	Description
Convert on Upload	An option for Keep <n> % of Random voice, matching screen, and unmatched screen recordings. The server converts uploaded recordings from the recording format to the storage format. If you do not select this option, the recording is not converted until it is played back. Screen recording and storage formats are the same by default (WebM Video - VP8). For audio recordings, the recording format is encrypted OPUS, and the storage format is WebMA Audio - Vorbis.

Related topics

- How workflow administration works—Learn more about workflow event types and how Webex WFO handles conflicting workflows.

How workflow administration works

Learn more about QM workflows, including the differences between End of Interaction (EOI) and Daily event types and how Webex WFO handles conflicting workflows.

Event types

The EOI and Daily event types determine at which point after a contact the workflow process takes place. After you select an event type, you can configure workflows to take a variety of actions. See Automate QM workflows for a complete list of workflow actions.

The logic applied to the three actions listed below varies depending on if the action is applied to a daily or EOI event. Details on the differing logic can be found in the sections on Daily events and End of Interaction events.

- Keep <n> % of random voice recordings
- Keep <n> % of random matching screen recordings
- Keep <n> % of random unmatched screen recordings

  Where <n> indicates a text field, check box, or drop-down list where a unique value can be set.

Daily events

Daily events are when a workflow processes all recordings once a day. If there are calls still being recorded when a daily workflow is executed, those calls are uploaded when the next daily workflow runs. Daily workflows can be configured for actions that allow you to keep a certain percentage of voice or screen recordings. Webex WFO calculates daily workflows using an exact percentage. Meaning, if you configure a workflow to keep 20% of random voice recordings, then 20% of random voice recordings will be kept when the workflow processes.

End of Interaction events

End of Interaction (EOI) events are when the workflow processes the recording at the end of each individual call. Unlike daily workflows, EOI workflows are calculated at the end of each contact using a calculated approximate percentage. Webex WFO estimates the percentage for all contacts because only the data for the current contact and earlier contacts is available at the time of processing. To estimate this percentage, the system uses logic similar to a deck shuffle model to decide what happens to the contact.

In the deck shuffle model, a theoretical deck is assigned to each agent. This deck consists of cards to keep and cards to discard in proportion to the configured keep <n> % of media action, such as keep <n> % of voice recordings. Where <n> indicates a text field, check box, or drop-down list where a unique value can be set. Webex WFO shuffles the deck, and then for each contact Webex WFO draws the card from the top of the deck and keeps or discards the contact based on that card. The deck is reshuffled when Webex WFO reaches the end of the deck. The deck shuffle model ensures that contacts are not over represented or under represented in proportion to the percentage of contacts you configured Webex WFO to keep.

IMPORTANT If an agent takes fewer than 10 calls in a day, then the actual percentage is not guaranteed to match the percentage you configured for the EOI workflow.

QM workflow conflicts

For most workflows, you can select multiple concurrent actions. However, conflicts can happen when you configure actions that are not compatible. Every action that can potentially trigger conflicts is listed below.

NOTE These actions on their own do not trigger conflicts. It is only a few select combinations of these actions that can trigger conflicts.

- Keep <n> % of random voice recordings
- Keep <n> % of random matching screen recordings
- Keep <n> % of random unmatched screen recordings
- Recycle Immediately Voice Recordings
- Recycle Immediately Screen Recordings.

EXAMPLE A workflow is configured to **Keep 10 % of random voice recordings**, and **Recycle Immediately Voice Recordings**. The system is being asked to do two opposing actions, which are keeping and recycling voice recordings. This creates a conflict.

Conditional statements

The conditional statements below show all of the specific scenarios that trigger conflicts by showing the configurations of two conflicting actions in head-to-head match ups and the final outcome of which of the competing actions wins. When an action wins, Webex WFO follows the winning action and disregards the losing action.

If:	Then:
There is an EOI Recycle Immediately workflow and Daily Keep <n> % of media workflow.	The EOI Recycle Immediately workflow is followed.
There is an EOI Recycle Immediately workflow and Daily Recycle Immediately	The EOI Recycle Immediately workflow is followed.

If:	Then:
workflow.	
There is an EOI Keep <n> % of media workflow and Daily Recycle Immediately workflow.	The EOI Keep <n> % of media workflow is followed. The EOI configured Upload Time and Retention Policy are followed.
There is an EOI Keep <n> % of media workflow and Daily Keep <n> % of media workflow.	The EOI Keep <n> % of media workflow is followed. The EOI configured Upload Time is followed and the Daily Retention Policy is followed.

IMPORTANT Generally, if there is a conflict between two workflows, then the workflow that is configured to run first is followed.

IMPORTANT Generally, if there are two workflows with conflicting retention policies, then the workflow that was most recently updated is followed.

Related topics

- Automate QM workflows—Learn more about how to configure workflows.

Manage data retention policies for QM and Analytics

Use the Retention page to create a retention policy that defines how long each contact is retained, and then assign the policy to a workflow (see Automate QM workflows). By default, the maximum retention time for voice and screen recordings is two years. The system administrator can set a different maximum retention time.

You can specify retention times for voice recordings, screen recordings, and text records for these contact categories:

- Archive contact
- Unscored contact
- Scored contact
- HR contact

- Training contact
- Tagged contact

Each component of a contact (audio recording, screen recording, or root recording) can have its own retention policy. Webex WFO deletes the recording storage files when all applicable storage policies expire. A recording storage file might be associated with zero or more contacts as well as zero or one root recordings. (See Configure QM global settings to set the retention policy for root recordings.)

Prerequisites

- You have the Administer QM permission

Page location

Application Management > QM > QM Contact Flows > Retention

Procedures

Create a retention policy

1. Select **Create a new retention policy**.
2. Enter the policy's name in the **Retention Policy** field.
3. In the **Settings** section, select the retention periods for each type of contact.
4. Click **Save**.
5. Go to the Workflow Administration page (Application Management > QM > QM Contact Flows > Workflow Administration) to assign the retention policy to a workflow (see Automate QM workflows).

Edit a retention policy

> **NOTE** Shortening or lengthening a retention period does not affect existing call recordings that were previously governed by that policy. The new shorter or longer length applies only to calls that are recorded after the change.

1. Select **Edit an existing retention policy**.
2. Select the policy from the **Retention Policies** drop-down list.
3. Edit the policy as needed and then click **Save**.

If a call is tagged, Webex WFO deletes its screen and voice recordings at the end of the Tagged retention times for screen and voice. Webex WFO deletes metadata associated with a call when the longest Tagged retention time is reached.

Teams assigned to a workflow share the same retention period. Once Webex WFO assigns a retention period to a call, the period does not change if a team is moved from one workflow to another workflow. Only calls that are recorded after the switch to the new workflow use the new workflow's retention period.

Related topics

- Automate QM workflows—Assign contacts to retention policies via workflows
- Configure QM global settings—Set the retention policy for root recordings
- Delete or update multiple contacts at once—Assign a new retention policy to multiple contacts at once.

Configure staged upload

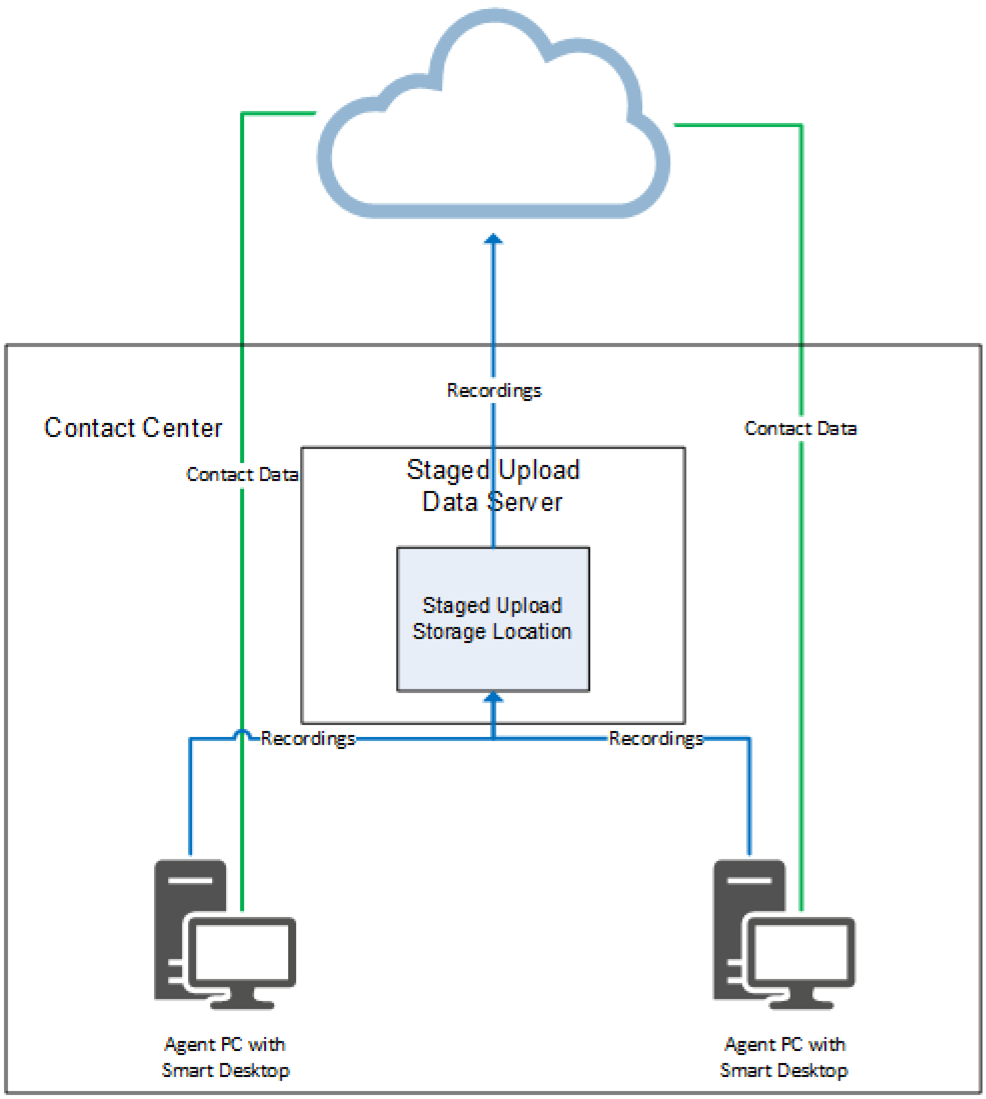
Recordings can be moved from agent PCs to the cloud in three different ways. All three methods require QM workflow events and agent PCs with Smart Desktop.

- Upload recordings to the cloud immediately after a contact completes.
- Store recordings on an agent's PC and then upload them to the cloud once a day.
- Upload recordings to a Data Server in your contact center immediately after a contact completes (stage one) and then move them to the cloud once a day (stage two).

This topic covers only the third option, called "staged upload." Staged upload lets you keep your recordings in a secure location without overloading your internet bandwidth.

Contacts handled with Staged Upload appear on the Interactions page after they are finished recording, but they have a "Not yet uploaded" File Upload State until the staged upload process is complete.

The following image shows the data flow for a basic staged upload configuration.



Prerequisites

- Agents are enabled for audio and/or screen recording.
- Agent PCs have Smart Desktop installed.
- You have all of these permissions:
  - Administer Tenant
  - Administer Org. Structure (needed to use teams to associate agents with the Staged Upload Data Server)
  - Administer Workflow

Page location

Varies. See the procedures below for details.

Procedures

There are four steps to setting up Staged Upload:

- Step 1: (Optional) identify agents who will use staged upload
- Step 2: Configure the staged upload component
- Step 3: Associate agents with the Staged Upload Data Server
- Step 4: Configure a daily event workflow rule for staged upload

Step 1: (Optional) identify agents who will use staged upload

Step 1 is a planning step, not a configuration step. First identify the agents who will use staged upload so that you can create the necessary configurations with those agents in mind. All agents in your contact center can use staged upload, or only some of them.

Step 2: Configure the staged upload component

Configure the Staged Upload Data Server

- Enable the SMB 1.0 File Sharing Support feature on the server that you will use for staged upload.

Create the staged upload storage location

1. Create a folder in the location where you want to store recordings before they are uploaded to the cloud. This location can be on the Data Server, or it can be in another location (for example, NAS).
2. Configure the folder's sharing properties so that agent PCs can access it. If the folder is not on the Data Server, you must also configure the sharing properties so that the Data Server can access it.
3. Copy the UNC path to the folder. You will use this later.

Enable the staged upload component

1. Navigate to Application Management > Global > System Configuration > Data Server Configuration.
2. Select the Data Server to use for staged upload from the **Select Data Server Configuration** drop-down list.
3. Under **Regional Data Server Staged Upload Settings**, select **Enable Staged Upload**. Additional fields appear.

4. Configure the fields as follows.

Field	Configuration
Location	The UNC path to the staged upload storage location that you copied earlier. Agent PCs must be able to access this location. **EXAMPLE** \\ServerName\FolderName
Username	The user name of the person who administers the Staged Upload Data Server. **EXAMPLE** Domain\user.name
Password	The password of the person who administers the Staged Upload Data Server.

5. Click **Save**.

Step 3: Associate agents with the Staged Upload Data Server

This step enables agent PCs to send recordings to the staged upload storage location, where the recordings are stored until the QM workflow daily event (configured in Step 4) runs and uploads them to the cloud.

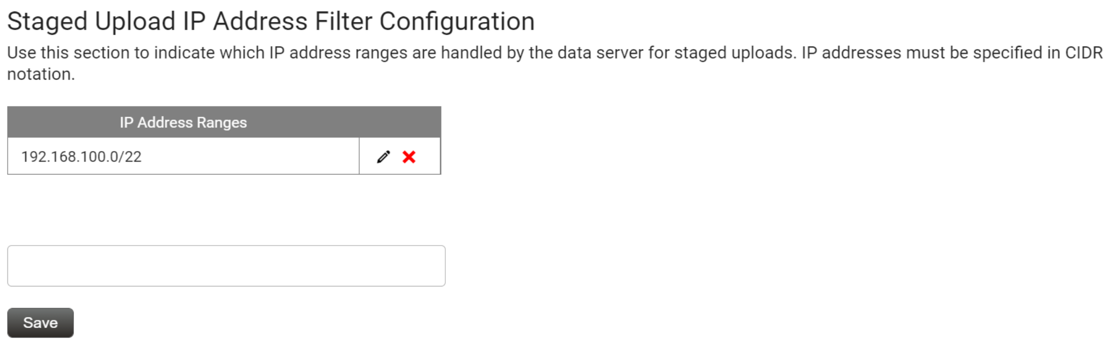
> **NOTE** Recordings for any agent who is not associated with the Staged Upload Data Server will upload according to the first QM workflow event with matching conditions. This can result in immediate upload to the cloud or delayed upload to the cloud where recordings remain on the agent's PC longer than desired.

You can associate agents with the Staged Upload Data Server in one of three ways: IP addresses, teams, or both IP addresses and teams.

Use IP addresses to associate agents with the Staged Upload Data Server

1. Navigate to Application Management > Global > System Configuration > Data Server Configuration.
2. Select the Staged Upload Data Server from the **Select Data Server Configuration** drop-down list.
3. In the **Staged Upload IP Address Filter Configuration** section, enter at least one range of IP addresses in CIDR notation. Any agent whose PC has an IP address matching this range is associated with the Staged Upload Data Server.

> **IMPORTANT** This IP address range must include the IP addresses of all PCs of all agents who will use staged upload. The address must identify the public or external network that the agents' desktops communicate from. If your organization uses a NAT firewall, do not use the address for its local or internal subnetwork.



4. Click **Save**.

Use teams to associate agents with the Staged Upload Data Server

You can assign the Staged Upload Data Server to one or more teams and then assign all the agents who will use staged upload to one of these teams.

1. Navigate to Application Management > Global > User Configuration > Teams.
2. Select the team to associate with the Staged Upload Data Server from the **Select a Team** drop-down list.
3. Under **Users**, move the agents to assign to this team from **Available** to **Assigned**.

   > **NOTE** You can also assign individual users to teams on the Users page.

4. Under **Staged Upload Location**, select the Staged Upload Data Server.
5. Click **Save**.

Use both IP addresses and teams to associate agents with the Staged Upload Data Server

1. Associate the agents' IP addresses with the Staged Upload Data Server as described in one of the earlier procedures.
2. Associate the agents with a Staged Upload Data Server team as described in one of the earlier procedures.

Various configurations with agent teams and IP addresses produce different results. The table below identifies whether an agent does or does not use staged upload based on these configurations.

Agent team associated with Data Server?	PC in IP filter	PC not in IP filter	No IP filter used
Yes	Uses staged upload	Does not use staged upload	Uses staged upload
No	Uses staged upload	Does not use staged upload	Does not use staged upload

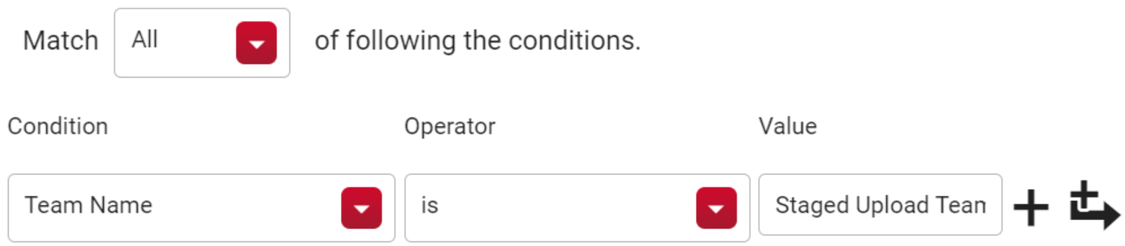
Step 4: Configure a daily event workflow rule for staged upload

Rules are composed of actions and conditions. An action is what Webex WFO does with a recording. Conditions are criteria that a recording must meet for the action to happen. This rule sends recordings from agent PCs to the staged upload storage location (configured in Step 2) instead of storing them on agent PCs or uploading them immediately to the cloud. For more information about configuring rules for QM workflow events, see Automate QM workflows.

Create a rule for staged upload

1. Navigate to Application Management > QM > QM Contact Flows > Workflow Administration.
2. Select **Daily Event**.
3. Under **Time**, select the time to upload recordings from the staged upload storage location to the cloud.
4. Enter a unique name for the rule in the **Name** field.
5. Click **Save Rule**.
6. Select the rule from the **Rules** list.
7. In the **Conditions** section, specify criteria that apply to all recordings captured by the PCs of all agents who will use staged upload.

> **EXAMPLE**
> All the agents who will use staged upload are assigned to the Staged Upload Team. The condition looks like this:

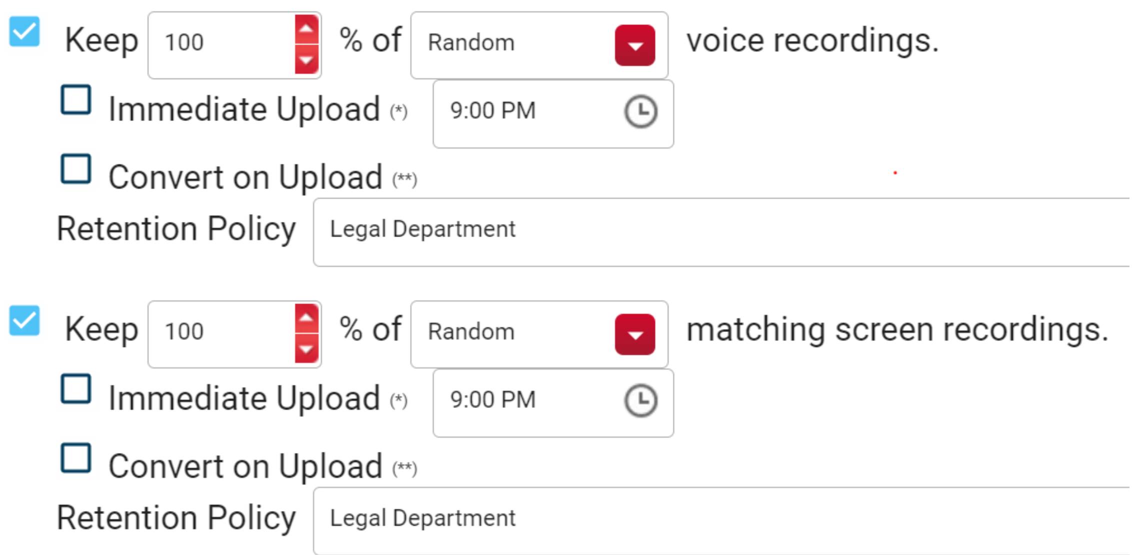


8. In the **Actions** section, create an action that prevents voice and screen recordings from being immediately uploaded.

   IMPORTANT At a minimum, you must clear the **Immediate Upload** check boxes for voice and screen recordings. A workflow rule that is configured with immediate upload always uploads recordings to the cloud immediately, even if a Staged Upload Data Server is configured and agents are associated with it.

   EXAMPLE

   All voice and screen recordings that meet the criteria you specified in the Conditions section will be handled by staged upload. The actions look like this:

9. (Optional) Refine the conditions and actions further if needed. Steps 7 and 8 provide the minimum configuration necessary.

10. If you use rules for other purposes besides staged upload, order the rules to prevent any conflicts. Webex WFO processes each recording according to the first rule in the list whose conditions match

it. See How workflow administration works for more information about potential conflicts between workflow rules.

11. Click **Save**.

Related topics

- Manage roles and permissions —Learn about the permissions needed to enable agents for recording.
- Configure the Data Server —More information about the settings available for Data Servers.
- Manage teams —More information about configuring teams.
- Automate QM workflows—Detailed information about automating how Webex WFO handles recordings.
- How workflow administration works—Additional information about how workflows work.

Manage what contacts are recorded

Use the Inclusion/Exclusion page to proactively manage which contacts Webex WFO automatically records and which contacts it automatically excludes from being recorded. You can have multiple include and exclude rules.

> **EXAMPLE** Create rules to exclude all outgoing contacts from recording, record all contacts that begin with "612822," or record all calls from the United Kingdom.

Prerequisites

- You have the Administer QM permission.

Page location

Application Management > QM > QM Contact Flows > Inclusion/Exclusion

Procedures

> **IMPORTANT** By default, Webex WFO records all calls. If fields in the exclusion rule (such as the pattern type or direction) are missing, are incomplete, or use wildcard characters inaccurately, Webex WFO records these calls.

EXAMPLE You create an Inclusion rule to record only calls with a Called Number of 1234567. A call comes in, but the ACD does not supply a Called Number. You have not created an Exclusion rule to exclude calls with an empty Called Number. Webex WFO records this call.

Create a recording rule

1. Click **Add**.
2. Enter the phone number in the **Pattern** field. Do not use hyphens. You can use wildcards in this field to create rules that apply to multiple numbers:
   - ? — A single digit

     EXAMPLE 612822???? = all numbers that begin with 612-822.

   - * — Any number of digits

     EXAMPLE 612* = all numbers that begin with 612.

   - + — Country code indicator (must be the first character in the field)

     EXAMPLE +44* = contacts in the United Kingdom.

   - EMPTY — The ACD does not supply data for this field.
3. Select the characteristics of the call from the **Pattern Type** field.
   - Calling Number—The ANI
   - Called Number—The DNIS
   - Extension
   - Phone Number—Some ACDs populate data in a field named Phone Number if the Calling Number or Called Number is empty. You can create rules with this pattern type if your ACD does this.
   - Any—Some ACDs populate data in a field named Any if the Calling Number or Called Number is empty. You can create rules with this pattern type if your ACD does this.
4. Select the call **Direction**.
5. Click **Add**. The rule appears on the page.

Edit a rule

1. Click the pencil icon next to the rule.
2. Edit the rule as needed.

3. Click **Update**.

Delete a rule

1. Click the trash can icon next to the rule. The **Confirm Delete** window opens.
2. Click **Delete**. The rule disappears from the list.

Import a list of recording rules

BEST PRACTICE To make sure that your import is formatted correctly, first Export a list of recording rules, edit the list as needed, and import it.

1. Click **Import** at the upper right corner of the page. The **Import** window opens.
2. Click **Choose File**.
3. Select the file to upload. The **Import** window previews the new and existing rules that are in the file.
4. Click **Import**. The new rules appear on the page.

Export a list of recording rules

IMPORTANT If you export a list that includes an international calling code with the plus (+) sign, Excel treats the number as a mathematical expression. To use these lists, convert the exported .CSV file to text (.TXT), open the file in Excel, and define this as a text formatted column.

- Click **Export** at the upper right corner of the page. The file inclusion_exclusion_list.csv downloads to your device.

Related topics

- Automate QM workflows—Create rules that tell Webex WFO what to do with recordings.

Export contact metadata

You can export metadata for all the contacts in your filter results as a CSV file.

NOTE Webex WFO administrators determine which metadata can be exported. Webex WFO includes only exportable metadata in the CSV file.

Prerequisites

- You have the View Contacts permission.
- You have recordings within your scope.

Page location

Interactions

Procedures

Export contact metadata

1. Filter contacts as desired. See Find contacts.
2. (Optional) Add or remove columns from the page. The CSV download contains information from only the columns that are visible on the page. See Customize the columns on the Interactions page.
3. Click the **List options** icon.
4. Click **Export table data to CSV**. The file downloads to your device.

Related topics

- Customize the columns on the Interactions page—Information about the columns you can include in the export
- Find contacts—How to locate the contacts that have data you want to download.
- Export contacts in bulk—Export recordings, metadata, and transcriptions for multiple contacts to an external storage location.
- Delete or update multiple contacts at once—Update or clear metadata fields from multiple contacts at once.

Record on demand

Quality Management workflows can handle most recording situations, but you might encounter a situation that isn't covered by a workflow. The Recording Controls page allows you to override these workflows and work with calls directly.

Prerequisites

- You have the Recording Controls set of permissions.
- Your organization has configured metadata for contacts (needed to Attach metadata to a contact).
- Your organization has configured tagging (needed to Tag a call for a different retention time).

Page location

Recording Controls

Procedures

Log in to Recording Controls

This is always the first step in using Recording Controls.

1. Click **Log In**.
2. Enter your extension in the **Telephone Extension** field.
3. Click **Submit**.

Record your screen

These steps record only your screen, not audio. You can record your screen even if you're not on a call, so this feature lets you record chat or email contacts.

1. Click **Start Screen**.
2. Click **Stop Screen** when you are finished recording.

Pause the recording

You might want to pause a recording if you are handling sensitive information, such as credit card numbers. This procedure pauses both screen and audio recording. When you play back the contact, the audio is silent during the pause, and the screen shows a *pause* symbol.

1. Click **Pause**.
2. Click **Resume** to continue recording.

Immediately delete part of a recording

This process is similar to Pause the recording, but it automatically deletes the part of the call that you don't want to record instead of keeping part of the recording silent.

1. While the call is being recorded, click **Segment and Save** before the confidential part of the contact begins.

   > **EXAMPLE** You are helping a customer place an order. You click **Segment and Save** right before the customer gives you their credit card number.

2. Click **Segment and Delete** when the confidential part of the call is over.

   > **IMPORTANT** When you click **Segment and Delete**, Webex WFO immediately deletes the confidential part of the call. This segment does not go to the recycle bin.

3. Click **Stop Screen** when you are finished recording.

Mark a segment of a call

Marking a call segment is like putting a bookmark inside the call. There are two situations when you might want to mark a call segment:

- If you are on a call that would not normally be recorded, you can start both audio and screen recording.
- If you are on a transfer or conference call, you can mark when the call was transferred or when another person was added to the call.

1. Click **Segment and Save**.
2. Click **Stop Screen** when you are finished recording.

Attach metadata to a contact

If your organization uses metadata for contacts, you can attach metadata to contacts that you record with Recording Controls. You can attach metadata to an active call and to the most recent call. You cannot attach metadata to calls older than that.

1. Click **Add Metadata**.
2. Select the metadata type from the **Metadata Key** drop-down list.
3. Enter the metadata value in the **Metadata Value** field.

   > **EXAMPLE** You need to add a comment to the contact recording. You select **Comment** from the **Metadata Key** drop-down list and enter your comment in the **Metadata Value** field.

4. Click **Submit**.

Tag a call for a different retention time

Your Webex WFO administrator controls how long recordings are available. However, you can give a contact a different retention time by tagging it. Tagging a contact applies whatever retention period your organization has set up for tagged contacts.

- Click **Tag**.

Related topics

- How Recording Controls work—In-depth information about how Recording Controls work.
- Automate QM workflows—Settings for which recordings to keep and delete.
- Manage what contacts are recorded—Settings for automatically recording contacts.
- Manage custom metadata fields—Background work for attaching metadata to a contact.
- Tag a contact—Background work for tagging contacts.
- Manage roles and permissions —Information about the Recording Controls set of permissions.

How Recording Controls work

This section provides you with more information about how the Recording Controls buttons work.

Login

Clicking **Login** associates you with the specific extension for hoteling and logs you into Recording Controls.

Start Screen

If QM is not currently recording an active call, clicking **Start Screen** starts a screen-only recording. If you receive a phone call or make a call during this time, a separate voice and screen contact might be created according to workflow criteria (or you can use **Segment and Save** and **Segment and Delete** to create the contact). When the active call ends, another screen-only contact is created and continues until you click **Stop Screen**.

If QM is currently recording an active call, clicking **Start Screen** does nothing to the current recording, but the screen-only recording begins after the active call ends (if you do not click **Stop Screen**). The call recording and the screen-only recording are saved as separate contact recordings.

Stop Screen

Stop Screen only works if you previously clicked **Start Screen**. If you do not click **Stop Screen** after **Start Screen**, the maximum contact recording length is four hours.

Segment and Save

Clicking **Segment and Save** starts the audio and screen recording of an active call. If QM does not automatically record the call (for example, the caller's phone number is on the exclusion list, or the call does not meet workflow criteria for being recorded), this button lets you record it and treat it as a normal contact. Segment and Save overrides the exclusion list (configured in Application Management > QM Contact Flows > Inclusion/Exclusion) because the root call does not know the agent's identity when recording (see How root calls and reconciliation work).

If QM is currently recording an active call, Segment and Save does nothing.

Segment and Delete

Clicking **Segment and Delete** stops the audio and screen recording of an active call. The recording made up to that point is discarded immediately. The recording resumes after you click **Segment and Delete** and is saved according to workflow criteria as a new contact.

Pause

Pause helps you adhere to the Payment Card Industry Data Security Standard (PCI DSS) for protecting consumer data.

Pause affects both voice and screen recording and works for active calls only. Clicking **Pause** for a call that is already paused does nothing. You must click **Resume** to continue recording. Pause does not affect live monitoring.

Calls are available for playback prior to reconciliation, with silence where you used Pause.

Resume

Resume affects both voice and screen recording and works for active calls only. If the call is not currently paused, Resume does nothing. If you do not click **Resume**, the point at which you paused the recording is the end of the audio recording.

During post-call processing, clicking **Resume** does not appear as a mutual silence event or talk over event.

> **NOTE** Using multiple methods of triggering pause and resume (such as Recording Controls, web events, APIs, and third-party signaling) at the same time can result in unpredictable behavior. To avoid these issues, use only one method on a call at a time.

Metadata

Clicking **Metadata** attaches metadata to an active call. If QM does not upload the current call for archiving because of workflow criteria, then the metadata is uploaded to the database but does not appear in the interface. You can attach metadata to a call only if the metadata is defined on the Metadata Manager page (Application Management > QM Configuration > Metadata Manager).

You can associate a maximum of 100 metadata items with a call. You can click **Metadata** 100 times, each time using one key/value pair, or click **Metadata** once and use 100 key/value pairs. Specifying an empty value for a key removes that metadata field association for the call.

Valid formats for metadata are as follows.

Metadata Type	Data Format
Date	YYYY-MM-DD
Numbers	■ Can start with and contain a decimal point ■ Cannot end with a decimal point or contain a comma
Text	Can include all alphanumeric characters except for the ampersand (&), less than (<), or greater than (>) characters

Security features for recordings

All recordings have the following security features:

- Encryption—All data is encrypted and transported via HTTPS/SSL from a customer's premises to the Webex WFO cloud platform for processing and storage.
- Role-based permissions—Only authorized users can play back or export recordings.
- Audit trail—The system tracks who accesses recordings, what they access, and when they access it.
- Payment Card Industry (PCI) compliance—Webex WFO complies with the industry standard comprehensive requirements for enhancing payment account data security.

In cloud deployments, the available encryption method is RSA-2048 (with asymmetric keys) and AES-256 for media recorded by Webex WFO.

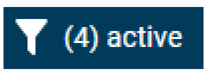
View recording reports

For information about the standard QM and WFM reports that come with Webex WFO, and for instructions on how to run a standard report, see QM standard reports and WFM standard reports.

> **NOTE** These standard Webex WFO reports show an agent's current team, not the team the agent belonged to at the time a recording was made. Reports created with Data Explorer and the contacts listed on the Interactions page show the team an agent belonged to at the time the recording was made.

Find contacts

You can find contacts within your scope by using one or more filters. For example, you can use filters to find all contacts handled by a specific person or recorded within a specific date range. The Filters icon (top left of the page) lists the number of filters you are currently using.



Each filter has at least one criterion. For example, the Evaluator Name filter has two criteria: First Name and Last Name. To appear in the filter results, a contact must meet all the criteria of every filter you use. For available filters and their criteria, see Filter descriptions.

Prerequisites

- You have the View Contacts permission.
- You have recordings within your scope.
- Some filters require specific permissions. See Filter descriptions for more information.
- Some filters require Webex WFO Analytics. See Filter descriptions for more information.

Page location

Interactions

Procedures

Filter contacts

1. Click the **Filter list** icon (top left of the page). The Filters panel opens to show either the last filters you used or the default filter set.

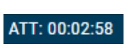
   The table below shows the default filter set. To load this set at any time, click **Reset**.

Filter	Criteria
Date Range	Past Month
Organization	Group: All Team: All Agent: All (active agents)
Search Scope	All Evaluations

2. Click **Add Filter**. The Choose Filters dialog box opens.
3. Click a filter in the **Available** column to add it, or click a filter in the **Selected** column to remove it.

   > **NOTE** You must include at least one of the following required filters: Contact ID, Date Range, or Specific Date. If your filter set includes only one required filter, you cannot remove that required filter unless you add a second required filter.

4. Click **Update Filters**. The Choose Filters dialog box closes.
5. Click each filter and choose its criteria.
6. Click **Apply**. Recordings that meet all of the criteria in the filter set display. The Filter Contacts Snapshot (top right of the page) updates with average talk time (ATT) for the displayed recordings. ATT is the average time it took an agent to handle a call. Talk time begins when an agent answers a call and ends when the agent disconnects or transfers it, including hold time.

Save a filter set

A group of filters and criteria that you use together is called a “filter set.” You can save a filter set and use it again later.

1. Filter contacts to choose the filters and criteria you want to save (see Filter contacts for details).
2. Click the **Save** icon . The Save Filter Set dialog box opens.
3. Enter a name for the filter set in the **New Filter Set Name** field.
4. Click **Save**. The Save Filter Set dialog box closes, and the name appears in the Filter Set drop-down list.

Use a saved filter set

1. Click the **Filter list** icon (top left of the page). The Filters panel opens.
2. Select the filter set from the **Filter Set** drop-down list. The filters and criteria for the set display.
3. Click **Apply**. Recordings that meet all of the criteria in the filter set display.

Edit a saved filter set

1. Select the filter set from the **Filter Set** drop-down list.
2. Edit the filter set.
3. Click **Apply**.
4. Click the **Save** icon. The Save Filter Set dialog box opens.
5. Select **Overwrite Filter Set**. The filter set's name appears in the Existing Filter Set drop-down list.
6. Click **Save**. The Save Filter Set dialog box closes.

Change the date format

By default, Webex WFO displays dates in MM/DD/YYYY format.

1. Click your name in the upper right corner of the page.
2. Select **Select Language**. The **Select Language** window opens.
3. Select one of the following languages:

To see dates in this format:	Select one of these languages:
MM/DD/YYYY	English
DD/MM/YYYY	English (UK & AUS)

To see dates in this format:	Select one of these languages:
	French (France)
	Spanish
	Portuguese (Portugal)
	Portuguese (Brazil)
	Italian
YYYY-MM-DD	Swedish
	French (Canada)
DD.MM.YYYY	Finnish
	Norwegian
	Danish
	German
	Polish
YYYY/MM/DD	Japanese
	Chinese (Traditional)
	Chinese (Simplified)
DD-MM-YYYY	Dutch
YYYY.MM.DD	Korean

4. Click **Change Language**. The **Select Language** window closes.
5. Refresh the page. The date format changes based on the language you selected.

Filter descriptions

The following table describes filters and their criteria.

NOTE
You can use wildcards in the criteria for several filters. Combine a wildcard with at least one letter or number.

- The * wildcard represents any number of characters. For example, if you enter 612* as a criterion for the Phone Number filter, you filter all phone numbers that begin with 612 but contain any number of characters afterward.
- The ? wildcard represents one character. For example, if you enter 612555???? as a criterion for the Phone Number filter, you filter all phone numbers that contain ten characters and begin with 612555.

Filter	Description
Approved By	Filters contacts by the name of the person who approved their evaluations. You can use wildcards. This filter is available if you have the View Evaluator Detail permission.
Associated Contact ID	Filters contacts by their associated contact ID. You can use wildcards.
Calibrated	Filters contacts on their marked-for-calibration status. Select one of the following criteria: ■ Yes—The contacts have been marked for calibration. ■ No—The contacts have not been marked for calibration.
Contact Content	Filters contacts based on the types of content that they contain. Select one or more of the criteria. This filter shows you all contacts that have the content types you select, not contacts that have only these content types. **NOTE** One of the criteria is Has Transcription. The number of calls you see using this criterion might vary from the number of calls you see in an Analytics dashboard that uses the Transcribed Call Count data set, for a variety of reasons: ■ QM data and Analytics data update at different times. ■ QM marks a call with Has Transcription if a transcription file

Filter	Description
	for the call is uploaded, but Analytics marks a call as transcribed after the call has been indexed. Indexing happens after the transcription file is uploaded, so reports on transcribed calls might show a higher number in QM than in Analytics if indexing has not happened yet. ▪ QM and Analytics could have different retention policies.
Contact ID	Filters contacts by their unique ID. You must enter the exact ID of the contact that you want to find. You cannot use wildcards.
Contact Type	Filters contacts by the contact type. Select one of the following criteria: ▪ Call—A contact with a call recording. ▪ Non-Call—A contact without a call recording that someone created by clicking Create Contact on the Interactions page. ▪ Screen Only—A screen recording contact without call recording. ▪ E-mail—An email contact without call recording. This contact type appears only when your organization uses both Quality Management and Analytics. ▪ Text—Depending on how your organization imports written contacts into Webex WFO, this could include emails, chat messages, or other text contacts. ▪ Chat—A written contact that happened within your organization's chat program. This can be with a human agent or with a chat bot. ▪ SMS—A written contact that happened within your organization's text-messaging program.
Custom Data	Filters contacts whose custom metadata meet the criteria you specify. The criteria available depend on the type of custom metadata. You cannot use a wildcard as the first or last character.
Date Evaluated	Filters contacts that were evaluated within the date range you specify. Both criteria default to the current date. This filter is available if you

Filter	Description
	have the View Evaluator Detail permission. **NOTE** If you are looking for recordings evaluated on a specific day, you might also need to search the recordings for the previous day or the next day, depending on your time zone. To calculate the Date Evaluated, Webex WFO uses the Universal Time Coordinated (UTC) time plus or minus an offset value associated with your time zone. For example, March 24, 2022 2:00 AM UTC converts to March 23, 2022 9:00 PM Central Daylight Time (CDT). A call evaluated late in the evening in the CDT time zone on March 23, 2022 might be filtered as a call that was evaluated on March 24, 2022.
Date Range	Filters contacts that were recorded within a predefined date range. Select one of the criteria. The default is Past Month. **NOTE** This filter always searches for contacts in the time zone of the capture source (for example, the Record Server or PC with Smart Desktop), even if the Display Contacts in User Time Zone check box is selected (see Configure QM global settings). **NOTE** The number of calls you see when using this filter might vary from the number of calls you see when using the Date Range filter in Analytics, for a variety of reasons: ▪ QM data and Analytics data update at different times. ▪ QM and Analytics could have different retention policies.
Direction	Filters contacts by their direction. Select one of the criteria.
Duration	Filters contacts whose duration is greater than, less than, or equal to the number of seconds you specify.
Email	Filters email contacts by their sender, recipient, or subject. Enter values for one or more of the criteria. These criteria are not case-sensitive. You can use wildcards.

Filter	Description
	NOTE The Email filter is only available with Analytics installed.
Evaluation Form	Filters contacts by the form with which they were evaluated.
Evaluation Response	Filters contacts by the agent's response to the evaluation. Select one or more of the following criteria: ▪ Pending Response—Agent has not yet responded. ▪ Acknowledged—Agent has acknowledged the evaluation. ▪ Appealed—Agent has appealed the evaluation.
Evaluator Name	Filters contacts by the name of the person who evaluated them. You can use wildcards. This filter is available if you have the View Evaluator Detail permission.
External Parties	(Chat and SMS contacts) Filters contacts by the identifier used by the person the agent interacted with. This identifier is usually an email address or phone number, but this varies based on the chat or messaging tool your organization uses. You can use wildcards.
Line	Filters contacts by extension.
Organization	Filters contacts by the group, team, or agent who handled them. **NOTE** If your organization uses QM views instead of configuring user scope via the Users page, the Organization filter works like this for users who have a QM view assigned but no assigned scope: ▪ The Group and Team drop-downs are set to All and cannot be changed. ▪ The Agent drop-down shows all agents' names.
Phone Number	Filters conversations by phone number. The filter returns any contact whose calling number or called number matches the number you enter. You can enter the following:

Filter	Description
	▪ Specific numbers ▪ Number ranges using wildcards ▪ The * wildcard to return all contacts with a called number or a calling number The numbers cannot contain dashes or parentheses.
Predictive Evaluation Score	Filters contacts whose predictive evaluation score is greater than, less than, or equal to the number you specify. This filter is available if you have the View Analytics permission. See Configure predictions for more information about predictive scoring.
Predictive Net Promoter Score	Filters contacts whose predictive net promoter score is greater than, less than, or equal to the number you specify. This filter is available if you have the View Analytics permission. See Configure predictions for more information about predictive scoring.
Recording Flags	Filters contacts that been marked or tagged. Select one or more of the criteria. For more information about tagging contacts, see Tag a contact and Mark contacts for training or HR. **NOTE** To see all contacts that are marked for training across your organization, you need the View All Training Contacts permission. **NOTE** To see all contacts that are marked for HR across your organization, you need the View All HR Contacts permission.
Recording Type	Filters contacts by recording type.
Score	Filters contacts whose evaluation score is greater than, less than, or equal to the number you specify.
Search Scope	Filters contacts by scope. Select one of the following criteria:

Filter	Description
	■ All Evaluations—All contacts within your scope. ■ My Evaluations—All contacts that you have been assigned to evaluate or whose evaluations you have started or completed. ■ My Pending Calibrations—Contacts within your scope that are marked for calibration. ■ Root Calls—Audio root recordings. Screen root recordings are not available on the Interactions page. **NOTE** To view root recordings, you need the View Root Recordings permission. ■ Recycle Bin Contacts—Contacts in the recycle bin.
Sentiment	Filters contacts by their sentiment score. Select one of the criteria. This filter is available if you have the View Analytics permission.
Specific Date	Filters contacts recorded within a specific date range. **NOTE** This filter always searches for contacts in the time zone of the capture source (for example, the Record Server or PC with Smart Desktop), even if the Display Contacts in User Time Zone check box is selected (see Configure QM global settings).
Speech Energy	Filters contacts by speech energy event. ■ To filter contacts by the number of an event that they contain, select Silence Events, Talk Over Events, Pause Events, or Hold Events. ■ To filter contacts where the duration of an event is greater than, less than, or equal to a number of seconds you specify, select Silence Duration, Talk Over Duration, Pause Duration, or Hold Duration. **NOTE** The Silence Events and Silence Duration criteria only return contacts that have silence event markers in the Audio panel. They do not return contacts where the audio recording is silent for other reasons (for example, because the customer is on hold or because a pause/resume event has occurred).

Filter	Description
	For more information about speech energy events, see Listen to an audio contact and About silence and talk over events.
State	Filters contacts by the state of their evaluation form. Select one or more of the criteria.
Survey Name	Filters contacts by the name of their associated post-call survey.
Survey Scores	Filters contacts whose survey score is greater than, less than, or equal to the number you specify.
Text Search	Filters contacts based on the text in the contact. The text can appear in a call transcription or in the body of a text, email, chat, or SMS message. A preview of your search results appears in the Text Preview column. To see search results from transcripts, you need the View Speech to Text Analytics permission. By default, Webex WFO searches for words and phrases that are similar to the search terms you enter. To search for only the exact text of your search terms, select **Exact Match**. Exact Match overrides any language you select from the **Language** drop-down list and finds results across all languages. **EXAMPLE** You enter the word *manager* in the Text Search field and don't select Exact Match. Webex WFO finds contacts that include *manager* and also include words like *managed*, *managers*, *management*, and so on. You select Exact Match. Webex WFO finds only contacts that include *manager*. Besides a simple text search, you can perform more complex searches by writing queries. For more information about how to write search queries, see How Text Search syntax works. **NOTE** The Text Search filter is available for cloud deployments only.
Time Range	Filters contacts that were captured within the specified time range, regardless of date. If the start time is greater than the end time, the filter

Filter	Description
	applies to contacts over midnight. **NOTE** This filter always searches for contacts in the time zone of the capture source (for example, the Record Server or PC with Smart Desktop), even if the Display Contacts in User Time Zone check box is selected (see Configure QM global settings).
Time Zone	Filters contacts by the time zone of the capture source. **NOTE** This filter always searches for contacts in the time zone of the capture source (for example, the Record Server or PC with Smart Desktop), even if the Display Contacts in User Time Zone check box is selected (see Configure QM global settings).

When locating a customer conversation for evaluation, consider the following information:

- An agent must be associated with a team if you want the agent's contacts to be recorded.
- An agent who is currently not on a team can search and play back their own scored recordings (and all training recordings). The cell in the Team column associated with the selected customer conversation appears blank.
- If configured to, a user can search, play back, and score contacts for an agent who is not currently in a team or group. If the agent does not belong to a team or group, the cell in the Team or Group column associated with the selected customer recording appears blank.
- If configured to, a user can search, play back, and score contacts for an agent who belongs to a team supervised by that user, when the team does not belong to a group. A team must be associated with a group for quality management purposes.

Related topics

- Play contacts
- Delete or restore a contact
- Customize the columns on the Interactions page
- Export contacts in bulk

- Export contact metadata
- Create a contact

How Text Search syntax works

Search for words in contacts with the Text Search filter on the Interactions page. You can enter a basic search as if you were searching Google, but you can also write a query that uses standard syntax operators to make your search more precise.

Examples

The following examples demonstrate the type of queries you can use with the Text Search filter.

> **NOTE** Text searches do not look for the following words. These words are also not highlighted in the search results:
> a, an, and, are, as, at, be, but, by, for, if, in, into, is, it, no, not, of, on, or, such, that, the, their, then, there, these, they, this, to, was, will, with

Search for a single word

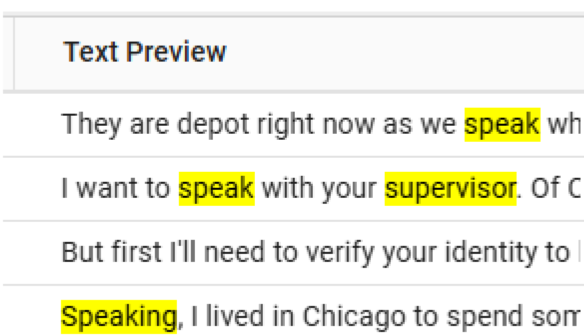
> **EXAMPLE** `supervisor`

The result is a list of all contacts that contain the word “supervisor” or “supervisors.”

Search for multiple words

> **EXAMPLE** `supervisor speak`

This search consists of two or more words with no operator between them and no quotation marks. The search performs as though an OR operator is present. The result is a list of contacts that contain the word “supervisor,” the word “speak,” or both of the words in no particular order.



Search for an exact phrase

EXAMPLE `“cancel my subscription”`

This search consists of two or more words in quotation marks with no operator between them. This search performs as though an AND operator is present. The result is a list of contacts that contain the words “cancel my subscription” in that exact order.

Text Preview
I want to speak with you you know what just cancel my subscription to kı
Know you just cancel my subscription seriously cancel my subscription...

Search for multiple exact phrases

EXAMPLE `“speak to your supervisor” “cancel my subscription”`

This search places quotation marks around two separate phrases. The result is a list of contacts that include either of these exact phrases.

Text Preview
I want to speak with you you know what just cancel my subscription to k
Know you just cancel my subscription seriously cancel my subscription.
I want to speak with your supervisor. Of course, it's necessary....I want to

Search with a single-character wildcard

EXAMPLE `te?t`

The question mark (?) wildcard character searches for a single character replacement. This search finds hits with “tent,” “test,” and “text.”

Text Preview
actually when Adrian was introduced that was two a standing ovation because we were all in a heated tent...
don't want if you can and they do that as well that's kinda like when you get the play, offs, but I'll tested...But
Okay, well that staving top names you lots of calls lot of texting name is on that subject....The waiver it said
Droid 540 tested....Detroit 540 times that that has no clue what they're doing without Aaron Rogers on a fee,

Search with a multiple-character wildcard

EXAMPLE `test*`

The asterisk (*) wildcard character searches for multiple characters. This search finds hits with "test," "tests," "tested," "tester," "testing," and even "testified."

Text Preview
Droid 540 tested....Detroit 540 times that that has no clue what they're doing without Aaron Rogers on a fee,
It was a test and I will do the motion of what what did you like about it....Great player and we're we're happy t
whether there is a real estate prospector security conviction that's the ultimate that as the primary test...Is th
Com is group of paid who try and ready kind of chop the legs of people that he got his Chris have testified...F

Proximity search

EXAMPLE `"speak supervisor"~2`

This proximity search looks for the words "speak" and "supervisor" within a maximum of two words. This example shows results that identify the two searched words, two words apart.

Text Preview
I want to speak with your supervisor.
Gonna speak with your supervisor. Of

BEST PRACTICE When writing a proximity search query, enter the search terms in the order you expect to find them in the transcript. If you're looking for phrases like "speak with your supervisor" ıd "speak to a supervisor," write the query as `"speak supervisor"~2`, not `"supervisor ɔeak"~2`. Proximity searches with randomly ordered search terms might give you unpredictable sults.

BEST PRACTICE Limit your proximity searches to a distance of two words. Proximity searches of `~3` or greater might give you unpredictable results.

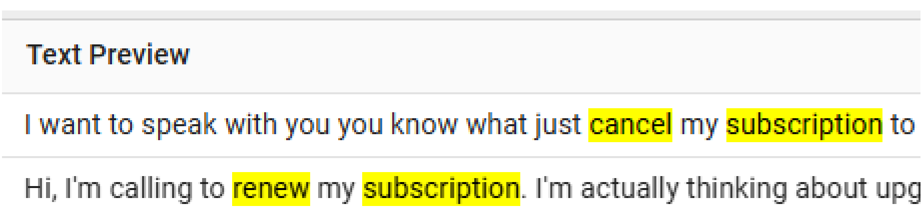
Exclude words

EXAMPLE `(cancel || renew)!subscription`

This search looks for contacts with the word "cancel" or the word "renew" but without the word "subscription."

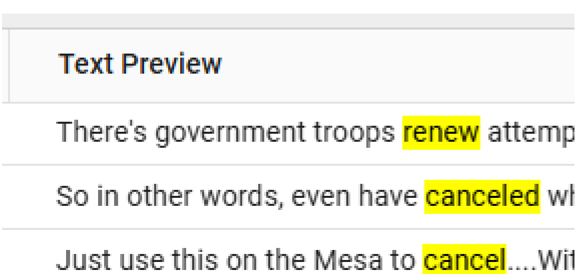
NOTE You cannot start a query with the ! (NOT) operator. The ! operator must follow a term in the query.

To demonstrate how NOT logic works, the image below shows the results of a query that includes the word "subscription" using AND logic (&&) instead of NOT logic, `(cancel || renew) && subscription`.



Text Preview
I want to speak with you you know what just cancel my subscription to
Hi, I'm calling to renew my subscription. I'm actually thinking about upg

If we change the AND logic back to NOT logic, `(cancel || renew)!subscription`, the search results show only contacts that have the word "cancel," "renew," or both, and the word "subscription" is not in the results.



Text Preview
There's government troops renew attemp
So in other words, even have canceled wl
Just use this on the Mesa to cancel....Wit

The following table defines each of the supported operators and provides short examples of how to use the operators to form a search query.

Operator	Definition	Sample Query	Query Explanation
~	Use this proximity operator to find words or phrases within a specific number of words. No space before or after this operator. AND logic is applied to all words within the quotation marks of a proximity search.	“speak supervisor”~2	The words “speak” and “supervisor” are searched within two words of each other, with “speak” before “supervisor.” The number 2 indicates the maximum number of words that can appear between “speak” and “supervisor.”
&&	Operates like a Boolean AND logic operator. Add a space before and after.	“cancel subscription”~2 && “renew subscription”~2	This query searches for occurrences of the words “cancel” and “subscription” within two words of each other, that are found along with occurrences of the words “renew” and “subscription” within two words of each other.
||	Operates like a Boolean OR logic operator. Use a space before and after. The OR logic is the default logic used when searching for two independent words.	speak supervisor “cancel subscription”~2 || “renew subscription”~2	The first example searches for either or both of the words “speak” or “supervisor.” The second example searches for occurrences of the words “cancel” and “subscription” within two words, or occurrences of the words “renew” and “subscription” within two words, or both word pairings.

Operator	Definition	Sample Query	Query Explanation
!	Operates like a Boolean NOT operator (performs a negative search). Do not add space before or after this operator. You cannot use this operator and accompanying term or phrase by itself. You must combine this operator with a positive search, where specific terms or phrases are located. The accompanying word that you enter becomes a stem word, and other variations of the word are detected.	(upgrade OR renew)!free hello!“thank call”~2	The search finds contacts that have the words “upgrade” or “renew” without the word “free” anywhere in the contact. The second example shows a search for the word “hello” with no occurrence of “thank” and “call” within two words of each other.
()	The parenthesis are used for grouping or nesting words.	(premium || gold) && (upgrade || renew)	The search is looking for any of the following combinations of two words: ▪ premium upgrade ▪ premium renew ▪ gold upgrade ▪ gold renew

Wildcards

You can modify query terms with single and multiple character wildcards within single terms (but not within phrases).

? (single character)	TE?T finds TEST and TEXT
* (multiple character)	TEST* finds TESTS, TESTER, TESTING, and TEST

IMPORTANT Wildcards might give you unexpected results if you put them into words that have suffixes. For example, “tests,” “tester,” and “testing” all add different suffixes to the same root: “test.” A search for “te*ting” might not find all occurrences of the words “texting” and “testing.” If you get unexpected results with wildcards, try removing the suffix and using just the root word instead.

NOTE You cannot use either wildcard symbol as the first character of a search.

Customize the columns on the Interactions page

The contacts table has columns with information about each contact. You can customize which columns you see and the order they appear on the page.

Prerequisites

- You have the View Contacts permission.
- You have recordings within your scope.
- Some columns require specific permissions. See Column descriptions for more information.
- Some columns require Webex WFO Analytics. See Column descriptions for more information.

Page location

Interactions

Procedures

Show or hide columns

1. Click the **List options** icon (top right of the page) and select **Show/Hide columns** from the drop-down list. The **Show/Hide columns** window opens.
2. To show a column, click the column’s name in the **Hidden columns** pane. To hide a column, click the column’s name in the **Shown columns** pane.
3. Click **Apply**. The **Show/Hide columns** window closes.

Rearrange columns

- Click and drag columns to rearrange them.

Column descriptions

The following tables describe all the columns that you can display in the contacts table. If the contact is recycled but not yet permanently deleted, all fields except for Contact ID display "######."

Organization

Column Name	Description
Agent ACD ID	The agent's ID in the ACD.
First Name	The agent's first name. **NOTE** If the First Name, Last Name, Group, and Team fields are blank, the recording is a root call. A root call is an unreconciled contact that appears as an archive contact. The call is assigned an agent when it is reconciled (see How root calls and reconciliation work).
Group Name	The name of the group.
Last Name	The agent's last name.
Team Name	The name of the team the agent belonged to at the time the contact was recorded.

Evaluation

Column Name	Description
Approved By	The person who approved the evaluation. This value appears if you are the evaluator or if you have the View Evaluator Details permission.
Calibrated	Whether the contact has been marked for calibration.
Date Evaluated	The date when the contact was evaluated. This value appears if you are the evaluator or if you have the View Evaluator Details permission. If you do not have this permission, this column displays #####. **NOTE** If you are looking for recordings evaluated on a specific day,

Evaluation (cont'd)

Column Name	Description
	you might also need to search the recordings for the previous day or the next day, depending on your time zone. To calculate the Date Evaluated, Webex WFO uses the Universal Time Coordinated (UTC) time plus or minus an offset value associated with your time zone. For example, March 24, 2022 2:00 AM UTC converts to March 23, 2022 9:00 PM Central Daylight Time (CDT). A call evaluated late in the evening in the CDT time zone on March 23, 2022 might be filtered as a call that was evaluated on March 24, 2022.
Date Responded	Date the agent responded to the evaluation. **NOTE** If you are looking for responses made on a specific day, you might also need to search the recordings for the previous day or the next day, depending on your time zone. To calculate the Date Responded, Webex WFO uses the Universal Time Coordinated (UTC) time plus or minus an offset value associated with your time zone. For example, March 24, 2022 2:00 AM UTC converts to March 23, 2022 9:00 PM Central Daylight Time (CDT). A response made late in the evening in the CDT time zone on March 23, 2022 might be filtered as a response made on March 24, 2022.
Evaluation Form	The evaluation or calibration form used to score the conversation.
Evaluation Response	The agent’s response to the evaluation: ■ Pending—Agent has not yet responded. ■ Acknowledged—Agent has acknowledged the evaluation. ■ Appealed—Agent has appealed the evaluation.
Evaluator Name	The evaluator or calibrator. This value appears if you are the evaluator or if you have the View Evaluator Details permission.
Score	The evaluation score given to the contact. **NOTE** Calibration scores do not appear in this field. For calibration scores, use the Evaluation Calibration.

Date

Column Name	Description
Date	The date on which the contact was captured. The format varies based on the language you select on either the login screen or the settings drop-down list.
Time	The start time of the contact in HH:MM. By default, Webex WFO displays this time in the time zone of the capture source (for example, the Record Server or the PC with Smart Desktop). If the Display Contacts in User Time Zone check box is selected on the QM Global Settings page, Webex WFO displays this time in the user's display time zone. See Configure QM global settings.
Time Zone	The time zone for the date and time fields. By default, Webex WFO uses the time zone of the capture source (for example, the Record Server or the PC with Smart Desktop). If the Display Contacts in User Time Zone check box is selected on the QM Global Settings page, Webex WFO uses the user's display time zone. See Configure QM global settings.

Contact

Column Name	Description
Associated Contact ID	The ID of a contact related to this contact.
Audio File Upload State	The status of the contact's audio file. Possible values for this column are as follows: ▪ Null/blank—There is no recording for this contact. ▪ File pending upload—Audio has been recorded but has not yet been uploaded. ▪ File is uploaded—Audio has been uploaded and can be played back. ▪ File is removed—Audio has been recorded, but the recording has been

Contact (cont'd)

Column Name	Description
	removed. ■ File is invalid—The recording file is invalid and cannot be played back. ■ File is recycled—The audio file is marked to be removed but is still recoverable. **NOTE** This column is not sortable.
Called Number	The direct inward dialing (DID) or Dialed Number Identification Service (DNIS) number of the phone that received the call. Displays “unknown” if the called number is unlisted or blocked. This field applies only to calls.
Calling Number	The caller ID or Automatic Number Identification (ANI) of the calling party. Displays “unknown” if the calling number is unlisted or blocked. This field applies only to calls.
Channel	The channel where the interaction occurred. This column appears if your organization uses a supported integration for social media contacts. The possible values for this field vary based on the types of social media your organization uses.
Contact Duration	The length of time between the call being answered and the call ending, including ring time and extended screen time (if any) in HH:MM:SS. This information comes from the signaling service. This field applies only to calls. The call duration shown in the contacts table might not be the same as the duration shown in the Media Player because “event duration” (the time between events) and “recording duration” (the duration within the actual recorded file) can be different. These scenarios cause the call duration to be different: ■ If you use the Recording Controls API to pause, resume, or restart

Contact (cont'd)

Column Name	Description
	recording, the recording duration is shorter than the actual call duration. For example, if recording is paused for one minute, the recording duration is one minute shorter than the call duration. ■ If you archive or clean a call with a long ring time, the contacts table shows the event duration, and the Media Player shows the recording duration.
Contact ID	The conversation's unique ID.
Contact Type	Possible values for this column are: ■ Call—A contact with a call recording. ■ Chat—A written contact that happened within your organization's chat program. This can be with a human agent or with a chat bot. ■ E-mail—An email contact without call recording. This contact type appears only when your organization uses both Quality Management and Analytics. ■ Non-Call—A contact without a call recording that someone created by clicking Create Contact on the Interactions page. ■ Screen Only—A screen recording contact without call recording. ■ SMS—A written contact that happened within your organization's text-messaging program. ■ Text—Depending on how your organization imports written contacts into Webex WFO, this could include emails, chat messages, or other text contacts.
Daily Workflow	The name of the Daily Workflow associated with this contact (see Automate QM workflows).
Direction	The direction of the contact: inbound or outbound.
End of Interaction Workflow	The name of the End of Interaction workflow associated with this contact (see Automate QM workflows).

Contact (cont'd)

Column Name	Description
External Parties	(Chat and SMS contacts only) The email, phone number, or other identifier of the person who interacted with the agent.
From Address	(Email contacts only) The email addresses in the From field. This column is available only with Analytics.
HR	Whether the contact has been marked as an HR contact.
Interaction Preview	A link that opens a window with information about the contact, the agent, and (if you have used the Text Search filter) a preview of the contact's text. If your organization has Cisco Interaction Summary, the window contains a summary of the contact.
Reason	The reason the conversation was recorded. This reason is set in the recording rule (see Automate QM workflows).
Recording Type	The recording type associated with this device.
Retention Policy	The policy that governs how long Webex WFO will retain this contact (see Manage data retention policies for QM and Analytics).
State	The state of the contact's evaluation form. Possible values for this column are: ▪ Scored—Contacts that are claimed by an evaluator, fully scored, and approved (if approval is required). ▪ Unscored—Contacts that are currently unclaimed by an evaluator and unscored. ▪ In Progress—Contacts that are claimed by an evaluator but are not yet completely scored. ▪ Cannot Score—Contacts that are claimed by an evaluator but cannot be scored. Evaluations with this state are not included in reporting or performance metrics. ▪ Needs Approval—Contacts that are claimed by an evaluator, fully scored, and awaiting approval.

Contact (cont'd)

Column Name	Description
	■ Needs Cannot Score Approval—Contacts that are claimed by an evaluator, cannot be scored, and are awaiting approval for the evaluator's inability to score.
Subject	(Non-call contacts only) The email addresses in the To field. This column is available only with Analytics.
Survey Name	The contact's post-call survey form.
Survey Score	The contact's completed survey score.
Text Preview	A preview of search results for your search with the Text Search filter.
To Address	(Non-call contacts only) The email addresses in the To field. This column is available only with Analytics.
Training	Whether the contact has been marked as a training contact.
Video File Upload State	The status of the contact's video file. Possible values for these columns are as follows: ■ Null/blank—There is no recording for this contact. ■ File pending upload—Video has been recorded but has not yet been uploaded. ■ File is uploaded—Video has been uploaded and can be played back. ■ File is removed—Video has been recorded, but the recording has been removed. ■ File is invalid—The recording file is invalid and cannot be played back. ■ File is recycled—The video file is marked to be removed but is still recoverable. **NOTE** These columns are not sortable.

Speech fields

Column Name	Description
% Hold	The percentage of the call spent in a hold state.
% Pause	The percentage of the call spent in a pause state.
% Silence	The percentage of the call spent in a silence state (during which neither the caller nor the agent is speaking).
% Talk Over	The percentage of the call spent in a talk over state (during which both the caller and the agent are speaking).
AVG Hold Duration	The average hold time in HH:MM:SS.
AVG Pause Duration	The average pause time in HH:MM:SS.
AVG Silence	The average duration of silence events in HH:MM:SS.
AVG Talk Over	The average talk over time in HH:MM:SS.
Hold Events	Number of detected hold events.
MAX Hold Duration	The duration of the longest hold event in HH:MM:SS.
MAX Pause Duration	The duration of the longest pause event in HH:MM:SS.
MAX Silence	The duration of the longest silence event in HH:MM:SS.
MAX Talk Over	The duration of the longest talk over event in HH:MM:SS.
MIN Hold Duration	The duration of the shortest hold event in HH:MM:SS.
MIN Pause Duration	The duration of the shortest pause event in HH:MM:SS.
MIN Silence	The duration of the shortest silence event in HH:MM:SS.
MIN Talk Over	The duration of the shortest talk over event in HH:MM:SS.
Pause Events	The number of detected pause events.

Speech fields (cont'd)

Column Name	Description
Silence Events	The number of detected silence events.
Talk Over Events	The number of detected talk over events.
Total Hold Duration	The total duration of hold time in HH:MM:SS.
Total Pause Duration	The total duration of pause time in HH:MM:SS.
Total Silence Duration	The total duration of silence time in HH:MM:SS.
Total Talk Over Duration	The total duration of talk over time in HH:MM:SS.

Analytics

Column Name	Description
Predictive Evaluation Score	The predicted evaluation score of an unscored contact. Webex WFO bases this predicted score on Analytics data (including call and agent attributes, speech hits, and desktop activity) and previous evaluation scores.
Predictive Net Promoter Score	The predicted net promoter score for the contact.
Sentiment	The overall emotional tone of the contact. Possible values are Positive, Neutral, and Negative.

Custom metadata

Column Name	Description
Variable text	The custom metadata available in Webex WFO varies by the configuration of your ACD and the Metadata Manager page. You can edit the values in custom metadata fields. See Edit custom metadata associated with a contact.

Related topics

- How root calls and reconciliation work
- Automate QM workflows
- Configure QM global settings
- Edit custom metadata associated with a contact
- Delete or update multiple contacts at once

Delete or restore a contact

This topic explains how to delete or restore recorded contacts.

Prerequisites

- You have a role and scope that allow you to view recordings.
- You have the View Recycle Bin and Delete Contact permissions.

Page location

Interactions

Procedures

Delete a contact

This procedure moves a contact to the Recycle Bin. You can delete one contact at a time.

1. Select the contact by clicking its check box on the left side of the Interactions page.
2. Click **Delete** (top right of the page). A confirmation dialog box opens.
3. Click **Delete**. The confirmation dialog box closes.

Restore a contact

This procedure moves a contact from the Recycle Bin back to the Interactions page. You can restore one contact at a time.

1. Click **Filter list** (top left of the page). The **Filters** panel opens.
2. If the **Search Scope** filter is not listed in the panel, click **Add Filter**. The **Choose Filters** window opens. (If Search Scope is listed, skip to step 5.)
3. In the **Available** column, click **Search Scope**.
4. Click **Update Filters**. The **Choose Filters** window closes.
5. Click **Search Scope** and select **Recycle Bin Contacts** from the drop-down list.
6. Click **Apply**. Contacts in the Recycle Bin display.
7. Select the contact by clicking its check box on the left side of the page.
8. Click **Restore** (top right of the page).

Permanently delete a contact

You can permanently delete one contact at a time.

IMPORTANT You cannot restore a permanently deleted contact.

1. Locate the contact in the Recycle Bin (see steps 1–6 under Restore a contact for how to access the Recycle Bin).
2. Select the contact by clicking its check box on the left side of the page.
3. Click **Permanently delete** (top right of the page). A confirmation dialog box opens.
4. Click **Delete**. The dialog box closes.

Related topics

- Find contacts—Learn more about filtering contacts.
- Automate QM workflows—Learn how to automatically send recordings to the Recycle Bin instead of moving them manually.

Play contacts

Prerequisites

- You have the View Contacts permission.
- Some panels in the Media Player require additional permissions, data, or Webex WFO features. See the topics listed in the "Related topics" section below for more information.

Page location

Interactions > Double-click a contact

You can also open the Media Player by clicking a contact in one of these locations:

- The Agent Explorer page
- In the Details pane of an Analytics widget
- In Data Explorer

> **NOTE**
> If you try to open a contact that is stored in Amazon Glacier, a window opens asking you to restore the media files required to play the recording.
>
> - To retrieve the contact, click **Restore**.
> - To dismiss the window without restoring the contact, click **OK**.

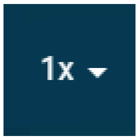
Procedures

Play a contact

Click **Play**.

Play the contact faster or slower

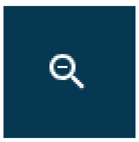
Select a speed from the Playback Speed drop-down.



Zoom in on a contact

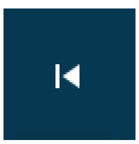
Click the Zoom In icon to see more detail in the Audio, Sentiment, Phrase Hits, and Desktop panels.

Click the Zoom Out icon to return to the original level of detail.



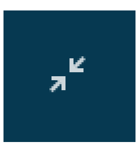
View associated contacts

Click the Next and Previous icons to move to contacts related to the one currently open.

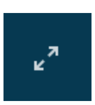
 

Shrink the Media Player

Click the Compact View icon to make the Media Player smaller and reveal the Interactions page.



Click the Full View icon to return to the full-size Media Player.



View information about the agent who handled the contact

Click **Profile Card**.

This card lists the agent’s roles, group, team, skill mappings, and the following statistics:

- Net Reputation Score—A number that quantifies how positively or negatively the agent affected your contact center in the last 30 days. Scores range from 1.00 to −1.00, with 1.00 being the most positive and −1.00 being the most negative. Webex WFO calculates this score according to the following formula:

  $$(A \div C) - (B \div C) = \text{Net Reputation Score}$$

  Where

  A = The number of the agent’s contacts in the last 30 days with a positive sentiment score
  B = The number of the agent’s contacts in the last 30 days with a negative sentiment score
  C = The number of the agent’s contacts in the last 30 days with any sentiment score: positive, negative, or neutral

- Average Predictive NPS—The agent’s average predictive net promoter score (NPS) over the past 30 days. Webex WFO calculates this average according to the following formula:

  $$A \div B = \text{Average Predictive NPS}$$

  Where

  A = Total of all predictive NPS scores given to the agent’s contacts in the last 30 days
  B = The number of the agent’s contacts in the last 30 days with a predictive NPS score

- Completed Customer contacts—How many contacts the agent handled in the last 30 days.

  > **NOTE** This number might not match the number of contacts you see for the agent on the Interactions page. It includes contacts that have not been uploaded, have been recycled or deleted, and so on, which do not appear on the Interactions page.

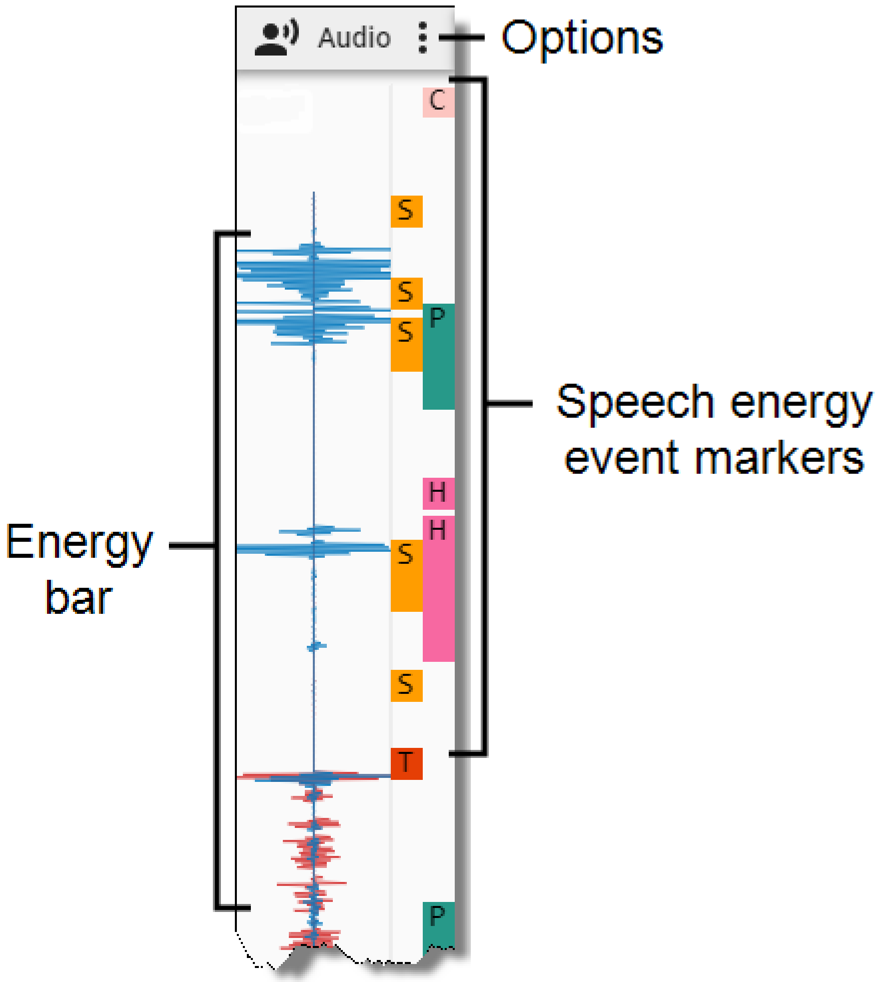
Net Reputation Score and Average Predictive NPS require the View Analytics Data for Contacts permission and advanced analytics features. Skill Mappings appear if the agent is associated with at least one skill mapping.

Related topics

- Listen to an audio contact
- Watch the screen capture of a contact
- Skip forward and back in a recording
- View agent actions for a contact
- View data associated with a contact
- Read an email contact
- Read a text contact
- Read the summary of a contact
- Read the transcription of an audio recording
- View phrase analytics for a contact
- View the sentiment for a contact
- Mark contacts for training or HR
-

Listen to an audio contact

The Audio panel in the Media Player visualizes the audio recording.



Prerequisites

- Your organization has the QM, CR, and Webex WFO Access licenses.
- You have the View Contacts permission.
- The contact's Contact Type is "Call," and its Contact Content includes "Has Voice."

Page location

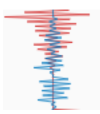
Interactions > Double-click a contact > Audio panel

View speech activity

The energy bar shows where audio activity (the agent and customer speaking) occurred throughout the contact. You can drag the timeline slider to a place where the energy interests you and listen to that portion of the audio.

> **NOTE** If an agent's screen activity was recorded before a call started or after a call ended (for example, because of a Screen Recording Extension configuration), the energy bar is blank during that portion of the recording.

The color of the audio streams depends on the type of recording.

Energy Bar	Recording Type	Description
	Stereo	The inbound audio stream is blue. The outbound stream is red.
	Mono	The audio stream is red.

View events

Speech energy event markers label where Webex WFO detects significant audio events, such as where both the agent and the customer spoke at the same time.

Click an event marker to move the timeline slider to it, or hover over an event marker to see further details.

The following table describes all event markers.

Icon	Type	Description
C	Comment	Someone commented on the evaluation while playing the contact. **NOTE** Comments left on evaluation forms that are in calibration mode do not appear as event markers.
H	Hold	The agent placed the call on hold.

Icon	Type	Description
P	Pause	The recording was paused because the agent did something that told Webex WFO to stop recording (see Identify websites and apps to be tracked by Analytics).
S	Silence	Neither the agent nor the customer was speaking (see About silence and talk over events). **NOTE** Brief background noises might appear as audio energy, but Webex WFO still considers those silence.
T	Talk over	Both the agent and the customer were speaking at the same time (see About silence and talk over events).

Filter events

Click the Options icon to select the types of events that appear.

Related topics

- Play contacts
- About silence and talk over events—Learn more about how Webex WFO identifies silence and talk over.
- Identify websites and apps to be tracked by Analytics—Specify agent actions that tell Webex WFO to pause and resume recording.
- Configure QM global settings—Establish how long silence or talk over must happen for Webex WFO to mark it as an event.

About silence and talk over events

A recorded call contains two streams of audio that represent the two sides of a call. In the Media Player, the Audio panel displays the inbound stream in blue and the outbound stream in red. In a normal conversation, the energy alternates between the outbound call and the inbound call.

When the inbound call and the outbound call spike simultaneously, that is a talk over event. The Audio panel displays a talk over icon in the energy bar where a talk over event occurs. When both parties are silent during a call, that is a silence event. During a silence event, the line in the energy bar is flat. The Audio panel displays a Silence icon in the energy bar where a Silence event occurs.

Normally, each stream contains the voice of a single person: either the agent or the customer. Occasionally, a stream includes multiple voices. For example, a conference call contains the agent stream where you hear the agent's voice and a second stream where you hear the voices of all other parties in the conference call.

Calls can include non-speech noises (for example, wind, typing, background conversions, or barking dogs). Webex WFO processes these noises in addition to speech when searching for silence and talk over events in a call. Brief background noises might display as audio energy, but Webex WFO still considers those silence.

Webex WFO uses a Voice Activity Detection (VAD) module to classify audio as silence or speech. VAD is designed to analyze phone calls where you expect to hear two or more people talking to each other. VAD analyzes separate blocks of audio data and calculates an average sound volume for each block. The blocks are called frames. (A frame size is measured in milliseconds of audio. VAD uses the same frame size when processing all audio in a file.) VAD uses its decision threshold to determine if each frame indicates silence or speech. If the average volume for the frame falls below the VAD decision threshold, it marks the frame as mutual silence. VAD processes each frame of each stream, compares the frames from stream 1 and stream 2, and assigns an audio type to each pair of frames. The audio types are as follows:

- Mutual Silence (MS)—Both frames are silent.
- Normal (N)—One frame contains speech, and the other frame is silent. This indicates normal conversation.
- Talk Over (TO)—Both frames contain speech.

VAD uses a heuristic algorithm that adapts based on the quality of the audio data. In a noisy environment, the VAD decision threshold rises to mark only the loudest noises as speech. Otherwise, the entire phone conversation would be marked as constant speech, even if the noise is caused by a car engine or another form of non-speech background noise. In a quiet environment where the person is not speaking loudly, the VAD decision threshold falls so that it can correctly identify speech at a low volume. This allows the entire call to be marked as normal speech instead of silence.

This adaptability allows VAD to be more accurate when detecting speech or silence, but it is not always 100% accurate. Because VAD uses average sound volume to tell the difference between speech and silence, there will always be instances where it incorrectly identifies normal speech or mutual silence in a frame of audio. When background noise levels change, VAD needs a few seconds to adapt. During this time, it might mark audio as normal speech when no one is speaking, or it might mark mutual silence when someone is speaking. During mutual silence, for example, a sudden noise like typing on the keyboard or coughing might be loud enough to cause VAD to identify a frame as talking even though no one is speaking. Essentially, VAD does not know the difference between human speech and the sound of a car engine.

It is also possible that VAD might not identify a talk over or silence event. For example, it might miss a talk over event even when two people are clearly talking to each other on a call at the same time. If one of the speakers during the talk over event pauses to think or take a breath for at least a quarter of a second, VAD could mark the frame as an instance of silence. From the speaker's perspective, they were constantly talking; you would expect VAD to indicate a talk over event. From VAD's perspective, however, there was a period of silence during the conversation, so it cannot be considered a talk over event.

On the Application Management > QM > QM Configuration > Global Settings page, you can establish the minimum duration of silence or talk over to be considered an event. For each event, Webex WFO saves the type (silence or talk over), the duration of the event in milliseconds, and the start of the event as an offset from the beginning of the audio.

Watch the screen capture of a contact

The Screen Capture panel provides a comprehensive view of the agent's actions throughout a contact. You can replay programs the agent opened, buttons the agent clicked, and text the agent typed.

Contact Type: Call, Screen Only

Contact Content: Has Screen

Licenses Required: QM, Webex WFO Access

Permissions Required: View Contacts

The Screen Capture panel can display recordings of both single- and multiple-monitor setups. With recordings of multiple-monitor setups, the panel displays one monitor at a time. To display a different monitor, hover over the panel and click the monitor you want.

You can display the Screen Capture panel in the Media Player or in a separate browser window.

- To open the panel in a separate browser window, click the Undock icon.
- To return the panel to the Media Player, click the Dock icon or close the browser window.

> **NOTE** You cannot undock panels if you are using a pop-up blocker. To undock panels, disable your pop-up blocker.

The screen size for screen recording playback is 1920 × 1088. If the total screen size for the screen recording is larger than 1920 × 1088, it will be reduced to appear in the Screen Capture panel. If you undock the panel and resize the browser window, the screen recording resizes accordingly. Multi-monitor recordings are at least twice the size of single-monitor recordings.

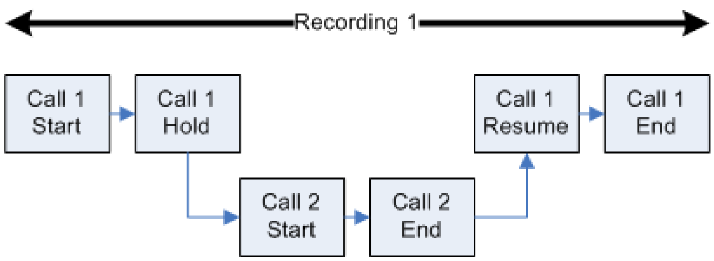
Examples of contact scenarios

The following topics describes how agents handle two call simultaneously, blind call transfers, and conference calls.

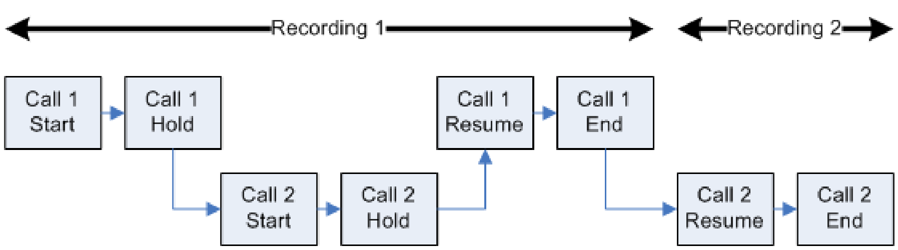
Bracketed and interleaved call recordings

When an agent or knowledge worker handles two calls simultaneously by putting one on hold and switching between them, the result can be one or two recordings, depending on whether the calls are bracketed or interleaved.

In the following figure, Recording 1 is created for Call 1. It also contains the entire audio from Call 2. Call 2 is bracketed within Call 1.



In the following figure, Recording 1 is created for Call 1. It also contains the portion of audio from Call 2 during the time in which both calls are active. Recording 2 is created for Call 2 after Call 1 ends. Recording 2 only contains the portion of audio from Call 2 beginning after Call 1 ends. Call 1 is interleaved with Call 2. The duration reported for Call 2 is from the time that Call 2 starts until the time that Call 2 ends. However, the actual duration of Recording 2 is from the time Call 1 ends until the time Call 2 ends.



Using the Associated Contacts tab on the Media Player pane, you can play any segment of a call between the time that it enters the contact center and when it is terminated. Clicking Associated Contacts enables you to see every call segment associated with a call. See Playing All Segments of a Call for more information on associated contacts.

Blind transfer

A blind transfer occurs in the following circumstances:

- A call is routed to a third party
- The original call is ended, and no check is made to determine whether the transferred call is answered
- The third party phone number is busy

> **EXAMPLE** The recording for the first agent stops when the agent transfers the call. The recording continues when the second agent answers the transferred call. If the second agent does not answer the call, the recording ends when the first agent transfers the call.

Conference calls

Conference calls are handled differently than solo calls in the Media Recorder. This topic describes conference calls.

Supervised conference

A supervised conference call occurs when an agent adds a third party to the call. The agent can choose to add the third party to the call without first speaking to the third party or to speak to the third party before actually completing the conference call.

> **EXAMPLE** The caller is placed on hold when the first agent initiates a conference call to the second agent. While the caller is on hold, the discussion between the two agents is recorded. When the caller is added to the conference, the call continues to be recorded. The recording for the first agent stops when the agent hangs up, and the call between the second agent and the caller continues recording.

Hold with call on second line

A hold with a call on a second line occurs when an agent places the caller on hold while talking to a third party on a second line.

> **EXAMPLE** The QM8 user places the caller on hold. A flat line represents the hold in the energy bar for Contact ID 1344. While on hold, the QM8 user picks up a second line and calls QM1 user at 2471827118. The call on the second line does not appear in the associated contacts for Contact ID 1344 because it is a separate call.

Skip forward and back in a recording

The Timeline panel allows you to control the playback of an audio or screen recording.

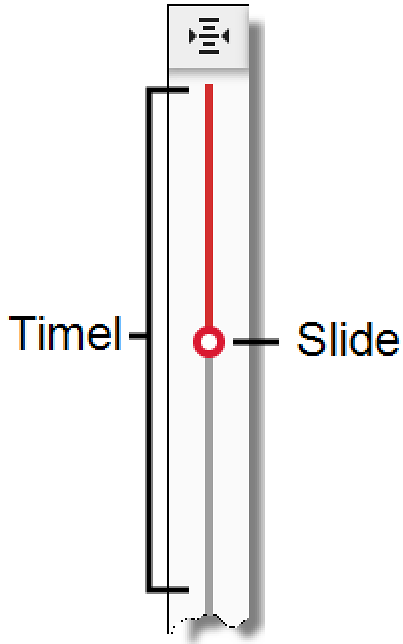
Contact Type: Call, Screen Only

Contact Content: Has Voice, Has Screen

Licenses Required: CR, QM, Webex WFO Access

Permissions: View Contacts

Drag the slider in the timeline to move forward or backward to specific points in the recording.



A red progress line in the energy bar lines up with the slider as the recording plays. This allows you to see how the recording matches the data in any of the following panels that are available to you:

- Audio
- Sentiment
- Phrase Hits
- Desktop

View agent actions for a contact

The Desktop panel summarizes the actions that agents took on their phones and computers. This allows you to identify and analyze decisions that affected their handling of the contact.

> **NOTE** Because of the way desktop data is processed, this panel does not show information if your organization integrates with Cisco Webex Contact Center.

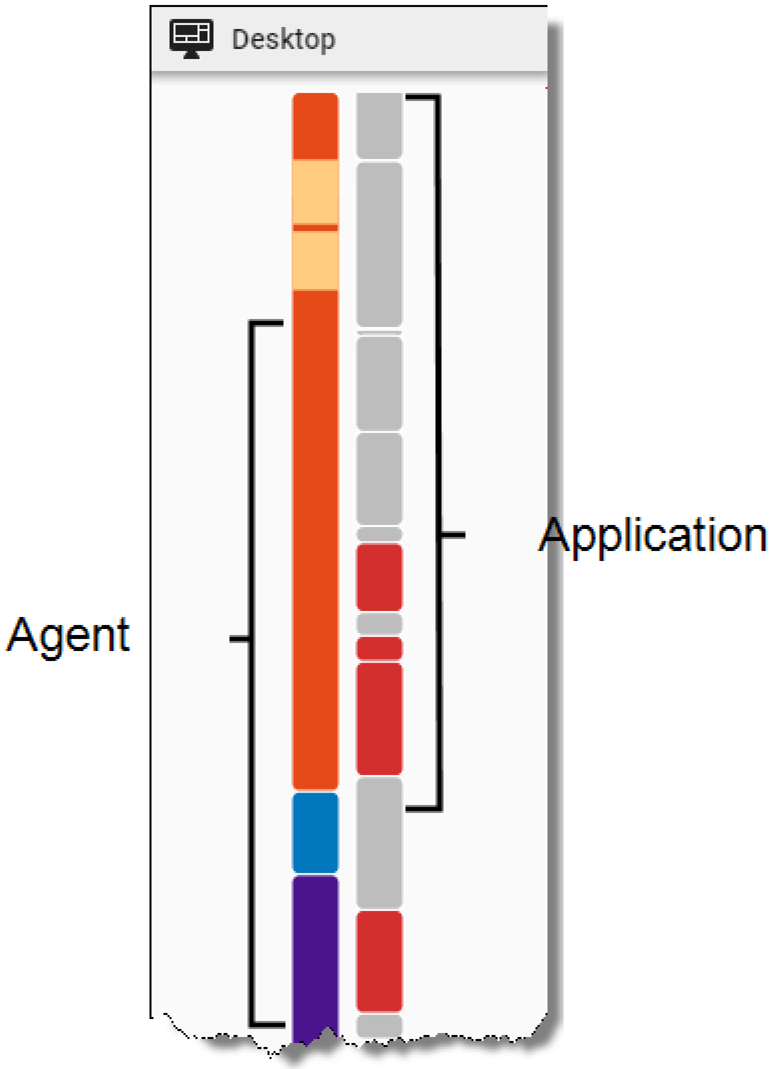
Contact Type: Call, Screen Only

Contact Content: Has Voice, Has Screen

Licenses Required: Webex WFO Access

Permissions Required: View Contacts, View Desktop Analytics

The panel contains the agent contact bar and the application usage bar.



Agent contact bar

The agent contact bar divides the contact into color-coded segments by the duration of each agent contact. Yellow bands indicate the duration of any desktop events that occurred during each state.

You can click an event or state to move the timeline slider to it, or you can hover over an event or state to see a tooltip that contains further details.

The following table describes the colors of the segments in the agent contact bar.

Color	State Type	Description
	Active	The agent was talking with the customer.
	On Hold	The agent put the customer on hold.
	After Call Work	The agent was disconnected from the customer, but completing work related to the contact.
	Event	The agent triggered a desktop event. Desktop events are moments where Webex WFO intervenes in a recording when an agent performs a predefined task in an application or website. For example, an administrator can configure Webex WFO to pause recording when an agent clicks a specific field (see Configure desktop item events).

Application usage bar

The application usage bar divides the contact into segments by the applications and websites that the agent accessed throughout.

NOTE The application usage bar shows only applications and websites that were active and in focus during the contact.

You can click an application segment to move the timeline slider to it, or hover over an application to see a tooltip that contains further details. If you click the Zoom In icon on the Media Player toolbar, the panel also displays the name of each application or website.

Applications are color-coded by their approval status (see Add a New Desktop Item).

Color	Status	Description
	Approved, Ignore, or New	The agent used an application that they are allowed to, that does not yet have an approval status, or that is ignored.
	Not Approved	The agent used an application that they are not allowed to.

Related topics

- Monitor agents' focus and activity—View the apps and websites an agent used on a specific date, including when they were not on a call

View data associated with a contact

The Details panel in the Media Player enables you to explore several categories of data associated with the contact. The sections available depend on your role, the contact type and contents, and the features enabled in Webex WFO.

Prerequisites

- Your organization has a QM or CR license
- You have the View Contacts permission

Page location

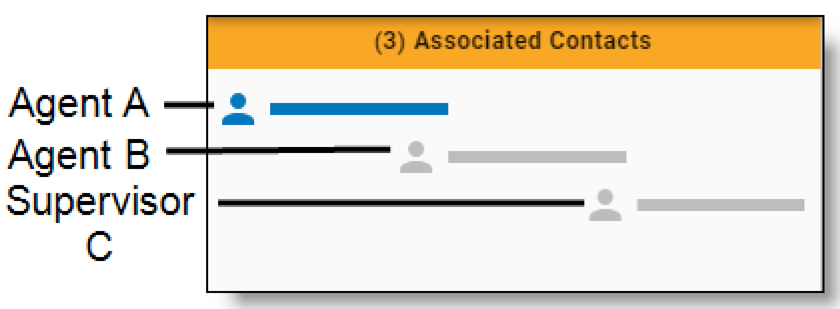
Interactions > Double-click a contact > Details panel

Associated Contacts

When multiple agents handle the same customer call (for example, when one agent transfers the call to another), Webex WFO creates a separate contact for each agent involved and gives these contacts the same associated contact ID. The Associated Contacts section displays such contacts, allowing you to see all segments of a call, from when it enters the contact center to when it ends.

EXAMPLE

A customer calls Agent A. Agent A transfers the customer to Agent B, and Agent B transfers the customer to Supervisor C. Webex WFO creates three separate contacts and gives them the same associated contact ID.



For further examples, see Watch the screen capture of a contact.

Webex WFO orders associated contacts chronologically and highlights the currently-loaded contact in blue. To load an associated contact, do either of the following:

- Click the associated contact that you want to load.
- Click the Previous or Next button in the Media Player (see Play contacts).

You can also hover over an associated contact to see a tooltip that contains further details.

NOTE Associated contacts might not align correctly. For example, the system clock time on each PC with Smart Desktop can vary if the desktops are not syncing to the same time server. The system clock time can also vary on each PC between syncs to the same time server.

NOTE
You might not be able to play back some associated contacts. This is due to various reasons:

- They were deleted.
- They did not meet workflow criteria.
- They were under the minimum length.

With this type of contact, the energy bar associated with the contact is empty, and the recording is unavailable. You cannot listen to those segments of the call, but you can view them so you can follow how the call moved through the contact center. When you use the Next and Previous buttons to move through the list of contacts, the Media Player automatically skips contacts you cannot listen to.

NOTE You can only play back associated contacts that are within your scope. An error message appears for calls that are out of your scope.

Contact Information

The Contact Information section displays contact data. The data shown depends on the type of contact. Information for calls is different than information for emails, for example.

The following tables describe all possible contact data that can appear in the Contact Information section of the Details panel. Each table orders contact data alphabetically.

Contact

Contact Data	Description
Audio File Upload State	The status of the contact's audio file. Possible values for this field are as follows: ■ Null/blank—There is no recording for this contact. ■ File pending upload—Audio has been recorded but has not yet been uploaded. ■ File is uploaded—Audio has been uploaded and can be played back. ■ File is removed—Audio has been recorded, but the recording has been removed. ■ File is invalid—The recording file is invalid and cannot be played back. ■ File is recycled—The audio file is marked to be removed but is still recoverable.
Called Number	The direct inward dialing (DID) or Dialed Number Identification Service (DNIS) number of the phone that received the call. Displays "unknown" if the called number is unlisted or blocked. This field applies only to calls.
Calling Number	The caller ID or Automatic Number Identification (ANI) of the calling party. Displays "unknown" if the calling number is unlisted or blocked. This field applies only to calls.
Channel	The channel where the interaction occurred. This field appears if your organization uses a supported integration for social media contacts. The possible values for this field vary based on the types of social media your organization uses.
Contact Direction	The direction of the contact: inbound or outbound.
Contact Duration	The length of time between the call being answered and the call

Contact Data	Description
	being dropped, including ring time and extended screen time (if any) in HH:MM:SS. The call duration is received from the signaling service. The call duration shown in the contacts table and the Media Player might not be the same due to the difference in "event duration" (the time between events) and "recording duration" (the duration within the actual recorded file). In these scenarios, the call duration would be different: ▪ When you use the Recording Controls API to pause, resume, or restart recording, the recording duration would be shorter than the actual call duration. For example, if a recording is restarted one minute into the call, the call duration would be one minute longer than the recording duration. ▪ When you archive or clean a call with a long ring time, the contacts table shows the event duration in the call duration field, while the Media Player shows the recording duration in the call duration field. This field applies only to calls.
Contact ID	The conversation's unique ID.
Contact Type	The contact type. The possible values for this field are: ▪ Call—A contact with a call recording. ▪ Chat—A written contact that happened within your organization's chat program. This can be with a human agent or with a chat bot. ▪ E-mail—An email contact without call recording. This contact type appears only when your organization uses both Quality Management and Analytics. ▪ Non-Call—A contact without a call recording that someone created by clicking Create Contact on the Interactions page.

Contact Data	Description
	■ Screen Only—A screen recording contact without call recording. ■ SMS—A written contact that happened within your organization's text-messaging program. ■ Text—Depending on how your organization imports written contacts into Webex WFO, this could include emails, chat messages, or other text contacts.
Daily Workflow	The name of the Daily Workflow associated with this contact (see Automate QM workflows).
End of Interaction Workflow	The name of the End of Interaction workflow associated with this contact.
External Parties	(Chat and SMS contacts only) The phone number, email address, or other identifier of the person who interacted with the agent.
From Address	(Email contacts only) The email addresses in the From field. This option is available only when Analytics is enabled.
HR	Indicates if the contact has been marked as an HR contact.
Reason	The reason the conversation was recorded. This reason is set in the recording rule (see View data associated with a contact).
Recording Type	The recording type associated with this device.
State	The current evaluation state of the contact. The possible values for this field are: ■ Scored—Contacts that are claimed by an evaluator, fully scored, and approved (if approval is required). ■ Unscored—Contacts that are unclaimed by an evaluator and unscored. ■ In Progress—Contacts that are claimed by an evaluator but which are not yet completely scored.

Contact Data	Description
	■ Cannot Score—Contacts that are claimed by an evaluator but cannot be scored. Evaluations with this state are not included in reporting or performance metrics. ■ Needs Approval—Contacts that are claimed by an evaluator, are fully scored, and are awaiting approval. ■ Needs Cannot Score Approval—Contacts that are claimed by an evaluator, cannot be scored, and are awaiting approval for the evaluator's inability to score.
Subject	Filters email associated with non-call contacts based on the email addresses in the To field. This option is available only when Analytics is enabled.
Survey Name	The name of a survey.
Survey Score	The score of a completed survey.
To Address	Filters email associated with non-call contacts based on the email addresses in the To field. This option is available only when Analytics is enabled.
Training	Indicates if the contact has been marked as a training contact.
Video File Upload State	The status of the video or audio file. Possible values for this field are: ■ Null/blank—There is no recording for this contact. ■ File pending upload—Video has been recorded but has not yet been uploaded. ■ File is uploaded—Video has been uploaded and can be played back. ■ File is removed—Video has been recorded, but the recording has been removed. ■ File is invalid—The recording file is invalid and cannot be played

Contact Data	Description
	back. ■ File is recycled—The video file is marked to be removed but is still recoverable.

Organization

Contact Data	Description
Agent ACD ID	The ID of the agent in the ACD.
First Name	The agent's first name. **NOTE** If the First Name, Last Name, Group and Team fields are blank, the recording is a root call. A root call is an unreconciled contact that appears as an QM archive contact. Once reconciled, the call is assigned a user (see How root calls and reconciliation work).
Group	The name of the group.
Last Name	The agent's last name.
Team	The name of the team the agent belonged to at the time the contact was recorded.

Evaluation

Contact Data	Description
Approved By	The name of the person who approved the evaluation. You can see this information if one of these is true: ■ You are the evaluator. ■ You have the View Evaluator Details permission. ■ You have the Edit Any Evaluation permission.

Contact Data	Description
Calibrated	Indicates if the contact has been marked for calibration.
Date Evaluated	The date when the contact was evaluated. This value appears if you are the evaluator or when the View Evaluator Details permission is enabled. If this permission is not enabled, the value ##### is displayed. **NOTE** The date and time used to calculate the Date Evaluated value is calculated using the Universal Time Coordinated (UTC) time plus or minus an offset value associated with your time zone. For example, 09/22/2019 2:00 AM UTC converts to 09/21/2019 9:00 PM Central Daylight Time (CDT). The Date Evaluated filter uses the UTC time of when the call is evaluated. That means, depending on your time zone, a call recorded on late in the evening in the CDT time zone on 09/21/2019 is filtered as a call that was recorded on 09/22/2019. If you search the recordings that occurred on 09/21/2019 using the Date Evaluated filter, you may also need to search the recordings for the previous or next day, depending on your time zone.
Date Responded	Date the agent responded to the evaluation.
Evaluation Form	The name of the evaluation or calibration form used to score the customer conversation.
Evaluation Response	Indicates the response status for the contact: ▪ Pending—The agent's response to the scored evaluation is required but has not yet been made. ▪ Acknowledged—The agent has acknowledged the scored response. ▪ Appealed—The agent has appealed the scored evaluation.
Evaluator Name	The name of the evaluator or calibrator. You can see this information if one of these is true:

Contact Data	Description
	■ You are the evaluator or calibrator. ■ You have the View Evaluator Details permission. ■ You have the Edit Any Evaluation permission.
Score	The evaluation score given to the contact. **NOTE** Calibration scores do not appear in this field. For calibration scores, use the Evaluation Calibration.

Speech, Speech Fields (Contacts Table)

Contact Data	Description
% Hold	The percentage of the call spent in a hold state.
% Pause	The percentage of the call spent in a pause state.
% Silence	The percentage of the call spent in a silence state (during which neither the caller or the agent are speaking).
% Talk Over	The percentage of the call spent in a talkover state (during which both the caller and the agent are speaking).
Hold Events	Number of detected hold events.
Pause Events	Number of detected pause events.
Silence Events	The number of detected silence events.
Talk Over Events	The number of detected talkover events.
Total Hold Duration	The total duration of hold time. Format = HH:MM:SS.
Total Pause Duration	The total duration of pause time. Format = HH:MM:SS.
Total Silence Duration	The total duration of silence time. Format = HH:MM:SS.
Total Talk Over Duration	The total duration of talkover time. Format = HH:MM:SS.

Analytics

Contact Data	Description
Predictive Evaluation Score	The predicted evaluation score of an unscored contact. Webex WFO bases this predicted score on Analytics data and previous evaluation scores. Webex WFO uses the following pieces of Analytics data: call and agent attributes, speech hits, and desktop activity.
Predictive Net Promoter Score	The predictive net promoter score for the contact.
Sentiment	The sentiment score for the contact. Possible values are Positive, Neutral, and Negative.

Metadata, Custom Metadata (Contacts Table)

Contact Data	Description
Variable text	The custom metadata available in Webex WFO varies by the configuration of your ACD and the Metadata Manager page. You can edit the values in custom metadata fields. See Edit custom metadata associated with a contact.

Post-Call Survey

The Post-Call Survey section displays the results of a survey completed by the customer after the contact ends. Post-call survey data appears only when your system is configured to deliver surveys and the customer has submitted a response.

Related topics

- Find contacts
- Play contacts

Edit custom metadata associated with a contact

If there is custom metadata associated with the contact, you can edit that metadata unless it is encrypted. In that case, the custom metadata fields are disabled.

Maximum character length varies by type.

Metadata Type	Maximum Character Length
Data	2056 characters
Date	Based on the standard date format
Hyperlink	2056 characters
Number	—

Edit the custom metadata associated with a contact

1. Click the contact whose metadata you want to edit. The Media Player opens.
2. In the Contact Information section of the Details panel, click the **Metadata** category. The Metadata category opens.
3. Enter the desired values in the metadata fields.
4. Click **Save Metadata**.

Related topics

- Delete or update multiple contacts at once—Edit custom metadata for multiple contacts at once.

Read an email contact

In the Email panel, you can review the emails that your agents received from customers.

Contact Type: Email

Contact Content: N/A

Licenses Required: QM, CR, Webex WFO Access. Sentiment analysis requires Text Analytics.

Permissions Required: View Contacts

Contacts displayed in this panel have a contact type of email. Phrase hits from Text Analytics tasks are highlighted in yellow.

Read a text contact

In the Text panel, you can review text-based contacts that your agents handled.

Contact Type: Text

Contact Content: N/A

Licenses Required: CR, QM, Webex WFO Access. Sentiment analysis requires Text Analytics.

Permissions Required: View Contacts

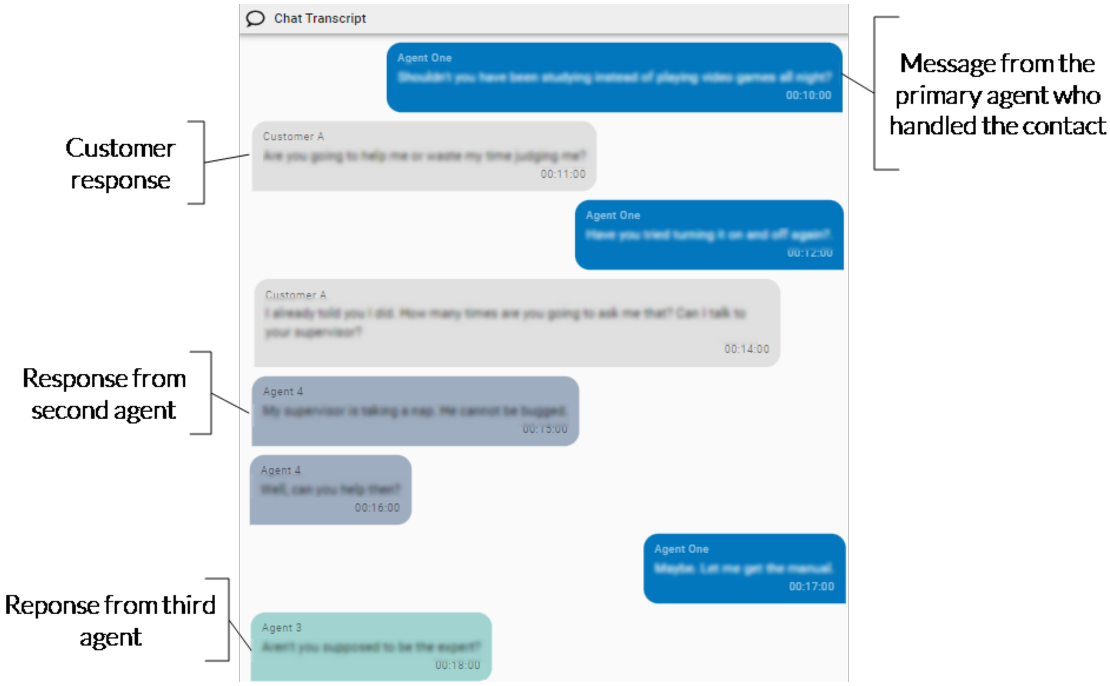
Contacts displayed in this panel have a contact type of text. Phrase hits from Text Analytics tasks are highlighted in yellow.

Read a chat contact

The Chat Transcript panel contains chat conversations. The responses from the agent who handled the contact are on the right, and responses from the customer and any other agents involved in the conversation are on the left. The messages from each person in the conversation are a different color for up to four different participants. (If a conversation has five or more participants, the colors repeat.)

You might see “System User” as a participant. These messages are automatically generated by the chat program your organization uses and usually say things like, “Agent Jane Doe has joined the chat” or “Chat session closed at 10:36 AM.”

If you click a message, the corresponding icon in the Text Map panel is highlighted.



Prerequisites

- Your organization imports chat contacts into Webex WFO via a supported integration.
- You have the View Contacts permission.

Page location

Interactions > Double-click a contact > Chat Transcript panel

Procedures

Search for words in a chat conversation

1. Click the options icon in the upper-right corner of the panel.
2. Select **Find**.
3. Enter your search in the **Find** field. Text that matches your search is highlighted.

Print a chat conversation

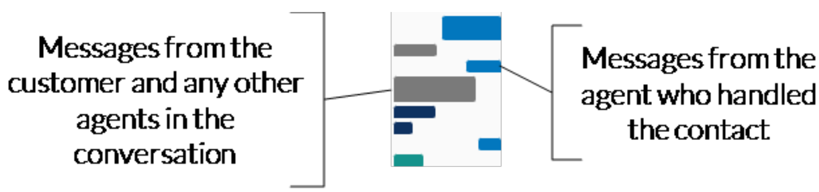
1. Click the options icon ⋮ in the upper-right corner of the panel.
2. Select **Print**. Your browser's print window opens. From here, you can also save the conversation as a PDF.

Related topics

- Find contacts
- View the overview of a chat contact

View the overview of a chat contact

The Text Map panel contains colored rectangles that represent the messages in a chat contact. This panel gives you a high-level picture of the conversation without needing to scroll. The responses from the agent who handled the contact are on the right, and responses from the customer and any other agents involved in the conversation are on the left. The messages from each person in the conversation are a different color for up to four different participants. (If a conversation has five or more participants, the colors repeat.).



Prerequisites

- Your organization imports chat contacts into Webex WFO via a supported integration, not via the Generic Text Import API.
- You have the View Contacts permission.

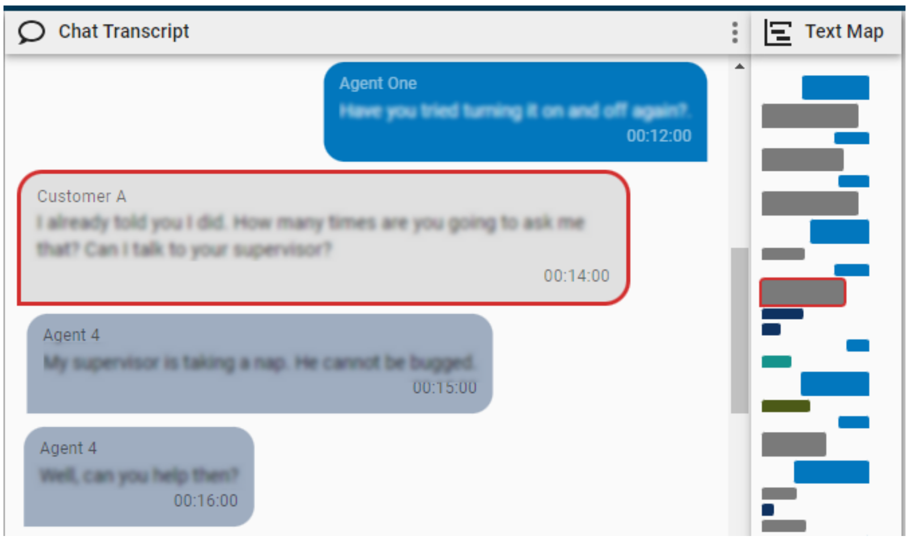
Page location

Interactions > Double-click a contact > Text Map panel

Procedure

Skip to a specific spot in the conversation

- Click a rectangle to move to the corresponding message in the conversation. The message is outlined in red in the Chat Transcript panel.



Related topics

- Find contacts
- Read a chat contact

Read the summary of a contact

The Data Insights panel in the Media Player summarizes calls in 150 words or fewer.

Prerequisites

- Your organization has an Analytics Essentials or Analytics Enterprise license
- An administrator has created an ongoing Analytics speech-to-text task with AI Interaction Summary enabled (see Create Analytics tasks).
- You have the View Contacts and View Speech to Text Analytics permissions.

- You have recordings within your scope.
- The contact has a transcript.

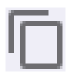
Page location

You can access an interaction summary in two ways:

- Interactions > Double-click a contact > Data Insights panel
- Interactions > Interaction Preview column > View

Procedures

Copy a summary

- Click the **Copy** icon. 

Related topics

- Play contacts
- Read the transcription of an audio recording
- Create Analytics tasks—Create an ongoing task with AI Interaction Summary enabled.

Read the transcription of an audio recording

In the Transcription panel, you can review the transcription of an audio recording.

Contact Type: Call

Contact Content: Has Transcription

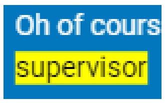
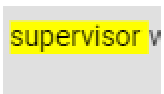
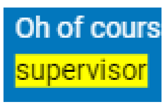
Licenses Required: Webex WFO Access, Analytics Essentials, or Analytics Enterprise

Permissions Required: View Contacts, View Speech to Text Analytics

The panel displays this transcription as text bubbles. When you play back a recording, Webex WFO highlights the text bubble of the current speaker. You can click a specific text bubble to skip to it. You can also click the Options icon to take the following actions:

- Find—Search the transcription.
- Print—Print the transcription.

Phrase hits from Speech-to-Text Analytics tasks are highlighted in yellow. The color and position of the text bubbles vary based on the type of recording.

Color	Recording Type	Description
 	Stereo	Text bubbles for the inbound audio stream are blue and right-aligned, and text bubbles for the outbound stream are gray and left-aligned.
	Mono	Text bubbles for the audio stream are blue and left-aligned.

If you have Cisco Analytics features installed, the text bubbles also include icons that represent any associated negative or positive sentiment scores.

Related topics

- Create Analytics tasks—Configure Webex WFO to transcribe contacts

View phrase analytics for a contact

The Phrase Hits panel shows where in the contact the customer or agent mentions words or phrases that matter to your contact center. These words or phrases are found by Analytics tasks, and they are called “phrase hits.”

NOTE Phrase hits are also highlighted in yellow in the transcription, if there is one.

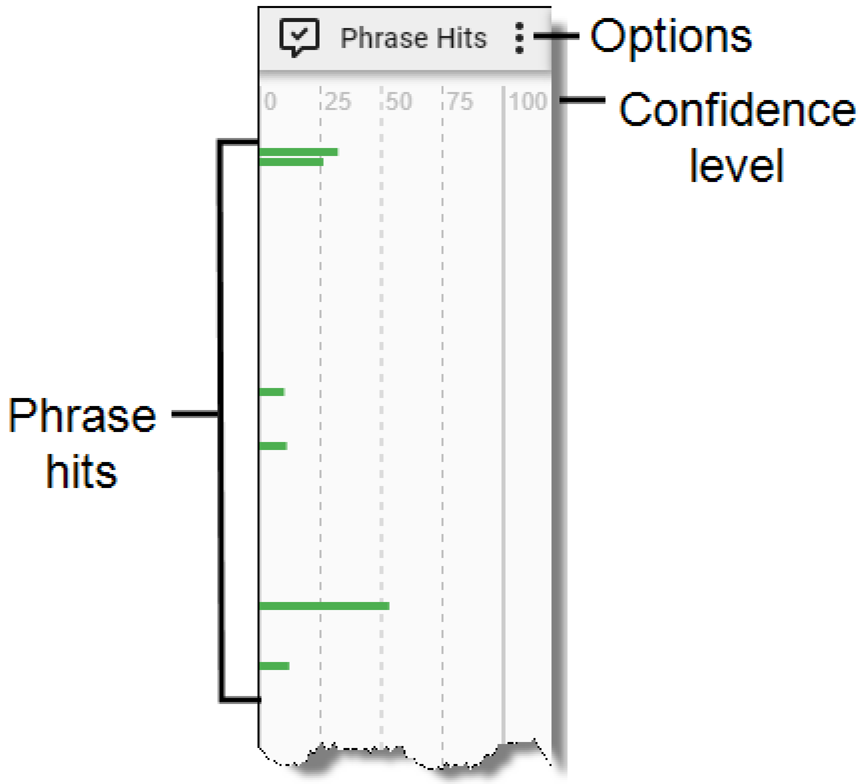
Contact Type: Call

Contact Content: Has Transcription

Licenses Required: Analytics or Webex WFO Access

Permissions Required: View Contacts, View Speech Analytics

Webex WFO assigns a confidence level to each phrase hit. This confidence level shows, on a scale 0–100, how certain Webex WFO is the task accurately detected the phrase. Phrase hits with higher confidence levels appear longer than phrase hits with lower confidence levels.



You can click a phrase hit to move the Timeline slider to it, or you can hover over a phrase hit to see a tooltip that contains further details. If you click the Zoom In icon on the Media Player toolbar, each phrase hit displays the word or phrase that Webex WFO detected.

Use the Options icon to select which categories of phrase hits appear.

Detecting phrase hits

Phrases are configured and categorized on the Phrase Manager page (see Create and manage phrases and phrase categories), and they are searched for by tasks scheduled on the Task Manager page (see Create Analytics tasks).

Each phrase has a text value. It can also have a phonetic value, if one is configured.

- Speech-to-Text tasks transcribe audio recordings and search the resulting transcription for text values.
- Phonetics Analytics tasks search audio recordings for phonetic values.

The results of both tasks appear in the Phrase Hits panel.

> **NOTE** The panel does not show hits whose confidence level is lower than the minimum confidence level assigned to the phrase during configuration. For example, if you assigned a confidence level of 20 to the phrase “bad customer service,” the panel displays phrase hits for “bad customer service” only where the confidence level is 20 or greater.

Each phrase hit starts two seconds before the phrase hit and ends two seconds after it. The confidence level is based on probability, so the exact hit might not line up exactly with the highlighted area. Webex WFO can resolve multiple phrase hits. If two similar phrases are detected within 200 milliseconds of each other, the phrase hit with the highest confidence level becomes the primary hit and all other hits become secondary hits, and they are indexed differently.

The tooltip’s header contains the phrase that the task detected. The following table describes the tooltip’s other fields.

Field	Description
Category	The category to which the phrase belongs, as assigned on the Phrase Manager page.
Source	The type of Analytics task that detected the phrase hit. The possible values are as follows: ▪ Phonetics—The phrase was found in an audio recording. ▪ Speech-to-Text—The phrase was found in the transcription of an audio recording.
Start	The offset from the beginning of the audio to the moment the phrase was found. The format is HH:MM.
Duration	The duration of the phrase. The format is HH:MM:SS. **NOTE** This field does not display values in milliseconds. If the duration is less than one second, the field displays 00:00:00.
Confidence	The confidence level of the phrase hit.
Channel	The audio stream where the phrase hit was detected. For stereo recordings, the following values are possible: ▪ 1—The outbound stream. ▪ 2—The inbound stream.

Related topics

- Create and manage phrases and phrase categories—Configure the phrases to look for in contacts
- Create Analytics tasks—Configure Webex WFO to analyze contacts for phrase hits

View the sentiment for a contact

Sentiment is the overall emotional tone (positive, negative, or neutral) of the agent's and customer's conversation throughout the contact. Webex WFO supports sentiment analysis for English calls, emails, and text contacts. For calls, sentiment requires speech-to-text transcription. For emails and text contacts, sentiment requires text analytics.

Contact Type: Call

Contact Content: Has Transcription

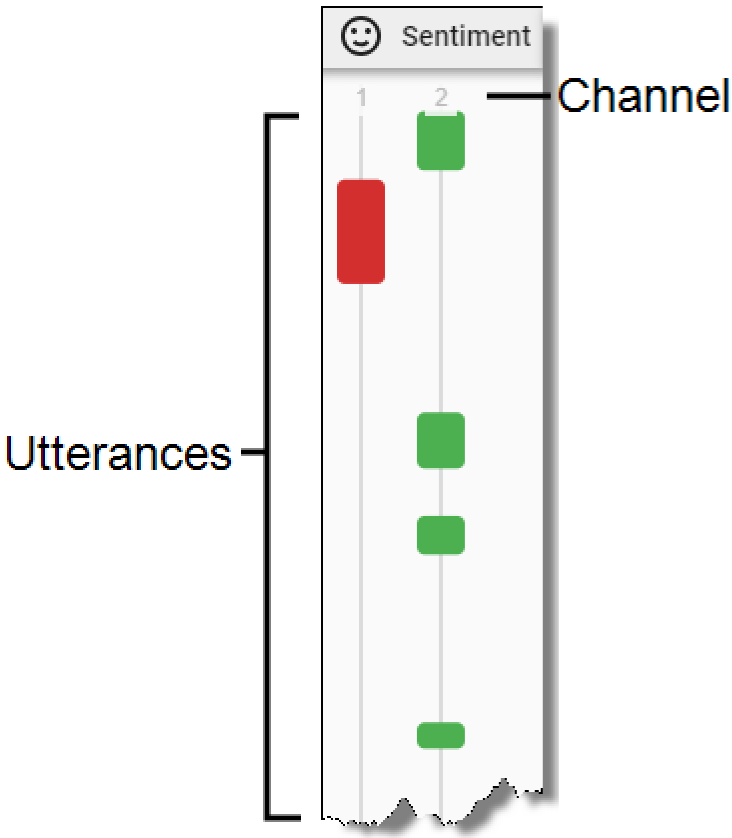
Licenses Required: Analytics or Webex WFO Access

Permissions Required: View Contacts, View Speech to Text Analytics

Sentiment for calls

The Sentiment panel shows sentiment for calls. The panel shows utterances that have a positive or a negative sentiment score as color-coded segments in the audio stream where they were spoken.

> **NOTE** An utterance is an unbroken series of words spoken by a single person. An utterance may contain multiple sentences.

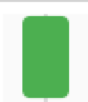
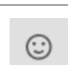


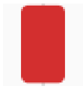
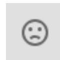
Click an utterance to move the timeline slider to it. When you do this, Webex WFO highlights the text bubble in the transcription that the sentiment task analyzed to produce the positive or negative score. The text bubble contains an icon that also indicates the sentiment score (see the table below). Hover over an utterance to see a preview of this text.

Utterance and channel descriptions

The following table describes the colors of utterance segments and their associated icons.

NOTE The Sentiment panel does not display utterances that have a neutral sentiment score.

Color	Description	
	Details	The utterance has a positive sentiment score.
	Text Bubble Icon	

Color	Description	
	Details	The utterance has a negative sentiment score.
	Text Bubble Icon	

The streams available depend on the recording type.

Recording Type	Description
Stereo	Utterances are divided by the following audio streams: ▪ 1—The utterance occurs on the inbound audio stream. ▪ 2—The utterance occurs on the outbound audio stream.
Mono	The only audio stream is 1. All inbound and outbound utterances occur on that stream.

Sentiment for emails and text contacts

Written contacts have an overall sentiment score in the Analytics section of the Details panel.

Related topics

- Read the transcription of an audio recording
- Create Analytics tasks—Configure Webex WFO to analyze contacts for sentiment

Download contacts on demand

Some call contact data (audio and/or screen recordings) might be initially unavailable when you double-click to play back a call due to the data storage state.

If any or all of a call recording is unavailable, you are prompted to choose whether to play the portion that is immediately available or to download the portion that is unavailable. A dialog box containing information about Audio Storage and Screen Storage indicates the state of each component:

- N/A—There is no audio or screen data associated with this contact.
- Cold Storage—The data is in cold storage. There might be a delay for retrieving the data.

- Immediate Storage—The data is available for immediate playback.

If you choose to download the portions that are unavailable, you are notified when the recording is available.

Assign and share contacts

Assigning and sharing contacts entails the following:

- Review recordings assigned to you.
- Create a uniform resource locator (URL) for a recording and send it as a hyperlink to others through a chat message or email.
- Export the media files associated with a contact.
- Export multiple contacts to an external storage location.

Access contacts assigned to you

The Contact Queue page displays any contacts that have been assigned to you for calibration, evaluation, or review. Contacts can be assigned to you through *contact goal tasks* or *ad-hoc tasks*.

Task type	Definition
Contact goal task	If your administrator has created a contact goal for you, Webex WFO automatically assigns you a number of contacts to complete each day, week, or month. You can also be assigned a contact goal for a specific date.
Ad-hoc task	Contacts that a team leader or administrator has specifically assigned to you.

NOTE Contacts must be less than a year old for them to appear in your contact queue. If an administrator assigns you an ad-hoc task for contacts more than a year old, they do not appear in your queue.

Prerequisites

- Your organization uses Cisco Quality Management.
- You have these permissions:

    - View Contacts
    - View Contact Goal
    - Evaluate Contact (needed to complete evaluation goals)
    - Calibrate Contact (needed to complete calibration goals)
- A team leader has assigned contacts for you to in an ad-hoc task, or an administrator has created a contact goal and assigned it to you.

Page location

Contact Queue

Procedures

Work with recordings assigned to you

1. Read the information in the **Action**, **Due Date**, and **Instructions** columns. You might need to scroll sideways to see these columns. These are the types of Actions:

Action	What you need to do
Calibration	Evaluate the contact. Your evaluation is compared with other evaluators' submissions to ensure consistency among evaluators.
Evaluation	Evaluate the contact for quality.
Review	Play the recording or part of the recording as instructed by the person who created the task.

2. Double-click the task. The contact opens in a new tab.
3. Play and evaluate the contact as needed and close the tab.
4. Go back to the Contact Queue page and click **Refresh** . If you have finished the task, it disappears from the page.

> **NOTE** Contact goals can contain more than one contact. The Contact Queue page shows one contact at a time for each goal assigned to you. Once you finish working with the first contact from the goal, Webex WFO assigns you another contact until you have finished all the tasks for that contact goal.

Add or remove columns on the Contact Queue page

1. Click **Settings** . The **Configure Fields** window opens.
2. To add a column, select its check box. To remove a column, clear its check box.
3. Click **Apply**. The **Configure Fields** window closes.

The contact queue contains the same columns as the Interactions page (see Customize the columns on the Interactions page) plus the following fields:

Column name	Description
Action	The type of task
Ad Hoc Task ID	The ID of the ad hoc task for this contact
Due Date	The date by which you must complete this task
Task Name	The name of the task or contact goal
Instructions	Any specific instructions for the task provided by the person who created the task

Related topics

- —Information about completing and submitting evaluations and calibrations.
- Customize the columns on the Interactions page—Definitions for the other columns that appear in the Contact Queue.
- Assign review, evaluations, and calibrations manually—Instructions for team leaders to create an ad-hoc task.
- Assign review, evaluations, and calibrations automatically—Instructions for administrators to create a contact goal.

Mark contacts for training or HR

Marking contacts for training or HR allows you to easily find these contacts later to use as training examples or to escalate to human resources.

> **NOTE** Marking contacts does not automatically send contacts to a training or HR system. What happens with these contacts depends on how your organization uses Webex WFO.

Prerequisites

- You have the View Contacts permission.
- You have the Mark for Training permission and/or the Mark for HR permission.
- You have recordings within your scope.

Page location

Interactions > Double-click a contact

You can also open the Media Player by clicking a contact in one of these locations:

- The Agent Explorer page
- In the Details pane of an Analytics widget
- In Data Explorer

Procedures

Mark a contact for training

1. Double-click the contact to open it.
2. Click the Options icon (upper right corner of the page).
3. Select **Mark for Training**.

Mark a contact for HR

1. Double-click the contact to open it.
2. Click the Options icon (upper right corner of the page).
3. Select **Mark for HR**.

Related topics

- Find contacts—Find marked contacts later using the Recording Flags filter.
- Play contacts
- Tag a contact—Tagging contacts is another way to set aside contacts that you want to find later.

Tag a contact

The Webex WFO administrator controls how long contacts are available on the Interactions page. However, if you want to keep a contact for longer than your organization's standard retention period, you can tag it. Tagging a contact applies a new retention time to that recording. Depending on how your organization uses tagging, Webex WFO retains tagged contacts for a longer or shorter time than non-tagged contacts (see Manage data retention policies for QM and Analytics).

> **NOTE** Tagging a contact overrides some QM workflow rules. If you apply a tag before a QM workflow runs, then Webex WFO keeps that contact and all of its associated media such as audio and screen recordings, regardless of the workflow's retention policies. If you apply a tag after a QM workflow runs, then that tag only affects the audio of that contact, not the screen recording. This means the QM workflow policy applies to the screen recording for that contact, but tagging overrides the workflow policy for the audio. If Webex WFO has recycled the audio recording because a QM workflow has run, that audio is restored. See Automate QM workflowsfor more information about QM workflows.

Prerequisites

- You have the Tag Contact permission and/or the Untag Contact permission.
- Your role and scope allow you to view recordings.

Page location

Interactions

Procedures

Tag a contact

1. Select the contact (don’t open it).
2. Click **Tag Contact** (upper right of the page). The icon changes to the Untag Contact icon.

Untag a contact

Untagging a contact applies your organization’s standard retention period to the contact.

1. Select the contact (don’t open it).
2. Click **Untag Contact** (upper right of the page). The icon changes to the Tag Contact icon.

Related topics

- Manage data retention policies for QM and Analytics—Establish your organization’s retention periods for tagged and untagged contacts.
- Automate QM workflows—Create rules for Webex WFO to automatically manage recordings.

Create hyperlinks to recordings

You can create a uniform resource locator (URL) for a recording and send it as a hyperlink to others through a chat message or email. The link points the recipient’s browser to Interactions once the recipient is authenticated through the Webex WFO Login page. Once the recipient is authenticated, the recording is opened in the Media Player.

The basic URL format is as follows:

```
http://<web server>/index.html#/recordings/<contactID>
```

or

```
https://<web server>/index.html#/recordings/<contactID>
```

where:

<web server> is the host name or IP address of the server that hosts Webex WFO

<contactID> is the Contact ID for the recording.

> **NOTE** URLs have `/ccr` after the ID for all recordings except root recordings. A root recording is an administrator view for tenants that use gateway recording only. A URL without `/ccr` at the end redirects to one with `/ccr` at the end.

Export a contact

You can download a contact to play it outside of the Webex WFO media player. Webex WFO exports recordings in WebM format. These recordings might play automatically on your device, or you might need to download an open-source media player like VLC Media Player (available from videolan.com).

Page location

Interactions

Prerequisites

- You have the Export Recordings permission.
- You are subscribed to the Recording Export notification.
- Your device can play WebM files.

Procedures

Export a recording

1. Select a recording.
2. Click **Export Contact**. The **Export Contact** window opens.
3. Select the format to export the media files.
4. Click **Export**.
5. Click **OK**. You receive a notification when the contact export has finished.

   > **NOTE** The time needed to export a contact depends on the length of the recording and whether it includes a screen recording.

6. Open the Alerts list (the bell icon) at the top of your window and select the **Export of Contact <ID> is ready for download** notification. The **Alert Notification** window opens.
7. Follow the prompts to download the recording.

Related topics

- Manage roles and permissions —More information about permissions.
- Configure notifications—More information about notifications.

Export contacts in bulk

Export multiple contacts to an external storage location using Bulk Contact Export. After a license is assigned to the tenant, anyone with bulk export permissions can create an export. This feature creates a directory within a selected external storage location that contains audio files or video files in the format you specify, a CSV file with contact metadata, and, if applicable, Analytics data with transcriptions.

> **NOTE** The Webex WFO administrator determines the metadata that can be exported. Only exportable metadata is saved to CSV format.

> **NOTE** The bulk contact export of root recordings is not supported.

> **IMPORTANT** You can export up to 1,000 total contacts per day per tenant with Bulk Contact Export. To export more than 1,000 contacts per day, add an Advanced Bulk Contact Export license to your tenant. Contact your Customer Success Manager to request this license.

Prerequisites

- You have the Bulk Contact Export permission. See Manage roles and permissions .
- You have a configured External Storage location. See Add external storage locations.

Page location

Interactions

Procedures

Schedule the bulk contact export feature to run automatically at regular intervals you specify, or run a bulk contact export immediately. Monitor the status of an export request on the Bulk Contact Export Audit page (Application Management > Global > Monitoring > Bulk Contact Export Audit).

Schedule a recurring bulk contact export

1. On the Interactions page, create and save a filter set (see Find contacts).

   IMPORTANT You must fully configure all the filters you add to your filter set. If you do not fully configure all the filters, the bulk context export will fail.

   EXAMPLE You add the **Predictive Net Promoter Score** filter to your filter set. You select **Equals** from the **Operator** drop-down list but do not enter a number in the **Score** field. Not fully configuring this filter will cause the bulk contact export to fail.

2. Click the **Options** icon, and then click **Bulk Contact Export**.
3. Click the **New Export** tab.
4. Configure the export as defined in the described fields below.

   Export Name — Enter a name for the bulk contact export file.

   Saved Search — Select your saved filter set.

   Storage Location — Select the external storage location to which you want to export the contacts.

   Media Type — Select the file format in which Webex WFO exports audio and video files.

   - **Audio/Video Formats** — Select the file format in which the audio/video media should be exported. Only available for contacts with both audio and screen recordings.
   - **Audio-only Formats** — Select the file format in which the audio-only media should be exported. Only available for contacts with audio recordings.
   - **None** — Select **Transcriptions Only** to export transcriptions only.

   Analytics Output Format — Select the file format in which you want to export Analytics transcription data: JSON or XML. If you select **None**, Webex WFO does not export any Analytics transcription data. Select **None** to export only a CSV file with metadata.

5. Select **Send Scheduled Export**, and then schedule the export as described below.

   Weekly — Select one or more days of the week, and then select the time on those days that Webex WFO will export the contacts.

   Monthly — Select the day of the month, and then select the time on that day that Webex WFO will export the contacts.

6. Click **Create**.

When you create a scheduled bulk contact export, Webex WFO saves the export. To edit the export, click the **Saved Contact Export** tab and select the export from the **Saved Export File Name** drop-down list.

> **NOTE** The first scheduled export (weekly or monthly) must occur after the next scheduled run of the App Dynamic Refresher task. Otherwise, the first scheduled export will not happen, although future exports will. By default, the App Dynamic Refresher task runs every fifteen minutes. Contact your system administrator to verify this schedule.

Export contacts immediately

1. On the Interactions page, create and save a filter set (see Find contacts).

   > **IMPORTANT** You must fully configure all the filters you add to your filter set. If you do not fully configure all the filters, the bulk context export will fail.

   > **EXAMPLE** You add the **Predictive Net Promoter Score** filter to your filter set. You select **Equals** from the **Operator** drop-down list but do not enter a number in the **Score** field. Not fully configuring this filter will cause the bulk contact export to fail.

2. Click the **Options** icon, and then click **Bulk Contact Export**.
3. Click the **New Export** tab.
4. Configure the export as described below.

   Export Name — Enter a name for the bulk contact export file.

   Saved Search — Select your saved filter set.

   Storage Location — Select the external storage location to which you want to export the contacts.

   Media Type — Select the file format in which Webex WFO exports audio and video files.

   - **Audio/Video Formats** — Select the file format in which the audio/video media should be exported. Only available for contacts with both audio and screen recordings.
   - **Audio-only Formats**—Select the file format in which the audio-only media should be exported. Only available for contacts with audio recordings.
   - **None** — Select **Transcriptions Only** to export transcriptions only.

   Analytics Output Format — Select the file format in which you want to export Analytics transcription data: JSON or XML. If you select **None**, Webex WFO does not export any Analytics transcription data. Select **None** to export only a CSV file with metadata.

5. Select **Send Export Immediately**.
6. Click **Create**.

Licensing requirements for bulk contact export

Cisco requires you to select a license type for bulk contact export.

- **Standard license**—Export up to 1,000 contacts daily through the UI.
- **Performance license**—Export contacts in bulk by configuring multiple contact export jobs periodically throughout each day.

> **NOTE** By default, each export batch is limited to 10,000 per job with the max amount of total contacts per day at 40,000 with the Performance license. If there is a need for an increase in these limits, please contact Cisco Professional Services or Cisco Support Services.

Data included in the bulk contact export CSV file

The following table describes the data fields included in the bulk contact export CSV file. If the contact is recycled but not yet permanently deleted, all fields except Contact ID display "######."

Field	Type	Max Length	Description
Contact ID	Integer	64	The unique ID of the contact.
Last Name	String	60	Agent's first name.
First Name	String	60	Agent's last name.
Group Name	String	60	Name of the agent's group.
Team Name	String	60	Name of the agent's team.
Calling Number	String	64	The caller ID or Automatic Number Identification (ANI) of the calling party. Displays "unknown" if the calling number is unlisted or blocked. This field applies only to calls.
Called Number	String	64	The DID or Dialed Number Identification Service (DNIS) number of the phone that received the call.

Field	Type	Max Length	Description
			Displays "unknown" if the called number is unlisted or blocked. This field applies only to calls.
Date	Date	10	Date of the contact. The format is DD/MM/YYYY.
Time	Time	5 + 2	Start time of the contact. The format is HH:MM AM or PM.
Time Zone	String	60	The time zone where the contact was created and the call was recorded. **EXAMPLE** America/Chicago **NOTE** This field is not in UTC format.
Score	Integer	64	The evaluation score given to the contact.
Reason	String	64	The reason the conversation was recorded. This reason is set in the recording rule.
Recording Type	String	64	The recording type associated with this device. Valid values: ■ AACC MLS Recording ■ Acme Packet Recording ■ AudioCodes Recording ■ AWS Connect Recording ■ BroadSoft Recording ■ CUBE Recording ■ End Point Recording ■ Event Notification ■ Five 9 VCC Recording

Field	**Type**	**Max Length**	**Description**
			▪ Genesys Recording ▪ IP Office Recording ▪ MediaSense Recording ▪ Multiple Registration Recording ▪ Network Recording ▪ None ▪ Reconciliation ▪ RTP Logger Recording ▪ Serenova Recording ▪ Single Step Conference Recording ▪ Sonus Recording ▪ Unknown Recording Type Not all recording types may be available to you.
Call Duration	Duration	8	The length of time between the call being answered and the call being dropped, including ring time and extended screen time (if any) in HH:MM:SS. The call duration is received from the signaling service. This field applies only to calls. The call duration shown in the Contacts table and the Media Player might not be the same due to the difference in “event duration” (the time between events) and “recording duration” (the duration within the actual recorded file). In these scenarios, the call duration would be different: ▪ When you use the Recording Controls API to pause,

Field	Type	Max Length	Description
			resume, or restart recording, the recording duration would be shorter than the actual call duration. For example, if a recording is restarted one minute into the call, the call duration is one minute longer than the recording duration. ■ When you archive or clean a call with a long ring time, the Contacts table shows the event duration in the call duration field, while the Media Player shows the recording duration in the call duration field.
Agent ID	String	64	Agent's system ID.
HR	Boolean	3	Indicates whether the contact has been marked for HR. The format is Yes/No.
Training	Boolean	3	Indicates whether the contact has been marked for training. The format is Yes/No.
State	String	32	The current evaluation state of the contact. Valid values: ■ Unscored ■ Scored ■ In Progress ■ Needs Approval
Contact Type	String	60	Type of contact. Possible values: ■ CALL ■ NON_CALL ■ SCREEN_ONLY ■ EMAIL

Field	Type	Max Length	Description
			▪ TEXT ▪ CHAT ▪ SMS
External Party	String		For chat or SMS contacts, the email, phone number, or other identifier of the person who interacted with the agent.
From Address	String	512	Filters email associated with non-call contacts based on the email addresses in the From field. **NOTE** This option is only available when Analytics is enabled.
To Address	String	no limit	Filters email associated with non-call contacts based on the email addresses in the To field. **NOTE** This option is only available when Analytics is enabled.
Subject	String	1000	Filters email associated with non-call contacts based on the Subject field.
Evaluator Name	String	256	The name of the person who evaluated the contact.
Date Evaluated	String	10	The date when the contact was evaluated. Format is MM/DD/YYYY.
Approved By	String	256	The name of the person who approved the evaluation.
Evaluation Form	String	64	The name of the evaluation or calibration form used to score the customer conversation.
Calibrated	Boolean	3	Indicates whether the contact has been marked for calibration. The format is Yes/No.

Field	Type	Max Length	Description
MAX Silence	Duration	8	Maximum length of a silence event in the contact. The format is HH:MM:SS.
MIN Silence	Duration	8	Minimum length of a silence event in the contact. The format is HH:MM:SS.
AVG Silence	Duration	8	Average length of a silence event in the contact. The format is HH:MM:SS.
Total Silence Duration	Duration	8	Total length of all silence events in the contact. The format is HH:MM:SS.
Silence Events	Integer	64	Number of silence events in the contact.
% Silence	Decimal	3	The percentage of the call spent in a silence state (during which neither the caller or the agent is speaking). Format is .99.
MAX Talk Over	Duration	8	Maximum length of a talk over event in the contact. The format is HH:MM:SS.
MIN Talk Over	Duration	8	Minimum length of a talk over event in the contact. The format is HH:MM:SS.
AVG Talk Over	Duration	8	Average length of talk over events in the contact. The format is HH:MM:SS.
Total Talk Over Duration	Duration	8	Total length of all talk over events in the contact. The format is HH:MM:SS.
Talk Over Events	Integer	64	Number of talk over events in the contact.
% Talk Over	Decimal	3	The percentage of a call that is talk over. Format is .99.

Field	Type	Max Length	Description
Hold Events	Integer	—	Number of detected hold events.
MIN Hold Duration	Duration	—	The duration of the shortest hold event. Format = HH:MM:SS.
MAX Hold Duration	Duration	—	The duration of the longest hold event. Format = HH:MM:SS.
Total Hold Duration	Duration	—	The total duration of hold time. Format = HH:MM:SS.
AVG Hold Duration	Duration	—	The average hold time in HH:MM:SS.
% Hold	Decimal	—	The percentage of the call spent in a hold state.
End of Interaction Workflow	String	64	Name of the end-of-interaction workflow used for the contact.
Daily Workflow	String	64	Name of the daily workflow used for the contact.
Predictive Evaluation Score	Decimal	3	The predicted score of a contact without an evaluation score. Webex WFO bases this predicted score on Analytics data and previous evaluation scores. Webex WFO uses the following pieces of Analytics data: call attributes, agent attributes, speech hits, and desktop activity. Format is .99.
Net Promoter Score	Decimal	—	The net promoter score for the contact provided by the caller.
Predictive Net Promoter Score	Decimal	3	The predicted score of a contact without a net promoter score. Webex WFO bases this predicted score on

Field	Type	Max Length	Description
			Analytics data and previous net promoter scores. Webex WFO uses the following pieces of Analytics data: call attributes, agent attributes, desktop applications, desktop activity, speech hits, and call metadata. Format is .99.
Sentiment Score	String	—	The contact’s sentiment score: positive, negative, or neutral.
Survey Score	Decimal	3	If the contact has an associated survey, provides the survey score, expressed as a percentage in decimal form.
Survey Name	String	255	If the contact has an associated survey, provides the survey name.
Agent ACD ID	String	256	ACD ID for the agent.
Associated Call ID	String	256	If the call involves a conference or transfer, the ID of the other agent.
Text Preview	String	—	A preview of search results for your search with the Text Search filter.
<custom metadata>	varies	—	The custom metadata associated with the contact.

Related topics

- Add external storage locations—Learn how to configure an external storage location.
- Find contacts—Learn how to create and save a filter set.
- Monitor scheduled bulk contact exports—View the status of your export.

Evaluate contacts

Manage evaluation forms

Evaluators use evaluation forms to assess agents' contacts with customers to ensure that agents communicate effectively and follow company policies.

Prerequisites

- You have the Administer Evaluation Forms permission.
- For each form, you have a plan for the sections, the questions within each section, and all the possible answers for each question.
- If you weight forms manually, you know how much weight each section contributes to the total evaluation and how many points each question is worth.

Page location

Application Management > QM > QM Configuration > Evaluation Form Manager

Procedures

Evaluation forms have three main components: sections, questions within the sections, and answer options for each question.

> **BEST PRACTICE** Click **Save Draft** frequently. The form preview updates whenever you click **Save Draft**.

Step 1: Create an evaluation form (required)

To complete the form, follow these steps and then continue to Step 2: Create sections (required), Step 3: Create questions (required), and Step 4: Create answers for the questions (required).

1. Click **New Form**.
2. Enter the form name in the **Name** field.
3. Enter a description in the **Description** field.
4. (Optional) To require approval for completed evaluations, select **Approval Required**. To not require approval, keep this box cleared.

5. Select an evaluation response option.
   - No Agent Response to Scored Evaluations—Agents cannot respond to scored evaluations.
   - Allow Agent to Acknowledge Scored Evaluations—Agents can indicate that they have received their evaluations.
   - Allow Agent to Acknowledge and Appeal Scored Evaluations—Agents can ask for an evaluation to be re-scored if they disagree with the score.
6. An agent's overall score falls into one of three categories: Meets Expectations, Exceeds Expectations, or Needs Improvement. To adjust the cutoff scores between these categories (optional), click and drag the sliders in the **Scoring Band Ranges** section.
7. Select a form type.
   - Percentage—The evaluation is scored based on a percentage. Sections and questions are weighted (0–100%), and the final score is a percentage.

     > **EXAMPLE** An agent scores four out of five questions correctly, and the questions are equally weighted. The agent's final score is 80%.

   - Points—The evaluation is scored based on a point system. Sections are not weighted; instead, the number of points a section is worth determines its weight.
8. (Optional, percentage scoring only) To weight section and question values manually, select **Manual Weighting**. To have Webex WFO calculate weighting automatically, skip this step.

Step 2: Create sections (required)

Sections are groups of questions. For example, an evaluation form could have sections called Greeting, Security, Resolution, and Closing. A form can have multiple sections or only one. For more information about creating effective sections, see Advice for evaluation forms.

1. Click **Add Section**.
2. Enter the name of the first section in the **Section Title** field.
3. (Manual weighting only) Enter how much this section influences the form's total score in the **Section Weight %** field. The weights for all sections must add up to 100%.
4. Repeat steps 1–3 until you are finished adding sections.
5. (Optional, manual weighting only) To give all sections the same weight, click **Balance Section Weight**.

Step 3: Create questions (required)

1. Click **Add Question**.
2. Enter the question text in the **New Question** field.
3. (Optional, manual weighting only) Enter how much this question influences the section's total score in the **Question Weight %** field. The weights for all questions in this section must add up to 100%.
4. (Optional) Enter a description for the question in the **Description** field. Evaluators see this description as they use the form to evaluate contacts.
5. Repeat steps 1–4 until you are finished adding questions to all the sections.
6. (Optional, manual weighting only) To give all questions in a section the same weight, click **Balance Question Weight**.

Step 4: Create answers for the questions (required)

In this step, you create the options that evaluators can select from when answering questions on evaluation forms. You can add possible answers to questions in two ways: by adding each answer manually or by selecting a predefined group of answers.

Option 1: Add answers manually

1. Click **Add Answer**.
2. Enter the answer text in the **Option 1 New Answer** field.
3. (Optional) To create a Not Applicable answer option, select **N/A**. Not Applicable answer options have no percentage or point value and do not impact a section's or form's total score.
4. (Optional) To make an answer a key performance indicator (KPI), select **KPI** .

   > **NOTE** If your form has multiple KPI answers, you must set the priority for each option. See Prioritize KPI answers (required for forms with multiple KPI answer options).

5. Enter the percentage or points value for the answer option in the **Percentage** or **Points** field.

   > **NOTE** With percentage forms, a percentage of 100 gives the agent full credit for their work related to this question. A percentage of 0 gives the agent no credit. A percentage from 1 to 99 gives the agent partial credit.

6. Repeat steps 1–5 until you are finished adding answers.
7. (Optional) To change the default answer to the question, select the answer from the **Default Answer** drop-down list.

> **NOTE** All questions have default answers. Evaluators can answer all the questions in a form with their default answers while evaluating a contact.

Option 2: Add answers from an answer group

An answer group is a predefined set of answer options.

- Select the group from the **Add Answer Group** drop-down list.

Step 5: Publish an evaluation form (required)

> **IMPORTANT** Publish a form only when you are completely finished creating it. You cannot edit a published form.

- Click **Publish**. The form is published immediately and is available to evaluators.

Create a new answer group

Answer groups that you create are visible to anyone else who creates evaluation forms. Webex WFO comes with five default answer groups:

- Create New Answer Group—Two blank answers, with the option to add more.
- Default Single Answer—One blank answer, with the option to add more.
- Default Yes/No Answer—The answers are Yes and No.
- Default How did the agent do?—The answers are Exceeds expectations, Meets expectations, and Needs improvement.
- Scale (1–5) Question—Answers allow agents to earn partial credit. You can adjust the scale to use more or fewer levels.

1. Select **Create New Answer Group** from the **Add Answer Group** drop-down list. You can also select an existing answer group and edit it.
2. Write and configure the answer options as needed.
3. Click the floppy disk icon. 
4. Enter the name of the new answer group in the **Answer Group Name** field.
5. Click **Save**.

Prioritize KPI answers (required for forms with multiple KPI answer options)

If a form has multiple KPI answer options, you must rank them by priority. The highest-priority answer that an evaluator selects becomes the agent’s final score.

EXAMPLE A form has two KPI answer options: Orange and Yellow. Orange is higher in the KPI Priority list than Yellow, but the evaluator does not select Orange when evaluating a contact. However, the evaluator does select Yellow. The agent's final score for this contact becomes the percentage or point value assigned to Yellow.

1. Scroll down to the **KPI Priority** section at the bottom of the page.
2. Click the arrows to move questions up or down in the priority list.

Move a section

- Click the arrows next to the section title.

Move a question within a section

- Click the arrows next to the question title.

Move a question to a different section

1. Click the three dots next to the question title.
2. Select **Move to [section title]**.

Delete a section

1. Click the three dots next to the section title.
2. Click **Delete Section**.
3. Click **Confirm**.

Delete a question

1. Click the three dots next to the question title.
2. Select **Delete Question**.
3. Click **Confirm**.

Edit an evaluation form

IMPORTANT Published forms cannot be edited. If you need to edit a published form, clone it and edit the clone. See Clone an evaluation form.

1. From the list of forms, click **Edit Form** (the pencil icon).
2. Edit the form as needed.

Clone an evaluation form

If you need to create a new evaluation form that is similar to an existing form, cloning the form is much easier than creating the form from scratch.

1. From the list of forms, click **Clone Form** (the rectangle icon).
2. Enter the clone's name in the field.
3. Click **Save**.

Archive an evaluation form

You can archive forms that are published. Archived forms cannot be used for future evaluations.

1. From the list of forms, click **Archive Form** (the file box icon).
2. Click **Yes**.

Delete an evaluation form

You can delete forms that are editable. If a form is published, you cannot delete it. To deactivate a published form, see Archive an evaluation form.

1. From the list of forms, click **Delete Form** (the trash can icon).
2. Click **Yes**.

Filter evaluation forms

1. From the list of forms, click **Filters** (the funnel icon, top left of the page). The **Filters** panel opens.
2. Click **Add Filter**. The **Choose Filters** dialog box opens.
3. Click a filter in the **Available** column to add it, or click a filter in the **Selected** column to remove it.
4. Click **Update Filters**. The **Choose Filters** dialog box closes.
5. Click each filter and choose its criteria.
6. Click **Apply**. Evaluation forms that meet all of the criteria in the filter set display.

NOTE To clear all filters and show all forms, click **Reset**.

Filter descriptions

The table below describes filters and their criteria.

Filter	Description
Created By	The person who created the form.
Date Created	When the form was created.
Form Name	The form’s title.
Last Updated	When the form was last edited.
Last Updated By	The person who most recently edited the form.
Status	The form’s state: Editable, Archived, or Published.

Export evaluation forms as a CSV file

To work with evaluation forms offline, you can export the evaluation form CSV file, add or edit forms, and import the file.

1. From the list of forms, click the three dots at the top of the page.
2. Select **Export**. A CSV file containing the information about all evaluation forms downloads to your device.

Import an evaluation form

1. From the list of forms, click the three dots at the top of the page.
2. Select **Import**.
3. Select the file to import. Imported forms appear in the list.

An imported file must have all the columns in the table below, in order from left to right. First Export evaluation forms as a CSV file, edit the exported file, and import it.

IMPORTANT

If you are adding a new evaluation form via CSV import, all fields that include IDs (formId, sectionId, questionId, and answerId) must be 0 (zero). Webex WFO adds these IDs automatically when you import the form.

If you are editing an existing form, do not change the IDs.

Column	Description
formId	The evaluation form’s ID. This is a number.

Column	Description
formName	The name of the evaluation form.
formDescription	The text that describes the evaluation form.
formStatus	■ Active—The form is published: it is available for evaluations and cannot be edited. ■ Editable—The form can be edited. ■ Inactive—The form is archived: it cannot be used for evaluations.
formApprovalRequired	■ TRUE—Evaluations completed with this form must be approved. ■ FALSE—Approval is not required.
formScoreType	■ Percentage—Evaluation is scored based on a percentage. ■ Points—Evaluation is scored based on a point system.
formResponseType	■ Acknowledge—Agents can indicate that they have received their evaluations. ■ Appeal—Agents can ask for an evaluation to be re-scored if they disagree with the score. ■ None—Agents cannot respond to scored evaluations.
formBandBreakOne	The lowest score for “meets expectations.”
formBandBreakTwo	The highest score for “meets expectations.”
manualWeighting	■ FALSE—The form does not use manual weighting. ■ TRUE—The form uses manual weighting.
sectionId	The section’s ID. This is a number.
sectionName	The name of the section.
sectionOrder	A number that determines the order in which the section appears. Sections are ordered by lowest number first.

Column	Description
sectionWeight	The weight assigned to a section from 0–100.
questionID	The question’s ID. This is a number.
questionText	The text for the question.
questionDescription	The description for the question.
questionOrder	A number that determines the order in which the question appears. Questions are ordered by lowest number first.
questionWeight	The weight assigned to a question from 0–100.
answerId	The answer’s ID. This is a number.
answerType	■ Accumulative—Points for this option are added together to get the final score, assuming no KPI options are selected. ■ KPI—If an evaluator selects this option, the final score for the form changes to this value. ■ Not Applicable—This option has no percentage or point value and does not impact the section’s or form’s total score.
answerLabel	■ Y—Yes. ■ N—No. ■ N/A—Not applicable. ■ <text>—A customized answer.
answerIsDefault	■ FALSE—This answer is not the default answer for the question. ■ TRUE—This answer is the default answer for the question.
answerOrder	A number that determines the order in which the answer appears. Answers are ordered by lowest number first.
answerPoints	The number of points assigned to the answer.

Related topics

- Advice for evaluation forms—In-depth information about how evaluation forms work and recommendations for creating effective evaluations.
- Configure KPIs—How to set up KPI goals and assign them to groups and teams.

Advice for evaluation forms

Guidelines for effective evaluations

An evaluation is the end result you receive from a Quality Management recording solution. The “Quality” in Quality Management comes from evaluating the methods and language the agents use while working with customers. Evaluations call out the elements you want the agents to use in a call.

> **EXAMPLE** The agent answers a call by saying “Good morning, this is Bob at XYZ Company, how can I help you today?” The evaluation form has three introductory questions: Did the agent use a greeting? Did the agent identify him or herself and the company? Did the agent ask an open-ended question? The evaluator answers each of these questions with “yes.”

The evaluation indicates excellent agent behavior and the areas where agents need improvement or training.

When you are implementing evaluations, consider the following best practices:

- Prioritize your initiatives—Start with the highest value or highest priority.
- Establish what success looks like—This is the desired behavior.
- Create a log of measurements and compare scores over time—Pick an evaluation form and stay with it for at least a quarter so that you can measure improvement over time and verify if your training and coaching are improving performance.
- Review agent evaluations and play back calls to determine the root causes of problems—Find out where you are having problems and improve training through root cause analysis.
- Make agent, team, and organizational comparisons—Measure progress at all levels.
- Move on when you have established success—When you no longer have problems in one section of the evaluation (for example, agent greetings), you can remove it from the evaluation. As your contact center’s business goals change, you can add new sections to the form to continually improve the performance of your agents.

Guidelines for evaluation form questions

Consider the following tips when writing evaluation form questions.

Use simple questions. Simple questions allow managers and supervisors to investigate the root cause of an agent's low score.

- Make each question a single question (don't use questions within questions).
- Limit the scope of a question to a single measurable event.

> **EXAMPLE** "Did the agent go the extra mile?" is a bad question. What does it mean to go the extra mile? Does going the extra mile look the same for every contact? Probably not. Instead, identify specific actions that agents who go the extra mile could do. For example, did the agent offer to follow up with the caller to make sure the issue was resolved? This questions asks about a specific action, and everyone will know what a "yes" or "no" answer means.

- Write the question so that both the evaluator and the agent will clearly understand how the agent performed.

Use questions that require a **yes or no answer** whenever possible. Yes or no questions provide clear and concise answers. They also require less documentation and collaboration efforts to get consistent evaluation measurements. These types of answers are more objective. By contrast, numerical ranges require you to establish criteria for each number in the range. This makes collaboration efforts between multiple evaluators difficult.

Organize your questions by placing them into **distinct sections**. Categorizing questions allows you to produce detailed reports about agent and team performance in each category.

- Match questions and sections to the flow of a typical call to make it easier for evaluators to score agent performance.

> **EXAMPLE** You create three sections named Greeting, Order Entry, and Closing.

- When using percentage-based scoring, assign higher weights to the most important questions and sections.
- Use no more than ten sections in an evaluation form.
- Use no more than ten questions in a section.

Decide whether there are any **key points of failure**. Mark questions that address critical behavior (such as courtesy) as Key Performance Indicators (KPIs). If such a question is scored negatively, the entire evaluation fails.

If you are using **predictive evaluation scores**, write questions that relate to the kind of data that Webex WFO pulls and analyzes. See Configure predictions for more information.

> **EXAMPLE** You use QM to measure the amount of silence in each contact. The evaluation form asks, “Did the agent give prompt attention to the customer?”

> **EXAMPLE** You have an Analytics phrase category called “Greeting” with phrases like “thank you for calling,” “my name is, “ and “how may I help you today.” The evaluation form asks, “Did the agent properly greet the caller?”

Key performance indicator (KPI) questions

To use KPI questions, you first need to identify the business goals for the contact center. When you break down the business goals, you need to identify the challenging areas and how you can measure success in meeting those goals. For example, you can break the business goals into the following:

- First contact resolution (FCR)
- Sales process and skills
- Product knowledge—You can use contact evaluations to identify agents who do not have sufficient product knowledge and then provide training to improve their product knowledge. For example, you might want to consider the following questions when evaluating an agent:
  - Does the agent have deep product knowledge?
  - Is this a critical indicator or a challenge area?
- Agent proficiency with tools—Agents sometimes have to deal with a wide variety of tools when they deal with a customer (for example, order entry tools, agent productivity tools, database tools, or custom software tools designed for the organization). You can use the evaluation to monitor agent proficiency with your contact center’s tools and then provide training to improve their tool proficiency.
- Average call duration—Some calls are longer than others. You can use the evaluation to understand what factors result in longer calls and then provide solutions that result in fewer long calls and improve the average call duration.

When you know what your business goals are, you can incorporate those goals as answers to questions in the evaluation form and assign KPIs to those questions. This allows you to align your agents’ goals with your business goals for the contact center. You can then use the evaluation forms to measure your agents’ performance against your contact center’s business goals.

A KPI can have a positive or negative impact on your contact center's business goals. The value assigned to the KPI answer reflects that impact.

> **EXAMPLE** Your contact center's business goals are to increase revenue, improve customer satisfaction, and reduce overall cost. An agent who turns an unhappy customer into a happy customer has a positive impact on your contact center's business goals. An agent who loses a potential sale has a negative impact on your contact center's business goals.

How KPI questions are scored

A question with one or more KPI answers is labeled with "KPI" in the **Type** field. A KPI overrides the final evaluation score. If you have multiple KPI answers, prioritize the KPI answers when creating the form to determine which KPI answer determines the final score.

When a KPI question appears in a section, QM scores the KPI question like any other question. The total value for that section appears in the section score, including the KPI question. QM retains the scores you assign to all questions and sections. These scores are available for review.

You must continue to score the entire evaluation when a KPI answer triggers a final score.

Percentage-based scoring

When you create an evaluation form, you must choose either percentage-based scoring or Point-based scoring. Percentage-based scoring is based on a range of whole numbers from 0 to 100. As the evaluator scores a section on a percentage-based evaluation form, a rolling total and percent appear on that section.

About percentage-based sections

Each percentage-based section has its own weight that determines how much it influences the total score for the evaluation form. Each section tab displays its section weight. The sum of all of the section weights must be 100. These weights are applied after all sections are scored to arrive at the overall score, as a percentage, for the evaluation. The overall score is calculated as follows:

```
Section score as a percentage × section weight = weighted section score

Sum of all weighted section scores = total score as a percentage
```

> **EXAMPLE**
>
> The form has two sections called Greet and Assess. The Greet section has a possible total of 15 points and is worth 40% of the overall score. The agent has earned 8 out of the possible 15 points, or 60%, for this section. The Assess section has a possible total of 10 points and is worth 60%. The agent has earned 8 points, or 80%, for this section. The overall score is calculated as follows:
>
> ```
> Greeting section = 60% × 0.4 = 24%
>
> Assess section = 80% × 0.6 = 48%
> ```

```
24% + 48% = 72% overall score
```

About percentage-based questions

Each percentage-based question has its own weight that determines how much it influences the total score for the section. The weight is converted into points. The maximum score for a section is 100% (or 100 points), no matter how many questions it contains. Webex WFO uses this formula used to calculate the weighted score for a single percentage-based question:

```
(actual score ÷ maximum score) × weight = weighted score
```

> **EXAMPLE** In a section with three questions, Question 1 has a weight of 50%. Questions 2 and 3 each have a weight of 25%. This means Question 1 is worth a maximum of 50 points and Questions 2 and 3 are each worth a maximum of 25 points.

The following table shows the potential points that a question with a 0–5 answer scale could earn if it has a weight of 25% or 50%. If an evaluator answers N/A, Webex WFO treats the section score as if the question does not exist.

Scale Answer	Points Earned (Question Weight of 25%)	Points Earned (Question Weight of 50%)
N/A	—	—
0	0	0
1	5	10
2	10	20
3	15	30
4	20	40
5	25	50

The following table shows the potential points that a Yes/No question could earn if it has a weight of 25% or 50%.

Answer	Points Earned (Question Weight of 25%)	Points Earned (Question Weight of 50%)
Yes	25	50

Answer	Points Earned (Question Weight of 25%)	Points Earned (Question Weight of 50%)
No	0	0
N/A	—	—

The following tables show the results for several sections in a sample evaluation form.

Scored example for a three-question section

Question	Weight	Type	Score	Weighted Score
1	50%	0–5 scale	4	40
2	25%	0–5 scale	3	15
3	25%	Yes or No	Yes	25
Section Score				**80%**

Scored example for a four-question section

Question	Weight	Type	Score	Weighted Score
1	60%	0–5 scale	3	36
2	15%	0–5 scale	4	12
3	20%	Yes or No	No	0
4	5%	Yes or No	Yes	5
Section Score				**53%**

Scored example with “not applicable” (N/A) as an answer

Question	Weight	Type	Score	Weighted Score
1	60%	0–5 scale	NA	—
2	15%	0–5 scale	4	12
3	20%	Yes or No	No	0

Question	Weight	Type	Score	Weighted Score
4	5%	Yes or No	Yes	5
Section Score				**42.5%**

NOTE An answer of N/A removes that question from the total possible score. So for this example, the score of 43% is based on a score of 17 out of a total of 40 instead of a total of 100.

How percentage-based evaluations are scored

When you save an evaluation form, the form calculates the Possible Points, Points Earned, and Percentage (or score). These formulas are based on the number of sections in an evaluation form.

Possible points

The total possible number of points for a scored evaluation form is the sum of each section's possible points multiplied by the total number of points:

```
Form Possible Points =
Section 1 weight × Section 1 Possible Points
+ Section 2 weight × Section 2 Possible Points
+ Section 3 weight × Section 3 Possible Points
+ Section 4 weight × Section 4 Possible Points
```

The following example shows how Webex WFO calculates the total possible number of points for a scored evaluation form with four sections:

Section	Weight	Possible Points for the Section	Points the Section Contributes to the Form
1	25%	100	25
2	25%	75	18.75
3	25%	80	20
4	25%	100	25
Total Possible Points			**88.75**

Points earned

The total number of points earned on a scored evaluation is calculated using the following formula:

```
Form Total Points Earned =
Section 1 weight × Section 1 Total Points Earned
+ Section 2 weight × Section 2 Total Points Earned
+ Section 3 weight × Section 3 Total Points Earned
+ Section 3 weight × Section 3 Total Points Earned
```

The following example shows how Webex WFO calculates the number of points earned on an evaluation form with four sections:

Section	Weight	Points Earned	Points the Section Contributes to the Total Score
1	25%	85	21.25
2	25%	60	15
3	25%	65	16.25
4	25%	90	22.5
Total Points Earned			**75**

Percentage score

The percentage for a scored evaluation form is calculated using the following formula:

```
Form Percentage =
Form Points Earned ÷ Form Possible Points
```

The following example shows how Webex WFO calculates the percentage score from the previous two tables:

```
75 ÷ 88.75 = 84.51%
```

Point-based scoring

When you create an evaluation form, you must choose either point-based scoring or Percentage-based scoring. Point-based scoring is based on a range of whole numbers. The minimum number can be less than zero.

> **EXAMPLE** The minimum number of points on a form is −50, and the maximum number of points is 150. A score of 0 is considered adequate or average. Positive points are awarded for exceptional service when the agent performs beyond the normal expected outcome. Negative points are subtracted for poor service and indicate the agent needs additional coaching.

The minimum score for a points-based evaluation form is the total of all minimum scores that are assigned to questions.

The maximum score for a points-based evaluation form is the total of all maximum scores that are assigned to questions.

Assign review, evaluations, and calibrations automatically

A contact goal is a list of contacts assigned to evaluators for review, evaluation, or calibration. When you create a goal, you specify the criteria for the contacts and the due date. Goals appear on evaluators' Contact Queue page.

Prerequisites

- Your organization uses Cisco Quality Management
- Some contact criteria require Cisco Analytics (see Step 10 below)
- You have the Administer Contact Goals permissions and at least one of these permissions:
  - Create Evaluation Goal (needed to create evaluation goals)
  - Create Calibration Goal (needed to create calibration goals)
  - Create Review Goal (needed to create review goals)
- People who are assigned the goals have these permissions:
  - View Contacts
  - View Contact Goal
  - Evaluate Contact (needed to complete evaluation goals)
  - Calibrate Contact (needed to complete calibration goals)

Page location

Application Management > QM > QM Contact Flows > Contact Goal Administration

Procedures

View all goals

- Select **View Contact Goals**. Goals are sorted by goal ID.

Create a goal

1. Select **Create a new goal**.
2. Enter the goal's name in the **Name** field.
3. Select the type of task from the **Action** drop-down list.
4. Enter the number of contacts included in the goal in the **Number of Contacts** field.
5. Select the contact type from the **Contact Type** drop-down list.
6. From the **Contact Level** drop-down list, select whether the number of contacts in the goal is per agent or per team.

   > **EXAMPLE** The goal is to evaluate 10 contacts per team. You select Team from the Contact Level drop-down list.

7. Select the goal's due date from the **Goal Frequency** drop-down list. These are your options:
   - Day, Week, or Month—Webex WFO assigns the goal every day, week, or month.
   - Specific Date—Evaluators must meet the goal by a specific date and time. After this date, the goal becomes inactive. Date and time fields appear if you select this option.
   - Date Range—Evaluators must meet the goal between a specific date range. After the end date, the goal becomes inactive. Effective Start Date and Effective End Date fields appear if you select this option.
8. (Optional) To limit the goal to contacts received within a specific time frame, select **Only assign a contact between these dates** and select the start date and end date.
9. (Optional) Enter instructions for the evaluators in the **Instructions** field.
10. From the **Classifier** drop-down list, select the first criterion for Webex WFO to use when selecting contacts for the goal. Additional fields appear based on your selection. These are your options:
    - Calls Less Than—(Call only) Calls that are shorter than a specific duration. Enter the duration or click the clock icon to select it.
    - Calls Greater Than—(Call only) Calls that are longer than a specific duration. Enter the duration or click the clock icon to select it.
    - Has Metadata Field—Contacts that have a particular metadata field, no matter what value is in that field. Select the metadata field.

- Has Metadata Field With Value—Contacts that have a particular metadata field with a specific value. Select the metadata field and enter the value.
- To—(Text and Email only) Contacts sent to a specific recipient. Enter the recipient.
- From—(Text and Email only) Contacts received from a specific sender. Enter the sender.
- Subject—(Email only) Contacts with a specific keyword in the subject line. Enter the keyword.
- Random Call/Text/Email—Any contacts that are within the evaluator's scope.
- Reason—(Call only) Contacts with a particular value in the Reason field. Select the reason.
- Predictive Net Promoter Score Less Than—Contacts with a predicted net promoter score less than a specific number. Enter the score. (Requires Cisco Analytics)
- Predictive Net Promoter Score Greater Than—Contacts with a predicted net promoter score greater than a specific number. Enter the score. (Requires Cisco Analytics)
- Predictive Evaluation Score Less Than—Contacts with a predicted evaluation score less than a specific number. Enter the score. (Requires Cisco Analytics)
- Predictive Evaluation Score Greater Than—Contacts with a predicted evaluation score less than a specific number. Enter the score. (Requires Cisco Analytics)
- Channel—(Email, Chat, and SMS only) Contacts that happened in a specific channel. Select the channel. This option appears if your organization uses a supported integration for social media contacts. The channel options vary based on the types of social media your organization uses.

11. Click **Add**.
12. (Optional) Select additional criteria from the **Classifier** drop-down list, and click **Add**. If Webex WFO doesn't find any contacts that meet the first classifier you selected, it will look for contacts that meet the second classifier, and so on, until it finds at least one contact. If it finds at least one contact that meets a classifier, it stops looking for contacts that meet other classifiers that are lower on the list.

> **NOTE** If Webex WFO finds no contacts that meet any of the classifiers for a goal, it does not assign the goal to evaluators. If a contact that meets a goal classifier becomes available later, then Webex WFO assigns the goal to evaluators. This delay in assigning goals could prevent evaluators from meeting that goal for a particular time period.

13. (Optional) To reorder the classifiers, select a classifier and click the up or down arrows. To delete a classifier, select it and click **Remove**.
14. In the **Users** section, move the evaluators who must complete the goal from **Available** to **Assigned**.
15. Select **Active** in the **Goal Status** section.

    > **IMPORTANT** Activate a goal only when you are completely finished creating it. You cannot edit an active goal.

16. Click **Save**.

Copy a goal

If you need to create a new goal that is similar to an existing goal, copying the goal is easier than creating the goal from scratch.

1. Select **Copy an existing goal**.
2. Select the original goal from the **Pick an existing goal to copy** drop-down list.
3. Edit the copy if needed.
4. Select **Active** in the **Goal Status** section.

    > **IMPORTANT** Activate a goal only when you are completely finished creating it. You cannot edit an active goal.

5. Click **Save**.

Change the people assigned to an active goal

The only thing you can change about an active goal is the people who are assigned to it.

1. Select **Edit an existing goal**.
2. Select the goal from the **Pick an existing goal to edit** drop-down list.
3. In the **Users** section, move people to or from the **Assigned** column.
4. Click **Save**.

Edit a goal

You can only edit goals with Editable status.

1. Select **Edit an existing goal**.
2. Select the goal from the **Pick an existing goal to edit** drop-down list.
3. Edit the goal and click **Save**.

Delete a goal

You can't delete a goal, but you can deactivate it. Deactivated goals no longer send contacts to evaluators' contact queues.

> **IMPORTANT** Deactivating a goal is permanent. You cannot reactivate or edit an inactive goal, but you can copy it. See Copy a goal.

1. Select **Edit an existing goal**.
2. Select the goal from the **Pick an existing goal to edit** drop-down list.
3. In the **Goal Status** section, select **Inactive**.
4. Click **Save**.

Related topics

- Access contacts assigned to you—Information about contact goals from the evaluator's perspective

Assign review, evaluations, and calibrations manually

You can create a task in which one or more users can calibrate, evaluate, or review one or more contacts. Webex WFO adds the contacts assigned by this task to the contact queue for those users (see Access contacts assigned to you).

> **NOTE** The contacts you use to create tasks must be less than a year old. Contacts more than a year old do not appear in the contact queue. To share a contact that is more than a year old, see Create hyperlinks to recordings.

Create an ad hoc task

1. Select one or more contacts.
2. Click **Create Task**. The Ad Hoc Task Configuration page appears.
3. Enter a name for your ad hoc task.
4. Select the task type. The task you select determines which users are available in the **Assign To** field. Webex WFO displays only users who have the permissions to perform the specified task.

- **Calibrate**—Multiple users can be assigned the task of calibrating the selected contacts. The **Evaluation Form** field appears when you select **Calibrate**. Select the form that you want to use to calibrate the contact.

  > **NOTE** If you select this option, any contacts not already marked for calibration will be marked for calibration after you create the task.

- **Evaluate**—Only one user can be assigned to evaluate the selected contacts. The **Evaluation Form** field appears when you select **Evaluate**. Select the form that you want to use to evaluate the contact.
- **Review**—Multiple users can be assigned to review (listen to) the call. The **Playback Duration Configuration** slider appears when you select **Review**. The slider determines the percentage of the call (from the beginning) the assignee must review to complete the task. The default is 100%. You can select the percentage in increments of 10%.

5. Select the users to whom you are assigning the task. If you are assigning a Calibration or Review, click **Select All** to add all users in the group to the task.
6. Enter a completion date for the task, or click the calendar icon and select a completion date.
7. (Optional) Select the **Notify on Complete** check box if you want to receive a notification when each assignee completes the task.

   > **NOTE** To be notified, you must also be assigned to the Contact Goal Completed notification.

8. (Optional) Enter any specific instructions for the assignees.
9. Click **Create Task**.

Mark a contact for calibration

When you mark a contact for calibration, any user whose role includes the Calibrate Contact permission and who has scope over the contact can evaluate the contact in the calibration mode.

The scores from an evaluation completed in the calibration mode are included in the Evaluation Calibration report, where you can compare and contrast the scores that all evaluators gave the contact. This allows you to see whether your evaluators give consistent scores.

For more information about calibration, see Calibrate evaluators.

Mark a contact for calibration

1. On the Interactions page, select a contact in the contacts table.
2. Click the **Mark for Calibration** icon.
3. Select the desired evaluation form.
4. Click **OK**.

Evaluate a contact

Evaluators use the Evaluation panel within the Media Player to score agents' work handling contacts. Answering questions in an evaluation form generates a score for the agent's work on a single contact. Contacts of any type and with any type of content (voice, screen, text, and so on) can be evaluated. The performance statistics in QM, Data Explorer, and Insights reports are based on these scores.

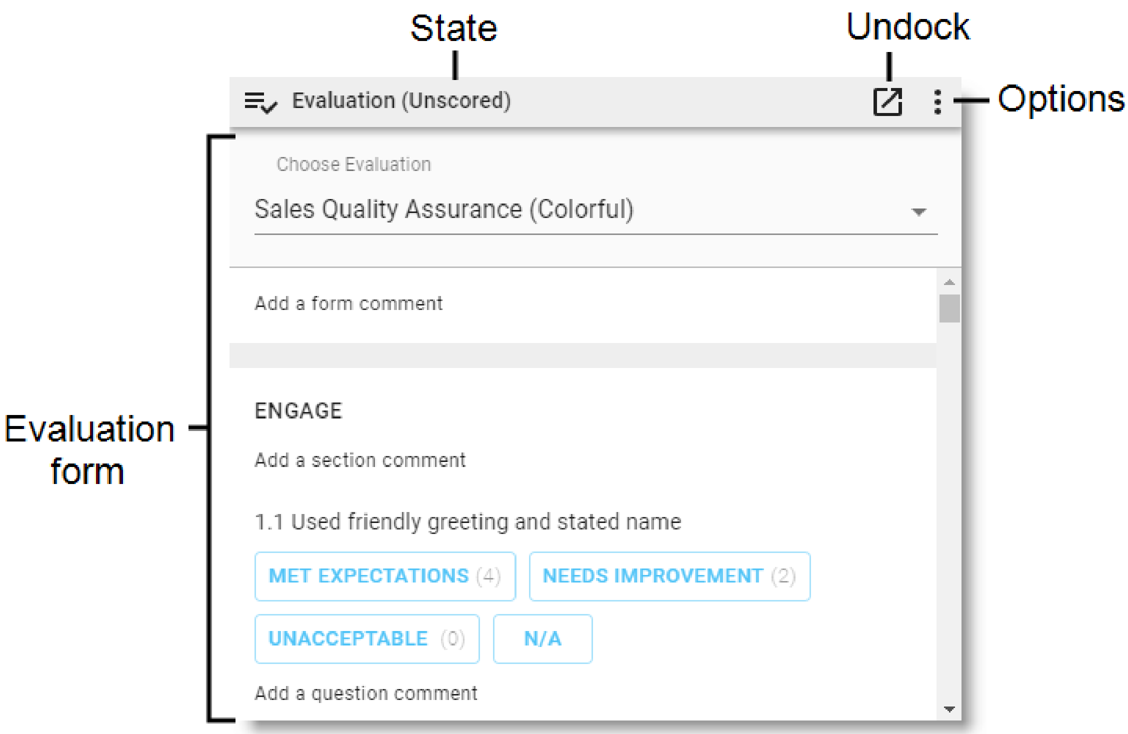
Prerequisites

- Your organization has QM and Webex WFO Access licenses.
- Your organization has created and published evaluation forms (see Manage evaluation forms).
- Your role and scope allow you to view recordings.
- You have the View Evaluations permission (gives you view-only access to completed evaluation forms).
- You have the Evaluate Contacts permission.
- Some actions require additional permissions. See the Procedures section below for more information.

Page location

You can access the Evaluation panel in two ways:

- Interactions > Double-click a contact > Evaluation panel
- Contact Queue > Double-click a contact > Evaluation panel



Procedures

View an evaluation in a larger window

- Click the undock icon. To return the form to its original place, click the redock icon, or close the window.

NOTE You cannot undock forms if you are using a pop-up blocker. To undock forms, disable your pop-up blocker.

Evaluate a contact manually

1. In the **Manual evaluation** tab, select an evaluation form from the **Choose Evaluation** drop-down list. Sometimes the evaluation form is already selected.

   NOTE You cannot switch the evaluation form if the evaluation was started by another person or is in the Needs Approval or Scored state. To change the form for an evaluation in the Needs Approval or Scored state, someone with the Approve Contact Evaluation permission must reject the evaluation to return it to the In Progress state.

2. As needed, click **Play** and **Pause** to review the contact.

3. Answer the questions in the evaluation form. The **Current Score** and **Section Score**s update as you work.
   - If you can't score the contact, click the options icon ⋮ and select **Cannot Score**. The state changes to **Cannot Score** or **Needs Cannot Score Approval**.
   - To change all the unanswered questions to your organization's standard answers, click the options icon ⋮ and select **Set Unanswered Questions to Default**.
4. (Optional) To add a comment:
   - About the contact as a whole, click **Add a form comment**, enter the comment, and click **Add Comment**.
   - About a section in the evaluation form, click **Add a section comment**, enter the comment, and click **Add Comment**.
   - About a question in the form, click **Add a question comment**, enter the comment, and click **Add Comment**.

   > **NOTE** To add a comment to a specific time in an audio contact, enter the timestamp in the **Location** fields before you click **Add Comment**. A **C** icon appears in the **Audio** panel at the location you specify.

   > **NOTE** You need the Create Evaluation Comment permission to add comments to evaluations.
5. To finish the evaluation, click the options icon ⋮ and select **Complete**. The state changes to **Scored** or **Needs Approval**, and the **Current Score** changes to **Final Score**.

> **NOTE** If you close the contact before you complete the evaluation, Webex WFO automatically saves the form and marks it as In Progress. The agent will not see the evaluation until it is complete.

View an AI-evaluated contact

- In the **Auto evaluation** tab, view the scores that were automatically generated.

Edit an AI-evaluated contact

1. In the **Auto evaluation** tab, to override a score generated by AI, click **Edit score**.
2. Select **Yes 100%**, **No 0%**, or **N/A**.
3. Add a comment.

4. Click **Save score**. This will also update the overall score.

   NOTE You can only use this feature if you have edit permissions.

Edit a completed evaluation

You can change the answers for any evaluation that you completed. To change an evaluation completed by someone else, you need the Edit Any Evaluation permission.

1. Click the options icon ⋮ and select **Edit**. The state changes from **Scored** to **In Progress**.
2. Edit the evaluation as needed.
3. Click the options icon and select **Complete**. The state changes from **In Progress** to **Scored**.

Edit a comment in an evaluation

You need the Edit Evaluation Comment permission to do this.

1. Click the comment.
2. Click **Edit**.
3. Edit the comment as needed.
4. Click **Update Comment**.

Delete all answers from an evaluation

You can clear answers from any evaluation that you completed. To clear answers from an evaluation completed by someone else, you need the Edit Any Evaluation permission. If the evaluation's state is Scored, deleting the answers also deletes data related to the score (for example, metrics in Data Explorer reports).

- Click the options icon ⋮ and select **Reset Form**. The state changes from **In Progress** or **Scored** to **Unscored**.

Evaluate a contact for a calibration exercise

In a calibration exercise, multiple evaluators score the same contact and then compare their scores. Calibration exercises help ensure that agents get consistent scores, regardless of who evaluates their contacts. These are the requirements to be part of a calibration exercise:

- You have the Calibrate Contact permission.
  - To calibrate a contact that you handled, you need the Self Calibrate Contact permission.
- The contact is marked for calibration.
- The agent whose contact you are evaluating is within your scope (see Mark a contact for calibration).

1. Click the options icon ⋮ and select **Mode**.
2. Click **Choose a mode** and select **Calibration**. The evaluation state changes to **Calibration (Unscored)**.

   > **NOTE** By default, all contacts are in Evaluation mode, even if they have been marked for calibration.

3. Evaluate the contact as normal. The state changes to **Calibration (In Progress)**.
4. Click the options icon and select **Complete**. The state changes to **Calibration (Scored)**.

Print an evaluation

- Click the options icon ⋮ and select **Print**. Your browser's print window opens. From here, you can also save the evaluation as a PDF.

Acknowledge an evaluation of your work

(For agents) Depending on how your organization uses Webex WFO, you might be required to review and acknowledge your evaluations. This option is available if the person who created the form selected the "Allow Agent to Acknowledge Scored Evaluations" option on the form.

- Click the options icon ⋮ and select **Acknowledge Evaluation**. A banner with your name and today's date appears underneath the name of the evaluation form.

Appeal an evaluation of your work

(For agents) If you disagree with an evaluation, you might be able to request that your work be rescored. This option is available if the person who created the form selected the "Allow Agent to Acknowledge and Appeal Scored Evaluations" option on the form.

1. Click the options icon ⋮ and select **Appeal Evaluation**.
2. Enter the problem with the evaluation in the **Provide reason for appeal** field.
3. Click **Appeal**. A banner with your name and today's date appears underneath the name of the evaluation form. If you get alerts or emails about new evaluations, you will receive an update when someone reviews your appeal.

Review an appealed evaluation score

To be notified when an agent appeals an evaluation you completed, you must be assigned to the Evaluation Appeal Request notification (see Configure notifications). When you get an appeal notification, do one of two things:

- Revise the evaluation and then click **Complete**.
- Click **Complete** without changing anything.

Approve a completed evaluation

This option is available if the person who created the form selected the "Approval Required" option on the form. You need the Approve Contact Evaluation permission to approve an evaluation completed by someone else. To approve an evaluation that you scored, you need the Self-Approve Contact Evaluation permission. To be notified when an evaluation needs approval, you must be assigned to the Evaluation Needs Approval notification (see Configure notifications).

- Click the options icon ⋮ and select **Approve**. The state changes from **Needs Approval** to **Scored**.

Reject a completed evaluation

This option is available if the person who created the form selected the "Approval Required" option on the form. You need the Approve Contact Evaluation permission to do this. To be notified when an evaluation needs approval, you must be assigned to the Evaluation Needs Approval notification (see Configure notifications).

- Click the options icon ⋮ and select **Reject**. The state changes from **Needs Approval** to **In Progress**.

Related topics

- Manage evaluation forms—Create, edit, publish, and archive the forms used for evaluations.
- Mark a contact for calibration—Make a contact part of a calibration exercise.
- Configure notifications—Subscribe to notifications, or assign notifications to other people.
- Manage roles and permissions —Create roles and assign permissions to them.

Calibrate evaluators

A calibration is a special type of evaluation that allows multiple users to evaluate a single contact. Calibration helps ensure consistency among evaluators by allowing you to compare how different evaluators completed the same evaluation.

If a contact is marked for calibration, an evaluator can complete the evaluation form as a calibration as well as a standard quality evaluation. Make sure to select the appropriate mode when you evaluate a contact.

Only the Evaluation Calibration report includes the calibration score. Neither team nor agent results in Dashboard or Reports include the calibration score.

NOTE When a contact is scored as a standard quality evaluation, it appears as scored when you search for All Evaluations or My Evaluations. When it is scored as a calibration, it appears as scored when you search for My Pending Calibrations.

Find contacts marked for calibration

1. On the Interactions page, click the **Filter list** icon. The Filters panel opens.
2. Configure a filter set that includes the **Search Scope** filter, with the criteria of **My Pending Calibrations**.
3. Click **Apply**. The filter results display all contacts within your scope that are marked for calibration.

Evaluation calibration report

The Evaluation report displays calibrated evaluation score results. It reports only scored evaluations marked for calibration. It does not display standard evaluation scores. Use this report to evaluate your evaluators.

NOTE You must have the View Evaluator Details permission enabled in order to have access to this report.

NOTE This report might take several minutes to generate.

Analyze evaluation data

In addition to standard evaluation reports, you can also use Analytics to predict net promoter scores or evaluation scores.

View evaluation reports 554
Configure predictions 555

View evaluation reports

In Webex WFO, the time associated with a contact is the time the contact occurred at the agent’s location. If the time zone associated with the contact is unknown to Webex WFO, then the time is displayed in Greenwich Mean Time (GMT).

Scores are rounded up for individual sections in evaluation and survey forms. However, in reports that show section averages for agents, teams, and groups, the section scores are first added and averaged before being rounded up. As a result, the average displayed in reports will vary slightly from the number calculated by adding up section scores as displayed in an evaluation or survey form and then averaging them.

For information about the standard QM and WFM reports that come with Webex WFO, and for instructions on how to run a standard report, see QM standard reports and WFM standard reports.

Configure predictions

With predictions, you can configure Webex WFO to estimate a contact's net promoter score or evaluation score. Based on the predicted score, you can then create an automated workflow that sends the contact to an evaluator. Predictions help your evaluators focus on contacts that are most likely to result in agent coaching.

The predictive engine combines the scores from contacts over the past six months with Analytics data and creates a new model each week. The default day to create a new model is Sunday, but a system administrator can select a different day.

Prerequisites

- Your organization has an Analytics Essentials or Analytics Enterprise license.
- You have the Administer Predictive Analytics permission.
- You have scope over the agent group that the prediction is for. You must have scope over the group, not just teams within the group.
- For predictive net promoter scores, you have at least 1,000 contacts with associated net promoter scores.
- For predictive evaluations, you have at least 1,000 contacts evaluated with the same form.

Page location

Varies. See the procedures below for more information.

Procedures

There are two steps to configuring the predictive features in Webex WFO: creating a model and applying the model. To create the model, you must first supply the predictive engine with scores for existing contacts.

Predictive Net Promoter Scores

The Predictive Net Promoter Score model uses customer contacts, agent performance, speech hits, and other factors to determine a likely net promoter score for the contact. The scores that the model creates appear in the Predictive Net Promoter Score field on the Interactions page and in the Predictive Net Promoter Score dashboard in Data Explorer. You can also add them to dashboards in both Data Explorer and Cisco Data Management.

Webex WFO creates predictive net promoter scores for audio contacts only. Other kinds of contacts do not support predictive net promoter scores.

Configure the Predictive Net Promoter Score model

1. On the Metadata Manager page (Application Management > QM > QM Configuration > Metadata Manager), create a new metadata field. See Manage custom metadata fields for more information.

   IMPORTANT Enter “Net Promoter Score” in the **Metadata Label** field. This label is not case sensitive.

2. Configure the Net Promoter Score metadata field that you just created with the Net Promoter Score information from your customers.

   NOTE See Add post-call surveys to contacts to integrate net promoter scores captured in post-call surveys.

   The predictive engine will pull the necessary information and create a model on the following Sunday.

Apply the Predictive Net Promoter Score model

- On the Task Manager page (Application Management > Analytics > Task Manager), create a new task. Select **Predictive Net Promoter Score** from the **Type** drop-down list. See Create Analytics tasks for more information.

Predictive Evaluation Scores

The Predictive Evaluation Score model uses a variety of factors to determine a likely evaluation score (on a specific evaluation form) for the contact. Predicted scores appear in the Predictive Evaluation Score field on the Interactions page and in the Predictive Evaluations dashboard in Data Explorer. You can also add them to dashboards in both Data Explorer and Cisco Data Management.

Webex WFO creates predictive evaluation scores for audio contacts only. Other kinds of contacts do not support predictive evaluation scores.

Each evaluation form needs its own model. To create models for multiple forms, follow the steps below for each form.

Configure the Predictive Evaluation Score model

1. On the Evaluation Form Management page (Application Management > QM > QM Configuration > Evaluation Form Manager), create an active evaluation form. See Manage evaluation forms and

Advice for evaluation forms for more information.

2. On the Phrase Manager page (Application Management > Analytics > Phrase Manager), create phrases and categories that closely relate to the questions that the evaluation form asks. See Create and manage phrases and phrase categories or for more information.

> **EXAMPLE** The evaluation form asks, “Did the agent properly greet the caller?” You have an Analytics phrase category called “Greeting” with phrases like “thank you for calling,” “my name is,” and “how may I help you today.”

3. Use the evaluation form to manually evaluate at least 1,000 contacts.
4. On the Workflow Administration page (Application Management > QM > QM Contact Flows), create a workflow that applies the form to incoming calls.

> **IMPORTANT** The workflow must apply the evaluation form either before or at the same time as the contact audio is uploaded to Webex WFO. Contacts do not receive predictive evaluation scores if the evaluation form is applied after the audio is uploaded. See Automate QM workflows for more information.

Apply the Predictive Evaluation Score model

- On the Task Manager page (Application Management > Analytics > Task Manager), create a new task. Select **Predictive Evaluation Score** from the **Type** drop-down list. Select the **Ongoing** check box. See Create Analytics tasks for more information.

Best practices

General

Predictive scores are intended to supplement (not replace) manually scored contacts.

While there is no ideal number of scores that will create a perfect model, maintaining a large number of scored contacts (at least 1,000) is necessary for the model to become more accurate over time. The predictive model continues to learn as it receives more data, but it does not use data that is older than six months. To keep the model accurate, you must continue giving it data, either by pulling in more net promoter scores or by continuing to use the evaluation form for manual evaluations. If the number of available scores falls below 50, the model will stop working.

You can create an ad hoc Analytics task using the predictive features. However, the predictive models use data from only the past six months. If you run an ad hoc task on contacts older than six months, you are less likely to get accurate data.

For best results, the Analytics retention time (set on the Analytics Configuration page) should be at least six months. See Configure Analytics.

Tune your phrases and categories periodically. Tuning helps ensure your categories and phrases are relevant and return the calls you need for analysis. Follow tuning best practices.

Predictive Net Promoter Scores

WFM data greatly improves the accuracy of the Predictive Net Promoter Score model.

Predictive evaluations

Create phrases and categories using the language that agents are callers are most likely to use.

Create phrases and categories that cover a variety of possible phrases that agents could say. Agents typically do not repeat scripts verbatim. Using multiple phrases helps increase the probability that Webex WFO will return a phrase hit.

In addition to creating phrases and categories related to the questions the evaluation form asks, consider creating phrases and categories for the answers that callers are likely to provide. For example, in answer to the question, “Have you had any accidents in the past five years?” callers’ replies are likely to be something like, “No, I haven’t had any accidents” or “Yeah, I’ve had one accident.” If the agent deviates significantly from the script, the caller’s answer might help Webex WFO to recognize a phrase hit.

If you need to revise the evaluation form that Webex WFO is using to create a Predictive Evaluation Score model, create a new form instead of editing the existing form. If the evaluation form is changed and the form’s ID remains the same, the model will not update to account for the change. As a result, the predicted scores will be less accurate. See Manage evaluation forms

Calibrate your evaluators using the evaluation forms that are used for predictive scores. The Predictive Evaluation Score model will become more accurate over time if the data that it is based on is accurate and consistent. For example, if there is a 10% to 15% difference in your manual evaluation scores, your predictive evaluation scores will have an even larger difference. See Calibrate evaluators.

In many contact centers, it’s common for a contact to earn either a very high score or a very low score. However, a lack of mid-range scores can result in less accurate predictions because the model doesn’t have enough information to learn what a mid-range contact looks like. Coach your evaluators to give mid-range scores whenever they are appropriate instead of scoring a contact either very high or very low.

For a contact to receive a predictive evaluation score, it must be processed with a QM workflow that assigns an evaluation form either before or at the same time as it uploads the audio. If a contact's audio is uploaded to Webex WFO before the contact receives an evaluation form, you must use ad-hoc Predictive Evaluation Score tasks to generate a predictive scores for this contact. See Create Analytics tasks.

Differences between predictive scores and manual scores

If you see significant differences between predictive scores and scores given by human evaluators, the cause might be one of two issues.

Differences among human evaluators

Because the Predictive Evaluation Score model uses scores from human evaluators to learn over time, inconsistencies in scores among evaluators can confuse the model. To correct this inconsistency, we recommend the following:

- As an organization, decide what amount of variation among human evaluators is acceptable. Keep in mind that the Predictive Evaluation model will vary more.
- Calibrate your evaluators regularly to maintain consistency in scoring.
- Check to see that categories and phrases align with evaluation questions. Look for commonly occurring false positives or negatives and adjust as needed.

Differences in calls evaluated

Webex WFO creates a predictive evaluation score for all calls that are associated with the evaluation form(s) used to create the model(s). If your human evaluators manually evaluate specific kinds of calls instead of random calls, you might see differences in scores because the two groups of calls being compared are different. In other words, you're comparing apples and oranges. Consider these examples:

- You use workflows to select calls with long or short handle times and calls handled by new agents for manual evaluation. These are all different from average calls and are scored differently.
- Your evaluators do not evaluate very long or very short calls. These calls would have very different scores from average calls.
- When there are many calls in the queue, team leaders or supervisors handle calls to reduce hold time. Evaluators do not evaluate calls handled by team leaders or supervisors.
- You recently retrained your agents or your evaluators. Manual scores are different right away in response to the training, but predictive scores might take some time to catch up. To see the impact of the retraining, adjust the date range for the predictive scores to match the date when the retraining took effect.

To accurately compare manual and predictive scores, make sure you are comparing scores for similar dates and call types.

Related topics

- Manage custom metadata fields
- Add post-call surveys to contacts
- Configure Analytics
- Create Analytics tasks
- Manage evaluation forms
- Advice for evaluation forms
- Create and manage phrases and phrase categories
- Automate QM workflows
- Calibrate evaluators

Monitor agents in real time

The Agent Monitoring page lets you listen in on a call and view an agent's screen in real time. Use live monitoring to ensure customer service quality and the agents' proficiency in handling customer contacts and associated tools.

With live audio monitoring, you can hear (but not interact with) any party on a call. With live screen monitoring, you can view an agent's screen activity, whether or not that agent is on a call. You can monitor only one agent at a time.

> **NOTE** The Smart Desktop Client - Screen Recording Priority field on the QM Global Settings page lets you set where the screen recording takes place (at the thin client or endpoint/PC) when an agent is logged in to both. (See Configure QM global settings.)

Prerequisites

- Your organization has one of these license combinations:
    - Quality Management (QM)—Provides screen and audio monitoring
    - Compliance Recording (CR) with the additional Monitoring license—Provides screen monitoring
    - Workforce Management (WFM) with the additional Monitoring license—Provides screen monitoring
- You have the Agent Monitoring permission.
- You are using Chrome, Firefox, or Edge Chromium as your browser.
- (for live screen monitoring) Both you and the agent have the Live Screen Monitoring permission.
- (for live screen monitoring) Smart Desktop is installed on agent PCs.
- (for live audio monitoring) Both you and the agent have the Live Audio Monitoring permission.
- (for live audio monitoring) The agent is currently on a call.
- (for live audio monitoring) Webex WFO records agents' calls through desktop recording (endpoint) or server recording (Cisco BiB or Avaya DMCC). Live audio monitoring is not available if your system uses gateway recording or CCaaS recording solutions where the CCaaS vendor records the audio.
- (for NAT environments only) The Webex WFO environment includes a configured STUN/TURN server.
- Ports TCP/UDP 49152–65535 are open in your firewall.

Page location

Application Management > Global > Monitoring > Agent Monitoring

Procedures

Filter the list of agents

- By default, the page displays all connected agents within your scope along with their current status. To more easily locate the agent you want to monitor, use the **Group**, **Team**, and **Agent** drop-down filters to narrow the list of agents.

- Further narrow the list of agents by selecting the **Show only connected users** or **Desktop Client** check boxes.

Check box	What it shows you
Show only connected users	Agents who can be monitored right now. They are either ■ Logged in to a computer that has Smart Desktop Capture installed and are connected to the Webex WFO app server *or* ■ Recorded via network recording and associated with a device via the Device Associations page (see Associate phones with agents, recording groups, and recording types)
Desktop Client	Agents who are logged in to a computer that has Smart Desktop Capture installed.
Live Monitor	Agents who have the Live Screen Monitoring and/or Live Audio Monitoring permission.

- You can also limit results by choosing the number of past days' data to display.
- Click **Reset** at any time to revert to the default filter settings.

Monitor an agent's audio

You can hear audio only if the agent is on a call.

PREREQUISITE Audio monitoring requires a QM license. It is not available with the Monitoring license.

NOTE Before starting a live audio monitor, always verify that the agent is logged in.

NOTE If you use a Cisco phone without a headset, you might need to lift the handset before beginning live audio monitoring.

1. Click the agent's audio monitoring icon . The icon's color indicates the agent's monitoring status.

Color	What it means
Black	The agent can be monitored. ▪ The agent is configured for desktop recording and has Smart Desktop Client running on their PC with the correct permissions for live audio monitoring. ▪ The agent is configured for server recording and is assigned to a monitored device on the Device Associations page (Application Management > QM > QM Configuration > Device Associations).
Gray	The agent cannot be monitored. ▪ The agent is configured for desktop recording but is not logged in, does not have Smart Desktop Client running on their PC, or does not have the correct permissions for live monitoring. ▪ The agent is configured for server recording and is offline or not assigned to a monitored device on the Device Associations page (Application Management > QM > QM Configuration > Device Associations).
Green	The agent is being monitored.
Blinking yellow	The agent is available but for some reason cannot be monitored.
Red	There is a connection error, and the agent cannot be monitored.

Webex WFO does not track or provide call control for the session, but you can transfer the call to another device as you would a normal call.

2. To end the monitoring session, click the audio monitoring icon again.

Monitor an agent's screen

1. Click the agent's screen monitoring icon . The**Live Screen Monitoring**window opens. The icon's color indicates the agent's monitoring status.

Color	What it means
Black	The agent can be monitored. They have Smart Desktop Client running on their PC with the correct permissions.
Gray	The agent cannot be monitored. They are offline or do not have correct permissions.

2. Click **Screen** to start the monitoring session. Click **Audio** to monitor the agent's call.
   - If the agent locks their screen, the progress bar at the bottom of the window displays the pause icon.
   - If the agent's PC goes into sleep mode, the window stops displaying activity.
   - Monitoring does not automatically resume when the agent logs back into their PC. To resume monitoring when the agent is logged back in, close the current window and reconnect.
3. To end monitoring, click **Disconnect**.

Export agent monitoring data

- Click **Export** to export all the agent monitoring data displayed on the page in CSV format. The export file is named **agents.csv**.

Related topics

- Associate phones with agents, recording groups, and recording types
- Configure QM global settings

Create a contact

If your agents interact with customers in other ways besides over the phone, you can still evaluate their non-call activities by manually creating a contact.

Examples of non-call activities include:

- Monitoring an agent's screen
- Performing customer service counter work
- Chatting

- Emailing
- Interacting on social media

An evaluator can assign an evaluation form, evaluate the contact, and insert contact metadata.

If you plan to evaluate a manually created contact, you should also use an evaluation form that is specifically created for non-call activities. This allows Dashboard and Reports to accurately report non-call activities. For more information about configuring evaluations, see Advice for evaluation forms.

Create a contact

1. Click the **List options** icon.
2. Click **Create Contact**.
3. Enter or select the date and time that the contact occurred. The default is today's date.

   > **NOTE** The same user cannot be associated with multiple manually created contacts that occur simultaneously.

4. Select a team, agent, and evaluation form.
5. Click **Create**.

Schedule people

Create schedules

A schedule lists the times when agents are in service for a service queue. For each agent, a schedule includes the start and end times for work shifts, breaks, lunches, exceptions, overtime, and projects.

> **NOTE** There are two ways to run a schedule: the standard way (described in this topic) and the ad-hoc way. See Add an agent to an existing schedule for more information.

Schedules are based on the agents' work shifts. When WFM generates a schedule, it takes into account the agents' work shifts and the forecast associated with the agents' service queue. WFM looks at the requirements and the agents' availabilities to create the most optimal schedules for the contact center and its agents.

> **NOTE** Schedules are generated midnight-to-midnight for the week in the agents' scheduling time zones.

WFM can also use shrinkage metrics when creating schedules. Shrinkage is applied against a full 24-hour period and increases the number of actual FTE (full-time equivalent) scheduled.

When creating a schedule, WFM sorts the service queues (both those individually selected and those assigned to the selected multiskill groups) by the service queue priority. Then, for each service queue, it sorts the agents by skill mapping priority and multiskill group priority, followed by the service queue scheduling order.

Agents assigned to fixed and dynamically scheduled work shifts are scheduled before agents assigned to variable work shifts. Agents assigned to assignment work shifts are scheduled last. After sorting agents, WFM schedules the first agent based on the agent's work shift preferences and optimizes the agents' breaks, lunches, and projects based on the minimum and maximum delays entered. The work shifts, breaks, lunches, and projects are influenced by coverage requirements. After scheduling the first agent, WFM schedules the next agent, and so on.

Closed dates and fixed work shifts

When WFM schedules an agent with a fixed or dynamically scheduled work shift, it schedules the agent for days, hours, and arrival times exactly as specified in the work shift configuration. It does not take into account a closed date for a service queue. As a result, an agent with a fixed work shift can be scheduled to work on a day when the contact center is closed (for example, a mid-week holiday).

To prevent this situation, create an exception and assign it to agents with fixed work shifts who would ordinarily be working on the closed day.

Scheduling order

WFM allows contact centers to define the scheduling order for each service queue by these criteria:

- Maximum hours available
- Minimum hours available
- Maximum hours per week
- Minimum hours per week
- Rank
- Company start date
- Department start date

This allows you to manage customer contact operations while maximizing the available agents for the most important activities.

NOTE Scheduling order is configured on the Service Queues page (see Manage service queues).

Depending on your contact center's policies, you can schedule agents based on their availability for a work shift, their seniority, or their ranking in the contact center.

Service queue priority

Assigning a priority number to a service queue allows WFM to resolve scheduling conflicts when agents are assigned to multiple service queues. Zero (0) is the highest priority.

To generate a schedule for a service queue, WFM finds the agents who are assigned to a skill mapping that is associated with the desired service queue. To generate a schedule for a multiskill group, WFM finds the agents who are assigned to the multiskill group. WFM then determines which agents have a work shift with available hours on the specified day. If the agent supports multiple service queues, WFM uses service queue priority to determine which service queue will be assigned to the agent for this schedule.

> **EXAMPLE** You designate some of your agents to support two service queues and assign a priority to each service queue. If WFM generates the schedules for the two service queues and discovers there are not enough agents to support all forecast requirements across both service queues, it compares the priority value for the two service queues and schedules agents for the service queue with the highest priority first.

About the scheduling process

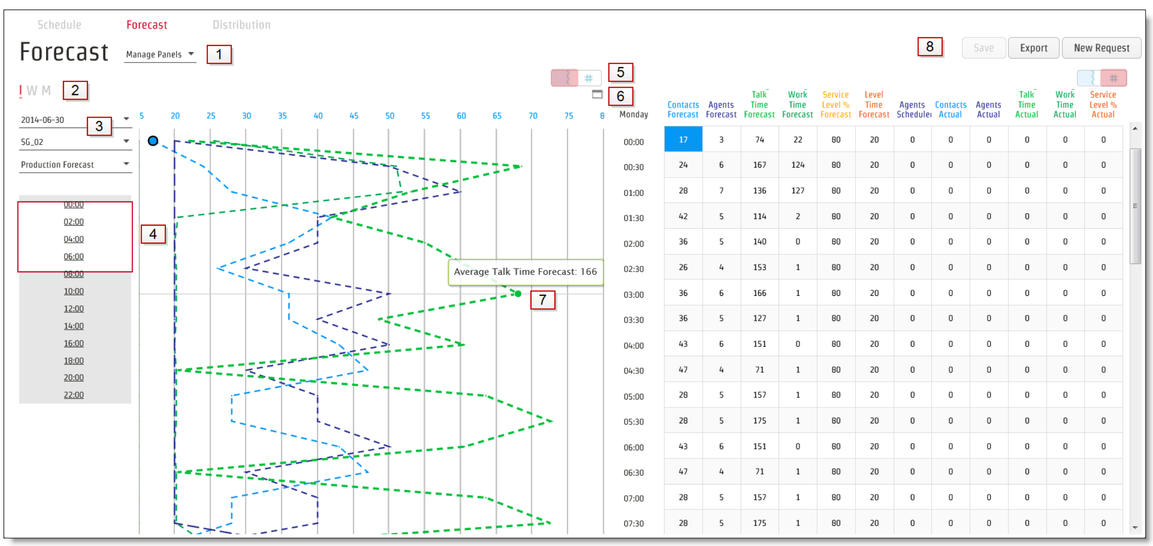
The Planning section is used to generate distributions, forecasts, and schedules.

The scheduling process follows these steps:

- Historical data is used to generate a distribution (see Create a distribution).
- The distribution and historical data are used to generate a forecast (see Create a forecast).
- The forecast is used to create a schedule (see Create schedules).

About the Planning page

The Planning page displays forecasts and distributions in both tabular and graphical format.



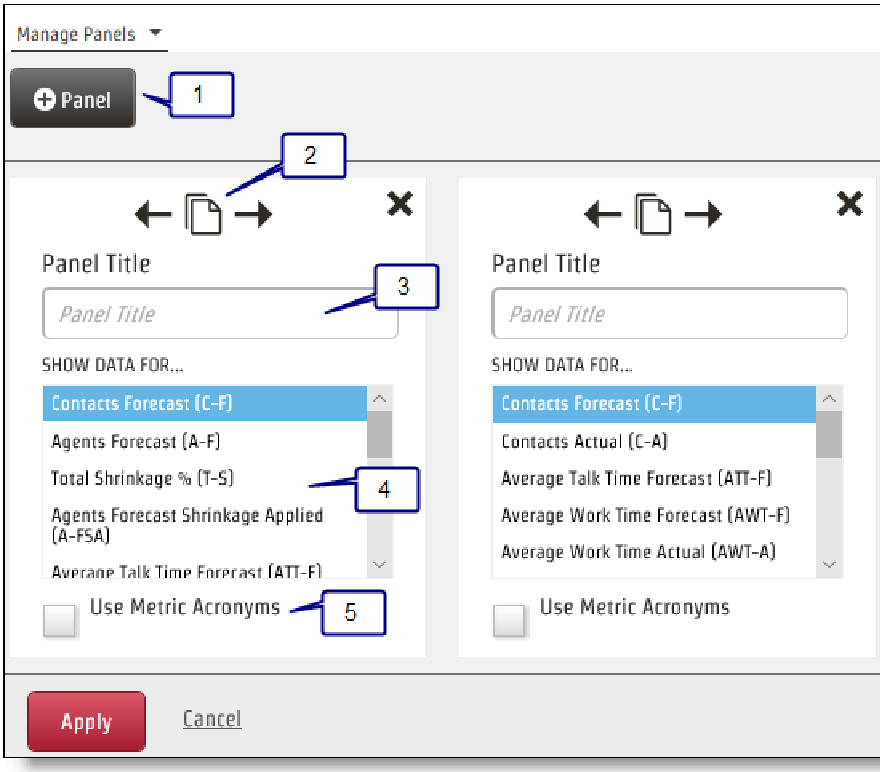
The following table describes each numbered area in this figure of the Forecast page.

Callout	Description
1	Click Manage Panels to configure the graphs and tables displayed on the page (see Panel

Callout	Description
	Manager).
2	Control the zoom level here. click D, W, or M to view your data by: ▪ Day (D)—Data is displayed by half-hour interval for one day ▪ Week (W)—Data is displayed in three-hour intervals for seven days ▪ Month (M)—Data is displayed by day for each day of the month The zoom-level control is found only on the Forecast view.
3	Select the type of forecast, the service queue, the specific forecast or distribution, the date (forecast) or day (distribution), and the time zone you want to view from these drop-down lists.
4	The long view slider shows the range of data you are viewing. Slide it up and down to change the dates viewed (week or month view) or hours viewed (interval view).
5	Graph/table control. Click the left button (graph) or right button (table) to toggle between the two views of the data in the panel.
6	Zoom button. Click this button to display the graph full width of the screen in horizontal format rather than in the default vertical format. To return to the regular view, click the rectangle at the top right hand of the screen.
7	Data points. Select a point on a line in the graph and the corresponding value in the table is highlighted (the reverse is also true: select a value in the table and the corresponding point on a line is highlighted). The lines are the same color as the column header of the data associated with it in the table. Hover text displays information about the data point. In Interval view, you can drag data points left and right to change their values.
8	Action buttons. ▪ Save—Save any changes you make to the distribution or forecast displayed. ▪ Save As—Save the displayed distribution under a new name. ▪ Export—Export the displayed distribution or forecast in CSV format. ▪ New Request—Create a new distribution or forecast request.

Panel Manager

Use the Panel Manager to configure what is displayed on a forecast or distribution page.



The following table describes each numbered area in this figure of the Panel Manager.

Callout	Description
1	Click the button to add a new panel.
2	These icons allow you to move and copy a panel. From left to right, they are: ■ Move this panel to the left ■ Add a copy of this panel ■ Move this panel to the right
3	Enter a name to identify the panel.
4	This is a list of all the metrics available to be displayed in the panel. They are selected when the text is highlighted.

Callout	Description
5	Select this check box to use metric acronyms instead of full names as table column headers. Note that selecting this for a graph has no effect on the graph. It applies only to tables.

About schedule types

When scheduling agents, you have the option of using single service queues, virtual service queues, and multiskill groups. Each has attributes that make it suitable for different situations.

- Single service queues are suitable in contact centers where single-skilled agents support a service queue. For example, there could be an English voice service queue and a Spanish voice service queue. The agents assigned to the English voice service queue handle calls from English-speaking customers all day, every day.
- Virtual service queues are suitable when you wish to combine similar service queues of the same contact type (interactive or non-interactive). For example, you can combine several low-volume voice service queues into one virtual service queue. This aggregates enough volume so that accurate forecasting and scheduling can occur. Statistics for the individual low-volume service queues will not be available through WFM (but would be obtainable from the ACD). Note that this unavailability might not be of importance in your contact center.
- Multiskill groups are suitable when you want to aggregate multiple service queues and multiple contact types and to schedule agents proportionally to support them. For example, a multiskill group might include service queues for English voice contacts and email contacts for Product A as well as Spanish voice contacts and email contacts for Product A. Because the multiskill group is set up to allocate specific percentages of an agent’s time to each specific service queue, coverage forecasts and schedules will be more accurate for each service queue. The agent statistics are also allocated by percentage to each service queue and so are more accurate.

Both types of scheduling methods (Balanced and Prioritized) can use block scheduling (formerly known as multiskill agent queuing, or MSAQ). In block scheduling, an agent performs multiple activities, each activity during a specified block of time. In contrast, in non-block scheduling, an agent performs one activity only for the entire schedule.

An agent’s schedule can include a combination of single service queues, virtual service queues, and multiskill groups. For example, an agent might support a single service queue from 8:00 to 11:00 AM and a virtual service queue from 1:00 to 4:00 PM.

The needs of your contact center will guide you in choosing what scheduling option you use. You might find that a virtual service queue serves your purpose best or that you want to allocate agents to multiple contact types and multiple service queues during the same block of time and so opt to use multiskill groups.

> **IMPORTANT** The weights allocated to the service queues that make up a multiskill group should be as accurate as possible. If they are not accurate, the coverage for specific service queues will be too high or too low in the generated schedule.

Configure dynamic scheduling

The dynamic scheduling feature enables agents who are part of a dynamic scheduling event to select their own schedules. These schedules will appear in the Agent Schedules page once the event is over and a schedule request has been successfully submitted for the period.

Before the agents can schedule themselves, you must configure WFM as follows:

1. Create a dynamic scheduling work rule. The work rule specifies the parameters for the work shift the agent will be scheduling: hours worked per week, starting times, days worked, and so on.
2. Configure the dynamic scheduling associations between a work rule, a specific work week, and an agent. This association gives the agent the opportunity to create a schedule for the specified work week. Note that a dynamic scheduling event can cover more weeks than the agent has an association for. For example, if an agent has an association for Week 1 and Week 2, but the dynamic scheduling event covers Week 1, Week 2, and Week 3, the agent can only create a schedule for Week 1 and Week 2.
3. Configure the dynamic scheduling event. Choose the weeks that the agents can schedule themselves for, and then configure the dynamic scheduling event exception that will be added to the selected agents' schedules so they have a specific time to create their own schedules.

> **NOTE** When using dynamic scheduling, the scheduling and display time zones should be the same. The dynamic scheduling work rules are interpreted in the agent scheduling time zones, while the selections made by the agents are made in their display time zones. If these time zones were different, it is possible that shift times might fall outside the scheduling week, which might cause problems. Therefore, the display and scheduling time zones should be the same.

A scheduling event exception is added to each agent's schedule according to the agent's ranking or seniority and availability in the contact center. The highest ranked agent gets the first opportunity to schedule him or herself, the second highest agent gets second opportunity, and so on down the list of selected agents.

There are factors that affect when the scheduling event exception fits into an agent's schedule. You can configure which activities can be overwritten by the event exception, and if the exception can be scheduled during a period when the agent is not available. If an agent's schedule is such that the exception cannot be added to it, the agent is scheduled automatically by WFM as usual.

You can also specify how long a gap there can be between sequential event exceptions. If Agent B is not available immediately after the time when Agent A's exception is scheduled and a gap of more than the configured number of minutes exists, then Agent B is skipped over and Agent C is scheduled next instead. Agent B's event exception will be added to the schedule as soon as possible, but Agent B will not get a chance to create a schedule in the order of his or her rank.

Manage dynamic scheduling work rules

A dynamic scheduling work rule is used to set the parameters for the work shifts for dynamic scheduling. Work rules are assigned to agents for specific weeks.

Field descriptions

The Dynamic Scheduling Work Rules page allows you to create, edit, and delete work rules that apply to dynamic scheduling.

NOTE Dynamic scheduling does not support split shifts (work shifts that cross midnight).

The fields on the page when you create, edit, or delete a work rule are described below.

Field	Description
Work Rule Name	A unique name for the work rule.
Activate this work rule	Select this check box to activate the work rule. You must activate the work rule for it to be available for use.
Work Rule Type	Select the type of work rule this is. ▪ Uniform—The agent's work shift starts at the same time every day. Hours per day and per week are fixed. ▪ Hybrid—The agent's work shift can start at a different time every day. Hours per day and per week are fixed. ▪ Variable—The agent chooses start time, shift length, and weekly hours within the defined parameters.

Field	Description
Work Rule Parameters	The work rule parameters depend on the type of work rule you selected.
Shift Length	(Uniform, Hybrid) Length of the shift, in hours.
Hours per Week	(Uniform, Hybrid) Calculated read-only field: shift length × number of work days selected
Earliest Start Time	(Uniform, Hybrid, Variable) The earliest time that the shift can be scheduled to start.
Latest Start Time	(Uniform, Hybrid, Variable) The latest time that the shift can be scheduled to start.
Minimum Hours per Shift	(Variable) The minimum number of hours the agent can work in the shift.
Maximum Hours per Shift	(Variable) The maximum number of hours the agent can work in the shift.
Minimum Hours per Week	(Variable) The minimum number of hours the agent can work in a week.
Maximum Hours per Week	(Variable) The maximum number of hours the agent can work in a week.
Minimum Consecutive Scheduled Days	(Variable) The minimum number of consecutive days the agent is required to work.
Minimum Interval Between Work Shifts	(Uniform, Hybrid, Variable) The minimum number of hours between the end of one work shift and the start of the next work shift.
Non-consecutive days off/Consecutive days off	(Variable) Choose whether days off during the week can be non-consecutive or must be consecutive.
Work Days	(Uniform, Hybrid) The days of the week that agents must be scheduled to work. By default, Monday through Friday are selected.
Work Conditions	Select the work conditions to be applied to the work shift. If you do not assign any work conditions, and no general conditions apply, agents will be scheduled without breaks or lunches.

Manage dynamic scheduling associations

The Dynamic Scheduling Associations page allows you to set up and manage an association between a specific work week, a work rule, and agents. When those agents are given the opportunity to create their own schedules for a specific work week, the work rule that is associated with that week and those agents determines what options those agents will have when selecting their schedules. An agent can be associated with only one work rule per week.

The Agents table shows the agents that are assigned to any work rule for the selected week, the work rule they will use to schedule themselves, and their rank and company start date (used to determine the order in which they can schedule themselves). You can sort the table by any column in ascending/descending order by clicking the column header, or filter the table by agent name.

> **EXAMPLE** Select Work Rule A and associate Agents 1, 2, 3, and 4 with it by moving their names to the Assigned pane. Next, select Work Rule B and associate Agents 5, 6, 7, and 8 with that work rule by moving their names to the Assigned pane.

Once you have configured and saved the dynamic scheduling associations for a specific week, you can copy them to other weeks using the Copy function. You can set up associations for as many weeks in the future as you choose.

Field descriptions

The fields on the page are described below.

Work Week

Select the starting date of the week in which you want agents to choose their own schedules. If you select a date that is not the configured first day of the week, WFM automatically changes your selection to the first day of the week of the selected week.

Associations

Select the work rule you want to use from the Work Rule Name drop down. The work rules listed in the drop down are those configured and active on the Dynamic Scheduling Work Rules page.

In the Agents table, select the agents who will schedule themselves according to the selected work rule for the selected week and move their names to the Assigned pane.

Copy

Select the starting date of one or more weeks other than the one you configured in the Schedule Date field, and then click Copy. This copies the work rule and agents you configured to those weeks. The Copy function is not enabled until you have saved the configured associations.

Manage dynamic scheduling events

Use the Dynamic Scheduling Events page to create, edit, delete, and review a dynamic scheduling event. You can also use it to generate a report of any scheduling incentives offered for a specified date range.

The event exception is applied to the selected agents' schedules as soon as you save the event.

> **NOTE** If a schedule is rerun, the dynamic scheduling event exceptions are overwritten. You can reinsert them into the agents' schedules by resaving the event. (Make a small change in the event to enable the Save button, such as adding a character to the event name.)

Creating a new event

Create a dynamic scheduling event

1. Select the "Create a new dynamic scheduling event" option.
2. Complete the sections on the page. See below for an explanation of the sections.
3. Click **Save**.

Event Name

Enter a unique name for the new event, or select an existing event from the Select Event drop-down field.

Schedule Period

Select the start date of the period to be scheduled in the Schedule Start Date field. The start date defaults to the configured first day of the week containing the date you choose. In the Duration field, enter the number of weeks you want to schedule.

Exception

Select the exception you want to use for the event. This is the exception that appears in agent schedules.

Schedule Inefficiency

Enter a percentage by which to increase forecasted requirements for all intervals in order to prevent understaffing. Use this option to model the effects of lost time from the ideal FTE due to the normal course of business such as breaks, planned activities, or task switching for multi-skilled agents. By default, this value is 20 percent. The maximum you can enter is 50 percent.

> **EXAMPLE** The default setting of 20 percent means that WFM accounts for 1.6 hours of non-productive time whenever an eight-hour schedule is selected.

Display Average Staff

Select this check box if you want the dynamic scheduling grid that the agent sees to display staffing needs as numbers as well as icons.

NOTE Analysts will always see the staffing needs numbers no matter what setting you choose here.

Permit Overstaffing

Select this check box if you want all agents to be presented with at least one shift option, even if staffing requirements have been met. Agents are presented with the least overstaffed shift (or shifts, if there is a tie).

Staffing Need Adjustment

You can enable a mixture of traditional work shifts, existing schedules, or schedules created outside of the dynamic scheduling event by balancing the staffing need by a fixed percentage. For example, if 40 percent of your FTE agents are participating in the dynamic scheduling event, and 60 percent are scheduled outside of this dynamic scheduling event, enter 40 (percent) in this field.

Scheduling Incentive

(Optional) Enter a description of an incentive you will offer to encourage agents to schedule themselves for a less desirable work shift. Max characters = 60.

Agents

The Agents table displays the agents who are assigned an active dynamic scheduling work rule for the weeks you chose in the Schedule Start Date and Duration fields and who have not yet been assigned a dynamic scheduling event.

Calculate Signup Times Button

Click this button to display a popup dialog box to configure the signup event added to an agent's schedule. The signup event is the time period during which the agent can select his or her own schedule. There are three tabs in this dialog box. When you have completed the fields on all three tabs, click **Apply**.

Duration Tab

Field	Description
Event Start Date	Enter the start date for the event. This is the first date that the exception can appear in agent schedules.
Event Start Time	Enter the start time for the event. This is the earliest time that the exception can appear in agent schedules on the start date. **EXAMPLE** If the start date is 23 September and start time is

Duration Tab (cont'd)

Field	Description
	08:00, you can select 07:00 on 24 September as long as that is within the end date and time.
Event End Date	The end date for the event. This is the last date that the exception can appear in agent schedules.
Event End Time	The end time for the event. This is the latest time that the exception can appear in agent schedules on the end date.
Event Length (Minutes)	The length of the event, in minutes. This is the amount of time that the agent will have to create his or her schedule.
Gap (Minutes)	The maximum number of minutes that can exist between the end of an exception and the start of the next exception for sequentially ranked agents. If Agent B’s schedule is such that the exception cannot be added to his or her schedule within the configured gap after Agent A’s exception, Agent B’s exception will be scheduled at the first available time slot and Agent C’s exception will be scheduled in Agent B’s originally intended time slot.

Activities tab

Field	Description
Activities That Can Be Overwritten	Select the schedule activities that can be overwritten by the event exception. If you choose “Not Available,” you must complete the Start Time and End Time fields.
Start Time	(Not Available activity only) The start time for the range during which the Not Available activity can be overwritten.
End Time	(Not Available acivity only) The end time for the range during which the Not Available activity can be overwritten.

Schedule Agents in Groups tab

Field	Description
Maximum Agent Percentage for Group Scheduling	The maximum percentage of agents that can be scheduled in groups. This means that these agents will have a dynamic scheduling event added to their schedules in the same time slot, and those agents will all be creating their own schedules at the same time. **EXAMPLE** Enter 75 in the field to schedule 75 percent of your agents in groups. This means that 25 percent of your agents will be scheduled as individuals.
Maximum Group Size Percentage	The maximum size of the scheduling group as a percentage of the total number of agents being scheduled. **EXAMPLE** You want to schedule 100 agents in groups, but you want each group to be no more than 20 agents. To get this result, you enter 20 (percent) in this field.

Reviewing an event's status

Schedulers and administrators can use the “Review, edit, or delete an existing dynamic scheduling event” option to monitor the current status of a dynamic scheduling event and review and edit submitted agent schedules. The Agents table lists all the agents who are assigned the event and each agent's event status.

You can revise the list of assigned agents if desired, and then calculate the agent exception times for newly assigned agents and agents who missed the event, or all assigned agents. Once you select which agents you want to include in the revised event, go through the tabs on the Calculate Signup Times pop-up window and revise the information there as needed. When you click Calculate Signup Times in the pop-up window, new signup events are generated for the selected agents.

You can also review submitted agent schedules and edit them. Editing the schedules must be done before the actual schedule is run. To review or edit a schedule, click the agent's Pending or Completed link in the Status column to view their Agent Dynamic Scheduling page. If you edit the schedule, click Submit when you are finished.

If an agent has missed an event, you can create a schedule for that agent and submit it by clicking the Missed status link.

Generating a scheduling incentives report

Use the “Generate a scheduling incentives report” option to view a listing of all scheduling incentives offered and accepted for a specified date range and for specified agents.

The report can be viewed on the Dynamic Scheduling Events page or exported as a spreadsheet in CSV format.

Generate a scheduling incentives report

1. On the Dynamic Scheduling Events page, select the **Generate a scheduling incentives report** option.
2. Select a date range and the agents on which you want to report.
3. Click **Display Report** to view the report on the page, or **Export as CSV** to generate a file that can be opened in Excel or other spreadsheet applications.

Edit an agent's dynamic scheduling page

If agents have been configured to create their own schedules using the dynamic scheduling feature, administrators and schedulers can review and edit the schedules that agents request before running the actual schedule.

To review and edit an agent's dynamic scheduling page:

1. On the toolbar, select **Schedules and Planning > My Schedule**.
2. Select the agent whose dynamic scheduling page you want to view, and then navigate to the schedule on the day that the agent received the dynamic scheduling event exception.
3. Click the link in the exception to view the page.
4. Review and edit as desired, and then click **Submit**.

For more information about agent dynamic scheduling, see Dynamic scheduling for agents.

Configure dynamic availability

Dynamic availability enables agents to configure their own work availability for specific weeks.

A dynamic availability rule is used to set the parameters for agent availability. Dynamic availability rules are assigned to agents for specific weeks or starting at a specific week and extending for an indefinite period. The agents configure their availability for those periods according to the parameters set out by the rule. Once approved, those availabilities are used as a variable type work shift to schedule agents in conjunction with their assigned min/max hour conditions.

Managing dynamic availability rules

The Dynamic Availability Rules page allows you to create, edit, delete, assign, and manage work rules that apply to agent availability.

The fields on the page when you create, edit, or delete rules are described below.

Field	Description
Rule Name	Enter a unique name for the rule.
Apply To	Select the one or more days of the week you are configuring. Use Ctrl+Click to select multiple non-contiguous days.
Type	Configure if the agent must work, can work, or cannot work on the selected days of the week. In the chart, days an agent must work appear dark gray, days an agent can work appear light gray, and days an agent cannot work are left blank. Selected days are highlighted in blue in the chart.
Duration	Configure the earliest start time and latest end time for the work shift on the selected day. Enter the time in 24-hour format. When you click outside the start and end time fields, a bar showing the shift duration is displayed on the graph. Appears if the Type is “Can Work” or “Must Work.” **NOTE** When configuring duration, make sure there is sufficient time allowed for shift extension due to unpaid work condition activities.
Smallest Shift Length Allowed	Enter the shortest shift length allowed on any day in hours with 15-minute increments.
Maximum Number of Shifts	Enter the number of shifts on any one day that an agent can work (split shifts).
Minimum Length of Time Between Shifts	Enter the amount of time that must occur between shifts on the same day. Appears if the maximum number of shifts is greater than one.

Assigning rules to agents

After a rule has been configured, it can be assigned to agents.

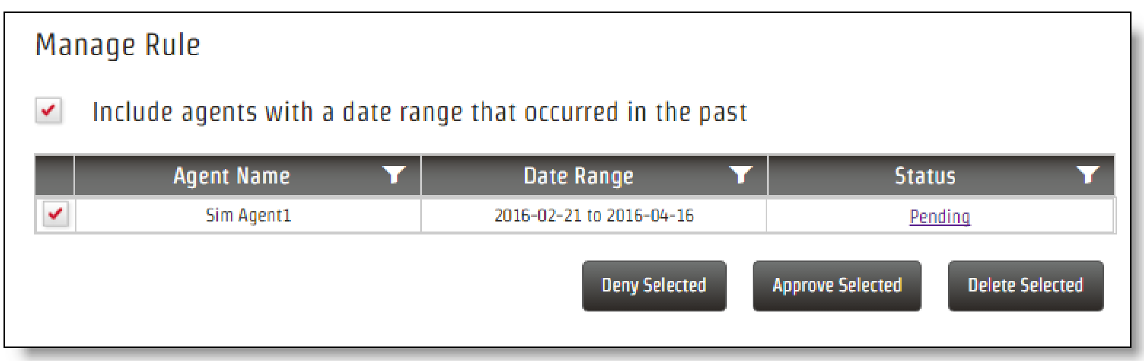
> **NOTE** An agent can only have one dynamic availability rule for a specific week. If a dynamic availability rule is assigned to a week that already has a dynamic availability rule assigned to it, the new assignment will be used for the specified weeks.

The fields on the page when you choose to assign a rule to agents are described below.

Field	Description
Rule Name	Select the rule you want to assign to agents.
Agents	Move the agents you want to assign the rule to from the Available pane to the Assigned pane.
Start Date	Choose a start date for the rule. If you select a date that is not the beginning of a work week, the date automatically defaults to the first day of the week selected.
Rule is ongoing	Select this check box if you do not want the rule to have a definite end date. When selected, the End Date field disappears.
End Date	Choose an end date for the rule. If you select a date that is not the end of a work week, the date automatically defaults to the last day of the week.
Approve agent dynamic availability request automatically	Select this check box if you want requests that meet the parameters set up for the rule to be approved automatically. If left cleared, all dynamic availability requests must be approved by an administrator, scheduler, or supervisor.

Managing assigned rules

Use the "Manage assigned rules" option to view a table of all agents assigned a selected dynamic availability rule for a date range in the future. You can opt to also list agents who were assigned the rule for a date range in the past.



From this table you can view each agent's dynamic availability request status. Clicking the status takes you to the agent's My Availability page to view all the details of the request.

When you select an agent in the table, buttons appear below the table that enable you to deny, approve, or delete the selected agent's availability request. The action you can take depends on the status of the selected agent's request. For example, if the status is Approved, the actions you can take are Deny Selected and Delete Selected. If you select multiple requests with different statuses, the actions you can take are those that are common to all of the selected statuses. For example, if you select requests with Approved and Denied statuses, the only action available to you is Delete Selected because that action is available to both Approved and Denied requests.

You can filter the table by any column by clicking the Apply Filter icon on the column header.

About My Availability

The My Availability feature (also known as "dynamic availability") allows agents to indicate the days of the week and the hours of the day they are available to work. This information is used like a variable work shift to schedule agents within their availability to meet service needs.

> **NOTE** This feature cannot be used to schedule agents unless min/max hour conditions are configured and assigned to the agents. The page itself is available to agents as soon as a dynamic availability rule is assigned to them for a specific date range.

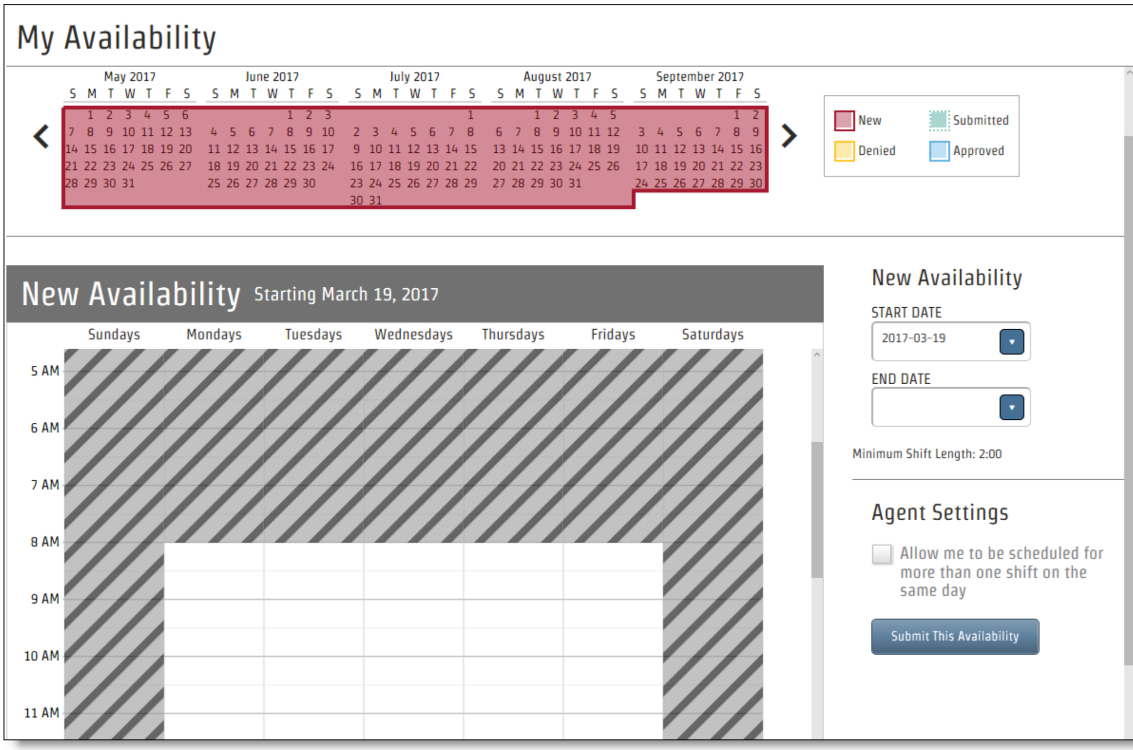
An administrator or scheduler creates a dynamic availability rule (see Configure dynamic availability) that specifies the parameters of the days and hours the agent can work. The rule is then assigned to agents for a specific date range or for an indefinite period. The My Availability feature then becomes available to the agent under the Schedules and Planning icon.

Dynamic availability rules can be configured so that agent availability requests are approved automatically, as long as the request conforms to the rule parameters. Otherwise, availability requests must be approved by an administrator, scheduler, or supervisor to go into effect.

My Availability for agents

When a dynamic availability rule is assigned to you, the My Availability option becomes visible under Schedules and Planning on the toolbar.

On the My Availability page, the weeks for which you must select your availability are shaded in red (new availability) or yellow (denied availability). Click in the red area to display a chart showing the days of the week and the hours available to you for selection. Unavailable hours are shaded in gray. Restrictions on how you can choose your days and hours are noted to the right of the graphic.

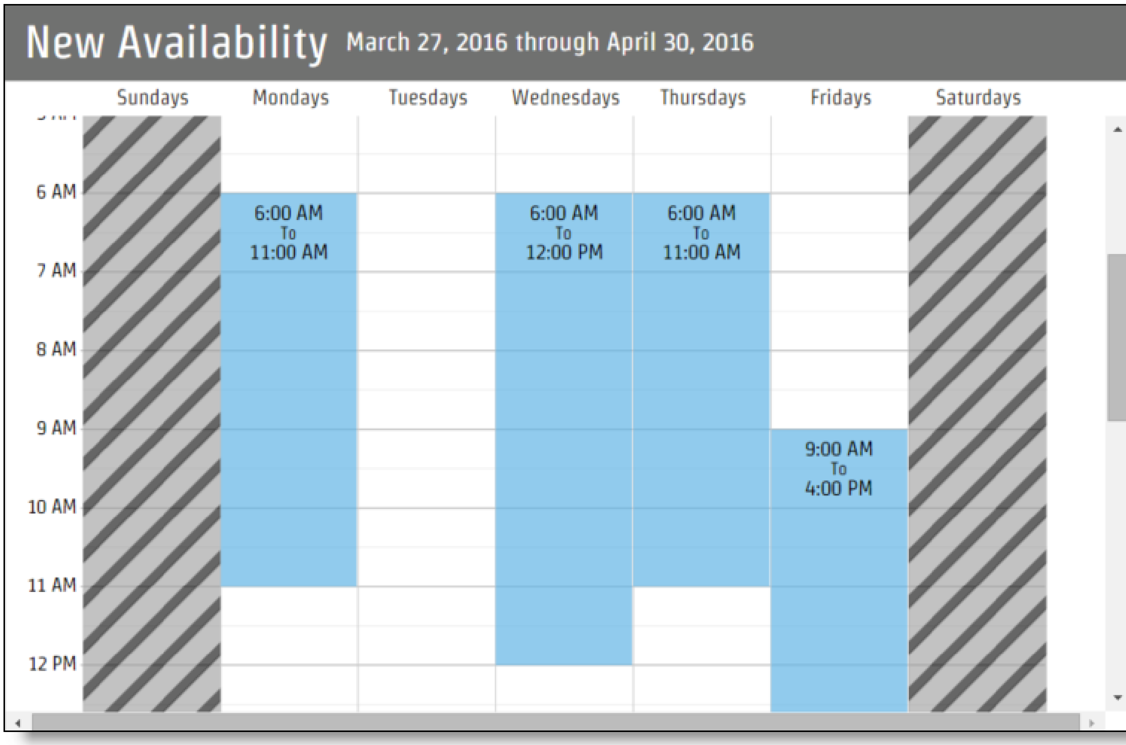


You do not have to configure the same availability for the entire period. You can configure different availabilities for subsets of the entire period by selecting start and end dates for the desired weeks. Availabilities always start on the first day of the week and end on the last day of the week. You cannot start or end an availability selection in the middle of a week.

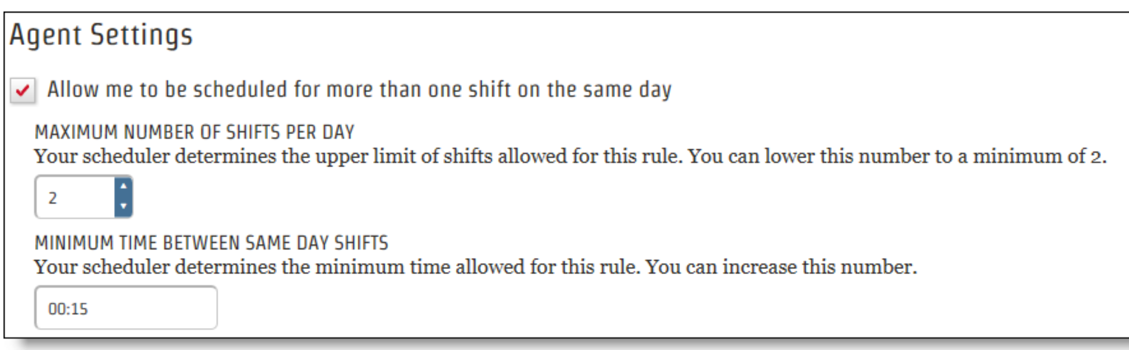
NOTE You cannot select dates outside the date range in the original assignment.

Configure the days and hours you are available to work on the chart. Click on a day's column, and then drag the ends of the resulting blue bar to your chosen start and end times. If there is a restriction, you cannot shorten the bar in a way that violates the restriction. For example, if there is a restriction that sets the minimum shift length to two hours, you cannot shorten the bar to less than two hours long.

The following graphic shows a chart with completed availability choices. This agent has opted to not work on Tuesdays for the weeks covered by this availability rule.



If the dynamic availability rule assigned to you allows for split shifts, the Agent Settings section appears. If you select the "Allow me to be scheduled for more than one shift on the same day" check box, you can then choose the maximum number of shifts per day and the minimum time between same day shifts. The maximum number of shifts per day must be less than or equal to what is configured in the rule, and the minimum time between same-day shifts must be greater than or equal to what is configured in the rule.



You have the option to attach a comment to your availability request at any time. Type your comment in the Leave a Comment field and click Add Comment.

When you have finished selecting your availability, click Submit This Availability. In the calendar area, the weeks covered by your availability request turn from red to green to denote that they have been submitted. If they are approved, whether automatically or by an administrator, scheduler, or supervisor, the weeks turn blue. If they are denied, they turn yellow.

In the event your availability is denied, you must resubmit a new availability selection. Check the comments attached to the page for information about why your initial request was denied. In most cases, if you do not have your availability approved, you will not be scheduled to work.

You can go back at any time and edit or delete all or any subset of your submitted availability, even if it has been approved. If you edit your availability, you can change a subset of what you submitted earlier or the availability for the entire period.

Your submitted, approved, and denied availability requests (but not your new requests) appear in your Messaging Out Box. You can track their status there or view their status on your My Availability page.

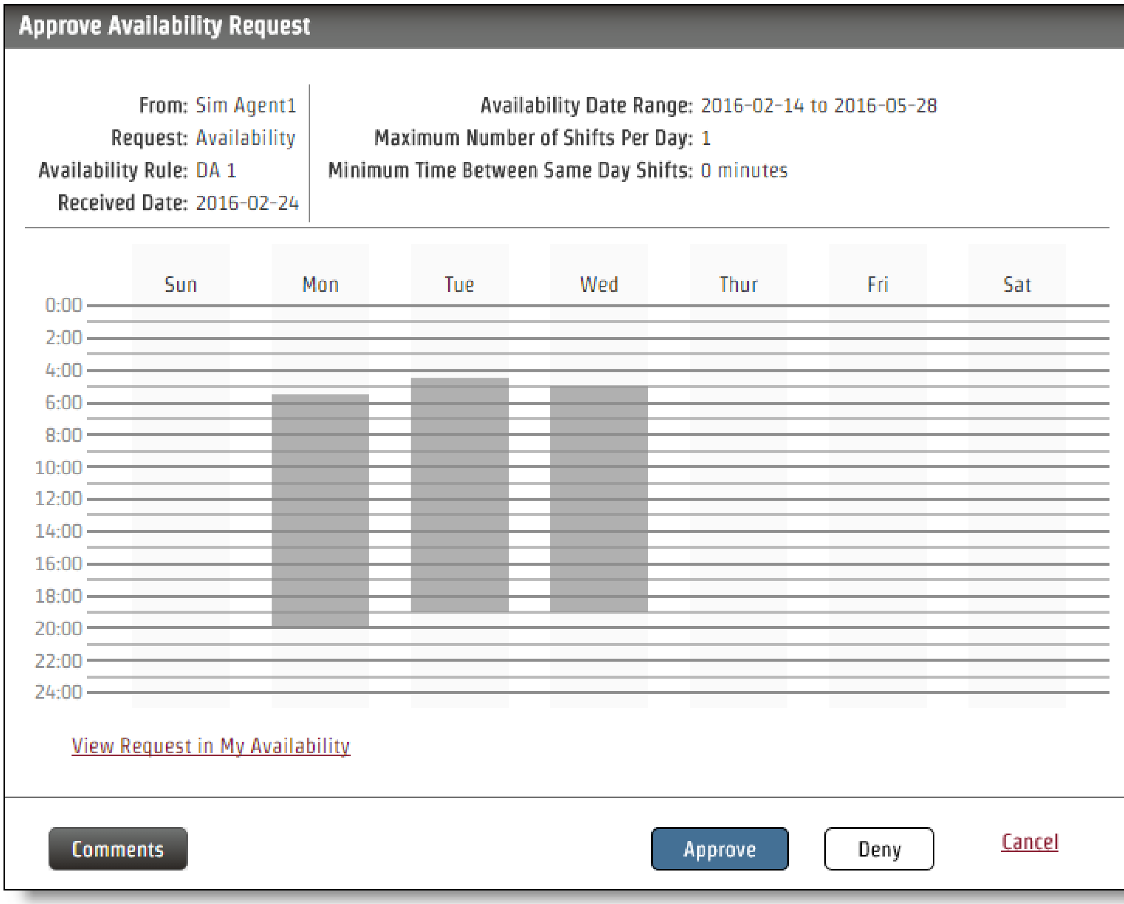
My Availability for administrators, schedulers, and supervisors

Once agents have completed their availability selections, the dynamic availability request must be approved before it can be used in scheduling. If the dynamic availability rule is configured to allow for automatic approval, the request is approved if it meets the parameters of the rule. Since requests cannot be submitted successfully unless they meet the rule parameters, they are always approved automatically.

If the dynamic availability rule is not configured for automatic approval, each request must be approved by an administrator, scheduler, or supervisor.

> **NOTE** Supervisors can only approve or deny requests made by members on their teams. Supervisors who are also agents cannot approve their own requests.

You are notified of dynamic availability requests in your Messaging To-Do box if messaging alerts are enabled on the Notifications page (see Configure notifications). When you open a request, a summary of the request is displayed.



You can approve or deny the request from this dialog box, or you can click the View Request in My Availability link to be redirected to the My Availability page with the agent selected and this request displayed.

You can then approve or deny the request from the My Availability page. You also have the option of editing the selections and then approving the changed request.

You can view an agent's availability at any time by choosing My Availability from the Schedules and Planning menu and then selecting the agent. When that agent's My Availability page is first displayed, it shows just the calendar bar with the shaded areas indicating the status of each dynamic availability rule assigned to the agent.

Click any of the shaded areas to display the details of the availability request. You have the option of approving, denying, or editing the selected availability, depending on its current status. The table below describes the actions you can take for each current status.

If the current status is:	You can:
New	Submit
Submitted	Approve, deny, edit
Approved	Deny, edit
Denied	Edit, approve

Create work shifts

WFM allows you to create work shifts that match agents' availability, preferred days off, start time, and length of work day. A work shift identifies the hours and days when agents can work. WFM will then schedule those agents to best match their work shift preferences and business requirements. There is no limit to the number of work shifts you can create, and WFM retains the previous schedule history for each agent in the WFM database.

When configuring a work shift, you need to determine what type of work shift it is. There are three types of work shifts:

- Fixed work shifts
- Assignment work shifts
- Variable work shifts

You can assign agents and work conditions to a work shift for specific weeks.

You can create multiple work shifts and then assign them to an agent's work shift rotation. If you use work shift rotations (an agent works different shifts over several weeks), you must define the shift and rotation sequence (see Manage users and Work shift rotation example).

Work shifts and time zones

Work shifts are time zone-neutral. This means that if you set up a work shift that starts at 8:00 AM and ends at 5:00 PM and then you assign that work shift to agents in two different time zones, the work shift runs from 8:00 AM to 5:00 PM in each agent's local time zone. The agents' local time zones are configured as their "scheduling time zone" on the Users page (see Manage users).

Work shifts and dynamic scheduling

If an agent creates a dynamic schedule that falls within a work shift rotation, the dynamic schedule overrides the rotation for that week. The rotation resumes after the dynamic schedule. WFM uses these priorities when setting work shifts:

1. Dynamic scheduling
2. Dynamic availability
3. Traditional work shifts

EXAMPLE
If an agent has a work shift rotation of three work shifts, but creates a dynamic schedule that falls on the second week of a rotation, that dynamic schedule overrides the work shift rotation for the second week. The rotation resumes for the third week, and the next rotation resumes the normal three-week rotation.

Rotation 1	Rotation 2 with Dynamic Schedule Added	Rotation 3
Work Shift 1	Work Shift 1	Work Shift 1
Work Shift 2	Dynamic Schedule	Work Shift 2
Work Shift 3	Work Shift 3	Work Shift 3

NOTE If a work shift is deleted, the agent's work shift assignment is also deleted. Subsequent agent work shift assignments will not be automatically adjusted to be adjacent to earlier assigned work shift dates. This can result in weeks where the agent has no work shift assigned.

Agents can trade work shifts. These trades must be approved by supervisors, schedulers, or administrators. Supervisors, schedulers, and administrators can also perform ad hoc schedule trades based on business requirements and the needs of the contact center.

Fixed work shifts

A fixed work shift is a work shift that covers requirements for fixed hours and days and never varies. Use this type of work shift to schedule agents to support requirements for entire days or weeks.

A fixed work shift has the following characteristics:

- Work days during the week are fixed
- Hours worked each day are fixed, but do not have to be the same for each day

- The shift start time each day is fixed, but does not have to be the same for each day
- The number of hours per week specified for the work shift (Hours per Week) must equal the total number of hours scheduled for the days of the week in the work shift (Total Hours)

If you assign a fixed work shift to an agent, the agent's schedule never changes. If you assign fixed work shifts to all agents, you cannot optimize schedules to ensure adequate coverage at all times.

Assignment work shifts

An assignment work shift is a type of fixed work shift that does not cover requirements. Use an assignment work shift to schedule agents for out-of-service activities such as projects for entire days or weeks.

Variable work shifts

A variable work shift is a work shift that covers requirements for variable hours and days. Use this type of work shift to schedule agents to support a service queue for variable days and weeks.

In contrast to a fixed work shift, a variable work shift offers flexibility in at least one of the following ways:

- You can assign one or more days a week as an optional work day.
- You can assign the total work hours for one or more days per week as variable.
- You can assign the arrival time for one or more days a week as variable.

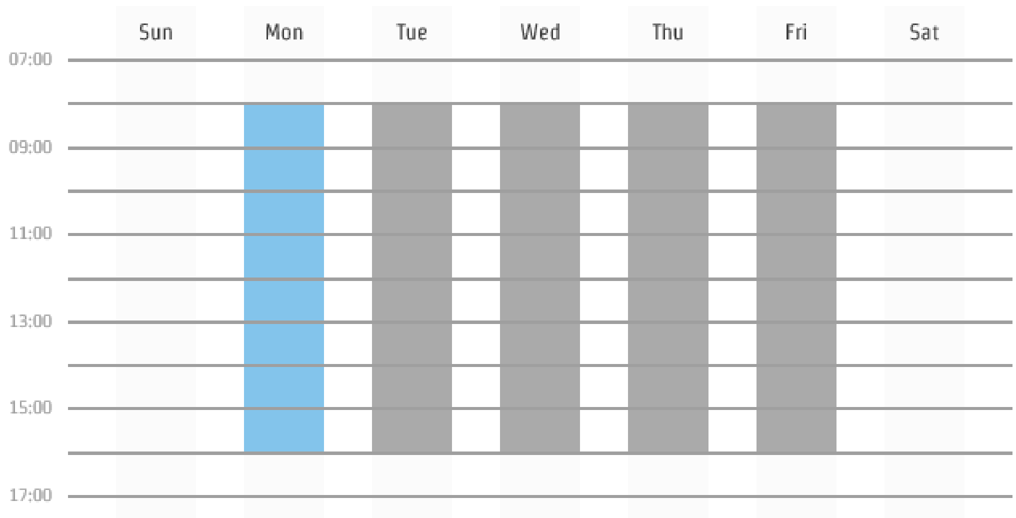
One or more of the following characteristics are different in a variable work shift:

- Minimum and Maximum Days per Week and Hours per Week—With a variable work shift, you might want to limit the maximum number of days and hours per week to limit overtime and guarantee a reasonably rested employee. You might also need to commit a minimum number of hours per day and days per week for the agent. You specify the minimum and maximum number of days per week and hours per week for the work shift. Then you specify the minimum and maximum number of hours for each day of the week that the agent can work for the day. You might also specify the days of the week that are potential days off for the agent.
- Earliest and Latest Start Times—Determine the earliest time you might want the agent to start work and when the agent can start work. Once you know the earliest and latest possible start times, you configure the earliest and latest start times for an agent in WFM for each day in a work shift.

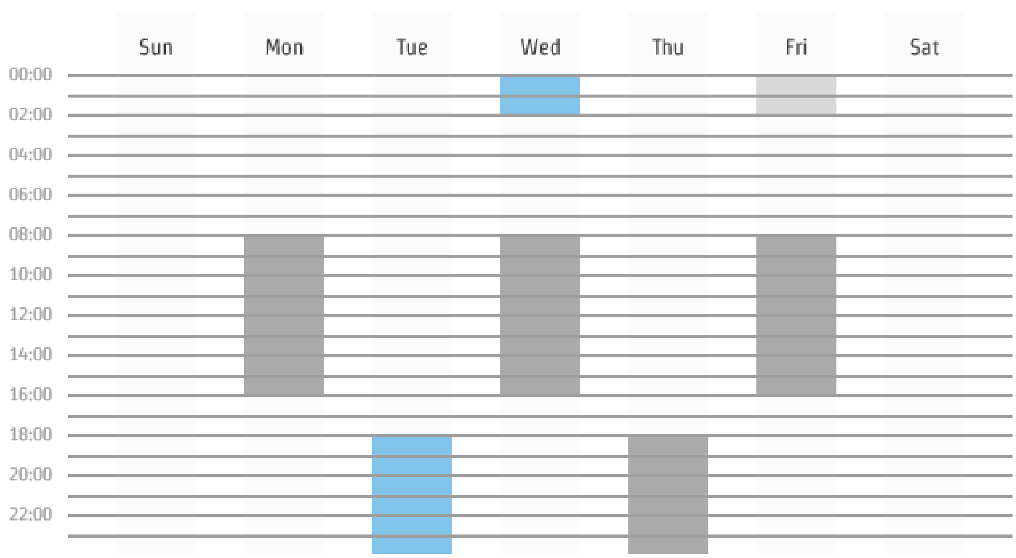
Understanding the work shift parameter graph

The work shift parameter graph is a visual representation of the work shift you are configuring. It displays a bar for every day you set up, showing the start times and durations. For fixed and assignment work shifts, the graph shows a gray bar for each scheduled day of the week. The selected day is shown in blue.

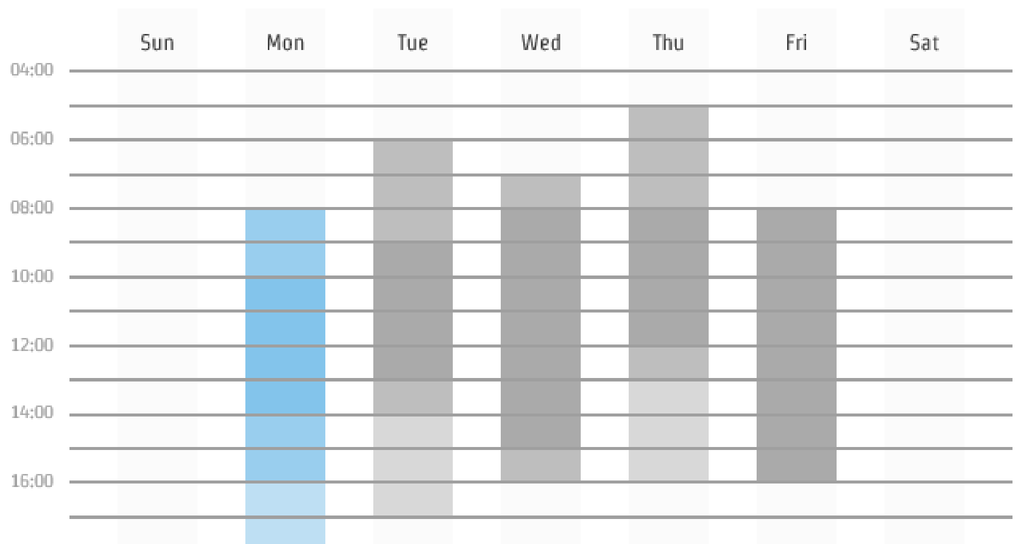
The following graph shows a fixed shift that starts at 08:00 Monday through Friday and has a duration of eight hours daily.



The following graph also shows a fixed work shift, but it includes two days on which the scheduled work shift crosses midnight. On Tuesday and Thursday, work starts at 18:00 and ends at 02:00 the next morning. This is shown visually by having the bar for Tuesday (the day is selected in the day bar, so it shows as blue in the graph) continue into Wednesday.



The following graph shows a variable work shift. The core hours the agent works each day are shown in dark gray or blue. The variable start times and shift duration are indicated by lighter gray or blue. For example, on Monday, the agent can start work from 08:00 to 10:00, and the shift duration is between four and eight hours long. The dark blue indicates that no matter when the agent starts or how long the shift is, the agent is in the contact center from 08:00 to 14:00.



Viewing assigned work shifts

Use the "View assigned work shifts" option to see a list of the assigned work shifts for the week that includes a selected date.

View assigned work shifts

1. Select the **View assigned work shifts** option.
2. Choose a date. The Assigned Work Shifts table appears, displaying all work shifts scheduled for the week that includes the selected date, and the number of agents assigned to each work shift.
3. Select a work shift and click **Display Agents** to view the names of the agents assigned to that work shift.

Field descriptions

The Work Shifts page allows you to create, edit, and delete work shifts. You can also view assigned work shifts.

The fields on the page when you create, edit, or delete a work shift are described below.

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Work Shift Name</td><td>The unique name for the work shift.</td></tr>
<tr><td>Activate</td><td>Select this check box to activate the work shift. It must be activated in order for it to be available for use.

NOTE When you deactivate a work shift, it no longer appears on agent schedules, and it will not be used in new schedule requests. Agents assigned to this work shift need to be reassigned to different active work shifts, or they will not be scheduled for the week.</td></tr>
<tr><td>Work Shift Type</td><td>The type of work shift.

When editing an existing work shift, there are limitations to changing the work shift to a different work shift type, as follows:
A fixed work shift can be changed to an assignment work shift
A variable work shift cannot change work shift type
An assignment work shift can be changed to a fixed work shift</td></tr>
<tr><td>Weekly Occurrence</td><td>(Variable work shifts only) The minimum and maximum number of hours and days per week an agent can be scheduled. These values must be consistent with the shift parameters. For example, you cannot specify a minimum of five days per week when only one day is configured in the shift parameters.</td></tr>
<tr><td>Shift Parameters</td><td>The shift parameters depend on the type of work shift you selected. As you enter parameters for each day of the week, they are displayed graphically in the work shift parameter graph (see Understanding the work shift parameter graph).

Fixed and Assignment Work Shifts:
Apply To—Select a day from the day bar to configure the parameters for that day.
Shift Start—Enter the time the shift starts.
Shift Length—Enter the length of the shift.</td></tr>
</table>

Field	Description
	■ Days Per Week—(Read-only) This value is calculated based on the number of days you configure. ■ Hours Per Week—(Read-only) This value is calculated based on the number of days you configure and the shift length each day. Variable Work Shifts: ■ Apply To—Select a day from the day bar to configure the parameters for that day. ■ Shift Start—Enter the earliest and the latest times that the agent's shift can start for that day. ■ Shift Length—Enter the minimum and maximum shift length for that day. ■ Minimum Interval—Enter the minimum amount of time between work shifts. ■ Days Off Allowed—Select this check box if the agent can have this day off. If cleared, the agent will be required to work this day if there are hours available.
Schedule Increment	(Variable work shifts only) The desired shift length increment. The default value is 30 minutes.
Optimization	(Variable work shifts only) The desired optimization type: ■ Optimum—WFM schedules agents with fixed work shifts first. Then it schedules the available agents with variable work shifts to best meet the requirements for the rest of the day. ■ Multilinear—WFM schedules agents with fixed work shifts first. Then it examines requirements starting at the beginning of the day for any not covered by agents with fixed shifts, and it schedules agents with variable shifts without taking into account needs later on in the day.
Work Conditions	The work conditions that apply to the work shift (see Manage work

Field	Description
	conditions).
Activity Metadata	(Assignment work shifts only) Assigns a default metadata value to, or removes a default metadata value from, the work shift. This value is optional. For more information about configuring metadata values, see Manage activity metadata values.

Work shift rotation example

The following table shows what happens when you move work shifts up and down in the Assigned pane on the Agents page.

Action	Effect on Shift Rotation	Comment
Select Shift 3	Week A | Shift 1 Week B | Shift 2 **Week C | Shift 3** Week D | Shift 4	—
Click Up	Week A | Shift 1 Week B | Shift 2 **Week B | Shift 3** Week C | Shift 4	Shifts 2 and 3 are now split shifts for Week B.
Click Up	Week A | Shift 1 **Week B | Shift 3** Week C | Shift 3 Week D | Shift 4	Week B no longer has a split shift.
Click Up	**Week A | Shift 3** Week A | Shift 1	Shifts 3 and 1 are now split shifts for Week A.

Action	Effect on Shift Rotation	Comment
	Week B | Shift 2 Week C | Shift 4	
Click Up	**Week A | Shift 3** Week B | Shift 1 Week C | Shift 2 Week D | Shift 4	Shift 3 is now first in the rotation and all other shifts have moved down one week.

NOTE A split work shift is a situation where an agent works two different shifts during the same day. Before you split a work shift, you must create two work shifts that start and end at different times or days and that do not overlap.

EXAMPLE If an agent works four hours in the morning and four hours in the evening, you must create one work shift that covers the morning hours and another work shift that covers the evening hours.

Manage work conditions

WFM differentiates between routine and non-routine activities. It categorizes activities that occur during every work shift (such as breaks and lunches) as routine. These routine activities are called work conditions. A work condition is a set of rules used to identify routine activities that prevent the agent from answering contacts.

There are two types of work conditions:

- Paid hours—Shift length is extended due to unpaid breaks and lunches
- Shift length—Shift length is not extended due to unpaid breaks and lunches

NOTE The Schedule service uses only paid hours work conditions. Intraday dynamic scheduling and partial day trades and offers use only shift length work conditions.

A work condition might be linked to fixed, assignment, or variable work shifts, or work condition profiles that are assigned to agents. If the agent can work four-and-half to six hours during a work shift and scheduling is in half-hour increments, you can configure work conditions for 4.5, 5, 5.5, and 6 hours and assign them to the agent’s work shift, or have them as general conditions. You can also configure a range-based work condition that covers a range from 4.5 to 6 hours.

> **NOTE** WFM will create agent schedules with no breaks or lunches if you do not assign work conditions and do not have any general work conditions. If you do not want to assign specific work conditions to specific work shifts or work condition profiles, create general work conditions.

> **NOTE** Only general conditions and work conditions assigned to work condition profiles that are assigned to agents are used in dynamic availability and partial day offers and trades.

For each work condition activity, you must specify the following information:

- Name
- Duration
- The minimum delay between the start of the work shift and the start of this work condition activity. For example, if the work shift starts at 08:00 and this work condition activity cannot start any earlier than 09:00, the minimum delay must be 1:00.

  > **NOTE** The delay must fit into the smaller length of a range-based condition.

- The maximum delay between the start of the work shift and the start of this work condition activity. For example, if the work shift starts at 08:00 and this work condition activity cannot start any later than 09:20, the maximum delay must be 1:20.
- The minimum interval between the end of the previous work condition activity and the start of this work condition activity. For example, if the previous work condition activity is a 15-minute break, and this work condition activity is a one-hour lunch, and there must be at least an hour and a half between the break and the lunch, the minimum interval must be 90 minutes.
- The increment in minutes that WFM uses to schedule the work condition activity. Possible values are 00:05, 00:10, 00:15, 00:20, and 00:30.
- The portion that is paid. For example, you can indicate that 15-minute breaks are paid and that one-hour lunches are unpaid.

Note that when creating schedules, the Schedule service verifies that all the work condition activities can be applied as configured. If there is no valid time where all the work condition activities can be applied as configured, the Schedule service ignores the work condition activity with a warning in the log and debug files.

The Schedule service applies the work condition activities for a work condition in the following order. All values are in ascending order except where noted.

1. Minimum delay
2. Maximum delay

3. Duration
4. Paid portion
5. Minimum intervals
6. Increment
7. Break type (Lunch before Break)
8. Break name
9. Color ID

It prefers to adhere to the work condition configuration rather than to the service queue need.

The work condition that is applied to an agent's work shift on a specific date is selected on the following basis:

- The list of paid hours work conditions associated with the condition profile (if specified for the agent), the work shift (if assigned), and the list of general paid hours work conditions are separately sorted as follows:
    1. Minimum paid hours (descending order)
    2. Maximum paid hours (descending order)
    3. Start time (ascending order)
    4. Work condition ID (ascending order)
- Search paid hours work conditions associated with the work condition profile (if specified for the agent) before paid hours work conditions associated with the work shift (if assigned) before searching among general paid hours work conditions.

    Search criteria for work conditions are:

    - Is enabled on the day of the week
    - Has start time earlier or the same as the work shift start time
    - Has the same minimum and maximum shift length as the scheduled work shift length
    - Scheduled work shift length is within the minimum and maximum shift length

After the above sorting and filtering for valid matches, work conditions are selected according to the following table. In this table,

- "Range" refers to a work condition where the minimum and maximum paid hours are not the same.
- "Non-range" refers to a work condition where the minimum and maximum paid hours are the same.
- "None" means that no work condition is configured.

Work Condition Source			
General	**work Condition Profile**	**Work Shift**	**Source Used**
Non-range, range, none	Non-range	Non-range	Work condition profile
	Non-range, range	Range	Work condition profile
	Range	Non-range	Work shift
	Range	None	Work condition profile
	None	Non-range, range	Work shift
Non-range, range	None	None	General work condition

One way to avoid scheduling conflicts is to use the following parameter assignments:

```
morning break maximum delay = lunch minimum delay – lunch minimum
   interval – morning break duration
lunch minimum delay = morning break maximum delay + morning break
   duration + lunch minimum interval
```

Example 1: Work condition without unpaid activities

A contact center has created three work condition activities: Morning Break, Lunch, and Afternoon Break. Work shifts are eight hours long. The start and end times of work shifts are variable: start times can be as early as 07:30 and end times as late as 17:30.

The work condition activities are configured as follows.

Activity	Min Delay	Max Delay	Duration	Min Interval
Morning Break	01:30	03:00	00:15	00:00
Lunch	03:00	05:00	00:30	01:30
Afternoon Break	05:30	06:45	00:15	01:30

If an agent’s work shift begins at 8:00 AM, then that agent’s morning break can start any time between 9:30 AM and 11:00 AM. The agent’s lunch can start any time between 11:00 AM and 1:00 PM. The agent’s afternoon break can start any time between 1:30 PM and 2:45 PM.

For example, assume that to handle predicted call volume, WFM must schedule an agent to begin work at 8:00 AM and to take a lunch break from 11:00—11:30 AM. WFM then schedules the agent’s morning break from 9:30–9:45 AM to satisfy the minimum delay of 01:30 for that work condition activity.

However, the earliest that lunch can start is 11:15 AM (9:45 AM plus 1:30, the minimum interval between this and the previous activity). WFM cannot create a schedule that satisfies all the parameters as configured. This situation can be corrected by decreasing the minimum delay of the morning break from 01:30 to 01:15 or by decreasing the lunch minimum interval to 01:15.

Example 2: Work condition with unpaid activities

A contact center has created three work condition activities: Morning Break, Lunch, and Afternoon Break. The lunch break is unpaid time. Work shifts are eight hours long, but since there is a one-hour unpaid lunch, the work shift actually spans nine hours. The Schedule service will schedule nine hours for the agent.

The start and end times of work shifts are variable: start times can be as early as 7:30 AM and end times as late as 6:30 PM.

Activity	Min Delay	Max Delay	Duration	Min Interval
Morning Break	01:15	03:00	00:15	00:00
Lunch	03:00	05:00	01:00 (unpaid)	01:30
Afternoon Break	08:00	08:30	00:15	01:30

If an agent’s work shift begins at 8:00 AM, then the agent’s morning break can start any time between 9:30 AM and 11:00 AM. The agent’s lunch can start any time between 11:00 AM and 1:00 PM.

The agent’s afternoon break can start any time between 4:00 PM and 4:30 PM. This allows for the one-hour unpaid lunch. It adds the hour and allows you to put in a delay of 08:00, something you could not do if the lunch were a paid activity. You cannot have a delay that is the same length of the work shift unless there is unpaid time included, in this case, the agent’s schedule spans a period of nine hours.

Scheduling and unpaid activities

Work conditions do not always extend shifts to accommodate unpaid activities.

For normal scheduling (standard work shifts, dynamic availability, and dynamic scheduling), the work conditions that are applied will extend the shift to meet the paid and unpaid hours of the shift. For example, if an agent is scheduled for an eight-hour shift and the eight-hour paid hours work condition that is applied includes an unpaid one-hour lunch break, then the shift is scheduled to cover an actual period of nine hours to accommodate the one-hour unpaid lunch break plus eight hours of paid activities.

For other types of events that work conditions apply to, such as intraday dynamic scheduling and partial day offers and trades, work conditions do not extend shifts for unpaid activities. For example, if an agent picks up two hours of overtime in an intraday scheduling event from 3:00 PM to 5:00 PM, a two-hour shift length work condition might be applied, and if that two-hour work condition contains an unpaid 30-minute lunch break, then it will be placed within the two-hour segment and not extend it. The overtime shift will continue to be 3:00—5:00 PM and not beyond, and the agent will be paid for one-and-a-half hours, not two hours.

Field descriptions

Use the Work Conditions page to create, edit, and delete work conditions.

The fields on the Work Conditions page are described below.

Field	Description
Work Condition Name	The name of the work condition. The name should make it easy to identify the work condition when assigning it to agents: for example, "Customer Service - 4.5 hours." You can also use this field to change the name of an existing work condition.
Work Condition Type	The type of work condition: ▪ Paid hours—(Default) When you select paid-hours-based work conditions, the system extends the shift length due to unpaid breaks and lunches. ▪ Shift length—When you select shift-length-based work conditions, the system does not extend the shift length due to unpaid breaks and lunches.
Allow paid hours to be a range	(Appears only if Paid Hours in Work Condition Type is selected) Select this check box to specify a minimum and maximum number of paid hours.
Paid Hours	(Appears only if the "Allow paid hours to be a range" check box is not

Field	Description
	selected) The total number of paid hours (in HH:MM) for the work condition.
Minimum Paid Hours	(Appears only if "Allow paid hours to be a range" is selected) The minimum number of paid hours (in HH:MM) for the work condition.
Maximum Paid Hours	(Appears only if "Allow paid hours to be a range" is selected) The maximum number of paid hours (in HH:MM) for the work condition.
Allow shift length to be a range	(Appears only when Shift Length in Work Condition Type is selected) Select this check box to enter a minimum and maximum shift length.
Shift Length	(Appears only if "Allow shift length to be a range" is not selected) The total shift length (in HH:MM) for the work condition.
Minimum Shift Length	(Appears only if "Allow shift length to be a range" is selected) The minimum shift length (in HH:MM) for the work condition.
Maximum Shift Length	(Appears only if "Allow shift length to be a range" is selected) Enter the maximum shift length (in HH:MM) for the work condition.
This is a general condition	Select this check box if this work condition applies to every work shift with the same number of hours or range of hours of work per day, and if no other work condition is associated with those work shifts. If you do not select the check box for a work condition and no other work condition is linked to a work shift or work condition profile associated with the agent, WFM will not schedule breaks or lunches to agents assigned to this work shift. **NOTE** There can be only one general condition per scheduled shift length or paid hours to which the work shift is applied. Only general conditions and work conditions associated with work condition profiles assigned to agents are used in dynamic availability and partial day offers and trades.
Apply work condition to work shifts with any arrival time	Select this check box if you want the work condition to apply to work shifts with any arrival time. If the check box is cleared, specify a time if you want the work condition to apply to work shifts that begin at or later

Field	Description
	than that specified arrival time. These options are mutually exclusive: you can select only one of them.
Days to Include	The days to which this work condition applies. By default, every day is selected. At least one day must be selected.
Activities	Click Add to add a row to the Activities table, and then specify the details of the activity. These include: ■ Name—Enter a name to describe the break or lunch. If you leave this field empty, WFM fills it with Break. ■ Type—Break or Lunch. ■ Min Delay—The minimum amount of time in HH:MM format that must elapse between the shift start time and the start of this activity. This value must be in multiples of five minutes. If anything else is entered, the value is rounded to the nearest five minutes. ■ Max Delay—The maximum amount of time in HH:MM format that can elapse between the shift start time and the start of this activity. This value must be in multiples of five minutes. If anything else is entered, the value is rounded to the nearest five minutes. ■ Duration—The length of time the activity lasts in HH:MM format. This value must be in multiples of five minutes. If anything else is entered, the value is rounded to the nearest five minutes. Activities with a value of zero (0) are ignored. ■ Increment—The increment during an hour when the activity can begin. For example, if the activity can start one hour after the shift start of 08:00 and you choose the 15-minute increment, the activity might start at 09:15, 09:30, or 09:45. ■ Min Interval—The minimum amount of time between this and the previous activity. This value must be in multiples of five minutes. If anything else is entered, the value is rounded to the nearest five

Field	Description
	minutes. ■ Paid Portion—The portion of the activity in HH:MM format that is paid. Activities that are not paid extend the work shift by the unpaid duration for paid hours work conditions. For example, an eight-hour work shift with a one-hour unpaid lunch will become a work shift that spans nine hours. There is a limit of 48 hours in a work condition. ■ Color/Color ID—The color that represents this activity in the schedule. The color ID is the hex code for the selected color. ■ Activity Metadata—(Optional) Assigns a metadata value to, or removes a metadata value from, breaks or lunches. Assigning or removing a metadata value here overrides any default metadata values that you assigned on the Activity Metadata page. For more information about configuring metadata values and assigning them to breaks and lunches, see Manage activity metadata values.
Maximum Optimization Adjustment	Allows you to control the amount of time the Optimize Schedules function can move a break or lunch forward or backward within the activity constraints. If the value is empty, the optimizer can move the activity as far as the activity constraints allow. If the value is zero (0), the activity cannot be moved. **NOTE** The maximum value for this field is 23:59.
Assign Work Condition Profiles	One or more work condition profiles assigned to the work condition.
Assign Work Shifts	(Appears only when Work Condition Type is Paid Hours) One or more work shifts that will use this work condition.

Work condition button definitions

Button	Description
Save	Click to save the new or changed work condition. This button is disabled

Button	Description
	until a work condition is named or selected, and all populated fields are valid.
Delete	Click to delete the work condition. This button is disabled until a work condition is named or selected.
Cancel	Click to cancel changes to the work condition.

Manage work condition profiles

Work condition profiles allow you to associate non-general work conditions with agents instead of associating them only with work shifts. Using work condition profiles, you can optimize an agent's intraday lunches and breaks and automate moving an agent's breaks and lunches to improve service queue coverage.

Only administrators and schedulers can create and manage work condition profiles.

You should create work condition profiles that include paid hour work conditions (shift lengths are extended due to unpaid breaks and lunches) and work condition profiles that include shift length work conditions (shift lengths are not extended due to unpaid breaks and lunches). Profiles with shift length work conditions are useful if agents might be doing partial day trades and offers or intrady dynamic scheduling. See Manage work conditions.

Every work condition profile includes a set of agents and work conditions. An agent or work condition is not required to be included in a work condition profile.

> **NOTE** An agent can only be included in a single work condition profile. However, multiple work conditions can be included in a work condition profile, and a work condition can be a member of multiple work condition profiles.

Scheduling with work condition profiles

The Schedule service can use work conditions in the agent's work condition profile to schedule the agent's lunches and breaks. The work conditions are applied to the agent's work shift on a specific date.

Field descriptions

Use the Work Condition Profiles page to create, edit, and delete work condition profiles.

The fields on the Work Conditions Profile page are described below.

Field	Description
Work Condition Profile Name	A unique name for the work condition profile.
Assign Work Conditions	Select and assign specific work conditions to the work condition profile. The same work condition can be included in multiple work condition profiles.
Assign Agents	Select and assign agents to the work condition profile. Both active and inactive agents are available for selection. **NOTE** An agent can be assigned to only one work condition profile.

Manage min/max hour conditions

On the Min/Max Hour Conditions page, you can limit the amount of time that your agents work by setting the following parameters:

- The minimum and maximum number of days that your agents work each week
- The minimum and maximum number of paid hours that your agents work each week
- The minimum and maximum number of paid hours that your agents work each day of the week

Configuring min/max hour conditions is optional. It is required if you want agents to be scheduled using dynamic availability (see About My Availability).

NOTE Min/max hour conditions are assigned to agents using min/max hour profiles (see Assign min/max hour conditions to agents).

Work shifts and schedules

Min/max hour conditions factor into the following scheduling methods:

- Fixed, assignment, and variable work shifts

  NOTE You can also limit the minimum and maximum number of days and paid hours that your agents work each week through variable work shifts. If you assign an agent to both a variable work shift and a min/max hour condition during the same week (whether by using a min/max hour condition as the default or applying one to a specific date range), WFM uses the configuration from the min/max hour condition instead of the configuration from the variable work shift.

- Dynamic scheduling

- Dynamic availability
- Intraday dynamic scheduling
- Manually edited schedules
- Trades, offers, exceptions, mentoring, and time off

Once you assign a min/max profile to an agent, its min/max conditions apply to every work shift assigned to the agent on each day of the week. Min/max conditions only limit paid hours. Unpaid activities do not count toward the weekly or daily parameters that you configure on this page.

Time definitions

The limits that you set on this page apply to weeks and days as they are defined by WFM, not necessarily as they appear on a calendar.

- “Week” refers to the schedule week in WFM as it is defined by the First Day of the Week field on the Global Settings page (see Configure system-wide WFM settings). “Week” includes all hours in every work shift that begins in a schedule week, even in work shifts that cross midnight into the next schedule week. “Week” does not include any hours from a work shift in a previous week that crosses midnight into it.
- “Day” refers to the day that a work shift begins on, and it includes all hours in the work shift, even if the work shift crosses midnight into the next day. “Day” does not include any hours from a work shift in a previous day that crosses midnight into it.

> **EXAMPLE**
>
> An agent has the following work shifts on Monday and Tuesday:
>
> - Monday 8:00 PM–Tuesday 4:00 AM
> - Tuesday 2:00 PM–10:00 PM
>
> WFM does not split the eight hours in the first shift between Monday and Tuesday. Since the work shift begins on Monday, WFM counts all eight hours as part of Monday’s work shift.

Both “day” and “week” refer to days and weeks as they appear in an agent’s scheduling time zone (see About time zones).

Schedule configuration considerations

Certain schedule elements that you configure in other parts of WFM can create schedules that violate the min/max conditions assigned to your agents. In some cases, this can cause agents not to be scheduled.

These elements include the following.

Exceptions

If an agent's schedule includes a partial- or entire-day paid or unpaid exception, WFM will attempt to create a schedule that meets any min/max hours condition assigned to the agent on the Min/Max Hour Profiles page as the default or for a specific date range.

However, assigning paid or unpaid exceptions can sometimes still result in schedules that violate min/max hour conditions. An agent will still be scheduled if a paid or unpaid exception creates a schedule that violates the agent's min/max hour condition.

Example 1: Paid exception

An agent is assigned to a min/max hour profile with a min/max hour condition that limits the agent to working a maximum of 10 hours on Wednesday, and that agent also has a work shift on Wednesday from 8:00 AM to 4:00 PM. However, a supervisor has also assigned a paid exception to the agent on Wednesday from 4:00 PM to 8:00 PM.

This means that the agent has the equivalent of a 12-hour work shift on Wednesday, from 8:00 AM to 8:00 PM. The agent's schedule therefore violates the agent's min/max hour condition, but the agent is still scheduled.

Example 2: Unpaid exception

An agent is assigned to a min/max hour profile with a min/max hour condition that limits the agent to working a minimum of six hours on Wednesday, and that agent also has a work shift on Wednesday from 8:00 AM to 4:00 PM. However, a supervisor has also assigned a paid exception to the agent on Wednesday from 8:00 AM to 1:00 PM.

This means that the agent has the equivalent of a three-hour work shift on Wednesday, from 1:00 PM to 4:00 PM. The agent's schedule therefore violates the agent's six-hour min/max hour condition, but the agent is still scheduled.

Overlapping work shifts

Work shifts that begin on one day can sometimes cross midnight and overlap work shifts that begin on the next day. When this happens, WFM does not count the period of time where the schedules overlap twice. Instead, it keeps the entirety of the work shift on the overlapping day, and it shortens the work shift on the overlapped day.

This can cause an agent's schedule to violate an assigned min/max hour condition. An agent will not be scheduled if overlapping work shifts create a schedule that violates the agent's min/max hours condition.

EXAMPLE

An agent is assigned to a min/max hour profile with a min/max hour condition that limits the agent to working a minimum of eight hours on Monday and Tuesday.

The agent has the following work shifts on those days:

- Monday 10:00 PM–Tuesday 6:00 AM
- Tuesday 2:00 AM–10:00 AM

This agent's shifts overlap for four hours on Tuesday, from 2:00 AM–6:00 AM. WFM counts these four hours as part of Monday's work shift, not Tuesday's.

This means that the agent now has the equivalent of a four-hour work shift on Tuesday, from 6:00 AM–10:00 AM. The agent's schedule configuration therefore violates the agent's eight-hour min/max hour condition, and the agent is not scheduled.

Field descriptions

Use the Min/Max Hour Conditions page to create, edit, and delete min/max hour conditions.

The fields on the page are described below.

Field	Description
Min/Max Hour Condition Name	A unique name for the condition.
Min Paid Hours per Week	The minimum number of paid hours per week that an agent can work. These hours must be equal to or less than the maximum possible number of hours that your agents' dynamic scheduling, dynamic availability, and work shift configurations permit them to work in a week.
Max Paid Hours per Week	The maximum number of paid hours per week that an agent can work. These hours must be greater than or equal to the minimum possible number of hours that your agents' dynamic scheduling, dynamic availability, and work shift configurations permit them to work in a week.
Min Days per Week	The minimum number of days per week that an agent can work. These days must be less than or equal to the total number of days that your agents' dynamic scheduling, dynamic availability, and work shift configurations permit them to work in a week.

Field	Description
Max Days per Week	The maximum number of days per week that an agent can work. These days must be greater than or equal to the total number of days that your agents' dynamic scheduling, dynamic availability, and work shift configurations require them to work in a week. **EXAMPLE** A supervisor assigns an agent to a five-day variable work shift. On two days, the supervisor has selected the Days Off Allowed check box (two days are optional). On three days, the supervisor has not selected the Days Off Allowed check box (three days are required). If the supervisor also assigns a min/max hour condition to this agent, the supervisor must enter a number equal to or greater than three in the Max Days per Week field.
Apply To	The day or days of the week whose parameters you want to configure. Use Shift+Click to select multiple contiguous days, or Ctrl+Click to select multiple noncontiguous days.
Paid Hours	Min—The minimum paid hours for the selected day of the week. These hours must be less than or equal to the maximum possible number of hours that your agents' dynamic scheduling, dynamic availability, and work shift configurations permit them to work on the selected day. Max—The maximum paid hours for the selected day of the week. These hours must be greater than or equal to the minimum possible number of hours that your agents' dynamic scheduling, dynamic availability, and work shift configurations permit them to work on the selected day.
Minimum Interval Between Shifts	The minimum amount of time that can exist between shifts on different days. **NOTE** The minimum interval between shifts is applied and validated at the time you run the schedule, and not for schedule edits done later.

Assign min/max hour conditions to agents

Min/max hour profiles are used to associate min/max hour conditions with specific agents for specific weeks. Agents must be associated with either the default min/max hour profile or a specific min/max hour profile to be scheduled using dynamic availability work shifts.

The fields on the page are described below.

Field	Description
Min/Max Hour Profile Name	Enter a unique name for the profile.
Use default condition	Select this check box to designate a default min/max hour condition and select that condition from the drop-down list. Default conditions apply whenever there is no condition assigned to a specific date range for the agent. **NOTE** If you do not configure a default condition and no conditions are configured for a specific date range for an agent, that agent will be scheduled with no minimum or maximum hour restrictions.
Date Range Conditions	Click Add to configure a start week, end week, and the min/max hour condition that applies to that date range. Select the check box to the left of any existing line to delete that line from the table.
Assign Agents	Move agents from the Available to the Assigned panes to assign them to the profile.

Limit the number of agents to schedule

The Maximum Staffing Groups page enables you to set a cap on how many of the agents that are assigned to the group can be scheduled to work at the same time.

> **EXAMPLE** Your contact center has 200 agents available to work but seating for only 100 agents. You cannot schedule more than 100 agents at any one time. To ensure that schedules accommodate this limit, you set up a maximum scheduling group that includes your 200 agents and that sets the simultaneous scheduling limit to 100 agents.

> **NOTE** If you use Maximum Staffing Groups, you should also use Balanced Scheduling.

When you run a schedule for agents who are subject to the limitation of a maximum staffing group and the limit is reached, no further agents can be scheduled. A schedule is not created that week for agents outside the maximum limit, even if it violates those agents' personal min/max hour profile or work shift rotation. The schedule runs normally for other agents and might complete with a status of "Partial Success." The user request detail page (see View server requests from WFM users) lists those agents who could not be scheduled because of the maximum staffing limitation.

When a maximum staffing group is configured, the limitation it sets is taken into account in all areas that create or modify schedules. These areas include the following:

- Running a schedule
- Creating a dynamic schedule event
- Approving schedule trades and offers
- Approving mentoring, exception, and time off requests
- Copying schedule activities
- Automatically or manually approving intraday dynamic scheduling
- Editing agent schedules on the Agent Schedule page
- Changes made through the Schedule Edit Management page

The system rejects attempts to change schedules that will violate the maximum staffing limit restriction. If you still want to change the schedule, you can make other schedule changes that will resolve the issue (for example, moving other agent's activities) and try your original schedule change again.

Agent shifts that are subject to a maximum staffing group limitation include all activities except for No Schedule, Not Available, and Available activities.

Exceptions, which are included when considering a maximum staffing group limitation, are a special case. Some exceptions, such as vacations, do not require an agent to be occupying a contact center seat. That agent's presence should not count towards the maximum staffing group limit. In order to distinguish between exceptions that should count and those that should not, an exception can be configured as requiring a workstation. See Manage exceptions for more information.

Field descriptions

The Maximum Staffing Groups page allows you to create, edit, and delete maximum staffing groups.

The fields on the page when you create, edit, or delete a maximum staffing group are described below.

Field	Description
Maximum Staffing Group Name	The unique name for the maximum staffing group.
Maximum Staffing Limit	The maximum number of agents who can work simultaneously at any one time.

Field	Description
Assign Agents	Move agents from the Available to the Assigned panes to assign them to the maximum staffing group.

Create a distribution

A distribution consists of one week's worth of contact data for every 30-minute interval of the day. The data includes the following:

Column	Description
Contact Ratio	Percentage of the day's total contacts for the interval. **NOTE** When exported, the contact ratio is expressed as a decimal, not a percentage. For example, a contact ratio displayed in the table as 2.03% is exported to a spreadsheet as 0.0203.
Contacts Distribution	The number of contacts received in the interval. If enabled on the Global Settings page (Enable Forecasted Contacts as Decimals setting), this value can have up to two decimal places.
Average Talk Time	The average talk or processing time.
Average Work Time	The average after contact work time.

The distribution determines the contact volume fluctuations within the intervals of a day.

This is how WFM generates a distribution:

1. WFM calculates the average number of contacts received in the reference period for each schedule interval for every day of the week selected in the distribution request. Days with special events are disregarded. Choose six to eight recent weeks for the reference period, taking care not to use a week with unusual volume, such as a holiday week.

   EXAMPLE To calculate the average contact volume for the 8:30–9:00 AM interval on Monday, WFM takes the sum of the volume for the 8:30–9:00 AM interval for each Monday in the reference period and divides the total by the number of Mondays in the reference period.

2. WFM then divides the result for each half hour by the average number of contacts received for the entire day to determine the percentage of the day's contacts that arrive during this interval.

3. WFM calculates the average talk time (interactive service queues) or processing time (non-interactive service queues) and after-contact work-time values per contact for each half hour.

> **EXAMPLE** To calculate the average talk time/processing time for the 8:30–9:00 AM interval on Monday, WFM takes the sum of talk time/processing time for each contact between 8:30 AM and 9:00 AM for each Monday in the reference period and divides the total by the number of contacts. WFM uses the same method to calculate average work time.

The future does not always repeat the past. Future events can cause a contact distribution to change. If you know about upcoming events that might affect a distribution, you can edit the distribution to account for those events. For any 30-minute interval, you can change the number of contacts likely to arrive, the average talking or processing time, and the average after-contact work time (see Edit distributions and forecasts).

Guidelines for generating a distribution

Choosing an appropriate reference period is important for generating a distribution suitable for your forecast period.

You can generate a distribution once and reuse it for every forecast or generate a new distribution every time you generate a forecast. A distribution and forecast are linked automatically—a service queue can only have one production distribution and one production forecast at any given time.

The type of distribution that you generate depends on the type of service queue you are generating it for. Use the following guidelines when generating a distribution:

- If your daily or weekly contact data fluctuate wildly, choose a longer reference period. If your contact data is fairly stable, choose a shorter reference period.
- If your contact data is fairly stable or seasonal, choose a longer reference period from the same period last year.
- If you have at least a year's worth of historical data and your business and routing patterns have not changed dramatically, use a reference period from a year earlier that is similar to the forecast period.
- If you have less than a year's worth of historical data or your contact center conditions have changed dramatically, identify a more recent period that is likely to have contact data that is similar to the forecast period.
- If the contact data is reasonably stable throughout the year, you might go several months without having to generate a new distribution.
- If the contact data varies frequently or shows seasonal variation, you might need to regenerate your distribution at least once a month or every time you create a forecast.

> **NOTE** Distributions ignore dates within your reference period that have special events assigned to them and dates that are tagged as closed dates.

Managing distributions

Use the Distribution Requests page to generate production and named distributions.

The production distribution is used by default to generate a forecast. There can be only one production distribution. In contrast, there can be many named distributions. Named distributions are used to analyze how different conditions affect contact volumes and agent schedules. A named distribution can be generated with historical data like a production distribution is, but it can also be generated without any historical data and then populated manually.

You can also use a named distribution instead of a production distribution to generate a forecast.

> **NOTE** If you are confident that the contact volume and distribution at your contact center are stable, then you only need to generate one distribution and one forecast, and you do not need to use named distributions.

Generating a production distribution

Generate a production distribution

1. On the Distribution Request page, select the **Submit a production distribution request** option.
2. Select one or more service queues. The available service queues listed are those that do not have the "Do not generate forecasts or schedules for this service queue" check box selected on the Manage service queues page.
3. Enter the start date and end date of the desired reference period in the service queue time zone. The reference period should have historical data that closely resembles the dates for which you want to generate a forecast. There should be data for every selected day of the week in your reference period. If there is no data, WFM fills those periods with zeros.
4. Select the days of the week for which you want to calculate a distribution. By default, every day of the week is selected.
5. Decide if you want the service queue standard times (Average Talk Time and Average After Contact Work Time) to be updated based on this distribution.
6. Schedule when you want the request to run. By default, the request is run immediately.
7. Click **Submit**.

Once your request has run successfully, you can view the distribution and edit it as needed.

Generating a named distribution

Use the Distribution Request page to submit a named distribution request. The request can generate a new named distribution or overwrite an existing named distribution with new data.

Generate a named distribution

1. On the Distribution Request page, select the desired option: **Submit a new named distribution request** or **Submit an existing named distribution request**.
2. Select a service queue. Note that while you can select multiple service queues for a production distribution, you can select only one service queue for a named distribution.
3. Enter a unique name for the named distribution if this is a new request, or select the existing named distribution name if you are reusing an existing named distribution name.
4. Enter the start date and end date of the desired reference period in the service queue time zone. The reference period should have historical data that closely resembles the dates for which you want to generate a forecast. There should be data for every selected day of the week in your reference period. If there is no data, WFM fills those periods with zeros.
5. Select the days of the week you want to calculate a distribution for. By default, every day of the week is selected.
6. Decide if you want the service queue standard times (Average Talk Time and Average After Contact Work Time) to be updated based on this distribution.
7. Schedule when you want the request to run. By default, the request is run immediately.
8. Click **Run**.

Once your request has run successfully, you can view the distribution and edit it as needed.

Viewing a distribution

View a distribution

1. On the Planning page, select **Distribution**.
2. Select the service queue for which you ran the distribution.
3. Select the production or named distribution. The distribution appears in both tabular and graphic form.
4. Select the day of the week you want to view from the drop-down list. Alternatively, scroll the displayed data up or down and click the black bar at the bottom to view the next day’s data or the black bar at the top to view the previous day’s data.

> **NOTE** The time zone for this service queue is also displayed. It is read-only and cannot be changed from this page. If the service queue time zone is changed on the Service Queues page, any affected distributions and forecasts should be rerun or manually edited, since the change of service queue time zone is not automatically reflected in them.

Working with distributions

Once you run a distribution, there are a number of actions you can take with it besides editing it. These actions are controlled by the buttons in the upper-right corner of the Distribution page. The button functions are described in the following table.

Not all buttons are available for both production and named distributions.

Button	Function
Save	Saves an edited distribution.
Save As	Saves a distribution with another name. This preserves the original distribution and creates a new named distribution.
Rename	Renames a named distribution. This function does not copy the distribution like the Save As function does, but rather changes the name of this distribution. Once changed, you will not see the old name in any list of named distributions for this service queue.
Delete	Deletes the named distribution.
Copy to Production	Copies the named distribution to production. This function overwrites the data in the existing production distribution with the data from this named distribution. For example, if the named distribution has data only for Monday and Tuesday but the production distribution has data for every day of the week, after the copy the production distribution will also contain data only for Monday and Tuesday.
Export	Exports the data in the distribution as a CSV file named export.csv. The export file contains the distribution data for every day of the week. This data can be manipulated in a spreadsheet application and then copied back into the distribution.

Create a forecast

A forecast is a prediction of the number of contacts for every 30-minute interval of the day that a contact center will receive over a specific period of time. There are three types of forecasts:

- The **production forecast** is used to generate the production schedule. There can be only one production forecast.
- **Named forecasts** are “what if?” forecasts, used to take into account volume drivers such as marketing campaigns that produce changes in contact volume, average handling time, or changes in operational hours. There can be many named forecasts.
- The **strategic forecast** is a five-year forecast that displays the number of agents required per month to meet the projected requirements of a service queue. There can be only one strategic forecast. This forecast is used to generate various strategic planning reports.

WFM uses historical contact data and a distribution to generate a forecast. The forecast is then used to create a schedule.

About the forecasting process

To create a forecast, you must complete each of the following tasks.

Generate a distribution

Generate a distribution (see Create a distribution) or use an existing distribution for the service queue and reference period you select. Choose six to eight recent weeks for the reference period, taking care not to use a week with unusual volume, such as a holiday week.

Distributions are responsible for determining the expected percentage of the daily contact volume that occurs in each interval of the day. Select a reference period that best represents the expected contact distribution over the course of a day.

Edit the distribution

If needed, edit the distribution (see Edit distributions and forecasts). For example, if you expect the contact volume to be lower on a certain day of the week in your forecast period, you can decrease the contact volume on that day in the distribution.

> **NOTE** If a special event is assigned to that day (see Account for days with abnormal contact volumes), then WFM normalizes the contact volume so that distributions are more accurate. In that case, there is no need for you to manually adjust the distribution.

Select a forecasting method

There are two forecasting methods, Standard and Advanced. The Standard method is the legacy method used by WFM. This method treats all weeks the same: it is not possible to represent differences in contact volumes or handle times on a week-by-week basis inside a single month. Therefore it does not reflect seasonal variations in contact volume at different times within the week and month. This method is recommended if you have one year or less of historical data to use as reference data.

The Advanced forecasting method is able to more accurately reflect seasonal variations in contact volume and handle time. This method is recommended for contact centers that do experience seasonal fluctuations in contact volume, and that have more than one year of historical data available. The longer the reference period, the more accurately this forecasting method is able to reflect weekly, monthly, and yearly variations.

Select a reference reriod

WFM uses historical data to project future requirements. The reference period you choose depends on which forecasting method you choose.

- **Standard Forecasting Method**. Identify the reference period with the historical data that most closely resembles the period for which you want to generate a forecast. The reference period you choose should reflect any weekly patterns that are likely to occur during the forecast period. Choosing a reference period from a year prior to the forecast period often provides the best reflection of weekly patterns.
- **Advanced Forecasting Method**. This forecast method performs better with a longer reference period. Identify the reference period of a year or longer with the historical data that most closely reflects the weekly, monthly, and yearly seasonal patterns that are likely to occur during the forecast period.

To view the historical data available to you for the service queue and the reference period you are considering, use the View and Edit Historical Data page (see View and edit historical data).

Generate the forecast

When you launch the forecast request, WFM performs these steps:

1. Applies any special event adjustments you assigned for the service queue in the historical reference period.
2. Generates the average contact volume for each day of the week using data from the reference period (Standard forecasting method) or generates the average daily contact volume using data from the reference period (Advanced forecasting method).

> **NOTE** When calculating contact volumes, WFM rounds near (up or down to the nearest whole number) except when the value would be rounded to zero. In that case, the value is rounded up to 1.

3. If you opted to use a historical trend, WFM determines the annual growth rate based on the two selected reference periods. The annual growth rate comes from the change in contact volume over the change in time between the two reference periods. The change in time is measured by the distance between the mid-date of each reference period. If you opted to use an expected trend, WFM adjusts the volume projections according to the percent annual growth rate you provide. Historical Trend and Expected Trend are applied to the forecase period differently. See Use trends in forecasting for more information.
4. Adjusts the volume projection for each day by the contact adjustment factor.
5. Applies the contact ratios from the distribution for each interval in the day. Contacts are redistributed for non-interactive service queues that use even or proportional redistribution during closed hours. Otherwise, the number of contacts is taken from the contacts arriving during service queue open hours. If the service queue is closed during an interval, the number of contacts is zero.
6. For non-interactive service queues, multiplies the projected contacts for each interval by the average handling time in order to estimate the amount of agent handling time required.
7. Uses an algorithm to determine the number of agents required per interval to meet the service level goals.

> **NOTE** If a service queue is closed on a day of the week, you must edit the service queue on the Service Queues page to clear the Active check box for that day of the week. If this is not done, the forecast request will fail.

> **NOTE** If there is a date with a firm date association within the forecast period, WFM uses the volume from the firm date association reference date, but the distribution of that contact volume by interval for the day comes from the distribution.

Review the forecast

If you do not think the forecast values are on target, you can edit the forecast (see Edit distributions and forecasts).

Generate a forecast

Use the Forecast Requests page to generate production, named, and strategic forecasts.

> **PREREQUISITE** Before generating a forecast, you must have a distribution for every service queue you select.

Generate a forecast

1. From the Forecast page, click **New Request**.
2. On the Forecast Request page, select the type of forecast you want to generate. You can:
   - Generate a new production forecast
   - Generate a new named forecast
   - Generate an existing named forecast
   - Generate a new strategic forecast
3. Complete the sections on the Forecast Request page as described below.
4. Click **Submit**.

Section descriptions

NOTE Not every section is required for every type of forecast.

Forecasting Method

Select the forecasting method you want to use, Advanced or Standard. The Advanced method takes into account weekly, monthly, and yearly patterns in your reference period data. The Standard method is not sensitive to such seasonal variations and is more appropriate if you have less than one year of historical data in your reference period.

NOTE Strategic forecasts use only the Standard forecasting method.

Forecast Period

Select the start and end dates of the period that the forecast covers.

Service Queue Type

Select the interactive or non-interactive service queue type for this forecast.

NOTE Strategic forecasts can be run only for interactive service queues.

Service Queue / Service Queues

Select the service queue that the forecast is for. Each of the available service queues are of the service queue type you selected and do not have the “Do not generate forecasts or schedules for this service queue” check box selected on the Service Queues page (see Manage service queues). You can select more than one service queue for a production or a strategic forecast. For named forecasts, you can select only one service queue.

NOTE Strategic forecasts can be run only for interactive service queues.

When you select the service queues for a production forecast, each service queue displays the default shrinkage scenario assigned to it. You can select a different shrinkage scenario if desired or make the Shrinkage Scenario field blank so that no shrinkage is applied to that service queue.

Shrinkage Scenario

Select the shrinkage scenario you want to apply to the named forecast. A shrinkage scenario consists of up to 12 shrinkage weeks in a specified order (from the current week to twelve weeks out) that are applied to the service queue when the forecast is run.

The default shrinkage scenario is displayed for the service queue you selected. You can select a different shrinkage scenario from the list of scenarios that are assigned to the service queue you selected, or make the field blank so that no shrinkage is applied.

Shrinkage Week Offset

Enter the shrinkage week offset to be used. The default offset is 0, meaning that a schedule will be run the same week this forecast is run. If you intend to run the schedule two weeks after the forecast is run, then the shrinkage week offset is 2. This tells WFM to start counting for Week 0's shrinkage two weeks from now when you actually run the schedule. There will be more exceptions in the schedule at that time, so your forecasted shrinkage will be a lower value than if you run the schedule now for the period two weeks in the future.

Forecast Name

If you are generating a new named forecast, enter a unique name for the forecast. If you are generating an existing named forecast, select that named forecast from the drop-down list.

Distribution

Select the distribution to be used. If you selected multiple service queues, this must be the production distribution. If you selected one service queue, then this can be either the production distribution or a named distribution. Whichever type of distribution you choose, it must have been run for the service queues you selected.

Trend Options

Select the trend option to be used (see Use trends in forecasting).

- No trend—Use this option if your contact volume remains constant over time.
- Historical trend—Use this option to determine the trend from historical data in two reference periods.

- Expected trend—Use this option if you want to forecast contact volume using an annual growth rate applied to the data in your reference period.

Reference Period

Enter the reference period to be used in the forecast. The reference period depends on which trend option you choose.

If you select…	Then…
No trend	Enter the start and end dates of the reference period. For the Advanced forecasting method, choose as long a reference period as possible that represents your current business conditions.
Historical trend	Enter two reference ranges to be used to calculate the trend. Range 1 should be one week or longer. This is the beginning point used to calculate the change in contact volume over time. For Range 2, choose the longest reference period possible that reflects the current conditions in your business. This represents seasonality, or the normal variance between between months for your company. The historical trend model performs optimally when both ranges are of the same length.
Expected trend	Enter a single reference range and an annual growth rate percentage. For the Advanced forecasting method, choose as long a reference period as possible that represents your current business conditions.

Contact Handling Time

Choose the source you want to use for the average talk time (ATT) and average after contact work time (AWT) used to generate the forecast. You can choose to calculate these values from the distribution you selected, or use the ATT and AWT configured for the service queue on the Service Queues page.

Contacts Adjustment Factor

(Optional) Enter a contact adjustment factor to adjust the forecasted contact volume up or down. The default value is 1.0, which means no change.

Service Level Objective

Set the service level objective, if desired.

- If the forecast is for interactive service queues, select the “Configure the service level objective” check box. When selected, a table is displayed that contains the standard service level objective configured on that service queue's Service Queues page. You can then modify the service level percentage by interval as desired.

- If the forecast is for non-interactive service queues, the Handling Threshold field is displayed. Enter the number of minutes (from 0 to 4320) in which contacts must be handled to meet the service level objective.

Schedule the Request

Schedule the time and date you want to run this forecast request. By default, the request is run immediately. Once your request has run successfully, you can view the forecast and edit it as needed.

Viewing a forecast

View a forecast

1. On the Planning page, select **Forecast**.
2. On the left side of the page, select the following:
    - The type of forecast—standard or strategic
    - The service queue
    - The production or named forecast
    - The date of the forecast
    - The time zone in which to display forecast data. By default it is displayed in the service queue time zone.
3. The forecast appears in both tabular and graphic form. You can choose to view it at different zoom levels.
    - Day view (D): Shows data at 30-minute intervals for the selected day
    - Week view (W): Shows daily data for each day in the selected 7-day week
    - Month view (M): Shows daily data for each day in the selected month

Working with forecasts

Once you run a forecast, there are a number of actions you can take with it besides editing it. These actions are controlled by the buttons in the upper right corner of the Forecast page. The button functions are described in the following table.

Not all buttons are available for production, named, and strategic forecasts.

Button	Function
Save	Saves an edited forecast.
Save As	Saves a production or named forecast with another name. This preserves the original forecast and creates a new named forecast that includes any edits you made to the forecast.
Rename	Renames a named forecast. This function does not copy the forecast like the Save As function does, but rather changes the name of this forecast. Once changed, you will not see the old name in any list of named forecasts for this service queue.
Delete	Deletes the named forecast.
Copy to Production	Copies the named forecast to production. This function overwrites the data in the existing production forecast with the data from this named forecast. For example, if the named forecast has data only for Monday and Tuesday but the production forecast has data for every day of the week, after the copy the production forecast will also contain data only for Monday and Tuesday.
Export	Exports the data in the forecast as a CSV file named export.csv. For production and named forecasts, you select a start and end date for the data to be exported for up to a year of data, as well as the zoom level (interval, week, or month). The default export is the date range, zoom level, and time zone you are viewing when you click the Export button. For strategic forecasts, you select a start and end date for the data to be exported from 1 to 60 months of data. The default length of time is 60 months. The default zoom level is by month, with no option to change to any other zoom level. This data can be manipulated in a spreadsheet application and then copied back into the forecast.

Import a forecast

There are some situations where you might want to import forecast data. For example, if there is no historical data available, a forecast cannot be calculated for you. Or perhaps a particular service queue handles trouble tickets, and the number of agents required to do that is already known and you just want to generate a schedule for those agents. Importing the data makes this possible.

The imported data is used to populate the forecast table seen on the Forecast page. It is more efficient than manually populating that table one cell at a time. The imported forecast can be a production forecast or a named forecast.

> **NOTE** There must be a row for every interval (a total of 48 rows per day), except on the day when your time zone transitions to or from Daylight Savings Time. On the day that Daylight Savings goes into effect there will be 46 rows, and the day when Daylight Savings ends there will be 50 rows.

> **NOTE** If you import a forecast for a day that already has a forecast, that existing forecast will be overwritten.

Forecasts are imported as CSV files.

- The forecast can be for one or for multiple days.
- The forecast must be for one interactive or non-interactive service queue at a time.
- The forecast data is assumed to be in the service queue time zone.
- The CSV file must include a row for every 30-minute interval in each day (a total of 48 rows) per day, and the data in each row must be in HH:MM format.

  > **NOTE** If you try to re-import a forecast that you exported at the week or month zoom level, you will receive an error message that you are missing a range of periods. This is because a week-level forecast displays data in three-hour intervals, and a month-level forecast displays data by day.

> **BEST PRACTICE** If you plan to import a forecast that includes fields without values, enter a 0 (zero) in these fields prior to importing the file.

Import a forecast

1. On the Forecast Request page, select the **Import a forecast** option.
2. Select the type of forecast you want to import:
   - If you are importing a production forecast, select the service queue it is for.
   - If you are importing an existing named forecast, select the service queue it is for and the named forecast.
   - If you are importing a new named forecast, select the service queue and enter a name for the new named forecast.
3. Choose the file to import, and then click **Upload** to import the forecast.

Once the forecast is uploaded, it can be viewed and edited like any other forecast.

Importing a forecast when you already know the number of forecasted agents

The CSV file includes the following fields when you already know the number of forecasted agents.

Field	Description
Date	The date of the forecast in YYYY-MM-DD format. **NOTE** The date format in the CSV files might be changed by a spreadsheet application such as Microsoft Excel to the format that is set in the application as the default. Be aware of this possibility and make sure that the date columns are configured so that the date format is correct.
Interval	The 30-minute interval in HH:MM format. **NOTE** There must be a row for every interval (a total of 48 rows per day).
AgentsForecast	The number of agents forecasted for the interval. Enter a 0 (zero) in any interval that the service queue is closed.

In this example import file, the AgentsForecast value is supplied. In that case, WFM uses the provided values and does not calculate its own.

```
Date,Interval,AgentsForecast
   2016-01-01,00:00,10
   2016-01-01,00:30,12
   2016-01-01,01:00,16
   ...
```

Importing a forecast when you want to calculate the number of forecasted agents

The CSV file includes the following fields in any order when you want WFM to calculate the number of forecasted agents based on the metrics you supply.

Field	Description
Date	The date of the forecast in YYYY-MM-DD format. **NOTE** The date format in the CSV files might be changed by a

Field	Description
	spreadsheet application such as Microsoft Excel to the format that is set in the application as the default. Be aware of this possibility and make sure that the date columns are configured so that the date format is correct.
Interval	The 30-minute interval in HH:MM format. **NOTE** There must be a row for every interval (a total of 48 rows per day).
ContactsForecast	The number of contacts forecasted for the interval. Enter a 0 (zero) in any interval that the service queue is closed. If enabled on the WFM Global Settings page (Enable Forecasted Contacts as Decimals), this number can have up to two decimal places (see Configure system-wide WFM settings). If more than two decimal places are entered, the number is rounded to the nearest two decimal places unless that would result in a number of 0.00, in which case the number displayed is 1.
AverageTalkTimeForecast	The average talk time per contact in seconds forecasted for the interval.
AverageWorkTimeForecast	The average after-contact work time in seconds forecasted for the interval.
ServiceLevelPercentForecast	The forecasted service level percentage for the interval.
ServiceLevelTimeForecast	The forecasted amount of time in seconds to answer a contact.

In this example, the AgentsForecast value will be calculated by WFM because no values are supplied in the file.

```
Date,Interval,ContactsForecast,AverageTalkTimeForecast,AverageWorkTimeForecast,S
   erviceLevelPercentForecast,ServiceLevelTimeForecast
   2016-01-01,00:00,100,120,30,80,20
   2016-01-01,00:30,102,110,35,80,20
   2016-01-01,01:00,103,90,40,80,20
   ...
```

Use trends in forecasting

When you choose to generate a forecast with trends, WFM calculates an annual growth rate in contact volume.

The choice of reference periods is an art that should take into account any seasonal fluctuations in the historical data. If historical data is seasonal, it is best to use the same portions of two different years to determine the trend.:

Webex WFO uses linear trends for forecasting. You can use two different trend options to generate a forecast:

- Historical trend—WFM uses historical data from your chosen reference period to calculate the percentage of contact volume change for each day of the week that is then applied to every date in the forecast period.
- Expected trend—WFM uses the annual growth rate you supply to calculate the contact volume change for every date in the forecast period.

Historical trends

Standard forecasting method

This trend option uses two reference periods. For each of the two trend reference periods, the average contact volume for each day of the week is computed, as well as the median date for each day of the week. For example, if there are five instances of Wednesday in the reference period, the median Wednesday is the third instance of that day.

Additionally, for each reference period, an overall average contact volume and mean date are computed. Then, the results from the two reference periods are combined to produce a growth rate and growth duration. From this, the annual growth rate is computed.

In a forecast using a historical trend, the starting point of the forecast is calculated by extending the trend line from the midpoint of the second reference period to the beginning of the forecast. In the graph below, the two reference periods are one year apart and there has been 100 percent growth over the course of the year (true for all days of the week). This growth is extended until January of the following year when the forecast begins.

Advanced forecasting method

This trend option uses two reference periods. For each of the two trend reference periods, the average contact volume for each day of the week is computed, as well as the median date for the reference period. For example, if there are five instances of Wednesday in the reference period, the median Wednesday is the third instance of that day.

Once the overall average contact volume and mean date are computed for each reference period, these values are used to produce a difference in contact volume and difference in time. The annual growth rate is computed from this.

In a forecast using a historical trend, the starting point of the forecast is calculated by extending the trend line from the midpoint in the second reference period to the beginning of the forecast. In the graph below, the two reference periods are one year apart and there has been 100 percent growth over the course of the year. This growth is extended until January of the following year when the forecast begins.

Expected trends

Standard forecasting method

In a forecast using a user-supplied expected trend, you enter a single reference period and a percentage rate of annual growth. A simple example is an annual growth rate of 100 percent. After one full year, call volume will have doubled (increased by 100 percent). The rate of growth is the same for all days of the week, but the slope of the linear trend associated with each day of the week might be different (see the Day of the week effect).

The average call volume is calculated on a per-day-of-the-week basis and carried forward to the first day of the forecast. It does not matter how much time elapses between the reference period and the beginning of the forecast (see the chart below). If the forecast begins on the same day of the week, the starting values will be identical between forecasts. If it begins on a different day of the week, there will be a small margin of error since the trend is applied to each forecast date.

Advanced forecasting method

In a forecast using a user-supplied expected trend, you enter a single reference period and a percentage rate of annual growth. A simple example is an annual growth rate of 100 percent. After one full year, the average daily call volume will have doubled (increased by 100 percent).

The average daily call volume is calculated from the whole reference period and carried forward to the first day of the forecast. It does not matter how much time elapses between the reference period and the beginning of the forecast (see the chart below). Since there are seasonal factors involved, the beginning forecast value will only be very close to the beginning reference period value if the forecast starts on the same day of the week, month of the year, and day of the month.

Day of the week effect

Since different days of the week usually have different call volumes, the effect of a uniform annual growth rate differs by day of the week. In the example below, the annual growth rate is 100 percent. The starting and ending average call volume for each day of the week is displayed in the following table:

Day of the Week	Initial Call Volume	Call Volume After 1 Year
Sunday	50	100
Monday	50	100
Tuesday	50	100
Wednesday	100	200
Thursday	100	200
Friday	200	400
Saturday	100	200

The red dashed lines show the trend line that results from the growth rate.

Examples: One-year forecast using the standard forecasting method

This section contains examples of the expected behavior of year-long forecasts made with specific growth rates. The annual growth rate is the amount of expected growth seen one full year after the beginning of the forecast.

> **NOTE** The formula uses 365 days in regular years and 366 days in leap years as the year length. In a normal year, the amount of growth on the 365th day of the forecast affecting the average call volume used to forecast will equal the average plus the expected growth.

Example 1: Positive growth rate

In this example, the annual growth rate is 50 percent. At the end of one year, the call volume for each day of the week should increase to 1.5 times its original value.

Day of the Week	Initial Call Volume	Call Volume After 1 Year
Sunday	50	75
Monday	50	75
Tuesday	50	75
Wednesday	100	150
Thursday	100	150

Day of the Week	Initial Call Volume	Call Volume After 1 Year
Friday	200	300
Saturday	100	150

Example 2: Zero growth rate

In this example, there is no change to the call volumes by day of the week (an annual growth rate of zero percent). The forecast for each day of the week is perfectly flat.

Day of the Week	Initial Call Volume	Call Volume After 1 Year
Sunday	50	50
Monday	50	50
Tuesday	50	50
Wednesday	100	100
Thursday	100	100
Friday	200	200
Saturday	100	100

Example 3: Negative growth rate

In this example, the call volume is decreasing. In the first chart, an annual growth rate of –50 percent implies that the call volumes for each day of the week is half of their starting value after one year.

Day of the Week	Initial Call Volume	Call Volume After 1 Year
Sunday	50	25
Monday	50	25
Tuesday	50	25
Wednesday	100	50
Thursday	100	50
Friday	200	100
Saturday	100	50

In the second chart, the annual growth rate is –200 percent. In this case, the call volumes reach zero halfway through the year. Once a negative growth rate forces the forecast to converge to zero, it bottoms out and can never be less than that. Because of the day of the week effect (see Day of the week effect), all days of the week converge to zero at roughly the same point in time.

Examples: One-year forecast using the advanced forecasting method

This section contains examples of the expected behavior of year-long forecasts made with specific growth rates. The annual growth rate is the amount of expected growth seen one full year after the beginning of the forecast.

> **NOTE** The formula uses 365 days in regular years and 366 in leap years as the year length. The amount of growth on the 365th day of the forecast will not be exactly equal to the annual growth rate, but it should be very close and within an acceptable margin of error.

Example 1: Positive growth rate

In this example, the annual growth rate is 50 percent. The average call volume increases so that at the end of one year, the average call volume will have increased to 1.5 times its original value. In the table and graph below, the average call volume begins at 497.7 and increases to 745.7 after one year. The average call volume for the last day of each month is shown in the table.

Month	Reference Period Average Daily Call Volume	Average Call Volume at End of the Month
January	497.7	518.1
February	497.7	537.2
March	497.7	558.3
April	497.7	578.8
May	497.7	599.9
June	497.7	620.3
July	497.7	641.5
August	497.7	662.6
September	497.7	683.0
October	497.7	704.1

Month	Reference Period Average Daily Call Volume	Average Call Volume at End of the Month
November	497.7	724.6
December	497.7	745.7

Example 2: Negative growth rate

In this example, the call volume is decreasing. In the first table and graph, an annual growth rate of –50 percent is applied so that the average daily call volume after one year is half of what it is at the beginning of the forecast period. In the table below, the average daily call for each month is shown.

Month	Reference Period Average Daily Call Volume	Average Call Voilume at End of the Month
January	497.7	477.3
February	497.7	458.2
March	497.7	437.1
April	497.7	416.6
May	497.7	395.5
June	497.7	375.1
July	497.7	353.9
August	497.7	332.8
September	497.7	312.4
October	497.7	291.3
November	497.7	270.8
December	497.7	249.7

In the second chart, the annual growth rate is –200 percent. In this case, the call volumes reach zero halfway through the year. Once a negative growth rate forces the forecast to converge to zero, it bottoms out and can never be less than that. Due to Day of Week arrival patterns, not all days may reach zero at the same point in time, as seen in the graph.

Strategic forecasts

Strategic forecasts are 5 years long. The annual growth rate is used to calculate the expected growth at the one-year point in time and to calculate the slope of the line that describes the call volume's continued growth. This is shown in the graph below as an annual growth rate as a linear trend. The growth rate is not applied independently to each year of the strategic forecast. The dashed red line illustrates what happens when the growth rate is applied to each subsequent year of a forecast.

Strategic forecast examples

Below are some examples of an annual growth rate as a linear trend (expected trend) in a strategic forecast. The annual growth rates shown are 100 percent, zero percent, and –50 percent. In all examples, the starting point is the same. Notice that a growth rate of –50 percent over the first year reaches zero at the end of Year 2, and then remains there for the rest of the forecast. Also worth noting is the zero percent growth rate (there is no change in the call volume for the forecast).

Manage firm date associations

A firm date association is a link between two dates that fall on different days of the week from year to year. Firm date associations are useful because when WFM generates a forecast, it uses historical data from the same day of the week.

To ensure that WFM uses a date with similar data for its forecast, you must create firm date associations.

> **EXAMPLE** To generate a forecast for Wednesday, January 1, 2014, WFM uses data from Wednesday, January 2, 2013. However, the 2014 date is New Year's Day and the 2013 date is the day after New Year's Day. The contact data for the two dates is probably going to be significantly different because of the holiday. Creating a firm date association between January 1, 2014 and January 1, 2013 corrects this when generating a forecast.

If you do not have adequate historical data in the WFM database to use firm date associations, you can generate a forecast and then edit the data for that specific date to reflect correct information (see Edit distributions and forecasts).

Copying firm date associations

Once you have saved firm date associations for a service queue, you can copy them to another service queue.

Copy firm date associations from one service queue to another

1. Select the service queue whose firm date associations you want to copy.
2. In the **Copy to Service Queue** field, select the target service queue.
3. Click **Copy**.

> **NOTE** The Copy action overwrites any firm date associations that might have been set up for the target service queue.

Field descriptions

Use the Firm Date Associations page to create, edit, and delete firm date associations for individual service queues.

You cannot edit associated dates once you have set them up, but you can edit their descriptions. If you have made an error in selecting the two dates, delete the date association and start again.

The fields on the Firm Date Associations page are described below.

Field	Description
Service Queue	The service queue you want to create firm date associations for.
Associate this future target date	The date in the future you want to link to a past reference date. This is the date you will be creating forecasts for.
With this historical reference date	The date in the past that has historical data similar to what you expect on the future date.
Description	A description of the associated dates to identify them, such as “New Year’s Day” or “Annual Sales Event.” This is the only field you can edit once you save a firm date association.
Add button	Click Add to add the associated dates to the table.
Delete button	If you want to delete a date association, select the check box next to it in the table and click Delete.
Copy to Service Queue	The target service queue to which you want to copy the displayed service queue’s firm date associations.

Account for days with abnormal contact volumes

Use the Special Events page to create and manage special events and assign them to service queues. A special event is a type of event that causes contact volume to deviate from normal. The special event can cause volume to either increase or decrease. When you assign a special event to a service queue, WFM makes adjustments for the effect of the special event by removing it from distributions and normalizing it in forecasts.

When examining a historical special event, consider the following:

- Which service queue does the special event affect? A special event is always related to a service queue.
- What type of event is this special event? You can configure generic types of special events with default values. Once you create a generic special event, you can select it from a list of available special event types whenever you need it.
- When does the special event occur?
- How many days after the special event does the contact volume impact appear? The impact of a power outage is immediate. The impact of a bill-format change happens after the postal service delivers the bills and the customers open the mail.
- How long does the contact volume impact last in days? The impact of a power outage might only last a day, if service is restored during that time. The impact of a bill format change is likely to endure for a number of days, because customers handle bills at different times.
- What was the impact ratio? This is determined by dividing the contact volume that occurred with the special event by the contact volume that would most likely occur in the absence of the special event.

Impact on distribution requests

If the reference period you specify in a distribution request includes a special event, the special event date is excluded from the reference period. This ensures that the abnormal contact patterns (including contact handle times) on the special event day do not affect the contact distribution patterns.

> **EXAMPLE** Consider a power outage that causes the daily contact volume to be halved: it is normal in the morning but goes to zero in the afternoon. A special event with an impact ratio of 0.5 is created. The date of this special event, if part of a reference period, will be excluded from that reference period.

Impact on forecast requests

If the reference period you specify in a forecast request includes a special event, the normalized contact volume is calculated by dividing the actual contact volume on the special event day by the impact factor. That is:

normalized contact volume = actual contact volume on special event date ÷ impact factor

In the power-outage example, let us say that the actual contact volume on the day the power outage occurred was 5,000 contacts. The power outage special event has an impact factor of 0.5. Using the above equation:

normalized contact volume = 5,000 ÷ 0.5 = 10,000

The contact volume in the reference period has been normalized to 10,000 contacts to compensate for the effect of the special event, which makes the forecast more accurate.

Limitations of special events

Special events are used to negate the effects of a sudden and nonrepeating change in the contact volume in the past to ensure that forecasts do not include these anomalies.

Special events cannot be used to predict changes in contact volume due to future events, such as an upcoming marketing campaign. These types of events can be accommodated either automatically or manually during the forecasting process.

Field descriptions

The fields on the page when you create, edit, or delete a special event are described below.

Field	Description
Special Event Name	A name for the special event. Maximum characters = 50.
Impact Delay	The delay in whole days between the special event's occurrence and when it actually affects the contact center. Default value = 0.
Impact Duration	The number of whole days you expect the effects of the special event to last. Default value = 1.
Impact Ratio	The impact of the special event on normal contact volume. Default value = 1.

The fields on the page when you assign a special event to a service queue are described below.

Field	Description
Service Queue	Select the service queue to which you want to assign the special event.
Special Event	Select the special event to which you want to assign to the service queue.
Event Date	Select the date of the special event.
Impact Delay	This field is autofilled with the value configured for the special event. You can change it if desired.
Impact Duration	This field is autofilled with the value configured for the special event.

Field	Description
	You can change it if desired.
Impact Ratio	This field is autofilled with the value configured for the special event. You can change it if desired.
Comment	(Optional) Comment about the special event.
Assign button	Click this button to assign the event to the service queue. It is added to the Assigned Events table.
Delete button	Click this button to delete the selected special event from the Assigned Events table.

Data in the forecast summary

The data in the Forecast Summary row is calculated as described in the following table.

> **NOTE** The totals and averages in the Forecast Summary row are calculated over a twenty-four hour period. These calculations are not limited to the opening and closing hours of the service queue you have selected.

Column	Summary Calculation
Agents Actual	Weighted average of values in the column: SUM(Agents Actual × Period Duration) ÷ SUM(Period Duration)
Agents Forecast	Weighted average of values in the column, rounded up to the next integer: SUM(Agents Forecast × period duration) ÷ SUM(period duration)
Agents Forecast Shrinkage Applied	Weighted average for period duration, rounded up to the nexst integer. Agents Forecast ÷ ([1 – shrinkage percentage] ÷ 100) **NOTE** In low-volume service queues with a small amount of shrinkage, it can look like shrinkage was not applied because both the Agents Forecast column and this column display the same value. For example, due to rounding up to the next integer, the

Column	Summary Calculation
	actual Agents Forecast of 0.2 is displayed as 1. If shrinkage of 5% is applied, the result is still less than 1. As a result, both columns display the value 1.
Agents Scheduled	Weighted average of values in the column: SUM(Agents Scheduled × Period Duration) ÷ SUM(Period Duration)
Average Talk Time Actual	Weighted average of values in the column: SUM(Average Talk Time Actual × Contacts Actual) ÷ SUM(Contacts Actual)
Average Talk Time Forecast	Weighted average of the non-zero values in the column: SUM(Average Talk Time Forecast × Contacts Forecast) ÷ SUM(Contacts Forecast).
Average Work Time Actual	Weighted average of values in the column: SUM(Average Work Time Actual × Contacts Actual) ÷ SUM(Contacts Actual)
Average Work Time Forecast	Weighted average of non-zero values in the column: SUM(Average Work Time Forecast × Contacts Forecast) ÷ SUM (Contacts Forecast)
Contacts Actual	Sum of values in the column.
Contacts Forecast	Sum of column values. If enabled on the Global Settings page (Enable Forecasted Contacts as Decimals), this value can have up to two decimal places. If edited, the cells in each row of the column change: (new summary value ÷ old summary value) × old cell value If the old summary value was zero, each cell is set to: summary value ÷ number of cells

Column	Summary Calculation
Net Agents	Agents Scheduled — Agents Forecast
Net Agents with Shrinkage	Agents Scheduled — Agents Forecasted with Shrinkage
Service Level % Actual	Weighted average of values in the column: SUM(interval service level % × contacts offered) ÷ SUM (interval contacts offered)
Service Level % Forecast	Weighted average of values in the column: SUM(Service Level % Forecast × Contacts Forecast) ÷ SUM(Contacts Forecast) By default this is the value configured as a service level objective on the Service Queue page, but it can be changed to a different value if desired. Only interactive service queue data can be edited.
Service Level Time Forecast	Weighted average of values in the column: SUM(Service Level Time Forecast × Contacts Forecast) ÷ SUM(Contacts Forecast) By default this is the value configured as a service level objective on the Service Queue page, but it can be changed to a different value if desired.
Total Shrinkage %	Average of all shrinkage percentages. **NOTE** If the summary value is 0%, and you edit it to another value greater than 0%, then that value is applied to every interval evenly across all intervals. For example, if you change the summary value from 0% to 10%, then 10% is applied to every interval. If, however, the summary value is greater than or less than 0%, and you edit it to another value that is greater than or less than 0%, then the the interval values are updated proportionately across all intervals so that the summary value is equal to or close to the value you entered.

Edit distributions and forecasts

Distributions and forecasts can be edited in a number of ways, as described below.

Dragging data points in the graph

You can drag the data points on the lines in the forecast and distribution graphs to increase or decrease the value that those data points represent.

> **NOTE** You cannot drag lines in a graph that is displayed horizontally.

There is some data that cannot be edited by dragging data points.

- In a forecast, you cannot edit any actual data (such as the Contacts Actual) or the number of agents scheduled (Agents Scheduled).
- In a distribution, you cannot edit the contact ratio data (Contact Ratio), but you can edit the other values in the distribution.

Editing data in the table

You can edit fields in the table. Changes you make are reflected immediately in the graph.

- Double-click a table cell to edit it. Tab out of the cell or press Enter for the new value to "stick."
- Press Tab to move cell to cell to the right.
- Press Shift+Tab to move cell to cell to the left.
- Press Enter to move down one cell at a time.
- Press Shift+Enter to move up one cell at a time.

Populating an empty table

If there is no forecast or distribution data available on a particular day, you can use the import function or manually populate the forecast or distribution table for that day using the Initialize button. This button appears at the upper right of the page only when there is no forecast or distribution data for the selected service queue and date.

> **NOTE** The Initialize button appears on the Forecast page only at the Day zoom level. It is never displayed for strategic forecasts.

When you click the button the table is filled with zeros in every interval of the day you are viewing. You can then copy and paste data into the table or enter it in manually.

Editing totals on the distribution page

The following table lists the fields on the Distribution page whose summary value you can edit, and how that edit affects the data in the table.

Field	Effect on Data
Average Talk Time	The new summary value is applied as is throughout the time period. This edit causes the Agents Forecast value to be recalculated at each interval.
Average Work Time	The new summary value is applied as is throughout the time period. This edit causes the Agents Forecast value to be recalculated at each interval.

Editing totals on the forecast page

The following table lists the fields on the Forecast page whose summary value you can edit, and how that edit affects the data in the table. When a summary value is edited, forecast values are redistributed to each interval. This in turn triggers a recalculation of the actual summary value, which might not be identical to the value you entered.

Field	Effect on Data
Agents Forecast	The new summary value is spread out proportionally throughout the time period based on the pre-edit values. If the pre-edit values are all zero, then the new value is spread out evenly across all intervals in the period. This edit does not cause any other metrics to be recalculated. This edit is allowed only at the Interval zoom level.
Agents Forecast Shrinkage Applied	The values in this column change if the shrinkage percentage is changed.
Average Talk Time Forecast	The new summary value is applied as is throughout the time period. This edit causes the Agents Forecast value to be recalculated at each interval.
Average Work Time Forecast	The new summary value is applied as is throughout the time period. This edit causes the Agents Forecast value to be recalculated at each interval.
Contacts Forecast	The new summary value is spread out proportionally throughout the time

Field	Effect on Data
	period based on the pre-edit values. If the pre-edit values are all zero, then the new value is spread out evenly across all intervals in the period. This edit causes the Agents Forecast value to be recalculated at each interval.
Service Level % Forecast	The new summary value is applied to all intervals throughout the time period. This edit causes the Agents Forecast value to be recalculated at each interval.
Service Level Time Forecast	The new summary value is applied as is throughout the time period. This edit causes the Agents Forecast value to be recalculated at each interval.
Total Shrinkage %	The new summary value is applied to all intervals throughout the time period. If all values in the intervals are the same, changing the summary value results in the same value appearing in each interval.

NOTE The numbers you see after making edits at the Week and Month zoom levels but before saving might (and likely will) change slightly after the changes are saved and propagated to the underlying interval data.

Editing totals in a strategic forecast

You can edit any strategic forecast column at the Year zoom level except for Agents Forecast, which is computed from the values in other columns.

NOTE The Contacts Forecast Summary value represents the total number of contacts for the year. If that value is changed to a value that averages out to fewer than 0.5 calls per day, it is rounded down to zero. Therefore, it is possible to see a zero for the monthly Contacts Forecast value.

Copying and pasting data in the table

You can copy and paste data in the table using standard Windows shortcut keys.

- Click and drag with your mouse to select specific rows and columns in the table or a spreadsheet, or press Ctrl+A to select the entire table or spreadsheet.

- Use Ctrl+C to copy the selected cells to the clipboard in tab separated value (TSV) or comma separated value (CSV) format. This action copies both editable and read-only columns if you are copying data from within the table.
- Use Ctrl+V to paste the contents of the clipboard into table cells. You can paste into a specifically chosen group of cells, or just select the cell that becomes the upper-left corner of your pasted data. The data is pasted into the selected cells, unless the selected column is read-only. You cannot paste copied data into read-only columns. If the copied data is too big to fit into the selected paste area, paste expands the selection to the size of the data on the clipboard. For example, if you select a 2 × 2 area but the data on the clipboard is 3 × 3, then it will paste 3 × 3. The pasted data is highlighted in the table.

Applying an adjustment factor to a column

You can apply an adjustment factor to edit every value in a distribution or forecast table column by the same percentage. For example, to increase the values in a column by 20 percent, you apply an adjustment factor of 1.2.

To apply the adjustment factor, double-click the column header and enter the desired value in the resulting dialog box. The dialog box is available only for columns you can edit this way.

You can adjust the following columns in a forecast:

- Contacts Forecast
- Average Talk Time
- Average Work Time Forecast
- Total Shrinkage %
- Agents Forecast Shrinkage Applied
- Agents Forecast
- Service Level % Forecast
- Service Level Time Forecast

You can adjust the following columns in a distribution:

- Average Talk Time
- Average Work Time

Manage schedule activities

The pages in the Activities section of Application Management enable you to set up and manage exceptions and projects.

Manage exceptions

The Exceptions page allows you to create, edit, delete, and assign exceptions. Exceptions are activities that take agents away from being in service. Examples of exceptions are meetings, training, and time off.

Exceptions can be placed in an agent's schedule in a number of ways:

- Requested by agents via an Exception Request for either past and future dates (see Request an exception). This type of exception must be approved by the agent's supervisor before it is applied to the schedule.
- Assigned to agents before a schedule is run by a supervisor or scheduler (see Assigning an exception). When generating a schedule, WFM applies the exception to the agent's schedule and moves breaks to accommodate it. WFM also attempts to schedule another agent to work on that date to ensure that requirements are covered for the service queue.
- Assigned to agents after a schedule is run by a supervisor or scheduler using the Agent Schedules page (see Insert an activity). Assigning exceptions after a schedule is run ensures that the schedule accurately reflects current conditions and that a history of exceptions is saved.
- Assigned to agents as a dynamic scheduling event.
- Assigned to agents as an intraday dynamic scheduling vacation or time off exception.

A list of agents assigned a specific exception can be reviewed in the Assigned Exceptions report (see).

In most cases, the exception placement is obvious and exactly matches what was requested. However, in a few cases, the exception placement is less obvious because the placement must follow certain rules based on the exception request or assigned exception and the agent's existing schedule, as described below.

For schedules run with assigned exceptions

When running a schedule, the scheduler looks at the assigned exceptions for each agent and attempts to place corresponding scheduled exceptions in the schedule for that agent. The scheduled exceptions might or might not exactly match the start/stop times of the assigned exception.

> **NOTE** It is possible that when assigning entire-day exceptions and partial-day exceptions with variable work shifts, the exceptions might be placed on optional days when agents do not have shifts.

For entire-day assigned exceptions:

- The entire-day assigned exception is applied to the entire shift if one is created for that day. If no shift is created for that day, then the exception is not placed in the schedule.
- For the Balanced scheduling method, if there is an all-day exception on a variable work shift day, the scheduler generally does not use that day if there are other days where the agent is needed. However, the scheduler prefers to schedule for that day if there are no other days where the agent is needed.

For partial-day assigned exceptions:

- Partial-day assigned exceptions are placed only on the portion of the schedule where a shift can be placed (that is, the agent is available to work).
- If no portion of the assigned exception overlaps where a shift can be placed, then the exception is not placed on the schedule.

For approved exception, mentoring, and time off requests

Exception, mentoring, and time off requests all create assigned exceptions at approval time, for both manually- and automatically-approved requests. The exception might or might not be placed on the schedule at approval time as described below.

When no schedule exists:

- If no schedule exists for the agent, then the exception is not placed on the schedule at approval time. The assigned exception is still created so that if or when a scehdule is run, the scheduler attempts to place the exception on the schedule for the agent based on the rules for running a schedule with assigned exceptions.

When a schedule exists:

- For entire-day requests, an exception is placed on the schedule over any paid activities in shifts that start on that day. Any unpaid activities in those shifts are replaced with a Not Available activity. If the agent does not have a shift on that day, then the exception is not added to the agent's schedule.
- For partial-day requests, an exception is placed on the schedule for the requested time period over any existing paid activities during that time period. Any overlapping unpaid activities in those shifts are replaced with a Not Available activity. If the agent does not have any existing paid activities during that time period, then the exception is not added to the agent's schedule.

BEST PRACTICE Do not delete exceptions that are no longer used if they were previously assigned to agents. If they are deleted, the historical data associated with them will be lost. Deactivate the exceptions instead.

Creating, editing, and deleting exceptions

The fields on the page when you edit or delete an existing exception, or when you create a new exception, are described below.

> **NOTE** Exceptions that were previously used in a schedule and are still in schedule history cannot be deleted.

Field	Description
Exception Information	The unique name for the exception. Max characters = 50.
Activate the exception	Select the check box to activate the exception and make it available for use. If you clear the check box, the exception will no longer be available for use (it is deactivated).
This exception is a paid activity	Select the check box if the exception activity is a paid activity. This setting can be overridden when the exception is assigned to an agent.
This activity requires a workstation	Select the check box if the exception activity requires the agent to whom it is assigned to occupy a workstation. When selected, the exception is counted when calculating the total number of agents scheduled at the same time (the maximum staffing limit). See Limit the number of agents to schedule for more information.
Hyperlink URL	The URL of the webpage an agent must visit to perform the exception activity, if that is required. You must use the full URL (including “http,” “https,” and “www” as needed). The URL appears in the exception in My Schedule.
Text to Display	The optional text that appears as a hyperlink in the exception instead of the URL.
Activity Metadata	(Optional) Assigns a default metadata value to, or removes a default metadata value from, the exception. For more information about configuring metadata values, see Manage activity metadata values.
Color	The color that represents this exception in the schedule.

Assigning an exception

The fields on the page when you assign an exception to one or more agents are described below.

NOTE You cannot edit an assigned exception. You can overlay an assigned exception with a new assigned exception for the same agents and date/time. The first assigned exception is then replaced with the new assigned exception the next time the schedule for those agents is run.

Field	Description
Exception	The exception you want to assign to agents.
This exception is a paid activity	By default, this check box shows the paid status assigned to the exception. When you assign the exception to one or more agents on this page, you can select or clear the check box to override that setting.
Agents	The agents who you can assign to the exception. You can assign one, multiple, or all agents to the exception.
Dates	The start date and end date of the exception activity. You can also enter a start date and then specify a number of occurrences for a recurring activity. If you enter a number of occurrences, the End Date field is disabled.
Duration	The start time and end time of the exception activity. If you choose Entire Day, the Start Time and End Time fields are disabled. The read-only Hours field calculates the length of time of the activity based on the start and end times. ▪ If the assigned exception is an all-day exception, that day is in each agent's display time zone. ▪ If the assigned exception is a partial-day exception, the times in the start and end time fields are in the customer time zone. However, agents see the exception in their own display time zone.
Entire Day	Select this check box if the activity lasts the entire work day. When selected, the Start Time and End Time fields are disabled.
Frequency	The frequency of the activity—day, week, month, or year.
Occurrence	Depending on your choice of frequency, this section displays the options you can choose to set the daily, weekly, monthly, or yearly occurrence.
Note	(Optional) Add additional information about the exception that is specific to the assigned agents. The information you enter is visible to those

Field	Description
	agents in My Schedule when the exception is scheduled. You can view, edit, or delete the note in Agent Schedules. You cannot edit an existing note here, but you can overlay the assigned exception with a new exception for the same assigned agents and the same time and date that includes a different note. The new exception then replaces the original exception the next time a schedule is run for those agents.

Examples of configuring frequency and occurrence

The following examples demonstrate how you can set the frequency and occurrence of daily, weekly, monthly, and yearly exceptions.

Once only

To assign an exception that occurs only once, use these settings.

Field	Setting
Start Date, End Date	Same date
Frequency	Day
Daily Occurrence	Every 1 days

Once a week

To assign an exception that occurs once a week on Monday for 10 weeks, use these settings.

Field	Setting
Start Date	Date of the first Monday in the series
Number of Occurrences	10
Frequency	Week
Weekly Occurrence	Every 1 weeks
On These Days	Monday **NOTE** Selected days are blue, unselected days are white.

Once a month

To assign an exception that occurs once a month on the second Monday for 12 months, use these settings.

Field	Setting
Start Date	Date of the first Monday in the series
Number of Occurrences	12
Frequency	Month
Monthly Occurrence	Select the option and complete the statement as follows: “The second Monday of every 1 months.”

Once a year

To assign an exception that occurs once a year on January 15 for five years, use these settings:

Field	Setting
Start Date	The first January 15 in the series
Number of Occurrences	5
Frequency	Year
Yearly Occurrence	Select the first option and complete the statement as follows: “Every January on this date: 15.”

Manage exception types

Use the Exception Types page to create, edit, and delete exception types. An exception type is a generic or high-level exception that agents select when requesting an exception.

If you think your agents will select an appropriate exception type when requesting time off, you can create exception types that are less generic. If you think your agents will not select an appropriate exception type, you can create a small number of very broad exception types and ask agents to include a descriptive comment when they request time off.

> **EXAMPLE** An agent has a doctor’s appointment, so when requesting time off, she selects the Sick Leave exception type and then types a comment indicating that the request is for a doctor’s appointment. This exception type serves as a placeholder until the agent’s supervisor approves the request. When approving the request, the supervisor enters the specific exception “Doctor Appointment.”

NOTE Exception types you create are automatically assigned to the Enterprise view and the view assigned to you.

Field descriptions

NOTE You cannot edit or delete exception types that are not within your view. If an exception type within your view has exceptions mapped to it that are not within your view, you cannot edit that exception type. This ensures that you cannot inadvertently remove exceptions you cannot view.

The fields on the page are described below.

Field	Description
Exception Type Name	The unique exception type name. Max characters = 50.
Default Exception	The default workflow exception used for this exception type (see Automate handling of agent requests).

Manage projects

Use the Projects page to create, edit, and delete projects. A project is an activity that prevents agents from responding to contacts. Projects are generally assigned to optimize the use of agent idle time when contact volume is low. These activities occur each work shift and can be assigned for one or more days per week.

WFM examines the coverage for every interval and schedules a project for a time when it has the least impact on coverage.

NOTE Projects are scheduled last, after work conditions and exceptions are taken into consideration. They are not scheduled over lunches, breaks, or exceptions. Projects should not be configured to be as long as an entire shift, but rather should be configured in smaller lengths of time so that they can take into account lunches, breaks, and exceptions.

There are two types of projects: required projects and non-required projects (the default). Required projects are projects that must be performed, and so must be scheduled at the best time even if there is not an interval where the coverage would normally allow it. Non-required projects are scheduled when possible, taking into consideration coverage requirements, and are scheduled based on their assigned priority.

Projects are scheduled in this order:

- Required project
- Non-required project, priority 0

- Non-required project, priority 1
- Non-required project, priority 2
- And so on.

NOTE You can change a project's status from required to non-required or non-required to required. That change does not go into effect until the schedule is rerun. It does not affect already-scheduled projects.

Field descriptions

BEST PRACTICE Do not delete projects. If you delete a project, all the historical data associated with it is lost.

NOTE You cannot delete a project if it is currently scheduled.

The fields on the page are described below.

Field	Description
Project Name	The unique name for the project.
This is a required project	Select this check box if the project is required. If you do, the project will be scheduled before non-required projects in the best possible place for coverage. This might cause under-staffing.
Priority	(Optional projects only) A number from zero to nine that describes the project's priority, with zero being the highest priority. If a project is designated as a required project, this field displays a read-only "–1".
Hyperlink URL	The URL of the webpage an agent must visit to perform the project activity, if that is required. You must use the full URL (including "http", "https", and "www" as applicable). The URL appears in the project activity in My Schedule.
Text to Display	Enter optional text that will appear as a hyperlink in the project activity instead of the URL.
This project is a paid activity	Select the check box if this project is a paid activity.
Activate this project	Select this check box to activate the project. A project cannot be

Field	Description
	scheduled until it is activated.
Start Date/End Date	The start and end dates of the period agents can be scheduled to work on the project. **NOTE** The scheduler treats project start and end dates as calendar dates, not shift dates.
Start Time/End Time	The start and end times of the period during which agents can be scheduled to work on the project. **NOTE** The scheduler bases project start and end times on the agent's scheduling time zone.
Schedule Increment	The schedule increment that determines the intervals in which the project can start. For example, if you choose an increment of 15 minutes and the start time is 08:00, then agents could start working on a project at 08:00, 08:15, 08:30, and so on.
Days Agents Can Work on the Project	The days that indicate which days of the week agents can be scheduled to work on the project. Selected days are blue. By default, every day of the week is selected.
Minimum Duration	(Optional projects only) The minimum length of time that agents can be scheduled to work on the project. This value cannot be less than the Duration Unit and must be a multiple of the Duration Unit.
Maximum Duration	(Optional projects only) The maximum length of time that agents can be scheduled to work on the project. This value must be a multiple of the Duration Unit and must be at least the same as the Minimum Duration.
Duration Unit	(Optional projects only) The basic block of time that agents are scheduled to work on the project. For example, if the duration unit is 30 minutes and an agent is scheduled to work on the project for 60 minutes during the work shift, that time could be two sequential duration units that total 60 minutes, or one 30-minute duration unit in the morning and another 30-minute duration unit in the afternoon.

Field	Description
Duration	(Required projects only) The duration that agents are scheduled to work on the required project. Default = 30 minutes.
Limit the total number of hours spent on this project per week	Select the check box if you want to limit the total number of hours spent on the project per week. When the check box is selected, the Maximum Hours per Week option appears.
Maximum Hours per Week	The maximum number of hours per week an agent can work on this project. Select one of two options to indicate if the agent can work multiple days per week or only one day per week on the project.
Agents	The agents selected to work on the project.
Note	(Optional) Add additional information about the project. The information you enter is visible to agents in My Schedule when the project is scheduled and to analysts on the Agent Schedules page. You can edit or delete the note here or in Agent Schedules. If you edit the note here the note is updated the next time the schedule is run.
Activity Metadata	(Optional) Assigns a default metadata value to, or removes a default metadata value from, the project. For more information about configuring metadata values, see Manage activity metadata values.
Color	The color that represents this project in the schedule.

Create a schedule

Generate a schedule

1. Access the Schedule Request page.
2. Select the scheduling method you want to use. By default, the Balanced option is selected.
    - The Balanced option equalizes staffing as best as possible across the day's intervals based on user configurations and work shifts, resulting in schedules that spread out available agents more evenly.

      > **NOTE** When maximum staffing limits are enabled, this option takes the limit into account when generating a schedule.

> **BEST PRACTICE** Use service queue priority settings to fine-tune scheduling behavior. If the results of scheduling multiple service queues are not satisfactory (for example, you need to minimize the understaffing of an important service queue), make sure that the priority assigned to that service queue is far from the priorities assigned to the other service queues. For example, the important service queue is assigned a priority of 4 while other service queues are assigned priorities of 90 and 100 (see Service Queue Priority).

- The Prioritized option (formerly called the Default option) concentrates available staff earlier in the week and in the earliest intervals they can be scheduled. If you are understaffed, this results in schedules that tend to meet staffing requirements earlier in the week and day rather than those later in the week and day.

  > **NOTE** Even when maximum staffing limits are enabled, this option does not take the limit into account when generating a schedule.

  > **BEST PRACTICE** If there are not enough agents to fully staff all service queues, using the Prioritized option results in higher priority service queues being more fully staffed than lower priority service queues. Consider using the Balanced option to more evenly balance staffing across the days of the week, within a day, and between service queues.

3. Select the **Ad-Hoc Scheduling** check box if you want to schedule selected agents without changing the schedules of agents who are already scheduled for the service queue. See Add an agent to an existing schedule for more information on how to generate an ad-hoc schedule.
4. Select the one or more multiskill groups and/or service queues to be scheduled.

   > **NOTE** If the service queues you select have a minimum scheduling block duration configured on the Service Queues page (see Manage service queues), it will lengthen the time it takes to run your schedules, especially if your schedules are complex (for example, they include many agents, service queues, and work conditions, and use variable work shifts).

5. Enter the start date and the number of weeks for the period you want to schedule. The start date used is the configured First Day of the Week of the week that contains the date you enter.
6. Select the **Rotate work shifts** check box if you want WFM to automatically rotate work shifts according to the work shift rotations configured for each agent scheduled. If the check box is not selected, you must configure a work shift for the specific week on the agent's Users page, or the

agents must have completed their dynamic scheduling work shift selection for those weeks.

> **BEST PRACTICE** Always select the “Rotate work shifts” check box even if you are not rotating work shifts. If the date on a work shift configured for an agent does not match the dates for this schedule, the schedule run will fail. When the check box is selected and you do not rotate work shifts, WFM ignores the date listed on the work shift configured for the agent and, in effect, rotates the single work shift from week to week.

7. Schedule when you want the request to run. By default, the request is run immediately.

> **NOTE** Schedule requests will succeed even if there is no forecast data for any of the days you are running the schedule for. WFM assumes that the forecast is zero on dates with no forecast data. This can affect how agents are scheduled.

8. Click **Submit**.

> **NOTE** A schedule request will fail if there is no forecasted data for any of the days you are running the schedule for. Also, if any of the multiskill groups or service queues are associated with agents whose work shifts include the last day of the week, there should be forecasted data for the first two days of the next week. If there is no data for those extra two days, it is assumed that the forecast is zero (0), and this can affect how the agents are scheduled. The extra days might be needed in case unpaid work condition activities are applied that push the work shift from the last day of the week across midnight into the first two days of the next week (the extended work shift day after applying the work condition can be a maximum of 48 hours when unpaid durations are included).

Add an agent to an existing schedule

Ad-hoc scheduling allows you to integrate specific agents into a service queue’s existing schedule without rerunning the schedule. This avoids disrupting the existing agents’ schedules.

Some reasons you would use ad-hoc scheduling include adding newly hired agents to an existing schedule or an agent who returns from leave.

Important to note

- Ad-hoc scheduling uses only the Balanced scheduling method.
- Ad-hoc schedules start on the default first day of the week.
- Ad-hoc scheduling can be used with fixed, variable, and dynamic availability work shifts.

- Ad-hoc scheduling applies to agents who are multiskilled, either as a member of multiple service queues or of a multiskill group.

Generating an ad-hoc schedule

Generate an ad-hoc schedule

1. Access the Schedule Request page.
2. By default, the Balanced option is selected. This is the only scheduling method allowed with ad-hoc scheduling.
3. Select the **Ad-Hoc Scheduling** check box.
4. From the Available pane, select the one or more agents you want to schedule and move them to the Assigned pane.
5. Configure the dates you want the selected agents scheduled for. Enter the start date and the number of weeks for the period you want to schedule. The start date used is the configured First Day of the Week of the week that contains the date you enter.

   > **NOTE** If an agent is to start mid-week, you can put in unpaid exceptions for the days they are not there and then run the ad-hoc schedule for the week.

6. Select the **Rotate work shifts** check box if you want WFM to automatically rotate work shifts according to the work shift rotations configured for each agent scheduled. If the check box is not selected, you must configure a work shift for the specific week on the agent's Users page, or the agents must have completed their dynamic scheduling work shift selection for those weeks.

   > **BEST PRACTICE** Always select the "Rotate work shifts" check box even if you are not rotating work shifts. If the date on a work shift configured for an agent does not match the dates for this schedule, the schedule run will fail. When the check box is selected and you do not rotate work shifts, WFM ignores the date listed on the work shift configured for the agent and, in effect, rotates the single work shift from week to week.

7. Schedule when you want the request to run. By default, the request is run immediately.

   > **NOTE** Schedule requests can run concurrently as long as they do not include the same agents or service queues.

8. Click **Submit**.

View server requests from WFM users

Use the User Requests page to view and/or delete server requests (such as scheduling, planning, and data requests) made by users.

When a user request is made, it is added to the queue. Requests are processed one at a time. The list displays the request type, the time and date the request was submitted, the name of the user who made the request, and the current status of the request.

The requests can be filtered and sorted by any column. Requests stay in the list until they are deleted.

Field descriptions

Field	Description
Selection Criteria	
Display User Requests	Displays the matching user request results.
Select Request Type	The type of user request to display. By default, results include all request types.
Select Requester	The name of the user who submitted the request. By default, results include all request types.
Select Status	The status of user requests to display. By default, results include requests of all statuses.
Start Date/End Date	(Optional) The range of dates for which results are displayed. If you do not specify a start/end date, all matching results are displayed.
List of User Requests	
Delete	Deletes the selected user requests. Select a request by selecting the appropriate check box in the list. Select the check box at the top of the table to select all user request results. **NOTE** You cannot delete requests that are tagged as In Progress. Requests that are tagged as Success, Failure, and Pending can be deleted.
Details	Displays further details about any request. To view further details about a

Field	Description
	request, click View Details. The details appear below the List of User Requests table.
Request Date/Time	The date and time that the user request was submitted.
Request Type	The type of user request.
Requester	The name of the user who submitted the request.
Status	The completion/run status of the request. Requests that have been scheduled to run at a future date/time are displayed as “Pending.” **NOTE** If a capture request is pending for longer than seems reasonable, consult the log for possible reasons the request is not being processed.

Manage time away

Messaging allows you to manage requests.

- Agents can request time off, exceptions, mentoring, and schedule offers and trades with the other agents on the team in their view. They can also accept or reject schedule trades and offers and mentoring requests and edit their own requests.
- Supervisors and schedulers use Messaging to approve or deny agent requests.

Request rows can be sorted in ascending or descending order by clicking the column header.

Messaging for agents

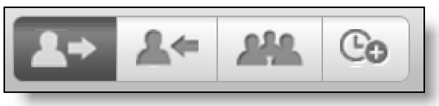
Messaging for agents consists of a menu for creating new requests and three mailboxes:

- Inbox—Contains all requests you receive
- Outbox—Contains all requests you make
- Public Box—Contains public schedule trades and mentoring requests

The default view is Outbox. Requests can be retained up to the maximum retention time configured by the system administrator for WFM forecast, schedule, request, and historical data (see Define the WFM retention period). You can delete requests until another user changes the request status. You cannot delete requests from any mailboxes yourself after they have been accepted, approved, or denied. Requests are deleted by the system when they pass the configured retention period.

Request statuses change as the request makes its way through the system. It is important to periodically refresh the mailbox so you see the latest statuses. Use standard browser page refreshing methods, such as pressing F5 or clicking the Refresh button on the browser toolbar. (The Outbox is displayed after the refresh, even if you were viewing the Inbox or Public Box.)

Access your mailboxes by clicking the mailbox's icon in the Messaging toolbar. From left to right, the icons are Outbox, Inbox, Public Box, and New Requests.



Search requests

You can search for requests in any box. When you run a search, the filters apply to requests on all pages of the box that you search.

Search requests

1. Click **Filter** to open the filter panel.
2. Select the criteria by which to search.
3. Click **Search**. The filter panel closes when you run the search.

The criteria for the search are retained until you leave the page. To amend the search criteria, click **Filter** to open the filter panel and change the criteria.

How to filter date fields

There are two ways to filter requests by date: Date Range and Specific Dates. Date fields are set to Date Range by default. The Date Range option filters requests by a drop-down list of set ranges relative to today's date. The Specific Dates option includes two date fields that allow you to filter requests relative to specific dates. Use the Specific Dates fields to enter the start date, the end date, or both dates to set date range parameters.

To filter by Date Range, select a range option from the drop-down list.

To filter by Specific Dates, enter a date in either or both of the following fields:

- Enter a date in the left field to filter by the start date, which filters requests by dates on or after the date entered
- Enter a date in the right field to filter by the end date, which filters requests by dates on or before the date entered
- Enter dates in both fields to return requests on or between the dates entered

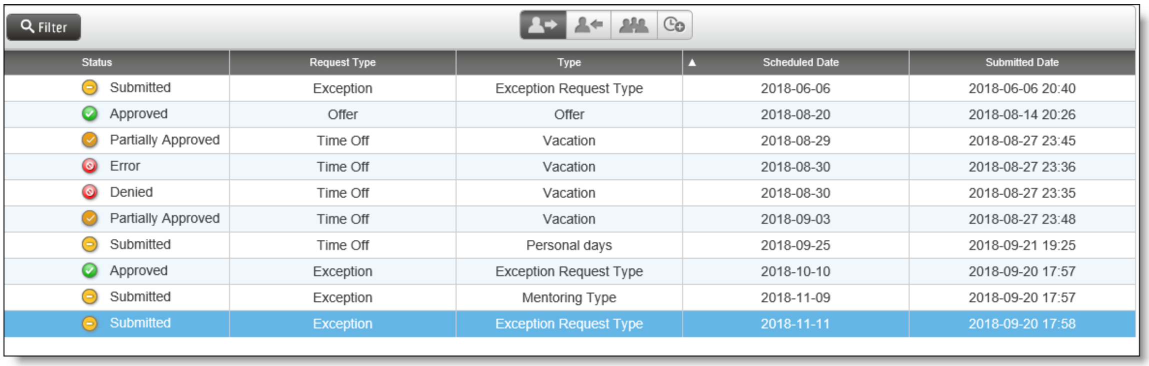
Search criteria

The following table describes all the search criteria available for searches.

Field	Description
Request Type	The type of request the agent selected from the New Request drop-down list when creating the request.
Sub-Type	For Exception type or Time Off type. The option the agent chose from the Type drop-down list when the request was created.
Agent	The agent who sent the request in your inbox or the agent who received the request in your outbox.
Status	The current status of the request.
Submitted Date	The date the agent submitted the request.
Schedule Date	The date the agent selected for the requested action to take place.

Outbox

The Outbox contains all requests you have made in ascending scheduled date order. You can view the details of a request and edit or delete the request if it has not yet been approved or denied.



Filter

Status	Request Type	Type	Scheduled Date	Submitted Date
Submitted	Exception	Exception Request Type	2018-06-06	2018-06-06 20:40
Approved	Offer	Offer	2018-08-20	2018-08-14 20:26
Partially Approved	Time Off	Vacation	2018-08-29	2018-08-27 23:45
Error	Time Off	Vacation	2018-08-30	2018-08-27 23:36
Denied	Time Off	Vacation	2018-08-30	2018-08-27 23:35
Partially Approved	Time Off	Vacation	2018-09-03	2018-08-27 23:48
Submitted	Time Off	Personal days	2018-09-25	2018-09-21 19:25
Approved	Exception	Exception Request Type	2018-10-10	2018-09-20 17:57
Submitted	Exception	Mentoring Type	2018-11-09	2018-09-20 17:57
Submitted	Exception	Exception Request Type	2018-11-11	2018-09-20 17:58

The following table describes the fields in the Outbox.

Field	Description
Status	The status of the request. Possible statuses are: ▪ Approved—Your request was approved by your supervisor. Partially Approved—Part of your time off request was approved by your supervisor. ▪ Pending—Your schedule trade or schedule offer request is waiting for a response from another agent. Can be edited or deleted. ▪ Waiting—A schedule offer or schedule trade request is waiting for your response. Can be accepted or rejected. ▪ Submitted—Your request is waiting for a response from your supervisor. Can be edited or deleted. ▪ Denied—Your request was denied by your supervisor. ▪ Error—Your request contains an error. ▪ Refused—Another agent has refused your schedule trade request. ▪ Rejected—You rejected another agent’s schedule trade request.
Request Type	The general type of request.
Type	The specific type of request. For example, if the Request Type is Time Off, the Type might be Vacation.

Field	Description
Scheduled Date	The date that the requested event occurs. By default, the Outbox is sorted by this date in ascending order. You can click the column header to toggle between ascending and descending order.
Submitted Date	The date and time when the request was submitted. Note that public trade offers do not display a submitted date until someone accepts them.

Working with your outbox

Double-click a request in the Outbox to view its details.

Edit a request that has not yet been approved or accepted

1. Double-click the request.
2. Edit as desired.
3. Click **Submit**.

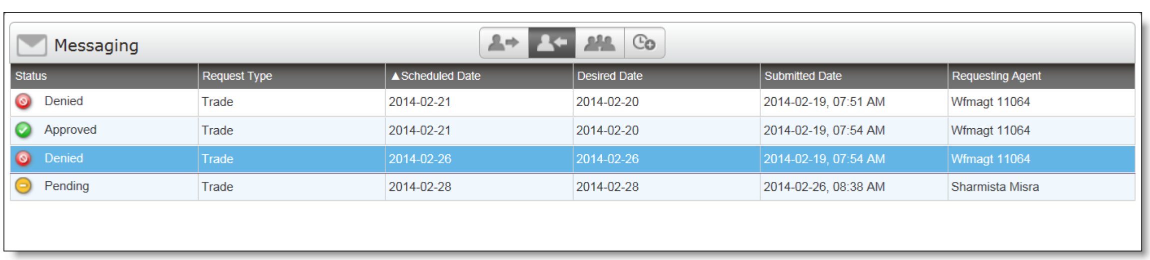
Delete a request that has not yet been approved or accepted

1. Double-click the request.
2. Click **Delete**.

Inbox

The Inbox contains all requests you have received in scheduled date order. You can view the details of a request and edit or delete the request if it has not yet been approved or denied.

> **NOTE** Supervisors have final authority over any schedule trades and mentoring requests, so a trade or mentoring request you accept might be rejected by that user.



The following table describes the fields in the Inbox.

Field	Description
Status	The status of the request. Possible statuses are the following: ▪ Approved—Your request was approved and your schedule updated accordingly. ▪ Pending—An accepted request is waiting for a response from another agent. Can be edited or deleted. ▪ Submitted—The request is waiting for a response from your supervisor. Can be edited or deleted. ▪ To-Do—The request is waiting for a response from you. Can be accepted or rejected. ▪ Denied—Your request was denied by your supervisor. ▪ Error—There is an error in the request. ▪ Refused—You refused another agent's schedule trade request. ▪ Rejected—Another agent rejected your schedule trade request.
Request Type	The general type of request.
Scheduled Date	The date that the requested event occurs. By default, the Inbox is sorted by this date in ascending order. You can click the column header to toggle between ascending and descending order.
Desired Date	The date the requesting agent wants to receive (the Scheduled Date in a schedule offer request and schedule trade request).
Submit Date	The date and time when the request was submitted. Note that public trade offers do not display a submitted date until someone accepts them.
Requesting Agent	The name of the agent requesting a schedule trade or offer or mentoring request.

Working with your inbox

Accept or reject a schedule trade request

1. Double-click the request to open it.
2. Click **Analyze** to compare your schedule to the requesting agent's schedule on the two days. This tells you if you are available to accept the trade.
3. Click **Accept** or **Reject**.

Confirm or reject an accepted schedule offer request

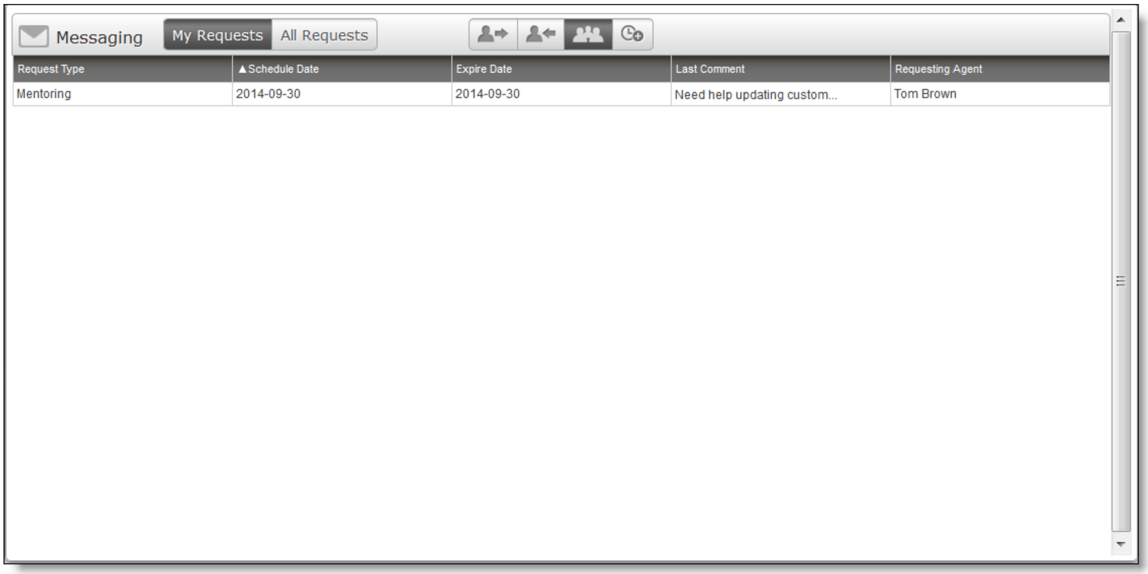
1. Double-click the request to open it.
2. Click **Analyze** to compare your schedule for the specified day with the offered schedule.
3. Click **Confirm** to accept the offer request or **Reject** to deny the offer request.

Confirm or reject an accepted mentoring request

1. Double-click the request to open it.
2. Review the accepted request.
3. Click **Confirm** to accept the mentor or **Reject** to refuse the mentor.

Public box

The Public box contains all available public schedule offers, schedule trades, and mentoring requests from the agents in your view that are available for any agent to accept. You can view the details of a request, evaluate the request, and accept the request (if desired).



NOTE Users with the permission to administer messaging have final authority over any schedule trades, schedule offers, and mentoring requests, so a request you accept might be rejected by that user.

The following table describes the fields in the Public Box.

Field	Description
Request Type	The general type of request.
Schedule Date	The date that the requester wants to give up or schedule the mentoring session. By default, the Public Box is sorted by this date in ascending order.
Expire Date	The date the request expires. The request expires at 23:59 on this date. After the request expires, you can no longer accept or cancel the request.
Last Comment	The last comment entered on the request.
Requesting Agent	The name of the agent requesting a schedule trade, scheduling offer, or mentoring request.

Working with the public box

Accept a schedule trade request

1. Double-click the request to open it.
2. Select a date you want to trade for the date in the request.
3. Click **Analyze** to compare the two schedules and ensure that your proposed date works.
4. Click **Accept**.

Accept a schedule offer request

1. Double-click the request to open it.
2. Click **Analyze** to compare your schedule for the specified day with the offered schedule.
3. Click **Accept** if you want to accept the offer or **Cancel** to close the request without accepting it.

Accept a mentoring request

1. Double-click the request to open it.
2. Review the details of the mentoring request and compare your schedule to that of the requester's to make sure the time slot works for you.
3. Click **Accept** if you want to accept the mentoring request or **Cancel** to close the request without accepting it.

Requests

The New Request menu enables you to create a request for exceptions, time off, schedule offers, schedule trades, and mentoring.

- Request an exception
- Request time off
- Request a schedule offer
- Request a schedule trade
- Request mentoring

Editing or deleting a request

Requests can be edited or deleted in certain situations. The following table describes when you can edit or delete a request.

Request Type	Status	Action Allowed
Schedule Offer (public)	Pending	Edit, Delete
Schedule Trade (private)	Pending	Edit
Schedule Trade (public)	Pending	Edit, Delete
Mentoring	Pending	Edit, Delete
Exception	Submitted	Edit, Delete
Time Off	Submitted	Edit, Delete

Edit a request

1. Double-click the request to open it.
2. Edit the request as desired.
3. Click **Submit**.

Delete a request

1. Double-click the request to open it.
2. Click **Delete**.

Request an exception

Use an exception request to request a change in your schedule for unplanned activities such as meetings, training sessions, unscheduled breaks, and absenteeism. Your request is sent to your supervisor for approval.

Exceptions can be requested for both future and past dates. Exceptions for past dates are used to correct your adherence percentage. For example, if you had to go home sick yesterday, your statistics would show you out of adherence because you did not follow your schedule. Requesting an exception for personal time off for the time you were out of the office corrects the schedule and your adherence percentage for that day.

> **NOTE** For entire-day requests, an exception is placed on the schedule over any paid activities in shifts that start on that day (regardless of whether the exception is paid or not paid) . Any unpaid activities in those shifts are replaced with a Not Available activity in the schedule. If you do not have a shift on that day, then the exception is not added to your schedule.
> For partial-day requests, an exception is placed on the schedule for the requested time period over any existing paid activities during that time period (regardless of whether the exception is paid or not paid) . Any overlapping unpaid activities in those shifts are replaced with a Not Available activity in

> the schedule. For example, if an exception partly covers an unpaid lunch, the part that is not overlapping remains a lunch. The part that overlaps with the exception is replaced with Not Available. If you do not have any existing paid activities during that time period, then the exception is not added to your schedule.
> Exception requests are handled this way to ensure that the paid time for the day remains the same before and after the exception is applied.

The following table describes the fields in the Exception Request dialog box.

Field	Description
Exception Date	The date you want the exception to occur. The current date is shown by default.
Exception Type	A drop-down list of the available exception types.
Entire Day	Select the check box to indicate that the exception is for the entire day. When selected, the Start Time and End Time fields are hidden.
Start Time	The time the exception starts.
End Time	The time the exception ends.
Write Comment	(Optional) Click to enter a comment regarding the exception request. Max characters = 140.

Create a new exception request

1. Click **New Request** and choose **Exception Request** from the menu.
2. Complete the fields.
3. Click **Submit**.

An exception request flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A’s Outbox	Pending
Supervisor	Receives request	Supervisor’s To-Do Box	To-Do
Supervisor	Approves/denies exception	Agent A’s Outbox	Approved/Denied

User	Action	Shows Up Here	Status
		Supervisor’s All Box	Approved/Denied

For more information about submitting exception requests, see About automatic changes to requests.

Request a schedule trade

Use the schedule trade request to trade an entire or partial scheduled work day with someone else’s whole or partial scheduled work day. These trade requests can be with a specified agent (a private trade) or with any agent in your view (a public trade). You can ask to trade shifts on the same day (for example, you might want to trade your 7:00 AM–3:00 PM shift with someone else’s 10:00 AM–6:00 PM shift) or for different days (for example, you might want to trade your Monday off for a Friday off).

If you want to trade multiple segments of your schedule (for example, if you want to trade a split shift) you must submit separate requests for each segment of the shift.

NOTE The main service queue must be configured for agents to perform a schedule trade or offer.

The following table describes the fields in the entire day Schedule Trade Request dialog box.

Field	Description
Public Trade	Select this check box to post your schedule trade in the Public Box of all agents in your view. Clear this check box to trade with a specific agent in a private trade.
Confirm	(Public trades only) A reminder that you will be asked to confirm or reject a proposed trade from the replying agent. This check box is read-only and cannot be cleared.
Requesting Agent	(Read-only) Your name.
Scheduled Date	The date you want to trade. By default, it displays tomorrow’s date.
Entire Day	Select this check box to trade an entire day.
Responding Agent	(Private trades only) The agent with whom you want to trade shifts.
Scheduled Date	(Private trades only) The date you want to trade with.
Expiration Date	(Public trades only) The date the request expires.

Field	Description
Write Comment	(Optional) Click to enter a comment regarding the exception request. Any comment you add is not saved until the exception request itself is saved. Max characters = 250.

The following table describes the fields in the partial day Schedule Trade Request dialog box.

Field	Description
Public Trade	Select this check box to post your schedule trade in the Public Box of all agents in your view. Clear this check box to trade with a specific agent in a private trade.
Confirm	(Public trades only) A reminder that you will be asked to confirm or reject a proposed trade from the replying agent. This check box is read-only and cannot be cleared.
Requesting Agent	(Read-only) Your name.
Scheduled Date	The date you want to trade. By default, it displays tomorrow's date.
Entire Day	Clear this check box to trade a partial day.
Time	Enter the start and end times of the hours you want to trade.
Responding Agent	(Private trades only) The agent with whom you want to trade shifts.
Scheduled Date	(Private trades only) The date you want to trade with.
Time	(Private trades only) Enter the start and end times of the hours you want to trade with.
Expiration Date	(Public trades only) The date the request expires.
Write Comment	(Optional) Click to enter a comment regarding the trade request. Any comment you add is not saved until the trade request itself is saved. Max characters = 250.

Create a new schedule trade request

1. Click **New Request**, and then choose **Schedule Trade Request** from the menu.
2. Complete the fields.

3. If this is a private trade, click **Analyze** to compare your schedule on the proposed trade date with that of the person with whom you want to trade to make sure that the trade is possible.
4. If desired, click **Write Comment** and enter a comment.
5. Click **Submit**.

A private schedule trade request flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A's Outbox	Pending
Agent B	Receives trade request	Agent B's Inbox	To-Do
Agent B	Accepts/refuses trade request	Agent B's Outbox	Submitted/Refused
Agent A	Receives Agent B's answer	Agent A's Inbox	Submitted/Rejected
Supervisor	Receives accepted trade request for approval	Supervisor's To-Do Box	To-Do
Supervisor	Approves/denies trade	Agent A's Outbox	Approved/Denied
		Agent B's Inbox	Approved/Denied
		Supervisor's All Box	Approved/Denied

A public schedule trade request flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A's Outbox	Pending
All Agents	See trade in Public Box	Agents' Public Box	Not applicable
Agent B	Accepts trade request	Agent B's Inbox	Pending
Agent A	Receives Agent B's answer	Agent A's Outbox	To-Do
Agent A	Confirms or rejects	Agent A's Outbox	Submitted/Denied

User	Action	Shows Up Here	Status
	Agent B's acceptance		(Rejecting the request creates a copy of the request that shows Denied on it, and the original request goes back to Pending)
	Agent B receives Agent A's confirmation/rejection	Agent B's Inbox	Submitted/Denied
Supervisor	Receives accepted and confirmed trade request for approval	Supervisor's To-Do Box	To-Do
Supervisor	Approves/denies trade	Agent A's Outbox	Approved/Denied
		Agent B's Inbox	Approved/Denied
		Supervisor's All Box	Approved/Denied

Request time off

Use a time off request to schedule various types of time off from work. You can request multiple days and types of time off in one request. For example, if you want a week off but do not have enough vacation days to cover five days, you can also use time off from one of the other categories to make up the difference.

NOTE You cannot submit time off requests for dates in the past.

You can submit multiple choices for time off in order of preference (first, second, or third choice). For example, you might want to take a week off in June as your first choice for vacation, but you also indicate that a week off in July is your second choice and a week off in August is your third choice. Your supervisor will approve one of your three choices.

Once submitted, you can edit or delete your request if it has not yet been approved.

Your supervisor can opt to approve only some days of a multi-day time off request. For example, you might want to take Monday, Tuesday, and Wednesday off. However, your supervisor needs you at work on Monday, and so approves your request only for Tuesday and Wednesday.

NOTE Your supervisor cannot change the number of hours requested off on a single day.

You also have the option to withdraw a time off request after your request was approved. For example, an event that you were going to attend and for which you requested time off is canceled. By withdrawing your time off request, you are put back on the schedule and your vacation time balance is updated to give you back those hours.

The Time Off Request dialog box includes a table that shows how much time off you have available, how much you have used, and how much remains in each of the time off categories. This information is compiled from the time off requests you have submitted.

> **NOTE** When you request time off, the hours you request are listed in the Pending Hours column. When they are approved they move to the Approved Hours column. The day after you have actually used the time off, the hours move to the Used Hours column and are no longer listed in the Approved Hours column.

> **NOTE** If you request the entire day off, the number of hours added to the Pending Hours and Approved Hours columns is based on the amount of paid shift activities on that day. If you have only Not Available or Available activities that day, the value added to Pending Hours and Approved Hours is zero. If you have no activities (which is not the same as the Not Available activity), the value added is the daily FTE hours.

The List Days and Time Off Allotment buttons can help you when requesting time off.

- List Days button—Displays a summary of your time off requests
- Time Off Allotment button—Allows you to check if there are time off hours available on the day you want to take off

A time off request flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A’s Outbox	Pending
Supervisor	Receives request	Supervisor’s To-Do Box	To-Do
Supervisor	Approves/partially approves/denies time off	Agent A’s Inbox	Approved/Partially Approved/Denied
		Supervisor’s Outbox	Approved/Partially Approved/Rejected
Agent A	Withdraws previously	Agent A’ Outbox	Withdrawal Requested

User	Action	Shows Up Here	Status
	approved request		
Supervisor	Receives withdrawal request	Supervisor's To-Do Box	Withdrawal Request
Supervisor	Acknowledges withdrawal	Agent A's Inbox	Withdrawn
		Supervisor's Outbox	Withdrawn

Create a new time off request

1. Click **New Request** and choose **Time Off Request** from the menu.
2. From the Type drop-down list, choose the type of time off desired.
3. From the Choice drop-down list, choose the preference for the time off (first, second, or third choice).
4. From the **Date** field, click the calendar icon to select a day. Dates with a gray background in the calendar are not available for time off. You cannot add the same day twice in the same request (for example, in both a first and second choice).
5. Click **Add**.
6. Repeat adding dates to the request. Use the First, Second, and Third Choice option as desired.
7. (Optional) Add a comment by clicking **Write Comment** . A comment can help your supervisor make the approval decision.
8. Click **Submit**.

   NOTE If you do not have enough available hours for the type of time off you request, the request fails.

For more information about submitting time off requests, see About automatic changes to requests.

Edit a submitted but not yet approved time off request

1. In your Outbox, double-click the time off request you want to edit. Requests you can edit have a status of Submitted.
2. In the Time Off Request dialog box, click **Edit**. The dialog box expands so you can add a new day, and adds a Delete button (an X) next to the existing days off requested. You can also add a comment explaining why you changed your time off request. A comment can help your supervisor make the approval decision.

3. Edit your request as desired by adding new days off or deleting existing days off.

> **NOTE** If you want to change the times on a requested day, you must delete the original day and add it again with the new times. For example, if you originally requested 8:00–11:00 AM off on Monday, but need to change that to 1:00–3:00 PM, delete the entry for Monday and add it again, this time with the new start and end times.

4. When you are finished editing the request, click **Update**.

Delete a submitted but not yet approved time off request

1. In your Outbox, double-click the time off request you want to edit. Requests you can edit have a status of Submitted.
2. in the Time Off Request dialog box, click **Delete**.

Withdraw an approved time off request

1. In your Outbox, double-click the time off request you want to withdraw. The request will have a status of Approved or Partially Approved.
2. In the Time Off Request dialog box, enter a comment to explain the reason for the withdrawal, if desired.
3. Click **Withdraw Request**.

   The withdrawn request remains in your Outbox with a status of Approved or Partially Approved until your supervisor acknowledges the withdrawal. At that time the request's status changes to Withdrawn.

> **NOTE** If your supervisor does not acknowledge your withdrawal request, you will still have that time off and will not be on the schedule.

Field descriptions

The following table describes the fields in the Time Off Request dialog box.

Field	Description
View Available Hours For	The date ranges of the vacation plans you are assigned to.
Type	The type of time off: Floating Holidays, Days Off, Personal Days, and Vacation.

Field	Description
	NOTE Some types of time off might not be available. Your administrator and vacation plan details determine the types of time off that are available. How each of these types of time off is defined is determined by your contact center.
Total Hours	The total number of hours available to you for the time off type.
Used Hours	The number of hours you have used for the time off type.
Approved Hours	The number of hours that have been approved for the time off type but not yet taken.
Pending Hours	The number of hours that you have requested for the time off type that have not yet been approved by your supervisor. **NOTE** While you can request multiple choices for time off, only the first choice is factored in when calculating pending hours.
Remaining Hours	The number of hours for the time off type you have remaining. This value is calculated as follows: Remaining Hours = Total Hours – (Used Hours + Approved Hours + Pending Hours)
First, Second, and Third tabs	Tabs that display your time off request preferences in this request.
Type	Select the type of time off you are requesting.
Choice	Choose the preference for the time off from the drop-down list.
Date	Select the day you want off from the calendar. You must select each day separately. Click Add to add the date to the First, Second, or Third Choice tab.
Entire Day	Select this check box if you want to take off the entire day. When selected, the Start Time and End Time fields are disabled.
Start Time	If you are taking a partial day off, enter the start time of the time off.

Field	Description
End Time	If you are taking a partial day off, enter the end time of the time off.
Time Off Allotments button	Displays the available time off allotments for a selected service queue and calendar month. This enables you to check if there are time off hours available on the day you want to take off. For more information, see Viewing time off allotments.
List Days button	Displays your time off summary. This pop-up lists all your approved and pending time off requests in date order.

Viewing time off allotments

> **NOTE** This feature is available only if the administrator has configured WFM to display the Time Off Allotments button (see Configure system-wide WFM settings).

The Time Off Allotments popup is displayed when you click the Time Off Allotments button in a time off request. It displays the current available time off that is allotted to a service queue on a specific date.

> **NOTE** A day that shows both available allotments and a positive forecast gap is generally a better choice for taking time off.

Field	Description
Date	The date of the allotment.
Available Allotment	The current number of time off allotments available on that day in FTEs or hours, depending on how the administrator has configured your system.
Forecast Gap	The average gap between the scheduled and forecasted FTEs for that day. This value is always displayed in FTEs. A negative number indicates understaffing, and a positive number indicates overstaffing.

Request a schedule offer

Use a schedule offer request to make all or part of a day you are scheduled to work available for another agent to work. For example, if you have an obligation away from work on Wednesday, you offer your shift to anyone else who can work that day. The schedule offer is posted to the Public Box of all agents in your view.

The following table describes the fields in the Schedule Offer Request dialog box.

Field	Description
Requesting Agent	(Read-only) Your name.
Scheduled Date	The date you want to offer to other agents to work. By default, it displays tomorrow's date. You cannot choose a date in the past.
Entire Day	Select this check box to offer an entire day.
Expiration Date	The date your request expires. At that time, it no longer appears in your Outbox or in the Public Box. The expiration date must be before the Scheduled Date.
Confirm	Select this check box if you want to confirm an agent's acceptance of the offer before it is sent to your supervisor for approval.
Write Comment	(Optional) Click to enter a comment regarding the schedule offer request. Any comment you add is not saved until the schedule offer request itself is saved. Max characters = 250.

The following table describes the fields in the partial day Schedule Offer Request dialog box.

Field	Description
Requesting Agent	(Read-only) Your name.
Scheduled Date	The date you want to offer to other agents to work. By default, it displays tomorrow's date. You cannot choose a date in the past.
Entire Day	Clear this check box to offer a partial day.
Time	Enter the start and end times of the hours you want to offer to another agent.
Expiration Date	The date your request expires. At that time, it no longer appears in your Outbox or in the Public Box. The expiration date must be before the Scheduled Date.
Confirm	Select this check box if you want to confirm an agent's acceptance of the offer before it is sent to your supervisor for approval.
Write Comment	(Optional) Click to enter a comment regarding the schedule offer request.

Field	Description
	Any comment you add is not saved until the schedule offer request itself is saved. Max characters = 250.

Create a new schedule offer request

1. Click **New Request**, and then choose **Schedule Offer Request** from the menu.
2. Complete the fields.
3. Click **Submit**.

A schedule offer request without confirmation flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A's Outbox	Pending
All agents	Receive offer	Agents' Public Box	Not applicable
Agent B	Accepts offer	Agent B's Inbox	Submitted
		Agent A's Outbox	Submitted
Supervisor	Receives accepted offer	Supervisor's To-Do Box	To-Do
Supervisor	Approves/denies offer	Supervisor's All Box	Approved/Denied
		Agent A's Outbox	Approved/Denied
		Agent B's Inbox	Approved/Denied

A schedule offer request with confirmation flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A's Outbox	Pending
All agents	Receive offer	Agents' Public Box	Not applicable
Agent B	Accepts offer	Agent B's Inbox	Pending

User	Action	Shows Up Here	Status
Agent A	Receives accepted offer	Agent A's Outbox	To-Do
		Agent B's Inbox	Pending
Agent A	Confirms/rejects offer	Agent A's Outbox	Submitted/Rejected (Rejecting the request creates a copy of the request that shows Denied on it, and the original request goes back to Pending)
		Agent B's Inbox	Submitted/Rejected
Supervisor	Receives accepted offer	Supervisor's To-Do Box	To-Do
		Supervisor's All Box	Approved/Denied
		Agent A's Outbox	Approved/Denied
		Agent B's Inbox	Approved/Denied

Request mentoring

Use a mentoring request to ask for one-on-one coaching from a fellow agent. All mentoring requests are posted in the Public Box, and any agent can respond. A supervisor or administrator must approve the mentoring request. When the request is approved, the exception is added to your schedule and to your mentor's schedule.

The following table describes the fields in the Mentoring Request dialog box.

Field	Description
Mentoring Date	The date on which you want to schedule the mentoring session.
Exception Type	Select the appropriate exception from the drop-down list.
Start Time	The start time of the mentoring session.
End Time	The end time of the mentoring session.
Description	A description of the purpose for the mentoring session. Max characters =

Field	Description
	251.

Create a new mentoring request

1. Click **New Request**, and then choose **Mentoring Request** from the menu.
2. Complete the fields.
3. Click **Submit**.

A mentoring request flows through the system as outlined in the following table.

User	Action	Shows Up Here	Status
Agent A	Creates new request	Agent A's Outbox	Pending
All agents	See request in Public Box	Agents' Public Box	Not applicable
Agent B	Accepts mentoring request	Agent B's Inbox	Pending
Agent A	Receives Agent B's answer	Agent A's Outbox	To-Do
Agent A	Confirms/rejects Agent B's acceptance	Agent A's Outbox	Submitted/Rejected (Rejecting the request creates a copy of the request that shows Denied on it, and the original request goes back to Pending)
	Agent B receives Agent A's confirmation or rejection	Agent B's Inbox	Submitted/Rejected
Supervisor	Receives accepted and confirmed mentoring request for approval	Supervisor's To-Do Box	To-Do

User	Action	Shows Up Here	Status
Supervisor	Approves/denies mentoring request	Agent A’s Outbox	Approved/Denied
		Agent B’s Inbox	Approved/Denied
		Supervisor’s All Box	Approved/Denied

For more information about submitting mentoring requests, see About automatic changes to requests.

About automatic changes to requests

In most cases, if a request is approved, Webex WFO updates the agent’s schedule exactly as requested. In some cases where a paid request is submitted, however, Webex WFO might alter the request to make sure that the agent is not scheduled for more paid time than the agent is supposed to work. The following are examples of such cases.

Case 1: The agent submits a paid request that overlaps an unpaid activity

The agent submits a partial- or entire-day paid request for mentoring, time off, or an exception. The request overlaps an unpaid activity in an existing schedule. The request is approved. In this case, Webex WFO replaces an unpaid activity (for example, an unpaid lunch) in the agent’s schedule with a Not Available activity.

> **EXAMPLE**
>
> You request paid time off, 7:00 AM–3:00 PM. The existing schedule is:
>
> - In Service, 7:00–11:00 AM
> - Unpaid Lunch, 11:00–11:30 AM
> - In Service, 11:30 AM–3:00 PM
>
> After the request is approved, the schedule is:
>
> - Paid Time Off, 7:00–11:00 AM
> - Not Available, 11:00–11:30 AM
> - Paid Time Off, 11:30 AM–3:00 PM

Case 2: The agent is scheduled to work during the requested time

The agent submits a partial- or entire-day paid request for mentoring, time off, or an exception. The request is for times the agent is not scheduled to work. The request is approved. In this case, Webex WFO does not insert the approved request into the agent’s schedule.

EXAMPLE

The agent requests paid time off, 5:00–7:00 PM. The existing schedule is:

- In Service, 9:00 AM–5:00 PM

After the request is approved, the agent's schedule remains the same.

Case 3: The agent is scheduled to work during only a part of the request

The agent submits a partial- or entire-day paid request for mentoring, time off, or an exception. The request is for an existing schedule, and the agent is scheduled to work during part of the request. The request is approved. In this case, Webex WFO inserts a part of the approved request into the agent's schedule.

EXAMPLE

The agent requests paid time off, 4:00–6:00 PM. The existing schedule is:

- In Service, 9:00 AM–5:00 PM

After the request is approved, the agent's schedule is:

- In Service, 9:00 AM–4:00 PM
- Paid Time Off, 4:00–5:00 PM

BEST PRACTICE If agents want to submit a paid request for a time in their existing schedule that they do not work, they should contact their supervisor.

NOTE

(Manual Handling only) If supervisors want to approve a paid request for a time that the agent who submitted the request is not scheduled to work in an existing schedule, they must do the following:

1. In Agent Schedules, navigate to the date that the agent requested.
2. Insert a paid activity (In Service or Overtime) for the time that the agent requested.
3. Approve the request.

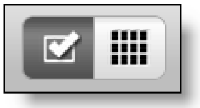
Messaging for request approvers

Messaging for users with the permission to administer messaging consists of two mailboxes:

- To-Do Box—Displays all requests that require action from you (the default view)
- All Box—Contains all requests sent to you

Requests can be retained up to the maximum retention time configured by the system administrator for WFM forecast, schedule, request, and historical data (see Define the WFM retention period).

Access your mailboxes by clicking the mailbox's icon in the Messaging toolbar. From left to right, the icons are the To-Do Box and the All Box.



NOTE Supervisors who are also agents have a dual mailbox, one with the agent's view and one with the supervisor's view. You can switch between the two views using the My Requests and All Requests buttons. Click My Requests to see the agent mailbox and All Requests to see the supervisor mailbox.

Search requests

Users with the Administer Messaging permission can run two types of searches. Like other users, you can run a basic search with standard search criteria. In addition to the basic search, if you have the Administer Messaging permission, you can run a custom search, where you choose which criteria to include in your search. You can run a search for requests in any mailbox. When you run a search, the filters apply to requests on all pages of the mailbox that you search.

Run a basic search

1. Click **Filter** to open the filter panel.
2. Select the criteria by which to search.
3. Click **Search**. The filter panel closes when the search runs.

Run a custom search

1. Click **Filter** to open the filter panel.
2. Click **Custom Search**.
3. Use the Select a Filter drop-down list to select a filter.
4. Click **Add** to add the filter to the custom search.
5. Enter the appropriate search criteria for each filter.
6. Click **Search**. The filter panel closes when you run the search.

The criteria for the search are retained until you leave the page. To change the search criteria, click **Filter** to open the filter panel and change the criteria.

How to configure date fields

There are two ways to filter requests by date: Date Range and Specific Dates. Date fields are set to Date Range by default. The Date Range option filters requests by a drop-down list of set ranges relative to today's date. The Specific Dates option includes two date fields that allow you to filter requests relative to specific dates. Use the Specific Dates fields to enter the start date, the end date, or both dates to set date range parameters.

To filter by Date Range, select a range option from the drop-down list.

To filter by Specific Dates, enter a date in either or both of the following fields:

- Enter a date in the left field to filter by the start date, which filters requests by dates on or after the date entered
- Enter a date in the right field to filter by the end date, which filters requests by dates on or before the date entered
- Enter dates in both fields to return requests on or between the dates entered

Search criteria

The following table describes all the search criteria available for basic and advanced searches.

Field	Description
Request Type	The type of request the agent selected from the New Request drop-down list when creating the request.
Sub-Type	For Exception type or Time Off type. The option the agent chose from the Type drop-down list when the request was created.
Team	The team to which the agent who created the request belongs.
Service Queue	The service queue to which the agent who created the request belongs.
Skill Mapping	The skill map to which the agent who created the request belongs.
Agent	The agent who sent the request in your inbox, or the agent who received the request in your outbox.
Agent Rank	The rank of the agent who created the request.
Agent Start Date	The date the agent started.

Field	Description
Status	The current status of the request.
Submitted Date	The date the agent submitted the request.
Schedule Date	The date the agent selected for the requested action to take place.

Approve or deny requests

Requests that require your approval appear in your To-Do Box. Once you have approved or denied a request, it is removed from your To-Do Box. All requests that you have received are archived in your All Box.

For more information about approving requests, see About automatic changes to requests.

Exception requests

The Approve Exception Request dialog box enables you to approve or deny an agent’s exception request.

Approve or deny an exception request

1. Double-click the request to open it.
2. If approving the request, select the appropriate schedule exception from the drop-down list. This is what appears in the schedule. Click **Read Comment** to view any comments that are attached to the exception request. You can also type a comment, if desired.

   > **NOTE** The Read Comment icon is red if there is at least one comment attached to the request.

3. Click **Approve** or **Deny**.

> **NOTE** For entire-day requests, an exception is placed on the schedule over any paid activities in shifts that start on that day (regardless of whether the exception is paid or not paid) . Any unpaid activities in those shifts are replaced with a Not Available activity in the schedule. If the agent does not have a shift on that day, then the exception is not added to the agent’s schedule.
> For partial-day requests, an exception is placed on the schedule for the requested time period over any existing paid activities during that time period (regardless of whether the exception is paid or not paid) . Any overlapping unpaid activities in those shifts are replaced with a Not Available activity in the schedule. For example, if an exception partly covers an unpaid lunch, the part that is not overlapping remains a lunch. The part that overlaps with the exception is replaced with Not Available. If the agent does not have any existing paid activities during that time period, then the

xception is not added to the agent’s schedule.
xception requests are handled this way to ensure that the paid time for the day remains the same efore and after the exception is applied.

The following table describes the fields in the Approve Exception Request dialog box.

Field	Description
From	The name of the agent requesting the exception.
Request	The type of request.
Received Date	The time and date you received the request.
Type	The type of exception, as chosen by the agent.
Schedule Date	The date of the exception.
Duration	The duration of the exception.
Schedule Exception	Select the exception description that will appear in the schedule if the exception is approved.

Time off requests

The Approve Time Off Request dialog box enables you to approve, partially approve, or deny an agent’s time off request. You can also acknowledge an agent’s withdrawal of a previously approved time off request.

> **NOTE** If a time off request overlaps a previously approved time off request, the request cannot be approved.

Approve, partially approve, or deny a time off request

1. Double-click the request to open it.
2. Select the appropriate service queue from the drop-down list.
3. Click the First, Second, and Third tabs to view the agent’s ranked time off requests. You can approve the requested time off on only one of these tabs. That tab must be selected when you approve or partially approve the request.
4. If desired, click **Hours** to view a summary of the agent’s total, used, approved, pending, and remaining time off hours. Click **Read Comment** to view any comments that are attached to the request. Click **Write Comment** to add a comment.

5. By default, every day in a request is selected in the Approve column. If you want to deny some portion of a multi-day request, clear the check box next to the days to be denied.
6. Select the appropriate schedule exception from the drop-down list. This is what appears in the schedule.
7. Click **Approve Selected** to approve or partially approve the request, or click **Deny** to deny the request.

Acknowledge an agent's withdrawal of an approved time off request

1. Double-click the request with a status of Withdrawal Request.
2. Click **Acknowledge Withdrawal**.

> **NOTE** If you do not acknowledge the withdrawal request, the agent will still have the approved time off and will not be on the schedule for that time. When you acknowledge the withdrawal, the agent's vacation balance is updated (but service queue time off allotments are not) and the agent is put back in the schedule but with no activities assigned to him or her. You must either run an ad-hoc schedule or manually add activities to the agent's schedule on the Agent Schedules page.

> **BEST PRACTICE** Use Schedule History and Restore to view what the agent's schedule was before the time off request was approved (see Undo a schedule change). You can use this as a reference to manually add activities to the agent's schedule, or restore the schedule if appropriate from a previous version.

The following table describes the fields in the Approve Time Off Request dialog box.

Field	Description
From	The name of the agent requesting time off.
Request	The type of request.
Submitted Date	The time and date that agent submitted the request. This is the same time and date you received the request.
Service Queue	Select the appropriate service queue from the drop-down list. This service queue is used to determine the Forecast Gap.
First, Second, Third tabs	Tabs that display the first, second, and third choices for time off requested by the agent.

Field	Description
Type	The type of time off request.
Date	The date of the requested time off.
Day	The day of the week of the requested time off.
Start Time	The start time of the requested time off.
End Time	The end time of the requested time off.
Forecast Gap (FTEs)	The difference in FTEs between the number of scheduled agents and the number of forecasted agents in the current production forecast for the service queue selected. You can use this number as a guide for determining if there is enough coverage that day to grant the time off request. **NOTE** There is a value in this field only if a production forecast has been generated.
Allotment Gap (FTEs or hours)	The available time off allotments for the requested day, displayed in either FTEs (full time equivalents) or hours. The format that you see depends on whether the administrator has configured WFM to display FTEs or Hours (see Configure system-wide WFM settings).
Approve	By default, all check boxes are selected. Clear the check box next to any day of a multi-day request to deny time off for that day.
Schedule Exception	Select the exception description that will appear in the schedule if the exception is approved.

Approve trade or offer request

The Approve Trade Request dialog box allows you to analyze and then approve or deny a trade request or an offer request. The same dialog box is used for both trades and offers.

> **NOTE** The existing breaks and lunch in each schedule involved in a partial day trade is replaced with in-service time to the agent's main service queue. The schedule is compared to range-based, general work conditions that have been set up to determine whether a lunch or break is assigned. If a trade splits a schedule, each segment of the split schedule is compared individually to existing work conditions. It is important that agents submitting partial day schedule offers or trades are assigned to a work condition profile that contains a condition for any possible shift length they might have after

the offer or trade is accepted. If no range-based work condition matches a traded schedule's length, no break or lunch is assigned.
Any exceptions are reassigned to the receiving agent, and those exceptions are not moved to accommodate a break or lunch.
Projects are reassigned to the receiving agent even if that violates the minimum or maximum number of minutes an agent can spend on the project in a day. Project time might be split or truncated but not moved to accommodate a lunch or break.

Approve or deny a schedule trade or offer request

1. Double-click the request to open it.
2. Use the Agent Schedules section to analyze the two schedules to make sure they can be traded. Click **Read Comment** if any comments are attached to the trade or offer request.
3. Click **Approve** or **Deny**.

The following table describes the fields in the Approve Trade Request dialog box.

Field	Description
From	The name of the agent who requested the trade.
Request	The Trade high-level request type.
Type	The type of trade request.
Submitted Date	The time and date that agent submitted the request. This is the same time and date you received the request.
To	The name of the other agent involved in the trade.
From Date	The first scheduled date involved in the trade.
To Date	The second scheduled date involved in the trade. This field only appears when different days are involved in the trade request.
From Agent Schedule	The schedule for the agent requesting the trade. Use the scroll bar to view the agent's entire schedule.
Name	The name of the agent.
Date	The date specified in the trade request.

Field	Description
To Agent Schedule	The schedule for the agent accepting the trade.
Availability	Indicates if the From agent's schedule fits into the To agent's schedule.
Service Queue	Indicates if the two agents support the same or different service queues.
Teams	Indicates if the two agents belong to the same or different teams.
Overlapping Shifts	Indicates if the two agents have overlapping shifts.
Time Zone	Indicates if the two agents are in the same or different time zone.
Skill Mapping	Indicates if the two agents belong to the same or different skill mapping.
Exception	Indicates if either agent's schedule includes an exception.

Approve mentoring request

The Approve Mentoring Request dialog box allows you to analyze and then approve or deny a mentoring request.

Approve or deny a mentoring request

1. Double-click the request to open it.
2. Review the details of the mentoring request. Click **Read Comments** if any comments are attached to the mentoring request.
3. Click **Approve** or **Deny**.

   If you approve the request, both agents' schedules are updated immediately to show the mentoring session.

The following table describes the fields in the Approve Mentoring Request dialog box.

Field	Description
From	The name of the agent who requested the mentoring.
Exception Type	The exception type chosen by the agent making the request.
To	The name of the agent who accepted the mentoring request.

Field	Description
Mentoring Date	The date of the mentoring session.
Request	The type of request.
Start Time	The start time of the mentoring session.
Submitted Date	The time and date that agent submitted the request. This is the same time and date you received the request.
End Time	The end time of the mentoring session.
Schedule Exception	The exception that will appear in the agents' schedules.
Both agents in service	Yes or No. Indicates if both the requesting and accepting agent are in service during the proposed mentoring time slot.

Automate handling of agent requests

Workflows provide a way to automate the handling of agent requests. You can configure workflows to automatically approve or deny requests or to force manual handling for schedule changes. Workflows are triggered by different types of agent requests (called "events"). You can create separate workflows for every type of event.

Workflows are created from a default rule and rules that you supply. Each workflow has a set of rules, and each rule has a list of conditions. When a rule's conditions are met, then the action configured for that rule is performed, and subsequent rules are not evaluated. Rules are evaluated in the order in which they appear in the Rules table. If the event does not meet any of the configured rules, then the default rule goes into effect.

By default, workflows are applied globally. However, you can add conditions that keep a rule from being applied globally.

> **EXAMPLE** A rule for automatically approving a mentoring request has a condition that restricts it to a single service queue instead of the whole contact center.

You must have the Administer WFM Workflows permission to access this page. Because workflows are global, the Administer WFM Workflows permission grants you the Enterprise view just for this page.

If you do not already have the Enterprise view assigned, the Administer WFM Workflows permission grants you the Enterprise view for this page only.

Create a workflow

1. Select the type of request you want to automate from the **Event** drop down.
2. (Schedule Edit requests only) Assign users to whom the workflow applies by selecting their names from the Available column and moving them to the Assigned column.
3. Click **Add** under the Rules table.
4. Enter a name for the rule in the Rule Name field.
5. (Optional) If you do not want the rule to be active immediately, uncheck the **Activate** box. Otherwise, leave the box checked.
6. Set the conditions for the rule under the Conditions section. For more information about conditions, see Building rule conditions.
7. Select the action that happens when all the conditions are met from the **Action** drop down.
8. Click **Save**.

Workflow example

You want to set up a workflow for exception requests. You want there to be two rules: one for approving the request and one for denying the request.

Approve rule

In this example, for an exception request to be automatically approved, the request must meet two conditions: the requester must support the email service queue and must have worked for the company for at least 90 days.

The conditions for the Approve rule look like the following table. Match all of the conditions.

Variable	Operator	Value
Service queue	Equal to	Email
Days since agent company start date	Greater than or equal to	90

Select **Approve** from the Action drop down for this rule.

Deny rule

For an exception request to be automatically denied, the requester must meet either of two conditions: the agent is not scheduled and eligible for activities, or the agent has been employed by the company for fewer than 90 days.

The conditions for the Deny rule look like the following table. Match any of the conditions.

Variable	Operator	Value
Agent is scheduled and eligible for activities	Equal to	False
Days since agent company start date	Less than	90

Select **Deny** from the Action drop down for this rule.

Default rule

The Default rule is executed if all other rules are not met. As a result, there are no conditions associated with it. The Default rule is present in every workflow event and is always the last in the Rules table. In this example, the action taken if none of the other rules are met is **Manual Handling**.

Automatic denial and manual handling

Automatic denial and manual handling occur if the following trigger conditions are met regardless of whether any workflow rules are configured.

Automatic denial

The following conditions trigger the automatic denial of a request.

Request Type	Trigger Conditions
Exception	■ The agent is not active. ■ The agent is not employed on the dates of the request.
Mentoring	■ Either agent is not active. ■ Either agent is not employed. ■ The request is for a schedule date in the past or the current date.
Schedule Edit	■ The agent is not active.

Request Type	Trigger Conditions
	■ The agent is not employed during the dates that were edited.
Schedule Offer	■ Either agent is not active. ■ Either agent is not employed on the dates of the request. ■ The request is for a schedule date in the past or the current date. ■ The request's expiration date is in the past or the current date. ■ The request's desired date is in the past or the current date. ■ The receiving agent already has scheduled activities other than Available/Not Available in the time where the copied scheduled activities will be placed. ■ The offering agent has no scheduled activities on the schedule date.
Schedule Trade	■ Either agent is not active. ■ Either agent is not employed on the dates of the request. ■ The request is for a schedule date in the past or the current date. ■ The request's expiration date is in the past or the current date. ■ The request's desired date is in the past or the current date. ■ The agent has scheduled activities other than Available/Not Available in the time where the copied scheduled activities will be placed if that is not being traded away. ■ The offering agent has no scheduled activities on the schedule date, or the receiving agent has no scheduled activities on the desired date.
Time Off	■ The agent is not active. ■ The agent is not employed on the dates of the request. ■ The agent does not have an assigned main service queue. ■ The remaining time off allotments for the agent's main service queue are not enough for the requested time off.

Request Type	Trigger Conditions
	■ The default FTE per day configured in Global Settings is not positive. ■ The agent does not have an FTE profile assigned. ■ The request date is in the past, including if the request date is the current date but the time is in the past. ■ The request has an overlapping date and time range. ■ The request has identical start and end times.

Automatic manual handling

The following conditions trigger the automatic manual handling of a request.

Request Type	Trigger Conditions
Exception	■ The request would have been approved, but the workflow exception for the exception type in the request is inactive. ■ The request would have been approved, but no workflow exception was specified for the exception type in the request. ■ The request would have been approved, but the agent does not have available work shift periods within the request date/time range.
Mentoring	■ The request would have been approved, but the workflow exception for the exception type in the request is inactive. ■ The request would have been approved, but no workflow exception was specified for the exception type in the request. ■ The request would have been approved, but there are no periods within the request date/time range where both agents have available work shift periods.
Schedule Edit	The request would have been approved, but the agent does not have available work shift periods on the date of the schedule edit.
Schedule Offer	None

Request Type	Trigger Conditions
Schedule Trade	None
Time Off	■ The request would have been approved, but the workflow exception for the specified vacation type is inactive, is no longer associated with the specified vacation type, or no exception associated with the specified vacation type is a workflow exception. ■ The request would have been approved, but the agent does not have available work shift periods within the request date/time range.

Field descriptions

The fields on the Workflows page are described below.

Field	Description
Event	The event whose workflow you want to edit.
Assign Users (Schedule Edit requests only)	The users to whom the Schedule Edit workflow applies. Schedule Edit workflows allow WFM administrators or analysts to prevent supervisors or junior schedulers from editing agent schedules.
Rules table	The Rules table lists all rules configured for the selected event. Use the up and down arrows to reorder the rules within the list. The Default rule is always last in the list and cannot be moved or deleted. You can add, copy, or delete rules using the buttons below the table.
Rule Name	The unique name for the rule. This name is added to a request’s Comment section when the request is processed successfully by the workflow.
Activate this rule	This check box to activates the rule. By default, a rule is activated. It will not be evaluated if this check box is cleared.
Conditions	This section builds the list of conditions for the rule. Conditions can be nested up to five levels deep. Click **Add Condition** to add another row. Click the x button (x) to delete the current condition row. Click **Add Dependent Set** to add a subcondition group.

Field	Description
	For more information about how to build conditions, see Building rule conditions.
Action	The action to take when the conditions in the rule are met. ■ Approve—The request is approved. ■ Deny—The request is denied. ■ Manual Handle—The request must be approved or denied by a supervisor. ■ Wait List—The request is neither approved nor denied, but is in a holding pattern. WFM continues to evaluate the request on a daily basis until a different rule affects the request or the request is handled manually.

Building rule conditions

The Conditions section allows you to build rule conditions that an event must satisfy for a rule to evaluate as true. Conditions are sets of AND statements and OR statements.

> **NOTE** It is possible to build rules and conditions that cannot work or where later rules will never be evaluated. Webex WFO does not validate the rules and conditions you build. Carefully review the logic of your rules and conditions to ensure they do what you want them to do.

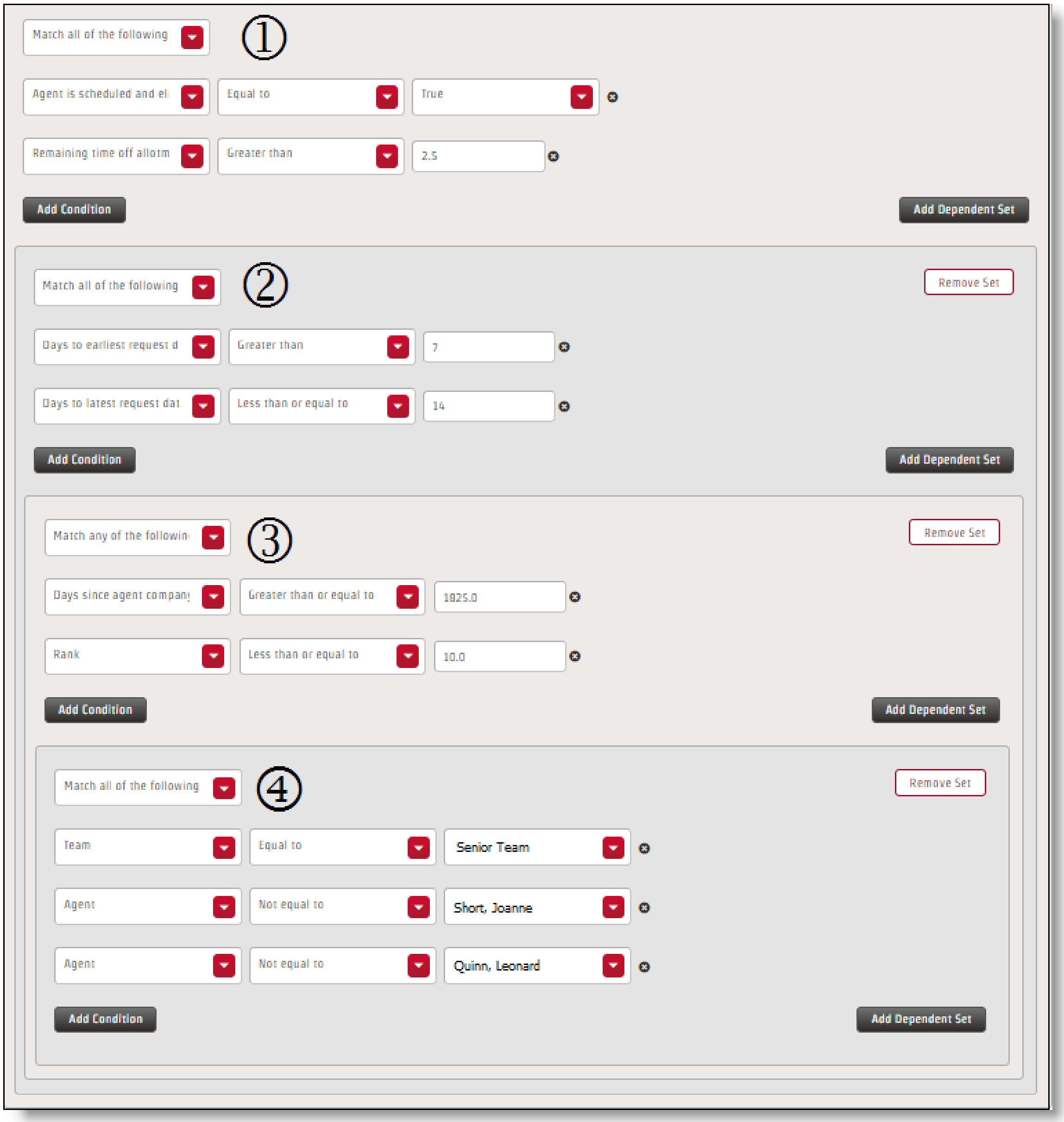
Every level of a condition set is an AND statement ("match **all** of the following conditions") or an OR statement ("match **any** of the following conditions"). In general, you alternate AND and OR statements when nesting conditions. If the primary statement for the condition set is an AND statement, nesting another AND statement immediately under it makes no difference, although you might want to do that to visually group some condition statements that relate to each other in some way.

Each condition row has three components: the variable, the operator, and the value (a few variables have a fourth component: percentage). The operators and types of values are dependent on the variable you choose. Conditions use these controls:

- New Condition—Adds a new condition row at the same level as the current row
- X—Deletes the row
- Add Dependent Set—Adds a new AND or OR statement
- Remove Set—Removes the dependent set from the condition

NOTE The first condition row cannot be deleted. A rule must have at least one condition row.

The following is an example of a condition set. The callout numbers are explained below.



Callout	Description
1	This AND condition group is the overarching condition group. Each condition statement at this level must be met for the rule to be true.

Callout	Description
2	This AND condition group defines the time period within which the requested dates occur. The request must be for a period between 7 and 14 days from the current date. The conditions in this AND statement could have been placed at the first level. They are grouped together to provide a visual cue that they are related.
3	This OR condition group defines the agents whose request will be considered. ■ The agent must have been employed at least 1,825 days. ■ The agent must have a rank less than or equal to 10. ■ The condition group in callout four must evaluate as true.
4	This AND condition group is a subcondition of the group in callout three. It defines the agents whose request will be automatically approved. The agent needs to belong to the Senior Team, but Joanne Short and Leonard Quinn are excluded for some administrative reason.

Variables

The following table defines the variables available to use in a condition statement. Not every variable is available for every event.

Variable	Description
Agent	The agent's ID (the agent name is displayed). If two agents are involved in the request, the request is checked against both agents. If the operator is Equal to, the condition evaluates to true if either agent ID is equal to the value. If the operator is Not equal to, the condition evaluates to true if both agent IDs are not equal to the value.
Agent is scheduled and eligible for activities	Whether the agent has scheduled activities for the dates and time ranges in the request. An agent is considered to have scheduled activities for a date (and time range, if applicable) if the agent is scheduled for anything except Not Available for the date (and within the time range, if applicable). If the agent has only some of the request's time range scheduled, it is still considered true.

Variable	Description
	If there are two agents involved in the request, the variable is checked against both agents. The variable is true if both agents have schedules for all the dates in the request. For the following specific types of requests, the variable is true if the listed criteria are met. ■ Time Off requests—The agent is scheduled for all the dates or time ranges in the time off choice. ■ Schedule Offer/Schedule Trade requests—Both agents are scheduled for any activities except Available/Not Available. ■ Schedule Offer requests—The check for the requesting agent is for the schedule date. This check is not done for the responding agent. ■ Schedule Trade requests—The check for the requesting agent is for the schedule date, and the check for the responding agent is for the desired date. ■ Mentoring requests—Both agents must have scheduled activities for the same periods in the time range.
Below minimum days per week	The agent's work shift is below the minimum days per week set by the min/max hours condition.
Below minimum hours per day	The agent's work shift is below the minimum number of hours per day set by the min/max hours condition.
Below minimum hours per week	The agent's work shift is below the minimum hours per week set by the min/max hours condition.
Days since agent company start date	The number of days between the agent's company start date and the request evaluation date. If there are two agents involved in the request, it is checked against both agents. Both agents must evaluate as true for the condition to evaluate as true. Format: number up to five digits (cannot be negative).
Days since agent department	The number of days between the agent's department start date and the

Variable	Description
start date	request evaluation date. If there are two agents involved in the request, it is checked against both agents. Both agents must evaluate as true for the condition to evaluate as true. Format: number up to five digits (cannot be negative).
Days to earliest request date	The number of days from the current date to the earliest date in the request. The current date is the date when the request is evaluated by the workflow. Format: number up to five digits, positive or negative.
Days to latest request date	The number of days from the current date to the latest date in the request. The current date is the date when the request is evaluated by the workflow. Format: number up to five digits, positive or negative.
Days to request date	The number of days from the current date to the request date. The current date is the date when the request is evaluated by the workflow. Format: number up to five digits, positive or negative.
Exceeds maximum days per week	The agent's work shift exceeds the maximum days per week set by the min/max hours condition.
Exceeds maximum hours per day	The agent's work shift exceeds the maximum hours per day set by the min/max hours condition.
Exceeds maximum hours per week	The agent's work shift exceeds the maximum number of hours per week set by the min/max hours condition.
Exception (Scheduled)	The exception selected is in the agent's schedule. This criteria applies to both scheduled and assigned exceptions that overlap with the requested time off day or time (if partial day). **NOTE** A time off workflow using an exception as the criteria won't work for a cross-midnight workshift and assigned exceptions (no schedule yet). In situations like these, use manual

Variable	Description
	handling.
Exception Type	The exception type selected in the agent request.
Gap between available hours and requested hours	Available hours is based on the Remaining Hours field in the Time Off request. The value can be a decimal. If HRMS integration is not enabled, the number of available hours is calculated at the time the request is processed by the workflow for the vacation year in which the request date falls. If HRMS integration is enabled, the number of available hours is based on the last imported data from the HRMS and is not tied to any vacation year. This value is not adjusted for other time off requests entered since the last HRMS import/export. **NOTE** If the entire day is specified for the time off date, the time off per day used is equal to the minimum hours per week for the FTE profile associated with the agent divided by five. If the agent does not have an FTE profile assigned, the condition (and workflow rule) is not applicable. Note that if the minimum hours per week in the FTE profile is zero, the time off hours for the entire time off date is also zero. Format: number up to 10 digits with one decimal, positive or negative.
Gap between scheduled agents and forecast agents	The number of scheduled agents minus the number of agents forecast (worst case for all service queues associated with the agents), for all the dates and time ranges in the request. For every service queue associated with the agent via skill mapping and every member service queue of multiskill groups associated with the agent, the workflow checks every five-minute period in the request dates and time range to get the difference between scheduled and forecast agents. If the entire day is checked in the request, all the agent’s available periods on the date are checked. It will not adjust the scheduled agents for shrinkage. If at least the specified percentage of periods meets the condition, the condition evaluates to true.

Variable	Description
	If there are two agents involved in the request, both agents must evaluate to true for the condition to evaluate to true. For Time Off requests, all the dates in the specified choice must evaluate to true. All the agents’ service queues must have a forecast for the dates, and the agents must have scheduled activities for all the dates and time ranges in the request. This variable has two value fields, one that accepts a decimal and one that accepts a percentage. The decimal field contains the gap value. The percentage field contains the percentage of five-minute intervals in the dates and time ranges in the request that must meet the condition. Format: number up to 10 digits with one decimal, positive or negative.
Gap between scheduled agents with shrinkage and forecast agents	The number of scheduled agents minus the number of agents forecast (worst case for all service queues associated with the agents) adjusted for shrinkage for all the dates and time ranges in the request. The shrinkage applied to the forecasted number of agents is computed based on the shrinkage categories and scenarios selected in the forecast request for the service queue. For every service queue associated with the agent via skill mapping and every member service queue of multiskill groups associated with the agent, the workflow checks every five-minute period in the request dates and time range to get the difference between scheduled and forecast agents. If the entire day is checked in the request, all the agent’s available periods on the date are checked. It will not adjust the scheduled agents for shrinkage. If at least the specified percentage of periods meets the condition, the condition evaluates to true. If there are two agents involved in the request, both agents must evaluate to true for the condition to evaluate to true. For Time Off requests, all the dates in the specified choice must evaluate

Variable	Description
	to true. All the agents' service queues must have a forecast for the dates, and the agents must have scheduled activities for all the dates and time ranges in the request. This variable has two value fields, one that accepts a decimal and one that accepts a percentage. The decimal field contains the gap value. The percentage field contains the percentage of five-minute intervals in the dates and time ranges in the request that must meet the condition. Format: number up to 10 digits with one decimal, positive or negative.
Paid hours per day	The number of paid hours per day for both agents after the schedule trade or schedule offer for the affected days. This condition validates only when it is true for both agents. Format: number up to two digits with one decimal.
Paid hours per week	The number of paid hours per week for both agents after the schedule trade or schedule offer for the affected schedule weeks. **NOTE** This condition considers only work shifts beginning in the current schedule week. Time belonging to a shift from the previous schedule week does not carry over to the current week. Any time that extends into the current week as part of a shift from the previous week is considered part of the previous schedule week. This condition validates only when it is true for both agents. Format: number up to two digits with one decimal (allowable values: —168 to 168).
Partial day request	Indicates it is a partial day request.
Project	One or more projects selected are in the agent's schedule. The project overlaps with the requested time off day or time (if partial day).

Variable	Description
Rank	The agent rank. If the agent rank is not specified, it is treated as 99999. If there are two agents involved in the request, both agents must evaluate to true for the condition to evaluate to true. Allowable values: 0 to 99999.
Remaining time off allotments	The time off allotments remaining for the agent's main service queue that is associated to the agent via a skill mapping or multiskill group. The time off allotments are configured in the default time zone. The agent must be associated with a valid FTE profile. If the request is for the entire day: ■ The allotment is taken from the date of the start of midnight of the request date in the agent's display time zone converted to the default time zone. ■ The time off allotment = (FTE profile weekly hours ÷ 5) ÷ (Default FTE per Day) If the request is for a partial day: ■ The request timespan is the agent's display time zone is converted to the default time zone. ■ The converted timespan is split at midnight. Each sub timespan is divided by the Default FTE per Day Remaining Time to arrive at the value taken off for each date. If any of these dates do not have time off allotment configured, the condition and workflow rule is ignored.
Same schedule week	Indicates whether both dates are for the same schedule week.
Same service queues	The agents support the same set of service queues. For example, an agent who supports SQ1 and SQ2 via skill mapping is considered to support the same set of service queues as another agent who belongs to a multiskill group that consists of SQ1 and SQ2. If the multiskill group contains more service queues, it does not count as the same.

Variable	Description
	An agent who supports SQ1 via skill mapping is considered to have a different set of service queues than another agent who supports SQ1 and SQ2 via skill mapping. If one agent in the request does not have an associated service queue, the agents are considered to support the same service queues only if the other agent also has no associated service queue.
Same team	The agents have a team in common.
Service Queue	The service queues associated with the agent through a skill mapping or a multiskill group. If there are two agents involved in the request, this condition is checked against both agents. If the operator is Equal to, the condition evaluates to true if either agent has a service queue whose ID is equal to the value. If the operator is Not equal to, the condition evaluates to true if both agents do not have any service queues whose ID is equal to the value. If there are no service queues associated with the agents involved in the request, the condition (and the workflow rule) is considered not applicable and is ignored.
Service queues have forecast	If there is a forecast for all the dates in the request for every service queue associated with the agent via skill mapping and every member service queue of a multiskill group associated with the agent. If there are two agents involved in the request, this condition is checked against all of both agents' service queues. For a Time Off request, this condition is checked against all dates in the specified choice. If there are no service queues associated with the agents involved in the request, the condition (and the rule) is considered not applicable and is ignored.

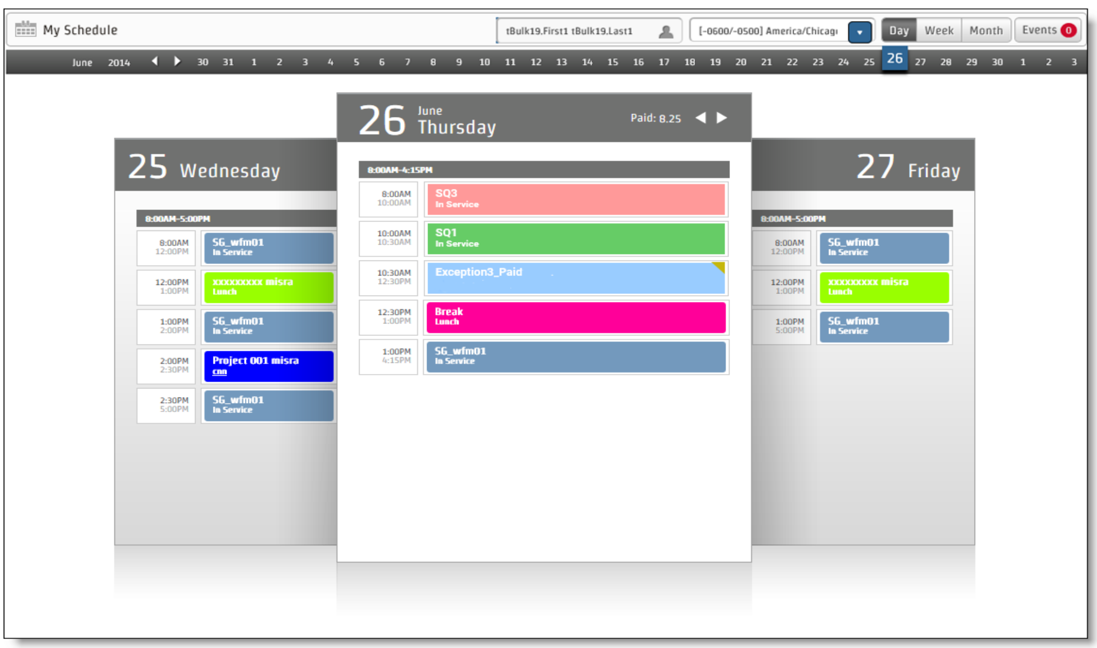
Variable	Description
Team	The name of the team the agent belongs to. If there are two agents involved in the request, this condition is checked against both agents. If the operator is Equal to, the condition evaluates to true if either agent has a team whose ID is equal to the value. If the operator is Not equal to, the condition evaluates to true if both agents do not have any team whose ID is equal to the value.

View and edit schedules

You can view your schedule or manage agents' schedules.

View your schedule

The My Schedule application allows you to view your schedule by day, week, or month.



By default, the My Schedule application displays today's schedule in Day view in the time zone configured for you by the administrator. You can also view your schedule in Week and Month view for any date a schedule has been created.

> **NOTE** If a project or exception activity has a note associated with it, a shaded triangle appears in the upper right corner. Hover over the activity to view the note.

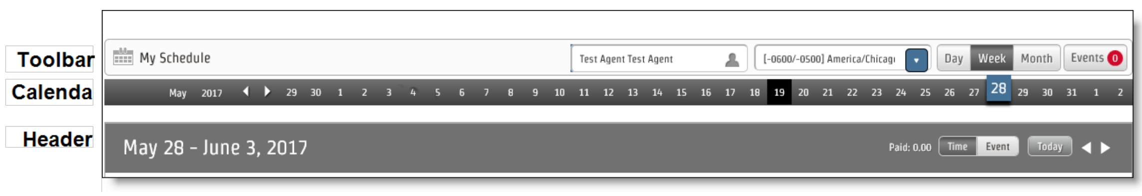
If you have permission to edit schedules, you can view your own schedule and the schedules for agents on your teams, and you can change the time zone a schedule is displayed in.

Activities are color coded according to their types. The colors are configured by the administrator. For example, breaks might be displayed in purple and meetings in blue. The color coding is visible on any schedule view you choose, either as a background for the activity listing or as a stripe or a square next to the activity.

Customize your schedule view

The My Schedule toolbar allows you to view your schedule by day, week, or month.

The graphic below displays the toolbar, calendar bar, and header seen by users who have the permission to edit schedules. The agent’s view is identical except that the Select Agent and Select Time Zone fields are not present on the toolbar.



The following tables describe the functionality available in the My Schedule toolbar, calendar bar, and header.

Toolbar functions

Field	Description
Mobile Calendar	(SAML authentication only) Click to access or reset the URL that you use to sync your Webex WFO work schedule with a third-party calendar application such as Microsoft Outlook or Apple Calendar. See View your schedule in another calendar app.
Select Agent	(Users with the edit schedule permission only) Select the agent from the drop-down list whose schedule you want to view.
Select Time Zone	(Users with the edit schedule permission only) Select a time zone in which to view an agent’s schedule. By default, the schedule is displayed

Toolbar functions (cont'd)

Field	Description
	in your display time zone. See About time zones for a detailed explanation of time zones and how they relate to schedules.
Day/Week/Month	Click to select the schedule view desired. The default view is Day view for the current date. Click the left and right arrows to view schedules in the past or future, or select a specific day or month from the calendar bar.

Calendar bar functions

Field	Description
Month and year	The month and year displayed is shown at the left end of the calendar bar. You can quickly navigate to another date by clicking the month and year and choosing the desired period from the drop-down menu.
Day view/Week view	Click any specific date from the five weeks of dates displayed in the calendar bar to view the schedule for that date or the week that includes that date. Each date has a tooltip that names the day of the week. Click the left and right arrows to change the month displayed. The displayed date is highlighted in red. Today’s date is highlighted in black. In the Week view, details of each activity are displayed in a tooltip when you hover your cursor over the activity. The Day and Week views can also include a hyperlink related to the schedule activity. For example, if you are scheduled for e-learning, you click the hyperlink in the schedule to view the e-learning training website.
Month view	Click any month from the twelve months displayed to view the schedule for that month. Six weeks are displayed in Month view, starting with the week the first day of the selected month is in. Click the left and right arrows to change the year displayed. The displayed month is highlighted in red. The current month is highlighted in black. The activities for each day’s schedule are limited to four listed events. “More” appears at the bottom of the date square if there are more than four activities on that day. The entire schedule is summarized in a tooltip when you hover your cursor over the bar at the top of each calendar square.

Header functions

Field	Description
Paid	The total paid hours scheduled on the displayed day, week, or month.
Time	(Week view only) Displays each day's schedule to show the length of each activity on an hourly grid. If a schedule crosses midnight, all activities after midnight are displayed on the next day.
Event	(Week view only) Displays each day's schedule as a list of activities. All activities for the shift are displayed on the day the shift starts, even if the shift crosses midnight into the following day. This view is recommended for printing a schedule.
Today	(Week and Month view only) Click to display the week or month that contains today's schedule.
Left/Right Arrows	Click to move one day, one week, or one month back and forth in the schedule, depending on the view you are using.

Print your schedule

Use your browser's print functionality to print your schedule. The recommended view to print is the Week view set to show the daily schedules by event, not by time.

You might have to change the print default settings to achieve an optimal result (adjusting page orientation, margins, and so on). Consult your browser's documentation on how to work with the print settings.

About time zones

All WFM users are assigned a display time zone by the administrator. The default setting is the time zone set for your organization (the default time zone). For a contact center with all locations in that same time zone, the default time zone is likely used for all WFM users. However, if the contact center has locations in multiple time zones, users located in time zones other than the default time zone can be assigned a user-specific display time zone so they see their schedules in local time.

> **EXAMPLE** Your organization's default time zone is set as the Central Time zone, which includes Chicago. Agent A is in Chicago, so his display time zone is the default time zone. However, Agent B is in Los Angeles, so her display time zone is set to the Pacific Time zone, and Agent C is in New York City, so his display time zone is set to the Eastern Time zone. All three agents see their schedules in their local time zone.

It is possible for users to see their schedules in a time zone that is different than the one where they are actually located. What is seen depends on how the administrator has configured their display time zones. As a result, the times shown in the My Schedule application and widget do not necessarily match the local time shown on their computers.

Users with permission to edit schedules also see their schedules and the schedules of the agents on their teams in the display time zone assigned to their user account. For example, if a supervisor located in the Central Time zone views the schedule of an agent located in the Pacific Time zone, that agent's schedule is shown in Central Time because that is the supervisor's display time zone.

Users with permission to edit schedules can control which time zone is shown in My Schedule by changing it in the time zone drop-down list. For example, a supervisor might want to see an agent's schedule as the agent sees it, especially if that agent is located far away from the supervisor and the time difference is more than a few hours. In that case, the supervisor selects the agent's local time zone from the time zone drop-down list.

> **NOTE** The time zone shown in the Select Time Zone drop-down list is not the display time zone assigned to the user whose schedule is displayed in My Schedule. It only reflects the time zone chosen by users with permission to edit schedules to view an agent's schedule. The only way you can know what is a user's display time zone is to look up the display time zone set on the user's Users record.

View your schedule in another calendar app

Agents can view their schedules outside of work through a third-party calendar application on a mobile device or PC by subscribing to the iCal feed from Webex WFO. Webex WFO supports any device that has a calendar application that can process ICS files, including those listed in the following table.

Device	Application
iPhone/iPad	Calendar App, Microsoft Outlook
PC	Microsoft Outlook
Android phones/tablets	Microsoft Outlook, Google Calendar, third-party applications that can read iCal files

Once agents subscribe to the iCal feed, it updates their calendar application with the number of schedule weeks that are configured in the "Number of Schedule Weeks Visible to Agents" field on the WFM Global Settings page (see Configure system-wide WFM settings).

Some calendar applications allow users to configure how often their calendar subscriptions request updates. However, Webex WFO limits calendar applications to making 5 requests every 10 minutes. Requests that exceed this limit will return an HTTP 403 status code ("Forbidden").

Only agents (not supervisors, schedulers, or administrators) can subscribe to the iCal feed from Webex WFO. Agents can view only their own schedule. The color coding that appears in the WFM interface is not displayed when you view the WFM schedule on your mobile device or personal computer.

> **NOTE** Your schedule will be displayed in your configured display time zone. If you look at your schedule on a device when in a different time zone, the schedule is converted to display in that time zone. However, the activity time labels will not match that time, but rather reflect your configured display time zone.

Subscribing to the iCal feed

For instructions about how to subscribe to the iCal feed, consult the documentation for the calendar application on the devices that your agents use. In general, your agents subscribe by copying the URL for the iCal feed from Webex WFO and pasting it into a subscription field in their calendar application.

Which URL your agents copy and paste depends on the authentication method that your tenant has implemented.

Active directory (AD) or Webex WFO authentication

Subscribe to the iCal feed in an AD or Webex WFO authentication environment

1. Determine how to subscribe to the iCal feed from Webex WFO by consulting the documentation for the calendar application on your device.
2. Copy and paste the following URL into the subscription field in your calendar application:
3. When prompted, log in to Webex WFO.

SAML authentication

If your tenant uses SAML authentication, the "iCal Sync with SSO" check box on the WFM Global Settings page must be selected before users can subscribe to the iCal feed. (See Configure system-wide WFM settings.) When this check box is selected, Webex WFO makes the Mobile Calendar button available to agents on the My Schedule toolbar, which provides them with a URL that they can use to subscribe to their work schedule.

This URL is unique and randomly generated for each agent. However, it is not password-protected. If an agent's URL is compromised, the agent should reset the URL. When an agent resets the URL, Webex WFO generates a new URL and deactivates the old URL. To continue receiving schedule updates from Webex WFO, the agent must reconfigure existing calendar subscriptions to use the new URL.

Subscribe to the iCal feed in a SAML authentication environment

1. Determine how to subscribe to the iCal feed from Webex WFO by consulting the documentation for the calendar application on your device.
2. In Webex WFO, navigate to My Schedule.
3. In the My Schedule toolbar, click Mobile Calendar.
4. Copy and paste and unique URL from the Mobile Calendar into the subscription field in your calendar application.

Reset the URL in a SAML authentication environment

1. In Webex WFO, navigate to My Schedule.
2. In the My Schedule toolbar, click Mobile Calendar.
3. Click Reset Web Address. Webex WFO generates a new URL.
4. In your calendar application, reconfigure your subscription to the iCal feed from Webex WFO.

Dynamic scheduling for agents

The dynamic scheduling feature enables you to create your own schedule for specific weeks if configured to do so by your administrator or scheduler.

If you are included in a dynamic scheduling event, you will see an event exception appear in your daily schedule. The exception includes a link that takes you to the Agent Dynamic Scheduling page.

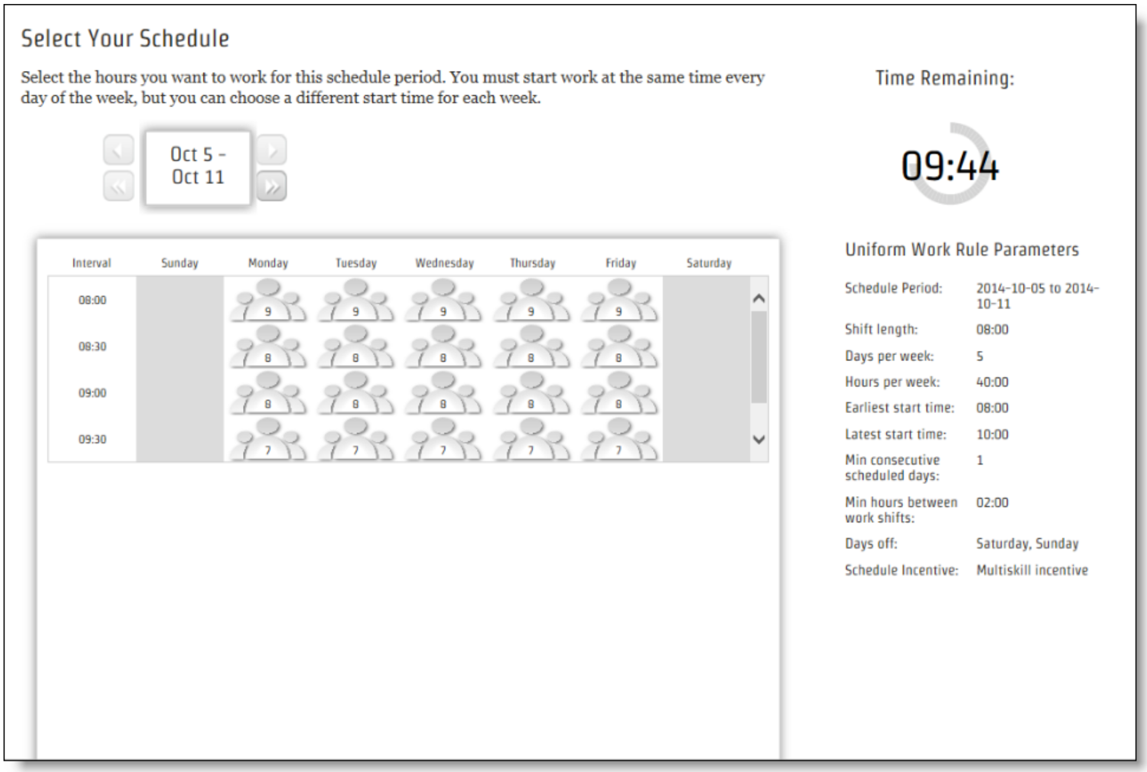
> **NOTE** The only time you can create your schedule is during the exception. Once that time is past, you can only view, not edit, the Agent Dynamic Scheduling page.

When you first access the page, you see the following:

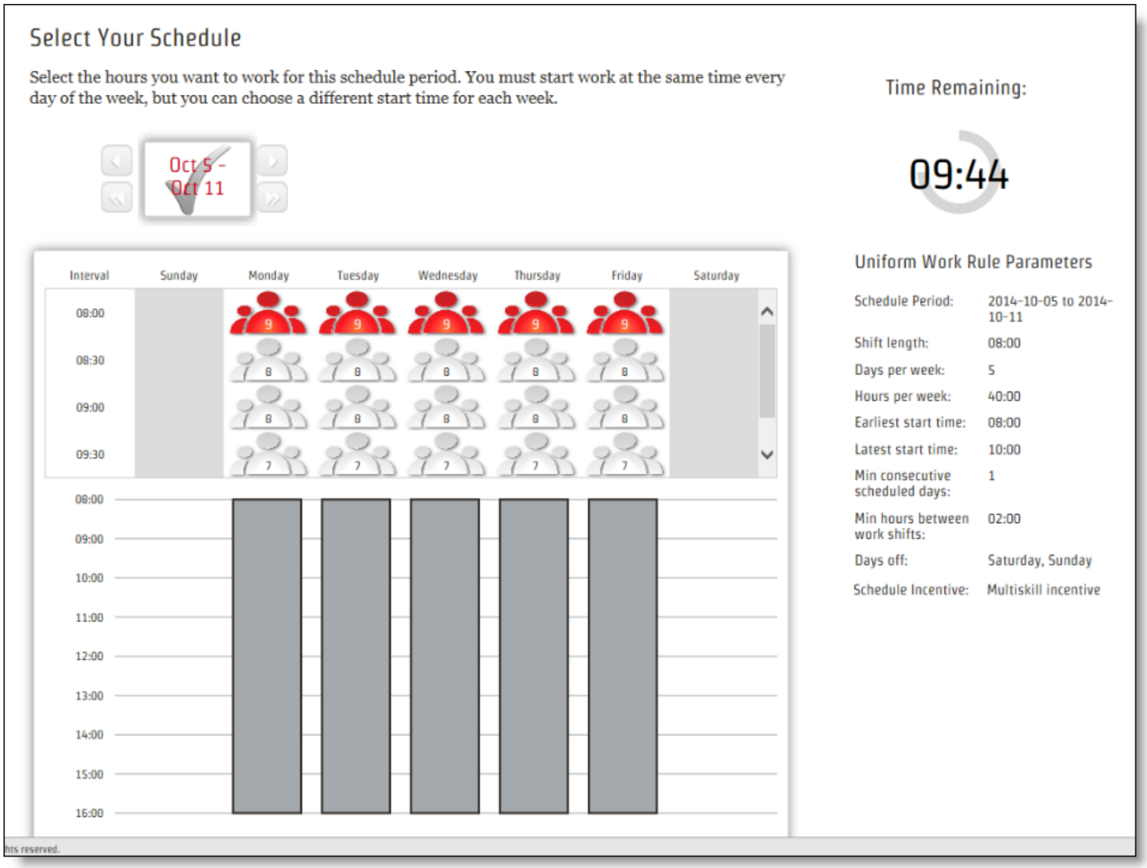
- Work rule parameters for the schedule you will be creating. There are three kinds of work rules: uniform, hybrid, and variable.
- Staffing icons that give you an idea of the staffing needs for the intervals that cover the times you can start your shift. In this graphic, the parameters say that you can start work any time between 08:00 and 10:00, so the staffing icons are displayed for every half hour interval between those times.

NOTE All times shown on this page are in your (the user's) display time zone.

- A countdown timer that tells you how much time is left for you to create and submit your schedule. Once the countdown timer reaches zero, you can no longer edit or submit your schedule.

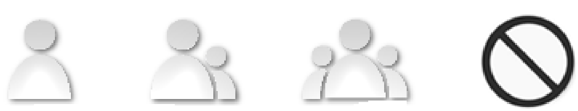


When you select your schedule, it is depicted by gray bars underneath the staffing icon section.

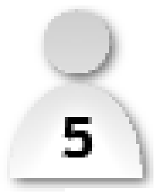


Staffing icons

The staffing icons depict the relative need for staffing for a shift starting in that interval.



If your administrator configures dynamic scheduling to include staffing numbers, you will see a number on a staffing icon. The number conveys the same information as the staffing icon. It is just an alternative way to display it.



The staffing icon and number are determined by the kind of work rule configured for the work shift.

Work Rule	Calculation
Uniform	The average staffing need across all work days for shifts beginning in the interval.
Hybrid	The average staffing need for that day's shift length beginning in the interval.
Variable	The average staffing need for the selected shift length for that day beginning in the interval. When you first view the page, the icon displayed is based on the configured minimum shift length. When you specify a shift length, the icon and number changes accordingly.

Creating your own schedule

IMPORTANT You have a limited time to create your schedule. Keep an eye on the countdown timer so you don't run out of time. Once the timer reaches zero, you can no longer edit or submit your schedule.

Create your own schedule

1. In your schedule, click the link in the dynamic scheduling exception to access the Agent Dynamic Scheduling page.
2. Based on the work rule parameters listed to the right of the scheduling grid, select the start time for each day you will work. Use the staffing icons to help you determine which shifts have the most staffing requirements and choose accordingly.

   Days that are set aside as days off display a gray column instead of any staffing icons.

If you are scheduling according to a variable work rule, and you are allowed to select a day off, do not select a staffing icon for that day.

3. When every day in the week has been configured with a work shift, a check mark appears in the date box to tell you that the work week is complete:

4. If you are to schedule more than one week, click the right arrow next to the date box to go to the next week, and then create a schedule for that week.

   NOTE A different type of work rule might apply to each week you schedule.

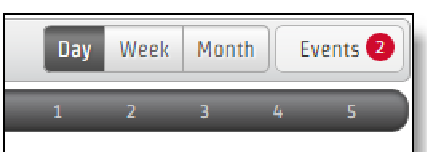
5. When you have scheduled every week, click **Submit**.

Intraday dynamic scheduling for agents

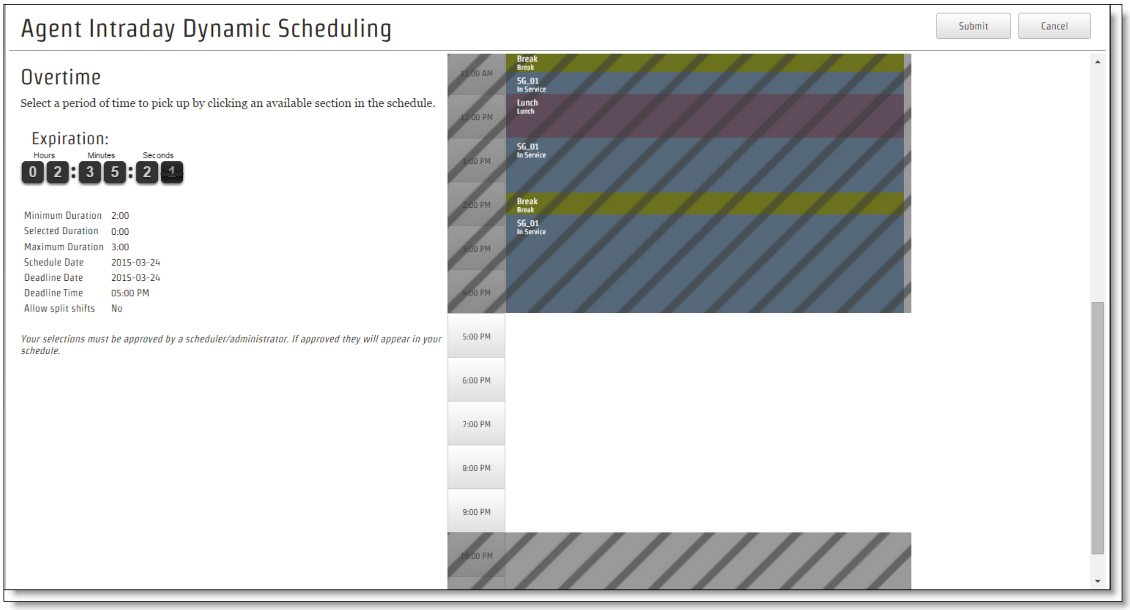
The intraday dynamic scheduling feature enables you to add voluntary overtime, time off, or both voluntary overtime and time off to your own schedule if your administrator or scheduler invites you to do so. These changes are usually for the current day or for a few days in the future. If your administrator or scheduler sees that contact volume is lower or higher than expected, they might decide to meet the actual coverage requirements by offering some agents who support the affected service queue the option to take time off or add overtime.

NOTE You can schedule voluntary overtime for a day you do not currently have a schedule.

If you are one of the agents who are invited to participate in an intraday dynamic scheduling event, you see a number displayed on the Events button on your My Schedule page. In this image, the agent has been invited to participate in two events.



The Agent Intraday Dynamic Scheduling page is displayed when you click the link in the event invitation. The initial view shows your schedule for the day of the event. Your existing schedule is shaded in gray. The event period is displayed as a blank area.

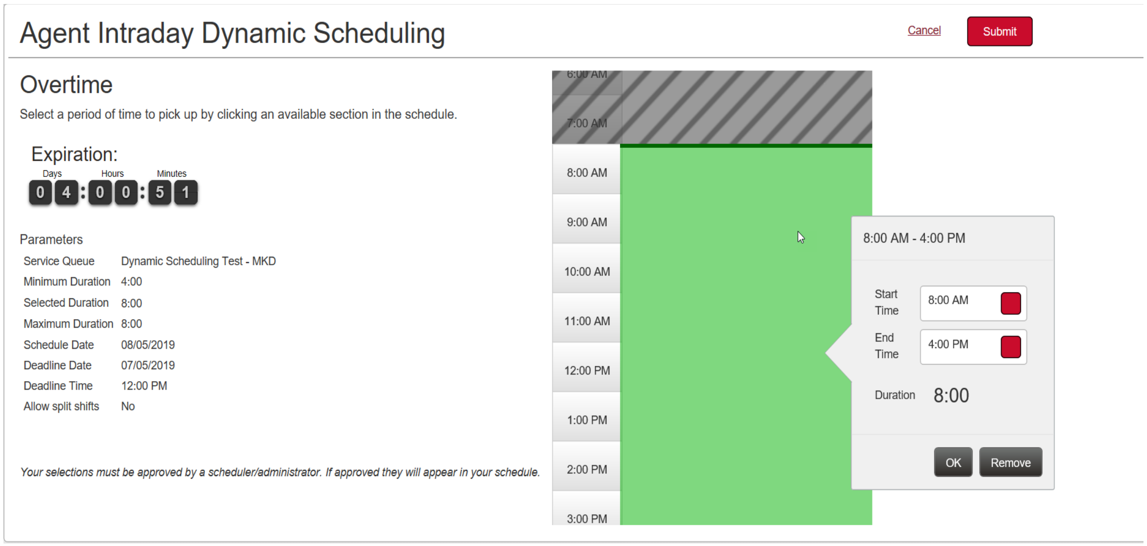


The text at the left of the page summarizes the details of the changes you can make to your schedule and informs you if your schedule change must be approved before it goes into effect.

When min/max hour conditions have been configured for you, the min/max hour condition details also appear at the left of the page. Your schedule changes must be within the min/max hour limitations in order for the request to be submitted.

Change your schedule

1. Click the **Events** button to display the event names as links.
2. Click the link to display the Agent Intraday Dynamic Scheduling page for that event.
3. Click in the blank area to display a flyout panel. You can either click intervals in the blank area to select them or configure the start time and length of the time you want to select. Selected areas are shaded in green (overtime) or red (time off). You can also drag the selected areas to change the time you want to select. By default, dragging snaps to five-minute increments. To drag the selection by one-minute increments, press the Shift key while you drag. Release the mouse button before the Shift key or it will snap back to five-minute increments.



4. The page displays one kind of schedule change at a time. If you have been invited to change your schedule with both voluntary time off and overtime, there are buttons at the top of the page labeled OT and VTO. Use these buttons to toggle between the two types of schedule change.

5. If you are given the option to schedule overtime or time off in multiple segments—the overtime or time off does not have to be one continuous segment—an Add and a Remove button are added to the window. With these buttons you can add a segment or remove a segment as needed.

6. When you are finished, click **Save**. A pop-up window is displayed that contains your revised schedule. Click **Submit** to confirm and submit your changes or **Cancel** to return to the Agent Intraday Dynamic Scheduling, where you can make revisions, save them, and then submit them.

   If the event is set up so your changes are automatically approved, your schedule is updated immediately. If the event is set up to require approval from your administrator or scheduler, your schedule is not updated until the changes are approved. If your changes are not approved, you will know because your schedule is not updated.

In the following situation, Webex WFO will replace an unpaid activity in your schedule with a Not Available activity.

Intraday Dynamic Event Configuration	Your Actions
Includes voluntary time off that uses a paid exception.	▪ You add voluntary time off, and that voluntary time off overlaps an unpaid activity in your existing schedule.

Intraday Dynamic Event Configuration	Your Actions
	■ Your changes are approved manually or automatically.

Manage agent schedules

Supervisors, schedulers, and administrators can do many different tasks on the Agent Schedules page:

- View agent schedules
- Sort and filter agent schedules
- Edit agent schedules:
  - Add an activity
  - Find the best time to schedule an activity
  - Move an activity
  - Delete an activity
  - Optimize breaks and lunches
  - Undo a schedule change
  - Trade schedules between two agents
  - Remove an agent from a schedule
- View agent adherence and conformance
- Check projected coverage

Prerequisites

You are a supervisor, scheduler, or administrator with agents assigned to your WFM view. A schedule has been run for the agents you are viewing. To edit schedules, you need the Edit Schedules permission.

Page location

Schedules and Planning > Agent Schedules

Procedures

View agent schedules

1. Select the agents' service queue group, service queue, skill mapping, or team from the **Search Criteria** drop-down list. Today's schedule for the group displays with agents ordered by start time. Activities are color coded.
2. Hover over an activity for more information.

> **NOTE** Sometimes, the activity information window appears to show an incorrect start or end time for the activity. This can happen because activities are in two layers. The bottom layer in the schedule is for in service, overtime, assignment, and closed service activities. The upper layer is for breaks, lunches, projects, and exceptions. If you hover over a bottom-layer activity, the information window shows the full length of time for that activity without considering any upper-layer activities that might be on top of it.
> The Work Shift field does not appear in the activity information window if the agent was scheduled using dynamic availability.

Sort and filter agent schedules

You can apply several filters to agent schedules so that you see only the information that is relevant to you.

- To sort the schedule by agent name, rank, or start date, click the **Agents** drop-down list at the top left of the screen.
- To see a schedule for a specific agent, enter the agent's name in the Filter Agents field at the top of the page.
- To see a schedule for a different date, click the month, year, and/or day at the top of the page.
- To see a broader view of the schedule, click **Week** or **Day** in the top right corner.
- To see what schedules look like for agents in different times zones, select a time zone from the **Time Zone** drop-down list.
- To pin an agent to the top of the list, hover over the agent's name and click the arrow icon. To unpin an agent, click the arrow icon again.
- To create a customized list of service queues, service queue groups, teams, and/or skill mappings, select **Select** from the bottom of the **Search Criteria** drop-down list (under Custom).

Add an activity

1. Select **Insert Activity** from the **Actions** drop-down list. The Insert Activity dialog box opens.
2. Click **Agent Selection** (the person icon). A list of available agents displays.
3. Select the agents from the list. Agent names display in the Agents box. (To remove an agent, click their name in the Agents box and click **Remove**.)
4. Click **Close**.
5. Enter the activity's start time and end time, or select **Start Time with Duration** to enter a duration instead of an end time.
6. Select the activity type from the **Activity** drop-down list. If more drop-down lists appear, narrow down the activity type as needed.
7. If the activity is paid, select the **Paid** check box. If the activity is unpaid, clear this box. This box is automatically selected or cleared depending on the type of activity you select.
8. Click **Insert**. The Insert Activity window closes, and the activity appears on the agents' schedules.
9. Click **Save** (top right of the page). The Save Schedule Changes dialog box opens.
10. Click **Save**. The Save Schedule Changes dialog box closes.

Find the best time to schedule an activity

Follow these steps to schedule an activity so that it has the least impact on the service level.

1. Select **Find Optimal Time** from the **Actions** drop-down list. The Find Optimal Time dialog box opens.
2. Select the first day that the activity could happen from the Start Date calendar. You can select a date within the current week.
3. Select the last day that the activity could happen from the End Date calendar. You can select a date within the current week.
4. Enter the earliest time that the activity could start in the Start Time field.
5. Enter the latest time that the activity could start in the End Time field.
6. Enter how long the activity will take in the Duration fields.
7. Enter the number of agents who will do the activity in the "No. of Agents" field.
8. Click **Analyze**. Possible times display in the Analysis Results section.

> **NOTE** The Gap column shows the difference between the number of forecasted agents and the number of agents actually scheduled. A positive number indicates overstaffing. A negative number indicates understaffing.

9. When you have chosen a time, click the number in the In Service Agents or Scheduled Agents column. The Insert Activity dialog box opens.
10. Move the agents who will perform the activity from the Available column to the Assigned column.
11. Select the activity from the **Select Activity** drop-down list. If more drop-down lists appear, narrow down the activity type as needed.
12. If the activity is paid, select the **Paid** check box. If the activity is unpaid, clear this box. This box is automatically selected or cleared depending on the type of activity you select.
13. Click **Insert**. The Insert Activity dialog box closes.
14. Click **Save** (top right of the page). The Save Schedule Changes dialog box opens.
15. Click **Save**. The Save Schedule Changes dialog box closes.

Move an activity

1. Double-click the agent's schedule. The schedule divides into two rows, with breaks, lunch, and special projects above in-service time.
2. Drag an activity to a different time. The Start Time and End Time change. If you have the Coverage drawer open, the predicted coverage adjusts when you release the activity.
3. Double-click the lower (solid) row to collapse the agent schedule back into one row.
4. Click **Save** (top right of the page). The Save Schedule Changes dialog box opens.
5. Click **Save**. The Save Schedule Changes dialog box closes.

Delete an activity

To delete an activity from an agent's schedule, insert another activity over the top of it.

1. Right-click the activity, and select **Insert** from the drop-down list. The Insert Activity dialog box opens with the activity start time and end time filled in.
2. Select a new activity from the **Activity** drop-down list. If more drop-down lists appear, narrow down the activity type as needed.

   > **NOTE** To put the agent back on the service queue, select **In Service**. Select the service queue from the **Search Criteria** drop-down list.

3. Click **Insert**. A warning message appears.

4. Click **Override Conflict**. The warning message closes, and the activity is removed from the agent's schedule.
5. Click **Save** (top right of the page). The Save Schedule Changes dialog box opens.
6. Click **Save**. The Save Schedule Changes dialog box closes.

Optimize breaks and lunches

Optimizing breaks and lunches helps you maximize coverage without running a new schedule.

IMPORTANT You can optimize breaks and lunches that start at least one hour in the future. To move an activity that begins sooner than that, go to Move an activity.

1. Select **Optimize Schedules** from the **Action** drop-down list (top right of the page). The Optimize Schedules dialog box opens.
2. Select the Start Date and End Date to optimize. Today's date is the default.
3. (Optional) To exclude some agents from the optimization, move them from Assigned to Available.

   NOTE After you run the optimizer, you cannot pick specific changes to keep or discard. If you need to keep some agents' schedules unchanged, exclude them now.

4. (Optional) To exclude breaks or lunches from the optimization, clear the **Breaks** or **Lunches** check box. Otherwise, leave these boxes checked.
5. Click **Optimize**. The Agent Schedules dialog box tells you how many agents' schedules have been changed.
6. Click **Close**. The Agent Schedules dialog box closes. Schedules that have changed are divided into two rows.

7. Click **Save** (top right of the page). The Save Schedule Changes dialog box opens.
8. Click **Save**. The Save Schedule Changes dialog box closes, and the changes are applied to agents' schedules.

Trade schedules between two agents

You can trade two agents' schedules for the same day, different days, or multiple days.

IMPORTANT To trade schedules, both agents must be included in a schedule that was run for the time frame of the trade.

NOTE When a schedule crosses midnight, the agent is scheduled to start work on the day the schedule begins.

1. Select **Trade Schedule** from the **Actions** drop-down list. The Trade Schedule dialog box opens.
2. Select the time frame radio button in the Trade Type section. If you select **Different Day** or **Multiple Days**, From Date and To Date fields display in the Dates section.
3. Select the agents whose schedules you are trading from the From Agent and To Agent lists.

   NOTE Only agents who are assigned to the team in your Main View appear in these lists.

4. Select the date(s) for the trade from the Dates section. The agents' schedules display, allowing you to compare them to see if the trade is feasible.
5. Click **Apply**. The Apply Trade dialog box opens.
6. Click **Yes**. The Apply Trade and Trade Schedule dialog boxes close.

Undo a schedule change

1. Right-click the agent's schedule, and select **Schedule History** from the drop-down list. The Schedule History and Restore page displays.
2. In the Results section, click any number in the Revision Detail ID column. The different versions of the agent's schedule display.
3. Click **Restore** next to the schedule that you want to give back to the agent. The Confirm dialog box displays.
4. Click **Yes**. A confirmation message displays, and the change displays in the list of schedule revisions on the Schedule History and Restore page.

NOTE If you restore a schedule that includes a trade, only the agent whose schedule you restored gets a schedule change. The other agent who traded shifts does not get a schedule change until you restore their schedule manually.

Remove an agent from a schedule

To remove an agent from a schedule, add an unpaid activity over their entire work shift (similar to how you Delete an activity).

1. (Optional) To remove the agent from a date other than today, click the date.
2. Right-click the agent's In Service time, and select **Insert** from the drop-down list. The Insert Activity dialog box opens.

3. (Optional) If the Start Time and End Time do not cover the agent's entire work shift, select the correct times.
4. Select an activity from the **Activity** drop-down list that would remove the agent from the queue. If more drop-down lists appear, narrow down the activity type as needed.

    > **NOTE** The activity you should select varies based on how your company has set up Webex WFO. Common activities to remove an agent are **Exception** and **Not Available**.

5. If necessary, clear the **Paid** check box.
6. Click **Insert**. A warning message displays.
7. Click **Override Conflict**. The change appears on the agent's schedule.
8. Click **Save** (top right of the page). The Save Schedule Changes dialog box opens.
9. Click **Save**. If the change violates any scheduling rules for the agent, a warning message displays. Otherwise, the Save Schedule Changes dialog box closes.
10. (Optional) Click **Ignore and Save**. The warning message closes.

View agent adherence and conformance

1. Click the Adherence drawer (the small red triangle) to the right of the agents' names.

The drawer opens to display agents' real-time adherence. A green circle means the agent is currently adhering to their schedule. A red circle means they are not in adherence. This drawer also shows agents' scheduled activity, current state, duration (how long they have been in their current state), reason code (RC), and adherence and conformance percentages for the day. This information updates automatically every 30 seconds.

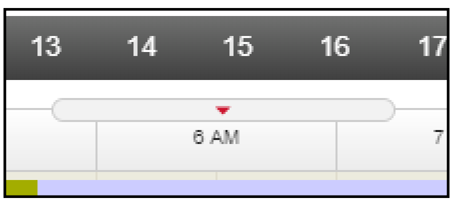
Agents		Schedule Activity	Agent State	Duration	RC	A %	C %
Quincy Landers		Lunch	Logged Out	69:49:31	--	11	0
Matt Rueben		In Service	After Call Work	0:07	--	40	87
Beth Bryant		In Service	Logged Out	68:18:42	--	0	0
Juana Urshela		Lunch	Ready Available	2:10	--	58	115

2. Click an agent's name to see more information about that agent. Click the agent's name again to close the drawer.

> **NOTE** The numbers in the agent drawer might be slightly different from the numbers in the overall Adherence drawer because these two drawers update at different rates and because numbers in the Adherence drawer are rounded.

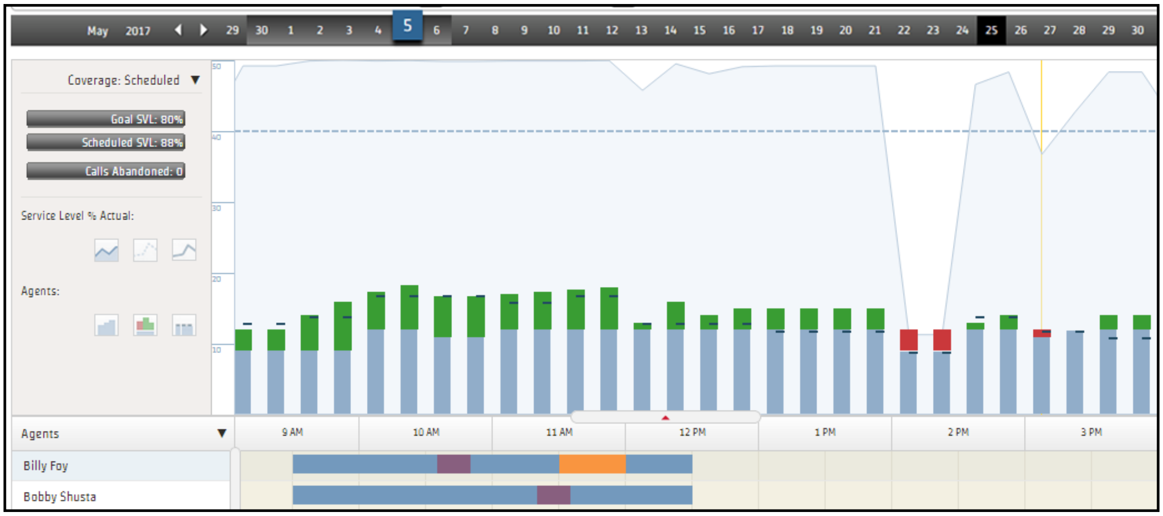
Check projected coverage

1. Click the Coverage drawer (small red triangle) at the top middle of the screen.

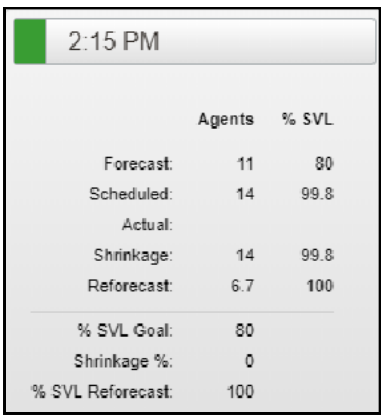


The Coverage drawer opens to show the projected coverage level for the day. Each vertical bar represents 15 minutes and compares your scheduled number of agents to the number you need for your expected contact volume.

A green top on the bar means you have more than enough agents scheduled. A red top means you don't have enough agents scheduled. A plain blue bar means you have exactly the number of agents you should need. For time periods that have passed, a black dash represents the actual level of coverage.



2. Click a vertical bar for more information on that 15-minute period.



Related topics

- Customize the Agent Schedules page
- About time zones
- Sort the list of agents
- About drawers
- Edit schedules
- About Schedule History and Restore
- Trade two agents' schedules

- Find the best time for an activity
- Optimize breaks and lunches
- Edit an agent's dynamic scheduling page

Customize the Agent Schedules page

The Agent Schedules toolbar controls which agents you see in the Agent Schedules page. Its fields and buttons are described in the table below.

> **NOTE** Until you select one or more service queue groups, service queues, skill mappings, or teams, the Agent Schedules page is blank. Your selection persists and is displayed by default in your next session.

Field/Button	Description
Select Time Zone	Choose your time zone preference from the drop-down list. The time zone of the user currently logged in (specified on the Manage users page) appears in this field by default. When you change this value, your selected time zone appears in the Time Zone row. **NOTE** The time zone is reset when you navigate away from the Agent Schedules page.
Select Criteria	Choose one or more service queues, service queue groups, teams, and/or skill mappings to display those agents' schedules (for more information, see Custom selection). To see agents who are scheduled for a multiskill group, select the service queues associated with the multiskill group or the agent's team. You can type all or part of the name in the field to find it more easily. This field is not case-sensitive.
Filter Agents	Filter agents on the current page by typing letters in an agent's name. For example, if you type "br" in the field, only names that contain the letters "br" are displayed. This field is not case-sensitive. The filter does not extend to agents listed on non-visible pages in a multiple-page list.
Actions	Click to display an option menu that allows you to modify agents'

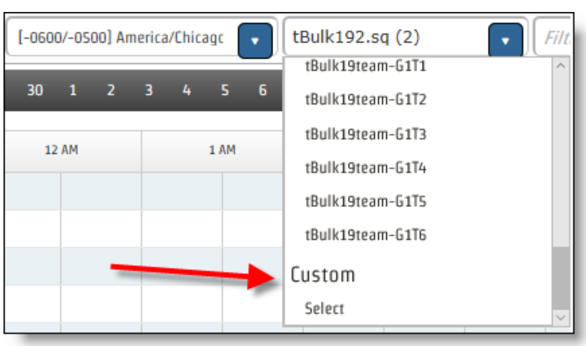
Field/Button	Description
	schedules by inserting activities and trading schedules, take you to today's schedule in one click, discard any changes you have made but have not yet saved, optimize lunches and breaks, and find an optimal time for an activity you want to insert.
Save	Save the changes to the database and update the production schedule.
Paging	The paging tool allows you to navigate through a long list of agents on multiple pages. Click the double arrows to navigate to the first or last page. Click the single arrows to move forward or backward one page at a time. Agents you pin to the top of the list remain there when you go to another page. Filters apply only to the page you are currently viewing.
Week/Day/Hour	Display the agent schedules by week, day, or hour. Changes to the date and view persist from session to session.

Custom selection

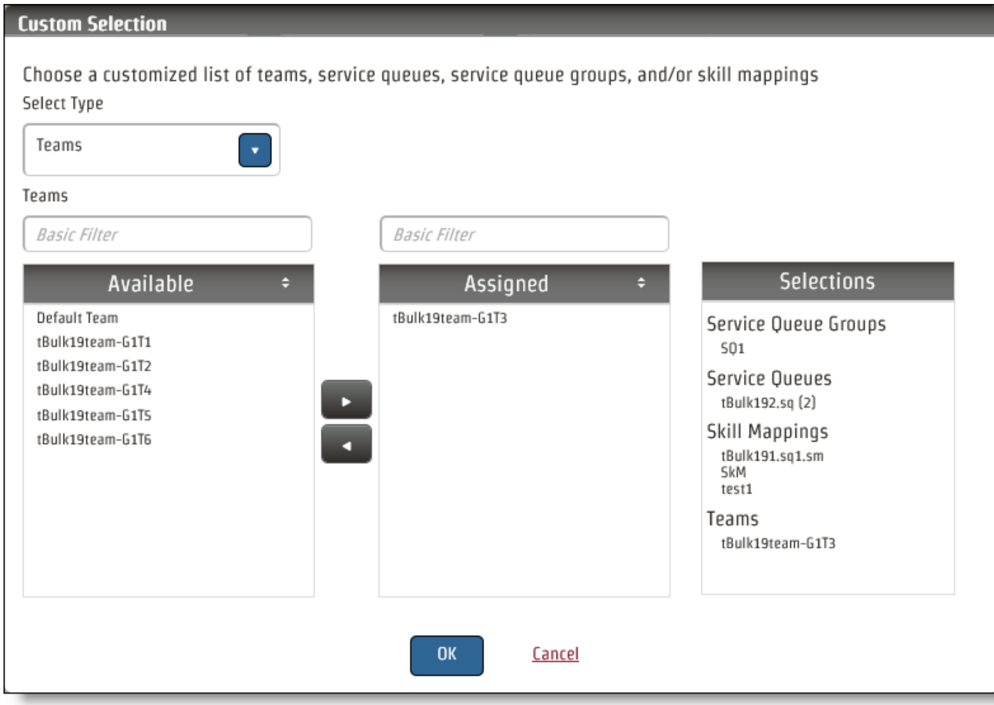
If you want to view the schedules of multiple service queues, service queue groups, teams, and skill mappings, use the Custom Selection dialog box to select them.

To set up a custom selection:

1. Scroll to the bottom of the Select Criteria drop-down list in the Agent Schedules toolbar to the Custom category, and then click **Select**.



The Custom Selection dialog box is displayed.



2. From the **Select Type** field, select Service Queue, Service Queue Group, Team, or Skill Mappings. The available entities of the type you selected are displayed in the Available pane.

3. Move the entities whose schedules you want to view to the Assigned pane. Your selection is also listed in the Selections pane.

4. Repeat steps 2 and 3 until you have built a list of the desired entities whose schedules you want to view. When you are finished, click **OK**. Agents belonging to the selected entities are displayed in the Agent Schedules page, and Custom is shown in the Select Criteria field on the toolbar.

The custom selection persists and is displayed the next time you log in.

To modify a custom selection:

1. In the **Select Criteria** field, click **Select**. The Custom Selection dialog box with your saved selections is displayed.

2. Modify the selections as desired, and then click **OK**.

About time zones

There are four types of time zones used in Webex WFO: the default time zone, the display time zone, the scheduling time zone, and the service queue time zone. These different types of time zones help avoid confusion when creating and viewing agent schedules for agents located in different time zones around the world.

> **NOTE** These time zones primarily affect WFM. In QM, recordings are time stamped at the capture source (for example, the Record Server or the PC with Smart Desktop). This can be different than where the agent being recorded is located.

Default time zone

The default time zone is usually the time zone where your organization's main office is located. It is configured on the Global Settings page (Application Management > Administration > Global Settings). This time zone is used to time stamp system events, logs, and captured data such as agent statistics.

Display time zone

The display time zone is a user's local time zone, and is used for information viewed by the individual user on pages such as My Schedule, Agent Schedules, and Messaging. It is configured on the Users page (Application Management > User Configuration > Users) for each individual user.

If the display time zone is not configured, then the default time zone is used in its place. If users are located in the default time zone, then configuring a display time zone per user might not be necessary.

Scheduling time zone

The scheduling time zone is used for scheduling agents. When each agent is assigned a scheduling time zone, time zone-neutral work shifts can be configured. That means that if you set up a work shift that starts at 8:00 AM and ends at 5:00 PM and then you assign that work shift to agents in two different time zones, the work shift starts at 8:00 AM in each agent's local time zone.

The scheduling time zone also eliminates possible confusion with when daylight saving time is applied in different time zones, and enables copying and editing schedules without the need for manually calculating time zone differences.

Service queue time zone

The service queue time zone is used to interpret the opening and closing hours of a service queue. By default this time zone is the same as your organization's default time zone, unless a different time zone for a specific service queue is configured on the Service Queues page (Application Management > Service Queues > Service Queues).

Time zones and agent schedules

By default, the Agent Schedules page displays schedules in the logged-in user's display time zone, midnight to midnight for the selected week. You can change the time zone to any other time zone by selecting a new one from the Time Zone drop-down list.

> **BEST PRACTICE** If you want to view schedules in another time zone, change the time zone before editing the schedule because changing the time zone triggers a new session.

> **NOTE** Adherence is shown to agents in their selected time zones, but the adherence calculations continue to be done from midnight to midnight in the default customer time zone. This helps ensure that you see the same data across all agents and have the same adherence scores for a day in the customer time zone.

About activity notes

An activity note is text that can be attached to a project or exception activity in an agent's schedule. The note provides more information about the activity.

> **EXAMPLE** You have an exception called 'Meeting" that is used for many types of meetings. When you assign the Meeting exception to Team 1 agents you enter "Team meeting, bring your laptop" in the Notes field. You then assign the Meeting exception to Team 2 agents for a different meeting. For this meeting you enter "Review on handling dissatisfied customers" in the Notes field.

These notes can be viewed in a number of ways.

- **My Schedules** page and **My Schedules Data Explorer widget**—A shaded triangle appears in the upper right corner of any scheduled activity that has an attached note. Hover over the activity to view the note.
- **Agent Schedules** page—Hover over an exception or project activity in an agent's schedule to view the note at the bottom of the activity information popup.
- **Projects** page—in the Note field.
- **Users** page—A shaded triangle appears in the upper right corner of an exception with a note listed in the Assigned Exceptions section. Hover over the exception name to view the note.

Notes can be added to exceptions and projects in the following ways.

- Add a note for a project on the **Projects** page.
- Add a note for an exception when the exception is assigned to specific agents on the **Exceptions** page.

- Add a note to an exception or project when inserting an activity in agent schedules on the **Agent Schedules** page.
- Add a note to an existing exception or project on the **Agent Schedules** page by right-clicking the activity and choosing Edit Note.

Notes can be edited in various locations.

- **Agent Schedules** page (Hour or interval view only)—Right click the project or exception activity and select **Edit Note** from the popup menu.
- **Projects** page—You can edit a project to change the note associated with it. The next time you run the schedule the note is updated.
- **Exceptions** page—Once an exception has been assigned its note cannot be edited from the Exceptions page, but you can overlay the assigned exception with a new exception that is a duplicate of the original one (same assigned agents, same date/time) but that has a different note. The new exception appears in the agent schedules the next time the schedule is run.

Related topics

- View your schedule
- Insert an activity
- Add and edit activity notes
- Manage exceptions
- Manage projects
- Manage users

Sort the list of agents

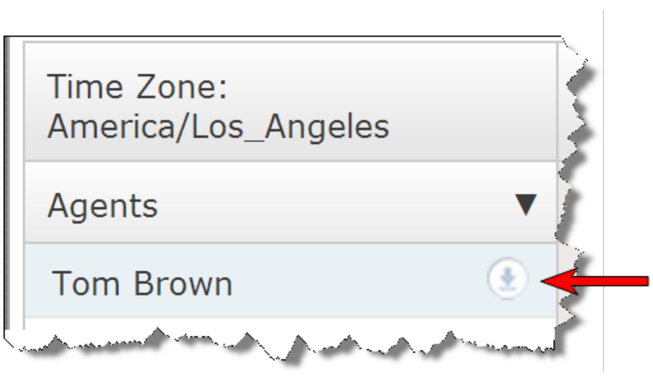
Use the triangle icon in the Agents column header to control how the agents are sorted in the schedule grid. You can sort agents in ascending order by the following:

- First name.
- Last name.

- Arrival time. Agents are sorted according to the first scheduled activity on the schedule, then by last name, and then by first name. Agents who are available but not scheduled are listed after scheduled agents, and agents who are unavailable and not scheduled are listed last.
- Rank. Agents are sorted based on their rank as assigned on the Agents page. Agents of equal rank are then sorted by first name. Agents with no rank are listed after those with rank.
- Company start date. Agents are sorted by their seniority in the company, with the least senior listed first.
- Department start date. Agents are sorted by their seniority in the department. Those with the least seniority are listed first.

The list of agents can be further refined by pinning an agent to the top of the list. When an agent is pinned, the agent is not subject to any sorting and always appears at the top of the list of agents in the schedule. You can pin multiple agents, and the one most recently pinned is at the top.

To pin an agent, hover your cursor over the agent's name, and then click the pin icon that appears at the right side of the cell (see below). To unpin the agent, click the icon again. The agent is immediately subject to the sorting method used in the list of agents.



NOTE Pinned agents are unpinned when you switch the service queue, service queue group, skill mapping, team, or custom grouping in the Agent Schedules toolbar.

Edit schedules

Agent schedules can be edited by inserting, copying, moving, or deleting activities on the Agent Schedules page. You can edit schedules only for the agents who are assigned to a team in your Main View. Agents who are not assigned to a team in your Main View are read-only and show a lock icon next to their names.

NOTE Individual agent schedule editing sessions can be a maximum of 8 hours long, and there is a maximum limit of 100 minutes idle time. When those limits are reached, you must log in again to restore your session.

NOTE There are no limits to how many editing sessions can be in progress simultaneously.

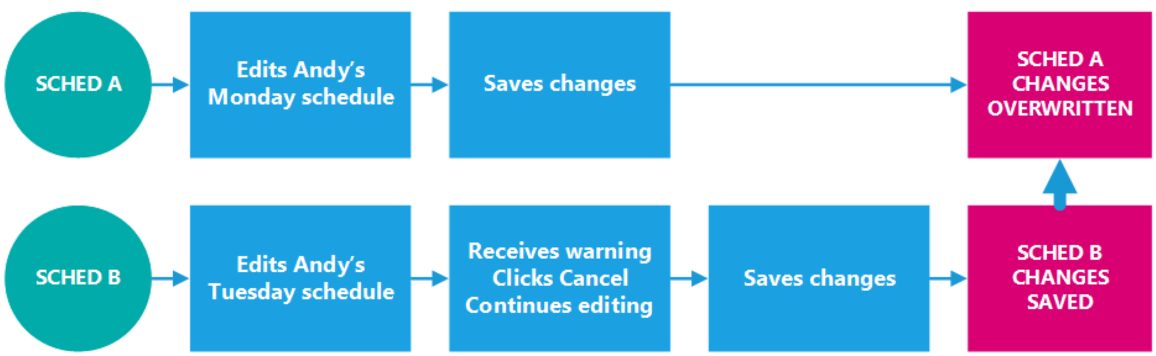
If agent schedules are changed and saved by another user or an automated workflow approves a request that affect the schedule week while you are viewing and editing the agent schedule, you will receive a warning message that the schedule has changed. You then have two options to choose from.

- You can refresh your view of the schedule, which results in you losing your unsaved changes.
- You can cancel the message, which results in you possibly overwriting another user's changes to the schedule when you save your changes. This occurs only if you were both working on the same agent's schedule.

Here are examples of what happens when two users are editing the same week's schedule.

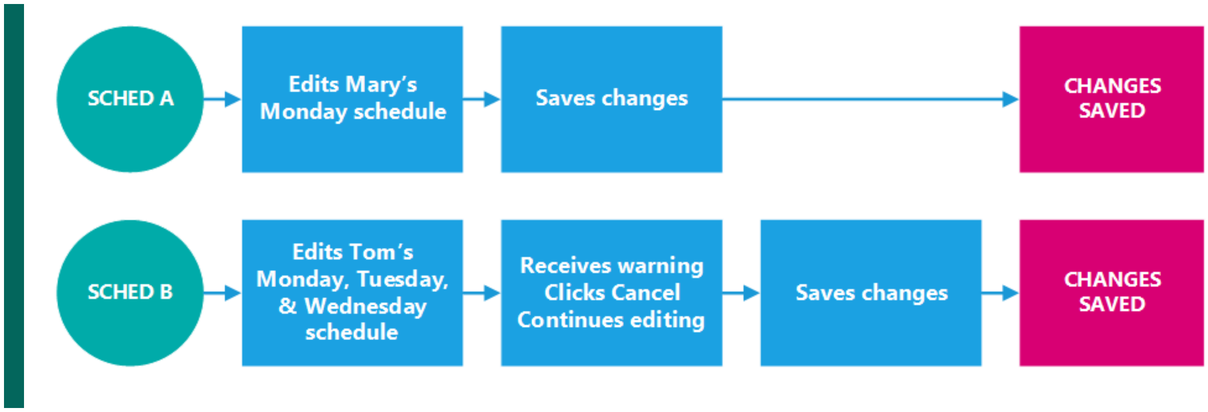
EXAMPLE

Scheduler A edits Andy's Monday schedule and saves those changes. Scheduler B is editing Andy's Tuesday schedule at the same time and receives the warning message. Scheduler B clicks Cancel, and completes and saves his edits. Scheduler B's version of Andy's schedule for the week is saved, and the changes that Scheduler A made are overwritten.



EXAMPLE

Scheduler A edits Mary's Monday schedule and saves those changes. Scheduler B is editing Tom's Monday, Tuesday, and Wednesday schedule at the same time and receives the warning message. Scheduler B clicks Cancel and completes and saves his edits to Tom's schedule. Scheduler A's edits to Mary's schedule are not affected by the changes made to Tom's schedule so the changes to both Mary's and Tom's schedules are saved.



Edits and the Assigned Exceptions list

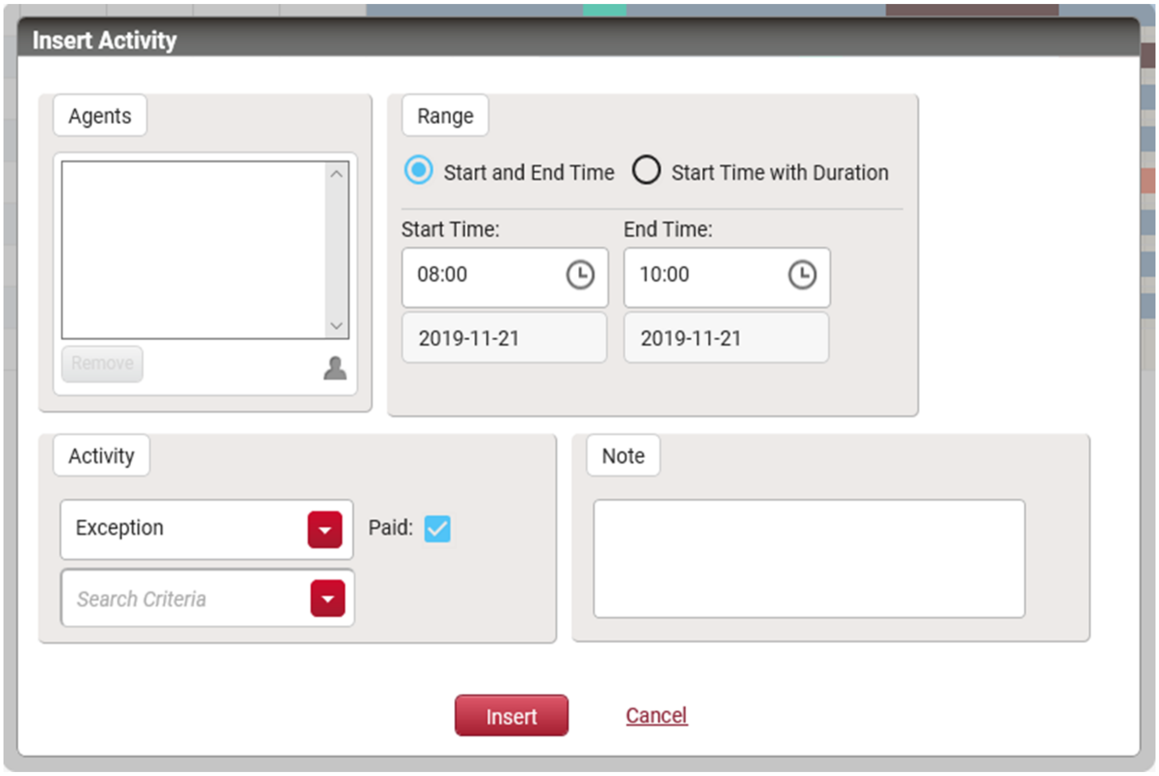
When you edit or delete an assigned exception activity on an agent's schedule, those changes are reflected in the Assigned Exceptions list displayed on that agent's Users page (see Create and edit users). This ensures that, when a new schedule is run, the edited assigned exceptions are included in the new schedule.

There are some exceptions to what will appear in the Assigned Exceptions list being edited. These include:

- Activities created before Version 10.4
- Mentoring activities
- Schedule trade activities
- Schedule history restores

Insert an activity

The Insert Activity dialog box allows you to add an activity to agent schedules.



Follow these steps to insert an activity in one or more agent's schedules.

NOTE If the agent schedule conflict warning feature is not enabled (see below), any partial or entire conflicting activities will be overwritten by the new inserted activity.

Insert an activity (agent schedule conflict warning not enabled)

1. On the Agent Schedules page, display the agent schedule for the desired service queue group, service queue, skill mapping, team, or custom grouping.
2. Choose **Actions > Insert Activity** from the Agent Schedules toolbar or right-click an agent's schedule and select **Insert** to display the Insert Activity dialog box with that agent already selected.
3. Complete the fields in the dialog box as described in the table below, and then click **Insert** to insert the new activity in the agents' schedules.
4. Click **Save** to save the schedule change.

The following table describes the fields in the Insert Activity dialog box.

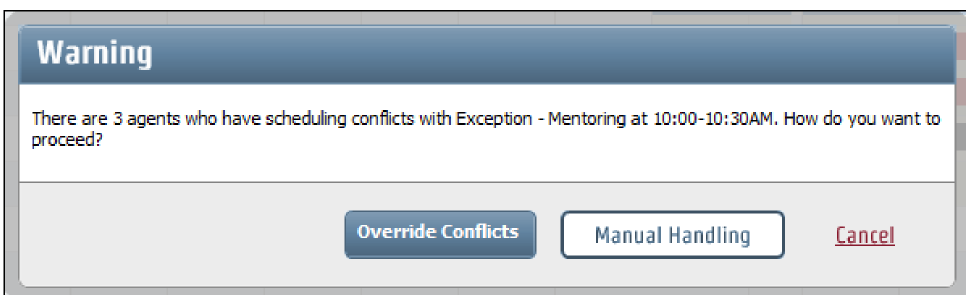
Field	Description
Agents	The agents involved in this activity. Click the Agent Selection field to choose one or more agents from the list. Only agents who are assigned to the team in your Main View appear in this list.
Remove button	Select one or more agents and click this button to remove them from the list.
Range	Choose a date range option.
Start Time	Enter the time and date when the activity begins. ■ Time field—Displays 00:00 by default. You can type the start time in one-minute increments in the time field, or you can select the start time from the drop-down list in 15-minute increments. ■ Date field—The date chosen for the activity. Default date is today.
Duration	The duration of the activity in hours and minutes. This option only appears when you select Start Time with Duration.
End Time	Enter the time and date when the activity ends. ■ Time field—Displays 00:00 by default. You can type the end time in one-minute increments in the time field, or you can select the end time from the drop-down list in 15-minute increments. ■ Date field—The date chosen for the activity. Default date is tomorrow.
Activity	Select the type of activity to be inserted in the schedule. **NOTE** If you select Exception, the exception is saved to the agent's Assigned Exceptions list on the agent's Users page and will be included if the schedule is rerun. Also, inserting exceptions from the Agent Schedules page will not create an all-day exception, but rather partial-day exceptions.
Search Criteria	Select the specific activity type. The Select Type field appears only for activities that can be further specified.

Field	Description
Activity Metadata	(Optional) Assigns a metadata value to, or removes a metadata value from, the activity. Assigning or removing a metadata value here overrides the default metadata value that you assigned when you configured the activity. For more information about configuring metadata values, see Manage activity metadata values.
Paid	Select the Paid check box if the scheduled activity counts toward the agent's number of hours worked during the week. The check box is selected or cleared by default depending on the activity you select.
Note	(Optional) Enter text to further describe the activity. This field appears only if the activity selected is an exception or project.

Agent schedule conflict warnings

If the agent schedule conflict warning feature on the WFM Global Settings page is enabled (see Configure system-wide WFM settings), you will receive a warning message if you edit a schedule so that the edit you make results in a conflict with an agent's break, lunch, project, or exception. Your edit can be the result of dragging and dropping an agent's activity, inserting an activity for one or more agents, or finding optimal times.

For example, if you insert an activity into multiple agents' schedules, and one of those agents has a schedule conflict with the new activity, you see this message:



You can override the conflict, handle it manually, or cancel your edit.

If you choose to override the conflict, the activity you are inserting will completely or partially overwrite the agent's previously-scheduled activity. For example, if an agent has a half-hour lunch scheduled for 9:30 AM to 10:00 AM, and the activity you are inserting runs from 9:15 AM to 9:45 AM, the agent's lunch break is shortened by 15 minutes to 9:45 AM to 10:00 AM.

If you choose to cancel the schedule edit, your Insert Activity action is canceled completely. You can start again using a different time for the activity.

If you choose to handle the conflict manually, you are given the opportunity to edit the agent's schedule by dragging the conflicting activity to another time so the conflict is resolved. In this same example, the agent's lunch break can be dragged to start at 10:00 AM instead of at 9:30 AM to avoid conflicting with the inserted activity.

After you have moved the conflicting activity, you click Retry to insert the activity in the conflicted agent's schedule. If there is no longer a conflict, the activity is inserted and you can click Save to finalize the schedule change.

Insert an activity opting to override conflicts

1. In the Agent Schedules page, choose **Actions > Insert Activity** from the Agent Schedules toolbar or right-click anywhere on the schedule page and select **Insert** to display a blank Insert Activity dialog box.
2. Complete the fields in the dialog box as desired and click **Insert** to insert the new activity in the agent's schedule.
3. If there are conflicts, click **Override** in the warning message to ignore the conflicts and insert the new activity over the conflicting activities.
4. Click **Save** to save the schedule change.

Insert an activity opting to handle conflicts manually

1. In the Agent Schedules page, choose **Actions > Insert Activity** from the Agent Schedules toolbar or right-click anywhere on the schedule page and select **Insert** to display a blank Insert Activity dialog box.
2. Complete the fields in the dialog box as desired and click **Insert** to insert the new activity in the agent's schedule.
3. If there are conflicts, click **Manual Handling**in the warning message. The agent schedules are loaded with the conflicted schedules pinned at the top of the page, marked with an exclamation point in a red circle.
4. Move activities as necessary to clear the conflicts. For more information about moving activities, see Edit schedules with drag and drop.

5. When all the conflicts are resolved, click **Retry** on the toolbar to insert the new activity in the conflicted agents' schedules.

   > **NOTE** If there are some agent schedules you prefer to override rather than handle manually, leave them conflicted when you click Retry. You will receive another warning message. Choose **Override** to override those particular schedules.

6. Click **Save** to save the schedule change.

Time off allotments and vacation plan considerations

Webex WFO does not allow users to submit time off requests for dates in the past. To correctly categorize an agent's absence as time off, you might decide to insert an exception into the agent's schedule after the absence.

However, Webex WFO does not always process an exception that a supervisor inserts into an agent's schedule after an absence the same way that it processes a time off request that an agent submits before the absence through messaging.

This difference affects the following:

- Time Off Allotments—Webex WFO does not subtract an exception inserted into a past schedule from the running total of remaining time off allotments. This is true even if the exception is associated with a vacation type.
- Vacation Time—If Webex WFO is integrated with an HRMS, it does not subtract an exception inserted into a past schedule from the running total of remaining vacation time. This running total is only updated once a day by importing vacation data from the HRMS.

The following table summarizes how time off requests before an absence and exception insertions after an absence are subtracted from both running totals in HRMS-integrated and non-HRMS-integrated systems.

Running Total	Time Off Request Before Absence	Exception Insertion After Absence
Vacation Time	HRMS—Subtracted Non-HRMS—Subtracted	HRMS—Not Subtracted Non-HRMS—Subtracted
Time Off Allotments	HRMS—Subtracted Non-HRMS—Subtracted	HRMS—Not Subtracted Non-HRMS—Not Subtracted

Delete an activity

You delete an activity from an agent's schedule by inserting another activity with the same start and end times over it.

> **EXAMPLE** An agent has a team meeting assigned exception on his schedule that runs from 9:00–10:00 AM on Tuesday. However, after the schedule is run, the team meeting is canceled. In order to remove the team meeting from the agent's schedule, the scheduler inserts In Service time that runs from 9:00–10:00 AM on Tuesday.

If the activity is an assigned exception, it can also be removed by deleting it from the Assigned Exceptions table on the agent's Users page (see Manage users). However, this leaves a gap where nothing is scheduled for the interval where the exception had been. In order for the agent to remain scheduled continuously without a gap, you must do one of the following:

- Rerun the schedule.
- Open the Agent Schedules page and fill in the empty portion with another activity or drag the In Service activity left or right to fill in the gap.

> **BEST PRACTICE** Always delete activities from the Agent Schedules page and not from the Assigned Exceptions table. The only reason you might delete an exception from the Assigned Exceptions table is that the exception was created in version 10.3 or earlier. These exceptions are not automatically updated or deleted when changed or deleted in version 10.4.

Edit schedules with drag and drop

You can change the start and end times of an agent's schedule and move scheduled activities within a day's schedule using drag-and-drop techniques.

With the schedules displayed in Hour view, double-click the agent's schedule bar to initiate the drag-and-drop action. When you do so, the schedule bar splits in two. General time, such as In Service time, becomes the bottom bar, and specific time, such as exceptions and breaks, becomes the top bar.

- Use your cursor to drag the ends of the bottom bar left and right to change the shift start and end times.
- On the top bar, use your cursor to drag a scheduled activity to a new time.

By default, schedule changes snap to five-minute increments. To make changes in one-minute increments, hold down the Shift key while you drag (release the mouse button before the Shift key or the schedule change snaps back to five-minute increments).

> **NOTE** A dynamic scheduling event exception that is outside of the agent's In Service time cannot be moved.

You must click **Save** to save the changes you have made to the schedule. If you want to cancel changes you have made but not yet saved, either select **Discard Changes** from the Actions drop-down list or click the browser Refresh button to reload the page with the original schedule.

Add and edit activity notes

Notes can be attached to project and exception activities in an agent's schedule. These notes contain more information about the activity. You can add a note, or edit an existing note, to a scheduled activity from the Agent Schedules page.

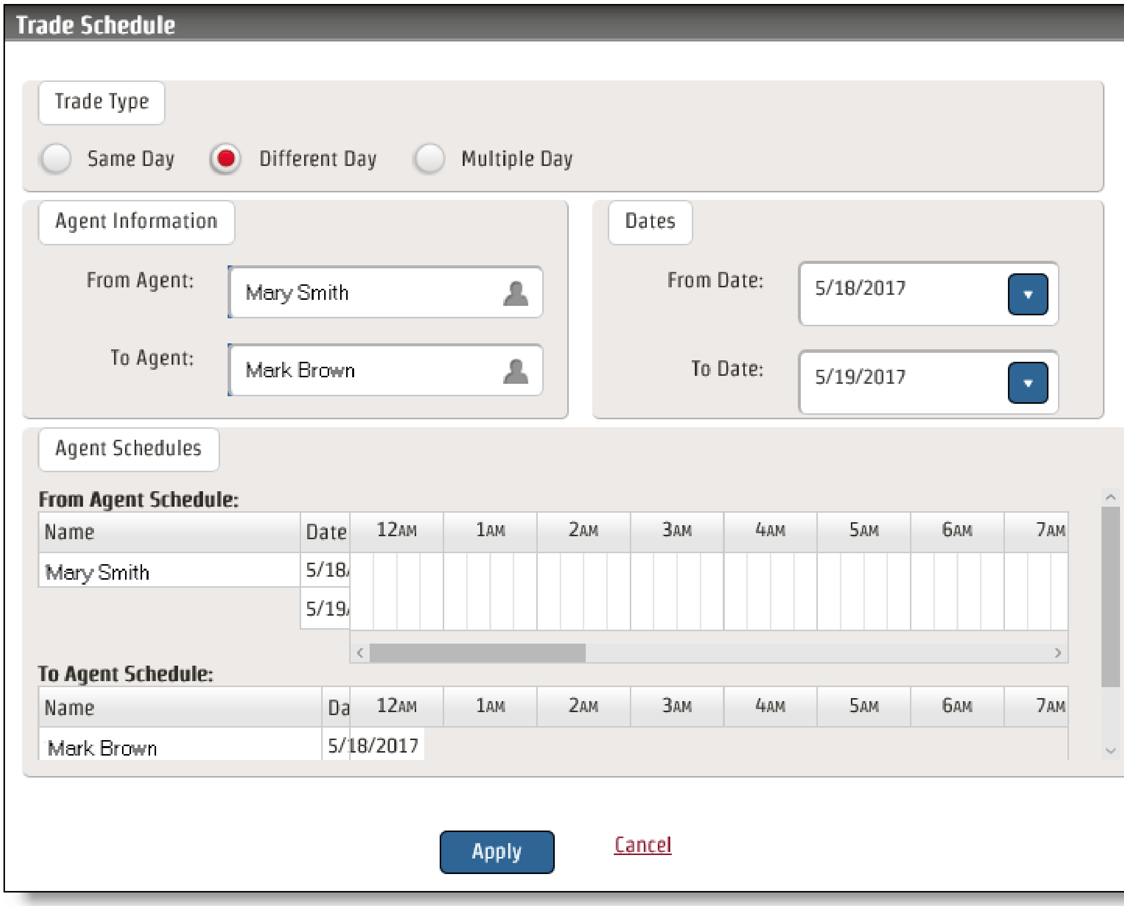
> **NOTE** If you are subject to a schedule editing rule that restricts your ability to make changes to activity notes on exceptions and projects, you can view existing activity notes by hovering over the activity but cannot edit them. If you insert an exception or a project into the schedule, you cannot add an activity note to it.

Add or edit an activity note

1. While viewing the Agent Schedules page in hour view, right-click the desired activity on an agent's schedule.
2. On the resulting popup menu, select **Edit Note**.
3. In the Edit Note dialog box, add a note or edit the existing note.
4. Click **Update**.
5. Click **Save** to save the updated schedule.

Trade two agents' schedules

The Trade Schedule dialog box allows you to trade schedules between two agents.



You can trade schedules for the same day, different days, or multiple days. The scheduled time stays where it is, because that is based on coverage needs. What changes is which agent works the scheduled hours.

When trading agent schedules that cross midnight, the agent is scheduled to start work the day the schedule begins.

The following table describes the fields in the Trade Schedule dialog box.

Field	Description
Trade Type	The type of trade for this action. Your options are the following: ■ Same Day—Trade schedules on the same day. When you choose this option, the Schedule Date field appears. This option is selected by default. For example, you can use this option to trade Agent A’s 07:00–15:00 schedule with Agent B’s 09:00–17:00

Field	Description
	schedule on the same day. ■ Different Days—Trade schedules on two days. When you choose this option, the From Date and To Date fields appear. This option works exactly as the Same Day option does, only on two separate days. ■ Multiple Days—Trade multiple day schedules. When you choose this option, the Start Date and End Date fields appear. For example, if you choose 1/23/2019 in the Start Date field and 1/27/2019 in the End Date field, then you will trade Agent A's Monday through Friday schedules with Agent B's Monday through Friday schedules.
Agent Information	The agents involved in the trade: ■ From Agent—The first agent whose schedule you want to trade ■ To Agent—The second agent whose schedule you want to trade Only agents who are assigned to the team in your Main View appear in the From Agent or To Agent list.
Dates	The dates involved in the trade. The possible trade dates are the following: ■ Schedule Date—The date you want to trade schedules. Type the date in manually or click the field and choose the date from the Calendar pop-up. ■ From Date—The first scheduled date involved in the trade. ■ To Date—The second scheduled date involved in the trade. ■ Start Date—The first day of the work shift that you want to trade. ■ End Date—The last day of the work shift that you want to trade.
Agent Schedules	The schedule for both agents, displayed side by side. These allow you to compare the agents' schedules before you click Apply. ■ From Agent Schedule—The first agent's current schedule

Field	Description
	■ To Agent Schedule—The second agent's current schedule You are provided with information about the To Agent's availability, teams, time zone, exceptions, service queue, overlapping shifts, and skill mapping to help you decide if the trade is feasible.

Trade schedules between two agents

1. Click **Actions > Trade Schedule** to display the Trade Schedule dialog box.
2. Complete the fields.
3. Click **Apply**. The traded schedules are applied immediately to the production schedule.

> **NOTE** To trade schedules, both agents must be included in a schedule that was run for the trade's time frame.

Copy schedule activities

The Copy Schedule Activities page allows you to copy schedule activities in several ways. You can:

- Copy activities from one agent's schedule on a particular day to other agents' schedules on selected days
- Copy multiple agents' schedules from specific days in a specific week to other weeks

The copy function replaces target schedule activities within the selected time slots with the source agent's activities. Any assigned exception activities that are copied automatically appear in the target agents' Assigned Exceptions table on the agents' Users page, and will appear in the target agents' schedules if the schedule is rerun.

> **NOTE** You should not select activities with overlapping time spans when copying one date to multiple days. For example, if you try to copy a 7 PM–5:30 AM shift and there is also a 12 AM–7 PM Not Available activity you can select for copying, then the 12 AM–5:30 AM portion of the shift will appear only on the last day selected for the copy. The reason for this is because the Not Available activity overwrites the 12 AM–5:30 AM portion of the previous day's shift as Webex WFO lays down the activities for the current day.

> **NOTE**
> If you copy activities from source agents who support different service queues than the target agents, be aware that those activities might be deleted from the source agents' schedules when a future schedule is run for their service queues. In order to avoid this issue, you can do one of the

> following:
>
> - Copy the activity from a source agent with the same service queues on their shift as the target agent.
> - Assign the activity to the target agent and run the schedule.

Copy Schedule Activities uses the source agent's assigned scheduling time zone when copying activities. The copied activities automatically appear in the target agent's schedule in the target agent's display time zone.

> **NOTE** If the copied activities were created in a version older than Version 10.3, then the Assigned Exceptions table is not updated, and if the schedule is rerun, the copied exceptions do not appear. However, the copied exceptions are reflected in Data Explorer for the target agents.

Prerequisites

- Administer WFM, Administer Schedules, or Edit Schedules permission

Procedures

Copy one agent's scheduled activities to other agents' schedules (copy activities)

Activities copied from the source schedule overwrite activities that are entirely encompassed within the same intervals in the target schedules. Target schedules that contain overlapping (but not entirely encompassed) activities are trimmed so that the overlapping portion is removed and the non-overlapping portion remains. Target schedule activities that are not overlapping or encompassed by any source activities will remain as they currently are in the target schedules. Copied activities are copied in the copying user's display time zone.

1. Select the **Copy an agent's scheduled activities from one date to other agents/dates** option.
2. In the **Source Schedule** section, select the agent whose schedule you want to copy, and the date of that schedule. The **Schedule** table then fills with the agent's schedule on that date.
3. Select the check boxes next to the activities you want to copy.

> **NOTE** If the agent has Not Available or Available activities that cross midnight in your display time zone, those activities are cut off at midnight when displayed on the page. This prevents activities that span multiple dates from being copied. Activities that exceed two days from midnight are outside the allowed time span and are not copied.

4. In the **Target Schedules** section, select the agents and the dates you want to copy the selected activities to. If no schedule exists for a target week, placeholders will be added as appropriate.
5. Click **Copy**.

Copy multiple agents' scheduled activities to other weeks (copy shifts)

The source shift for a day of the week completely overwrites the target shift on that day of the week. Target days that were not scheduled in the source shift remain as they were. If a targeted date has no activities scheduled, and if the source activities do not contain a shift to place on this day, then the day is populated with Not Available activities. Copied activities are copied in the copied agents' display time zone.

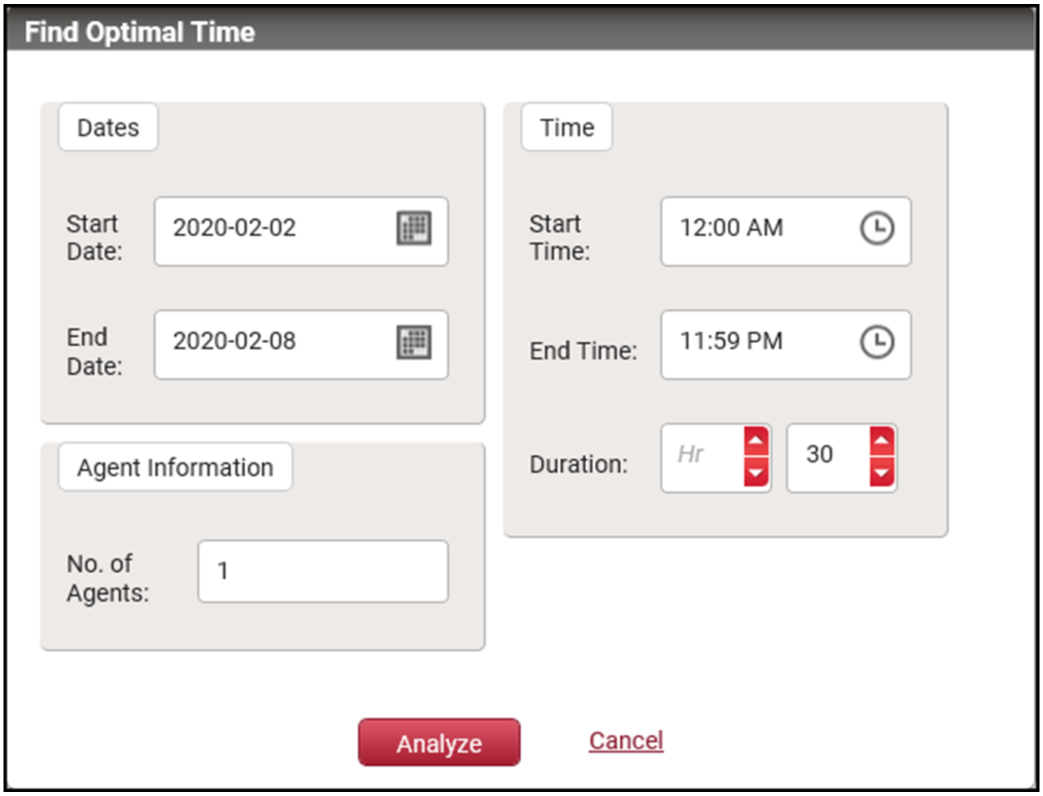
1. Select the **Copy one or more agents' daily schedules from one week to other weeks** option.
2. In the **Source Schedules** section, select the agents whose schedules you want to copy, and the schedule week. No matter which day in the week you enter in the **Week** field, the configured first day of the week is displayed.
3. In the **Days** table, select the specific days of the week whose schedules you want to copy. By default, every day of the week is selected.
4. In the Target Schedules section, select the weeks you want to copy the schedules to. When you click any day in a week, the date of the first day of that week is entered in the Assigned pane. To remove a week, select it and click **Remove**.

   > **NOTE** Attributes of the shift date you are copying are carried through to the target date, so a cross-midnight shift for Wednesday to Thursday will be Wednesday to Thursday in the target week.

5. Click **Copy**.

Find the best time for an activity

The Find Optimal Time dialog box helps you find the best time in the agent schedule to insert an activity so that it has as little impact on the service level as possible. In order to insert an activity, you must select a service queue on the Agent Schedules page that has a forecast and a schedule.



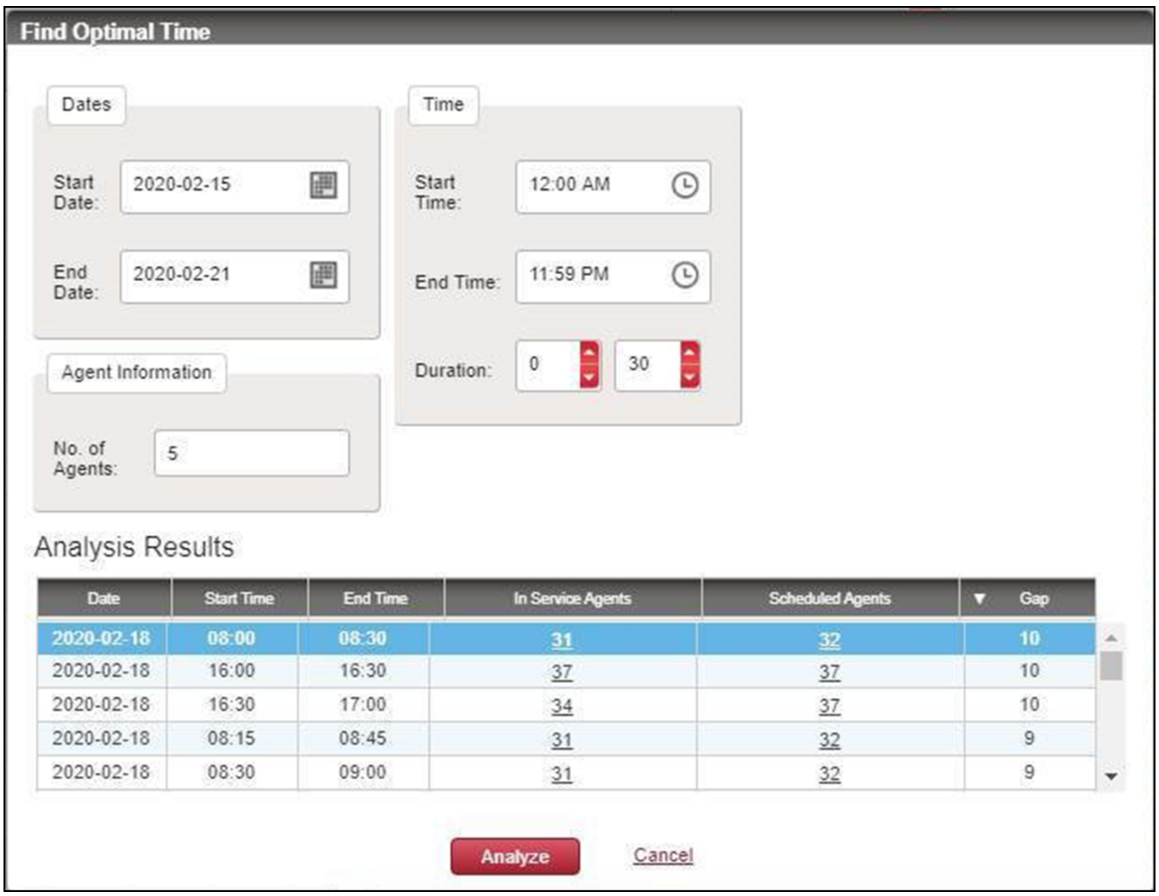
The following table describes the fields in the Find Optimal Time dialog box.

Field	Description
Start Date	The start date of the date range in which the activity should take place. By default, this is the first day of the week whose schedule you are viewing. You can choose a date within this week. If you want to choose a date in a future week, you must display that week on the Agent Schedules page.
End Date	The end date of the date range in which the activity should take place. By default, this is the end of the week whose schedule you are viewing. You can choose any date within the week. If you want to choose a date in a future week, you must display that week on the Agent Schedules page.
Start Time	The earliest time at which the activity can start.
End Time	The latest time at which the activity can start.

Field	Description
Duration	The amount of time the activity should last.
No. of Agents	The number of agents you want to perform the activity.

To find an optimal time:

1. Complete the fields in the Find Optimal Time dialog box.
2. Click Analyze. WFM finds the best times for the activity and lists them in the Analysis Results flyout.

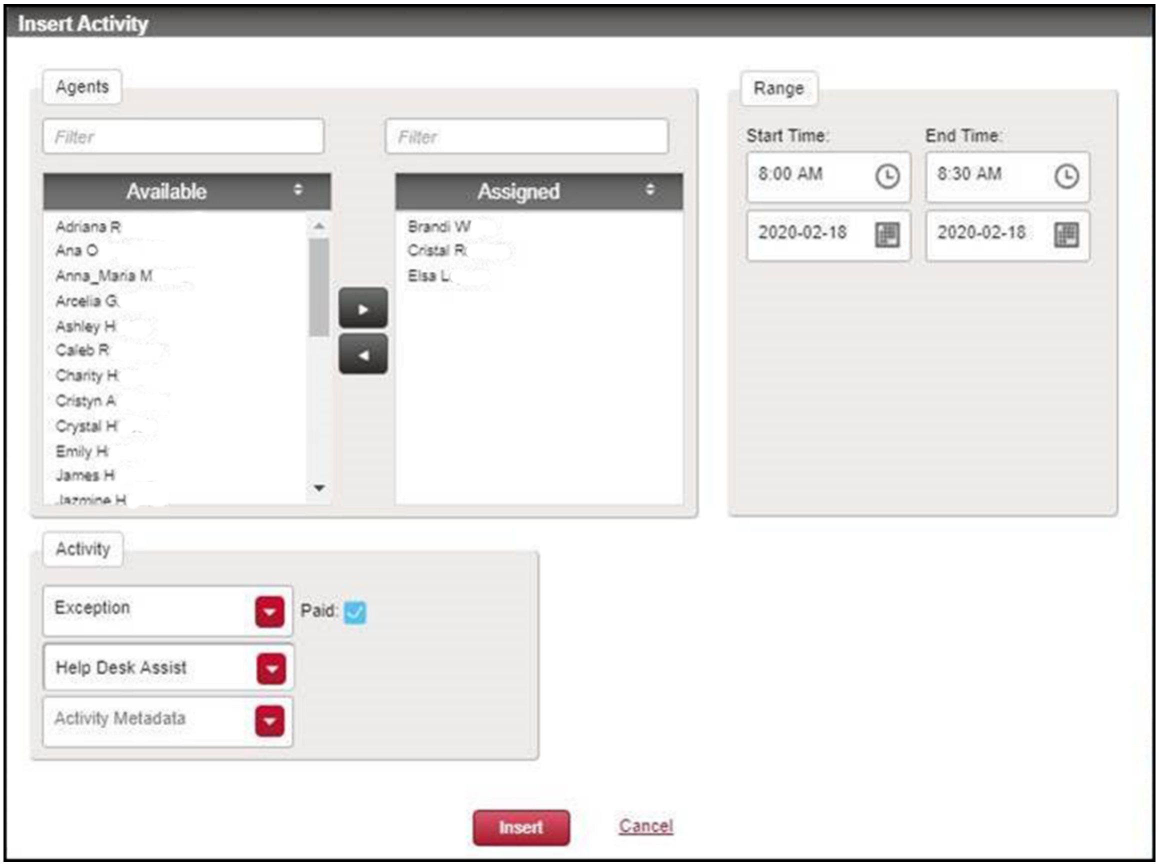


The Analysis Results table lists candidate time slots for the activity. The fields in the table are the following.

Field	Description
Date	The date of the time slot.
Start Time	The start time of the time slot.
End Time	The end time of the time slot.
In Service Agents	The number of agents who are in service for the entire duration of the time slot.
Scheduled Agents	The number of agents who are scheduled during the time slot. These agents can be scheduled for any activity, including in service, break, exception, project, and so on.
Gap	The positive or negative gap between the number of forecasted agents and actual scheduled agents. A positive number indicates overstaffing, and a negative number indicates understaffing. Note that this does not take into account the number of agents forecasted with shrinkage applied.

Use the gap value to help you decide which time slot to use for the activity. By default, the most optimal time (the greatest difference between in-service agents and forecasted agents) is shown on the first line of the Analysis Results list. If that number is negative, try increasing the start date/end date range, or lower the number of agents needed.

Once you decide, click the hyperlinked number in the In Service Agents or Scheduled Agents fields in your selected time slot. This opens the Insert an activity dialog box with the Range fields autofilled based on your time slot selection.



The Agents pane contains the names of the agents who were listed as In Service Agents or Scheduled Agents in the Analysis Results table.

To add the activity to selected agents' schedules:

1. Select the agents you want to perform the activity.
2. Complete the Exception Assignment and Activity sections.
3. Click **Insert**
4. Click **Save**.

Undo a schedule change

The Schedule History and Restore page enables you to review a history of an agent's schedule revisions and restore a previous revision to the current schedule.

NOTE For an overview of this feature, see About Schedule History and Restore,

You can access the Schedule History and Restore page by two methods:

- Right-click an agent's schedule on the Agent Schedules page and choose Schedule History from the context menu. This displays the page with search results for that agent and the date of the schedule you were viewing.
- Navigate to the page in Application Management (Application Management > Schedule Management > Schedule History and Restore). This displays the page with search results for today's schedule date.

Searching schedule history

Use the search criteria to find the agent schedule you want to revert.

Search the schedule history for a specific agent schedule

1. Enter a specific schedule date or a range of schedule dates. This is the minimum required search criteria.
2. Add more search criteria if desired, as follows. All these criteria are optional.

Criteria	Description
Agent Name	The agents in the drop-down list are active agents on teams in your Main View. You can opt to include inactive agents in the list by selecting the "Show inactive users" check box.
Display Time Zone	The time zone used when displaying the search results.
Revision Date	The date the schedule revision was made.
Changed By	The name of the user who changed the schedule.
Revision Type	The type of change made to the schedule.
Event ID	The unique ID that identifies every agent schedule that was involved in a change. **NOTE** If there are multiple agent schedules that were changed in a single saved change, each of those schedules has the same Event ID, but individual Revision IDs.

3. Click **Search**. The search results are displayed in the Results table.
4. Click **Reset** to clear the search criteria fields and enter new search criteria.

Results table

Depending on your search criteria, the Results table can contain one or multiple hits for a specific agent, or, if you searched using the Event ID, for multiple agents. If there are multiple hits for an individual agent, the Revision ID identifies the order in which changes were made to that agent's schedule, with the highest revision ID number being the most recent change.

> **NOTE** Each schedule revision hit is for a shift. If an agent has split shifts for a date during a schedule run, each of the shifts has its own schedule revision hit. If an agent's schedule has not changed during a schedule run, there is no revision hit for that agent.

The Results table can be sorted by any of the table columns in ascending or descending order by clicking the column header.

Restoring a schedule

Restore an agent's schedule to a previous version

1. Access the Schedule History and Restore page by right-clicking the agent's schedule on the Agent Schedules page or by navigating to it in Application Management.
2. If you accessed the page through Application Management, use the search criteria fields to locate the agent schedule you want to restore.
3. In the search results table, click the Revision ID hyperlink on the appropriate row.
4. Click **Restore** next to the revision you want to restore.

Example: Restoring a schedule

In the Results table, click the hyperlinked Revision ID to display the agent's schedule history. The schedule history shows every revision made to that agent's schedule within the data retention period.

> **NOTE** For each schedule revision shown, there is one hour of non-scheduled time (brown with dark cross-hatching) shown at each end of the schedule bar. These extra time spans are displayed only to delineate the schedule, and are not restored when you restore a revision.

For example, the schedule history for this agent shows the current schedule and three changes:

Callout	Description
4	This row shows the oldest revision. This original version of the agent's schedule has an assigned exception (the pink activity) scheduled to take place at 9:15 AM.

Callout	Description
3	This row shows the second more recent revision. In this revision, the assigned exception has been moved from 9:15 AM to 2:30 PM and the lunch break (the blue activity) moved from 11:00 AM to 12:00 PM.
2	This row shows the most recent revision. It is always identical to the current revision in row 1. In this revision, the assigned exception has been moved again to 1:00 PM and the lunch break moved back to 11:00 AM.
1	This row shows the agent's current schedule. It is always displayed on the schedule history page so you can compare it to previous revisions. When there are many revisions, those revision lines can be scrolled up and down while the current schedule stays in place.

If it necessary to restore the agent's schedule to the version where the assigned exception is at 2:30 PM and lunch is at 12:00 PM, you can display the schedule history and click the Restore button on row 3. The agent's current schedule then reverts to that version. The agent's schedule history now displays a new revision showing this change:

Example: Behavior when restoring over an existing schedule

If a time span where a revision is restored already has one or more shifts for the agent (including Available time) up to 24 hours long, these shifts are replaced with the Not Available activity before the restored revision is applied. For example:

Before Restore	Restored Revision	After Restore
6 AM–12 PM Shift 3 PM–6 PM Shift	9 AM–5:30 PM Shift	6 AM–9 AM Not Available 9 AM–5:30 PM Restored Shift 5:30 PM–6 PM Not Available
8 AM–12 PM Shift 12 PM–4 PM Available	12 PM–4 PM Shift	8 AM–12 PM Not Available 12 PM–4 PM Restored Shift

About Schedule History and Restore

> **NOTE** For procedures on how to view an agent's schedule history and restore previous schedules, see Undo a schedule change.

You can restore an agent's schedule to a previous version using the Schedule History and Restore feature. It is available for use with the past, current, and future schedules of agents who are within your Main View.

Schedule history is tracked as soon as retention is enabled and accumulates from that point in time up to the length of the retention period. By default, the retention period is 7 days, but this value can be changed by your administrator. If for some reason an agent's schedule needs to revert to a previous version in order to undo changes that were made, the appropriate schedule revision can be restored from the schedule history as long as it is within the retention period.

You can view and restore schedule history from two locations:

- Agent Schedules page (right-click an agent's schedule and choose Schedule History from the context menu)
- Schedule History and Restore page in Application Management (see Undo a schedule change

Important to note

Keep in mind that a restore does not affect:

- Min/max limits by agent (they can be violated)
- Assigned exceptions list on the Users page
- Time off allotment usage
- Intraday dynamic scheduling requests
- Dynamic availability
- Pending schedule edits
- Adherence and conformance calculations
- HRMS
- Vacation plans
- Messaging requests

NOTE If a restore violates maximum staffing conditions, it will fail.

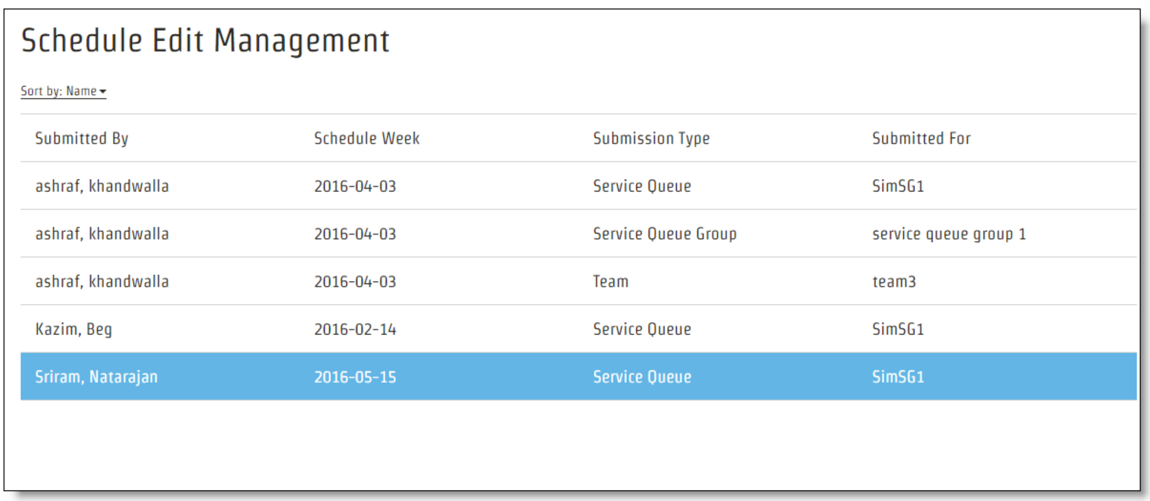
Restoring a schedule involved with a trade restores only the selected agent's schedule. The other agent's schedule is not changed and the traded hours remain.

> **EXAMPLE** Agent A trades a Tuesday shift with Agent B's Wednesday shift. However, Agent A's schedule is restored to what it was before the trade with Agent B so that Agent A is once again scheduled to work on Tuesday. Agent B's schedule is not changed by the restore so that he is still scheduled to work on Tuesday and not on Wednesday.

When there are multiple agent schedules involved in a change, they are identified as a group with an Event ID. This makes it easier to find every schedule that was changed if it becomes necessary to restore them to an earlier version.

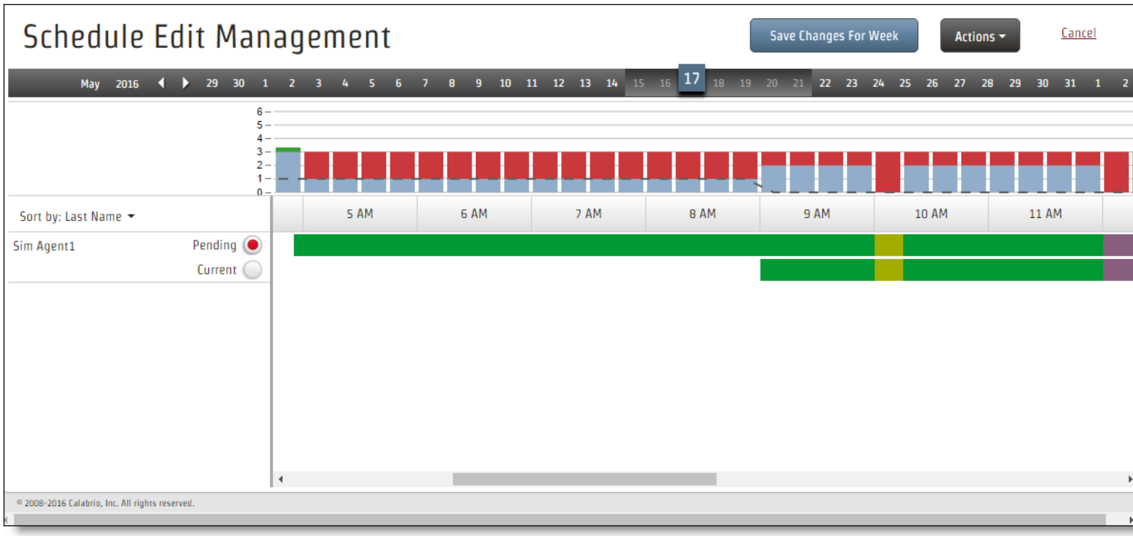
Approve or deny schedule changes made by supervisors

The Schedule Edit Management page is available to users with the Administer WFM permission enabled for their role. It lists schedule edits made by supervisors whose editing capabilities are controlled by a schedule editing rule (see Limit a supervisor's ability to edit schedules) and who are included in a schedule edit event workflow. The edits made by these supervisors are on hold until they are approved or denied by an administrator or scheduler.



When you click one of the entries, a page showing the changes made by the supervisor is displayed. This page shows each agent's current schedule and the pending schedule with the supervisor's proposed changes.

You can view how coverage and staffing are affected by the change by toggling between the Pending and Current options for each agent. Hover your cursor over any of the bars at the top of the schedule to display the number of agents forecasted and scheduled for the interval.



Approve or deny schedule changes

1. To approve a schedule change, select the **Pending** option next to the agent's name. To deny a schedule change, select the **Current** option.

   NOTE You can select all pending or all current schedules at once from the Actions button on the toolbar.

2. Click **Save Changes for Week**.

Manage today's schedule

Managing today's schedule entails the following:

- Offer selected agents the opportunity to take voluntary time off, overtime, or both when the generated schedule overstaffs or understaffs the service queue.
- Check staffing coverage, including agent adherence and conformance.
- Maximize coverage without running a new schedule.

Offer voluntary overtime or time off

Intraday dynamic scheduling allows you to fine-tune staffing to meet current conditions by offering selected agents the opportunity to take voluntary time off, overtime, or both when the generated schedule overstaffs or understaffs the service queue.

The schedule changes can be for the current day or a future day. These agent-initiated schedule changes can be configured to require approval or go into effect immediately without any approval needed.

From the Intraday Dynamic Scheduling page, you can do the following:

- Browse a service queue's schedule coverage
- Create a new intraday dynamic scheduling event
- View and edit a list of existing intraday dynamic scheduling events

NOTE It is strongly recommended that you use work condition profiles to optimize an agent's intraday lunches and breaks.

Browsing

The Intraday Dynamic Scheduling page opens in the Event view, which lists all existing events. Click Browse and then select a service queue from the drop-down list to display that service queue's schedule and coverage for the current date. You can choose a different date if desired.

Once you have displayed the schedule and coverage for a service queue, you can:

- Select another service queue from the Service Queue drop-down list.
- Select a different date on the calendar bar. You can select today's date or any date in the future.
- Select a different forecast from the Forecast drop-down list. You can also select Reforecast to reforecast the schedule. Changing the forecast used can help you determine the staffing levels you need on the selected day.

  NOTE Reforecast can be used only for the current date.

Viewing existing events

Click the Event button (upper right corner of the Intraday Dynamic Scheduling page) to view a list of existing events for the current and future dates. You can click the Settings button next to any of the listed events to view the Intraday Dynamic Scheduling Events page for that event. If the event is ongoing, a countdown clock is displayed at the top of the page that shows how much more time is left for agents to sign up for the event.

The fields in the list are described in the following table.

Field	Description
Settings	Click this button to view, edit, or delete the intraday dynamic scheduling

Field	Description
	event.
Type	The type of change to the schedule: VTO (voluntary time off), OT (overtime), or both.
Event Name	The name of the intraday dynamic scheduling event. Click the event name to view the Intraday Dynamic Scheduling page for the event.
Service Queue	The service queue that the listed event applies to.
Schedule Date	The date of the amended schedule.
Status	These three numbers are, from left to right: ▪ The number of agents whose schedule changes have been approved (Approved) ▪ The number of agents who have submitted a schedule change but that haven't been approved yet (Pending) ▪ The total number of agents invited to participate in the event (Total Agents Assigned)

Creating a new intraday dynamic scheduling event

Click the **Create Event** button (upper right corner of the Intraday Dynamic Scheduling page) to create a new event.

The sections on the Intraday Dynamic Scheduling Events page are described below.

Intraday Dynamic Scheduling Event Name

The unique names of the event.

Agent Response Deadline

This section is used to configure when agents must respond to the event with their revised schedules, deadline, and if their response has to be approved manually.

Field	Description
Deadline Date	Enter the date when the responses from agents invited to change their schedules are due.

Field	Description
Deadline Time	Enter the time on the date when the responses from agents invited to change their schedules are due.
Approve agent schedule changes automatically	Select this check box if you want agents' schedule changes to go into effect automatically. If cleared, all agent schedule changes must be approved manually.
Allow min/max hours per day/week violations	Select this check box if you want agent schedule changes to violate the min/max hours restrictions assigned to the agent.

Service Queue

Select the service queue whose schedule you want to change.

Schedule Change Period

NOTE These fields are the only fields that can be updated after an event has been created.

Field	Description
Schedule Date	Select the date of the schedule change period.
Change Start Time	Enter the start time of the schedule change period in 24-hour format. **NOTE** To select midnight, enter **0:00** manually.
Change End Time	Enter the end time of the schedule change period in 24-hour format. **NOTE** To select midnight, enter **24:00** manually.

Forecast

Select the forecast used to indicate staffing needs for the date of the schedule change. You can choose the production forecast, a named forecast, or an intraday reforecast.

Schedule Change Option

Choose the kind of schedule change you want to offer selected agents:

- Voluntary time off—agents give up time during the overstaffed intervals
- Overtime—Agents pick up additional time during the understaffed intervals

- Both—Agents give up time during overstaffed intervals and pick up additional time during understaffed intervals

Voluntary Time Off Parameters

These fields appear when you choose the Voluntary time off or Both schedule change option.

Field	Description
Minimum Time Off	Enter the minimum amount of time off an agent can take.
Maximum Time Off	Enter the maximum amount of time off an agent can take.
Allow multiple time off selections	Select this check box to allow agents to take time off in multiple segments within the schedule change period—that is, the time off does not have to be contiguous.
Staffing Goal Threshold	Enter the amount of overstaffing (positive number) or understaffing (negative number) allowed during each interval in the schedule change period.
Exception To Be Used	Select the exception to be used for the voluntary time off in the agent’s schedule.

Overtime Parameters

These fields appear when you choose the Overtime time off or Both schedule change option.

Field	Description
Minimum Overtime	Enter the minimum amount of overtime an agent can take. This field appears when the Overtime or Both schedule change option is selected.
Maximum Overtime	Enter the maximum amount of overtime an agent can take. This field appears when the Overtime or Both schedule change option is selected.
Allow multiple overtime selections	Select this check box to allow agents to take overtime in multiple segments within the schedule change period—that is, the overtime does not have to be contiguous. This check box appears only when the Overtime or Both schedule change option is selected.
Force a minimum gap between the shift and the start	Select this check box if you want to require there to be a minimum amount of time between the agent’s regular shift and the start of overtime.

Field	Description
of overtime	
Minimum Gap Duration	Enter the minimum amount of time that can occur between the agent's regular shift and the start of overtime.
Staffing Goal Threshold	Enter the amount of overstaffing (positive number) or understaffing (negative number) allowed during each interval in the schedule change period.

Agents

Select the agents you want to invite to participate in the intraday dynamic scheduling event. The agents listed in the Available pane are those who are supporting the service you selected.

> **NOTE** For voluntary overtime events only (not including events for both voluntary overtime and voluntary time off), you have the option to select agents outside of the selected service queue to participate in the event. This gives you more flexibility to meet your coverage requirements. To make those agents visible in the Available pane, select the "I want to assign agents in other service queues to the event" check box. Note that if you select the check box, assign outside agents to the event, and then clear the check box, those outside agents are removed from both the Available and Assigned panes.

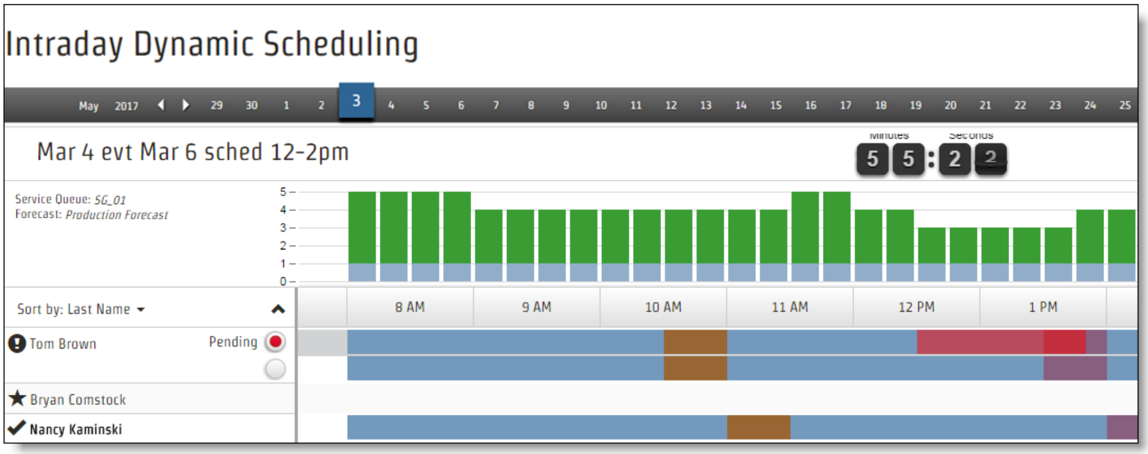
An invited agent might not be able to take part in the event because the agent's schedule does not work with the event's requirements. In that case, the agent sees a message that selecting time off or overtime is no longer available for the event.

> **NOTE** Agents can sign up for voluntary overtime on days they do not have a schedule.

Approving schedule changes

If an Intraday Dynamic Scheduling event is configured to automatically approve agent schedule changes (the "Approve agent schedule changes automatically" check box is selected), then the schedule change appears immediately in the agent's schedule.

Agent schedule changes that need approval appear on the Intraday Dynamic Scheduling page for that event.



The names of the agents who have been invited to take part in an intraday dynamic scheduling event are marked with one of three icons (shown in the above graphic).

- A star—Denotes an agent who has been invited to participate in the event but who has not yet replied
- A check mark—Denotes an agent who has made schedule changes and those changes have been approved, either automatically or manually
- An exclamation point—Denotes an agent whose changes are waiting for manual approval

If an agent’s changes are waiting for your approval, there are two schedule bars next to the agent’s name. The upper bar is the proposed schedule (pending) and the lower bar is the agent’s existing schedule. When you toggle between the agent’s current schedule and the agent’s pending changed schedule, the coverage updates to help you decide if you want to accept the pending change or not.

Accept an agent’s proposed schedule

1. Select the **Pending** option.
2. On the toolbar, click **Save** .

In the following situation, Webex WFO will replace an unpaid activity in the schedule of the agent who submitted the changes with a Not Available activity.

Intraday Dynamic Event Configuration	Agent Actions
Includes voluntary time off that uses a paid exception.	■ Agent adds voluntary time off, and that voluntary time off overlaps an unpaid activity in the agent’s existing schedule.

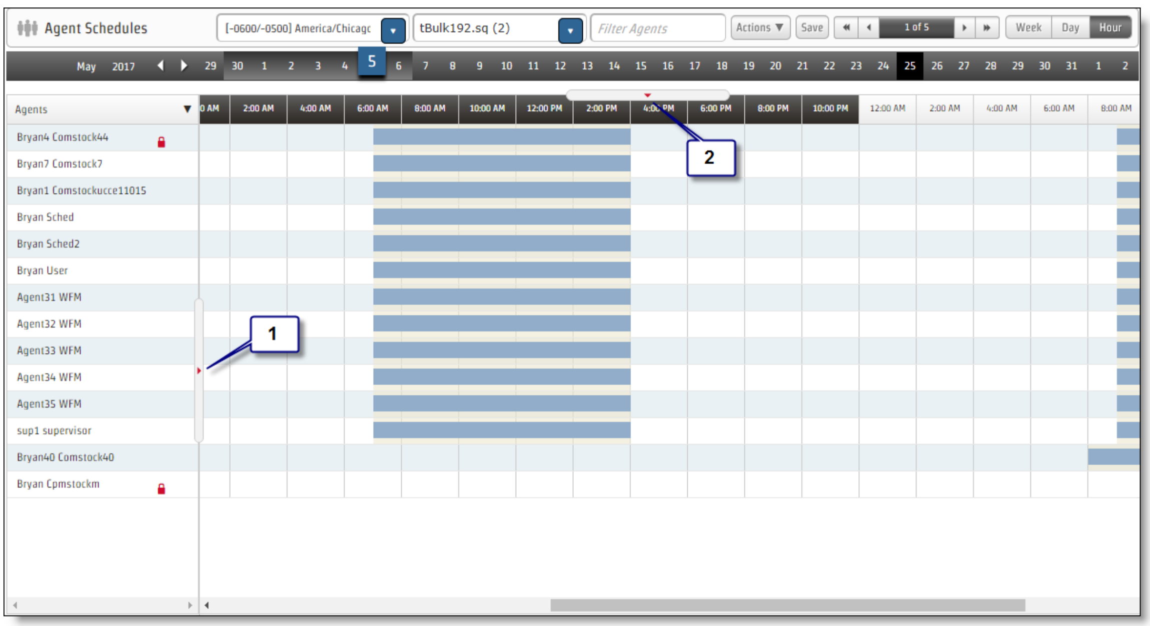
Intraday Dynamic Event Configuration	Agent Actions
	■ Agent's changes are approved manually or automatically.

Deny an agent's proposed schedule

1. Select the **Current** option.
2. On the toolbar, click **Save**.

About drawers

A drawer is a pane that is opened and closed by clicking a control in the Agent Schedules page.



There are three drawers available:

- Agent Adherence Details drawer—Displayed by clicking an agent's name in the Agents list
- Adherence drawer—Displayed by clicking the arrow control (number 1 in the figure) to the right of the Agents list
- Coverage drawer—Displayed by clicking the arrow control (number 2 in the figure) below the calendar bar

NOTE The Coverage drawer is not available when the agent schedules are filtered by team.

Check staffing coverage

The Coverage drawer is available only for service queue and service queue groups. It is opened and closed by clicking the arrow control below the calendar bar.

The Coverage drawer has the following views:

- Coverage: Scheduled view (default view)
- Coverage: Shrinkage view
- Coverage: Reforecast view
- Intraday: Data view
- Multiskill Coverage Map

You can use the Coverage drawer to see how WFM predicts what the service queue will do for each day and interval. It shows you if your forecast is accurate when compared to the production schedule and allows you to make post-production schedule changes.

> **NOTE** The service level data in all coverage pages are calculated using daily totals in the Hour and Day views and weekly totals in the Week view.

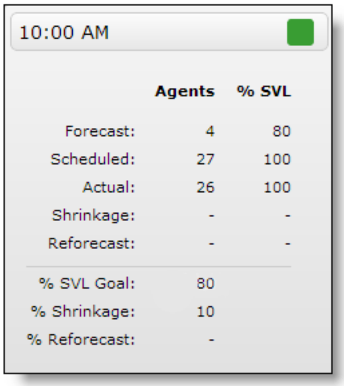
Based on the metrics displayed in the Coverage drawer, you can edit the schedule to improve the overall service level goal. For example, you could reschedule an agent's break to occur 30 minutes later to resolve a staffing issue. This schedule flexibility can make a big difference toward maintaining the daily service level goal.

> **NOTE** If you do not see the coverage you need when editing the schedule, it might be due to the minimum scheduling duration value set for this or another service queue. Consider shortening the minimum duration or removing the minimum duration setting completely to allow for more flexibility in meeting coverage requirements.

The metrics in this drawer update automatically when you change the production schedule.

You can choose what information is displayed in a coverage chart by clicking the metrics buttons at the left of the chart on and off. You can tell if a button has been turned on if the button's border changes from light gray to dark gray.

A pop-up appears when you click a bar in any of the coverage drawers.



The information in the pop-up is detailed in the following table.

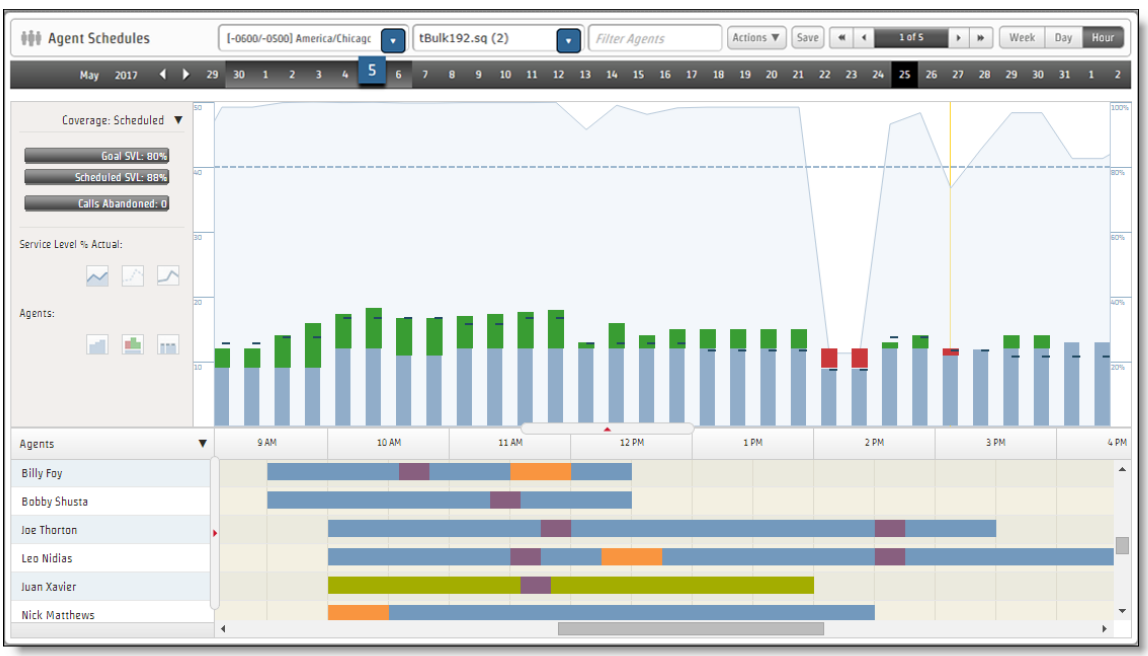
> **NOTE** Interactive service queues display information in both the Agents and % SVL columns. Non-interactive service queues and any service queue groups display information only in the Agents column.

Field	Description
Forecast	The number of agents and service level percentage forecasted for the interval.
Scheduled	The number of agents and service level percentage scheduled for the interval. This number does not include inactive agents or agents who have been terminated but who are still in the schedule. **NOTE** If an agent is scheduled for a multiskill group, the agent contributes the service queue weight to the number of scheduled agents. For example, if the service queue has a weight of 30 percent in the multiskill group, an agent scheduled for the multiskill group contributes 0.3 scheduled agents for that service queue.
Actual	The actual number of agents and service level percentage for the interval.
Shrinkage	The number of agents after shrinkage is applied to the number of scheduled agents and the service level percentage expected for that number of agents.

Field	Description
Reforecast	The reforecasted number of agents based on the reforecasted number of contacts and reforecasted average handle time, given the desired service level goal (percent and seconds). This data is available for the current half hour and onward.
% SVL Goal	(Interactive service queues only) The service level percentage goal.
Shrinkage %	The shrinkage percentage applied to the interval.
% Reforecast	The reforecasted service level percentage. This data is available for the current half hour and onward.

Coverage: Scheduled view

The Coverage: Scheduled view is the default view in the Coverage drawer. It shows how well the service queue is meeting its service level goal by comparing real-time data to the production schedule.



You can configure the chart to display any or all of the following metrics by clicking the appropriate metric buttons on and off:

- (Individual service queues only) Service level % scheduled
- (Individual service queues only) Service level % goal
- (Individual service queues only) Service level % actual
- Agents Scheduled
- Agents Forecast
- Agents Actual
- (Non-interactive individual service queues or service queue groups only) Maximum Contacts in Queue

The left panel also displays the following metrics for the selected time period:

- (Interactive service queues only) Goal SVL %
- (Interactive service queues only) Scheduled SVL %
- (Current and past days only for a Unified CCE ACD) Actual SVL %
- Calls Abandoned

Interpreting the chart

The Coverage: Scheduled view chart displays a stacked bar and line graph for a specific day. The bars and lines are color coded to aid interpretation. Each bar represents a 15-minute interval on the day and hour views and a 60-minute interval on the week view.

The following table describes the colors used in the stacked bar for each interval.

Color	Agents Scheduled
Light Blue	Number of agents scheduled.
Dark Blue	Actual number of agents.
Red	Number of agents forecasted. Indicates there is a shortage of agents.
Green	Number of agents forecasted. Indicates there is a surplus of agents scheduled.

To determine the least disruptive time to insert an activity, compare the Agents Scheduled to the Agents Forecast in the chart. You can use the gap to determine the number of agents who are available for the planned activity without affecting the coverage.

If there are extra agents available, you can schedule an activity without affecting the service level goal. For example, if the interval from 10:30 to 11:00 has a surplus of four agents scheduled, you can schedule a 30-minute meeting with four agents during that time.

If there are fewer agents scheduled than the forecast requires, you need to change the agents' schedules to fulfill the schedule requirement.

The following table describes the lines used to represent the different service levels in the chart. You can compare the actual service level scores to the service level scheduled and service level goal to see what exactly is happening in the contact center. The chart shows how closely the contact center achieved its service level goal.

For non-interactive service queues, the chart displays the actual maximum contacts in queue.

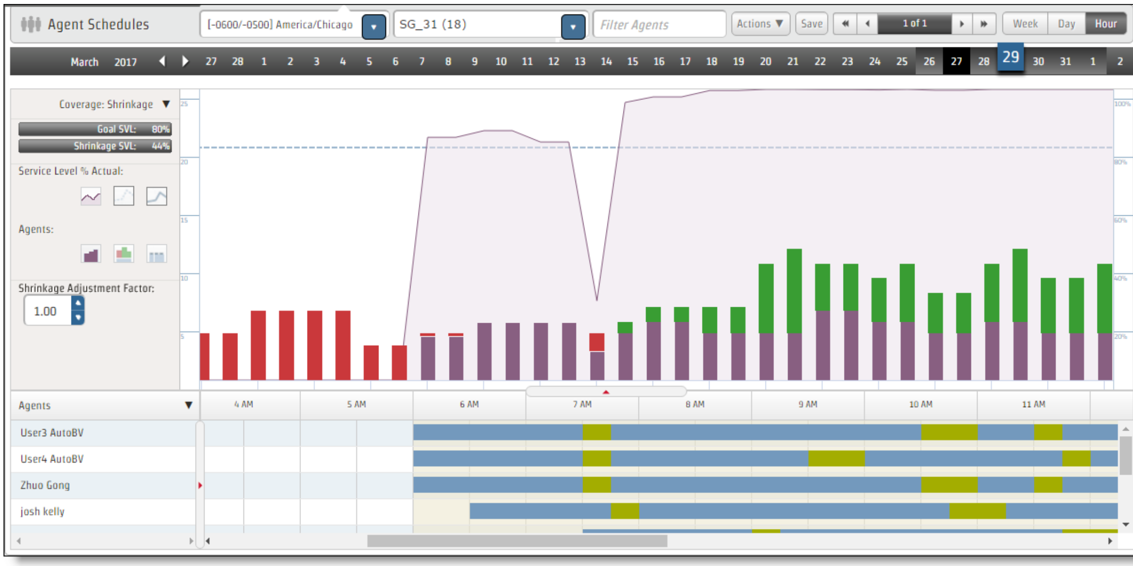
NOTE The line graph representing service levels or queue metrics is available only for individual service queues, not service queue groups.

Line	Service Level
Light blue	(Interactive service queues) Service Level % Scheduled (Non-interactive service queues only) Maximum Contacts in Queue
Dashed blue	(Interactive service queues only) Service Level % Goal
Dark blue	(Interactive service queues only) Service Level % Actual

Coverage: Shrinkage view

The Coverage: Shrinkage view shows the effect of shrinkage on the schedule's ability to meet the service level. You can adjust the shrinkage percentage to see how that affects meeting the service level goal.

NOTE Shrinkage is applied only to future dates and times.



You can configure the chart to display any or all of following metrics by clicking the appropriate metric buttons on and off:

- (Interactive service queues only) Service Level % Shrinkage
- (Interactive service queues only) Service Level % Goal
- (Interactive service queues only) Service Level % Actual
- (Non-interactive service queues only) Maximum Contacts in Queue
- Agents Shrinkage
- Agents Forecast
- Agents Actual

The Shrinkage Adjustment Factor field by default is set to 1.00 (no adjustment from the default shrinkage scenario applied to the service queue). You can change the factor up or down to see how those changes impact the schedule and use that information to decide if the schedule needs to be adjusted so that the service level goal is met. For example, if you enter 2.00 as the adjustment factor, the shrinkage percentage applied to each interval doubles.

To adjust the shrinkage adjustment factor:

1. In the Shrinkage Adjustment Factor field, use the up and down arrows to change the adjustment factor to a new value. Valid values range from 0.00 to 10.00.

2. Click anywhere in the chart to apply the new adjustment factor to each interval. The chart updates to reflect the new shrinkage adjustment factor.

> **NOTE** The adjustment factor does not affect your actual forecast on the Planning page. It is only for display purposes on this page.

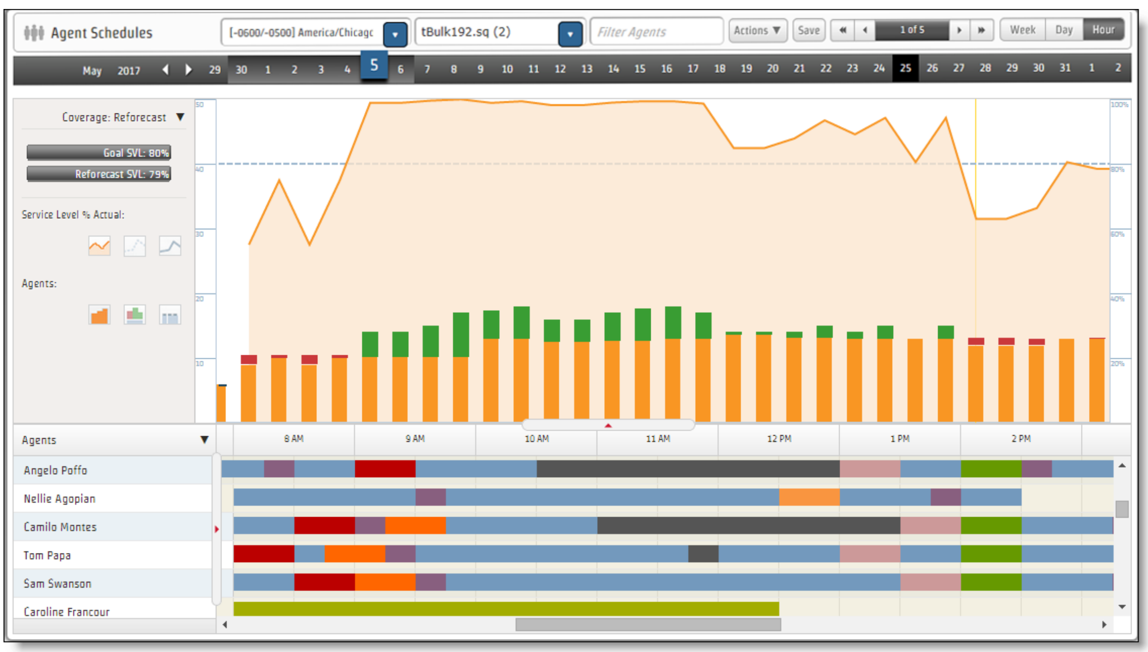
The Shrinkage Adjustment Factor value reverts to the default value when you refresh the window. You cannot save the revised shrinkage percentages.

Coverage: Reforecast view

The Coverage: Reforecast view shows the impact of reforecast metrics on the coverage data so that schedules can be edited based on what the reforecast metrics say might happen.

To display the Reforecast view:

- Select the current date, set the zoom level to Hour, and select an individual service queue.



You can configure the chart to display any or all of the following metrics by clicking the appropriate metric buttons on and off:

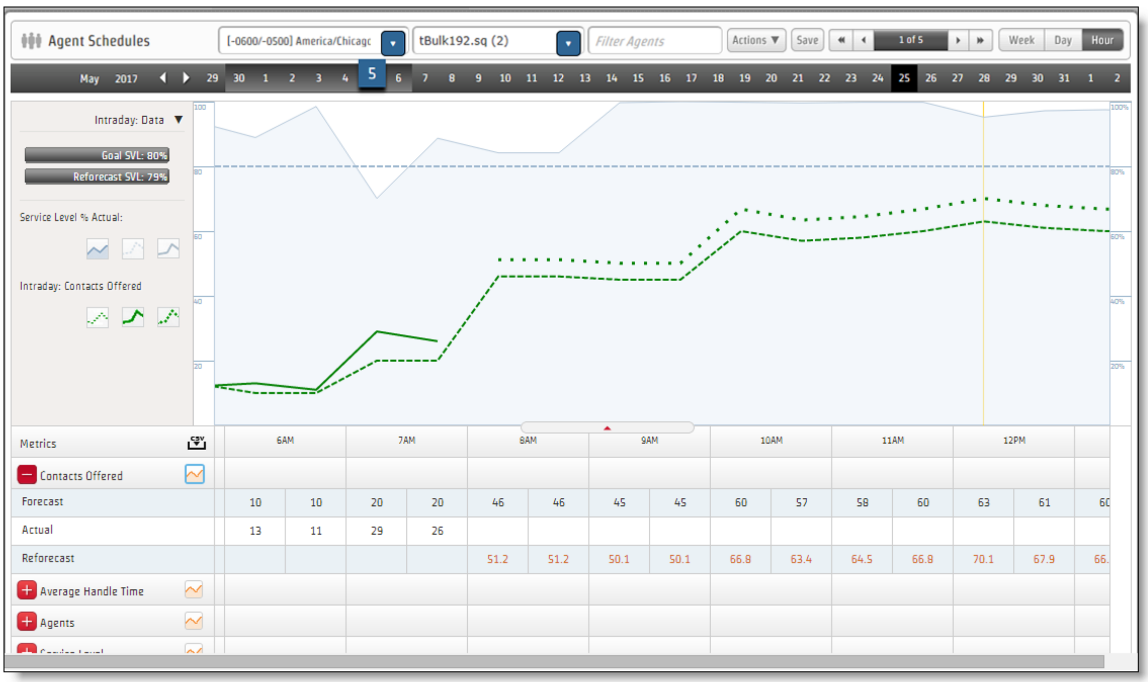
- (Interactive service queues only) Service Level Reforecast
- (Interactive service queues only) Service Level % Goal
- (Interactive service queues only) Service Level % Actual

- (Non-interactive service queues only) Maximum Contacts in Queue
- Agents Scheduled
- Agents Reforecast
- Agents Actual

Intraday: Data view

The Intraday: Data view shows actual data compared to forecast data in chart form.

> **NOTE** In order to display the Intraday Data view, set the zoom level to Hour, and then select an individual service queue.



You can configure the chart to display any or all of the following metrics by clicking the appropriate metric buttons on and off:

- Service Level %—(Interactive service queues only) Scheduled, Goal, and Actual. Always available.
- Contacts Offered—Forecast, Actual, and Reforecast. Available when the Show in Graph button on the Contacts Offered drawer is clicked. If enabled on the WFM Configure system-wide WFM settings page (Enable Forecasted Contacts as Decimals), the Contacts Forecast value can have up to two decimal places, although only one is displayed.

- Average Handle Time—Forecast, Actual, and Reforecast. Available when the Show in Graph button on the Average Handle Time drawer is clicked.
- Agents—Scheduled, Forecast, Actual, and Reforecast. Available when the Show in Graph button on the Agents drawer is clicked.
- Service Level—(Interactive service queues only) Reforecast. Available when the Show in Graph button on the Service Level drawer is clicked.
- Maximum Contacts in Queue—(Non-interactice service queues only) Actual. Available when the Show in Graph button on the Maximum Contacts in Queue drawer is clicked.

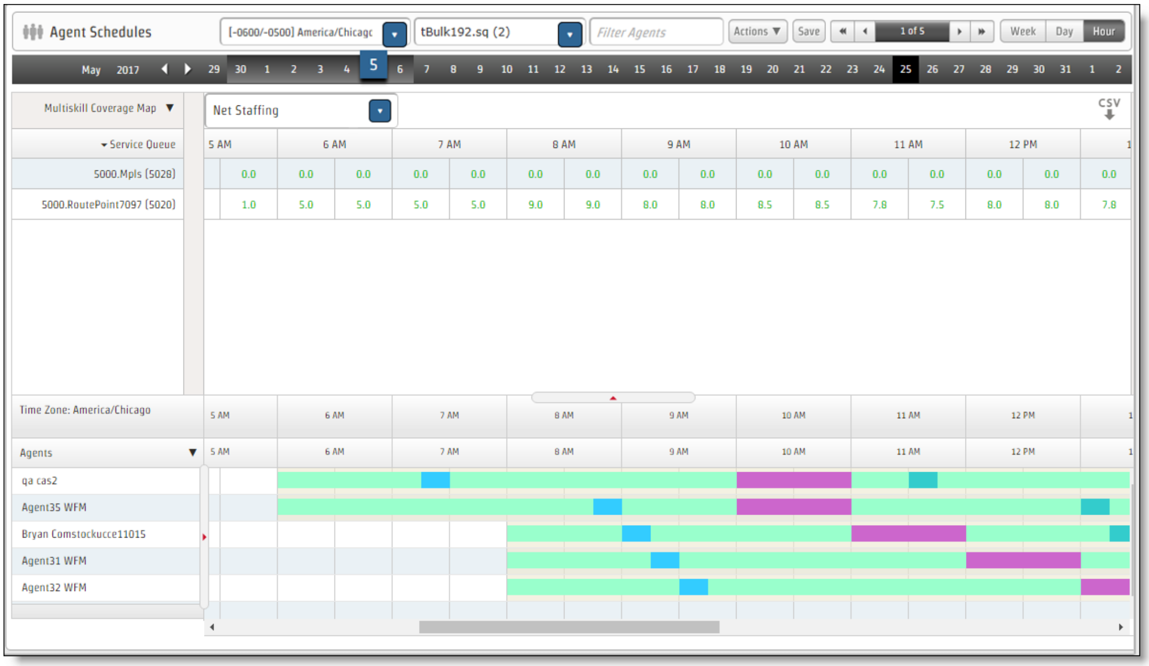
The data used to create the chart is provided in tabular form in drawers at the bottom of the chart. The tabular drawers show the following metrics for 30-minute intervals:

- Contacts Offered—Forecast, Actual, and Reforecast. If enabled on the Global Settings page (Enable Forecasted Contacts as Decimals), the Contacts Forecast value can have up to two decimal places, although only one is displayed.
- Average Handle Time—Forecast, Actual, and Reforecast.
- Agents—Forecast, Scheduled, Actual, and Reforecast.
- Service Level—(Interactive service queues only) Forecast, Scheduled, Actual, and Reforecast.
- Maximum Contacts in Queue—(Non-interactive service queues only) Actual.

The tabular data can be exported in CSV format by clicking the CSV download icon to the right of the Metrics label.

Multiskill Coverage Map

The Multiskill Coverage Map view shows the staffing levels for specific service queues that are otherwise blended together in other coverage views. This option is available only when viewing schedules for a service queue group or a service queue at the Hour zoom level.



You can view the following metrics for each service queue at the 30-minute interval level:

- Agents Forecast
- Agents Scheduled
- Net Staffing—Default view. Net staffing is a calculated as follows:

  `Net Staffing = Agents Scheduled – Agents Forecast`

The table contains data for the set of all service queues that the visible agents can work. Only service queues with a forecast for the selected day are shown. An agent can work a service queue if they are mapped to that service queue via skill mappings or a multiskill group, or if they have a scheduled activity for the service queue during that week.

NOTE The visible agents are those who are visible to you based on your view.

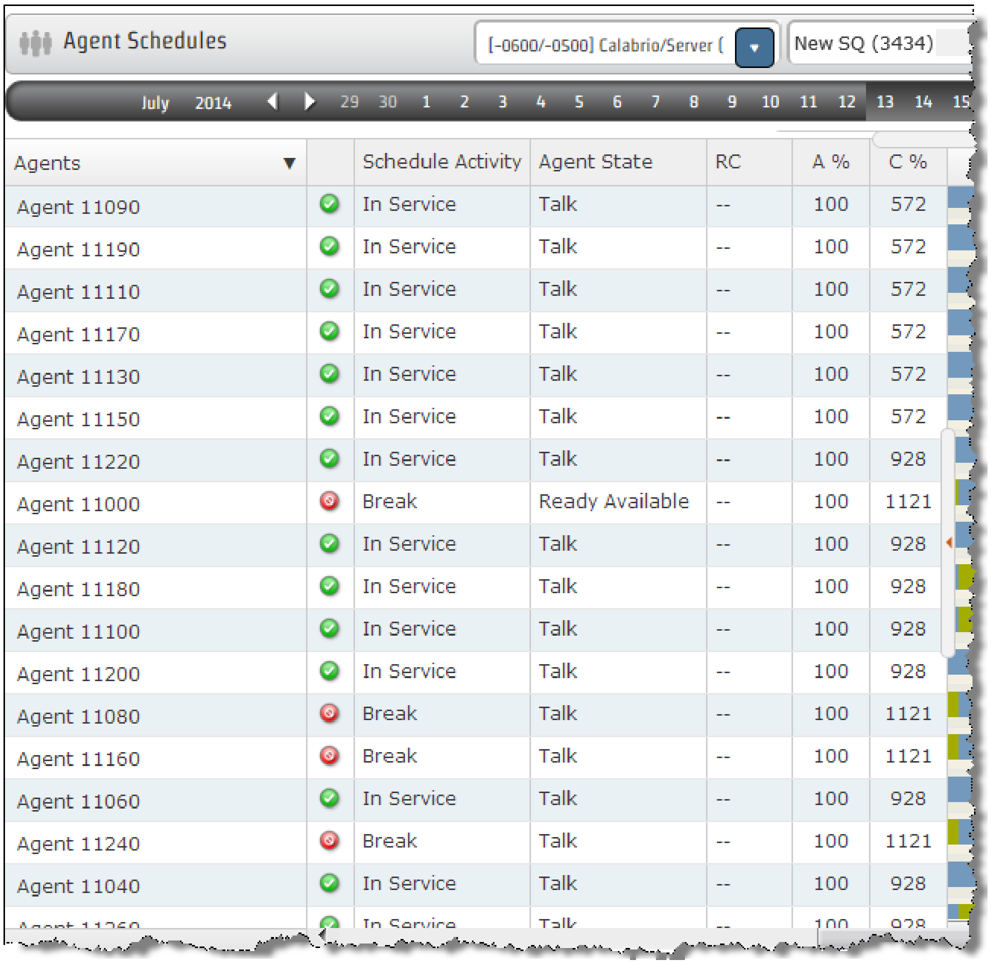
The data in the table is a snapshot of the database as of the time that you selected the Multiskill Coverage Map option. Any unsaved schedule edits or changes are not reflected in this data. When you change the metric to view, the data is updated.

Click the CSV download icon to the right of the Metrics label to export the tabular data in CSV format.

View agent adherence and conformance

The Adherence drawer displays the real-time agent data and adherence and conformance percentages for the agents in the Agents list. Open and close it by clicking the arrow control to the right of the Agents list. When the drawer is open, the data is refreshed every 30 seconds.

NOTE The Adherence drawer does not update at the same time as the Data Explorer Real Time Adherence widget. See Real Time Adherence Widget.



Agents		Schedule Activity	Agent State	RC	A %	C %
Agent 11090		In Service	Talk	--	100	572
Agent 11190		In Service	Talk	--	100	572
Agent 11110		In Service	Talk	--	100	572
Agent 11170		In Service	Talk	--	100	572
Agent 11130		In Service	Talk	--	100	572
Agent 11150		In Service	Talk	--	100	572
Agent 11220		In Service	Talk	--	100	928
Agent 11000		Break	Ready Available	--	100	1121
Agent 11120		In Service	Talk	--	100	928
Agent 11180		In Service	Talk	--	100	928
Agent 11100		In Service	Talk	--	100	928
Agent 11200		In Service	Talk	--	100	928
Agent 11080		Break	Talk	--	100	1121
Agent 11160		Break	Talk	--	100	1121
Agent 11060		In Service	Talk	--	100	928
Agent 11240		Break	Talk	--	100	1121
Agent 11040		In Service	Talk	--	100	928
Agent 11260		In Service	Talk	--	100	928

WFM collects real-time agent state data from the ACD and compares it with the agent schedules to calculate the adherence and conformance percentages. The adherence and conformance values are calculated every 15 minutes.

NOTE The adherence and conformance percentages in the Adherence drawer are updated every 30 seconds and rounded up to a whole number. These percentages might be different from the ercentages displayed in the Adherence Details drawer because each drawer refreshes at a different te, and the Adherence Details drawer displays the adherence and conformance percentages as a ecimal instead of a whole number.

IMPORTANT A second Data server must be created to send productivity data to Data Explorer for agents supporting a non-interactive service queue. If this additional Webex WFO Data Server is not in use and an agent is supporting a non-interactive service queue, Data Explorer is not receiving productivity data for that agent. This is true even though the information is visible in the Adherence Details drawer. This means that the agent will be out of adherence in Data Explorer reports.

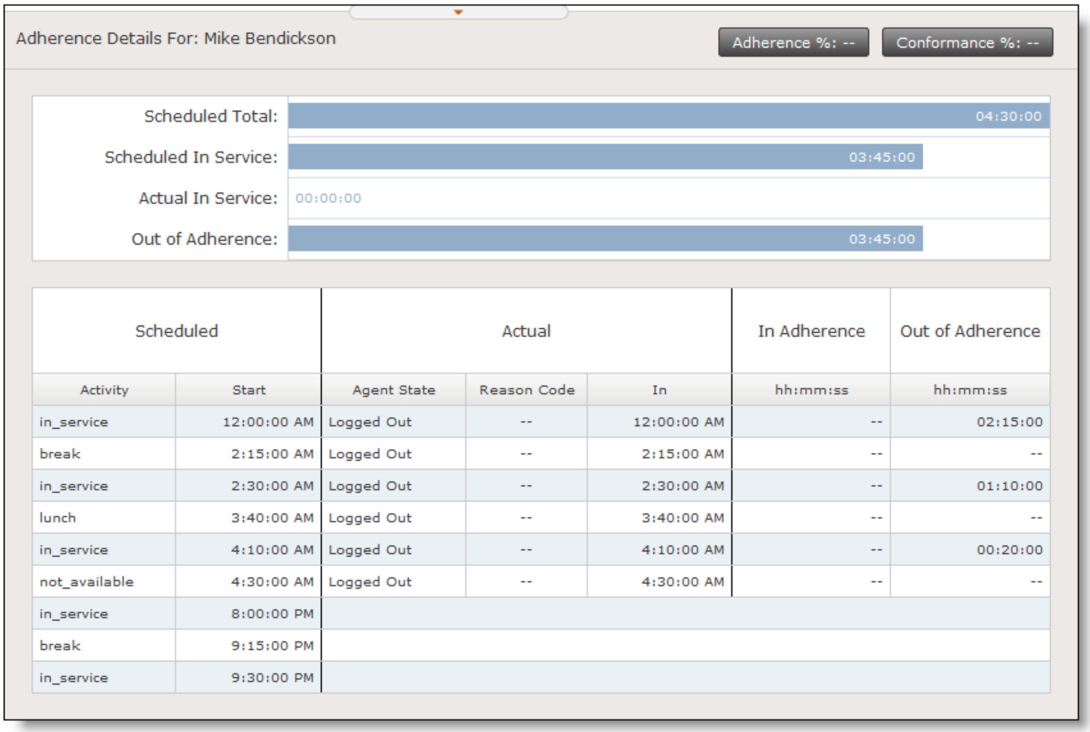
The following table lists the fields in the Adherence drawer.

Field	Description
Agents	The agent's name.
Red or green ball icons	A green ball indicates that the agent is in adherence. A red ball indicates that the agent is out of adherence.
Schedule Activity	The agent's current scheduled activity.
Agent State	The agent's ACD agent state.
RC	The reason code or description (if any) associated with the agent's ACD state. The reason codes are those associated with the agent's main service queue.
A %	The agent's adherence percentage. Adherence is the percentage of time that agents follow their schedules. When calculating adherence, WFM considers scheduled arrival and departure times, breaks, lunches, and time spent on scheduled activities. It then compares the actual activity to the scheduled activity each millisecond through the work shift. For example, an agent who is scheduled to be in service at 09:00 and to log out at 16:00, and who sticks to that schedule for the entire day, is 100% in adherence. Adherence is calculated by the following formula: [(configured schedule adherence minutes − minutes not in adherence) ÷ configured schedule adherence minutes] × 100

Field	Description
	In this formula, "configured schedule adherence minutes" is the sum of time scheduled for activities for which the Calculate Adherence option set to Yes (see Customize adherence state mappings). **NOTE** If the formula produces a negative number, the field displays a zero.
C %	The agent's conformance percentage. Conformance is the percentage of time an agent works the right amount of time, regardless of the time of day the agent works. Schedule conformance does not take arrival and departure times into account. For example, an agent who is scheduled to work from 08:00 to 16:00 but instead works from 10:00 to 18:00 would be conforming, but not adhering, to the schedule. Conformance is calculated according to the following formula: (total time an agent is in a ready, talk, hold, or work state) ÷ (total current scheduled in-service time) × 100 In-service time does not include lunch, breaks, projects, or exceptions. **NOTE** (Five9 ACDs only) Real-time data is captured at the interval for the duration of the interval period. However, the data can be retrieved by Web Services API requests only a certain number of times per minute, per hour, and per day. (Consult Five9 Customer Support for more information on these limits and how to change them if necessary. The APIs used are getUsersInfo, getSkills, getAgentGroups, and runReport.) Because of this, if the interval is set to a value that is too small, data can be missed in capture after the maximum number of API requests have been made for the hour if the time between the last allowed capture and the beginning of the next hour is longer than the capture interval. To determine the lowest interval threshold, use this formula: 3600 ÷ maximum API calls per hour = minimum interval in seconds

View detailed adherence for an agent

The Adherence Details drawer is opened and closed by clicking an agent's name in the Agents list. It shows how well the agent has maintained schedule adherence since the start of the day. Adherence is calculated using agent state data captured from the ACD in real time. For this reason, the values displayed at the top of the Adherence Details drawer (Scheduled Total, Scheduled In Service, Actual In Service, and Out of Adherence) reflect the data at the time you open the drawer and might differ from the values shown in the detail portion. You can refresh the data in the drawer by closing it and then reopening it.



You can use the Adherence Details drawer to do the following:

- Compare the agent's scheduled activities with real-time statistics about the agent from the ACD
- Interpret adherence statistics

The following table describes the Adherence Details drawer fields.

Column	Description
Adherence %	The agent's adherence score. The percentage value is updated every time the drawer is opened. The value is displayed as a decimal and is calculated every 15 minutes.

Column	Description
	NOTE This value might differ from the A % value in the Adherence drawer because each drawer refreshes at a different rate and because the values are rounded in the Adherence drawer.
Conformance %	The agent's conformance score. The percentage value is updated every time the drawer is opened. The value is displayed as a decimal and is calculated every 15 minutes. **NOTE** This value might differ from the C % value in the Adherence drawer because each drawer refreshes at a different rate and because the values are rounded in the Adherence drawer.
Scheduled Total	The total time the agent is scheduled to work for the selected date. If the selected date is the current date, the value is calculated to the time the drawer was opened. This value includes only paid time, not unpaid time.
Scheduled In Service	The total time the agent is scheduled to be in service and available to handle calls for the current date at the time the drawer is opened. When agents are in service, they are either ready to handle a call or already handling a call.
Actual In Service	The total time the agent is ready or handling at the current time for the current date. **NOTE** In Service time is based solely on the real-time feed from the ACD and includes any time spent by the agent in the Ready, Talk, Hold, and Work states. This might not match In Service time in other reports, since those other reports are based on historical data feeds.
Out of Adherence	The total time the agent is out of adherence for the current date at the time the drawer is opened.
Scheduled	A list of scheduled activities and their start times for the selected day.
Actual	The actual agent data for the following three values: ▪ Agent State—The agent's state from the ACD

Column	Description
	■ Reason Code—The reason code associated with the Out of Service and Not Ready states ■ In—The time when the agent entered the agent state
In Adherence	The time in adherence for each agent state. If the selected date is the current date, the value is calculated up to the current time.
Out of Adherence	The time out of adherence for each agent state. If the selected date is the current date, the value is calculated up to the current time.

Optimize breaks and lunches

The Optimize Schedules action allows you to maximize coverage without running a new schedule. It is possible that a number of things changed since the schedule was run (exceptions were added, agents took time off, and so on) that affect coverage. Optimizing schedules by moving lunches and breaks helps to compensate for this.

Optimization affects only work condition activities (lunches and breaks) in work shifts that have scheduled activities for the selected service queue or multiskill group that includes the selected service queue for the selected date.

> **NOTE** This can result in worse coverage for other service queues that the agent is scheduled for on that date. For each existing work condition activity in the shift, the optimizer only moves those activities within their constraints and maximum optimization adjustment field limits (if they are set). This is done for both paid hours and shift length work conditions currently in the agent's work shifts. The optimizer will not move breaks and lunches added via the Insert Activity action on the Agent Schedules page. It is a good idea to run the optimizer before you change breaks and lunches manually.

This action is available on the Agent Schedules page for the current and future dates when a service queue is selected and there is at least one agent scheduled. It is not available when you select a service queue group, skill mapping, team, or custom grouping.

> **NOTE** To optimize current date schedules, lunches and breaks must begin at least one hour from the current time (rounded up to the nearest five minutes), and there must be at least ten minutes available before the end of potential lunches or breaks. Manual changes are always allowed.

Agents are optimized in the order that they appear on the Agent Schedules page. You can change this order by using the Agent column drop-down menu for sorting or by pinning agents to the top of the list. Optimization affects all agents across multiple pages, not just those on the visible page.

> **NOTE** The optimizer can be configured to run from 1 to 30 times every time you click the action (see “Maximum Schedule Optimization Attempts” on the Configure system-wide WFM settings page). By default it runs through the agent schedules up to 10 times. If it achieves maximum optimization before the configured limit is reached, it stops.

You receive a notification message after the action runs that states how many agents and schedules were optimized. When you close the notification message, the system updates the current page for all agents whose lunches and breaks were optimized. The changed agent schedules are not saved until you click Save.

Schedules for the agents who have been optimized are expanded into two entries for that date, as if you had double-clicked that agent’s schedule. If you select a different date in the schedule week in which the agent is not optimized, the agent’s schedule is not expanded. Clicking back to the date that was optimized causes the agent’s schedule to be expanded again. The two-entry schedule expansion for the agent on a date is maintained until one of the following occurs:

- Another optimization is done on a specified date
- The page is refreshed
- The agent schedule is double-clicked
- The schedule is saved or discarded

The two-entry schedule expansion applies across multiple pages.

You can make additional changes to the optimized schedules by double-clicking a schedule to bring up the two-entry schedule expansion. You can run the optimizer multiple times on the same date without saving and run the optimizer on multiple dates in the same schedule week without saving between each date optimized.

Once you have run the optimizer and are viewing the expanded rows of optimized schedules, the following is true:

- You cannot exclude agents from being optimized. You either have to save or discard all the optimized schedules for the agents.
- You cannot select specific optimized agent schedules to save.

To optimize schedules:

1. On the Agent Schedules page, click **Actions** and select **Optimize Schedules**.
2. Configure the optimization action.
   - Select a specific date or a date range. By default, the current date is selected. The date or date range you select must be within the schedule week.
   - If you want to exclude certain agents from optimization, move them from the Assigned pane to the Available pane. By default, all agents in the schedule are listed in the Assigned pane.
   - Select if you want breaks, lunches, or both to be optimized. By default, both breaks and lunches are selected.
3. Click **Optimize**. The optimizer runs the configured number of times, or until the schedule is optimized, and displays a message telling you how many agents were optimized and how many activities were moved.
4. If desired, optimize the schedule again. You can run the action as many times as you want. Each time it runs the configured number of times through the schedule. After the optimizer is finished, the schedules that were changed are shown in Edit mode (split into two bars). You can review the changes and make manual changes if desired. If you are optimizing a range of dates, you can view the changes made on each date in the range.
5. When you are done, click **Save** to save the changes made to the schedule.

Limitations on optimization

The optimizer considers these work condition activity constraints when moving lunches and breaks:

- Minimum delay
- Maximum delay
- Minimum interval
- Increment
- Maximum optimization adjustment field limit (if one is set)

The lunch or break will not be moved if these constraints cannot be met, or if the following are true:

- The location the lunch or break could be moved to is currently occupied by another lunch, break, project, or exception.
- The lunch or break crosses midnight.

- The lunch or break has been removed from the work condition, or it has been removed and then added back.

If the constraint for the activity has changed such that the activity cannot be moved in future time, it will not be moved.

The optimizer will not add or delete lunches or breaks, nor will it change their attributes (name, type, duration, paid portion duration, and color).

The optimizer will not move lunches and breaks on top of or partially under existing exceptions, projects, lunches, or breaks. If a lunch or break has both a paid and an unpaid portion, the optimizer will not attempt to swap which appears in the non-overlap portion. It always places the paid portion before the unpaid portion.

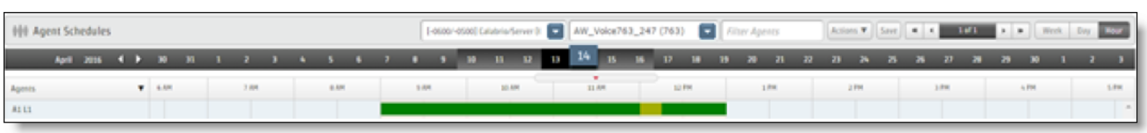
Optimization examples

Example 1: Break Manually Moved by Administrator in Single Shift, Maximum Optimization Adjustment Not Set

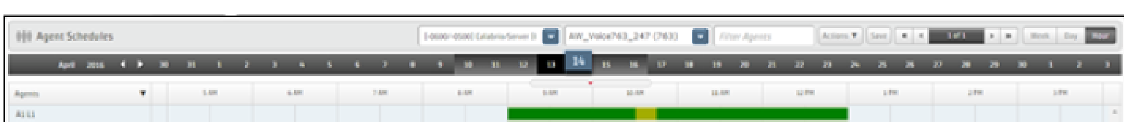
An agent has a four-hour shift (9:00 AM–1:00 PM) with one break (10:30 AM), and you move the break to 12:00 PM. The break has a one-hour minimum delay and a two-hour maximum delay in a four-hour paid hours work condition.

	Name	Type	Min Delay	Max Delay	Duration	Increment	Min Interval	Paid Portion	Color	Color ID
	4Hr_1Br1HrMin2HrMax_Break	Break	01:00	02:00	00:15	5	00:00	00:15		#A3AD00

After you make the manual change the schedule shows the break at 12:00 PM:

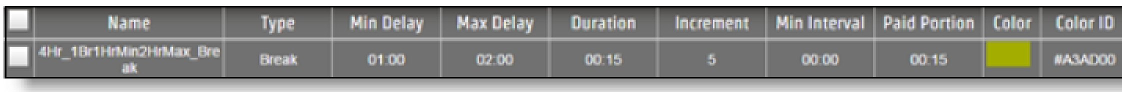


After optimizing lunches and breaks, the break is moved between 10:00 and 11:00 AM.



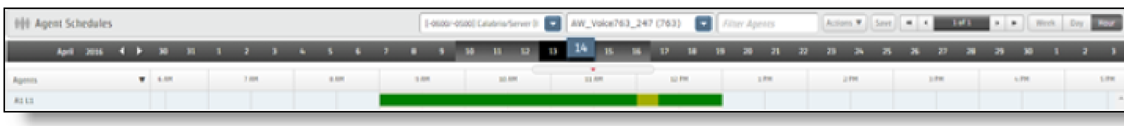
Example 2: Break Manually Moved by Administrator in Single Shift, Maximum Optimization Adjustment Set

An agent has a four-hour shift (9:00 AM–1:00 PM) with one break (10:30 AM), and you move the break to 12:00 PM. The break has a one-hour minimum delay and a two-hour maximum delay in a four-hour shift length work condition with a fifteen-minute maximum optimization adjustment.



	Name	Type	Min Delay	Max Delay	Duration	Increment	Min Interval	Paid Portion	Color	Color ID
	4Hr_1Br1HrMin2HrMax_Break	Break	01:00	02:00	00:15	5	00:00	00:15		#A3AD00

After you make the manual change the schedule shows the break at 12:00 PM:



After optimizing lunches and breaks, there is no change to the agent schedule.

View scheduling reports

For information about the standard QM and WFM reports that come with Webex WFO, and for instructions on how to run a standard report, see QM standard reports and WFM standard reports.

NOTE WFM reports reflect data as it appears in the tenant time zone configured by your system administrator. If you request a WFM report and your display time zone is ahead of the tenant time zone, your report might not contain any data.

NOTE Some values in reports are calculated values, and subject to rounding up or down. Because of this rounding, they might differ slightly from historical data values.

Make long-term plans

Making long-term plans entails the following:

- Estimate future contact center requirements and costs.
- Configure and manage agent time off.

Estimate future requirements

The Strategic Planning section of Application Management enables you to estimate future contact center requirements and costs.

Manage strategic resources

Use the Strategic Resources page to create, edit, and delete strategic resources. Strategic resources are the people and capital equipment that make up your contact center. The strategic resources you configure here are used to generate strategic planning reports that estimate future costs and requirements.

> **NOTE**
> For information about the standard QM and WFM reports that come with Webex WFO, and for instructions on how to run a standard report, see QM standard reports and WFM standard reports.

The base resource is the agent. All other resources are calculated directly or indirectly in terms of the number of agents in the contact center.

> **EXAMPLE** You configure one administrator for every 50 supervisors, and you configure one supervisor for every 20 agents. A supervisor has a direct relationship to the number of agents, and an administrator has an indirect relationship to the number of agents through the number of supervisors.

> **NOTE** The Agent resource is a system resource. You can edit the details of the Agent resource, but you cannot delete it.

The following fields appear on this page.

Field	Description
Resource Name	The name of this resource. This name must be unique.
Resource Category	The resource type. The resource can be a human resource (employees and contractors) or a capital item (equipment, furniture, and fixtures).
Resource Cost	The resource’s cost per month, per year, or as a one-time expenditure. The cost must be a whole number greater than or equal to zero. If you choose one-time expenditure, indicate the resource’s lifespan in months. This value must be a whole number (0–999).
Resource Ratio	The ratio of one instance of this resource to the quantity of another strategic resource to another resource. This value must be a number (0–

Field	Description
	9999). Directly or indirectly, every resource is defined in relation to the Agent resource. **NOTE** This field is not present for the Agent system resource, since the agent is the base resource.
Current Number of Resources	The current quantity of this strategic resource in the contact center. This value must be a number (0–99999). If the resource is a human resource, use the number of FTE agents. If the strategic resource is a one-time expenditure, use the number of resources whose cost has not yet been fully amortized.

Manage hiring plans

Use the Hiring Plans page to create, edit, and delete hiring plans. A hiring plan is a sequence of hiring steps that describes the process of hiring agents to meet future requirements in your contact center. Hiring plans are used in conjunction with strategic resources and the strategic forecast to generate the report.

> **NOTE** Once you have created a hiring plan, the individual hiring steps do not change, even if those steps are edited or deleted on the Hiring Steps page. See Manage hiring steps.

The following fields appear on this page.

Field	Description
Plan Name	The name of the hiring plan. This name must be unique.
Plan Details	A list of the available and assigned hiring steps for the hiring plan. You can rearrange the assigned hiring steps using the up/down arrows. The list of available hiring steps displays the step name, its duration, and the attrition rate.

Manage hiring steps

Use the Hiring Steps page to create, edit, and delete hiring steps. A hiring step is a component of a hiring plan. The metrics you configure for each step are used to determine how many candidates must enter the hiring pipeline to meet future agent requirements as determined by a strategic forecast.

To be used for forecasting, hiring steps must be made part of a hiring plan on the Hiring Plans page. See Manage hiring plans.

> **NOTE**
> Editing a hiring step on this page does not impact any hiring plans that include that step. For example, if you create a step with a duration of five days, add it to a hiring plan, and then later change the duration of that step to three days, the step in that hiring plan retains a duration of five days. If you add the step to a different hiring plan, its duration in the new hiring plan is three days.
>
> Similarly, deleting a hiring step on this page does not remove it from any hiring plans to which it has already been added.

The following fields appear on this page.

Field	Description
Step Name	The name of the hiring step. This name must be unique.
Duration	The number of days that the step lasts. This value must be a whole number (1–999).
Attrition Rate	The number of candidates out of 100 that drop out from the hiring process during this step. This value must be a whole number (1–100).

Analyze shift costs for a service queue

A shift budget analysis request generates the data needed to analyze shift costs for one or more service queues.

> **NOTE** There must be a production forecast for the period you want to analyze for the request to run successfully.

Once you have run this request, you can run a Shift Budget Analysis report. This report displays the cost per shift for a service queue. You can only view this report for service queues for which you have previously submitted a Shift Budget Analysis Request.

Generate a Shift Budget Analysis Request

1. On the Shift Budget Analysis Request page, enter a start date and end date for the period whose data you want to analyze.
2. Select one or more service queues.

3. Add the parameters of the shifts you want to analyze. Click **Add** to add a row to the table, and then for each row enter the shift parameters:
    - Select the shift length from the drop-down list.
    - Enter the desired utilization percentage. This is the percentage of time agents are in service.
    - Enter the maximum number of agents available to work. If you want WFM to determine this, enter 9999.
    - Select the days of the week you want to use in the analysis. Select **All** to select each day of the week in one click.
4. Schedule the request. By default, the request runs immediately.

Manage agent time off

The Vacation Planning section of Application Management enables you to configure and manage agent time off.

Manage full time equivalent profiles

If you are using the strategic planning and vacation features, you must create full time equivalent profiles and assign agents to these profiles. WFM uses full time equivalents profiles when creating strategic plans and analyzing vacation requests.

A full time equivalent (FTE) is equal to the number of total scheduled person hours divided by the number of hours per week that constitute a full time person (for example, 40 hours or 35 hours). An FTE might consist of several part time individuals whose combined work hours in a week equal the full time person, but might not incur benefit expenses.

For forecasting and planning purposes, you need to establish the number of hours an agent is paid per week (for example, 20, 35, or 40 hours). WFM uses this value to determine the number of FTE agents required for a forecast. If the number of paid hours is 40 and the forecast calls for 80 hours, you need two full time agents.

> **EXAMPLE** A contact center has 100 agents. An FTE is 40 paid hours per week (160 hours per month), and an FTE agent earns $3,000 per month. All agents are required to take eight hours of training this month. That is 800 hours of training for the month (100 × 8). If you change the number of hours of training to FTEs, you would need five FTEs (800 ÷ 160), which corresponds to $15,000 spent on training for this month (5 × $3,000). By using strategic planning to determine costs in advance, managers can ask for fewer training hours in relation to their budget or spread the training out over a period of two or three months.

Field descriptions

Use the Full Time Equivalents Profiles page to create, edit, and delete full time equivalent profiles.

The fields on the Full Time Equivalents Profiles page are described below.

Field	Description
FTE Name	A unique name for the FTE profile.
Minimum Hours per Week	The minimum number of paid hours per week for this profile.
Maximum Hours per Week	The maximum number of paid hours per week for this profile.
Assign Agents	Assign agents to this profile. This is required for vacation planning. An agent cannot request time off unless the agent is assigned to an FTE profile.

Manage vacation types

The Vacation Types page enables you to create and manage vacation types and associate exceptions with specific vacation types. This lets you customize exactly what each vacation type means in your contact center.

NOTE Vacation types you create are automatically assigned to the Enterprise view and the views assigned to you.

Exceptions are activities that take agents away from being in service. You can map multiple exceptions to the same vacation type, but each exception can only be mapped to a single vacation type. You must select one exception to be the workflow exception. For more information about workflow exceptions, see Automate handling of agent requests.

Examples of vacation types include the following:

- Sick Days
- Jury Duty
- Floating Holidays
- Vacation

Using vacation types and vacation plans, Webex WFO allows you to track how many hours of each type of vacation have been used by an agent.

In systems with HRMS integration (see “Integrating Your HRMS with Webex WFO” in the *Webex WFO Data Import Reference Guide*), this information is exported to a file that can be imported into the HRMS on a daily basis.

> **NOTE** If you do integrate with HRMS, you do not set up vacation plans in Webex WFO. They are set up within the HRMS.

In systems without HRMS integration, this information is applied to the vacation plan configured for each agent. In both systems, the vacation hours available to an agent are displayed on the Manage users page and can be reported in the Vacation Status report.

Create a vacation type

1. Select **Create a new vacation type**.
2. Enter a vacation type name in the **Vacation Type** field (for example, “Sick Days” or “Bereavement Leave”).
3. Select one or more exceptions to apply to this vacation type.
4. Click **Save**.

After you have created a vacation type, you can include it in one or more vacation plans (see Manage vacation plans).

Edit a vacation type

1. Select **Edit or delete an existing vacation type**.
2. Select a vacation type from the **Vacation Type** drop-down list.
3. Make any required changes to the vacation type.
4. Click **Save**.

Delete a vacation type

1. Select **Edit or delete an existing vacation type**.
2. Select a vacation type from the **Vacation Type** drop-down list.
3. Click **Delete**.

> **NOTE** You cannot edit or delete vacation types that are not within your view. If a vacation type within your view has exceptions assigned to it that are not within your view, you cannot edit that vacation type. This ensures that you cannot inadvertently remove exceptions you cannot view.

NOTE When you delete a vacation type, it is deleted from all vacation plans that use it.

Field descriptions

Use the Vacation Types page to assign exceptions to each vacation type.

The fields on the Vacation Types page when you edit or delete an existing vacation type, or when you create a new vacation type, are described below.

Field	Description
Exceptions	Assigns exceptions to the vacation type. Select one exception to be the workflow exception used for this vacation type. **NOTE** A workflow exception must be specified for each vacation type in order for Time Off requests to be approved automatically by a workflow (see Automate handling of agent requests for more information).
Vacation Type	The name of the vacation type.

Manage vacation plans

Vacation plans define the time off plans assigned to agents. You can create multiple vacation plans to manage time off for various types of agents (for example, part-time agents and full-time agents). Vacation plans use Vacation Types to describe how agents track their time off (see Manage vacation types). How this is managed is specific to your contact center.

BEST PRACTICE Individual vacation plans are intended (but not required) to span an entire year (January 1 through December 31).

NOTE The Vacation Plans page is present only in systems that do not use HRMS integration. Systems that do use HRMS integration get their vacation plans from the HRMS (see Integrate with a human resource management system).

Create a vacation plan

1. Enter a unique name of the plan in the **Plan Name** field.
2. Enter a plan start date in the **Start Date** field.
3. Enter an end date in the **End Date** field.

4. Select a **Vacation Type** to assign, and allocate hours to it. For more information about creating vacation types, see Manage vacation types .
5. Assign agents to the vacation plan.
6. Click **Save**.

Edit a vacation plan

1. Select a vacation plan from the **Select Plan** drop-down list.
2. Change the values in any of the vacation plan fields.
3. Click **Save**.

Copy a vacation plan

> **NOTE** Copying a vacation plan copies all information in the original plan (including its assigned agents). If there is *any* date overlap between the new and original vacation plans, all agents will be deleted from the original plan.

1. Select a vacation plan from the **Select Plan** drop-down list.
2. Enter a vacation plan name in the **New Plan Name** field. If the new vacation plan is the same as the original plan with the next year's dates, you do not need to change the new vacation plan name.
3. Enter a plan start date in the **Start Date** field.
4. Enter an end date in the **End Date** field.
5. Click **Save**.

Delete a vacation plan

1. Select a vacation plan from the **Select Plan** drop-down list.
2. Click **Delete**.

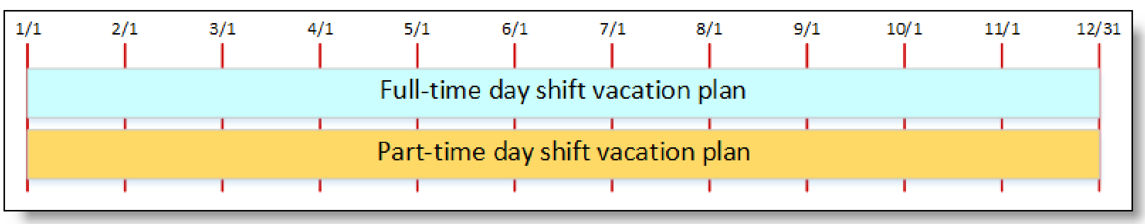
Vacation plan examples

Your company will define the requirements for each vacation plan. For example, the following might be the attributes of a vacation plan for full-time entry-level agents (vacation types have been defined on the Vacation Types page):

Field	Value
Plan Name	Full-time day shift (entry level)
Start Date	January 1, 2016
End Date	December 31, 2016
Vacation Types	▪ Personal and Sick Days - 24 hours ▪ Bereavement Leave - 16 hours ▪ Floating Holiday - 24 hours ▪ Jury Duty - 40 hours ▪ Vacation Days - 80 hours
Assign Agents	▪ Adams, Ann ▪ Baker, Ben ▪ Clark, Charlotte etc.

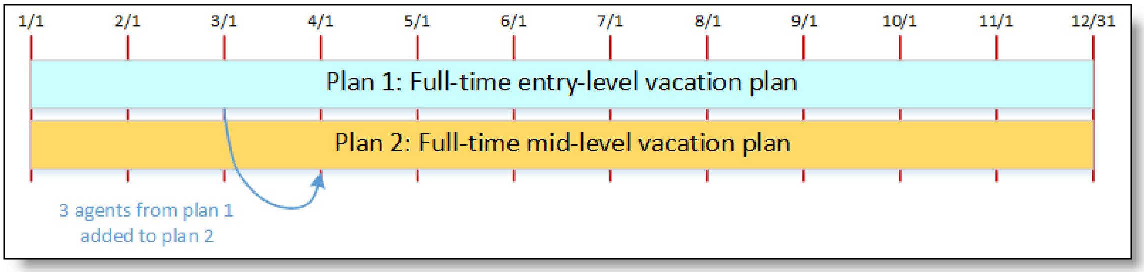
You can create vacation plans with overlapping dates. However, agents can only be assigned to a single vacation plan on any given date.

Example 1: Overlapping vacation plans without common agents



These are valid vacation plans, because although they overlap, there are no common agents between the two plans.

Example 2: Moving agents between vacation plans

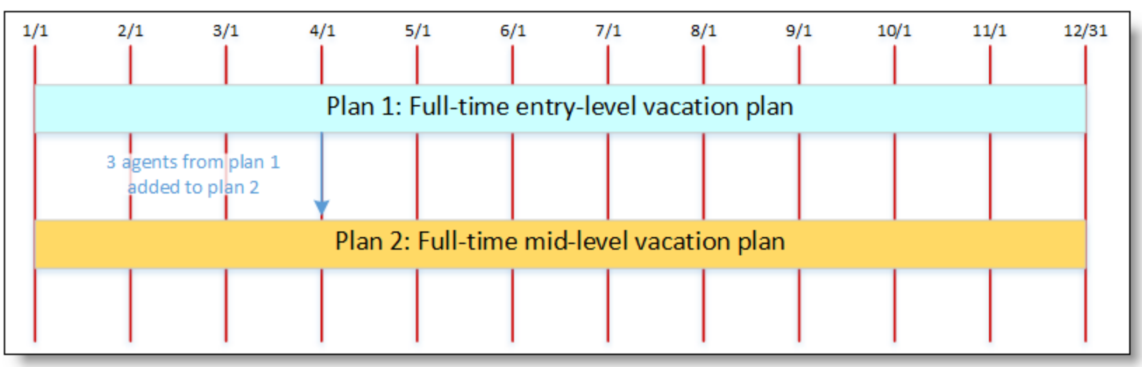


In this example, the customer has set up vacation plans that vary based on the level of agent experience. On April 1, three agents will qualify to be added to vacation Plan 2. An administrator wants to proactively move these agents into vacation Plan 2 on March 1.

Changes to vacation plans go into effect immediately, and agents cannot simultaneously be in Plan 1 and Plan 2. The system displays an error message.

You can take two actions in this situation:

- Assign the agents to Plan 2 on March 1. After the agents have been assigned to Plan 2, they will no longer be assigned to Plan 1 and will be active in Plan 2. From March 1 to April 1, they will have the vacation privileges assigned to Plan 2 (although they have not yet earned them). Other existing agents in Plan 1 will not be affected by the change.
- Cancel the change, and on April 1, add the agents from Plan 1 to Plan 2.



Field descriptions

Use the Vacation Plans page to assign, create, edit, copy, or delete vacation plans.

NOTE An agent can be assigned to only one vacation plan on any date (the same agent cannot be assigned to overlapping vacation plans).

The fields on the Vacation Plans page are described below.

Fields	Description
Plan Name	A unique name for the plan. **EXAMPLE** An example of a valid name is “Full-time up to 5 years service.”
Select Plan	Select the plan you want to copy, edit, or delete.
Start Date	The starting date for the vacation plan, in YYYY-MM-DD format. Alternatively, you can choose a date using the date selector.
End Date	The ending date for the vacation plan, in YYYY-MM-DD format. Alternatively, you can choose a date using the date selector.
Vacation Types/Allocated Hours	Select an available vacation type and allocate the number of hours for that type. Repeat for each vacation type to which you want to allocate hours. You can add up to 20 vacation types to one vacation plan.
Assign Agents	Select the agents to whom you want to assign this plan. An agent can be assigned to only one plan on any given date.
New Plan Name	The name of the new vacation plan into which you want to copy values. This field only appears when you select the Copy Plan option.

Manage time off allotments

On the Time Off Allotments page, you can set the maximum amount of time that agents in a service queue can take off each day of the year.

You can configure time off allotments in FTEs (full time equivalents) or hours, depending on which unit your administrator has selected on the WFM Global Settings page (see Configure system-wide WFM settings).

Using time off allotments with time off requests

When a supervisor approves an agent’s time off request for either a partial or an entire day off, WFM subtracts the amount of time that the agent requests from the time off allotments that have been entered for that day. Seeing how much time off remains on a particular day can help both agents and supervisors make informed decisions about requesting and approving time off.

> **NOTE** If the time off request passes through a workflow, the agent must have a main service queue configured in order for the allotments to be calculated correctly. The workflow looks for the main service queue to deduct allotments from.

Supervisors and agents can see how much of the time off allotments remain when they do the following:

- Supervisors—Look at the Allotment Gap column while reviewing time off requests (see Approve or deny requests).
- Agents—Look at the Available Allotment column while creating time off requests (see Request time off).

  > **NOTE** This feature is available only if the administrator has configured WFM to display the Time Off Allotments button (see Configure system-wide WFM settings).

  > **NOTE** Agents will never see a negative value in the time off allotments. If the value goes below zero, the agent will see a zero as the remaining allotment. This discourages agents from taking time off on understaffed days.

Supervisors and agents see the remaining time off allotments in FTEs or Hours, depending on which unit the administrator has selected.

Calculating time off allotments with time off requests

The following sections explain how WFM subtracts time off requests from time off allotments.

Time off requests with FTEs or hours

When a supervisor approves a time off request, the amount that WFM subtracts from the time off allotments for the day of the request depends on whether the administrator has configured WFM to display FTEs or hours:

- FTEs—WFM uses the following formula:

  Time off allotments for the day - (Number of hours in a partial or an entire day time off request ÷ Default FTE per day)

  > **NOTE** The default FTE per day is configured on the Configure system-wide WFM settings page.

- Hours—WFM uses the following formula:

Time off allotments for the day - Number of hours in a partial or an entire day time off request

Entire day time off requests

In the calculations above, the amount of time subtracted by an entire day time off request depends on whether your agents have schedules for the days that they request time off for:

- Agents have schedules—WFM uses the amount of paid time that the agent is scheduled to work on the day that they request time off for.
- Agents do not yet have schedules—WFM uses a fraction of the agent's minimum hours per week (configured and assigned on the Manage full time equivalent profiles page) to calculate how many hours equal an entire day:

  Minimum hours per week ÷ 5 = Number of hours in an entire day time off request

> **NOTE** When agents request time off for a day that they do not yet have schedules for, WFM always divides their minimum hours per week by five, not by the number of week days that their service queues are actually open.

The following table shows what happens to time off allotments when three agents submit time off requests for September 10 and the following conditions are all true:

- The agents do not yet have schedules for September 10.
- The agents have different minimum hours per week.
- The default FTE per day is 8 hours.
- The display unit for time off allotments is FTEs.
- The time off allotments for September 10 are 3 FTEs.

Time Off Requester	Min. Hrs. per Week Calculation	Impact Calculation (FTEs)
Agent A	20 min. hrs. ÷ 5 = 4	4 ÷ 8 = 0.5 FTEs
Agent B	30 min. hrs. ÷ 5 = 6	6 ÷ 8 = 0.75 FTEs
Agent C	40 min. hrs. ÷ 5 = 8	8 ÷ 8 = 1.0 FTEs
TOTAL		2.25 FTEs

After a supervisor approves these time off requests, the time off allotments remaining for September 10 are 0.75 FTEs.

> **NOTE** If an agent belongs to multiple service queues, the supervisor who approves a time off request determines which service queue's FTE allotment it applies to.

Copying time off allotments

You can copy a service queue's time off allotments to another year or to another service queue for any year.

The copy action copies an entire year of time off allotments at once, and it replaces any time off allotments that have been previously configured for the service queue that you are copying to. This replacement happens even if you have entered FTEs or hours into fewer months for the service queue you are copying than for the service queue you are copying to.

Example 1: Service queues both have time off allotments for an entire year

The following list shows what happens when you copy time off allotments from a service queue that has an entire year of FTEs or hours to another service queue that also has an entire year of FTEs or hours:

- Situation—Service Queue A and Service Queue B both have time off allotments configured. Service Queue A has FTEs or hours entered for all of 2018, and Service Queue B has FTEs or hours entered for all of 2019.
- Action—You copy the time off allotments that Service Queue A has in 2018 to the time off allotments that Service Queue B will have in 2019.
- Result—Service Queue A's time off allotments replace all Service Queue B's time off allotments. Service Queue B's time off allotments for 2019 are now the same as Service Queue A's time off allotments are for 2018.

Example 2: Service queues have time off allotments for different numbers of months

The following list shows what happens when you copy time off allotments from a service queue that has only a month of FTEs or hours to another service queue that has an entire year of FTEs or hours:

- Situation—Service Queue A and Service Queue B both have time off allotments configured. Service Queue A only has FTEs or hours entered for March 2018, and Service Queue B has FTEs or hours entered for all 2019.
- Action—You copy the time off allotments that Service Queue A has in 2018 to the time off allotments that Service Queue B will have in 2019.
- Result—Service Queue A's time off allotments replace all Service Queue B's time off allotments. Now, Service Queue B does not only have the same FTEs or hours for March 2019 as Service Queue A has for March 2018. Service Queue B also has the same FTEs or hours for the rest of 2019 as Service Queue A has for the rest of 2018, which means that it does not have any. Even though

Service Queue A only has time off allotments configured for one specific month, the copy action fills all other months in Service Queue B's time off allotments with blanks.

Time off allotments and time zones

The time off allotments list that agents see in a Time Off request reflect the default time zone, although the agent's time off request is displayed and submitted in the agent's display time zone.

Time off allotments are taken out of a service queue's bucket based on which day the majority of the time span covers in the default time zone. If the time off is split equally between two days, the allotment is taken out of the bucket for the time span's start date.

In the table below are examples of what happens when an agent's time off request (EST) crosses midnight in the default time zone (PST). As is shown, the date on which the majority of the time off falls in the default time zone determines which service queue bucket the allotment is taken out of.

Time Off Request (EST)	Default Time Zone (PST)	Allotment Bucket Affected
October 10, 00:00 October 10, 24:00	October 10, 21:00 (3 hours) October 11, 21:00 (21 hours)	October 11
October 10, 00:00 October 10, 05:00	October 9, 21:00 (3 hours) October 10, 02:00 (2 hours)	October 9
October 10, 00:00 October 10, 06:00	October 9, 21:00 (3 hours) October 10, 03:00 (3 hours)	October 9

Field descriptions

Use the Time Off Allotments page to enter, edit, copy, and delete time off allotments for service queues.

The fields on the page when you edit time off allotments are described below.

Field	Description
Service Queue	The service queue that you want to configure allotments for.
Year	The year that you want to configure allotments for.
Month	The month that you want to configure allotments for. If you select a specific month, you can configure allotments for that month only. If you select All, you can configure allotments for the entire year.

Field	Description
Quick Entry	To quickly enter values in the allotment table, enter the desired allotment for each day of the week. That value is then applied to each corresponding day of the week in the allotment table. When your cursor is in the field for a specific day, the corresponding days in the allotment table are highlighted in blue. You can edit the values in the allotment table after you have filled it using Quick Entry. You can only enter whole numbers into the Quick Entry fields. The values that you enter can either be FTEs or hours, depending on which unit the administrator has selected (see Configure system-wide WFM settings).

The fields on the page when you copy time off allotments are described below.

Field	Description
Service Queue	The service queue with the allotments that you want to copy.
Year	The year with the allotments that you want to copy.
Copy to Queue	The service queue that you want to copy the allotments to.
Copy to Year	The year that you want to copy the allotments to.

Agent time off reports

For information about the standard QM and WFM reports that come with Webex WFO, and for instructions on how to run a standard report, see QM standard reports and WFM standard reports.

Analyze contacts, people, and processes

Analyzing contacts, people, and processes entails the following:

- Collect and process data with analytics tasks.
- Organize data from transcripts, automated desktop actions, and Smart Desktop event triggers.
- View data in dashboards on the Analytics Dashboard page.

Create Analytics tasks

Use the Task Manager page to collect and process data with Analytics tasks. These tasks analyze current or previously captured data. This data can include audio recordings, email text, and desktop and event data. Webex WFO puts the processed data in a searchable database.

Analytics tasks can be ongoing (run whenever new data comes into the system) or ad hoc (run once at a scheduled time and date).

When scheduling Analytics tasks, remember the following points.

- If a speech-to-text task fails, Webex WFO retries at a later time to complete the task.
- The time zone in Task Manager is your organization’s default time zone.

Prerequisites

- Your organization has one of these licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics (lets you create Desktop Analytics tasks)
- You have at least one of the following permissions:
  - Administer Desktop Analytics
  - Administer Speech Analytics
  - Administer Speech to Text Analytics

    - Administer Text Analytics
    - Administer Predictive Analytics

- To create a task, you have scope over at least one group. If you have scope only for a team and not the group the team belongs to, you cannot create a task for that team.
- (For desktop analysis) Applications and websites are configured on the Desktop Manager page.
- (For desktop analysis) Application and website fields are configured on the Field Manager page.
- (For audio and text analysis) Phrases and phrase categories are configured on the Phrase Manager page.

Page location

Application Management > Analytics > Task Manager

Procedures

Create a new task

1. Click **Create Task**.
2. Enter a unique name for the task in the **Name** field.
3. Select the type of task you want to create from the **Type** drop-down list. The fields that display vary based on the type of task you select. Click the task type below for the rest of the steps.

   Desktop Analytics

   Speech to Text (Transcription)

   Text Analytics

   Predictive Evaluation Score

   Predictive Net Promoter Score

   Auto QM

   #### Desktop Analytics

   This task processes uploaded desktop analytics data and merges that information with the agents' audio and screen recording data. You need the Administer Desktop Analytics permission to work with Desktop Analytics tasks.

1. In the **Running the task** section, configure when the task should run and the date range of the data the task should analyze.

Ongoing and **Ad-Hoc** buttons	To run the task whenever new data comes into the system, select **Ongoing**. This disables the date, time, and range fields. To run the task only once, select **Ad-Hoc**.
Schedule task	Select the start date and time of the task. The date can be today's date or a future date. The time must be in the future. It cannot be the current time.
Selecting calls	Select the start date and end date of the range of data you want the task to process. The start date must be in the past by at least one day. It cannot be today's date. The end date must be later than the start date but before today's date.

2. In the **Groups and teams** section, assign groups and teams to the task. Only groups and teams within your scope are available.

   NOTE If you assign a group but don't assign a team, Webex WFO assigns the task to all teams within that group.

3. Click **Save**.

Speech to Text (Transcription)

This task transcribes audio recordings and then searches the text for predefined phrases (which you configure on the Phrase Manager page) and stores the results in a searchable database. You need the Administer Speech to Text Analytics permission to work with Transcription tasks.

1. Select the language associated with the task from the **Language** drop-down list. The language you choose determines what appears in the list of available phrase categories.

   NOTE Some languages in this drop-down list might require additional configuration for your Webex WFO implementation. Consult with Support to ensure the language you want to transcribe is configured for you.

2. (Optional) For English transcriptions, select **Enable** in the Sentiment analysis section to have Webex WFO analyze the emotions expressed in a contact. You can view a single contact's sentiment in the media player and can filter contacts on the Interactions page based on sentiment. Sentiment Analysis also generates an agent's Net Reputation Score, which appears in the media player. Select **Disable** to conserve system resources.
3. Select **Enable** in the **Phrase hits** section to have Webex WFO search transcripts for all of your organization's active predefined phrases. Select **Disable** to conserve system resources (not recommended: phrase hits are an important component of many Analytics features).
4. Select an existing **Index tag**, or create a new index tag for the task.
5. In the **Running the task** section, configure when the task should run and the date range of the data the task should analyze.

Ongoing and **Ad-Hoc** buttons	To run the task whenever new data comes into the system, select **Ongoing**. This disables the date, time, and range fields. To run the task only once, select **Ad-Hoc**.
Schedule task	Select the start date and time of the task. The date can be today's date or a future date. The time must be in the future. It cannot be the current time.
Selecting calls	Select the start date and end date of the range of data you want the task to process. The start date must be in the past by at least one day. It cannot be today's date. The end date must be later than the start date but before today's date.

6. (Optional) To create summaries of the transcribed calls, select the **Enable** radio button in the **AI Interaction summary** section.
7. Enter the approximate percentage of calls to transcribe in the **Percentage** field. Webex WFO gives each call the specified chance to be transcribed rather than transcribing a percentage of the total calls received over a set time period. This results in a representative sample of the calls transcribed as the calls come in. There will be some deviation from the percentage, but that deviation becomes less significant over time.

8. (Optional) Configure the **Conditions** that must be met for the call to be transcribed. Depending on which condition you choose, additional fields for an operand and a value or a time range appear.

   NOTE If you use this optional section, calls that do not meet the filter conditions are not transcribed.

9. In the **Groups and teams** section, assign groups and teams to the task. Only groups and teams within your scope are available.

   NOTE If you assign a group but don't assign a team, Webex WFO assigns the task to all teams within that group.

10. Click **Save**.

Text Analytics

This task searches captured email or chat text for predefined phrases (which you configure on the Phrase Manager page) and stores the results in a searchable database. You need the Administer Text Analytics permission to work with Text Analytics tasks.

1. Select an existing **Index tag**, or create a new index tag for the task.
2. In the **Running the task** section, configure when the task should run and the date range of the data the task should analyze.

Ongoing and **Ad-Hoc** buttons	To run the task whenever new data comes into the system, select **Ongoing**. This disables the date, time, and range fields. To run the task only once, select **Ad-Hoc**.
Schedule task	Select the start date and time of the task. The date can be today's date or a future date. The time must be in the future. It cannot be the current time.
Selecting calls	Select the start date and end date of the range of data you want the task to process. The start date must be in the past by at least one day. It cannot be today's date. The end date must be later than the start date but before today's date.

3. In the **Groups and teams** section, assign groups and teams to the task. Only groups and teams within your scope are available.

   > **NOTE** If you assign a group but don't assign a team, Webex WFO assigns the task to all teams within that group.

4. In the **Phrase categories** section, assign phrase categories to the task.
5. Click **Save**.

> **NOTE** For ad-hoc Text Analytics tasks that process more than 200 contacts, it might take a few minutes for the full number of **Processed**, **Failed**, and **Total** contacts to appear, even after the task **Status** is **Finished**.

Predictive Evaluation Score

This task uses machine learning models to predict a contact's evaluation score. You need the Administer Predictive Analytics permission to work with Predictive tasks.

> **IMPORTANT** Predictions are complex and require work in multiple spots within Webex WFO. See Configure predictions for more information.

> **NOTE** Predictive Evaluation Score tasks can analyze only audio contacts. Other types of contacts do not support predictive evaluation scores.

1. In the **Running the task** section, configure when the task should run and the date range of the data the task should analyze.

Ongoing and **Ad-Hoc** buttons	To run the task whenever new data comes into the system, select **Ongoing**. This disables the date, time, and range fields. To run the task only once, select **Ad-Hoc**.
Schedule task	Select the start date and time of the task. The date can be today's date or a future date. The time must be in the future. It cannot be the current time.
Selecting calls	Select the start date and end date of the range of data you want the task to process. The start date must be in the past by at least one day. It cannot be today's date. The

end date must be later than the start date but before today's date.

2. In the **Groups and teams** section, assign groups and teams to the task. Only groups and teams within your scope are available.

   > **NOTE** If you assign a group but don't assign a team, Webex WFO assigns the task to all teams within that group.

3. Click **Save**.

Predictive Net Promoter Score

This task uses machine learning models to predict a contact's net promoter score. You need the Administer Predictive Analytics permission to work with Predictive tasks.

> **IMPORTANT** Predictions are complex and require work in multiple spots within Webex WFO. See Configure predictions for more information.

> **NOTE** Predictive Net Promoter Score tasks can analyze only audio contacts. Other types of contacts do not support predictive net promoter scores.

1. In the **Running the task** section, configure when the task should run and the date range of the data the task should analyze.

Ongoing and **Ad-Hoc** buttons	To run the task whenever new data comes into the system, select **Ongoing**. This disables the date, time, and range fields. To run the task only once, select **Ad-Hoc**.
Schedule task	Select the start date and time of the task. The date can be today's date or a future date. The time must be in the future. It cannot be the current time.
Selecting calls	Select the start date and end date of the range of data you want the task to process. The start date must be in the past by at least one day. It cannot be today's date. The end date must be later than the start date but before today's date.

2. In the **Groups and teams** section, assign groups and teams to the task. Only groups and teams within your scope are available.

   > **NOTE** If you assign a group but don't assign a team, Webex WFO assigns the task to all teams within that group.

3. Click **Save**.

Auto QM

This task allows users to assign forms to different groups or teams.

1. Enter a name for the task in the **Name** field.
2. Select the Auto QM from the **Type** drop-down list.
3. Select a name from the **Form name** drop-down list.
4. Select the required **Groups** and **Teams** and click either **Add all** or **Remove all**.
5. Click **Save**.

Filter existing tasks

1. Click **Filters** (the funnel icon, upper-left corner of the page). The **Filters** panel opens.
2. Configure your search criteria.
3. Click **Apply**. The list of tasks updates. Click **Reset** to see all tasks.

Show or hide columns

1. Click **Show/Hide columns** (the gear icon, upper-right corner of the page). The **Show/Hide columns** window opens.
2. Select or clear the check boxes as desired.
3. Click **Apply**. The window closes.

Edit an existing task

> **NOTE** You cannot edit a task if processing has started.

1. Double-click the task. The task page opens.
2. Edit the task as desired.
3. Click **Save**.

Cancel a task in progress

You can cancel a task only if its **Status** is **Running**. You cannot cancel tasks with other statuses.

1. Double-click the task. The task page opens.
2. In the **Task processing** section, click **Cancel processing**. A confirmation window opens.
3. Click **Yes**. The window closes.

Delete a task

> **NOTE** You cannot delete an ad-hoc task after it has run. This restriction maintains historical data and an audit trail.

1. Click **Delete** (the trash can icon). A confirmation window opens.
2. Click **Delete**. The window closes.

Related topics

- About Analytics tasks
- Create and manage desktop items—Use the Desktop Manager page to configure websites and apps as approved or not approved for agent use.
- View agent actions for a contact—View a single contact's desktop analytics results on the Interactions page.
- Identify website fields to be tracked by Analytics—Use the Field Manager page to identify fields on webpages that agents use.
- Create and manage phrases and phrase categories—Use the Phrase Manager page to configure phrases for phonetics, transcription, and text jobs.
- Manage custom metadata fields—Use the Metadata Manager page to configure the metadata that tells Webex WFO to analyze a contact.
- View phrase analytics for a contact—View a single contact's phrase hits on the Interactions page.
- Read the summary of a contact—View the summary of an audio contact on the Interactions page.
- Read the transcription of an audio recording—View a single contact's transcription on the Interactions page.
- Read a text contact—View a single text contact on the Interactions page.

- Configure predictions—Learn how to set up predictive evaluation scores and predictive net promoter scores.

About Analytics tasks

Changes to Analytics licenses

If your organization downgrades from an Analytics Essentials or Analytics Enterprise license to a Desktop Analytics license, Webex WFO automatically disables all existing non-desktop tasks. This disabling does not affect any tasks that are in progress—for example, ad-hoc tasks that have already started or ongoing tasks that are scheduled or started.

Email and chat text

You can set up an ongoing Text Analytics task to analyze emails for predefined phrase hits. If no ongoing task is configured, then all emails are still indexed and saved as email contacts. You can process those emails as ad hoc tasks.

You must set up a Text Analytics task to analyze emails or chats for predefined phrase hits. If no task is configured, here is what happens when text is imported:

- The text is not analyzed in Analytics.
- The contact is still available on the Interactions page.
- Sentiment is not analyzed on the Interactions page.

> **NOTE** If Webex WFO detects a generic email address that is not associated with an agent during an email import to the Mail server, Webex WFO creates a new user and associates the user with that email address. This user then appears on the user list and adds a user to the user count.

Languages and teams

For a complete list of supported languages in Webex WFO, see “Localization and supported languages” in the *Webex WFO Installation Guide*.

> **IMPORTANT** Languages require server configuration. Before using a language in a task, make sure your system administrator has configured the language.

When you run a speech task, results are based exclusively on the selected language. There is an implied relationship between teams and languages. For example, if you choose French from the Language drop-down list when configuring a task, the task processes all calls in French for the selected teams. Any secondary language spoken during those calls produces bad results.

BEST PRACTICE

If your contact center supports multiple languages, each team should be associated with a specific language.

It is not unusual for one or more agents in a team to be bilingual. In that case, bilingual agents switch between languages during a call or from one call to another. If agents on a team are known to use a secondary language during a call, create a metadata tag using the Metadata Manager page (Application Management > QM > QM Configuration > Metadata Manager) and assign the possible language values to a metadata tag. When an agent uses a secondary language during a call, the agent can assign that metadata tag to identify the language used. You can then run a task to search for all calls associated with the team that are tagged with that specific language metadata tag.

EXAMPLE

Agent A is on the Sales team and speaks French as a primary language and English as a secondary language. When Agent A switches to English for a call, she tags the call with a metadata tag called **VoiceLanguage** and a value of **English**.

To analyze Agent A’s English language calls, you create a Speech to Text (Transcription) task configured with the following settings:

- Language: English
- Team: Sales

If you select French from the Language drop-down list, the task will not yield any results.

Language transcription for gateway recording

Gateway recording creates a root recording for the whole call from beginning to end. If the call is transferred, this root recording has multiple segments, one for the initial call and another for the transfer. (If a call is transferred multiple times, each transfer is a separate segment.)

When this recording is reconciled, Webex WFO transcribes the call using the language of the last segment, which is the language associated with the last segment's speech-to-text task. A speech-to-text task can be associated with only one language. If the people on the call speak a different language after the call is transferred, Webex WFO will still try to transcribe the call in the language used in the last segment.

> **EXAMPLE** The agent and caller speak English for the first call segment, which is associated with an English speech-to-text task. The agent transfers the caller to a Spanish-speaking agent. This second segment is associated with a Spanish speech-to-text task. Webex WFO transcribes both segments of this call in Spanish after the recording is reconciled.

If a call segment is not associated with a speech-to-text task, Webex WFO will not transcribe the segment. If the last segment of a call is not associated with a speech-to-text task, Webex WFO will not transcribe the call.

> **EXAMPLE** The agent and caller speak English for the first call segment, which is associated with an English speech-to-text task. The agent transfers the caller to a Spanish-speaking agent. This second segment is not associated with a speech-to-text task. Webex WFO does not transcribe the call.

Organize Data

Organizing data entails the following:

- Create, manage, import, and export the phrase lists used in speech and text analytics tasks.
- Configure Webex WFO to perform various actions automatically when a user opens or interacts with a Windows application or website.
- Configure fields associated with websites that have been marked for use in Smart Desktop.

Create and manage phrases and phrase categories

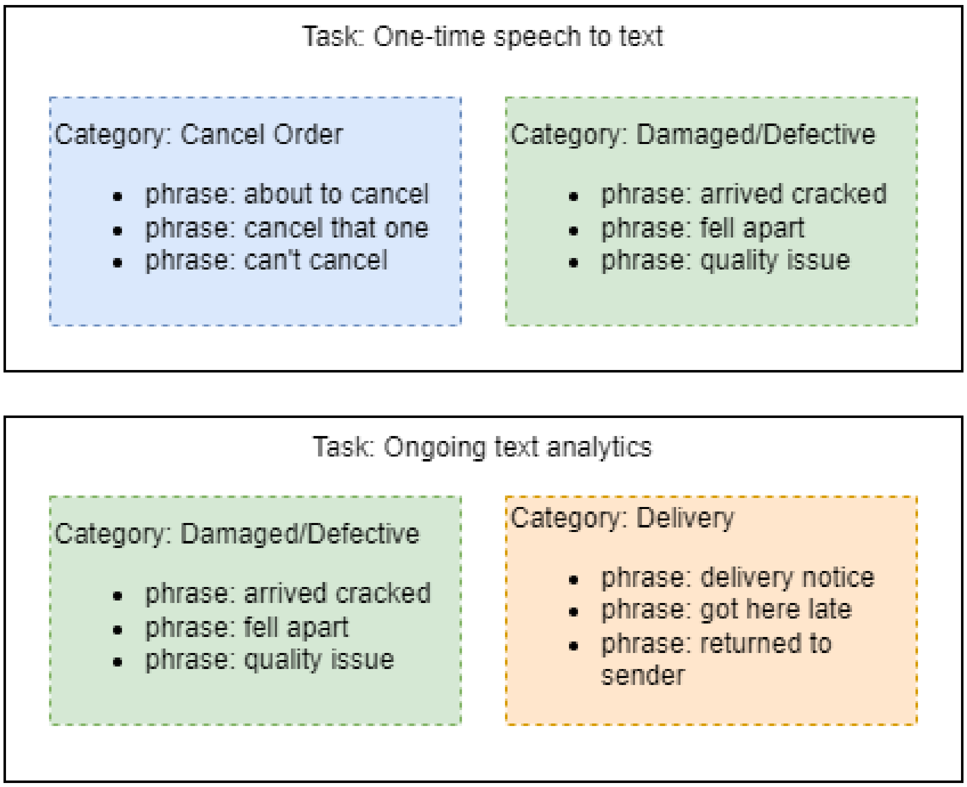
Use the Phrase Manager page to create, manage, import, and export the phrases used in speech and text analytics tasks.

A **phrase** is a group of one or more words that Webex WFO can search for as a single grammatical unit in audio and text tasks. When you provide a phrase that is important to your business, Webex WFO searches for that phrase in the transcriptions of audio recordings and the text in emails and chats.

A **category** is a collection of phrases that you organize together because they have a similar business purpose or language. For example, a category called "Cancel Order" could contain phrases like "about to cancel," "cancel that one," and so on. Analytics tasks can process multiple phrase categories, and phrase categories can be used in multiple tasks. You can also use categories to group phrases by language. For example, you can create a “Happy Customer—English” category for agents who speak English and a “Client heureux—français” category for agents who speak French.

A **task** is a job that tells Webex WFO to search specific types of contacts for phrases within specific categories. You manage tasks on the Task Manager page. See Create Analytics tasks for more information about tasks.

The diagram below illustrates the relationship between phrases, categories, and tasks.



Prerequisites

- Your organization has either the Analytics Essentials or Analytics Enterprise license.
- You have the Administer Analytics Phrases permission.

Page location

Application Management > Analytics > Phrase Manager

Procedures

View the phrases in existing categories

1. (Optional) To view phrases for languages other than United States English, select a language from the drop-down list at the top of the **Phrase Categories** panel.
2. Click a category in the **Phrase Categories** panel. Phrases within that category appear in the **Phrases** panel.

View the tasks that use a category

- Click the options icon (the three dots) next to the category, and then select **Associated Tasks** from the drop-down list. The **Associated Tasks** window opens with a list of all the tasks that use this category, along with the task type and schedule (ongoing or ad hoc).

Get suggestions for new phrases

Webex WFO uses artificial intelligence to generate phrases to add to your categories. Phrase suggestions are based on “seed” phrases that are already in the category.

1. Click the category in the **Phrase Categories** panel.
2. In the **Phrases** panel, select the check box next to the “seed” phrases that you want Webex WFO to use to generate suggestions.

   BEST PRACTICE Select at least three phrases. Webex WFO can make suggestions based on only one phrase, but selecting more gives it more material to work with.

3. In the **Suggestions** panel, click **Make Suggestions**. A list of suggested phrases appears.
4. Click a suggestion to add it to the category.
5. (Optional) To get more suggestions, select the check box next to the seed phrases and click **Make Suggestions** again.
6. When you are finished adding phrases, click **Save**.

Add a new phrase

NOTE A phrase can exist in only one category per language. If you need to add an existing phrase to a new category in the same language, first delete the phrase from its old category.

NOTE You can use the same phrase in multiple languages.

1. Click the category that the new phrase will go into in the **Phrase Categories** panel. Phrases that are already in the category appear in the **Phrases** panel.
2. In the **Phrases** panel, enter the new phrase in the **Type to create a phrase** field.
3. Press the Enter key. The new phrase is added to the list of phrases. By default, the new phrase is active.
4. Click **Save**.

Add a new category

1. In the **Phrase Categories** panel, enter the category name in the **Create a phrase category** field.

   NOTE The category name must be unique. You cannot use the same category name in different languages.

2. (Optional) Enter a description for the category in the **Description** field.
3. Click **Save**. The category and its description appear in the list of categories.

Edit a phrase

IMPORTANT Be careful when editing phrases. Editing a phrase can create a mismatch between previous phrase hits and new hits.

1. Click the phrase you want to edit.
2. Edit the phrase.
3. Press the Enter key.

Edit a category

You can edit a category’s name and description.

1. Click the options icon (the three dots) next to the category and then select **Edit** from the drop-down list.
2. Edit the category.
3. Click **Save**.

Disable a phrase

Disabling a phrase removes it from all speech-to-text (transcription) tasks. Webex WFO does not identify hits for disabled phrases.

1. Click the phrase.
2. Select **Inactive** from the **Active** drop-down list.
3. Click **Save**.

Enable a phrase

Enabling a phrase causes Webex WFO to search for it in all speech-to-text (transcription) tasks.

1. Click the phrase.
2. Select **Active** from the **Inactive** drop-down list.
3. Click **Save**.

Delete a phrase

You can delete a phrase only when any contacts that contain hits for that phrase have reached the end of their data retention period and are deleted.

1. Select the check box next to the phrase.
2. In the upper-right corner of the **Phrases** panel, click **Delete**. The phrase is deleted immediately.

Delete a category

> **IMPORTANT** Deleting a category also deletes all the category's phrases. Deleting a category cannot be undone.

1. Click the options icon (the three dots) next to the category and then select **Delete** from the drop-down list. A confirmation window opens.
2. Click **Delete**. The window closes.

Import categories and phrases

You can use a CSV file to import new categories and phrases and update existing categories and phrases. The file you import must include the columns listed in the table below, in the order shown (top to bottom = order left to right in the file). If there is a format error, the import fails.

> **NOTE** A phrase can exist in only one category per language.

> **EXAMPLE** You try to import Phrase A into English (U.S.) Category B, but Phrase A already exists in English (U.S.) Category C. Webex WFO does not add Phrase A to English (U.S.) Category B.

> **EXAMPLE** You want to import Phrase A into English (U.K.) Category D. Phrase A already exists in English (U.S.) Category C. Webex WFO successfully adds Phrase A to English (U.K.) Category D. Phrase A now exists in both English (U.K.) Category D and English (U.S.) Category C.

1. Click the options icon (the three dots) at the top of the **Phrase Categories** panel and select **Import** from the drop-down list. Your device's file explorer opens.
2. Locate the CSV file and then click **Open**.

BEST PRACTICE We are in the process of removing the Phonetic, Soundslike, and Confidence fields. We recommend that you not use these columns in your imported CSV file.

<table>
<tr><th>Column</th><th>Description</th></tr>
<tr><td>Category</td><td>(required) The name of the category.</td></tr>
<tr><td>Phrase</td><td>(required) The phrase text.</td></tr>
<tr><td>Phonetic</td><td>This column is no longer used.</td></tr>
<tr><td>Soundslike</td><td>This column is no longer used.</td></tr>
<tr><td>Confidence</td><td>This column is no longer used.</td></tr>
<tr><td>State</td><td>(required) 0 (zero) if the phrase is disabled for Analytics, or 1 if the phrase is enabled for Analytics.</td></tr>
<tr><td>LanguageID</td><td>(required) The 2-character language code and 2-character country code for the phrase, in the format nn-nn.The table below lists the supported languages.
<table>
<tr><th>Language</th><th>Code</th></tr>
<tr><td>Arabic</td><td>ar-ar</td></tr>
<tr><td>Danish</td><td>da-dk</td></tr>
<tr><td>Dutch (Netherlands)</td><td>nl-nl</td></tr>
<tr><td>English (Australia)</td><td>en-au</td></tr>
<tr><td>English (Euro)</td><td>en-eu</td></tr>
<tr><td>English (South Africa)</td><td>en-za</td></tr>
</table>
</td></tr>
</table>

Column	Description	
	Language	**Code**
	English (U.K.)	en-uk
	English (U.S.)	en-us
	Finnish	fi-fi
	French (Canada)	fr-ca
	French (France)	fr-fr
	German (Germany)	de-de
	Italian	it-it
	Norwegian	no-no
	Portuguese (Brazil)	pt-br
	Spanish (Euro)	es-eu
	Spanish (North America)	es-mx
	Swedish	sv-se

Export categories and phrases

You can export all Phrase Manager data to a CSV file.

- Click the options icon (the three dots) at the top of the **Phrase Categories** panel and select **Export All** from the drop-down list. A file named phrases.csv downloads to your device.

Related Topics

- Create Analytics tasks—Configure Webex WFO processes that search audio and text contacts for phrases.
- View phrase analytics for a contact—View a single contact's phrase hits on the Interactions page.

Identify websites and apps to be tracked by Analytics

Use the Desktop Manager page to configure Webex WFO to perform various actions automatically when a user opens or interacts with a Windows application or website. These configured automated actions are called **desktop item events**.

> **EXAMPLE** To prevent recordings from capturing sensitive data, you want Webex WFO to pause the recording when an agent clicks in the Credit Card Number field in your order management application and to resume the recording when the agent clicks out of the Credit Card Number field.

You can add the target applications and websites manually or in a batch using the Import function. The Export function allows you to obtain a list of all the applications and websites set up in Desktop Manager.

You can also mark specific applications and websites as "approved" or "not approved" on this page. This enables you to identify agents who are accessing applications and websites that your company has not approved for use.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics

    > **NOTE** The Desktop Analytics license lets you mark websites and apps as approved or unapproved for agents to use. (See Create and manage desktop items for instructions.) It does not allow you to configure automated actions like pausing and resuming recording of a call.
- You have the Administer Desktop Analytics permission.

Page location

Application Management > Analytics > Analytics > Desktop Manager

Procedures

- Create and manage desktop items—Add, edit, and set the status of desktop items; import and export desktop item data; set the status of desktop items, and push updated configurations to Smart

Desktop users.

- Configure desktop item events—Create and edit automated desktop item events.
- Use the Application Field Marker tool—Obtain the information you need to configure a desktop item event that involves fields in a Windows application.

Create and manage desktop items

Before you can create an automated desktop item event, you must have a list of the applications and websites those event run against.

Procedures

Filter the list of applications and websites

1. Use the **Search** field and the **View**buttons in the toolbar to filter what appears on the Desktop Manager page.
   - Enter any string in the **Search** field to limit the list to applications and websites whose names contain that string.
   - Click the **App** or **Web**buttons to show only applications or websites, or both. A selected button is dark gray. A deselected button is light gray.
   - Click the **Application State** button to select the states you want to view.
2. Clear the **Search** field and select all buttons to view the entire list of applications and websites.

Add a new desktop item

1. Click **New Desktop Item**. The **Add New Desktop Item** page opens.
2. Select the type of item you want to add from the What Do You Want to Do? options. Fields appear based on the type of item you select.
3. Complete the fields as described below. This table contains all the possible fields you might see.

Field	Description
Application, Website, or Field Name	Enter a unique and easily identifiable name for the desktop item.

Field	Description
Application File	Enter the executable file name of the Windows application you are adding. **EXAMPLE** word.exe
Application or Website Status	Select the status of the application or website from the drop-down list. **NOTE** Each time a desktop analytics task finds a new application or website, it assigns the New status to it (see Create Analytics tasks). When the New status appears, you must change the status to Approved, Not Approved, or Ignore.
URL	Enter the website's URL. Use only the pieces of the URL that do not have slashes (/). **EXAMPLE** Yes: www.example.com Yes: www.example.com:1234 No: http://www.example.com No: www.example.com/website
Application Properties	This section is used to define a text field within an application. You must use the Application Field Marker tool to obtain this information. This tool is available on any desktop that has Smart Desktop installed. See Use the Application Field Marker tool to learn how to use the tool and populate the fields in this section.

4. Click **Save**. The fields on the page clear, and you are ready to add another new desktop item. If you are done adding new items, click**Cancel** to return to the Desktop Manager page.

Edit an existing desktop item

- Click the desktop item in the left pane to view the details of that item in the right pane. Edit as desired and then click **Save**.

Assign a status to multiple items

1. In the left pane, select the applications and websites whose status you want to change.
2. Select a status from the **Application Status** drop-down list.
3. Click **Save**.

Import data to Desktop Manager

1. In the **Import** section of the page, navigate to the CSV file you want to import using the **Browse** button.

   The CSV file must contain the following columns in order as listed from top to bottom. Every field in a row must contain a value. The CSV generated when you export data follows this format.

   > **NOTE** Files exported from a pre-11.0 version of Webex WFOcontain an additional column, “handleCode.” To import these files into Cloud/11.0 or newer, you must remove that column and associated data from the CSV file.

Column	Description
key	The executable name for an application or the URL for a website.
name	The name of the application or website.
status	The status of the application or website.
type	The type of desktop item: application, content (website), or system.

2. Click **Import**.

Export information from Desktop Manager

- In the Export section, click **Export** to save or open the file. By default, the export file is named **desktopuse.csv**.

> **NOTE** Exported files contain only the applications that have been acted upon. Not all applications in the Desktop Manager application list appear in the exported file.

Push updated application and website configurations to user desktops

- Click the **Push Configuration** button to push any changes made to applications or websites in Desktop Manager to your user's desktops.

Configure desktop item events

The Desktop Manager Event Configuration page allows you to control how Webex WFO responds when users access websites and applications. You can configure one or more events for any desktop item on the Desktop Manager page. These events are triggered by Smart Desktop on the agent's computer at run time.

> **NOTE** See Webex WFO Pause and Resume for information on using desktop item events for Webex WFO initiated automatic pause and resume functionality in Webex WFO integrations. Webex WFO initiated automatic pause and resume using desktop item events is not available for all integrations.

An event consists of the following components:

Start trigger	What the user does that starts the system action **The agent clicks in the Credit Card Number field.**
System action	What Smart Desktop does when the Start Trigger happens **Smart Desktop stops audio and screen recording**.
Action duration	How long before a stop action happens automatically instead of by a stop trigger **Smart Desktop restarts audio and screen recording one minute after the agent clicks in the Credit Card Number field.**
Stop trigger	(optional) What the user does that stops the system action **The agent clicks out of the Credit Card Number field.**
Stop action	(optional) What Smart Desktop does when the Stop Trigger happens **Smart Desktop restarts audio and screen recording.**

When you play back a call associated with an event in the Media Player, the event is highlighted in yellow in the Media Player's Desktop panel and in Agent Explorer.

Smart Desktop does not track new or updated desktop events until one of the following happens:

- A user logs in or out of Smart Desktop.
- You click **Push Configuration** on the Desktop Manager page.
- A daily refresh occurs (by default, a random time between 4:00 and 4:30 AM).

Page location

Application Management > Analytics > Desktop Manager > Add Event

Procedures

Create a new desktop item event via the Desktop Manager page

1. On the Desktop Manager page, select the desktop item to which you want to add an event.
2. Click **Add Event** to open the Desktop Manager Event Configuration page.
3. Select **Create a new event**.
4. (For applications only) In the **Event Type** section, choose the type of event you want to create.
   - Desktop event—The start trigger for the event is something that a user does in an application.
   - Automated event—The start trigger for the event is an RTP signal that Webex WFO automatically detects. For more information about RTP signaling, see Configure QM global settings.
5. In the **Event Name** field, enter a name that clearly identifies the event.

   IMPORTANT Each event in Desktop Manager must have a unique name.

6. In the **Start Event Trigger** drop-down list, select the trigger that initiates the event. The triggers listed vary based on whether the desktop item is an application or a website.

   NOTE Using multiple methods of triggering pause and resume (such as Recording Controls, web events, APIs, and third-party signaling) at the same time can result in unpredictable behavior. To avoid these issues, use only one method on a call at a time.

Application (desktop event)

Trigger	Description
Program gets focus	The application window or dialog box has the keyboard focus.
Program loses focus	The keyboard focus ends for the application window or dialog box.
Create	A window or dialog box for the application is created. You can use Create to indicate when an application is started if you specify the top-level window title as the window text.
Destroy	A window or dialog box is destroyed. You can use Destroy to indicate when an application is closed if you specify the top-level window title as the window text. If multiple instances of the same application are running, closing one instance will generate this event, but the other instances will continue running.
Click on text field	The user performs an action that gives keyboard focus to a text field in the application.
Click out of text field	The user performs an action that removes the keyboard focus for a text field in the application.
Button click	The user clicks a button in the application.
Title change	The title of the window changes.

Application (automated event)

Trigger	Description
RTP call starts	Webex WFO detects an inbound or outbound RTP signal.
RTP call stops	Webex WFO no longer detects an inbound or outbound RTP signal.

Website

Trigger	Description
Click on text field	The user performs an action that gives keyboard focus to a text field on a web page.
Click out of text field	The user performs an action that removes the keyboard focus for a text field on a web page.
Request website	The user navigates to the URL specified in the trigger details.
Page makes background request	The URL specified in the trigger details sends an XHR.

7. In the **Start Trigger Details** section, enter the details that define which applications or websites set off the start trigger.

Application

Item	Description
Window title	The name of the window or dialog box associated with the event. **NOTE** This field is not case sensitive. However, the text must match the name of the window or dialog box for the event trigger to succeed. **BEST PRACTICE** Do not specify a window that contains variable text. **NOTE** If you leave this field blank, any window in the associated application can trigger the event unless the trigger is a title change. For title change triggers, this field must contain text.
Button	The name of the button associated with the event. **NOTE** Users must use their mouse to click the button to

Item	Description
	trigger an event. Webex WFO does not recognize the trigger if a user uses a key on their keyboard. For example, a user must click the Save button, not use the key combination Ctrl+S.
Field	The field that triggers the system action when a user clicks on or out of it. The field must be configured in the Field Manager (see Identify website fields to be tracked by Analytics). Used with the “Click on text field” and “Click out of text field” triggers only.

Website

Item	Description
URL	The path for the website that is associated with the event. Enter the part of the URL that comes after the hostname. **EXAMPLE** If the website’s full URL is **http://www.example.com/website/page**, enter **/website/page**. **BEST PRACTICE** Always enter the resolved address of the website. Users frequently use shortcuts when entering a URL in their browser’s address field. The browser uses DNS or some other service to resolve the address and will display the resolved address in the address field (the address includes the omitted “www” or “http,” for example). **NOTE** When you enter the resolved address in this field, Webex WFO automatically triggers an event when a user enters a shortcut for the resolved address.

Item	Description
	If an agent accesses a website and the page for that website is cached, then no request goes through Smart Desktop. In this instance, Webex WFO cannot hit any triggers for the website and will not display the website's URL.
Field	The field that triggers the system action when a user clicks on or out of it. The field must be configured in the Field Manager (see Identify website fields to be tracked by Analytics). Used with the "Click on text field" and "Click out of text field" triggers only.

8. In the **Start System Action** section, click **Add** to add the actions that occur when a start trigger happens. You can configure more than one action for a trigger. When more than one action is used, the actions are treated as operands evaluated with a logical AND. See Add a system action for how to add actions and descriptions of the actions available.
9. In the **Action Duration** section, enter the length of time (in seconds) before a configured stop action happens automatically instead of by a stop trigger. The maximum duration you can set is 3,600 seconds. If you set a value in this section, you must also configure one or more stop actions.

   > **NOTE** If you set the duration to zero seconds, the stop action will never happen automatically.

10. (Optional) In the **Stop Event Trigger** drop-down list, select the trigger that ends the event. The triggers listed vary based on whether the desktop item is an application or a website. See Step 6 above for descriptions of the available triggers.
11. If you selected a stop event trigger, configure the **Stop Trigger Details** section. See Step 7 above for descriptions of the details fields.
12. (Optional unless you configured an action duration) In the **Stop System Actions** section, add the actions that occur when a stop trigger happens. You can configure more than one action for a trigger. When more than one action is used, the actions are treated as operands evaluated with a logical AND.

13. Click **Save**. The event is saved, and the fields on the page clear so you are ready to add another event to the desktop item. If you are done adding new events, click **Cancel** to return to the Desktop Manager page.

Add a system action

1. In the **Start System Actions** or **Stop System Actions** field, select the action you want to occur when a trigger happens. These actions are described in the table below.

Action	Description
Make available in Analytics	Displays the event in Agent Explorer. Webex WFO displays events in Agent Explorer even if you do not select this trigger.
Pause recording	Temporarily halts any audio or screen recording occurring on the agent's desktop. A "Pause recording" system action does not affect Live Screen Monitoring.
Resume recording	Restarts audio and screen recording after a "Pause recording" action.
Access a website	Navigates to the website that you enter in the Start Request URL field.
Scrape metadata	Searches for a field you have marked with the application field marker, then attaches any text in that field as custom metadata to the active call. If no call is active, Webex WFO attaches this metadata to the most recent call.
Add to custom metadata	("Click on text field" and "Click out of text field" triggers only) Attaches the text in a field that you designate in the Field section of the Start or Stop Trigger Details as custom metadata to the active call. If no call is active, Webex WFO attaches this metadata to the most recent call.
Start segment	Starts a new recording and deletes any previous portion of the

Action	Description
	recording. On the Recording Controls page, this action is called Segment and Delete (see Record on demand).
Stop segment	Starts a new recording and keeps any previous portion of the recording as a separate recording. On the Recording Controls page, this action is called Segment and Save (see Record on demand).
Associate segment	Starts a new recording and associates it with the previous recording.
Tag contact	Applies the Tagged reason to the active call. If no call is active, Webex WFO applies this reason to the most recent call.
Start screen recording	Starts a screen-only recording.
Stop screen recording	Stops a screen-only recording.

2. Depending on your action choice, you might need to complete one or more of the other fields. If the field is disabled, it is not required for your chosen action.
   - Windows Field—This drop-down list is populated with fields configured on the Field Manager page.
   - Metadata Field—This drop-down list is populated with metadata configured on the Metadata Manager page.
   - Start (or Stop) Request URL—Enter a website URL. Smart Desktop makes a GET request to this URL.
3. If you want to add another action, click **Add** and repeat steps 1 and 2.

Create a pause-and-resume event via HTML

If you control the page where recording should pause and resume, you can create pause and resume triggers as HTML events. This method is especially helpful for pages where the Cisco browser extension might not get field-level events, such as pages customized with Salesforce Lightning components.

IMPORTANT Do not combine HTML event triggers with other pause-and-resume methods.

- Add these commands to elements that should trigger pause and resume when agents interact with them:
  - document.dispatchEvent(new CustomEvent('CALABRIO_PAUSE'))
  - document.dispatchEvent(new CustomEvent('CALABRIO_RESUME'))

Overlapping events

Do not configure events that frequently overlap each other. When multiple events do overlap, remember the following points:

- Multiple runs of the same event will not overlap.

  > **EXAMPLE**
  > An event named "PCI Compliance" has the following configuration:
  >
  > - Start Trigger—Agent clicks in the credit card field.
  > - Start Action—Smart Desktop stops recording.
  > - Event Duration—Thirty minutes (in seconds)
  > - Stop Trigger—Agent clicks in the address field.
  > - Stop Action—Smart Desktop starts recording.
  >
  > In this event, it is possible for the agent to click in and out of the credit card field several times before clicking in the address field. However, new runs of the PCI Compliance event do not start every time the agent clicks in the credit card field. The PCI Compliance event runs only the first time.

- Each event trigger can be viewed independently. When any event is triggered, the actions associated with the event are performed.
- If more than one event that uses a pause or a resume action is triggered at the same time (that is, they overlap each other), the first start trigger automatically starts the event, the first stop trigger stops all overlapping events, and the following triggers are ignored.

  > **EXAMPLE** An agent clicks a field that is set as a pause action and then clicks in another field that is also set as a pause action. The second pause action is ignored. Likewise, the pause events that these actions triggered will end the first time the agent clicks a field that is set as a resume action. The second resume action is ignored.

Related topics

- Identify website fields to be tracked by Analytics
- Manage custom metadata fields
- Webex WFO Pause and Resume

Use the Application Field Marker tool

The Application Field Marker tool obtains the information you need to configure the Application Properties section of the New Desktop Item page when the new desktop item is a Windows application and field.

> **NOTE** The Application Field Marker tool does not work on website fields. For that you must have your browser correctly configured and use the Ctrl+M shortcut keys. See Identify website fields to be tracked by Analytics for more information.

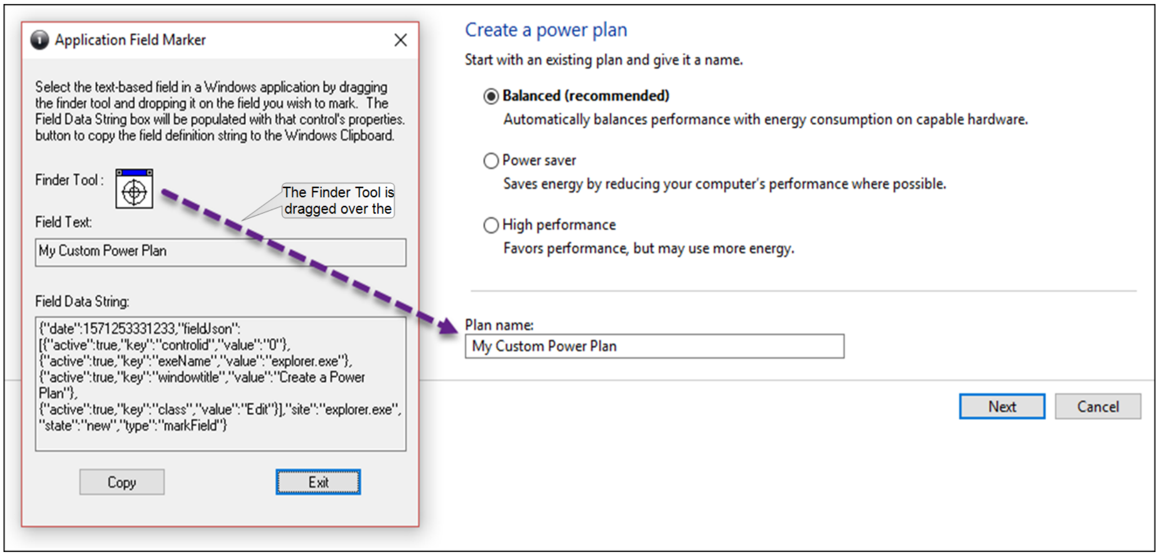
Procedures

Use the Application Field Marker tool

1. On your PC, navigate to the location where the Application Field Marker tool executable is located. The default location is:

   ```
   C:\Program Files (x86)\Webex
      WFO\Desktop\Active\bin\ApplicationFieldMarker.exe
   ```

2. Double-click the executable to launch the tool.
3. Open the application that contains the field you want to configure as a desktop item.
4. In the Application Field Marker tool, click the **Finder Tool** and drag the bullseye onto the field in the target application. When the finder is positioned over the field, the field is highlighted with a heavy border.
5. When you release the mouse, the data strings for the field are displayed in the Field Data String pane, as shown in this example.



6. Click **Copy** to copy the text to your computer's clipboard.
7. On the **Add New Desktop Item** page, paste the text in the **Definition String** field.
8. Click **Parse Fields**. The relevant fields from the definition string text are loaded into the fields to the right of the Definition String pane.

Related topics

- Create and manage desktop items
- Identify website fields to be tracked by Analytics

Identify website fields to be tracked by Analytics

The Field Manager page lists fields associated with websites that have been marked for use in Smart Desktop.

> **NOTE** The Field Manager page manages only website fields. Windows application fields are managed on the Desktop Manager page.

Once a field is marked it is listed on the Field Manager page. From there you can configure the field with the strings that you want to match when running desktop events and actions.

The page's left pane displays the website and its associated fields that have been marked. Enabled fields are highlighted in green. When you select a field in the left pane, its settings appear in the right pane.

When a field first appears in the list, its name is the timestamp when it was marked. When you configure the field, you have to option to replace the timestamp with a name of your choosing to help identify it.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics

    NOTE The Desktop Analytics license lets you identify fields so that you can monitor agents' activity. It does not allow you to configure automated actions like pausing and resuming the recording of a call.
- You have the Administer Desktop Analytics permission.
- You have Smart Desktop installed.
- Your browser must be configured correctly before you can use the field marking shortcut keys. See Enable the Desktop Analytics extension in your browser for details.

Page location

Application Management > Analytics > Analytics > Field Manager

Procedures

NOTE If you delete a field from the Field Manager page that is used in the Desktop Manager page, you must log out of Webex WFO and then log in again for the change to take effect.

Mark a field on a website

1. With the Field Manager page displayed, open a new tab in your browser.
2. Navigate to the website whose fields you want to mark.
3. Click in the desired field and press **Ctrl+M**. The field appears in the left pane of the Field Manager page with a timestamp in place of a name.

Filter the list of websites and fields

- Enter a search string in the **Search Fields** field. The list is immediately updated with fields that meet your search criteria. The search does not filter on website names.
- Use the **View** buttons (**All**, **New**, and **Configured**) to limit the list to fields displayed. New fields are those that have not yet been configured.

Configure a marked field

1. Click the field in the left pane. The right pane displays the field's settings and properties in the right pane.
2. Edit the field settings.
   - The **Website** field contains the URL of the website where the field is located. Click to open the website in a new browser tab.
   - The **Name** field initially contains the timestamp of when the field was marked. You can replace the timestamp with a name that describes the field for easy identification.
3. Edit the field properties. The properties are the data captured by the field marker and can vary from field to field.
   - Select the **Enabled** check box to enable the searching of strings that match the specified field and value when configured in Desktop Manager. If the check box is not selected, the field is ignored.
   - The **Field** column contains the read-only name of the property associated with the marked field.
   - By default, the **Value** field contains the property's value at the time the field was marked. Any value entered in this field must be a supported value for the property. You can use the asterisk wildcard (*) in this field.
4. Click **Save**.

Related topics

- Identify websites and apps to be tracked by Analytics
- "Installing Webex WFO Smart Desktop" in the *Webex WFOInstallation Guide*

Enable the Desktop Analytics extension in your browser

Smart Desktop must be installed on your computer and activated before you can mark fields. Users who have permission to administer fields for Desktop Analytics using the Field Manager page and on the agents' desktops where Smart Desktop is installed must have the appropriate Desktop Analytics browser plug-in configured for the browser they use.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- Smart Desktop is installed and activated on your computer.

Procedures

Enable the Desktop Analytics extension in Firefox

The first time you log in to Webex WFO using Firefox, you see a dialog box telling you to install the Calabrio Browser Extension. Select **Allow this installation** and click **Continue**. No further action is required.

Enable the Desktop Analytics plug-in in Microsoft Edge Chromium

In Edge Chromium, go to https://chrome.google.com/webstore/detail/calabrio-analytics-plugin/hecgknieibccghjmmhhckdfeobjoffdf and click **Add to Chrome**.

Enable the Desktop Analytics plug-in in Chrome

The Chrome extension can be downloaded or installed through GPO settings. Download and install the Calabrio Analytics Plug-in, version 0.2.0.4. The plug-in is located at:

https://chrome.google.com/webstore/detail/calabrio-analytics-plugin/hecgknieibccghjmmhhckdfeobjoffdf

NOTE If clicking the link does not work, copy the URL and paste it into your browser.

Related topics

"Installing Webex WFO Smart Desktop" in the *Webex WFO Installation Guide*

Analytics dashboards overview

The Analytics page is a dashboard that displays data about your desktop, speech, and text contacts. You can use the default dashboard, another user's shared dashboard, or your own custom dashboards. Each dashboard's widgets display data based on your role and the data sets you define. Your access to dashboards depends on your assigned permissions.

If your administrator has configured Analytics to allow dashboard sharing, you can designate any dashboard you create as one that can be shared by other users. Those users can view your dashboard (populated with data that pertains to them) but they cannot edit it. Only you can edit your shared dashboard.

The general process for configuring a dashboard is as follows:

1. Create a new dashboard.
2. Create data sets for the dashboard.
3. Create and add widgets to the dashboard.
4. (Optional) Share your new dashboard with others.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have at least one of the following permissions:
  - View Analytics
  - View Desktop Analytics
  - View Speech Analytics
  - View Speech to Text Analytics
  - View System Analytics
  - View System Metrics
  - View Text Analytics
- Desktop sharing is enabled (optional)

- Analytics data collection is configured in Application Management on the Task Manager, Phrase Manager, Desktop Manager, Field Manager, and Analytics Configuration pages.

Page location

Analytics > Analytics Dashboard

Procedures

Select an existing dashboard to view

- Click the **Dashboards** button on the Analytics toolbar and select an existing dashboard from the resulting list.

Create and work with dashboards

- Create and manage an Analytics dashboard
- Create and manage a data set
- Create and manage an Analytics widget
- Filter data on the Analytics dashboard
- Configure predictions

Related topics

Customize your Analytics dashboard

Create and manage a data set

Data sets determine what appear in the widgets on the Analytics Dashboard page. They must be configured before you create a widget.

Data sets are unique to a specific dashboard. When you create a data set for one dashboard, that data set will not appear in any other dashboards.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- Some data sets are not available with the Desktop Analytics license. See Data sources below for the data sets that are not included with this license.
- You have the View System Analytics permission.

Page location

Analytics > Analytics Dashboard

Procedures

Create a new data set

1. On the Analytics toolbar, click **Data Set Manager** and then **Create New Data Set**.

   NOTE You might have to click **Unlock** to enable the Data Set Manager button.

2. Select a data source from the Data Source list. The available data sources are described below.
3. In the Data Set Manager - Create New dialog box, configure the filters for the data source you chose. These filters determine what data appears on your dashboard. There is a different dialog box for each data source, with different data filters. The available data filters are described below.
4. When you are finished configuring the filters, click **Submit** to see a preview of the data that is included in the new data set. The column headers shown can be truncated. Click **Show All Data** to see all the columns.

   If the columns shown are not what you want, click **Back** to return to the previous dialog box and reconfigure the filters.

5. When you are satisfied with the data set, click **Save**.
6. On the toolbar, click **Save**.

Edit a data set

1. On the Analytics toolbar click **Data Set Manager**.

   > **NOTE** You might have to click **Unlock** to enable the Data Set Manager button.

2. Click **Edit** next to the data set you want to edit.
3. When you are finished editing the data set, click **Submit** to see a preview of the data that is included in the data set. The column headers shown might be truncated. Click **Show All Data** to see all the columns.

   If the columns shown are not what you want, click **Back** to return to the previous dialog box and reconfigure the filters.

4. When you are satisfied with the data set, click **Save**.
5. On the Analytics toolbar, click **Save**.

Delete a data set

1. On the Analytics toolbar, click **Data Set Manager**.

   > **NOTE** You might have to click **Unlock** to enable the Data Set Manager icon.

2. Click **Delete** next to the data set you want to delete, and then confirm the deletion. When you delete a data set, changes on the dashboard are saved immediately.
3. Click **Cancel** to close the Data Set Manager dialog box.

Data sources

The following table describes the available data sources. You can filter items with an asterisk (*) using Data filters.

The two primary types of data sets are count data sets and trend data sets.

- Count data sets report the number of times the defined action occurs.
- Trend data sets report how the specified action changes over time.

Data Set	Description
Application Count Application Statistics	Metrics on accessing applications on a user's desktop. Application Statistics displays the access statistics for specific applications.

Data Set	Description
Application Usage Count Application Usage Trend	Metrics on how many users have used the application. This includes information on the number of users who have used the Webex WFO user interface as well as the number of desktop clients that have connected.
Audit Count Audit Trend	Metrics for audits in your recordings. **NOTE** Your organization needs the Analytics Essentials or Analytics Enterprise license in order to use this data set. This data set is not available with the Desktop Analytics license.
Call Summary Count Call Summary Trend	Metrics for your total, missed, and answered calls.
Event Count Event Statistics	Event Count shows aggregation of an event's duration by agent, team, or group. Event Statistics shows the distribution of the average event duration.
Outstanding Uploads Count Outstanding Uploads Trend	Metrics for files that still need to be uploaded. This is a measure of calls that have taken place but the corresponding media files have not yet been uploaded.
Phrase Count* Phrase Trend*	Metrics for phrase usage hits in contacts. This includes phonetic hits only. **NOTE** Your organization needs the Analytics Essentials or Analytics Enterprise license in order to use this data set. This data set is not available with the Desktop Analytics license.
Recycling Count Recycling Trend	Metrics for files that are in the recycle bin. Data is collected every five minutes.
Storage Details Count Storage Details Trend	Metrics for files stored on disk. This includes call audio files and screen capture video files, as well as logical groups such as recordings (call audio and screen capture video) as well as total

Data Set	Description
	size (all files on disk).
Support Count Support Trend	Upload and disk storage metrics for packet capture (PCAP) and log files.
Text Contact Count* Text Contact Trend*	The total number of email and text contacts. **NOTE** Your organization needs the Analytics Essentials or Analytics Enterprise license in order to use this data set. This data set is not available with the Desktop Analytics license.
Text Hit Count* Text Hit Trend*	The total number of individual text hits in email and text contacts. **NOTE** Your organization needs the Analytics Essentials or Analytics Enterprise license in order to use this data set. This data set is not available with the Desktop Analytics licenses.
Transcribed Call Count* Transcribed Call Trend*	Metrics for your transcribed contacts. **NOTE** Your organization needs the Analytics Essentials or Analytics Enterprise license in order to use this data set. This data set is not available with the Desktop Analytics license. **NOTE** The number of calls you see in an Analytics dashboard that uses this data set might vary from the number of calls you see using the Has Transcription criterion in the Contact Content filter on the Interactions page, for a variety of reasons: ▪ Analytics data and QM data update at different times. ▪ Analytics marks a call as transcribed after the call has been indexed, but QM marks a call with Has Transcription if a transcription file for the call is uploaded. Indexing happens after the transcription file is uploaded, so reports of transcribed calls might show a higher number in QM than in Analytics if indexing has not happened yet.

Data Set	Description
	■ Analytics and QM could have different retention policies.
Upload Details Count Upload Details Trend	Upload metrics for media files broken down by file type. This includes call audio files, screen capture video files, desktop application and website usage files, and email text files.
Upload Summary Count Upload Summary Trend	Upload metrics for media files aggregated into logical groupings. This includes recording uploads (call audio and screen capture video) and total uploads (all file types from upload details).

Data filters

The following table describes the available filters that can be configured for the available data sources. Not all filters apply to every type of data source.

Name	Description
Agents	Select one or more agents to filter data by. If you do not select one or more agents, all agents are selected by default.
Aggregate by	Select the unit by which you want to aggregate event counts or statistics.
Application States	Choose the application states you want to display in the widget.
Assume All Groups	Select this check box to bypass the groups list in the drill-down details for widgets associated with this data set.
Assume All Teams	Select this check box to bypass the teams list in the drill-down details for widgets associated with this data set.
Categories	Select one or more categories to filter data by.
Confidence	Enter the minimum confidence value for a hit. Valid values are 1–100. **EXAMPLE** When you specify a value of 60, Speech Analytics

<table>
<tr><th>Name</th><th>Description</th></tr>
<tr><td></td><td>returns hits where the confidence value is 60 or greater.</td></tr>
<tr><td>Date Range</td><td>Select the date range for which you want the widgets to display historical information.

NOTE If the date range exceeds the analytics data retention period, values outside the retention period will appear as 0 in a widget.

NOTE
The number of calls you see when using this filter might vary from the number of calls you see when using the Date Range filter on the Interactions page, for a variety of reasons:
Analytics data and QM data update at different times.
Analytics and QM could have different retention policies.</td></tr>
<tr><td>Enable Application States Filtering</td><td>Select this check box to allow a user to modify the selected application states from the Analytics toolbar. When this box is cleared, changes to the selected application states from the Analytics toolbar do not affect the widget.</td></tr>
<tr><td>Enable Confidence Filtering</td><td>Select this check box to allow a user to modify the selected confidence value from the Analytics toolbar. When this box is cleared, changes to the confidence value from the Analytics toolbar do not affect the widget.</td></tr>
<tr><td>Enable Date Filtering</td><td>Select this check box to enable users to modify the date range from the Analytics toolbar. When this box is cleared, changes to the global date range in the Analytics toolbar do not affect the widget.</td></tr>
<tr><td>Enable Interaction State Filtering</td><td>Select this check box to allow a user to modify the selected interaction states from the Analytics toolbar. When this box is cleared, changes to the selected interaction states from the</td></tr>
</table>

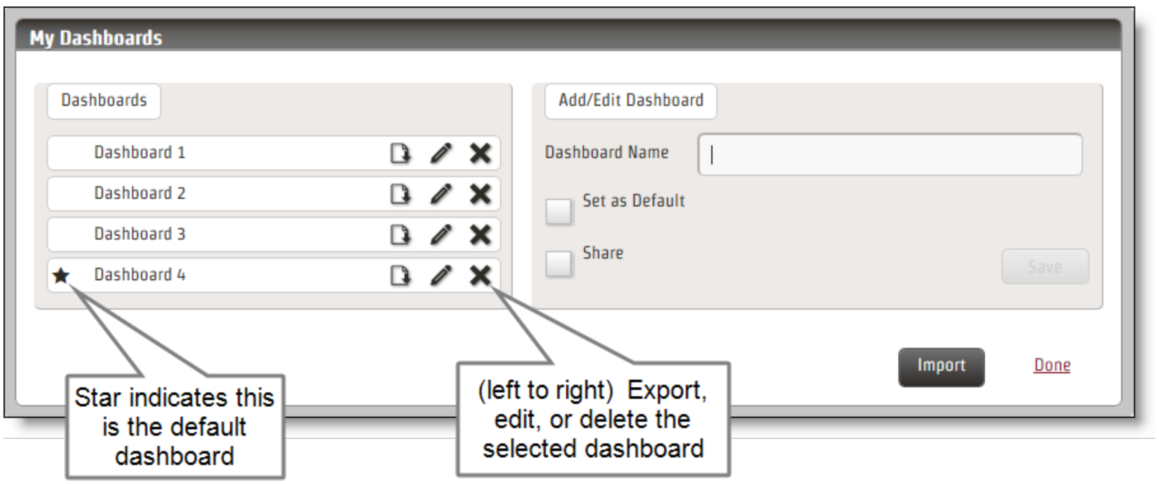
Name	Description
	Analytics toolbar do not affect the widget.
Enable Text Search	Select this check box to allow a user to search for phrases from the Analytics toolbar. When this box is cleared, searching for phrases from the Analytics toolbar does not affect the widget.
Event Type	Select the event type for the data set.
File Group by	Select how you want to file the group.
Filter Out Multiple Hits	Select this check box to count the phrase with the higher confidence level and filter out similar phrases with a lower confidence level. When this box is cleared, all phrase hits appear. Analytics can generate multiple phrase hits for similar phrases with different confidence levels that occur near the same time within a recording. **EXAMPLE** If you add phrases for "ambulance" and "ambulance service," multiple hits can appear when Analytics locates the phrase "ambulance service."
From Date	The starting date for the date range.
Group By	Select the way you want to group data. The options available in this field are determined by the type of data set you are creating.
Groups	Select one or more groups to filter data by. If you do not select one or more groups, all groups are selected by default. If you select one or more groups, all teams for those groups are selected by default. Groups are limited by your assigned permissions.
Histogram Bins	Enter the number of intervals to appear in the histogram. Valid values are integers 3–100. The default is 10.

Name	Description
Interaction States	Choose the interaction states you want to display in the widget.
Limit to Predefined Phrases	Select this check box to filter contacts in the data set to include only ones that have predefined phrase hits. The phrases are defined in the Phrase Manager.
Name	The name of the data set.
Phrases	Select one or more phrases to filter data by.
Ranking Size	Enter how many top-ranking applications display results. Valid values are 10–100. The default is 10.
Result	Select whether you want to return results that do or do not contain the specified phrases for this data set. ■ If you select **Return contacts with the selected phrases**, Webex WFO reports the total number of phrase matches among all contacts. ■ If you select **Return contacts without the selected phrases**, Webex WFO reports the number of contacts that do not contain the specified phrases.
Show Websites Only	Select this check box to display statistics only for websites accessed. When this box is cleared, statistics are displayed for both applications and websites.
Tags	Select one or more tags to filter data by.
Teams	Select one or more teams to filter data by. If you do not select one or more teams, all teams are selected by default.
Text Types	Select one or more text types to filter data by.
To Date	The ending date for the date range.

Name	Description
Type	Select the type of trend.
Types	Select one or more types to filter data by.

Create and manage an Analytics dashboard

Selecting, creating, and managing dashboards is done from the **Dashboards** icon on the Analytics toolbar. Click the icon to select an existing dashboard to view from the list displayed. Click the **Manage** button at the top of the list of dashboards to open the **My Dashboards** dialog box. From there you create and manage dashboards. This feature is available only if you have the appropriate permissions.



NOTE Shared dashboards are indicated with a lock symbol in My Dashboards. This means you can view those dashboards but you cannot edit them. Only the owner of the shared dashboard can do that.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have the View System Analytics permission.

Page location

Analytics > Analytics Dashboard

Procedures

Create a dashboard

1. Open **My Dashboards**.
2. Type a name for your new dashboard in the **Dashboard Name** field. Optionally, you can set this dashboard to be your default dashboard, or to share your dashboard with other users.
3. (Optional) Select the **Set as Default** check box if you want to use this dashboard as your default Analytics dashboard.
4. (Optional) Select the **Share** check box if you want to share this dashboard with other users. This feature is available only if your administrator has enabled dashboard sharing on the Analytics Configuration page.
5. Click **Save** and then **Done**.

Edit a dashboard

1. Open **My Dashboards**.
2. Select the dashboard you want to edit and click **Edit** (the pencil icon).
3. Make your changes. You can change the dashboard's name, set or remove it as the default dashboard, and share or unshare it with other users.
4. Click **Save** and then **Done**.

Delete a dashboard

1. Open **My Dashboards**.
2. Click **Delete** (the X icon) next to the dashboard you want to delete.

   > **NOTE** When you delete a dashboard, you also delete all data sets and widgets associated with the dashboard.

3. Click **Save** and then **Done**.

Export a dashboard

1. Open **My Dashboards**.
2. Click **Export** next to the dashboard you want to export.
3. Click **Save** to save the dashboard as a file named “dashboard.json” to your default download location, or **Save As** to rename the file and save it to a different location.

Import a dashboard

1. Open **My Dashboards**.
2. Click **Import**.
3. Browse to the location where the desired dashboard is saved and select the file. The file has a JSON extension.
4. Click **Submit** to import the dashboard.

   > **NOTE** If you import a dashboard with the same name as one of your existing dashboards, an asterisk is appended to the imported dashboard’s name.

5. Click **Save**.

Create and manage an Analytics widget

There are four types of Analytics widgets: chart, data grid, text, and phrase cloud. Each type of widget displays the data defined in a data set. You can customize your Analytics dashboards by creating and arranging widgets to your liking.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have the View System Analytics permission.
- You have created a data set (see Create and manage a data set).

Page location

Analytics > Analytics Dashboard

Procedures

Add a widget to your dashboard

1. Display the dashboard to which you want to add a widget.
2. Click **Unlock** to enable the Add Widget button, and then click **Add Widget**.
3. Choose which type of widget to add.
4. Configure the settings for your selected widget type (see Chart Settings, Data Grid Settings, Text Settings, and Phrase Cloud Settings).
5. Click **Save**.

You can move and resize the widgets on your dashboard. When you move them (click and hold while the mouse pointer is positioned in the widget toolbar), red lines appear to help you align the widget you are moving with other widgets nearby. Resize widgets by clicking and dragging the lower right corner of the widget.

Each widget has a toolbar:

1—Settings. Edit the widget settings

2—CSV Export. Export the data from the widget to a CSV format file

3—Print. Print an image of the widget

4—Delete. Delete the widget

5—Full Screen. Toggles the widget between its normal size and full-screen size

Chart Settings

When you select the Chart type for a widget, you must configure the following fields in the Chart Settings dialog box.

Container Settings

Setting	Description
Title	The name of the widget.
Hide Title	Select this check box to hide the widget title bar. The tools from the title bar are moved to the body of the widget.
Hide Background	Select this check box to remove the widget border.

Chart Options

Setting	Description
Title	The name of the chart.
Type	The type of chart you want to appear in this widget. ■ Line charts and area charts are typically used to demonstrate how an item changed over time. Line charts display information as a series of points connected by straight line segments. Area charts display data graphically and are based on a line chart. The area between the axis and a line is emphasized with colors. It is commonly used to compare two or more quantities within a chart. ■ Bar charts are charts with rectangular bars that have lengths proportional to the data they represent. Bar charts can be plotted vertically or horizontally. Stacked bar charts are useful when you get multiple hits in one or more categories. Stacked bar charts can be used to depict trends. ■ Pie charts are circular charts divided into sectors, illustrating numerical proportion. A pie chart allows you to select two intersections of data: the series (the data you want to plot) and the value. A slice in a pie chart represents the series, and the size of a slice represents the value.
Legend	The position of the legend on the chart.
Label Step	The frequency of labels drawn on the x-axis. **EXAMPLE** **1** displays a label on the x-axis for each data point. **2**

Setting	Description
	displays a label on the x-axis for every other data point.
Enable Labels	Select this check box to display labels on the chart.
Show Data Point Labels	Select this check box to display data point labels in the chart.

Data set Selection & Reference Grid

Setting	Description
Select Data Set	Choose one of the data sets you created from the drop-down list. The column headers associated with the data set are displayed.
Show All Data	Click this button to display an expanded version of the column headers.

Chart Options

Setting	Description
X-Axis	Select the information to appear on the chart's x-axis. The options are based on the selected data set.
Y-Axis	Select the information to appear on the chart's y-axis. The options are based on the selected data set.
Series	The data that you want to measure on the x-axis. **NOTE** Trending data must be sorted by date. If you want to create a trending chart, choose From Date or To Date from the Series drop-down list. The trending chart will not be sorted logically if you choose Agent ID, Agent Name, Phrase, or Category.

Data Grid Settings

When you select the Data Grid type for a widget, you must configure the following fields in the Data Grid Settings dialog box.

Container Settings

Setting	Description
Title	The name of the widget.
Hide Title	Select this check box to hide the widget title bar. The tools from the title bar are moved to the body of the widget.
Hide Background	Select this check box to remove the widget border.

Data Set Selection & Reference Grid

Setting	Description
Select Data Set	Choose one of the data sets you created from the drop-down list. The column headers associated with the data set are displayed.
Show All Data	Click this button to display an expanded version of the column headers.

Chart Options

This section displays the fields that appear in the Data Grid widget. The available fields depend on the selected data set. All available fields are displayed in the data grid by default. To remove a field from the data grid, click the field name. The field will be disabled. Click the field name again to enable the field, or select All to enable all fields.

Text Settings

When you select the Text type for a widget, you must configure the following fields in the Text Settings dialog box.

Container Settings

Setting	Description
Title	The name of the widget.
Hide Title	Select this check box to hide the widget title bar. The tools from the title bar are moved to the body of the widget.
Hide Background	Select this check box to remove the widget border.

Text Editor

Use the text editor to create and edit the text that appears in your text widget. The text you enter can be set in bold, italic, or underlined. You cannot control the size of the text.

Phrase Cloud Settings

A phrase cloud is a visual representation of phrases. This format is useful for quickly identifying the most prominent phrases by font size and color.

Container Settings

Setting	Description
Title	The name of the widget.
Hide Title	Select this check box to hide the widget title bar. The tools from the title bar are moved to the body of the widget.
Hide Background	Select this check box to remove the widget border.

Data Set Selection & Reference Grid

Setting	Description
Select Data Set	Choose one of the data sets you created from the drop-down list. The column headers associated with the data set are displayed. **NOTE** A phrase cloud supports any data set that has a phrase option (for example, Group by Phrase). If the phrase count data set uses Group by Category, you cannot create a phrase cloud with

Setting	Description
	that data set.
Show All Data	Click this button to display an expanded version of the column headers.

Displaying widget details

The widget Details pane displays a data grid that contains the data that is the source of the graphic representation. You open the Details pane by clicking on an item or data point within the widget, or by clicking the Full Screen Toggle button in the toolbar and then the Details button at the top of the widget pane.

NOTE A data grid widget displays the same information that the Details pane contains. You can drill down into that information just as you can in the Details pane.

The initial data grid displays general details. To view more specific details, double-click a row to drill down into the information. Breadcrumbs are added at the top left of the Details pane to help you navigate back to where you started. The Home icon brings you to the initial data grid view.

The Setting icon next to the breadcrumb trail opens a configuration window where you can select the data you want displayed in the Details pane.

Notifying users of non-approved application usage

You can send an email notifying one or more people regarding the use of a non-approved application or website. When you drill down far enough in the Details pane to show the agent detail grid containing the Application Label column, there is an email icon next to a link naming the application or website in question.

Click the Email icon to display an email form. The body of the email contains the following information:

- A statement indicating that an unapproved application or document was used
- The name of the agent
- The date and time that the application was accessed
- The names of the application and document
- A URL to the application usage issue in Agent Explorer
- (Optional) Your comments

NOTE Click the link in the Application Label column to navigate to Agent Explorer for the date and time the application was accessed.

Enter one or more email addresses, append any comments you might have to the end of the message, and then click OK to send the notification out.

Filter data on the Analytics dashboard

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have the View System Analytics permission

Page location

Analytics > Analytics Dashboard

Filter the data in all the widgets that appear on your dashboard using the Data Filters tool. You can choose one or more filters to apply. When you do create more than one filter, the results must match all the filter criteria.

> **NOTE** Not all types of data can be filtered. See Create and manage a data set for a list of data that can be filtered.

Any data filters that you set apply to any dashboard you view during a session. However, if you log out and then log in again, you must configure your filters again. They do not persist from session to session.

Procedure

Add a data filter

1. Click **Data Filters**.
2. Click **Add Filter**.
3. In the Add Filter dialog box, select the filter. There are four filter types:
   - Analysis—filter by call statistics and events
   - Contact—filter by the recording contact information

- Date—filter by time zone
- Organization—filter by agent, group, or team

4. Select the operator (such as greater than, less than, contains, and so on) and enter a value. The value can include wild cards (* or ?). The asterisk wild card stands for any number of characters, and the question mark wild card stands for one character.

> **EXAMPLE** A filter to find calls that include more than three talkover events is “Talk Over Events Greater than 3.”

5. Click **OK**.

Customize your Analytics dashboard

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have the View System Analytics permission.

Page location

Analytics > Analytics Dashboard

There are two toolbars available on the Analytics Dashboard page.

Analytics toolbar

The Analytics toolbar lets you manage the contents of your dashboard.

1—Search field

The Search field filters the text in widgets that use the Contact Count, Content Trend, Text Contact Count, and Text Contact Trend data sets. This field appears only if the Enable Text Search check box is selected in a Contact Count data set.

2—Global Date Range field

The Global Date Range field filters historical information in widgets by date range. Your selection affects all widgets in the dashboard whose data sets have the Enable Date Filtering check box selected. This field is available when the dashboard is locked.

3—Confidence field

The Confidence field is used to set the minimum confidence value for a hit. Valid values are 1–100.

> **EXAMPLE** When you specify a value of 20, Analytics returns hits where the confidence value is 20 or greater.

This value affects all widgets in the dashboard whose data set is configured with the Allow Override Confidence check box selected. This value does not persist from session to session.

4—Data filters

Click the Data Filters button to display the Data Filters dialog box. Use this dialog box to add filters that determine the recording data that appears in your widgets (see Filter data on the Analytics dashboard).

> **NOTE** Data filters are supported only with Speech Analytics.

5—Interaction State

Click the Interaction States button to select the interaction states (active, inactive, after call work, and on hold) you want data about displayed in your widgets. By default, all interaction states are selected.

6—Application State

Click the Application State button to select the application states (approved, not approved, ignore, and new) you want data about displayed in your widgets. By default, all application states are selected except for the Ignore state.

7—Dashboards

Click the Dashboards button to display a list of the dashboards available to you. If you have the appropriate role and permissions, you can access the My Dashboards dialog box by clicking the Manage link (see Create and manage an Analytics dashboard).

8—Print

Click the Print button to print a snapshot of the Analytics dashboard.

9—Lock/Unlock

This button toggles between Locked and Unlocked.

- When locked, you cannot change the widgets on the dashboard or their layout.
- When unlocked, you can add, edit, and delete widgets and change their layout.

> **NOTE** Shared dashboards cannot be unlocked. They can be changed only by their owners.

10—Save

Click the Save button to save changes you made to an unlocked dashboard.

11—Data Set Manager

The Data Set Manager allows you to create, modify, and delete data sets associated with the displayed dashboard (see Create and manage a data set). This button is enabled when the dashboard is unlocked.

12—Add Widget

Click the Add Widget button to choose a widget type and configure the content of that widget (see Create and manage an Analytics widget). This button is enabled when the dashboard is unlocked.

13—Tile Widgets

Click the Tile Widgets button to stack the widgets in the upper left corner. This button is enabled when the dashboard is unlocked.

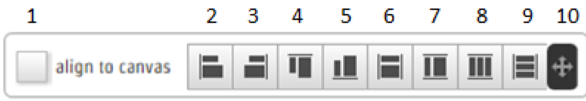
14—Select Tool

Click the Select Tool to select widgets and then align them on the dashboard. You select widgets by either dragging a rectangular selection area around them or pressing Ctrl + Click to select them one by one. Selected widgets are outlined in red. This button is enabled when the dashboard is unlocked. When you select widgets with this tool, the Widget Alignment toolbar is opened and displayed in the upper left corner of the page.

You can select widgets as long as the Select Tool button is enabled (it turns dark gray). It stays enabled until you click it again to disable it. When it is disabled you cannot select widgets.

Widget Alignment toolbar

The Widget Alignment toolbar appears when you select widgets on your dashboard using the **Select Tool** on the Analytics toolbar. By default the toolbar appears in the upper left corner of the dashboard.



1—Align to Canvas check box

When you select the Align to Canvas check box, widgets are snapped to one of the outer edges of the dashboard when you use the alignment control buttons.

> **EXAMPLE** If the check box is selected and you click Align Bottom, all your selected widgets snap to the bottom edge of the dashboard. If the check box is cleared and you click Align Bottom, all your selected widgets align their bottom edges to the bottom edge of the widget that is positioned lowest on the dashboard.

2—Align Left

Click the Align Left button to align the left sides of all selected widgets.

3—Align Right

Click the Align Right button to align the right sides of all selected widgets.

4—Align Top

Click the Align Top button to align the tops of all selected widgets.

5—Align Bottom

Click the Align Bottom button to align the bottoms of all selected widgets.

6—Match Width

Click the Match Width button to size the width of all selected widgets to the width of the widest widget.

7—Match Height

Click the Match Height button to size the height of all selected widgets to the height of the tallest widget.

8—Distribute Horizontally

Click the Distribute Horizontally button to spread the selected widgets evenly and horizontally across the dashboard. They are resized to the same width with their side edges touching.

9—Distribute Vertically

Click the Distribute Vertically button to spread the selected widgets evenly and vertically across the dashboard. They are resized to the same height with their top and bottom edges touching.

10—Move Toolbar

Click and hold the Move Toolbar button to drag the toolbar to any location you wish on the dashboard. The toolbar stays in this location for the duration of your session.

Monitor agents' focus and activity

The Agent Explorer page allows a supervisor or manager to view an agent's focus and activity for a specific date in a single view.

Prerequisites

- Your organization has one of the following licenses:
  - Analytics Essentials
  - Analytics Enterprise
  - Desktop Analytics
- You have the View Desktop Analytics permission.
- Your organization does not use RTE recording (also known as chunk recording). Because of the way RTE recording processes desktop data, Agent Explorer is not available for integrations with Cisco Webex Contact Center.

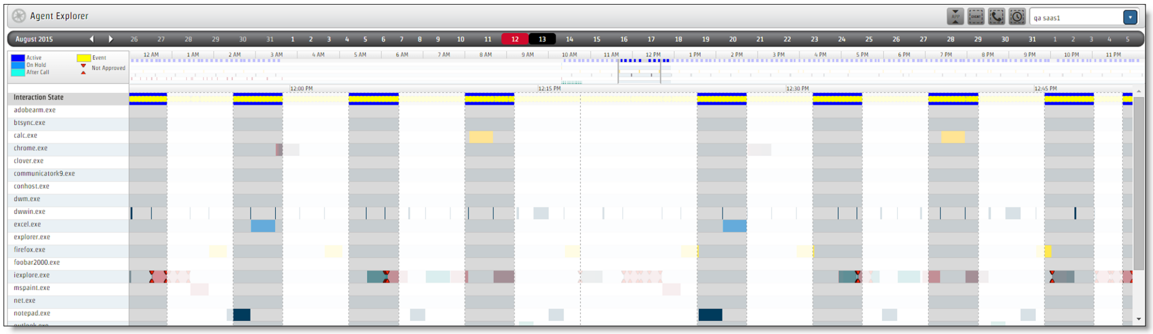
Page location

Agent Explorer

Procedures

View an agent's focus and activity:

1. Select the agent from the **Choose an agent** drop-down list (top right of the page). A list of programs the agent used and the agent's state while using those programs displays.



NOTE For more information about what you can see on this page, see Agent Explorer overview.

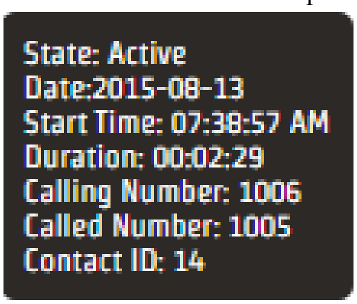
2. (Optional) Click a date or the month arrows at the top of the screen to view a different date. Agent Explorer does not display information for today or dates in the future.

3. Drill down for more information using one or more of the procedures below.

See more information about an interaction state, event, document, or URL in the main panel:

Hover over the element. A tooltip appears.

EXAMPLE This is a tooltip for an interaction state.



See an agent’s focus during calls only:

1. Toggle the **Call Boundaries** button on.

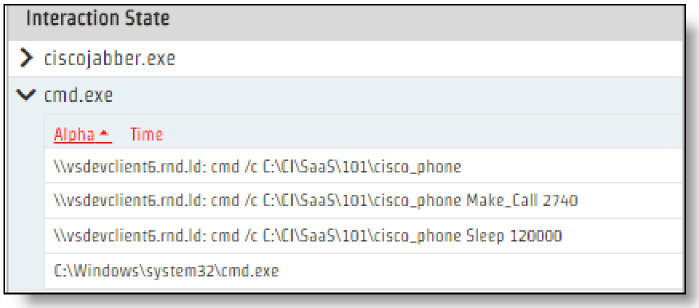
2. Toggle the **Idle Boundaries** button off.

See the documents or URLs an agent accessed from an application or website:

1. In the column under Interaction State, click the arrow to the left of the application or website name.

2. To sort the documents or URLs alphabetically, click **Alpha**. To sort them by the time the agent

accessed them, click **Time**.



Turn off the non approved content markers:

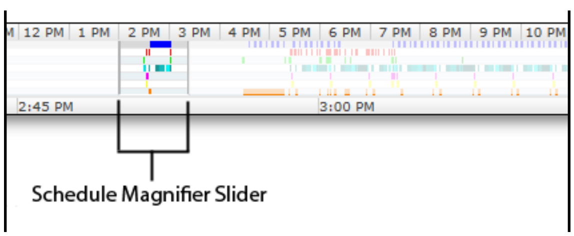
Toggle the **Non Approved Content Markers** button off.

Highlight a specific kind of event:

1. Toggle the **Events** button on. The Events dialog box opens.
2. Select the kind of event to highlight.

Zoom in on a part of the agent's schedule:

1. Click the Schedule Magnifier slider in the time scale bar at the top of the page.
2. To view the schedule in 15-minute increments, drag the slider horizontally, or click a time in the time scale bar.



NOTE Your web browser's zoom in and zoom out features do not work in Agent Explorer. If you use the zoom in or zoom out feature, the selected time does not display correctly when you use the Schedule Magnifier slider.

Play a recording associated with an interaction state:

1. Click an interaction state associated with a call. The column below the interaction state is highlighted purple.
2. Double-click the interaction state. The Media Player opens.

3. Click **Play** in the Media Player.
4. If you have Speech Analytics, click the **Speech** tab to see phrases associated with the recording.

Related topics

- Agent Explorer overview
- Play contacts
- View agent actions for a contact—View the apps and websites an agent used on a specific call

Agent Explorer overview

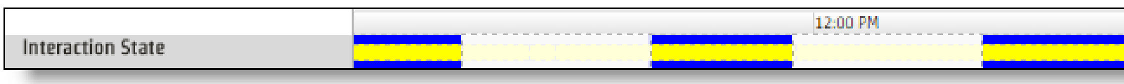
The Agent Explorer page contains the main grid and a toolbar. The left pane of the grid displays the applications and websites used by the agent. The right pane shows when the document or URL was used. They are displayed in different colors so you can readily see changes to an agent's focus.

The four buttons on the toolbar are toggles that control what is displayed in the grid. The legend at the left under the calendar bar identifies what the colors and symbols in the grid mean.

Button	Name	Description
	Non Approved Content Markers	Toggles Non Approved Content markers that designate applications the agent used that are not approved.
	Events	Toggles Event markers that indicate the agent's focus on an application that triggered the event. The event is highlighted in yellow in the Interaction State row. When toggled on, the Events dialog box opens that prompts you to select the type of event to highlight. By default, all events are selected.
	Call Boundaries	Highlights the duration of a call in gray. If you want to see only an agent's focus during a call, toggle the Call Boundaries button on and toggle the Idle Boundaries button off.

Button	Name	Description
	Idle Boundaries	Highlights the idle time information between contacts in white, including the applications used during that time. Toggling this button off allows you to clearly see approved and unapproved applications during a contact.

An Interaction State row appears immediately below the legend. The Interaction State shows the status of the agent's call status at a specific point in time.



NOTE You might see System Lock in one of the rows below Interaction State. This means that an agent's desktop was locked or asleep and shows what applications or websites were in focus during that state.

Analyze business intelligence data

Your homepage dashboard

Your homepage dashboard is powered by Data Explorer and is customized to your role. Your role and permissions determine how the homepage works. Some users can create their own homepage, while others can view one or more homepages supervisors and administrators create and share.

Prerequisites

- You have valid Webex WFO login credentials
- A supervisor or administrator has created a dashboard for your role
- Administer Dashboards permission (optional)
- View WFM Dashboard permission (required for WFM users to see a homepage dashboard)
- View QM Dashboard permission (required for QM users to see a homepage dashboard)

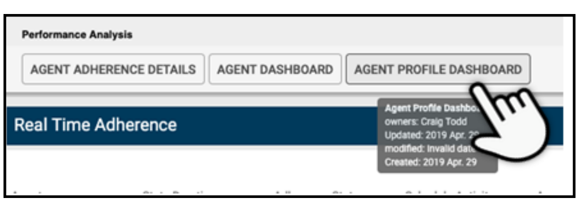
Page location

Home

Procedures

View another dashboard

If you have access to multiple dashboards, you will see buttons with the different dashboard names at the top left of the home page. Click the button for the desired dashboard. The dashboard you select becomes the one that is displayed when you log in or return to the homepage from elsewhere in Webex WFO.



Create your own dashboard

If the toolbar at the top of the page includes Data Explorer, you have permission to use it to create your own dashboard and homepage. The Related Topics section lists topics that can help you create your own dashboard.

Related topics

- Manage the list of Data Explorer dashboards and reports
- Create a report
- Create a dashboard
- Set your homepage

Create your own reports with Data Explorer

Data Explorer allows you to create your own reports and dashboards. The Data Explorer page includes a list of default reports and dashboards that you can use as is, or use as templates to get you started on developing your own.

A report is a tool that you use to answer a business question. For example, you can create a report that tells you what your total sales were last year or how many contacts an agent transferred between June and August. Using Data Explorer, you can define the question that your report will answer.

Once you have report data that gives you targeted, useful information, you can configure a chart or table to present that information in a visual format that is easy to understand. Charts can display a single piece of information, like a headline, or show trends and relationships between several complex metrics.

Reports can be grouped by theme or subject in dashboards. Dashboards provide a wealth of information at a glance and can reveal new or hidden relationships between different kinds of data.

IMPORTANT The amount and complexity of reports in Data Explorer dashboards can affect performance. For optimal performance, limit the number of complex reports included on your Data Explorer dashboards.

Manage the list of Data Explorer dashboards and reports

The Data Explorer asset browser page contains a list of dashboards and reports. From this page you can view, share, create, and manage dashboards and reports. Exactly what you can do in the asset browser depends on the permissions assigned to your role. The functions available on the asset browser page are:

View the standard Data Explorer dashboards

Set your homepage

Copy a report or dashboard

Share reports and dashboards

Set up report email delivery

Tag reports and dashboards with roles

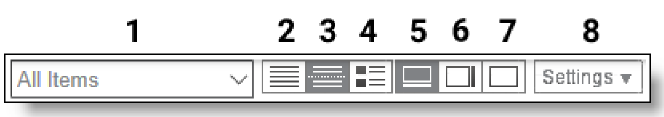
Search the asset browser by tag

Export a report

About the DX toolbar

The Data Explorer toolbar enables you to select a predefined filter to limit which items appear in the asset browser. For example, you can opt to list only reports and dashboards you shared or only those you created. You can also search for specific reports or dashboards by name, description, or tag.

The asset browser page can display reports and dashboards as a flat list, a categorized list, or generic thumbnail icons. To change the display, click the desired icon in the toolbar.



Field / Button		Description
1	All Items drop-down list	Select the items you want to be displayed on the page from the drop-down list.

Field / Button		Description
2	Flat List button	View items on the page in a flat list.
3	Categorized List button	View items on the page grouped as dashboards and reports.
4	Thumbnails button	View items on the page as thumbnails. The pictures in the thumbnails represent either a dashboard or a report, not the actual look of the item.
5	Bottom Preview Panel button	Display the item preview panel at the bottom of the page.
6	Right Preview Panel button	Display the item preview panel at the right side of the page.
7	Hide Preview Panel button	No item preview is displayed.
8	Settings drop-down list	Configure settings for the page. This controls how items are sorted on the page and which properties are displayed for each item.

View the standard Data Explorer dashboards

Data Explorer comes with a variety of pre-built dashboards that you can copy and edit.

Prerequisites

- You have the Data Explorer permission.
- (To copy and edit standard dashboards) You have the Content Creation permission.
- The dashboards available to you vary depending on the Cisco subscriptions your organization has. See Available pre-built dashboards for specifics.

Page location

Data Explorer

Procedures

View the standard Data Explorer dashboards

The standard dashboards have **System** in the **Owner** column.

1. Click a dashboard to open it.
2. Click **Data Explorer** to return to the list of dashboards. (Do not click your browser's Back button. That takes you back to your home page.)

Available pre-built dashboards

QM dashboards

These dashboards are available if your organization has Cisco Quality Management.

Dashboard	Description
Agent Profile Dashboard	A snapshot of performance for any single agent over the last 30 days that lets supervisors, managers, and evaluators drill directly into contacts for further review. You can also access this dashboard by opening a contact and clicking the agent's name.
Agent Profile Dashboard - Agent Homepage View	A comprehensive overview of a single agent's performance for the last 30 days that lets an agent drill directly into contacts they handled for further review. You can assign this dashboard as a home page for any agent. Each agent sees only their data. See Tag reports and dashboards with roles.
CCR Drill Detail Agent Profile	This is a child dashboard that you can drill down to from the Agent Profile dashboard.
CX Focus QM - Contact Detail Dashboard (Last 7 Days)	Contains the number of contacts and duration information for each group from the previous seven days. You can drill down to see scores for teams and agents.
CX Focus QM - Evaluations Detail Dashboard (Last 7 Days)	Contains evaluation scores for each group from the previous seven days. You can drill down to see scores for teams and agents.
CX Focus QM - NPS Detail Dashboard (Last 7 Days)	Contains net promoter scores for each group from the previous seven days. You can drill down to see scores for teams and agents.

Dashboard	Description
QM Agent Quality Percentage (AQP)	Contains the number of evaluations completed and average evaluation score. You can filter by date, contact start time, group, team, agent, evaluation form, and evaluator.
QM Common Metrics	Contains average scores, evaluations, and contact times from the previous thirty days.
QM CX Focus Overview	Contains contact duration, holds, average evaluations, and net promoter score (NPS) from the previous thirty days.
Widgets - QM Only	Widgets are pre-built apps that you can drop into a dashboard to get information without having to write queries or build reports. This dashboard contains all the widgets for QM. See Available QM widgets for more information about each widget. **BEST PRACTICE** Most widgets come without any date filters set, so they automatically pull data from as far back as possible. If widgets take too long to load, adjust the filters to a shorter date range.

WFM dashboards

These dashboards are available if your organization has Cisco Workforce Management.

Dashboard	Description
Agent Adherence Details	Contains adherence and conformance information. You can filter by date, group, team, and person.
CX Focus WFM - Contact Duration Detail Dashboard (Today)	This is a child dashboard that you can drill to from a parent dashboard.
CX Focus WFM - Contact Volume Detail Dashboard (Today)	This is a child dashboard that you can drill to from a parent dashboard.
CX Focus WFM - SL, ASA, Abandon Detail Dashboard	This is a child dashboard that you can drill to from a parent dashboard.

Dashboard	Description
(Today)	
Today's WFM CX Focus Overview	Contains information about contact volumes and service levels for today.
WFM Common Metrics	Contains staffing and scheduling information for the previous seven days.
WFM Forecast	Compares forecasted volumes and service levels with the actual numbers. You can filter to specific skills, scenarios, date ranges, and more. This dashboard includes links to related forecast dashboards.
WFM Forecast Details	Compares the detailed forecast metrics vs. actual metrics for various skills. You can filter to specific skills, scenarios, date ranges, and more.
WFM Forecast Scenario	Compares what-if scenarios for both forecasts and schedules with the actual metrics. You can filter to specific skills, scenarios, date ranges, and more.
WFM Supervisor	Contains a key set of metrics to understand agent, team, and site performance. These metrics include performance around contacts, adherence, scheduled activities, and absenteeism. You can view trends over time for the group while also getting to the agent detail level.
Widgets - WFM Only	Widgets are pre-built apps that you can drop into a dashboard to get insight without having to write queries or build reports. This dashboard contains all the widgets for WFM. See Available WFM widgets for more information about each widget. **BEST PRACTICE** Most widgets come without any date filters set, so they automatically pull data from as far back as possible. If widgets take too long to load, adjust the filters to a shorter date range.

Suite-wide dashboards

These dashboards are available if your organization has both Cisco Quality Management and Cisco Workforce Management.

Dashboard	Description
QM WFM Common Metrics	Contains scheduling, staffing, and evaluation reports.
WFM QM CX Focus Overview	Contains reports on contact volume, staffing, and evaluation scores.
Widgets - All Widgets	Widgets are pre-built apps that you can drop into a dashboard to get insight without having to write queries or build reports. This dashboard contains all the widgets. See Available QM widgets and Available WFM widgets for more information about each widget.

Analytics dashboards

These dashboards are available if your organization has Cisco Analytics.

Dashboard	Description
Advanced Speech Search	Search for phrase hits by date, confidence, duration, and category.
Agent Smart Benchmarking	Contains information about contact volume, duration, and call events. You can filter by date, group, team, agent, contact type, and phrase hit.
Analytics - Agent Coaching Opportunities	Contains hits for the most commonly used phrases that indicate a need for coaching, as well as information on evaluation scores.
Analytics - Customer Effort	Contains hits for the most commonly used phrases related to customer effort, such as transfers and escalations, plus information on call events such as holds and silence.
Analytics - Customer Experience	Contains hits for the top phrase categories that influence a positive or negative customer experience.
Analytics - First Call Resolution	Tracks trending related to the biggest drivers of first-call resolution such as escalations, transfers, and service barriers. Contains hits for the phrases that lead to non-resolution.
Analytics - Main Overview	Contains information about the topics and discussions in your contact center, based on phrase categories and hits. Helps identify positive and negative trends over time within common categories such as repeat effort or transfers.

Dashboard	Description
Analytics - Phrase Drilldown	Contains information on contacts that contain a specific phrase hit. You can filter by date, group, team, agent, phrase category, and phrase.
CCR Drill Detail	This is a child dashboard that you can drill to from a parent dashboard.
CCR Drill Detail Sentiment	This dashboard opens when you click into a report that is within another Analytics dashboard. It contains information about the contacts in the report, such as start time, agent, and duration.
CCR Drill Detail Smart Benchmarking	This dashboard opens when you click into a report that is within another Analytics dashboard. It contains information about the contacts in the report, such as start time, agent, and evaluation state.
Predictive Evaluations	Contains predicted and actual evaluation scores for contacts. You can filter by date, group, team, agent, evaluation form, and phrase hit.
Predictive Net Promoter Score	Contains predicted and actual net promoter scores for contacts. You can filter by date, group, team, agent, contact type, and phrase hit.
Sentiment Analysis	Contains sentiment information by channel, agent, and more. You can filter by date, group, team, agent, highest sentiment, and phrase hit.

CXI - Contact Center dashboards

These dashboards are available if your organization has Cisco Data Management.

Dashboard	Description
CXI - Contact Center - Customer Effort	Provides a view of the effort made by a customer when interacting with your contact center. It compares metrics like handle time and the prevalence of escalations against metrics like NPS and sentiment to show how increased effort affects customer satisfaction.
CXI - Contact Center - Employee Engagement and Satisfaction	Provides an overall view of agent engagement, as measured by metrics such as utilization, transfer rate, and escalation-related phrase hits. You can filter by date, group, team, and agent.
CXI - Contact Center - Process Improvement	Includes metrics that show opportunities for process improvements across the contact center. Call times, agent behavior, script adherence, training opportunities, and application usage help you find training opportunities

Dashboard	Description
	or processes that might need improvement.
CXI - Contact Center - Repeat Calls	Helps you determine if your customers are making multiple calls to the call center, potentially indicating a lack of first-call resolution. The abandoned contacts metric shows how many customers hang up when they are waiting in the queue.
CXI - Contact Center - Systems Improvements	Helps you monitor systems issues and opportunities for improvement. Speech hit data shows how often systems issues come up during calls. NPS and sentiment data show how those issues impact customer satisfaction, and duration graphs show how they impact overall call length. You can also see which applications agents are spending the most time in.
CXI - Contact Center - Workforce Optimization	Provides an overview of workforce performance and areas for optimization. The dashboard has two main sections: the left side focuses on quality evaluations from agent calls, and the right side provides an overview of other workforce performance metrics.
CXI - Handle Time Detail	You can access this dashboard on its own or by drilling through to it from a call-time metric on a different dashboard. It provides more granular detail on handle times, including the breakdown between talk, hold, and after-call work time, as well as times by group. You can click a group to drill further down to team or agent.
CXI - NPS Detail	You can access this dashboard on its own or by drilling through to it from an NPS metric on a different dashboard. It helps you to understand the trends in your actual and predictive NPS scores, as well as variances in your NPS and predictive NPS scores.
CXI - Phrase Hits Detail	You can access this dashboard on its own or by drilling through to it from a phrase hits metric on a different dashboard. It shows the absolute and relative number of phrase hits for the phrase categories and phrases you select.
CXI - Sentiment Detail	You can access this dashboard on its own or by drilling through to it from a sentiment metric on a different dashboard. It helps you understand the trends in the sentiment of your contacts.

Related topics

- Copy a report or dashboard
- Manage roles and permissions —Assign permissions to let users view Data Explorer information.
- Available QM widgets—Information about the pre-built QM apps that appear in some standard dashboards.
- Available WFM widgets—Information about the pre-built WFM apps that appear in some standard dashboards.

Set your homepage

Data Explorer includes many predefined reports and dashboards that any user can set as a homepage. For example, if you use QM, you can set the Widgets - QM Only dashboard as your homepage.

Data Explorer tags default reports and dashboards by product, so you can search for relevant reports and dashboards by product tag: WFM, CWFM, QM, or Analytics.

> **NOTE** Dashboards and reports show only data that is within your scope. For example, if another user shares a report comparing the average evaluation scores of Team A and Team B, but you have scope over just Team A, the report does not show any data for Team B.

You can set only one dashboard or report at a time as your homepage.

Prerequisites

- Data Explorer permission—gives you read-only access to the Data Explorer asset browser page

Page location

Data Explorer or Data Explorer > Reports

Procedures

Set a dashboard or report as your homepage

1. Navigate to the Data Explorer asset browser page.
2. Right-click a dashboard or report listed in the asset browser.

3. Click **Set as homepage**. Data Explorer marks the dashboard or report with a red homepage icon and the selected report or dashboard becomes your homepage.

Copy a report or dashboard

Unless a report or dashboard is shared with you and the owner gives you permission to make changes to it, the best way to take an existing report or dashboard and make it your own is to copy it. You are then the owner of the copy.

Once you are the owner, you can customize it and share it as you please.

Prerequisites

- Data Explorer permission—gives you read-only access to the Data Explorer asset browser page
- Content Creation permission—enables you to create, update, and delete dashboards and reports

Page location

Data Explorer or Data Explorer > Reports

Procedures

Copy a report or dashboard shared with you

1. Right-click the shared report or dashboard on the asset browser page.
2. Click **Copy**. Data Explorer adds a copy of the report or dashboard and makes you its owner.

Share reports and dashboards

After you create a report or dashboard, you can allow other users to access it. When sharing a report or dashboard, you control what the other users can do with it—view, copy, or edit it.

> **NOTE** Reports and dashboards show only data that is within your scope. For example, if another user shares a report comparing the average evaluation scores of Team A and Team B, but you have scope over just Team A, the report does not show any data for Team B.

You can share only the reports and dashboards you own. To share one that has been shared with you, create a copy of it.

Prerequisites

- Data Explorer permission—gives you read-only access to the Data Explorer asset browser page
- Content Publishing permission—enables you to share reports and dashboards that you own to sharing groups you belong to

Page location

Data Explorer or Data Explorer > Reports

Procedures

Share a report or dashboard

1. Right-click the report or dashboard you want to share on the asset browser page.
2. Click **Share**. The Sharing dialog box opens.
3. Select the level of permission that you want to assign to other users who belong to one of the groups listed. The following table describes the permission levels available.

Permission	Description
None	Other users cannot view the item. This permission is the default choice for all the groups listed.
View	Other users can view the item.
Explore	(Reports only) Other users can change filters, groups, and other report elements but cannot save changes.
Save As	Other users can make changes and save a copy of the item. They cannot overwrite the original item.
Edit	Other users have full permission to change and overwrite the original item. Note that there is no audit trail that shows who edited the item or what was changed.

4. Click **OK**.

The **Shared To** column on the asset browser page now displays with whom the item is shared.

Set up report email delivery

IMPORTANT Cisco Advanced Reporting has been declared End of Sale as of November 1st, 2023 and is no longer available for purchase.

The Deliver function allows you to schedule a report you own to be delivered to recipients at intervals for a certain length of time. You can specify the report file format, the interval, the length of time it is delivered, and the recipients.

EXAMPLE I want my Agent Statistics report in PDF format to be sent to James Smith and Angela Brown daily at 10 AM until March 31.

Deliveries can be made to both email addresses associated with Webex WFO users and email addresses external to Webex WFO.

Once set up, you can edit the details of the delivery and start or stop deliveries through the Deliver function or from the Delivery page (see Manage report email delivery).

Prerequisites

- Your organization has a Data Management license.

  IMPORTANT Report email delivery is not available without a Data Management license.

- You have the Report Delivery permission—allows you to configure and manage when and to whom a report that you own is emailed

Page location

Data Explorer or Data Explorer > Reports

Procedures

Set up delivery of a report

1. On the Data Explorer asset browser page, locate the report you want to deliver. You must be the owner of the report.
2. Right-click the report and select **Deliver** from the drop-down list. The **All Deliveries** window opens.
3. Click **Click to add a delivery schedule** to display the **Edit Delivery** dialog box.

4. Complete the fields to configure the delivery schedule.
5. Click **Click to add a delivery method** to display the **Edit Email Delivery** dialog box.
6. Click  At the bottom left of the **Recipients** pane to display the **Choose Recipients** dialog box.
7. Expand the tenant user in the **Available** pane to show all available users, select the recipients, and click **Add the selected accounts**  to move them to the **Selected** pane.

   > **NOTE** Only recipients who are Webex WFO users can be added in the Choose Recipients dialog box. You must return to the **Edit Email Delivery** dialog box to add external recipients.

8. Click the **Edit Email Delivery** button in the top left of the title bar to move back to the **Edit Email Delivery** dialog box.

   > **NOTE** Do not click **Set**. If you do, the delivery is saved and you are returned to the asset browser page. If you are not finished configuring your delivery, you will have to edit the delivery setup.

9. At the bottom of the dialog box, select formats for the report.
   - If you opt to deliver the report as an image of the report as it appears in Data Explorer, the data format must be **None**.
   - If you opt to deliver the report as data (a CSV or Excel file), the image format must be **None**.
   - You can select a custom page size for the report. By default, reports are delivered in your default page size.
10. If you want to add an external recipient email address, click directly below the **Recipients** label or below an existing recipient's name to bring up an editable field.

11. Type the external email address and press **Enter**.
12. Click **Set**. The delivery configuration is saved and you return to the asset browser page.

Manage report email delivery

The Delivery page enables you to control the sending and receiving reports by email. The page has two sections:

Deliveries from others panel—This upper panel lists reports sent to you by other users. You might be the only recipient of the report, or you might be a member of a sharing group and receive a report that also goes to the other members of the group. You can opt out of receiving these reports.

Your deliveries panel—This lower panel lists reports that you set up to be delivered to other users. You can start or stop (turn on or off) the delivery of a report here. This allows you to set up reports in advance to their being needed. For example, a report that shows the progress of a sales campaign is turned on only when the campaign is in progress, and is turned off after the campaign is done. The report can then be turned on again when the next sales campaign starts.

Each panel displays the name of the report being delivered, who the recipients are, and what the delivery schedule is.

Deliveries are set up on the Data Explorer asset browser page.

Prerequisites

- Your organization has a Data Management license.

  IMPORTANT Report email delivery is not available without a Data Management license.

- You have the Delivery Management permission—allows you to opt in and opt out of receiving scheduled reports by email from other users and to start and stop the report deliveries to other users that you have set up.
- You have the Report Delivery permission—allows you to configure and manage when and to whom a report that you own is emailed

Page location

Data Explorer > Settings > Delivery

Procedures

Manage deliveries from others

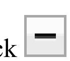
> **NOTE** If a report is delivered to you at an email address outside of the email address used for you in Webex WFO, you cannot opt in or out of delivery to that address. This feature is available only for email addresses within Webex WFO.

- To discontinue receiving report deliveries set up by other users, select the **Opt-out** check box and click **Save**.
- To restart delivery, clear the **Opt-out** check box and click **Save**.

Manage your own deliveries

- To turn on a report's delivery, select the **On/Off** check box and click **Save**.
- To turn off a report's delivery, clear the **On/Off** check box and click **Save**.

Delete one of your own deliveries

- Select the delivery you want to delete and click  in the lower left corner of the **Your deliveries** panel, and then click **Save**.

Cancel changes you make to the page

- Click the **Revert** button to cancel any changes you make to the Delivery page. You must do this before you save your changes. After your changes are saved, you cannot revert them.

Related topics

- Set up report email delivery

Tag reports and dashboards with roles

If you want only users with a specific role to access a shared report or dashboard, you can tag it with the name of the desired role.

You can tag only reports or dashboards that you own. To become the owner of a report or dashboard shared with you, copy it (see Copy a report or dashboard).

NOTE If the role does not include access to Data Explorer, a tagged dashboard becomes the default homepage for people with this role.

Prerequisites

- Data Explorer permission—gives you read-only access to the Data Explorer asset browser page
- Content Publishing permission—enables you to share reports and dashboards that you own to sharing groups you belong to

Page location

Data Explorer or Data Explorer > Reports

Procedures

Tag a report or dashboard with a role

PREREQUISITE

- (For customers transitioning from version 10.4 to cloud) The role is assigned to Data Explorer homepage dashboards: On Application Management > Global > Global Settings > Dashboard Administration, move the role to **Data Explorer**.

1. On the Data Explorer page, right-click the report or dashboard and select **Tag** from the drop-down list. The **Tags** window opens.
2. Enter **c1_role_** and then the name of the role.

   IMPORTANT The role name must match the name that your organization uses. A list of roles is available on Application Management > Global > User Configuration > Roles.

   To add a role whose name is one word, enter the name.

   EXAMPLE **c1_role_Agent**

   To add a role whose name is multiple words separated by spaces, enclose the tag in double quotes.

   EXAMPLE **“c1_role_East Coast Team Leader”**

   To add multiple roles at the same time, enter them one after the other separated by a space.

   EXAMPLE **c1_role_Evaluator “c1_role_East Coast Agent”**
3. Click **Add Tag**.
4. Click **OK**. The **Tag** window closes.

Search the asset browser by tag

You can search the asset browser by any tag. If you are searching by product tag, you can only see tags for products you are licensed to use. For example, if you only have a QM license, you will only see predefined items that have a QM tag, not items that have a WFM or an Analytics tag.

NOTE Depending on the WFM license you have, WFM fields are tagged with WFM (for new WFM) or CWFM (for classic WFM).

Prerequisites

- Data Explorer permission—gives you read-only access to the Data Explorer asset browser page

Page location

Data Explorer or Data Explorer > Reports

Procedures

Search for reports and dashboards by tag

1. On the asset browser page, click the search icon, and then select **Search tags**.
2. In the search field, type the desired tag. Data Explorer shows only reports and dashboards tagged with this value.

> **NOTE** If the tag name is multiple words separated by spaces, enclose the name with double quotes. For example, to search for **Agent East Coast**, enter **"Agent East Coast"**.

Export a report

Data Explorer allows you to export reports. Each report page has an **Export as** button. This allows you to export the data from a report in CSV or XLSX format.

> **IMPORTANT** To export the results of a report, you must save the filter criteria and any other edits before exporting.

Prerequisites

- Data Explorer permission—gives you read-only access to the Data Explorer asset browser page

Procedures

Export a report

1. Click the name of the report in the asset browser. The report page opens.
2. Click **Export as**. The **Export Report** dialog box opens.
3. Select the file format you want for the export.
4. Click **Next**. When the data is ready, a download link appears.
5. Click the link to download the file.
6. Click **Close** after your download is complete.

Create a report

Reports are the building blocks of Data Explorer that help you visualize trends in your data. You create a report by defining the question you want to answer and configuring the output so the answer is presented in a meaningful way.

To start the process, you break the question down into its individual parts:

- Measures—The metrics you want to understand. These are numerical fields that will have calculations performed on them, such as adding or averaging.
- Subjects—How you want the metrics grouped. These are text fields that are used as category-style groupings, such as agent ID number or queue name.
- Filters—The boundaries that you want the metrics to fall within, such as a time frame or maximum/minimum values.

> **EXAMPLE**
> You want to find out how many contacts that lasted longer than ten minutes were handled by each agent on the East Coast team during the month of March.
>
> - The **measure** is contacts.
> - The **subjects** are the agents on the East Coast team.
> - The **filters** are contacts longer than ten minutes and the month of March.

These three components make up the structure of reports that can be incredibly complex and useful.

Once you have created the question of the report, you can then determine how the information in the report is displayed. There are a wide variety of customizable charts and tables to choose from.

Create a question

Reports are the building blocks of Data Explorer that help you visualize trends in your data. You create a report by defining the question you want to answer and configuring the output so the answer is presented in a meaningful way. There are a wide variety of customizable charts and tables to choose from.

You use the Question panel to create a question. To start the process, break down the question into its individual parts:

- **What**—The measures (metrics) you want to understand. These are numerical fields that will have calculations performed on them, such as adding or averaging.
- **How**—How you want the measures grouped. These are text fields that are used as category-style groupings, such as agent ID number or queue name.
- **Filters**—The limits that you want the metrics to fall within, such as a time frame or maximum/minimum values.

EXAMPLE
You want to find out how many contacts that lasted longer than ten minutes were handled by each agent on the East Coast team during the month of March.

- **What** is the number of contacts (the measure).
- **How** is the agents on the East Coast team (the grouping).
- **Filters** limit the report to contacts longer than ten minutes and that were from the month of March.

NOTE As you create your question, the pane at the bottom of the Question panel states the question in plain language based on your selections in the What, How, and Filters sections.

Create a new report

In order to create a question, you need a report in which to put it.

Create and name your new report

1. On the Data Explorer home page, click **New Report** to display the report designer.
2. Click **Unnamed Report** in the title bar and enter a name for the new report.

Choose a measure

Decide what information you want your report to show. These numeric values are called measures.

There is a list of measures that you can choose from, or you can create your own custom measures. Multiple measures are often used in reports. For example, a report that shows contact duration in hours might also show the average contact duration.

NOTE
The Adherence % – Daily measure is computed after the close of the day and is then timestamped only with a date, and not a time. The engine assigns a time value of midnight UTC to it. Since reports are executed in the time context of the user running the report, there is a time shift by default, and adherence values can seem incorrect in the report.

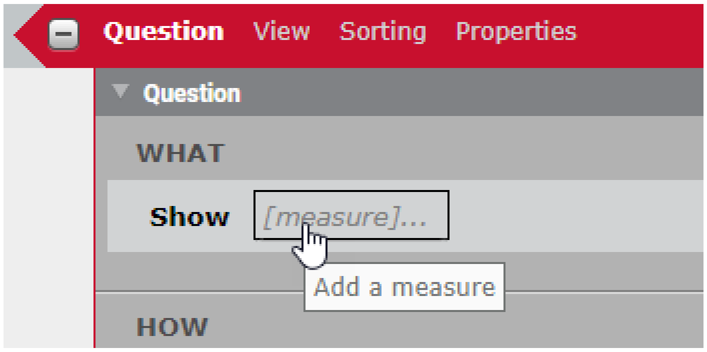
To adjust for this, you have several options:

1. Set the time zone for the report to UTC.
2. Set the time zone for the user running the report to UTC.
3. Apply the following custom formula to the report:

```
timeShiftValue([Adherence PCT],[Adherence Date], 'Hour', -8)
```

Configure measures for a new report

1. In the **What** section of the **Question** panel, click Show **[measure]**. The **Select Measure** dialog box opens.

   By default, **all** available measures are listed, but you can search, sort, and filter the list.

   - Click **By Tags** to view measures that apply only to various sources of data, such as Analytics or QM. Some measures have multiple tags and so appear in more than one tag list.
   - Click **Favorites**  (upper right of the list) to view only those measures you tagged as a favorite. To tag a favorite, click the box to the left of the measure's name in the list so a yellow star appears. Any measure you tag as a favorite will stay tagged from session to session.
   - Click **Sort**  (upper right of the list) to sort the list of measures in ascending/descending order. By default the list is in ascending order.
   - Enter the name of the measure you want to use in the **Search** field to find that field quickly.

2. Select the measure you want to include in the report from the list of available measures.

   You can also click **Custom** in the top right corner to create a custom measure. For more information about custom measures, see Create a custom measure.

3. (Optional) Customize how the measure will appear in the report by using the **Measure Configuration** panel at the bottom of the dialog box. Here you can configure the number or date format of the measure, how it is aggregated, and apply content attributes to it. For more information about configuring a measure, see Configure a measure's appearance.

4. Click **Add**.

   The measure you added is displayed in the Question panel, and another Show field is added below the one you completed. Use this field to add additional measures to your question.

   > **NOTE** If you want to configure a measure you have already added to the **What** section, click the measure to open the **Select Measure** dialog box again.

5. (Optional) Measures display as columns by default. Click **as columns** to switch to displaying them as rows.

Choose a grouping

After you have defined the topic of your question with the measure, determine how to group the information. The **How** question term is often the organization of people, places, things, and timeframes that provide real-world subjects or circumstances for the report. It is common to have multiple How subjects in a report.

Determine how the report will group the information

1. In the **How** section of the Question panel click Group **[grouping]**. The **Select Grouping** dialog box opens.

   There are two grouping options, **Subject** or **Time**. By default you see the Subject option. If you want to group by time or date, click **Time** in the upper right corner of the dialog box. You are also able to further refine the time grouping by period.

   > **NOTE** Just as you can with measures, you can narrow down the displayed subjects and times by tag or favorites, sort them in ascending/descending order, or search for a specific subject or time by name.

2. Choose the desired grouping, and then click **Add**.

   The grouping you added is displayed in the Question panel, and another **[grouping]** field is added below the one you completed. Use this field to add additional groups to your question.

   > **NOTE** If you select **with totals** in the Group section of the Question panel and select **Preserve Totals** when creating a visualization, the chart will display the total value as an additional column.

Set a filter

The final step of defining a question is choosing a filter. A measure alone can return a large amount of information. The filter serves to target the specific information you want to include or exclude in your report. You can select specific values to include or exclude, or you can set text comparison filters or range comparison filters to determine which range of values are included in your report.

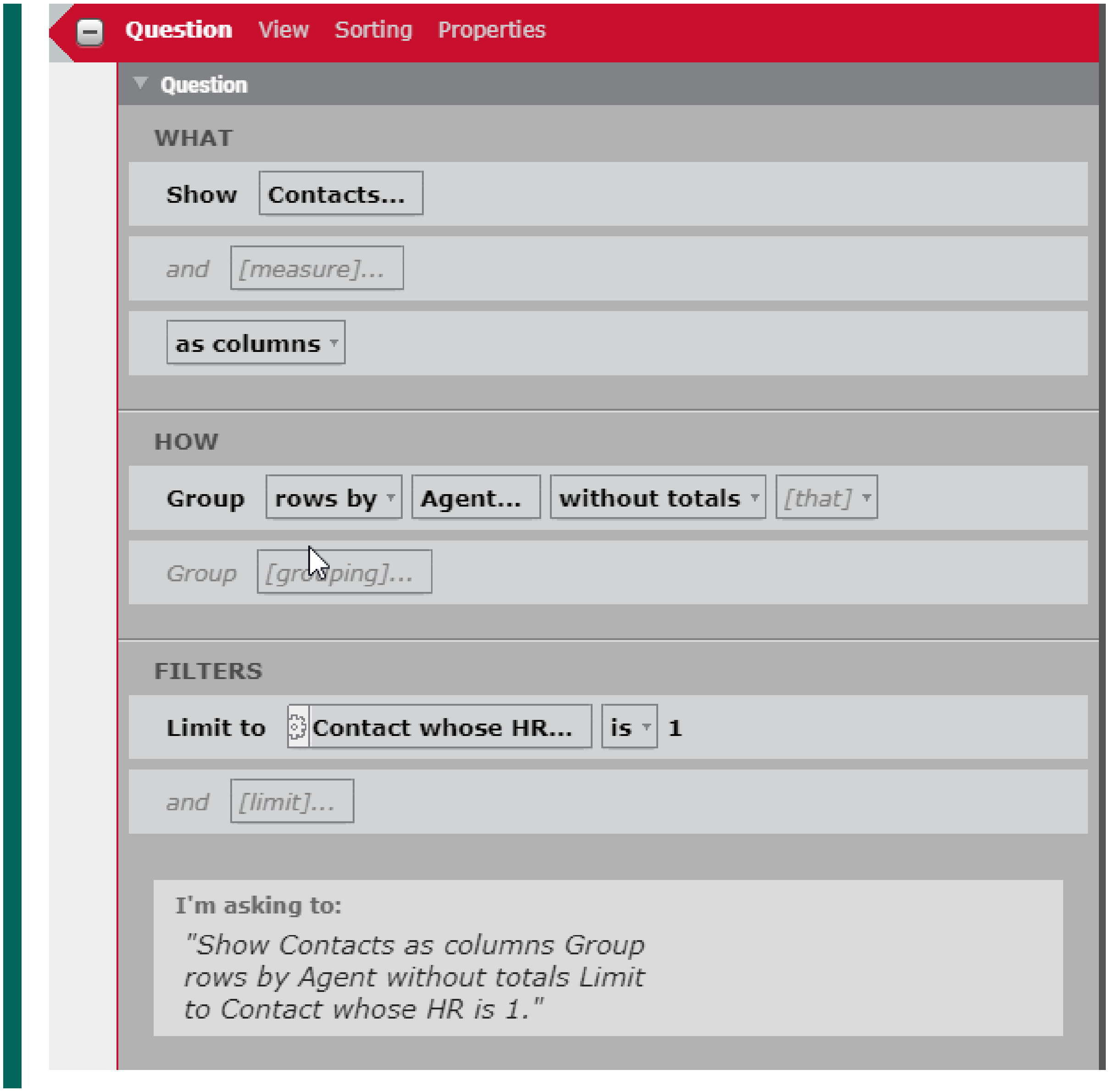
> **NOTE** Data Explorer reports on the last two years of data. If your system has a lot of historical data, you might find it useful to configure your filter before you configure your measures and groupings. This helps speed up displaying the report preview.

The filter section is also used to configure which subjects are used in conjunction with parameters on the dashboard. For example, if your report lists every agent in the contact center, but you want to be able view data only for a specific agent, the parameter allows you to select that agent and see only their data displayed in the report.

Include only certain values of a subject in the report

1. In the **Filters** section of the Question panel, click Limit to **[limit]**. The **Select Filter** dialog box opens.
2. Select a subject, and then select a field to filter the report by.
3. Clear the **All Values** check box, and select the check box for the values you want to include.
4. Click **Add** to filter the report.

> **EXAMPLE**
> You want to include only contacts that were tagged for HR in your report. You complete the **Select Filter** dialog box as follows.
>
> - In the left-hand pane, select **Contact**.
> - In the middle pane, select **HR**.
> - In the right-hand pane, on the **Select** tab, clear the **All values** check box and select the **1** (which means true or yes) check box.

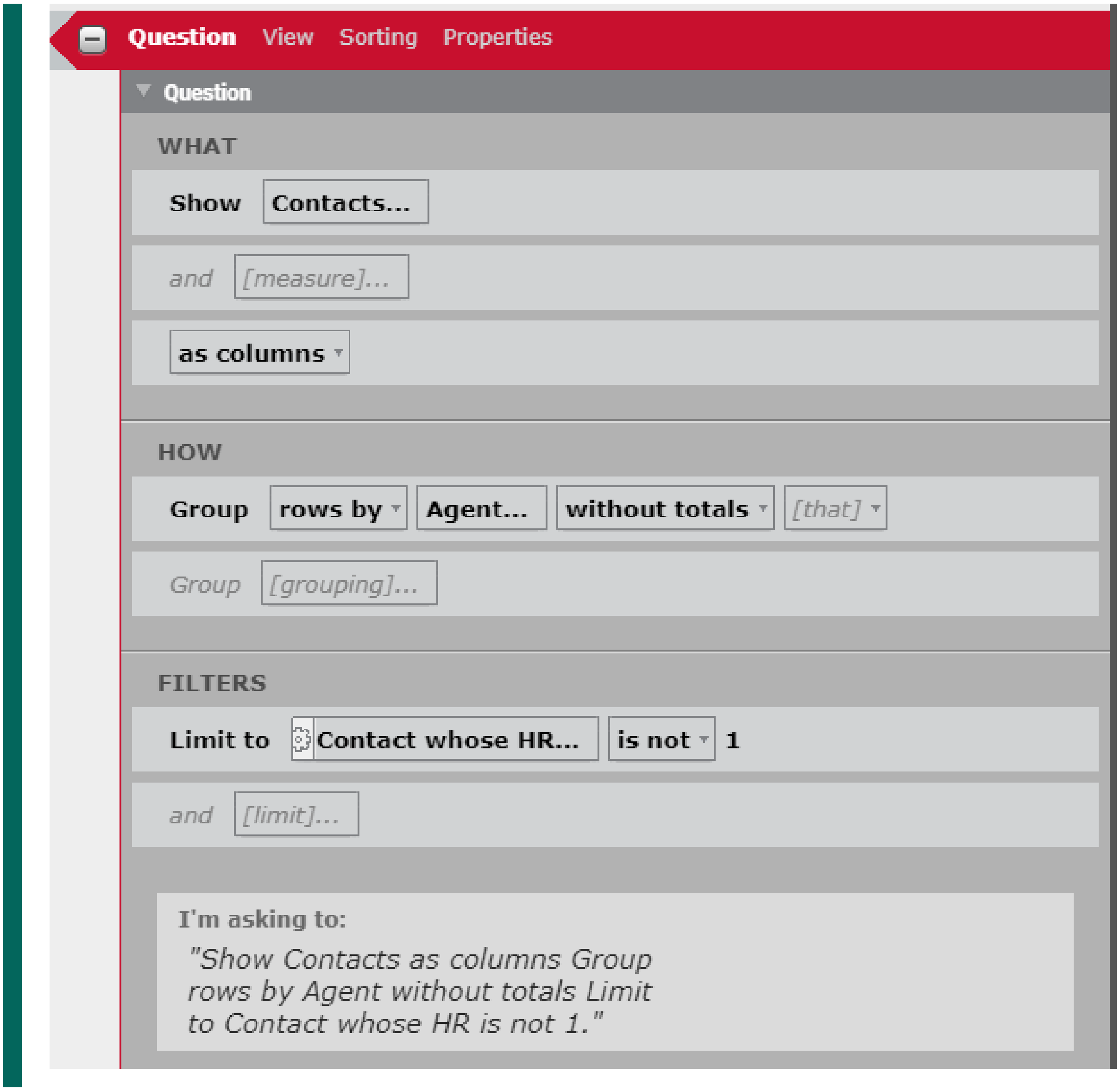


Exclude certain values from the report

1. In the **Filters** section of the Question panel, click Limit to **[limit]**. The **Select Filter** dialog box opens.
2. Select a subject, and then select a field to filter the report by.
3. Clear the **All Values** check box, and then select the check box for one or more of the values that you want to exclude.
4. Click **Add**.

5. In the **Filters** section of the Question Panel, click the **is** drop-down list in the filter you created and select **is not** from the drop-down list.

> **EXAMPLE**
>
> You want to exclude contacts that were tagged for HR in your report. You complete the **Select Filter** dialog box as follows.
>
> - In the left-hand pane, select **Contact**.
> - In the middle pane, select **HR**.
> - In the right-hand pane, on the **Select** tab, clear the **All values** check box and select the **1** (which means true or yes) check box.
>
> In the **Filters** section of the Question panel, next to the filter you just added, change **is** to **is not** in the drop-down list.

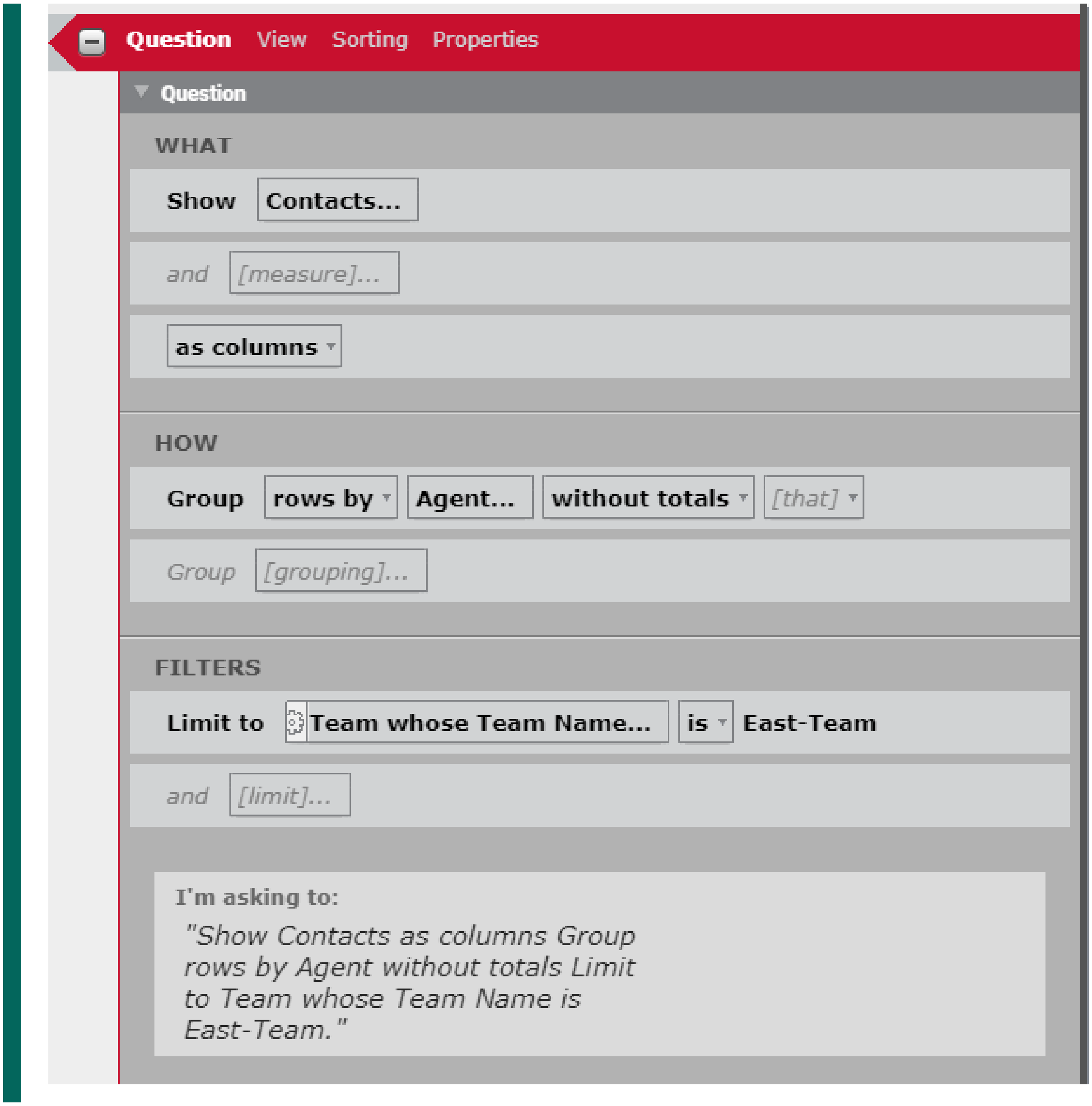


Include or exclude values using comparison filters

1. In the **Filters** section of the Question panel, click Limit to **[limit]**. The **Select Filter** dialog box opens.
2. Select a subject, and then select a field to filter the report by.
3. Clear the **All Values** check box, and then take one of the following actions:
   - Select the check box for the value to set it as a comparison.
   - On the **Specify** tab, enter a value in quotation marks to set as a comparison.

4. Click **Add**.
5. In the Filters section of the Question panel, click the **is** drop-down list in the new filter and select the operator you would like to apply to the value.

> **EXAMPLE**
>
> You want to include only agents who belong to the East Team in your report. You complete the **Select Filter** dialog box as follows.
>
> - In the left-hand pane, select **Team**.
> - In the middle pane, select **Team Name**.
> - In the right-hand pane, on the **Select** tab, clear the **All values** check box and select the **East-Team** check box. Alternatively, click the **Specify** tab and enter **"East-Team"** in the filter value pane.

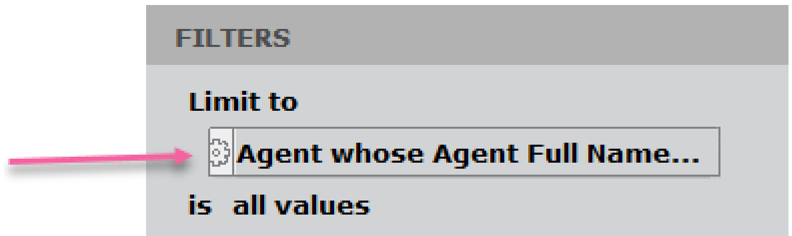


Add one or more report parameters

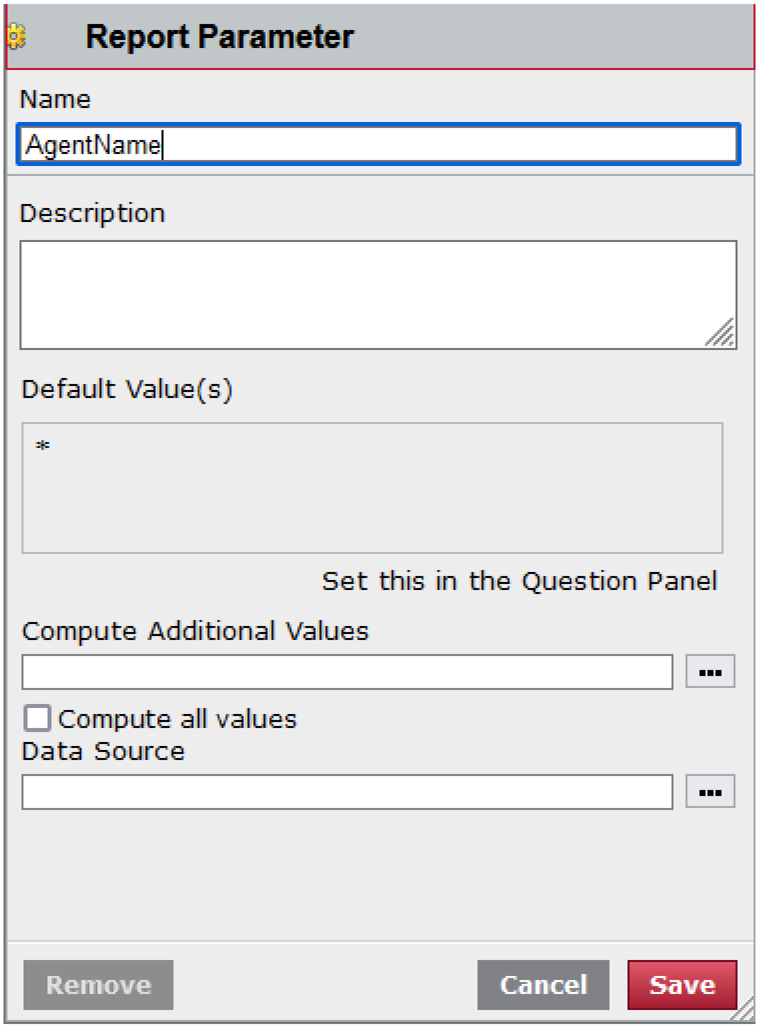
If you intend to use a parameter control such as a member picker to filter the data displayed in a report, you must add one or more report parameters to the report. For more information about using parameters with a report, see Add a parameter.

1. In the **Filters** section of the **Question** panel, click Limit to **[limit]**. The **Select Filter** dialog box opens.
2. Select a subject, and then select a field to filter the report by.

3. On the **Select** tab, select the **All Values** check box.
4. Click **Add**. The subject is displayed in the **Limit to** field.
5. To the left of the **Limit to** field, click the gear icon to open the **Report Parameter** dialog box.



6. In the **Name** field, enter a name for the parameter. The name cannot contain a space. All other fields are optional.



7. Click **Save**. Note that the gear icon has turned red, indicating that the parameter has been configured.
8. Repeat this procedure for any other filters you want to use in the report.

Filtering deleted forecast, adherence, and agent schedule records

By their nature, forecast, adherence, and agent schedule records are frequently changed. For example, an agent's schedule might be changed multiple times. Each time this occurs, a schedule record is deleted and a new one is created.

In the Data Explorer database, these records are not physically deleted. Rather, they are flagged as deleted, and the record remains in the database. This results in many records that are no longer relevant and might result in inaccurate reports if they are included. In this case, the records that are flagged as deleted should be filtered out of your report.

NOTE Bear in mind that there might be times when you want to include these flagged records in a report. For example, you might need to audit how many times a specific agent's schedule was changed. In such a case, you would not filter the deleted records from your report, because each record logs a schedule change.

Filter deleted forecast, adherence, and agent schedule records

1. In the **Filters** section of the **Question** panel, click Limit to **[limit]**. The **Select Filter** dialog box opens.
2. Select a forecast, adherence, or schedule subject, and see if the fields associated with that subject include any of these flag fields:
   - Agent Adherence Report IsDeleted
   - Schedule Activity IsDeleted
   - Forecast IsDeleted
3. If you locate one of these fields, select it. Clear the **All Values** check box and select **1** (1 = true or yes).
4. Click **Add**.
5. In the **Filters** section of the **Question** panel, click the **is** drop-down list and select **is not**.

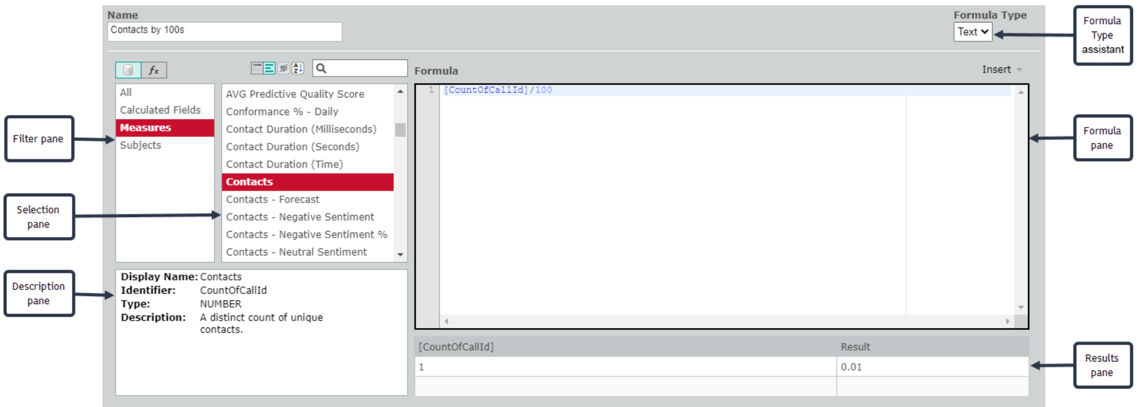
Create a custom measure

If you want to add a measure to a report that is not in the list of measures, you can create a custom measure by clicking **Custom** in upper right corner of the **Select Measure** dialog box.

Custom measures use formulas to alter measures and fields that already exist in the data model. You can create a formula by manually entering measures and operators into the Formula pane. The custom Create Measure dialog box includes lists of the available measures, operators, and references that you can choose from to build a formula.

The Create Measure dialog box for custom measures is made up of two sections: the Formula Editor panel at the top and the Measure Configuration panel at the bottom. For information on the Measure Configuration panel, see Configure a measure's appearance.

The Formula Editor is context-specific. It allows you to include only the data elements, functions, and other features for your formula that are appropriate for the measure you select.



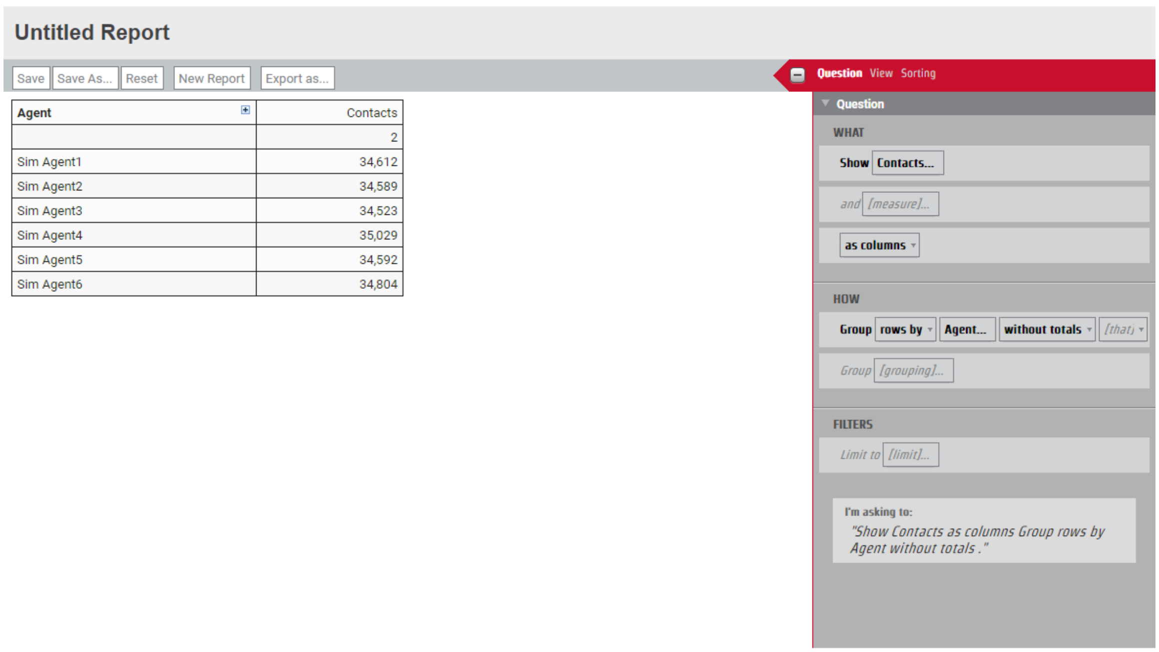
- The **Filter pane** contains the options you can use to narrow the number of data elements or functions displayed in the Selections pane. For example, if you select **Measures** in the Filter pane, only measures are listed in the Selections pane. Use the buttons above the Filter pane to toggle between data elements and functions. Data elements are the fields in the data library that are available for use in your formula, and functions are defined operational tasks.
- The **Selection pane** displays the elements or functions you can add to your formula. What is displayed depends on your selection in the Filter pane. Use the buttons above the Selection pane to toggle between measure or function display names and identifiers. You can sort the data elements or functions in ascending or descending order with the Sort button , and search for a specific data element or function with the search field.

  NOTE This button is not currently used.
- The **Description pane** displays information about the data element or function that you have selected in the Selection pane.
- The **Formula pane** displays the formula as you create it. This pane includes the data elements and functions you select and whatever other formula elements you enter manually.
- The **Results pane** attempts to compile your formula as you work and to display the result. It will display an error message if your formula contains errors.
- The **Formula Type assistant** drop-down list enables you to access assistants that help you create various types of formulas. The default is a text formula, but besides text you can choose from difference, ratio, scale, split, and time shift formula types. See Create a custom measure with a Formula Type assistant for more information.

Example of a custom measure

The Custom Measure function is a tool that can be used to create many different types of formulas with different levels of complexity. There are several ways to create a formula. The following example explains one way to create a custom measure.

For this example, let us say that you want to see a report that involves the number of contacts your agents handle. Your contact center receives large numbers of contacts, so the report would show each agent handling contacts that can number in the thousands every year. However, you use the report to find agents who are performing above or below the rest of the group, and seeing the exact number of contacts for each makes that difficult to absorb at a glance, as seen in this graphic:



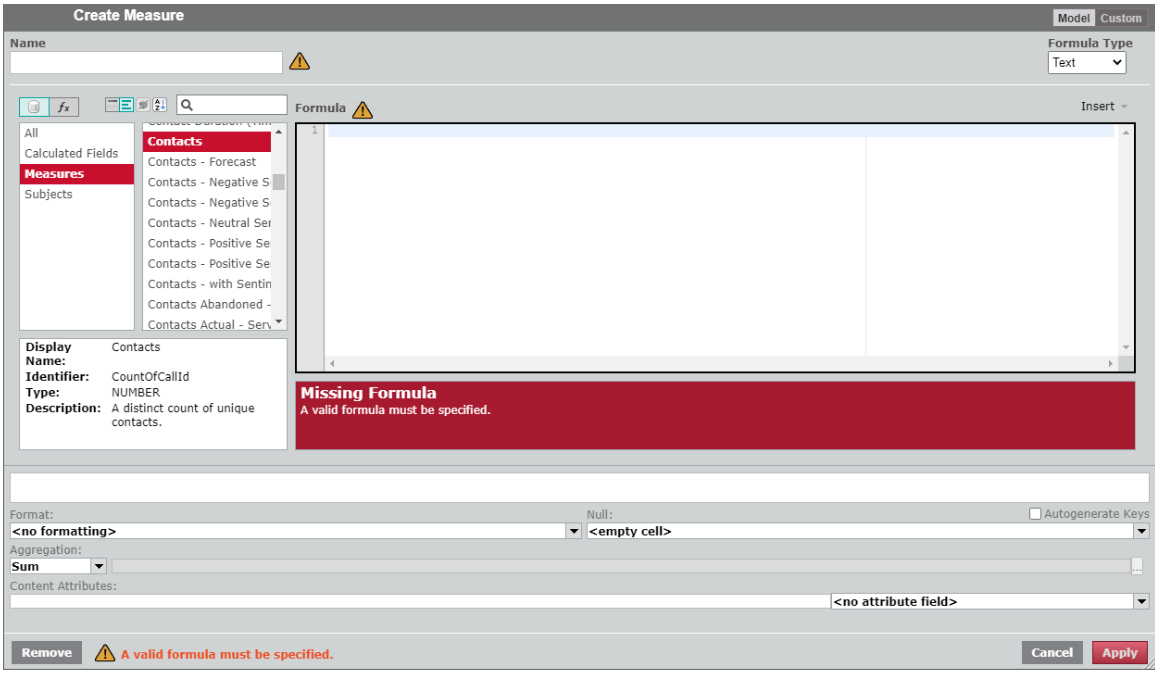
The way to solve this problem is to present the number of contacts as factors of 1,000 in order to see agent productivity at a glance. In this example we will show you how to create a custom measure that divides the number of contacts by 1,000.

Create a custom measure to divide contacts by 1,000

1. On the Question tab of the Question panel, click Show **[measure]**. The **Select Measure** dialog box opens.
2. Click **Custom**. The Create Measure dialog box opens. The text boxes will be empty, and several warnings will display in the dialog box.
3. Enter **Contacts by 1K** in the **Name** text box.

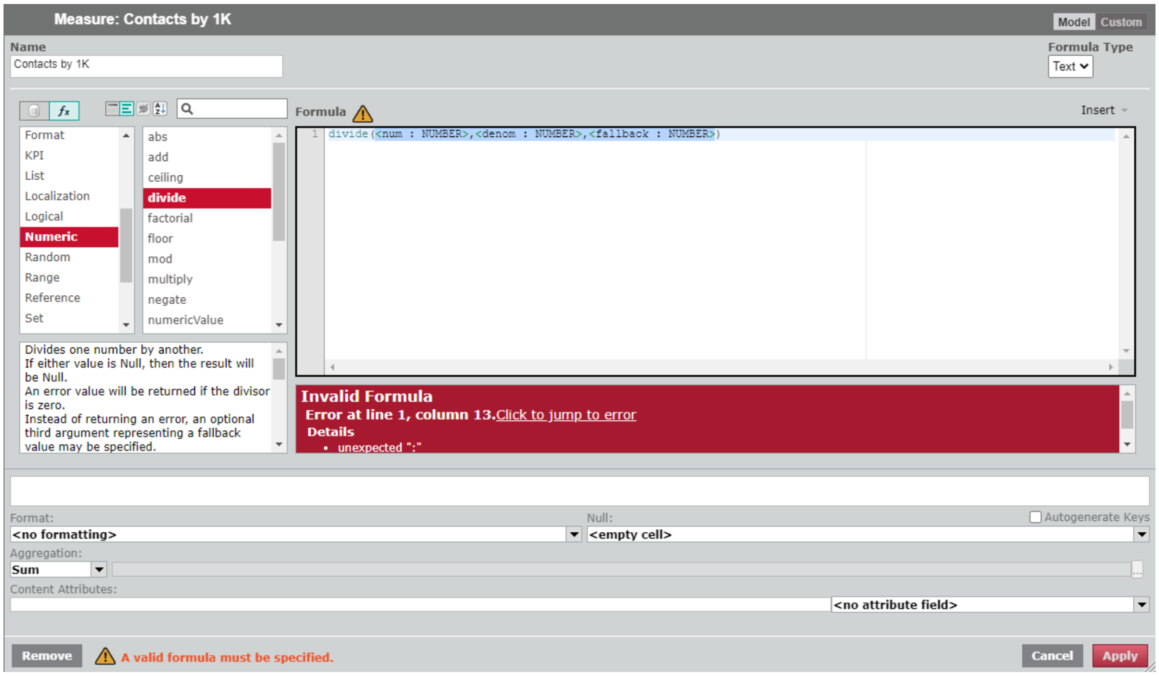
4. Locate and select the **Contacts** measure.

> **NOTE** You might need to clear the search field of an existing search string in order to see all results in the Selection pane.



5. To use the Divide function, click the **Data Elements/Functions** toggle so the **Filter** and **Selection** panes display functions.

6. Click **Numeric** in the **Functions Filter** pane, and then double-click **divide** in the **Selection** pane. The Divide function text is displayed in the Formula pane.

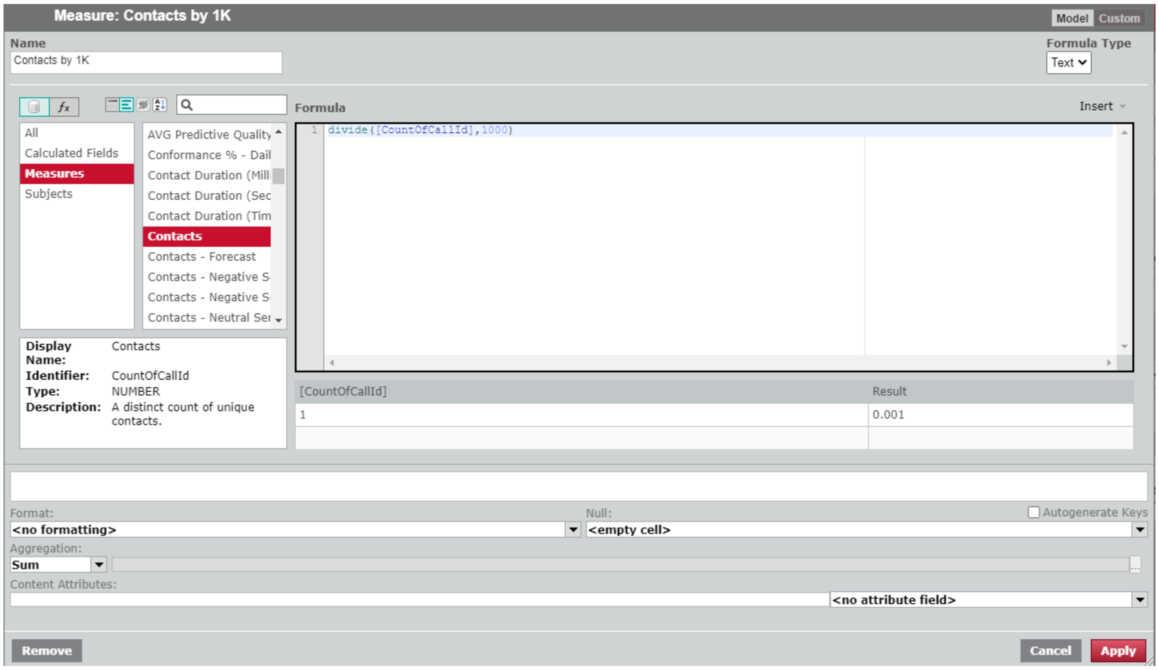


The Divide function text is an outline of the formula. You must replace the placeholder text with the values you want to divide in the order that they would appear in a mathematical equation.

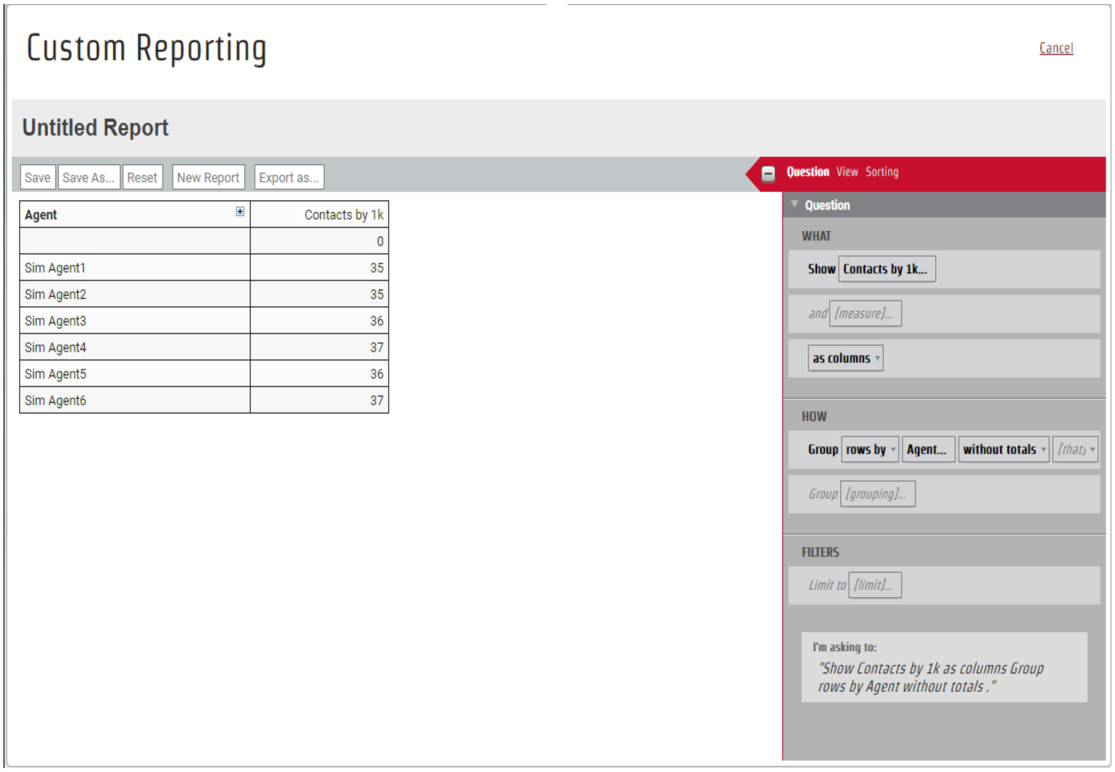
- <num : NUMBER> is the numerator, the number being divided. Replace this with the contact field name.
- <denom : NUMBER> is the denominator, the number you are dividing by. Replace this with **1000**.
- <fallback : NUMBER> is an optional value that is displayed if the formula results in dividing by zero instead of returning an error.

7. To replace `<num : NUMBER>` with the measure for the number of contacts, highlight **<num : NUMBER>** in the Formula pane.
8. Click the **Data Elements/Functions** toggle to display lists of data elements.
9. Click **Measures** in the **Data Elements Filter** pane, and then double-click **Contacts** in the **Selection** pane. The Contacts text appears in the Formula pane in place of **<num : NUMBER>**.
10. Delete **<denom : NUMBER>**, and type **1,000** in its place. The Results pane displays a sample of the calculation.

NOTE We have also deleted **<fallback : NUMBER>** from the formula, because we are not using this optional element.



11. To make the results display as a whole number, in the Measure Configuration section, select a format from the **Format** drop-down list that does not include any decimal places, such as **#,###**.
12. Click **Add**. Your new custom measure appears in the Question panel, and the new column in the table displays the number of contacts divided by 1,000.



NOTE As previously mentioned, the Create Measure dialog box includes several options for creating formulas. As an alternative to selecting a Function and editing the placeholder text, you can create a custom measure to divide the number of contacts by 1,000 by selecting the elements individually or manually entering the following formula in the Formula pane.

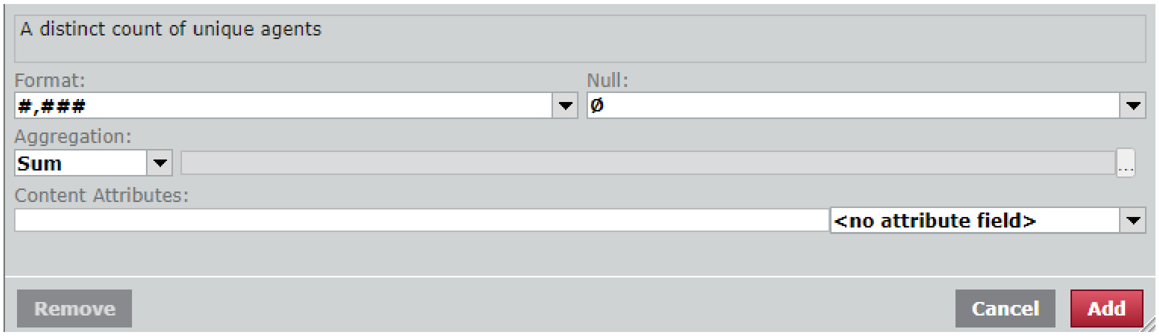
```
[CountOfCallId]/1000
```

Related Topics

- Configure a measure’s appearance

Configure a measure’s appearance

Use the fields at the bottom of the Measure dialog box to customize how a measure appears in a report. This panel is available for both model measures (measures that come pre-built in Data Explorer) and custom measures (measures that you create yourself).



Prerequisites

- You have the Content Creation permission.
- You have created a report that has at least one measure.

Page location

Data Explorer > open a report

Procedures

Format a measure

1. In the Question panel, click the measure. The **Measure** dialog box opens.
2. Configure the measure as needed using the drop-down lists and fields at the bottom of the dialog. The table below defines the different fields.

Formatting fields in the Measure dialog box

Field	Definition
Format	The format in which to display numbers, dates, and times. You can select a format or enter the format syntax.
Null	What appears in a report when the value returned is null (blank).

<table>
<tr><th>Field</th><th>Definition</th></tr>
<tr><td>Aggregation</td><td>The consolidation method for values. For example, average, maximum, or minimum.</td></tr>
<tr><td>Content Attributes</td><td>The content attributes string that determines the measure’s appearance. See About content attributes for examples and further information.</td></tr>
<tr><td>Content Attributes drop-down list</td><td>You can use the drop-down list to the right of the Content Attributes field to apply preconfigured content attributes to the measure without having to enter anything in the Content Attributes field itself.

BEST PRACTICE Use only one of the two content attribute fields at a time. Using both fields at the same time could lead to unexpected results.

Your options vary by data model and could include the following:

■ <no attribute field>—The default value. No preconfigured attributes are applied.
■ ATTR_CCRID_Link—Turns the contact recording ID measure into a link to the recording and colors the text blue.
■ ATTR_DURATION—Applies the duration format associated with the measure.
■ ATTR_DURATION_hhmmss—Applies the HH:MM:SS format to the measure.
■ ATTR_kpiScoreColor—Turns text to white against a background of red (#A6192E) for KPIs of 0.7 and below, yellow (#FFC72C) for KPIs between 0.7 and 1.0, and green (#279989) for KPIs 1.0 and above.
■ ATTR_NPS_ChartColors—Applies red (#A6192E) to NPS</td></tr>
</table>

Field	Definition
	scores of 0 to 6, yellow (#FFC72C) to NPS scores of 7 and 8, and green (#279989) to NPS scores of 9 and 10. ■ ATTR_NPSColours—Applies red (#A6192E) to NPS scores of –100 to 0, yellow (#FFC72C) to NPS scores of 1 to 50, and green (#279989) to NPS scores 51 to 100. ■ ATTR_PredictiveNPS_ChartColors—Applies red (#A6192E) to NPS scores of 0 to 6, yellow (#FFC72C) to NPS scores of 7 and 8, and green (#279989) to NPS scores of 9 and 10. ■ ATTR_Quartile_Colors—Turns text to white against a background of teal (#279989) for the first quartile, yellow (#FFC72C) for the second quartile, dark yellow (#FF9D00) for the third quartile, and maroon (#A61923) for the fourth quartile. ■ ATTR_SentimentChartColors—Applies red (#A6192E) to negative sentiments, yellow (#FFC72C) to neutral sentiments, and green (#279989) to positive sentiments.

3. Click **Apply**. The **Measure** window closes.

Related topics

- About content attributes—A full list of all content attributes and the syntax to use them

About content attributes

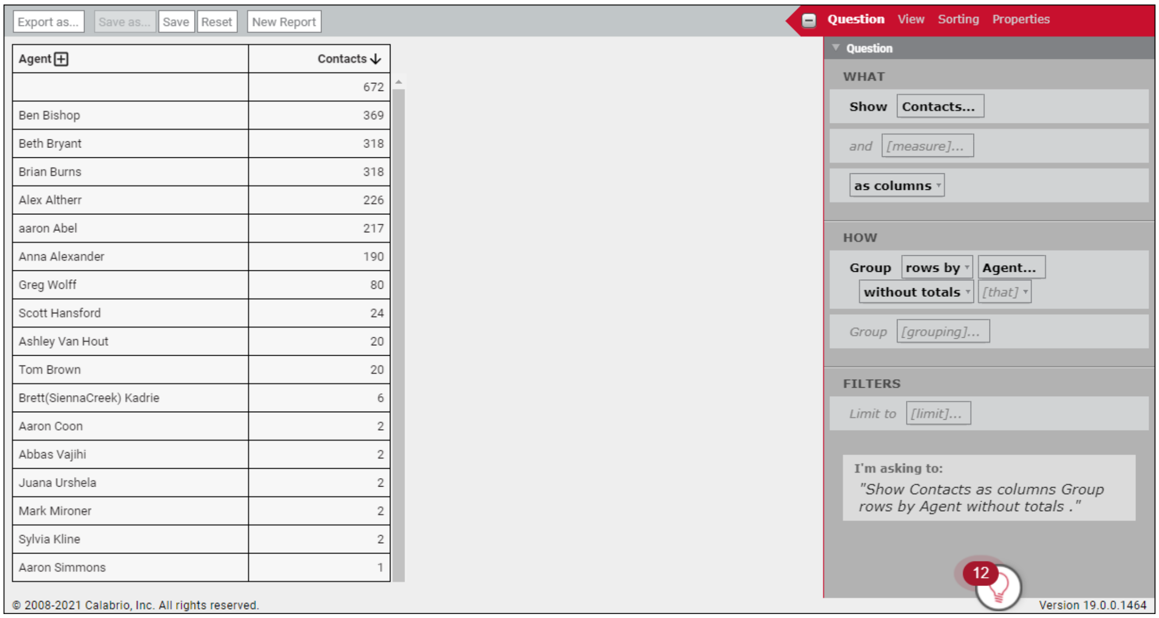
Content attributes apply static or conditional changes to specific measures in a report.

A **static change** always affects how a measure is displayed. For example, you can apply attributes to a measure so that it always appears in bold text.

A **conditional change** applies only when the measure's value meets certain criteria. For example, you can set a condition so that a measure appears in red whenever it is a negative number.

Example 1: Make numbers from 20 to 200 bold and blue

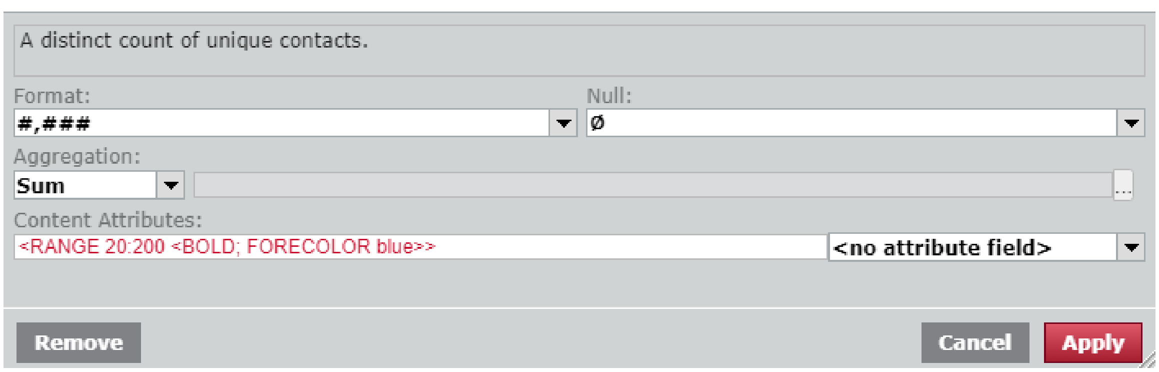
You create a report that shows how many contacts each agent has handled. You want to easily identify the agents who have handled between 20 and 200 contacts. Without applying any content attributes, the report looks like this:



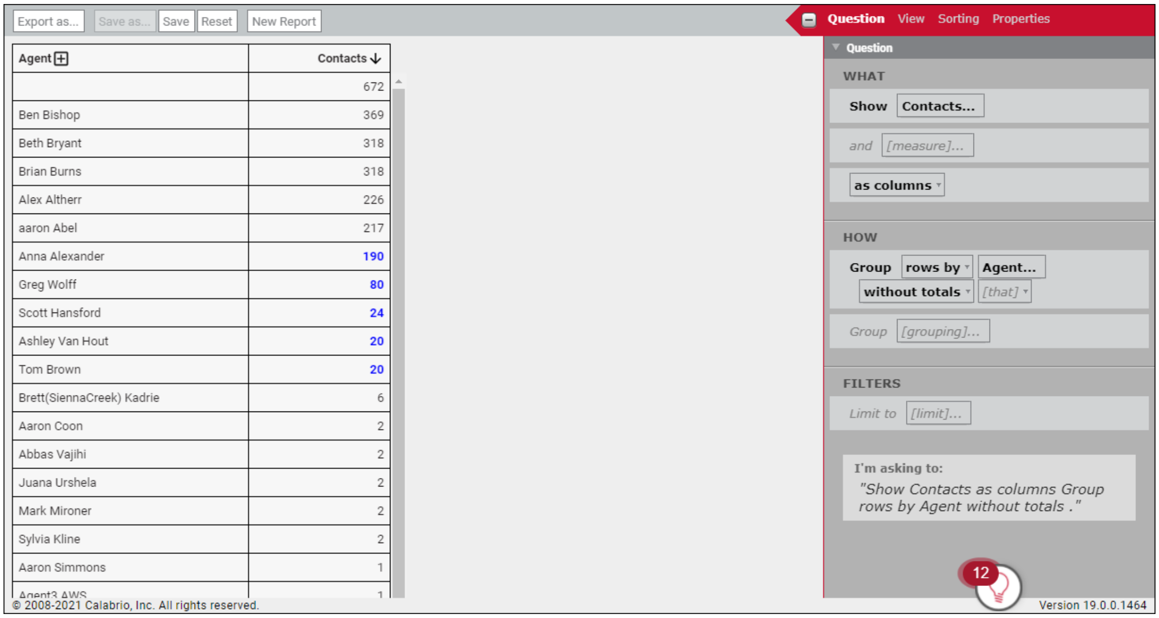
You want contact totals from 20 to 200 to be blue and bold. To do this, use the RANGE keyword and the FORECOLOR and BOLD attributes.

1. In the **Question** panel, click **Contacts**. The **Measure: Contacts** dialog box opens.
2. In the **Content Attributes** field, enter the following text:

```
<RANGE 20:200 <BOLD; FORECOLOR blue>>
```



3. Click **Apply**. Numbers from 20 to 200 in the report's Contacts column appear in bold blue text.



Example 2: Color-code numbers as low, medium, or high

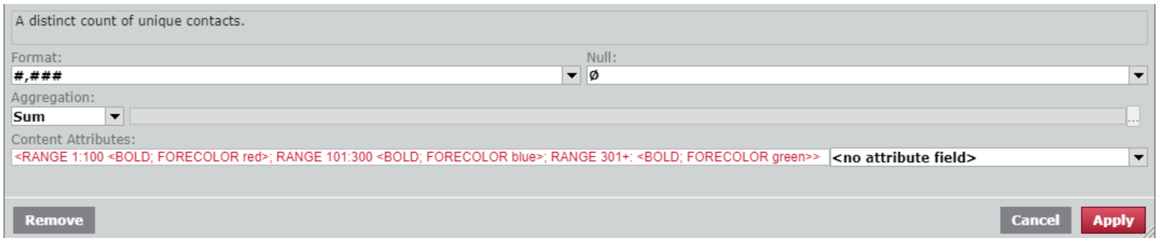
You revise the report you created in Example 1 to use more ranges and colors that indicate how agents are performing. You want to see agents in three ranges:

- Low performing (red): Agents who handled between 1 and 100 contacts
- Average performing (blue): Agents who handled between 101 and 300 contacts
- High performing (green): Agents who handled 301 contacts and up

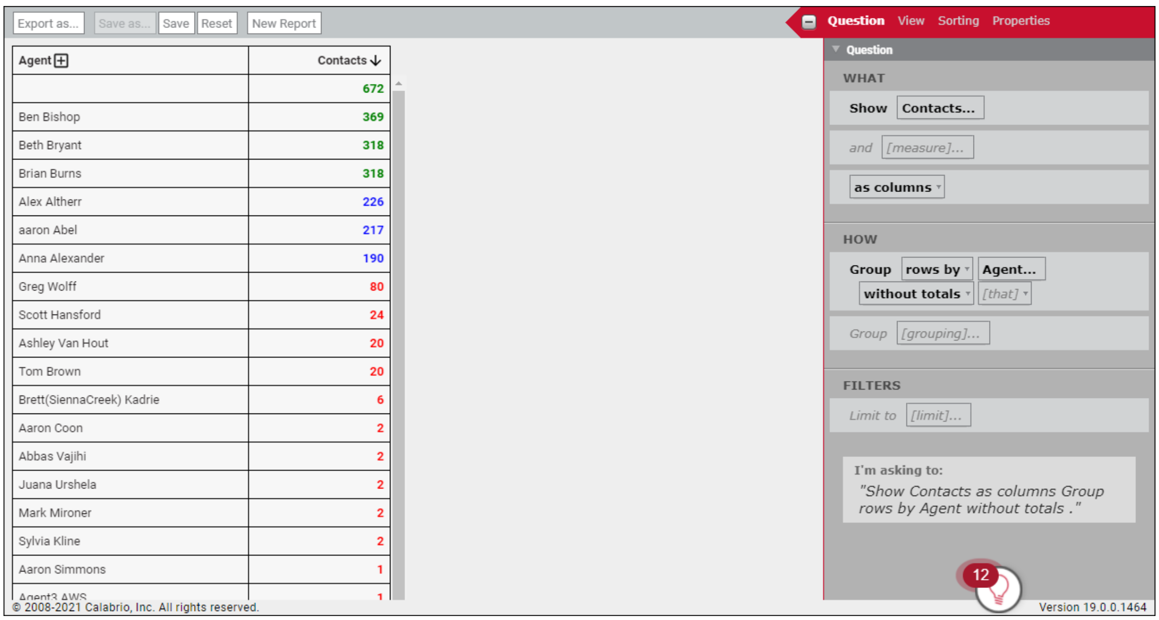
To do this, nest multiple RANGE conditions. The colors you specify for each range appear if any of the conditions are met.

1. In the **Question** panel, click **Contacts**. The **Measure: Contacts** dialog box opens.
2. In the **Content Attributes** field, enter the following text:

```
BOLD;<RANGE 1:100 <FORECOLOR red>; RANGE 101:300 <FORECOLOR blue>; RANGE
   301+: <FORECOLOR green>>
```



3. Click **Apply**. Numbers in the report's Contacts column appear in red, blue, or green, depending on where they fall in the three ranges.

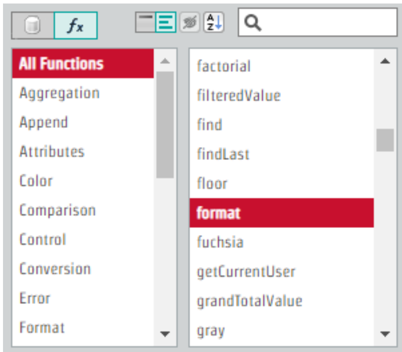


Example 3: Preserve the formatting for time fields when you export a report

You create a report that shows the duration of contacts in seconds, and you select ATTR_DURATION_hhmmss from the Content Attribute drop-down list to format these seconds into hours and minutes. However, when you export the report, the duration values in the export appear as seconds. Webex WFO does this so that you can easily import reports into other databases or spreadsheets. If you want to preserve the hours-and-minutes formatting in the export, create a custom measure and use the DURATION and PATTERN content attributes.

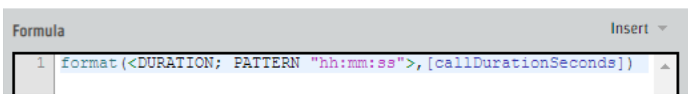
1. (Optional) Remove the original duration measure from the report. If you need both the formatted and unformatted data in your export, skip this step.
2. In the **Question** panel, click ***[measure]***. The **Select Measure** dialog opens.
3. Click **Custom**.

4. Enter a name for the custom measure in the **Name** field.
5. Click ***fx***.
6. Select **All Functions**.
7. Select **format**.



8. In the **Formula** field, enter the following text:

```
format(<DURATION; PATTERN “hh:mm:ss”>,[callDurationSeconds])
```



9. Click **Add**. Call durations in the exported report now preserve their time formatting.

Content attribute syntax

This section defines the text to enter in the Content Attribute field in the Measure panel.

BEST PRACTICE Not all content attributes are appropriate for all types of data. For example, the Maximum Decimal Places attribute, which specifies the maximum number of decimal places to display in a value, has no effect on a report that returns only whole numbers.

NOTE All time data available for reporting in Data Explorer is in UTC format. To use a different time format, add a time subject as a custom measure and apply the Time Zone content attribute.

Syntax element	Purpose	Example
angle brackets	Use angle brackets to enclose the attribute content.	`<BOLD>`
uppercase text	Use uppercase text to specify the name of the attribute.	`<ITALIC>`

Syntax element	Purpose	Example

true / false	For Boolean attributes, specify **true** to enable them and **false** to disable them. A Boolean attribute that does not specify true or false is by default true.	`<BOLD true>` or `<BOLD>`
		`<BOLD false>`
		Applies or removes bold formatting.

semicolons	Separate multiple attribute declarations with a semicolon.	`<ITALIC; BOLD>` Applies italic and bold formatting.

static value declaration, with a space or an equal sign	For attributes that require a value assignment, enter the static value declaration after the attribute and inside the angle brackets. The static value can be separated from the attribute by a space or an equal sign.	`<FORECOLOR blue>`
		`<FORECOLOR=blue>`
		Applies the color blue to the text.

double quotation marks	Enclose text values in double quotation marks.	`<FONT_FACE "Arial">` Applies the font Arial to the text.
no	Prefix an attribute with **no** to unset its value and force the use of the default. This can be used to override any attribute.	`<no FONT_FACE>` Overrides any custom font styles that might have been specified elsewhere.

Keywords

Data Explorer uses the following three keywords to amend content attributes.

- **ERROR**—Identifies if a problem occurs with the measure. (For example, when a formula results in a number being divided by zero.)
- **NULL**—Identifies a measure that returns no value.
- **RANGE**—Identifies measures between two specified bounds.

Use these keywords to set conditions for content attributes. The following syntax rules apply when working with keywords.

Syntax element	Purpose	Example
RANGE n:n	Use the keyword condition RANGE followed by the lower and upper bounds of the range, separated by a colon.	`<RANGE 0:100 <BOLD>>` Displays the values in the range of 0–100 inclusive in bold text.

RANGE n:
RANGE :n
	Use the keyword condition RANGE followed by either only the lower or only the upper bound to indicate that the bound is not inclusive.
	
	You can apply multiple attributes to the range.
		`<RANGE 0: <UNDERLINE>>`
		
		Underlines values greater than 0.
		
		`<RANGE 0: <BOLD; ITALIC>>`
		
		Applies bold and italic formatting to values greater than 0.

RANGE n+:	Use the keyword condition RANGE followed by the lower bound and a plus sign to indicate that the lower bound is not inclusive.	`<RANGE 0+: <UNDERLINE>>` Applies an underline to values greater than but not including 0.
RANGE :n-	Use the keyword condition RANGE followed by the upper bound and a minus sign to	`<RANGE :0- <BOLD>>` Applies bolding to values less

Syntax element	Purpose	Example
	indicate that the upper bound is not inclusive.	than but not including 0.
NULL ERROR NULL, ERROR	Use the keyword conditions NULL, ERROR, or both to test if a value is null or an error value. When using both, separate the keywords with a comma.	<NULL, ERROR <BACKCOLOR red>> Displays a background color of red if there is a null or error condition.
Multiple keyword conditions with a single attribute	When assigning a single attribute to multiple keyword conditions (RANGE, NULL, ERROR), separate the conditions with a comma.	<NULL, RANGE 1:100<ITALIC>> Italicizes nulls and values between 1–100 inclusive.
Multiple keyword conditions with multiple attributes	When assigning different attributes for multiple keyword conditions (RANGE, NULL, ERROR), separate the conditions with a semicolon.	<NULL <UNDERLINE>; RANGE 1:100<ITALIC>> Underlines nulls and italicizes values between 1–100 inclusive.
Nested multiple keyword conditions	When nesting multiple keyword conditions, the specified attributes apply if any of the conditions are met.	<NULL <UNDERLINE>; RANGE 0+: <ITALIC>, RANGE 0:100 <FORECOLOR red>; RANGE 101:200 <FORECOLOR yellow>; RANGE 201+: <FORECOLOR green>; RANGE 201+: <BOLD>>

Syntax element	Purpose	Example
		Displays all values greater than zero in italics. Displays all values in red, yellow, or green, based on the defined ranges. If the value falls above 200, applies both the color green and bolding.

Additional syntax considerations

- Most attribute names are case sensitive. It is best to use uppercase for all attribute names.
- Three keywords, RANGE, NULL, and ERROR, help test values and apply conditional formatting based on the results.
- When using attribute values in a formula, literal values are considered constants.

Content attributes for all data types

The content attributes in this table can be used for all data types.

Attribute	Description	Example
LOCALE	Configures the name of a locale as defined in ISO-639 language codes and ISO-3166 country codes. Default format settings are derived from the locale.	<LOCALE "en"> <LOCALE "fr_CA">
NULL_TEXT	Specifies the text to be displayed for null values.	<NULL_TEXT "No data available.">
PREFIX	Prepends specified text to a value. The prefix text is added after other formatting has been applied. A prefix can be added to formatted values of any type. Prefixes are not added to	<PREFIX "Dr.">

Attribute	Description	Example
	null or error values, or to values assigned using the REPLACE attribute.	
REPLACE	Replaces the value with the specified text, even if the value is null or error. No other text formatting attributes, including PREFIX and SUFFIX, are applied if a REPLACE value is specified.	<REPLACE "CONFIDENTIAL INFORMATION”>
SUFFIX	Appends the specified text to a value. The suffix text is added after other formatting has been applied. A suffix can be added to formatted values of any type. Suffixes are not added to null or error values, or to values assigned using the REPLACE attribute.	

Content attributes for text data types

The content attributes in this table can be used for text data types.

Attribute	Description	Example
BACKCOLOR	Uses the specified color to fill the background.	<BACKCOLOR "white">
BOLD	Displays the specified text as bolded.	<BOLD>
DISPLAY_NAME	Uses the specified text to replace the name of the measure for headings. This is similar to the HEADING attribute. However, DISPLAY_NAME can include filter text and other variable content. This attribute	<DISPLAY_NAME "Maximum Sale Value">

Attribute	Description	Example
	cannot be used on custom measures.	
DROP_HEADING_ PREFIX	Trims the display of the specified characters from the left side of the value. This attribute can be specified as a value or as a control character such as the minus sign (-). This specifies that everything to the left of and including the minus sign should be stripped for display. This attribute is useful for preventing the display of prefixes that might have been added to control sort orders for text values in cohorts.	<DROP_HEADING_PREFIX 4> <DROP_HEADING_PREFIX "-">
FONT_FACE	Controls the font that is to be used for text. Data Explorer supports common font faces, using common web-safe CSS font stacks. If an unrecognized font is specified, the content will be displayed following the CSS font stack rules, often using a basic serif font face.	<FONT_FACE "Arial">
FORECOLOR	Uses the specified color to display text. Data Explorer supports the following common color values: aqua, black, blue, color, fuchsia, gray, green, lime, maroon, navy, olive, orange, purple, red, silver, teal, white, and yellow. **NOTE** You can also specify any RGBa value by using the COLOR ( ) function in a formula.	<FORECOLOR teal>

Attribute	Description	Example
HEADING	Uses the specified text to replace the name of the measure for headings. This is similar to the DISPLAY_NAME attribute. However, HEADING cannot include filter text and other variable content. This attribute can be used on all measure, including custom measures.	<HEADING "Maximum Sale Value">
ITALIC	Displays the specified text in italics.	<ITALIC>
LINK	Adds a hyperlink to the specified URL. **NOTE** When this attribute is specified on a measure, it adds a link to the measure heading.	<LINK "https://www.calabrio.com">
NOTE	Attaches a note with the specified text to the current measure. The note appears in the tooltip that is shown when hovering over the measure heading or any value for that measure.	<NOTE "Ask Accounts Payable for more details.">
STRIKETHROUGH	Displays the specified text with a strikethrough.	<STRIKETHROUGH>
UNDERLINE	Displays the specified text with an underline.	<UNDERLINE>

Content attributes for numeric data types

The content attributes in this table can be used for numeric data types.

Attribute	Description	Example
BYTE_SCALE	Specifies what scale the desired byte output	<BYTE_SCALE "kB">

Attribute	Description	Example
	should use, in increments of 1024. The range is from bytes (B) to yottabytes (YB). Also has an auto option to automatically choose the best scale.	■ If the value “3287040” is to be formatted, “3,210 kB” is displayed because 287040 ÷ 1024 = 3210 <BYTE_SCALE "auto"> ■ If the value “9876543210” is formatted with <BYTE_SCALE "auto">, “9.198 GB” is displayed because it cannot be further reduced.
CURRENCY_CODE	Specifies the currency code as defined in ISO-4217. If a CURRENCY_SYMBOL is also specified, that attribute takes precedence.	<CURRENCY_CODE "EUR">
CURRENCY_SYMBOL	Specifies the symbol to use when formatting. **NOTE** For the symbol to appear, you must also select <no formatting> in the Format selection list of the select measure dialog box.	<CURRENCY_SYMBOL "$">
DURATION	Specifies the value should be displayed as a time duration. This attribute uses the mm:ss pattern by default. It can be combined with the PATTERN attribute to specify alternate formats.	<DURATION> <DURATION; PATTERN "h:mm:ss"> <DURATION; PATTERN “mm.##”> ■ Displays a number of minutes with up to two decimals for a fraction of a minute. <DURATION; PATTERN

Attribute	Description	Example
		“mm:ss.00”> ■ Displays minutes, seconds, and exactly two decimals for a fraction of a second.
FIXED	Specifies the number of decimal places to display for a value. If necessary, the value is rounded to the specified number of decimal places.	<FIXED 4>
INPUT_BYTE_SCALE	Specifies what byte scale the input number is. If not specified, then the input value is assumed to be in bytes.	<INPUT_BYTE_SCALE "MB"> ■ If the value “2” is to be formatted with <BYTE_SCALE "MB">, “2,048 kB” is displayed because there are 1024 kB in 1 MB.
INPUT_METRIC_SCALE	Specifies what metric scale the input number is.	<INPUT_METRIC_SCALE "k"> ■ If the value “123456.789” accompanied with <METRIC_SCALE "M"> and <METRIC_UNIT "J"> is to be formatted, “123.457 MJ” is displayed because there are 1000 kJ in 1 MJ.
INTEGER	Formats the value as an integer, rounding it to the nearest whole number.	<INTEGER>
MAX_DP	Specifies the maximum number of decimal	<MAX_DP 2>

Attribute	Description	Example
	places to be included in the fraction part of a formatted number. If the specified number of digits exceeds the number of digits in the fraction value, all available digits are displayed. **NOTE** This value is ignored if the FIXED attribute is specified.	■ If the value “1.23” is formatted with <MAX_DP 1>, “1.2” is displayed. ■ If the value “1.23” is formatted with <MAX_DP 2>, “1.23” is displayed. ■ If the value “1.23” is formatted with <MAX_DP 3>, “1.23” is displayed.
METRIC_ SCALE	Specifies what scale the desired metric output should use. Uses increments of 1000. The range is from pico (p) to yotta (Y). Also has an auto option to automatically choose the best scale. METRIC_SCALE should always be accompanied by METRIC_UNIT. Available scales: ■ p—pico ■ n—nano ■ u—micro ■ m—milli ■ k—kilo ■ M—mega ■ G—giga ■ T—tera ■ P—peta ■ E—exa	<METRIC_SCALE "k"> ■ If the value “123456789” accompanied with a <METRIC_UNIT "J"> is to be formatted, “123,456.789 kJ” is displayed. <METRIC_SCALE "auto"> ■ If the value “0.0008” accompanied with a <METRIC_UNIT "W"> is to be formatted, “800 uW” is displayed.

Attribute	Description	Example
	■ Z—zetta ■ Y—yotta ■ auto—automatically chooses the best scale. ■ ‘ ‘—empty quotes for the base metric unit. For example, meters instead of kilometers. **NOTE** Instead of specifying the prefix letter, you can also use the spelled out scale.	
METRIC_UNIT	Specifies what unit is displayed in the output. METRIC_UNIT is should always be accompanied by METRIC_SCALE.	See the examples for METRIC_SCALE.
MIN_DP	Specifies the minimum number of decimal places to be included in the fraction part of a formatted number. If the number of digits specified exceeds the number of digits in the fraction value, all available digits are displayed followed by zeros to achieve the specified number of digits. **NOTE** This value is ignored if the FIXED attribute is specified.	<MIN_DP 3> ■ If the value “1.2” is formatted with <MIN_DP 1>, “1.2” is displayed. ■ If the value “1.2” is formatted with <MIN_DP 2>, “1.20” is displayed. ■ If the value “1.2” is formatted with <MIN_DP 3>, “1.200” is displayed.
MIN_INT_ DIGITS	Specifies the minimum number of integer digits to be included in the whole number part of a formatted number. If the number of digits specified exceeds	<MIN_INT_DIGITS 3> ■ If the value “.123” is formatted with <MIN_ INT_DIGITS 0>, “.123” is

Attribute	Description	Example
	the number of digits in the integer value, all available digits are preceded by zeros to achieve the specified number of digits.	displayed. ■ If the value “.123” is formatted with <MIN_INT_DIGITS 1>, “0.123” is displayed. ■ If the value “.123” is formatted with <MIN_INT_DIGITS 3>, “000.123” is displayed.
PATTERN	Specifies the formatting pattern to use. **NOTE** For the attribute to appear correctly, you must also select **<no formatting>** from the **Format** drop-down list in the **Select Measure** dialog box.	<PATTERN "#,###.00">
PERCENT	Formats the value as a percentage, displaying a % symbol and scaling it by 100. This attribute is most useful for displaying fractional values.	<PERCENT>
RADIX_CHAR	Specifies the character to use for the decimal separator in numbers. This must be a single-character string value.	<RADIX_CHAR ",">
TRIPLE_CHAR	Specifies the character to use for the grouping separator (typically thousands) in numbers. This must be a single-character string value.	<TRIPLE_CHAR ".">

Attribute	Description	Example
	NOTE To prevent any character from appearing, specify an empty string to suppress it.	

Content attributes for date/time data types

The content attributes in this table can be used for date/time data types.

Attribute	Description	Example
DATE_STYLE	Specifies the date formatting style to apply. Options include the following: short, medium, long, full, default, and none.	<DATE_STYLE "full">
PATTERN	Specifies the formatting pattern to use. This attribute can be combined with other attributes, such as DURATION to control the display of numerically-stored time durations. **NOTE** For the attribute to appear correctly, you must also select <no formatting> in the Format selection list of the select measure dialog box.	<PATTERN "#,###.00">
TIME_STYLE	Specifies the formatting style to apply to the time portion of a date/time value. Options include the following: short, medium, long, full, default, and none.	<TIME_STYLE "short">
TIME_ZONE	Specifies the time zone to use for interpreting date and time values.	<TIME_ZONE "America/Vancouver">

Content attributes for Boolean-like data types

Data Explorer does not use “Boolean” as a data type. However, it does support handling numeric data values of 0 and 1 as false/no and true/yes values. The content attributes in this table can be used for numeric data types that contain values of 0 or 1.

Attribute	Description	Example
FALSE_TEXT	Specifies the string to display for false values.	<FALSE_TEXT "Out of stock.">
TRUE_TEXT	Specifies the string to display for true values.	TRUE_TEXT "In stock.">

Create a view

Once you have created the question for your report, you are ready to customize how the data is visualized. You do this on the **View** tab in the Question panel.

By default, your report is presented as a table with your chosen measures as the columns and the data as the rows. This is what is displayed as you develop your question. On the View tab you can customize your table or select another view type.

When you select a view type, you can then select from a number of view options and styling choices. The options are dependent on the type of view you select. As you select options and customize your view, your choices are previewed in the report pane as you go.

Not all view types are appropriate for your report. You will need to consider what type of chart will work best with your data. Some charts are best at showing the relationship between several pieces of information, while others can better display trends over time. Some view types can handle multiple measures, while others can display only a single measure.

Available view types

The following are the currently available view types. Each view type has styling options to control labels, text, colors, and so on.

- Area chart
- Bar chart
- Column chart
- Compound chart
- Gauge chart
- Headline chart
- KPI Headline chart
- KPI Rank chart
- Line chart

- Pie chart
- Scatter chart
- Table view
- Word cloud view

Area chart

Area charts show data similar to a line chart, but with the area below the line filled. Area charts are often used to display:

- The composition of a total and which parts add up to the whole
- The magnitude of change
- The difference between two or more trends

Area charts can handle multiple measures.

You can choose from one of the following chart options for your visualization.

Option	Description
Overlay	(Default) Displays the area under multiple lines to show the relationship across categories.
Overlay with Markers	Overlays the chart with dots representing individual data points on the lines.
Stacked	Displays the area under multiple lines one on top of the other to show a comparison across categories.
Stacked with Markers	Overlays the chart with dots representing individual data points on the stacked lines.

Once you have selected the desired chart option, you can then customize your chart further using these controls:

- Legend
- Styling
- Titles

- Grid Options
- Axis Display
- Data Series Format
- Exception Display

Bar chart

Bar charts display information as horizontal bars along the Y axis, individually or stacked. This type of visualization can be used to effectively display:

- The distribution of data such as trends and ranges
- A comparison of value sets
- A trend that develops over time

Bar charts can handle multiple measures.

You can choose from one of the following chart options for your visualization.

Option	Description
2D	(Default) The bars are presented in two dimensions, one bar per measure.
2D Stacked	The bars are presented in two dimensions with multiple measures stacked to show the relationship of individual items to the whole.
Preserve Totals toggle	Displays the total value on the chart as an additional bar labeled "Total". **NOTE** To display the total value as an additional column, you must first select **with totals** in the Group section of the Question panel.

Once you have selected the desired chart option, you can then customize your chart further using these controls:

- Legend
- Styling

- Titles
- Grid Options
- Axis Display
- Data Series Format
- Exception Display

Column chart

Column charts display information as vertical bars along the horizontal X axis, individually or stacked. This type of visualization can be used to effectively display:

- The distribution of data such as trends and ranges
- A comparison of value sets
- A trend that develops over time

Column charts can handle multiple measures.

You can choose from one of the following chart options for your visualization.

Option	Description
2D	(Default) The columns are presented in two dimensions, one column per measure.
2D Stacked	The columns are presented in two dimensions with multiple measures stacked to show the relationship of individual items to the whole.
Preserve Totals toggle	Displays the total value on the chart as an additional column labeled “Total”. **NOTE** To display the total value as an additional column, you must first select **with totals** in the Group section of the Question panel.

Once you have selected the desired chart option, you can then customize your chart further using these controls:

- Legend
- Styling
- Titles
- Grid Options
- Axis Display
- Data Series Format
- Exception Display

Compound chart

Compound charts include both columns and lines. They are useful when comparing two sets of values such as predictions and actual values. They can handle multiple measures.

You can customize your chart using these controls:

- Legend
- Styling
- Titles
- Grid Options
- Axis Display
- Data Series Format
- Exception Display

Gauge chart

Gauge charts display the value of a single measure as a needle on a dial, like a speedometer. They are often used to display a single important measure or a trend that develops over time.

You can customize your chart using these controls:

- Styling
- Titles
- Gauge Options
- Ranges

Headline chart

Headline charts can be used to display an important measure as a single number, without any details or other distractions. They are often grouped with other such reports on a dashboard to give an instant snapshot of the current status of your organization.

You can customize your chart using these controls:

- Styling
- Titles
- Headline Options
- Ranges

KPI Headline chart

KPI Headline charts display a single value that represents a key performance indicator (KPI) that users would find useful to know. A KPI headline uses the KPIs configured on the KPI Configuration page (Application Management > Administration > Key Performance Indicators (KPIs)).

This chart allows you to gain insights from:

- A metric such as the average handle time, the first call resolution, and so on
- A KPI that is an aggregated set of values created from a custom formula
- Suggested thresholds that drive an action

You can customize your chart using:

- Styling
- Titles
- KPI Headline Options

KPI Rank chart

KPI Rank charts visualize data with several sub-groups included, such as members on a team or teams in a department. For example, this chart can illustrate how well agents are meeting their goals, using colors and arrows to indicate change.

This chart allows you to gain insights from:

- A metric such as the average handle time, first call resolution, and so on
- A KPI that is an aggregated set of values created from a custom formula

- Multiple variables in a group
- Suggested thresholds that drive an action

You can customize this chart using:

- Styling
- Titles
- KPI Rank Options

Line chart

Line charts display data in a series. This is the only chart type that can include a trendline. Line charts are often used to show the following information:

- The distribution of data such as trends, ranges, outliers, and tendencies
- A comparison of value sets
- A trend over time when using multiple axes
- The relationship between one measure and another

You can choose from one of the following chart options for your visualization.

Option	Description
Straight	(Default) Straight line from one data point to the next.
Straight with Markers	Straight line from one data point to the next with dots representing each data point.
Markers	Dots are displayed at each data point without a line connecting them.
Curved	Smooth curving line connects each data point to the next.
Curved with Markers	Smooth curving line connects each data point to the next with dots representing the data points.

Once you have selected the desired chart option, you can then customize your chart further using these controls:

- Legend
- Styling
- Titles
- Grid Options
- Axis Display
- Data Series Format
- Exception Display

Pie chart

Pie charts display the sum of a single measure as a complete circle, and show the size of the components that make up that circle. Pie charts are most effective when you have a limited number of data categories that are part of a single group.

You can customize your chart using these controls:

- Legend
- Styling
- Titles
- Pie Chart Options
- Exception Display

Scatter chart

Scatter charts show the correlations between sets of values that cannot be represented in a series or interval. They are useful for displaying:

- A comparison of value sets
- The distribution of trends, tendencies, ranges of information, and outliers
- The relationship between two measures

Scatter charts can handle multiple measures. If you have three measures, the scatter chart becomes a bubble chart. A bubble chart is an extension of a scatter chart used to look at relationships between three measures. Each dot in a bubble chart corresponds with a single data point, and the measures' values for each point are indicated by horizontal position, vertical position, and dot size.

You can customize your chart using these controls:

- Styling
- Titles
- Grid Options
- Axis Display
- Data Series Format

Table view

The table view is the default view type and the most basic visualization. Tables display numeric information and can be used with multiple measures. They can be sorted in ascending or descending order by any column by clicking that column's header.

You can choose from one of the following table options for your table visualization.

Option	Description
Full	(Default) Displays the table with column and row headers.
Column Header Only	Displays the table with just column headers.
Row Header Only	Displays the table with just row headers.
Compact	Displays the table with both column and row headers in the smallest possible area.
Compact (Column Header Only)	Displays the table with just column headers in the smallest possible area.
Cells Only	Displays your report data without column or row headers.

Once you have selected the desired table option, you can then customize your table further using these controls:

- Styling
- Titles
- Table Style
- Exception Display

Word cloud view

Word cloud views show the frequency of certain words by making the size of the word proportional to its frequency of use. This type of visualization is simple and easily understood, and provides specific information at a glance. However, word clouds should not be used for analysis that requires precision and accuracy. Often, the shape of the letters in the word (if they have ascenders or descenders) and the length of the word can cause some words to attract more attention than others.

NOTE The length of words and phrases displayed in the word cloud visualization can be configured based on your needs and business use cases. If you want to do so, contact the Cisco support team.

You can customize your word cloud using these controls:

- Styling
- Titles
- Exception Display

Styling Options

Once you have selected your view type and view option, you can further customize your chart with styling options. This section describes each available styling option.

NOTE Not all styling options are available for every type of chart.

- Axis Display
- Data Series Format
- Exception Display
- Gauge Options
- Grid Options
- Headline Options
- KPI Headline Options
- KPI Rank Options
- Legend
- Pie Chart Options
- Ranges

- Styling
- Table Style
- Titles

Axis Display

The Axis Display control includes tools for configuring the X- and Y-axes. You can configure multiple axes.

X axis

Field	Description
X Axis	Shows or hides the X axis in your chart. The controls are displayed only if you select to show the axis. **Color**—Select the color in which the X axis and its labels are displayed. **Tick Marks**—Select this check box to display tick marks beside the axis labels. **Grid Lines**—Select this check box to display vertical X axis grid lines within the chart.
Title	Shows or hides a title for the X axis data. The controls are displayed only if you select to show the title. **Text Box**—Enter the X axis title. **Font**—Select the font and font size for the X axis title. If you choose **Inherited**, the font you selected in the Styling section is used. **Orientation**—Choose the angle at which the X axis title is oriented. The default setting is **0** (no angle).
Labels	**Labels**—Select if and how X axis labels are displayed. The default, **Auto**, sets the labels vertically. If you select **On**, the labels

Field	Description
	are set horizontally. If you select **Off**, there are no labels displayed. **Font**—Select the font and font size for the X axis labels. If you choose **Inherited**, the font you selected in the Styling section is used.

Y axis (Primary, Secondary, 3, and 4)

Some charts can have multiple Y axes. In that case, there will be multiple Y axis show/hide toggles. The fields to configure these axes are the same for each.

Field	Description
Y Axis (Primary, Secondary, 3, and 4)	Shows or hides the Y axis in your chart. The controls are displayed only if you select to show the axis. **Color**—Select the color in which the Y axis and its labels are displayed. **Series Color**—Select the color in which Y axis series is displayed. **Tick Marks**—Select this check box to display tick marks beside the axis labels. **Grid Lines**—Select this check box to display horizontal Y axis grid lines within the chart. **Min**—Sets the minimum value for the axis. **Max**—Sets the maximum value for the axis. **Tick Interval**—Sets the value for the increments to be used on the axis. **Minor Ticks**—Determines how many ticks are displayed between each numbered tick interval on the axis.
Title	Shows or hides a title for the Y axis data. The controls are displayed only if you select to show the title.

Field	Description
	Text Box—Enter the Y axis title. **Font**—Select the font and font size for the X axis title. If you choose **Inherited**, the font you selected in the Styling section is used. **Orientation**—Choose the angle at which the Y axis title is oriented. The default setting is **270** (sideways).
Labels	**Labels**—Select if and how Y axis labels are displayed. The default, **Auto**, sets the labels horizontally. If you select **On**, the labels are set horizontally. If you select **Off**, there are no labels displayed. **Font**—Select the font and font size for the Y axis labels. If you choose **Inherited**, the font you selected in the Styling section is used. **Format**—Select the format for the Y axis labels. By default this is set to **Auto**, where the format of the label text is automatically detected. Otherwise, choose a currency symbol or percentage.

Data Series Format

The Data Series Format control allows you to customize the color and spacing of categories and series.

NOTE Not every control is available for every chart option.

Field	Description
All Series	**Bar Spacing**—Determines the amount of space between categories and series on the chart.
<Specified Measure>	**Axis**—Select the axis you want to format. **Color**—Choose the color for the bar/column/line/scatter chart markers on the specified axis. For area charts, this also determines

Field	Description
	the color of the area under the line. **Line Width**—Choose the width of the line that appears in the chart. **Markers**—Choose the type of marker to represent each individual data point. **Marker Size**—Choose the size of the selected marker. **Type**—Choose how to display data, as a column, line, or curved line.
Data Labels	Shows or hides data labels in the chart. These labels are displayed at the end of bars or columns, or next to data markers. The controls are displayed only if you select to show the labels. **Labels**—Choose to turn data labels on or off. **Font**—Select the font, font size, and font color in which to display the label text. If you choose **Inherited**, the font you selected in the Styling section is used. **Format**—Choose the format of the labels. If you select **Auto**, the format is determined by the measure. **Layout**—Choose how labels are displayed: straight, wrapped, truncated, or angled.

Exception Display

The Exception Display control configures how a result with no data is displayed in your report.

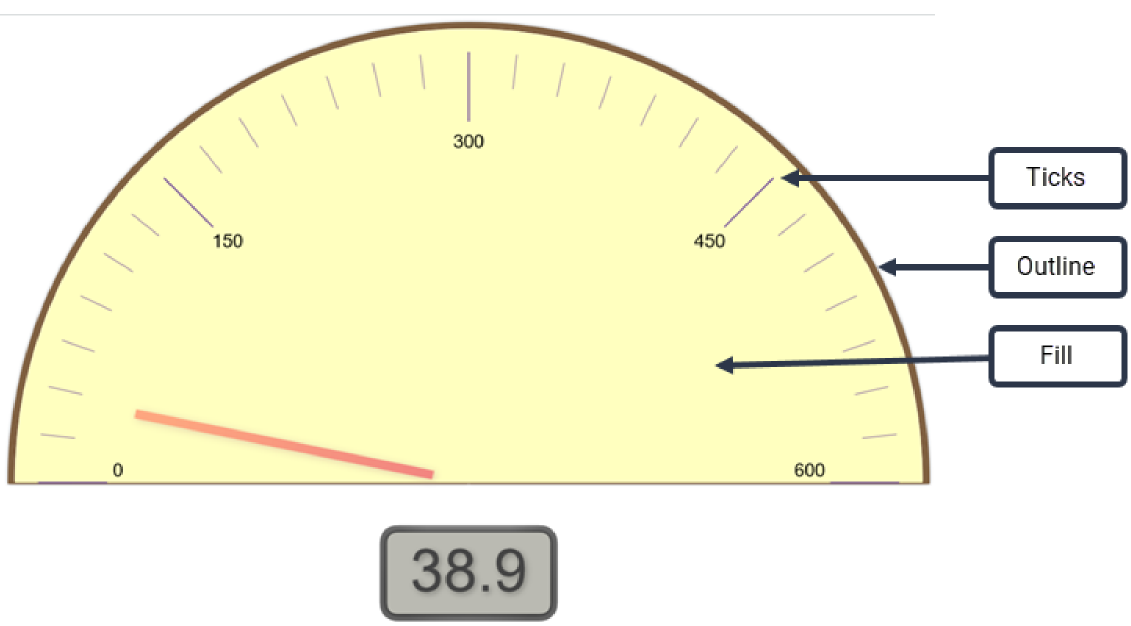
Field	Description
Display	Select either **Icon & Text** (the default) or **Text** from the drop-down list. If you choose Icon and Text, a blue bar graph is displayed with your

Field	Description
	desired text message, like this:

	If you choose Text, just the text message you configure is displayed.
Text	Enter the text string you want displayed if there is no data.
Font	Select the font, font style, font size, and font color in which to display the text. If you choose **Inherited**, the font you selected in the Styling section is used.

Gauge Options

The Gauge Options section allows you to customize the gauge chart.



NOTE A gauge can also include range indicators. This is configured using the Ranges control.

Field	Description
Colors	Click the box to open the color palette. **Outline**—Choose the color for the gauge's outline. **Fill**—Choose the color for the gauge's face. **Ticks**—Choose the color for the gauge's tick marks.
Sizes	**Outline**—Configure the width of the arc that outlines the gauge. **Needle**—Configure the width of the needle.

Grid Options

The Grid Options control allows you to customize the color applied to the grid's background and to the lines of the grid.

Field	Description
Background Color	Click the box to choose a color for the grid's background from the color palette.
Line Color	Click the box to choose a color for the grid lines from the color palette.

Headline Options

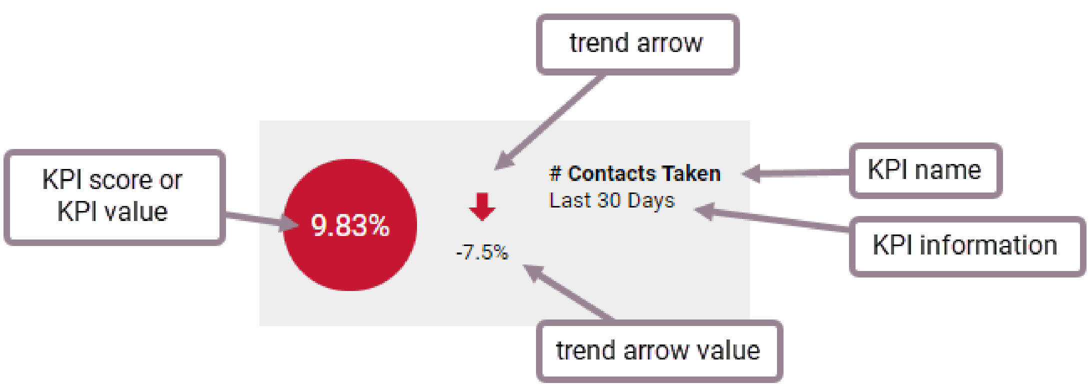
The Headline Options control allows you to customize how the headline looks, and to include the upper and lower limits of the value if desired.

Field	Description
Headline Font	Select the font, font style, font size, and color in which to display the headline. If you choose **Inherited**, the font and font style you selected in the Styling section are used. If you select **Auto** for the font size, the font is scaled to fit the available space.

Field	Description
	Click the color box to select a color for the headline text. By default, **Use inherited color** is selected. You must clear this check box to select a custom color.
Maximum Size	Allows you to specify a maximum size for the headline font. If you select a specific headline font size, this field defaults to **None**. If you select **Auto** for the headline font size, you can then specify a maximum size.
Show Limits	Shows or hides the minimum and maximum range limits for the headline value. These values are set in the Ranges control. If you opt to show the limits, you can then specify the font, font style, font size, and font color for the limits text. By default, the font and font style you selected in the Styling section are used. If you select **Auto** for the font size, the font is scaled to fit the available space. Click the color box to select a color for the limits text. By default, **Use inherited color** is selected. You must clear this check box to select a custom color.

KPI Headline Options

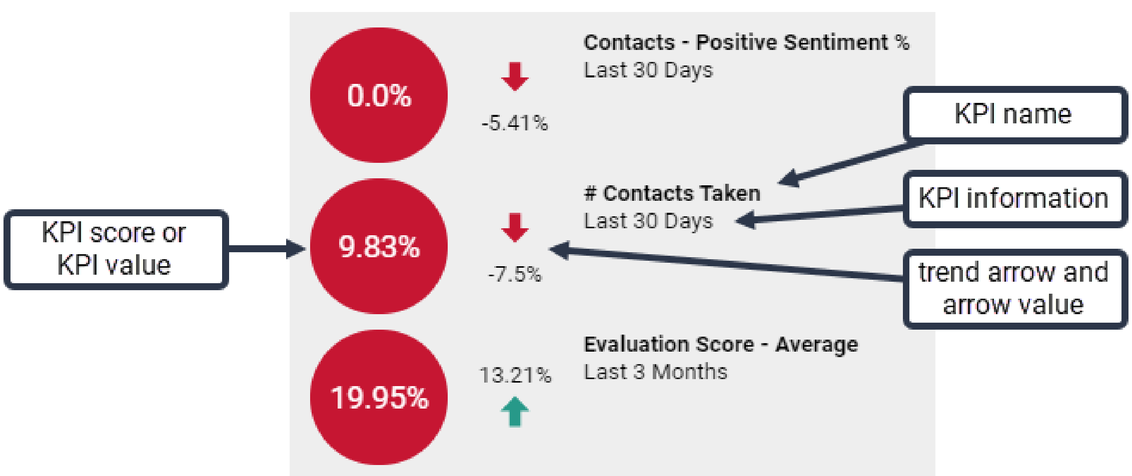
The KPI Headline Options control enables you to display or hide information about a KPI.



Field	Description
Headline Display	Choose to display the KPI score or KPI value in the colored circle. More details about the KPI score or value can be viewed by hovering over the number. The color of the circle is configured in the data model and is not something you can customize for your own reports. The circle can be red, yellow, or green, depending on the KPI's value.
Show KPI Name	Show or hide the KPI name.
Show KPI Information	Show or hide information about the KPI.
Show Trend Arrow	Show or hide an arrow indicating the KPI trend.
Show Trend Arrow Value	Show or hide the KPI trend value.

KPI Rank Options

The KPI Rank Options control enables you to display or hide information about multiple KPIs.



Field	Description
Headline Display	Choose to display the KPI score or KPI value in the colored circle. More details about the KPI score or value can be viewed by

Field	Description
	hovering over the number. The color of the circle is configured in the data model and is not something you can customize for your own reports. The circle can be red, yellow, or green, depending on the KPI's value.
Show KPI Name	Show or hide the KPI name.
Show KPI Information	Show or hide information about the KPI.
Show Trend Arrow	Show or hide an arrow indicating the KPI trend.
Show Trend Arrow Value	Show or hide the KPI trend value.

Legend

The Legend control enables you to configure where the chart's legend (the explanation of what metric a color represents) is located and the size of the legend font.

Field	Description
Location	Select where the legend is displayed, at the top, bottom, or to the right of the chart. If you choose to locate it at the top or bottom of the chart, the legend is arrayed horizontally; if you choose to locate it at the right side, it is arrayed vertically. You can also select **None** so no legend is displayed.
Size	Choose the point size for the legend font.

Pie Chart Options

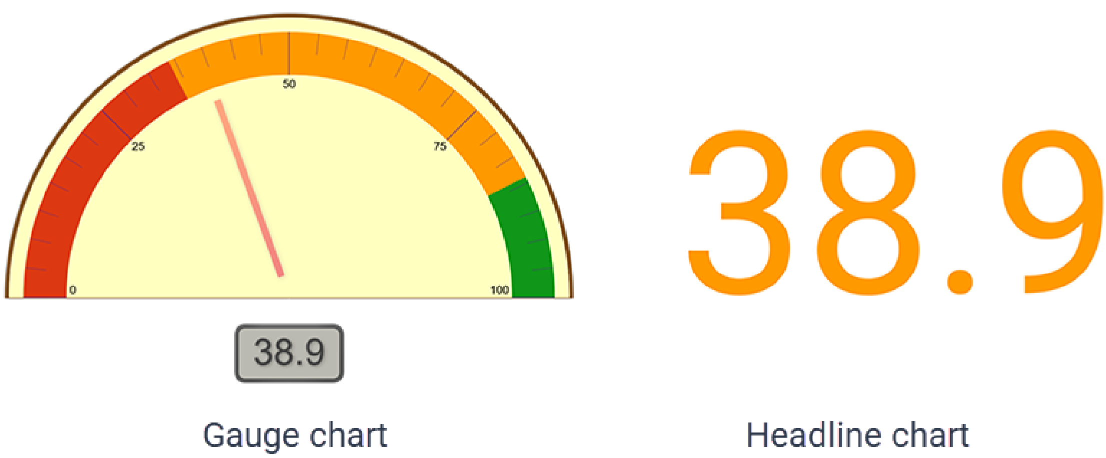
The Pie Chart Options control enables you to configure the labels applied to the pie chart.

Field	Description
Show Labels	Choose to show or hide labels. If you select **Auto**, the label position cannot be changed. If you select **On**, then all options can

Field	Description
	be configured.
Contents	Choose which information the label displays.
Color	Select the color for the label text.
Size	Configure the point size of the label text.
Position	Select the position of the label text relative to the edge of the pie chart. ▪ If the position you select is 1.1 or greater, the label appears outside the edge of the pie chart. ▪ If the position you select is 1, the label appears outside but almost touching the edge of the pie chart. ▪ If the position you select is less than 1, the label appears inside the edge of the pie chart.

Ranges

The Ranges control allows you to customize the values and colors used to indicate ranges. This control applies to gauge and headline charts, as shown in this graphic:



In gauge charts, the range is indicated as a colored band on the gauge. In headline charts, the range is indicated by the color applied to the headline.

Field	Description
Minimum	Set the lowest value to include in the chart. This value is displayed in the Headline Options if that control's Show Limits is turned on.
Low	Set the value that separates the low range from the medium range.
High	Set the value that separates the medium range from the high range.
Maximum	Set the highest value to include in the chart. This value is displayed in the Headline Options if that control's Show Limits is turned on.
Colors check box	Select this check box to enable ranges on your chart. If you set range values and this check box is cleared, the ranges will not go into effect in the chart.
Color selection boxes	Choose the colors you want to represent the ranges you have configured. Note the position of the color boxes; they are positioned between the two values that act as the lower and upper range value the color is to represent. By default, the colors are red for low, yellow for medium, and green for high values. You can customize the colors to ones of your choosing.

Styling

The Styling control allows you to configure the default font and background color used in the chart.

Field	Description
Text	Select the font, font style, and color in which to display text in the chart. Click the color box to select a color for the text.
Background Color	Click the color box to choose the background color to be used in the chart.

Table Style

The Table Style control allows you to customize table headers and rows.

<table>
<tr><th>Field</th><th>Description</th></tr>
<tr><td>Fonts</td><td> Table Font Size—Choose the point size for all text in the table. Row Headings—Choose a font style and color for the row headings. If you choose Inherited, the style you selected in the Styling section is used. Column Headings—Choose a font style and color for the column headings. If you choose Inherited, the style you selected in the Styling section is used. Cells—Choose a font style and color for the individual table cells. If you choose Inherited, the style you selected in the Styling section is used. Groupings—Choose a font style and color for groupings. If you choose Inherited, the style you selected in the Styling section is used. </td></tr>
<tr><td>Colors</td><td> Row Headings—Change the background color for row headings. Column Headings—Change the background color for column headings. Cells—Change the background color for table cells. </td></tr>
<tr><td>Column Widths</td><td> Row Headings—Set the width in pixels of row headings. Column Headings—Set the width in pixels of column headings. NOTE You cannot set individual row or column headings to specific widths. All row and column headings are set to the same width with this control. </td></tr>
<tr><td>Column Header Height</td><td> Number of rows—Sets the height of the column heading row in terms of row height. For example, if you set this to 2, the column heading row will be two rows tall. </td></tr>
</table>

Field	Description
Position	**Horizontal**—Set the horizontal position of the table in the report viewer window. **Vertical**—Set the vertical position of the table in the report viewer window.

Titles

The Titles control allows you to customize the report title, the report subtitle, and the total text.

Field	Description
Show Title	Turns the chart title on and off. The title is positioned above the chart. When turned on, configuration options are displayed: **Title Font**—Select the font, font style, font size, and color in which to display the chart title. If you choose **Inherited**, the font and font style you selected in the Styling section are used. **Alignment**—Choose an alignment for the chart title. **Act as zoom/edit hyperlink in Dashboards**—Select this check box to make the chart title a hyperlink that opens the chart for detailed viewing.
Show Subtitle	Turns the chart subtitle on and off. The subtitle is positioned beneath the chart. When turned on, configuration options are displayed: **Subtitle Font**—Select the font, font style, font size, and color in which to display the chart subtitle. If you choose **Inherited**, the font and font style you selected in the Styling section are used. **Alignment**—Choose an alignment for the chart subtitle.
Override Default Total Text	Allows you to override the default Total text with a custom text string. Enter your custom text string in the text box.

Configure the report's default sort

You can configure how information in your report is sorted by default on the **Sorting** tab in the Question panel. You can sort by data or by categories, but not by both.

Sorting data

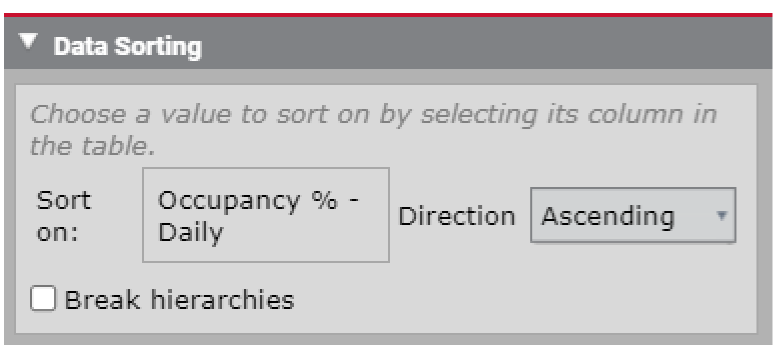
The Data Sorting control allows you to configure the way that a column is sorted in your table by default. You can configure only one column.

Even if you set a default sort direction, anyone viewing the table can reverse the sort by clicking the sort arrow in the column header. This control only sets the default sorting direction.

Configure a column's default sorting direction

1. In a report with a table view type, select the **Sorting** tab in the Question panel.
2. In the report preview pane, hover over the header of the column you want to sort the table by until the sort arrows appear.

3. Click the sort arrows. The first click results in an ascending sort (an up arrow). Click again to change the sort to descending (a down arrow). Your sort choice is reflected in the Data Sorting control fields.



4. You can change the direction of the sort either using the **Direction** drop-down field or clicking the sort arrow in the column header again.

5. (Optional) Select the Break Hierarchies check box to apply this sort order to the entire table without regard to other groupings.

Delete a column's default sorting direction

- In the **Data Sorting** control, select **None** from the **Direction** field to remove a default sorting direction from a column.

Ordering a category

The Category Ordering control allows you to sort the members in a group and designate certain members as exceptions to the sort order so that they are displayed at the top of the list.

> **NOTE** The Data Sorting control must be set to **None** in order to configure anything in the Category Ordering control.

Configure a category's default sorting order

1. In a report with a table view type, select the **Sorting** tab in the Question panel.
2. In the Category Ordering control, all available categories (groupings) are listed. Locate the category whose sorting direction you want to configure.
3. Select the sorting direction from the **Sort** field drop-down list.

Setting an exception

The **Exceptions** button allows you to remove one or more members of a category from the ascending or descending sorting order you configure in the Sort field. Any member designated as an exception remains at the top of the list.

Set exceptions to the category's sorting order

1. Click **Choose Exceptions**. The **Choose Sorting Exceptions** dialog box opens.
2. Clear the **All values** check box, and then select the one or more members of the category you want to make exceptions.
3. Click **Apply**.

Create a dashboard

A dashboard is a collection of panels—reports, lists, images, widgets, and webpages—that share a common theme or focus and can provide a high-level picture of a business situation. Dashboards are generally created to track business changes, watch for warning signs, or monitor progress.

BEST PRACTICE Before you create a dashboard, you should know what content you want to put on it and how that content will be arranged. The reports you want to include should already have been created. You might want to sketch out your dashboard design before you start so you have a plan to follow.

Create a new dashboard

1. On the Data Explorer **asset browser** page, click the **New Dashboard** button. The dashboard designer opens with the Dashboard Control visible. The dashboard designer is where you add all the elements that make up your new dashboard. It has a grid to help you align and arrange panels.
2. In the **Dashboard Control**, click **Page Settings**. Enter a name for the new dashboard in the **Title** field and click **Save**.

   The dashboard designer view closes and the new dashboard is displayed with the title in the upper left corner. It is now also listed in the asset browser's list of dashboards.

Edit your new dashboard

1. If you just saved your new dashboard with a name, it is already displayed on your screen. If you haven't worked on it recently, locate it in the list of reports on the asset browser page.
2. Click **Edit Dashboard** in the upper right corner of the dashboard to open the dashboard designer.

   You are now ready to add content to the dashboard using the Dashboard Control.

About the Dashboard Control

The Dashboard Control enables you to add various types of content to a dashboard and configure how the dashboard looks. It includes 4 controls.

Add Panels Control

The Add Panels control is the primary way to add content to your dashboard. A panel is a container for specific kinds of content:

- Content panels—lists, reports, and web pages
- Styling panels—images and text
- Parameter controls—compact member picker, member picker, number entry, text entry, and time period picker
- WFM and QM widgets

Parameters Control

The Parameters control links (“binds”) a parameter control panel with the report that parameter control affects. For example, if you have a report that contains data for multiple agents, a Member Picker parameter control can be linked to that report so you can select which agent’s data you view on the dashboard.

Grid Settings Control

The Grid Settings control enables you to change the grid in the dashboard designer. You can add or remove rows and columns, and change the spacing between grid lines.

Page Settings Control

The Page Settings control enables you to configure how your dashboard looks. You can configure the header, the footer, borders, the background, and a navigation bar for the top of your dashboard.

Add a panel

Panels are containers that are placed in the grid of a dashboard. There are several types of panels. Webpage, List, Text, and Image panels display information from outside the Data Explorer feature, while Report, Parameter, and Widget panels configure and display information generated by Data Explorer.

A report panel displays the chart or table that was configured in the report designer. A parameter panel displays specific filters for reports. You can link a parameter panel to a report panel and use the parameter panel to filter the information that is displayed in the report panel. For example, a report that displays information for a group could be linked to a Member Picker parameter panel. From the Member Picker panel, you can filter the information in the chart to display the information for each member of the team.

> **BEST PRACTICE** To create a parameter for a report panel, create both the report panel and the parameter panel before setting the parameter.

Add a report panel to the dashboard

1. Click **Add Panels** in the Dashboard Control dialog box.
2. Click the **Add Report** button, and then click in the grid and drag to draw a box and set the position and size of the panel.
3. Click **Edit**, and then select **Properties** from the drop-down list in the panel to configure the panel properties. The Report Properties dialog box opens.
4. On the **Selection** tab, choose a report to display in the panel.

Add a parameter panel to the dashboard

1. Click **Add Panels** in the Dashboard Control dialog box.
2. Select the parameter type from the Parameter Controls section.

3. Click inside the grid and drag to draw the outline of the parameter panel.

Add a widget panel

Widget panels provide a summary and detail display of the contact center's performance statistics for the last twelve months by agent, team, and group. Summaries appear in the form of bar charts and graphs.

Customize a Data Explorer widget

When you move your pointer over a widget toolbar, the widget configuration button becomes available. If you click this button, a roll-out panel that contains configurable widget settings opens. Once you apply changes to the settings, the changes persist each time you log in. To hide the widget settings, click the icon again.

Prerequisites

You need the correct permissions to view and edit widgets. The required permissions vary by widget. See Manage roles and permissions .

Page location

Homepage > Edit Dashboard > Add Panels > WFM Widgets or QM Widgets

> **NOTE** You need the Data Explorer permission to access the Data Explorer tab. With this permission, the following alternative path is available:
> Data Explorer > New Dashboard or Dashboard (in Dashboard list) > Add Panels > WFM Widgets or QM Widgets

Procedures

Add a widget to your dashboard

1. Navigate to your dashboard.
2. Click **Add Panels**.
3. Select your desired widget.
4. Click inside the grid and drag to draw the outline of the parameter panel.
5. Click **Save**. The **Preview Dashboard** page displays.
6. Click the **Settings** icon (the gear in the top right corner of the widget).
7. Configure the available fields as desired.

> **NOTE** Fields vary depending on the widget. See the field descriptions below for more information on all potential fields.

8. Click **Apply**.

Edit a widget

1. Click the **Settings** icon (the gear in the top right corner of the widget) while on the **Preview Dashboard** page.
2. Edit the available fields as desired.
3. Click **Apply**.

Field descriptions

The fields that can appear in the panel are listed below. Only the fields that apply to a specific widget appear in that widget's panel.

Field	Description
Agent	The name of the agent. The default setting for this field depends on your role: ■ If you are an agent and your role is limited in scope, your name appears in this field and the field is disabled ■ If your role has a broader scope, this field is enabled and you can choose an agent from the drop-down list ■ If you are an agent and your role has a broader scope, your name appears in this field and you can choose an agent from the drop-down list
Range	The date range for the historical information. The default range is: ■ Eight days for Service Queue Performance ■ One month for Agent Percentages, Average Time per Call, Agent Calls per Hour, Call Volume, Agent Time, Agent Time Distributions, Agent Time Totals, and Speech Statistics ■ The past six months for Contact Totals, Evaluation Averages, and Evaluation Ranges

Field	Description
Chart	The type of chart you want to appear in this widget.
Eval Form	The type of evaluation form or the name of a specific evaluation form.
Group	The name of the group. The default is determined by your role.
Team	The name of the team. The default is determined by your role.
Group By	How dates are grouped. The default setting is Day.
Series 1–8	The data elements you want to appear in this widget. Each widget contains a unique set of data elements, and the number of data elements varies depending on the widget.
Service Queue	The name of the service queue. This field only appears for supervisors.
Goal	The goal for the selected service queue. Select the check box to display the goal.
Bands 1–4	The bands determine the number of stars that appear in the Score field. For percentage-based scoring, the bands use integers from 0–100. The default value for each band is as follows: ■ Band 1 = 20 ■ Band 2 = 40 ■ Band 3 = 60 ■ Band 4 = 80 **EXAMPLE** If the agent scores 61 or higher, four stars appear in the Score field. If the agent scores between 41 and 60, three stars appear in the Score field. For point-based scoring, the bands use integers. The minimum

Field	Description
	value for this range is determined by the total of all minimum values that are assigned to questions. The maximum value for this range is determined by the total of all maximum values that are assigned to questions.
Metadata Key	The metadata associated with the score. The drop-down list displays all defined metadata keys. The metadata that appears in this drop-down list is defined by the administrator. The default value = All. Select a metadata key and value to filter scores based on specific metadata values.
Metadata Value	The value associated with the metadata key. Wildcards are supported. The asterisk wildcard (*) represents any number of characters and the question mark wildcard (?) represents one character.

Related topics

- Manage roles and permissions
- Create a dashboard
- Add a panel

Available QM widgets

The following widgets contain statistics for QM.

- Contact Goal Progress widget
- Contact Totals widget
- Current Best Performers widget
- Evaluation Averages widget
- Evaluation Ranges widget

- Gamification Score widget
- Recent Evals Performed widget
- Recent Evaluations widget
- Recording Surveys widget

Prerequisites

- You need the View QM Dashboard permission to view your own data.
- You need the Administer Dashboards permission to edit dashboards. See Manage roles and permissions .

Page location

Data Explorer > New Dashboard or Dashboard (in Dashboard list) > Add Panels > QM Widgets

Homepage > Edit Dashboard > Add Panels > QM Widgets

Contact Goal Progress widget

The Contact Goal Progress widget displays the current completion status of contact goal evaluations, calibrations, and reviews. You can choose to display data for all active goals for a single evaluator or to display data for all evaluators for a single goal.

Data Element	Description
Name	The name of the evaluator for the current goal.
Progress	Displays progress as one of the following metrics: ■ Completed—The number of contact goal tasks that the evaluator has completed out of the total required. ■ Remaining—The number of contact goal tasks remaining for the evaluator to complete.

Contact Totals widget

The Contact Totals widget displays the current contact totals for the selected group, team, or agents. The displayed data is based on results from a specific evaluation form or type of evaluation form. For more information about this report, see Contact Totals Graph.

Current Best Performers widget

The Current Best Performers widget displays the current list of your best performing agents.

Data Element	Description
Agent	The agent's first and last name.
Score	The score based on evaluated calls that contain the specified metadata value for the specified date range. A star appears for each scoring band. **EXAMPLE** For percentage-based scoring, four stars appear in the Score field if the agent's score is between 61 and 80.
ACD Status	The status of ACD agents. This is the current ACD Status in Workforce Management. **NOTE** This field appears only if you have both QM and WFM.

Evaluation Averages widget

The Evaluation Averages widget displays the current evaluation averages for the selected group, team, or agents.

Evaluation Ranges widget

The Evaluation Ranges widget displays the current evaluation ranges for the selected group, team, or agents. It displays the following data elements.

Data Element	Description
Below	The number of evaluated contacts that are below expectations.
Meets	The number of evaluated contacts that meet expectations.
Exceeds	The number of evaluated contacts that exceed expectations.

Gamification Score widget

The Gamification Score widget displays metrics based on the following performance categories:

- QM Quality Score
- WFM Adherence Score

NOTE The WFM Adherence Score is only available when WFM is activated.

In the Gamification Score widget, agents can see their current level and their progress towards the next level. They can choose which performance category to display: QM Quality Score or WFM Adherence Score.

When agents configure the Gamification Score widget, it displays a badge and a progress bar. The badge has a number next to it: the badge symbolizes the level the agents have achieved, and the number next to it indicates the level they have achieved for the performance category they have selected. The progress bar indicates how close agents are to the next level.

Supervisors and administrators can configure the Gamification Score widget to display a single agent (that would look identical to the agent's Gamification Score widget) or to display all agents for a specific performance category.

The Gamification Score widget displays the following data elements.

Data Element	Description
Group	The name of the group.
Team	The name of the team.
Agent	The agent's first and last name.
Badge	The badge that the agent has earned, which is based on the number of points that the agent currently has accumulated.

Recent Evals Performed widget

The Recent Evals Performed widget displays the results for the most recent evaluations that you performed for the selected group, team, or agents. You can select a point-based or percentage-based evaluation form from the Eval Form drop-down list.

Data Element	Description
Last	The point or percentage score for the last evaluation that you performed. The widget determines the last evaluation by the date and time of the evaluation.
Last 5	The average point or percentage score for the last five evaluations that you performed. The widget determines the last five evaluations by the date and time of the evaluations.

Recent Evaluations widget

The Recent Evaluations widget displays the results for the most recent evaluations that all evaluators performed for the selected group, team, or agents. You can select a point-based or percentage-based evaluation form from the Eval Form drop-down list.

> **NOTE** When an agent moves from one team to another, the agent's contacts from the original team, and the evaluations associated with those contacts, stay with the original team. Contacts and their evaluations from the agent's second team stay with the second team.

Data Element	Description
Last	The point or percentage score for the last evaluation. The widget determines the last evaluation by the date and time of the evaluation.
Last 5	The average point or percentage score for the last five evaluations. The widget determines the last five evaluations by the date and time of the evaluations.

Recording Surveys widget

The Recording Surveys widget displays the results for the most recent post-call surveys that customers have submitted for the selected group, team, or agents. You can select one or all of the survey forms from the Survey Form drop-down list.

Data Element	Description
Last	The score for the last survey submitted. The widget determines the last survey by the date and time of the survey response.
Last 5	The average survey score for the last five surveys submitted. The widget determines the last five surveys by the date and time of the survey responses.

Available WFM widgets

The following widgets contain statistics for WFM.

- Agent Call Volumes Widget
- Agent Calls per Hour Widget

- Agent Percentages Widget
- Agent Time Distributions Widget
- Agent Time Totals Widget
- My Schedule Widget
- Real Time Adherence Widget
- Service Queue Performance Widget

Prerequisites

- You need the View WFM Dashboard permission to view your own data.
- You need the View WFM Dashboard, Edit Schedules, and View Schedules permissions to view the data of agents in your scope.
- You need the Administer Dashboards permission to edit dashboards. See Manage roles and permissions .

Page Location

Data Explorer > New Dashboard or Dashboard (in Dashboard list) > Add Panels > WFM Widgets

Homepage > Edit Dashboard > Add Panels > WFM Widgets

Agent Call Volumes Widget

The Agent Call Volumes widget displays an agent's call volumes for the selected date range. Data can be grouped by day or by month. If you group data by day, the range is one month. If you group data by month, you can select a range of two, three, six, or twelve months. Hover your pointer over a data point in the chart to display a screentip containing the exact value for the data point. Agents can view their own handled calls and transferred calls. Supervisors, schedulers, or administrators can view handled calls and transferred calls for agents within their scope. See Customize a Data Explorer widget to learn more about the fields for this widget.

You can choose to display the following data elements from the Series drop-down list:

Calls Handled — The number of contacts that the service queue or agent handled during the interval.

Calls Transferred — The number of ACD calls the agent transferred during the interval.

NOTE A zero in the graph indicates the agent logged in during the day but took no calls. No data in the graph indicates that the agent did not log in on that specific day.

Agent Calls per Hour Widget

The Agent Calls per Hour widget displays the average number of ACD calls per hour an agent handles over the selected date range. Data can be grouped by day or by month. If you group data by day, the range is one month. If you group data by month, you can select a range of two, three, six, or twelve months. Hover your pointer over a data point in the chart to display a screentip containing the exact value for the data point.

A call is counted in the schedule interval in which the agent answers it. You can choose to display the **Calls per Hour** data element from the **Series** drop-down list. **Calls per Hour** is the average number of ACD calls per hour an agent handles. See Customize a Data Explorer widget to learn more about the fields for this widget.

EXAMPLE If an agent answers a call at 10:58 and completes the call at 11:03, that call is counted in the 10:00–10:59 schedule interval, not the 11:00–11:59 schedule interval.

Agent Percentages Widget

The Agent Percentages widget displays your occupancy ratio, your percentage of calls answered, or both for the selected date range. Data can be grouped by day or by month. If you group data by day, the range is one month. If you group data by month, you can select a range of two, three, six, or twelve months. Hover your pointer over a data point in the chart to display a screentip containing the exact value for the data point.

You can choose to display either or both of the Occupancy % and Utilization % data elements in any order from the Widget Configuration panel. **Occupancy %** is the percentage of in-session time that the agent spends in active contact handling states (for example, on incoming calls, in wrap-up activity, on outbound calls). **Utilization %** is the percentage of offered calls that the agent answered. See Customize a Data Explorer widget to learn more about the fields for this widget.

Agent Time Distributions Widget

The Agent Time Distributions widget displays the average time you spent in a specific ACD state for the selected date range. Data can be grouped by day or by month and is expressed in seconds. If you group data by month, you can select a range of one, two, three, six, or twelve months. Hover your pointer over a data point in the chart to display a screentip containing the exact value for the data point.

You can choose to display up to three of the following data elements in any order.

Data Element	Description
Average Processing Time	The average amount of time an agent was in ACD states related to

Data Element	Description
	processing a call. The ACD states included in this average depend on which of the following ACDs your system uses: ■ Unified CCE or Unified CCX—The average amount of time an agent was in the Talking, On Hold, Work Ready, and Work Not Ready states. ■ Avaya AACC—The average amount of time an agent was in the Talking, On Hold, and Break (Work) states. ■ Avaya CMS—The average amount of time an agent was in the Talking, On Hold, and After Call Work states.
Average Talk Time	The average amount of time an agent was on incoming ACD calls, beginning when the call is answered and ending when the call is disconnected, including hold time.
Average Hold Time	The average amount of time the agent placed calls on hold, including hold time for transfers and conferences.
Average Work Time	The average amount of time an agent spent in the Work state immediately following an ACD call.
Average Ready Time	The average amount of time an agent was logged in and available to accept ACD calls.
Average Not Ready Time	The average amount of time an agent was logged in but not available to take ACD calls.

Agent Time Totals Widget

The Agent Time Totals widget displays the total time an agent spent in specific ACD states for the selected date range. Data can be grouped by day or by month for ranges between 1 and 12 months and is presented in HH:MM:SS format. Hover your pointer over a data point in the chart to display a screentip containing the exact value for the data point.

You can choose to display up to eight of the following data elements in any order.

Data Element	Description
Total Processing Time	The total amount of time an agent was in ACD states related to processing

Data Element	Description
	a call. The ACD states included in this average depend on which of the following ACDs your system uses: ▪ Unified CCE or Unified CCX—The total amount of time an agent was in the Talking, On Hold, Work Ready, and Work Not Ready states. ▪ Avaya AACC—The total amount of time an agent was in the Talking, On Hold, and Break (Work) states. ▪ Avaya CMS—The total amount of time an agent was in the Talking, On Hold, and After Call Work states.
Total Talk Time	The total amount of time an agent was on incoming ACD calls, beginning when the call is answered and ending when the call is disconnected, including hold time.
Total Hold Time	The total amount of time the agent placed calls on hold, including hold time for transfers and conferences.
Total Work Time	The total amount of time an agent spent in the Work state immediately following an ACD call.
Total Ready Time	The total amount of time an agent was logged in and available to accept ACD calls.
Total Not Ready Time	The total amount of time an agent was logged in but not available to take ACD calls.
Total In Service Time	The total amount of time an agent was in the Ready, Talk, Hold, and Work state. Default option for Series 1 in the Widget Configuration panel.
Total Login Time	The total time during the period the agent was logged into the ACD. Default option for Series 2 in the Widget Configuration panel.

My Schedule Widget

The My Schedule widget displays a summary of an agent's schedule for one day with the default being today.

> **NOTE** If a project or exception activity has a note associated with it, a shaded triangle appears in the upper right corner. Hover over the activity to view the note.

The widget also shows the agent's current adherence (A) and conformance (C) percentages for the day. For information about how the adherence and conformance percentages are calculated, see Real Time Adherence Widget.

If the agent is not scheduled for any activities, My Schedule displays the message, "Nothing Scheduled On This Day."

You can view past and future schedules one day at a time by clicking backward and forward through the calendar pages.

The activity start and end times shown are based on the Display Time Zone configured for the agent by the administrator, while the date is based on the WFM server's time zone. If the schedule crosses midnight, the start times for activities before midnight are highlighted. For more information about time zones, see About time zones.

Agents cannot modify the My Schedule widget. Supervisors can modify the widget by selecting the agent whose schedule is displayed in the widget and renaming the widget as desired.

Real Time Adherence Widget

The Real Time Adherence widget displays real time adherence data for selected agents. The widget updates data every 30 seconds. Click the **Display Summary** check box to show a summary of results at the top of the table. Click the Right Arrow icon in the top right corner of the widget to go to the Agent's Schedules page. See Customize a Data Explorer widget to learn more about the fields for this widget.

You can display selected agents and series in any order. Click, drag, and drop an individual agent or series to the intended location in the list.

Sort the table rows in ascending or descending order by clicking the column header.

> **NOTE** The Real Time Adherence Widget does not update at the same time as the WFM Adherence drawer on the Agent Explorer page. See View agent adherence and conformance.

Service Queue Performance Widget

Only supervisors, schedulers, and administrators can access the Service Queue Performance widget. It displays the real time service level performance (% Service Level) for the selected service queue and optionally the goal (forecasted) service level performance as well. The widget updates data twice hourly: on the hour and at 30 minutes past the hour. You can group data by day or by interval for ranges between 8 and 180 days.

The service level percentage is the percentage of actual calls answered for each interval within the service threshold time.

To compare the actual service level performance (%SVL-A) with the goal (forecasted) service level performance (%SVL-G), select Interval from the Group By drop-down list, and then select the Goal check box in the Widget Configuration panel.

Add a parameter

A parameter links (binds) values between a parameter panel and a report panel on a dashboard. When these two elements are linked, you can select or enter values that will dynamically filter the information displayed in the report panel. You can use a parameter to control one or multiple reports.

Bind a parameter panel to a report panel

1. Click **Parameters** in the Dashboard Control dialog box. The Parameter Bindings dialog box opens.
2. Click the **Add a New Parameter** button in the bottom left corner of the Parameter Bindings dialog box. A new parameter is added to the list.
3. Click the **Bindings** field and select the data category to bind the report panel to the parameter.
4. Click **Add** to add a Binding field.
5. In the new Binding field, select the parameter panel to filter the report by.
6. Click **Apply** to create the parameter binding.

When the parameter panel is bound to the Report panel, you can control what information the report panel displays. For example, to display information for a single member of the group, clear the All Values check box in the parameter panel, and select the check box for the member you want to see.

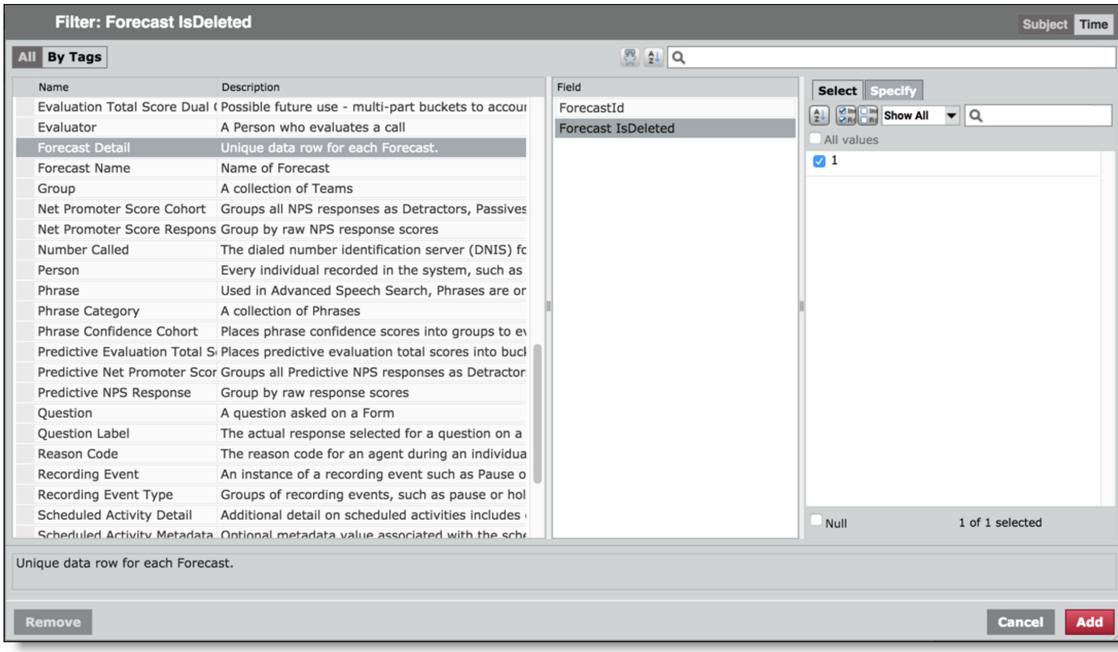
Filter deleted records

The reporting database for Data Explorer accumulates data over time to allow historical analysis of that data. Records that would normally be deleted from a database are not actually removed from Data Explorer. Instead, these files are flagged to indicate their deleted status. To ensure accurate results in reporting, you must apply a filter to remove the deleted records from your questions. The following table displays three data types that require these filters and the corresponding subjects and fields you must use to filter out the deleted records:

Subject Name	Field
Agent Adherence Report	Agent Adherence Report IsDeleted
Agent Schedule	Schedule Activity IsDeleted
Forecast	Forecast IsDeleted

Filter deleted records

1. In the Filters section of the Question tab, click **[limit]**. The Select Filter dialog box opens.



2. Select the appropriate subject name according to the previous table.
3. Select the appropriate field for that subject name according to the previous table.
4. Clear the **All values** check box.
5. Select the **1** check box. In this filter, 1 means "true."
6. Click **Add**. This first sets the report to include only deleted values.
7. In the Filters section of the Question tab, click the **is** drop-down menu in the filter and select **is not**. The deleted records are removed from the report.

Configure enterprise KPIs

An enterprise key performance indicator (KPI) is more than just a single metric or measure, such as Average Handle Time, Adherence, or Calls Taken. To be a KPI, those numbers must be given further definition in order to tell their story and make an impact on enterprise performance management. KPIs require the following to be meaningful:

- A **goal**, so that you understand what the organization is trying to achieve.
- A **score**, so that you understand whether the goal was attained. Very often, scores are derived by using a simple ratio of metric divided by goal, but in other cases a more complex formula is required to assess achievement. For example, sometimes a curved rather than linear scale aligns better with the reality of performance and what is considered a “good” or “bad” score.
- A **prior period**, against which to evaluate performance over time. Are we doing better or worse than we did last month?
- A **dimensional context in which to be evaluated**. Is this for a group? A team? A service queue? An agent?

Each of these things, when properly configured, can quickly answer questions like, “Did the Eastern Team meet the company’s adherence goals for last month? Have they improved from the previous month?” or “Last month was tough on quality for the Database service queue due to storms in the Northeast. Now that the weather has settled down, how have they improved?”

KPI properties

There are nine properties configured that contribute to an enterprise KPI.

Property	Description
KPI Actual	The actual measure value. This is the same value that is returned if the measure is used without the KPI visualizations.
KPI Goal	The goal for the KPI, as defined on the Key Performance Indicators (KPIs) page (see Configure KPIs).
KPI Score	The score for the KPI, based on the actual and goal values. The specific formula that governs this is built directly into the data model and cannot be changed.
KPI Actual Delta %	The percentage of change between the actual value of the measure specified in the report and the actual value of the measure from the prior period.
KPI Actual Delta	The difference in value between the actual value of the measure specified in the report and the actual value of the measure from the

Property	Description
	prior period.
KPI Prior Actual	The prior value of the measure or metric at the time specified by the KPI Time Period Display property.
KPI Prior Score	The score attained by the prior actual value in comparison to the goal.
KPI Score Delta	The actual variance between the prior score and the current score.
KPI Time Period Display	The time period configured on the Key Performance Indicators (KPIs) page (see Configure KPIs).

Configure the settings

KPIs are configured at the company level on the **Key Performance Indicators (KPIs)** page in Application Management by an administrator (see Configure KPIs). This is done so that all KPIs can be compared on an even scale—the ones defined by the company for goals, dimensions, and time. That way, all results can be compared to one another with some certainty.

The Key Performance Indicators page is connected to the Data Explorer data library, from which it gets its list of available KPIs, their default values, and the groups, teams, and service queues associated with them. Once configured, those settings are read by any Data Explorer report that uses KPIs. If the KPI settings are changed, all KPI reports and dashboards are automatically updated to reflect those changes.

A KPI is hierarchical in nature. That is, when you set a goal and do not specify a group, team, or service queue, the goal applies to all groups, teams, and service queues in your entire contact center. If you specify a group, the goal applies only to that group and the teams that belong to it. If you specify a group, team, and service queue, the goal applies to the team belonging to the group and to the service queue, as they do not have a direct relationship. A more specific goal overrides a less specific goal.

NOTE Not all KPIs can be configured for all three available dimensions.

KPIs all come with default goals and time periods so that they will work without error. Those goals should be changed to suit your business' unique requirements and business goals.

Implement the reports

Any report can be a KPI report, as long as it uses one or more measures that have been configured to be KPIs. When configuring the report, you can choose to group by KPI Values (available in the Subject view) to show all of the configured properties for each KPI. The properties can be filtered so only selected properties are shown in the report.

KPI reports can be filtered like any other report and can be grouped by any of the dimensions that were configured on the Key Performance Indicators page.

Available KPI measures

The following KPI measures are available to be used in Data Explorer reports. You can filter the list of measures by the KPI tag to locate them easily when adding a new report in Data Explorer.

KPI	Description
# Contacts Taken	A count of the number of contacts that were answered.
Adherence %—Daily	Percentage of time agents are in adherence to their planned work schedules.
Average Contact Time	The sum of contact seconds divided by the number of contacts.
Average Handle Time—Agent by Interval and Service Queue	Average handle (contact, hold, and work) time for contacts handled this interval for the agent/queue.
Average Speed of Answer—Service Queue by Interval	Average speed of calls answered in seconds by service queue by interval.
Conformance %—Daily	The conformance percentage that indicates how closely the agent conforms to the scheduled amount of time for the day.
Contacts—Negative Sentiment %	Percentage of contact IDs with a negative sentiment score among those contacts with a sentiment score.
Contacts—Positive Sentiment %	Percentage of contact IDs with a positive sentiment score among those contacts with a sentiment score.

KPI	Description
Contacts Abandoned—Service Queue by Interval	The total number of contacts abandoned for the service queue.
Evaluation Score—Average	The average of the score per evaluation as a key performance indicator.
NPS	The computed net promoter score, where results can range from –100 to 100. The score comes from the NPS question, “On a scale of 1 to 10, how likely is it that you would recommend our organization to a friend or colleague?” 0–6 range = detractors 7–8 range = passives 9–10 range = promoters `NPS = (number of promoters – number of detractors) ÷ (number of respondents) × 100`
Utilization %—Daily	The average percentage of processing time per day for the agent.

Standard reports

Webex WFO comes with a number of standard reports.

- QM standard reports provide evaluation, survey, and system information.
- WFM standard reports provide data related to schedules, agent performance, and planning.

Run a standard QM or WFM report

Reporting allows you to run, view, and export informational reports on Webex WFO data. Your administrator determines which reports are available to you by product, report type, and role. The Reporting toolbar gives you access to standard QM reports, WFM reports, and reports you have saved for reuse.

> **BEST PRACTICE** Before you run a standard report, know what data you need to access and how best to filter it. Use the smallest possible date range, and use many targeted searches as opposed to a

ngle large search. You can also use group, team, and agent filters to get specific data without
nning a report for all groups or teams in your system. Let the report finish running before
questing a new report.

Prerequisites

The proper permissions for the report you want to run. The permissions you need can vary depending on the report. See Manage roles and permissions for the full list of Reporting permissions.

Page location

Reporting

Procedures

Run a report

1. Click **QM**, **WFM**, or **Saved** from the Reporting toolbar.
2. Click the report name to display the report's setup page.
3. Complete the report setup information. Choose the date, criteria, format, and fields to be included in the report.

   NOTE For all standard QM reports, the date filter searches based on the date the contact was recorded, not the date the contact was evaluated.

   NOTE If the report allows you to choose the fields that appear in the report and their order, when you click **Run Report** or **Save As**, the selected fields become the default fields for the report for you. Other users do not see your choices when they run the report.

4. (Optional) Choose whether to enable recurrence for the report.

   (Optional) Choose whether to email recurring reports to email addresses you enter in the **Destination** section. At least one email address is required. Email addresses are separated by semicolons. If Webex WFO is configured to email reports, you can set a report to run automatically at specified intervals for a specified length of time or indefinitely.

   EXAMPLE john.smith@example.com;mary.jones@example.com

> **NOTE** There is a 10 MB attachment size limit for reports that are emailed. The size of the generated report depends on the amount of data included (the number of agents or service queues, for example). To check the size of the report, generate it manually as a PDF or CSV first. If the report is large, break it into smaller reports to ensure it meets the size limitation.

The email includes your email address in the From field (as the user who scheduled the report). If your email address is not available, the email address will be <your first name>.<your last name>@automated.report.

> **NOTE** To use Recurrence, you must save the report for future use.

5. Click **Run Report** to run the report immediately.

Save a report

1. Click **QM** or **WFM** from the Reporting toolbar.
2. Click the report name to display the report's setup page.
3. Complete the report setup information. Choose the date, criteria, format, and configure the fields to be included in the report.
4. (Optional) Choose whether to enable recurrence for the report.
5. Click **Save As** to save the report for future use.
6. Enter a name for the report in the Save As text field then click **Save**.
7. When you save a report's configuration, you can access it by clicking **Saved** in the Reporting toolbar and then clicking the report name.

Related topics

- Manage roles and permissions —Learn about the permissions required for running and accessing reports

QM standard reports

Quality Management provides evaluation, system, and survey reports.

> **NOTE** Scores are rounded up for individual sections in evaluation and survey forms. However, in reports that show section averages for agents, teams, and groups, the section scores are first added and averaged before being rounded up. As a result, the average displayed in reports will vary slightly from the number calculated by adding up section scores as displayed in an evaluation or survey form and then averaging them.

Quality Management displays time in two different ways, depending on where it appears. In all Quality Management reports, except for system status and user recording status, the time associated with a contact is the time the contact occurred at the agent's location. The time appears in a format appropriate to the locale with an abbreviation for the local time zone. . For example, if the agent is located in Chicago, USA, the time associated with any contacts made by that agent is Central Standard Time (CST). If Webex WFO does not know the time zone associated with the contact, then the time is displayed in Greenwich Mean Time (GMT).

In system status and user recording status reports, the time associated with a contact is in a format appropriate to the locale plus the GMT offset. For example, the time for a contact made by a Chicago agent at 3:42 PM CST appears as 9:42 PM GMT −06:00.

> **BEST PRACTICE** Before you run a standard report, know what data you need to access and how best to filter it. Use the smallest possible date range, and use many targeted searches as opposed to a single large search. You can also use group, team, and agent filters to get specific data without running a report for all groups or teams in your system. Let the report finish running before requesting a new report.

Prerequisites

The proper permissions for the report you want to run. The permissions you need can vary depending on the report. See Manage roles and permissions for the full list of Reporting permissions.

Page location

Reporting

Procedures

Run a report

1. Click **QM** or **Saved** from the Reporting toolbar.
2. Click the report name to display the report's setup page.
3. Complete the report setup information. Choose the date, criteria, format, and fields to be included in the report.

   > **NOTE** For all standard QM reports, the date filter searches based on the date the contact was recorded, not the date the contact was evaluated.

> **NOTE** If the report allows you to choose the fields that appear in the report and their order, when you click **Run Report** or **Save As**, the selected fields become the default fields for the report for you. Other users do not see your choices when they run the report.

4. (Optional) Choose whether to enable recurrence for the report.

   (Optional) Choose whether to email recurring reports to email addresses you enter in the **Destination** section. At least one email address is required. Email addresses are separated by semicolons. If Webex WFO is configured to email reports, you can set a report to run automatically at specified intervals for a specified length of time or indefinitely.

   > **EXAMPLE** john.smith@example.com;mary.jones@example.com

   > **NOTE** There is a 10 MB attachment size limit for reports that are emailed. The size of the generated report depends on the amount of data included (the number of agents or service queues, for example). To check the size of the report, generate it manually as a PDF or CSV first. If the report is large, break it into smaller reports to ensure it meets the size limitation.

   The email includes your email address in the From field (as the user who scheduled the report). If your email address is not available, the email address will be <your first name>.<your last name>@automated.report.

   > **NOTE** To use Recurrence, you must save the report for future use.

5. Click **Run Report** to run the report immediately.

Save a report

1. Set up the report as desired (see the procedure “Run a report”).
2. Click **Save As** to save the report for future use.
3. Enter a name for the report in the Save As text field then click **Save**.
4. When you save a report’s configuration, you can access it by clicking **Saved** in the Reporting toolbar and then clicking the report name.

Available reports

Evaluation Reports	
Scores All Data	Displays average evaluation scores by group, team, or agent per

Evaluation Reports	
	form. This can include one evaluation form or all point-based or percentage-based forms.
Evaluation Scores	Displays average detailed evaluation scores per agent, team, and/or group, based on form.
Section Scores	Displays the average score for each section of an evaluation form over a specified period. This can be run by agent, team, and/or group.
Question Scores	Displays the scores for each question on an evaluation form. This can include one evaluation form or all point-based or percentage-based forms for an individual agent, group, or team.
Evaluator Performance	Provides a summary of how many evaluations an evaluator has completed and the average evaluation score based on a time period. This can include one evaluation form or all point-based or percentage-based forms.
Quality Averages Graph	Displays quality averages over time for an agent, team, and/or group. This can include one evaluation form or all point-based or percentage-based forms.
Evaluation Totals Graph	Displays the evaluation totals by month for an individual agent, group, or team.
Contact Totals Graph	Displays the total number of recordings and evaluations per month for a specified group.
Agent Trend Graph	Displays a specific user's average score for each evaluation made over a specified time period, along with trend line and the detailed information below that makes up the graph.
Agent Scored Evaluation	Displays the details of all evaluations scored for a specific user

Evaluation Reports	
	during a defined time period, including the scores given on each evaluation question, the score for each section, the overall score, and any added comments. The report can be run for one form or for all percentage-based or point-based forms.
Contact Detail	Displays average evaluation scores, ranges, and contact total dates for a specific agent and whether the score exceeded, met, or was below expectation based on what was defined in the form. For the agent-level detail, you see a row per form. On the team- and group-level detail, you see some additional information for total number of evaluations, team, and agent averages.
Evaluation Calibration	Shows the results of a calibration session based on the Contact ID.
Contact Goal Progress	If you are using the Contact Goal feature, this report shows the progress of completed evaluations compared to their goals. The goals are by evaluator.

System Reports	
Interaction Access by User	Displays users who accessed the recordings over a specified period.
Interaction Access by Contact	Displays a list of archived recordings for a specific agent that were accessed over a specified period. It enables you to determine if a significant number of recordings concerning a particular contact, called number, or calling number were reviewed.
User Recording Status	Displays user and recording events associated with the agents configured for recording. You can choose to view messages generated by the service at the INFO, WARN, or ERROR level, or at all levels. Information is available for the past seven days, including the current day.

System Reports	
System Status	Displays system and administrative events associated with agents configured for recording. You can choose to view messages generated by the service at the INFO, WARN, or ERROR level, or at all levels. Information is available for the past seven days, including the current day.

Survey Reports	
Surveys All Data	Displays collective post-call survey scores.
Survey Form Scores	Displays the average scores for post-call surveys.

Agent Scored Evaluation

The Agent Scored Evaluation report displays the details of all evaluations scored for a specific user during a defined time period, including the scores given on each evaluation question, the score for each section, the overall score, and any added comments. The report can be run for one form or for all percentage-based or point-based forms.

You can use this report to print out a hard copy of an individual evaluation result.

CALABRIO **Agent Scored Evaluation**

Start:7/08/2019
End:5/08/2020

Eval Form	Contact ID	Called Number	Calling Number	Call Duration	Contact Date	Contact Time	Contact Time Zone	Eval Date	Eval Time	Eval Time Zone	Eval Last Name	Eval First Name	Score:
% Form with KPI Questions	13676			0:00:03	7/08/2019	12:00 PM	America/Chicago	9/03/2019	4:21 PM	America/India..	Moilanen	Mary	70.00

Section:	Greetings	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
0.00	50.00	N	50.00	1.1 Agent identifies company and themselves?
50.00	50.00	N	50.00	1.3 Agent verifies customer via PIN or security questions?

Section Total: 50.00 Possible: 100.00 Score: 50.00

Section:	Applications	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
100.00	100.00	N	100.00	2.3 Stays within appropriate applications?

Section Total: 100.00 Possible: 100.00 Score: 100.00

Section:	Handling Call	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
80.00	100.00	N	100.00	3.4 Suggests customer upgrade membership or add users

Section Total: 80.00 Possible: 100.00 Score: 80.00

Section:	Closing	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
50.00	50.00	N	50.00	4.1 Reads and gains approval of disclosures
0.00	50.00	N	50.00	4.4 Thanks the customer on the company's behalf

Section Total: 50.00 Possible: 100.00 Score: 50.00

Eval Form	Contact ID	Called Number	Calling Number	Call Duration	Contact Date	Contact Time	Contact Time Zone	Eval Date	Eval Time	Eval Time Zone	Eval Last Name	Eval First Name	Score:
% Form with KPI Questions	13677			0:00:02	7/08/2019	12:00 PM	America/Chicago	8/09/2019	2:53 PM	America/India..	Moilanen	Mary	75.00

Section:	Greetings	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
50.00	50.00	N	50.00	1.1 Agent identifies company and themselves?
50.00	50.00	N	50.00	1.3 Agent verifies customer via PIN or security questions?

Section Total: 100.00 Possible: 100.00 Score: 100.00

Section:	Applications	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
0.00	100.00	N	100.00	2.3 Stays within appropriate applications?

Section Total: 0.00 Possible: 100.00 Score: 0.00

Section:	Handling Call	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
100.00	100.00	N	100.00	3.4 Suggests customer upgrade membership or add users

Section Total: 100.00 Possible: 100.00 Score: 100.00

Section:	Closing	Weight(%):25.00		
Score:	Possible Score	KPI	Weight(%)	Question
50.00	50.00	N	50.00	4.1 Reads and gains approval of disclosures
50.00	50.00	N	50.00	4.4 Thanks the customer on the company's behalf

Section Total: 100.00 Possible: 100.00 Score: 100.00

Form Comments

First Name	Last Name	Comment Date	Comment Time	Comment Time Zone	Comment
Michael	Kouri	2/11/2020	4:51 AM	UTC	SECTN
Michael	Kouri	2/11/2020	4:51 AM	UTC	QSTN
Michael	Kouri	2/11/2020	4:51 AM	UTC	Good - Test Comment
Michael	Kouri	2/11/2020	4:52 AM	UTC	QSTN
Michael	Kouri	2/11/2020	4:52 AM	UTC	Section Comment - Test

Total Evaluations: 2
[Agent]:Alan Duff [Form]:% Form with KPI Questions

NOTE

If an evaluation score has a repetitive decimal, Webex WFO will round the value at the number of significant digits you have specified for reports. At 14 decimal places and below, the last decimal is rounded. At 15 decimals, the last two decimals are rounded.

For example, for 14 decimals, a repeating value appears as 66.66666666666667. For 15 decimals, a repeating value appears as 66.666666666666671.

Prerequisite

- You have the “View Evaluation Details” permission. See Manage roles and permissions .

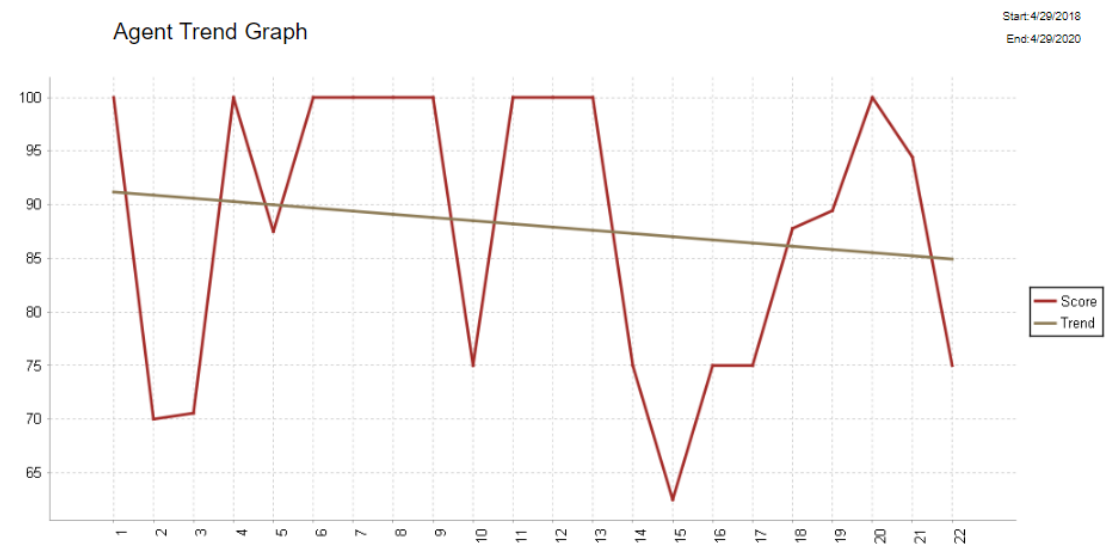
Fields in this report

Field	Definition
Call Duration	The contact’s talk time (amount of time between call answered and call dropped).
Called Number	The DID (Direct Inward Dialing) or DNIS (Dialed Number Identification Service) number of the phone that received the call. Displays “unknown” if the called number is unlisted or blocked.
Calling Number	The Caller ID or ANI (Automatic Number Identification) of the calling party. Displays “unknown” if the calling number is unlisted or blocked.
Comment	The comment related to a form or section. Anyone who can view the evaluation can add a comment.
Comment Date	The date when the comment was entered on the evaluation.
Comment Time	The time when the comment was entered on the evaluation.
Comment Time Zone	The time zone where the comment was entered.
Contact ID	The conversation’s unique ID.
Contact Time	The time when the contact occurred.
End	The end of the day or interval, or the end of the period covered by the report.
Eval Date	The date the contact was evaluated. This value appears on requested reports if the View Evaluator Detail permission is selected. If it is not selected, the value 12/31/2999 is displayed. On scheduled reports, this value is always displayed.
Eval Form	The evaluation form used to score the contact.
Eval Time	The time when the contact was evaluated. Available on requested reports if the View Evaluator Detail permission is selected. If the View Evaluator Detail permission is not selected, the value 12:00 AM is displayed. This value is always available on scheduled reports.

Field	Definition
Eval Time Zone	The time zone in which the contact was evaluated. Only available on requested reports if the View Evaluator Details permission is enabled. If the permission is not enabled, the value ##### is displayed. This value is always displayed on scheduled reports.
First Name	The evaluator's first name. You can see the evaluator's first name if you have the View Evaluator Details permission.
Form Comments	The comments for a form. Anyone who can view the evaluation can add a comment.
KPI	Key Performance Indicator.
Last Name	The evaluator's last name. You can see the evaluator's last name if you have the View Evaluator Details permission.
Possible	The total possible score.
Possible Score	The actual question that appears in the evaluation form.
Question	The text of the question that appears in the evaluation form.
Score	The evaluation score given to the contact.
Section	The name of the section in the evaluation form.
Section Total	The total score for the section.
Total Evaluations	The total number of evaluations performed using the specified evaluation form during the specified time period.
Weight (%)	A percentage applied to a section or question in an evaluation form. The sum of question weights in a evaluation form section is 100 percent.

Agent Trend Graph

The Agent Trend Graph report displays a specific user's average score for each evaluation made over a specified time period, along with trend line and the detailed information below that makes up the graph.



ID	Contact ID	Form	Contact Date	Contact Time	Contact Time Zone	Call Duration	Score(%):
1	842	Training QM Form	10/22/2018	12:46 PM	America/Chicago		100.00
2	848	Training QM Form	11/06/2018	9:22 AM	America/Chicago		70.00
3	847	Training QM Form	11/08/2018	9:21 AM	America/Chicago		70.56
4	852	IB DQA - Draft	11/12/2018	8:03 AM	America/Chicago		100.00
5	853	Testing - Roles 2	11/13/2018	1:48 PM	America/Chicago		87.50
6	854	Training QM Form	11/13/2018	1:54 PM	America/Chicago		100.00
7	855	Training QM Form	11/13/2018	1:57 PM	America/Chicago		100.00
8	856	Training QM Form	11/13/2018	1:59 PM	America/Chicago		100.00
9	857	Training QM Form	11/13/2018	2:01 PM	America/Chicago		100.00
10	858	Testing - JW NA	11/13/2018	2:06 PM	America/Chicago		75.00
11	859	Testing - Roles	11/13/2018	2:09 PM	America/Chicago		100.00
12	860	Testing - Roles	11/13/2018	2:30 PM	America/Chicago		100.00
13	861	Testing - Roles	11/13/2018	2:34 PM	America/Chicago		100.00
14	862	Testing - Roles 2	11/15/2018	12:08 PM	America/Chicago		75.00
15	863	Testing - Roles 2	11/19/2018	3:43 PM	America/Chicago		62.50
16	864	Testing - Appeal Process	11/20/2018	4:48 PM	America/Chicago		75.00
17	866	Testing - Roles 2	11/30/2018	11:31 AM	America/Chicago		75.00
18	867	Training QM Form	11/30/2018	11:35 AM	America/Chicago		87.78
19	868	Testing - JW Notification	11/30/2018	11:40 AM	America/Chicago		89.44
20	872	Testing - JW Notification	12/04/2018	1:20 PM	America/Chicago		100.00
21	890	Testing - JW Notification	1/24/2019	10:01 AM	America/Chicago		94.44
22	895	Testing - Roles 2	2/06/2019	11:57 AM	America/Chicago		75.00

Fields in this report

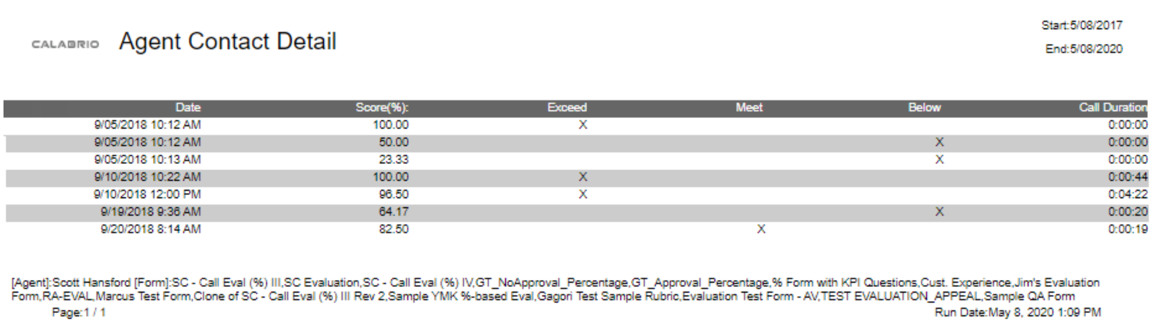
Field	Description
Call Duration	The contact’s talk time (amount of time between call answered and call dropped).
Contact Date	The date the contact occurred.
Contact ID	The conversation’s unique ID.
Contact Time	The time when the contact occurred.

Field	Description
Contact Time Zone	The time zone in which the contact occurred.
End	The end of the day or interval, or the end of the period covered by the report.
Form	The name of the evaluation form.
ID	The ID of the contact.
Score	The evaluation score given to the contact.
Start	The start time of the day or interval or the start of the period covered by the report.
Trend	The average evaluation score over time.

Contact Detail

This report displays average evaluation scores, ranges, and contact total dates for a specific agent and whether the score exceeded, met, or was below expectation based on what was defined in the form. For the agent-level detail, you see a row per form. On the team- and group-level detail, you see some additional information for total number of evaluations, team, and agent averages.

> **NOTE** Statistics for scored contacts do not include evaluations in progress or evaluations waiting for approval.


CALABRIO Agent Contact Detail

Start:5/08/2017
End:5/08/2020

Date	Score(%):	Exceed	Meet	Below	Call Duration
9/05/2018 10:12 AM	100.00	X			0:00:00
9/05/2018 10:12 AM	50.00			X	0:00:00
9/05/2018 10:13 AM	23.33			X	0:00:00
9/10/2018 10:22 AM	100.00	X			0:00:44
9/10/2018 12:00 PM	96.50	X			0:04:22
9/19/2018 9:36 AM	64.17			X	0:00:20
9/20/2018 8:14 AM	82.50		X		0:00:19

[Agent]:Scott Hansford [Form]:SC - Call Eval (%) III,SC Evaluation,SC - Call Eval (%) IV,GT_NoApproval_Percentage,GT_Approval_Percentage,% Form with KPI Questions,Cust. Experience,Jim's Evaluation Form,RA-EVAL,Marcus Test Form,Clone of SC - Call Eval (%) III Rev 2,Sample YMK %-based Eval,Gagori Test Sample Rubric,Evaluation Test Form - AV,TEST EVALUATION_APPEAL,Sample QA Form

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CALABRIO Team Contact Detail

Start:7/08/2017
End:5/08/2020

First Name	Last Name	Agent ID	Total Evaluations	Team Average(%)	Agent Average(%)	Score Std Dev	Total Exceed	Total Meet	Total Below
		171	1	73.42	100.00	0.00	1	0	0
		596	2	73.42	45.50	45.50	1	0	1
Advanced	Reporting	110	1	73.42	100.00	0.00	1	0	0
Alan	Duff	425	7	73.42	64.71	28.87	2	3	2
Alex	Altherr	47	72	73.42	87.44	21.09	60	0	12
Alvin	Wong	349	1	73.42	100.00	0.00	1	0	0
Anna	Alexander	62	90	73.42	82.54	24.20	65	0	25
Ashley	Van Hout	428	1	73.42	46.67	0.00	0	0	1
Ben	Bishop	48	176	73.42	68.98	28.50	80	0	96
Beth	Bryant	63	163	73.42	70.06	28.52	78	0	85
Brett(SiennaCreek)	Kadrie	429	1	73.42	65.25	0.00	0	0	1
Brian	Burns	30	161	73.42	69.97	28.35	76	0	85
Chris	Hohenberger	190	1	73.42	96.50	0.00	1	0	0
Curt	Cowens	64	1	73.42	95.50	0.00	1	0	0
Dan	Lanctot	431	2	73.42	57.13	2.87	0	1	1
Dan	Lynch	432	3	73.42	68.74	24.54	1	1	1
David	Dubinski	65	1	73.42	90.50	0.00	1	0	0
Derek	Fernholz	148	1	73.42	64.17	0.00	0	0	1
Erika	Eells	411	1	73.42	50.83	0.00	0	0	1
Gerry	Johnsen	100	4	73.42	67.08	19.90	1	0	3
Greg	Iske	436	1	73.42	71.00	0.00	0	1	0
Ignacio	Villar	76	1	73.42	85.50	0.00	0	1	0
Juana	Urshela	75	2	73.42	92.25	0.25	2	0	0
Kevin	Thurman	74	1	73.42	73.25	0.00	0	1	0
Mike	Engen	441	1	73.42	49.50	0.00	0	0	1
Nate	Isham	301	1	73.42	91.67	0.00	1	0	0
Nina	Quinlan	71	1	73.42	93.00	0.00	1	0	0
Oishong	Chok	443	3	73.42	75.93	34.05	2	0	1
Oscar	Purcell	70	1	73.42	86.50	0.00	0	1	0
Quincy	Landers	68	1	73.42	83.50	0.00	0	1	0
Sally	Risk	444	1	73.42	23.33	0.00	0	0	1
Sam	Boswell	118	1	73.42	87.50	0.00	1	0	0
Scott	Hansford	94	7	73.42	73.79	27.18	3	1	3
Shane	Johnson	169	3	73.42	58.14	25.78	0	2	1
Shane	Johnson	95	1	73.42	100.00	0.00	1	0	0
Taylor	Laehn	446	7	73.42	90.40	9.02	4	3	0
Tom	Brown	447	2	73.42	79.17	6.83	0	2	0

[Team]:Default Team [Form]:SC - Call Eval (%) III,SC Evaluation,SC - Call Eval (%) IV,GT_NoApproval_Percentage,GT_Approval_Percentage,% Form with KPI Questions,Cust. Experience,Jim's Evaluation Form,RA-EVAL,Marcus Test Form,Clone of SC - Call Eval (%) III Rev 2,Sample YMK %-based Eval,Gagori Test Sample Rubric,Evaluation Test Form - AV,TEST EVALUATION_APPEAL,Sample QA Form

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Fields in this report

Field	Definition
Below	The number of evaluated contacts that are below expectations.
Date	The date of the reported information.
End	The end of the day or interval, or the end of the period covered by the report.
Exceeds	The number of evaluated contacts that exceed expectations.
Meets	The number of evaluated contacts that meet expectations.
Score	The evaluation score given to the contact.

Field	Definition
Start	The start time of the day or interval or the start of the period covered by the report.

Contact Goal Progress

If you are using the Contact Goal feature, this report shows the progress of completed evaluations compared to their goals. The goals are by evaluator.

As Of:5/08/2017

CALABRIO Contact Goal Progress

First Name	Last Name	Contact Goal	Completed	Total to Complete	Percent Complete
Call	Design	Goal 40: calabration session	0	3	0.0%
Charlie	Snedden	Goal 40: calabration session	0	3	0.0%
Chris	Dickhans	Goal 40: calabration session	0	3	0.0%
Consulting	Calabrio	Goal 40: calabration session	0	3	0.0%

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Fields in this report

Field	Definition
First Name	The evaluator’s first name. You can see the evaluator’s first name if you have the View Evaluator Details permission.
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Contact Goal	The description of the contact goal as configured on the Contact Goal Administration page.
Completed	The number of contact goals that the evaluator has completed.
Total To Complete	The total number of contact goals the evaluator has to complete. **NOTE** If an agent is deactivated before a goal is active (or, for recurring goals, before Webex WFO assigns the next recurrence), Webex WFO does not include contacts from that agent in the total number of contacts that the evaluator must handle in order to meet that goal. If an agent is deactivated after a goal is active, that agent’s contacts are included in the goal and in the metrics for this

Field	Definition
	report. **EXAMPLE** Each week, evaluators have a goal to evaluate ten calls. The week runs from Monday to Friday. An agent leaves the contact center on a Wednesday. Her contacts are included in the goal and report metrics for that week but not in the goal and report metrics for the week after that.
Percent Complete	The percentage of contact goals that the evaluator has completed.

Contact Totals Graph

The Contact Totals Graph report displays the total number of recordings and evaluations per month for a specified group.

Fields in this report

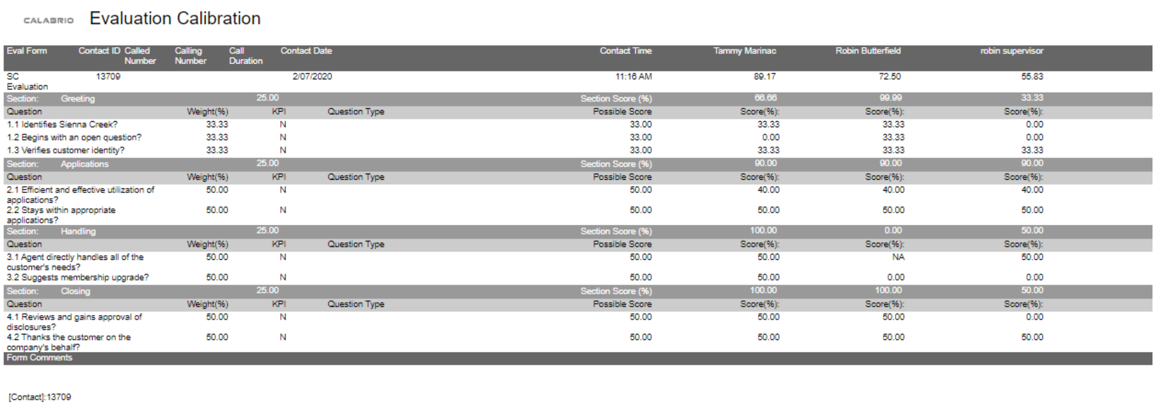
Field	Definition
End	The end of the day or interval, or the end of the period covered by the report.
Start	The start time of the day or interval or the start of the period covered by the report.
Total Evaluations	The total number of evaluations performed using the specified evaluation form during the specified time period.
Total QM Recordings	The total number of Quality Management recordings.

Evaluation Calibration

This report shows the results of a calibration session based on the Contact ID. It does not display standard evaluation scores

Prerequisite

- You have the View Evaluator Details permission. See Manage roles and permissions .


CALABRIO Evaluation Calibration

Eval Form	Contact ID	Called Number	Calling Number	Call Duration	Contact Date	Contact Time	Tammy Marinac	Robin Butterfield	robin supervisor
SC Evaluation	13709				2/07/2020	11:16 AM	89.17	72.50	55.83
Section: Greeting				25.00		Section Score (%)	66.66	99.99	33.33
Question			Weight(%)	KPI	Question Type	Possible Score	Score(%):	Score(%):	Score(%):
1.1 Identifies Sienna Creek?			33.33	N		33.00	33.33	33.33	0.00
1.2 Begins with an open question?			33.33	N		33.00	0.00	33.33	0.00
1.3 Verifies customer identity?			33.33	N		33.00	33.33	33.33	33.33
Section: Applications				25.00		Section Score (%)	90.00	90.00	90.00
Question			Weight(%)	KPI	Question Type	Possible Score	Score(%):	Score(%):	Score(%):
2.1 Efficient and effective utilization of applications?			50.00	N		50.00	40.00	40.00	40.00
2.2 Stays within appropriate applications?			50.00	N		50.00	50.00	50.00	50.00
Section: Handling				25.00		Section Score (%)	100.00	0.00	50.00
Question			Weight(%)	KPI	Question Type	Possible Score	Score(%):	Score(%):	Score(%):
3.1 Agent directly handles all of the customer's needs?			50.00	N		50.00	50.00	NA	50.00
3.2 Suggests membership upgrade?			50.00	N		50.00	50.00	0.00	0.00
Section: Closing				25.00		Section Score (%)	100.00	100.00	50.00
Question			Weight(%)	KPI	Question Type	Possible Score	Score(%):	Score(%):	Score(%):
4.1 Reviews and gains approval of disclosures?			50.00	N		50.00	50.00	50.00	0.00
4.2 Thanks the customer on the company's behalf?			50.00	N		50.00	50.00	50.00	50.00
Form Comments									

[Contact]:13709

Fields in this report

Field	Definition
Call Duration	The contact's talk time (amount of time between call answered and call dropped).
Called Number	The DID (Direct Inward Dialing) or DNIS (Dialed Number Identification Service) number of the phone that received the call. Displays "unknown" if the called number is unlisted or blocked.
Calling Number	The Caller ID or ANI (Automatic Number Identification) of the calling party. Displays "unknown" if the calling number is unlisted or blocked.
Contact Date	The date the contact occurred.
Contact ID	The conversation's unique ID.
Contact Time	The time when the contact occurred.
Eval Form	The evaluation form used to score the contact.
Evaluator Name	The first and last name of the person who evaluated or calibrated the contact. Only available on requested reports if the View Evaluator Details permission is enabled. This value is always displayed on scheduled reports.

Field	Definition
Form Comments	The comments for a form. Anyone who can view the evaluation can add a comment.
KPI	Key Performance Indicator.
Possible Score	The actual question that appears in the evaluation form.
Question	The text of the question that appears in the evaluation form.
Question Type	The type of question based on the possible answer: Yes/No or 0–5.
Score	The evaluation score given to the contact.
Section	The name of the section in the evaluation form.
Section Score (%)	The section score given to the contact.
Weight (%)	A percentage applied to a section or question in an evaluation form. The sum of question weights in a evaluation form section is 100 percent.

Evaluation Scores

This report displays average detailed evaluation scores per agent, team, and/or group, based on form.

CALABRIO Agent Evaluation Scores

Start:3/15/2021
End:3/15/2022

Group	Team	Last Name	First Name	Agent ID	Form	Recordings	Evaluations	Exceed	Meet	Below	Average Score
Default Group	Default Team	Agent	Therese	Therese Agent	% Form with KPI Questions	423	1	0	0	1	0.00

Section Weight(%):25.00	Section:	Greetings		Average Score:	50.00
Question Weight(%)	Question				
50.00	1.1 Agent identifies company and themselves?		100.00		
50.00	1.3 Agent verifies customer via PIN or security questions?		0.00		
Section Weight(%):25.00	Section:	Applications		Average Score:	100.00
Question Weight(%)	Question				
100.00	2.3 Stays within appropriate applications?		100.00		
Section Weight(%):25.00	Section:	Handling Call		Average Score:	80.00
Question Weight(%)	Question				
100.00	3.4 Suggests customer upgrade membership or add users		80.00		
Section Weight(%):25.00	Section:	Closing		Average Score:	100.00
Question Weight(%)	Question				
50.00	4.1 Reads and gains approval of disclosures		100.00		
50.00	4.4 Thanks the customer on the company's behalf		100.00		

[Agent]:Therese Agent [Form]:% Form with KPI Questions
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CALABRIO Team Evaluation Scores

Start:3/15/2021
End:3/15/2022

Group	Team	Last Name	First Name	Agent ID	Form	Recordings	Evaluations	Exceed	Meet	Below	Average Score
Default Group	Default Team				% Form with KPI Questions	423	7	4	1	2	76.07
	Section Weight(%):25.00		Section: Greetings							Average Score:	71.43
	Question Weight(%)		Question								
		50.00	1.1 Agent identifies company and themselves?							75.00	
		50.00	1.3 Agent verifies customer via PIN or security questions?							66.67	
	Section Weight(%):25.00		Section: Applications							Average Score:	75.00
	Question Weight(%)		Question								
		100.00	2.3 Stays within appropriate applications?							75.00	
	Section Weight(%):25.00		Section: Handling Call							Average Score:	86.67
	Question Weight(%)		Question								
		100.00	3.4 Suggests customer upgrade membership or add users							86.67	
	Section Weight(%):25.00		Section: Closing							Average Score:	100.00
	Question Weight(%)		Question								
		50.00	4.1 Reads and gains approval of disclosures							100.00	
		50.00	4.4 Thanks the customer on the company's behalf							100.00	
Group	Team	Last Name	First Name	Agent ID	Form	Recordings	Evaluations	Exceed	Meet	Below	Average Score
Default Group	WFM Test Team 1				% Form with KPI Questions	15	2	2	0	0	100.00
	Section Weight(%):25.00		Section: Greetings							Average Score:	
	Question Weight(%)		Question								
		50.00	1.1 Agent identifies company and themselves?							0.00	
		50.00	1.3 Agent verifies customer via PIN or security questions?							0.00	
	Section Weight(%):25.00		Section: Applications							Average Score:	
	Question Weight(%)		Question								
		100.00	2.3 Stays within appropriate applications?							0.00	
	Section Weight(%):25.00		Section: Handling Call							Average Score:	
	Question Weight(%)		Question								
		100.00	3.4 Suggests customer upgrade membership or add users							0.00	
	Section Weight(%):25.00		Section: Closing							Average Score:	
	Question Weight(%)		Question								
		50.00	4.1 Reads and gains approval of disclosures							0.00	
		50.00	4.4 Thanks the customer on the company's behalf							0.00	

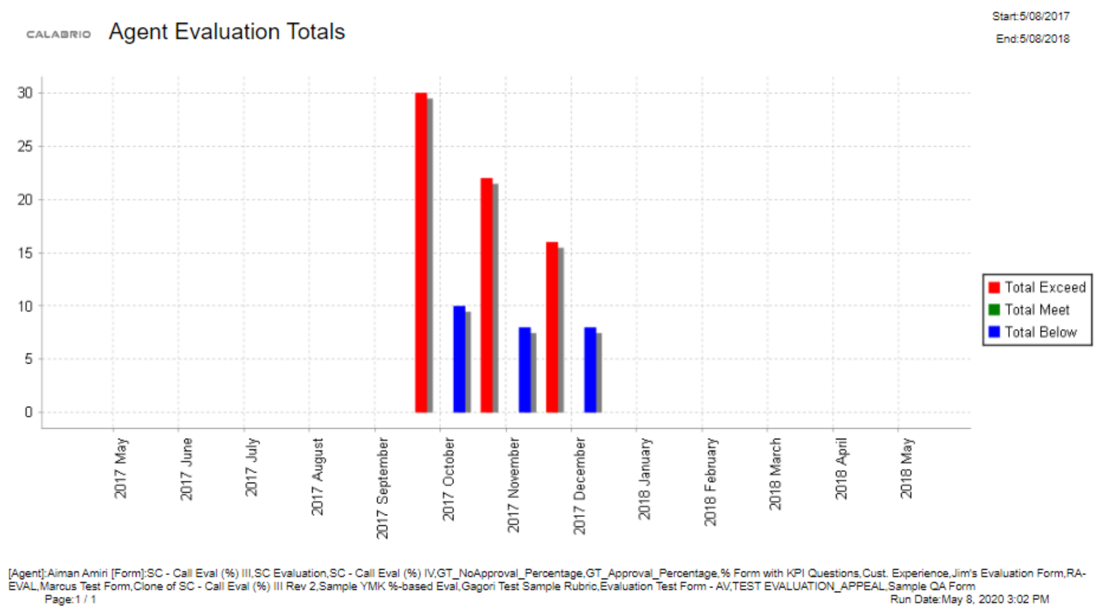
Fields in this report

Field	Description
Agent ID	The agent's system ID number.
Below	The number of evaluated contacts that are below expectations.
End	The end of the day or interval, or the end of the period covered by the report.
Evaluations	The total number of evaluations.
Exceeds	The number of evaluated contacts that exceed expectations.
First Name	The evaluator's first name. You can see the evaluator's first name if you have the View Evaluator Details permission.
Form	The name of the evaluation form.
Group	The name of the group.

Field	Description
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Meets	The number of evaluated contacts that meet expectations.
Question	The text of the question that appears in the evaluation form.
Question Weight	A percentage applied to a question in an evaluation form. The sum of the question weights in each section of the form is 100 percent.
Recordings	The number of recordings.
Section	The name of the section in the evaluation form.
Section Weight	A percentage applied to a section in an evaluation form. The sum of the section weights in the form is 100 percent.
Start	The start time of the day or interval or the start of the period covered by the report.
Team	The name of the team. When associated with an agent, the team is the agent’s current team.

Evaluation Totals Graph

The Evaluation Totals Graph report displays the evaluation totals by month for an individual agent, group, or team.


CALABRIO
Agent Evaluation Totals
Start:5/08/2017
End:5/08/2018
30
25
20
15
10
5
0
Total Exceed
Total Meet
Total Below
2017 May
2017 June
2017 July
2017 August
2017 September
2017 October
2017 November
2017 December
2018 January
2018 February
2018 March
2018 April
2018 May
[Agent]:Aiman Amiri [Form]:SC - Call Eval (%) III,SC Evaluation,SC - Call Eval (%) IV,GT_NoApproval_Percentage,GT_Approval_Percentage,% Form with KPI Questions,Cust. Experience,Jim's Evaluation Form,RA-EVAL,Marcus Test Form,Clone of SC - Call Eval (%) III Rev 2,Sample YMK %-based Eval,Gagori Test Sample Rubric,Evaluation Test Form - AV,TEST EVALUATION_APPEAL,Sample QA Form
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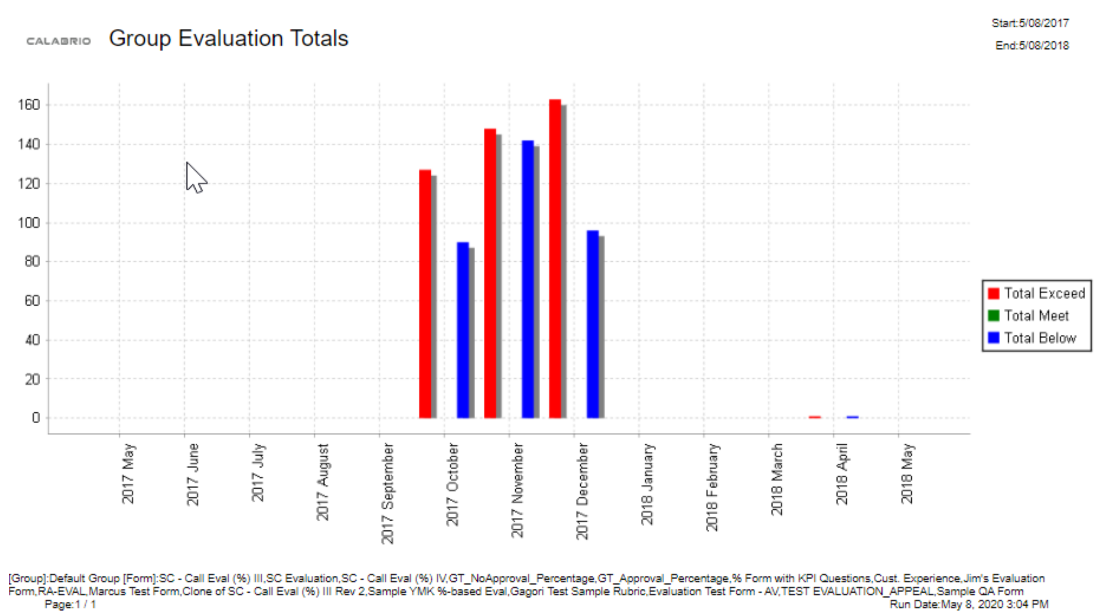
CALABRIO
Group Evaluation Totals
Start:5/08/2017
End:5/08/2018
160
140
120
100
80
60
40
20
0
Total Exceed
Total Meet
Total Below
2017 May
2017 June
2017 July
2017 August
2017 September
2017 October
2017 November
2017 December
2018 January
2018 February
2018 March
2018 April
2018 May
[Group]:Default Group [Form]:SC - Call Eval (%) III,SC Evaluation,SC - Call Eval (%) IV,GT_NoApproval_Percentage,GT_Approval_Percentage,% Form with KPI Questions,Cust. Experience,Jim's Evaluation Form,RA-EVAL,Marcus Test Form,Clone of SC - Call Eval (%) III Rev 2,Sample YMK %-based Eval,Gagori Test Sample Rubric,Evaluation Test Form - AV,TEST EVALUATION_APPEAL,Sample QA Form
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Fields in this report

Field	Description
End	The end of the day or interval, or the end of the period covered by the report.
Start	The start time of the day or interval or the start of the period covered by the report.
Total Below	The total number of evaluated contacts whose scores fall below expectations. The default score range is 0–74 percent. The range can be modified by the administrator.
Total Exceed	The total number of evaluated contacts whose scores exceed expectations. The default score range is 90–100 percent. This range can be modified by the administrator.

Evaluator Performance

This report provides a summary of how many evaluations an evaluator has completed and the average evaluation score based on a time period. This can include one evaluation form or all point-based or percentage-based forms.

Prerequisite

- You have the View Evaluator Details permission. See Manage roles and permissions .

CALABRIO Evaluator Performance

Start:5/09/2019
End:5/08/2020

Last Name	First Name	User ID	Eval Form	Total Evaluations	Average Score
Butterfield	Robin	Robin.Butterfield@Calab..	% Form with KPI Questions	3.00	63.33
Butterfield	Robin	Robin.Butterfield@Calab..	GT_Approval_Percentage	1.00	100.00
Butterfield	Robin	Robin.Butterfield@Calab..	Sample QA Form	1.00	68.00
Butterfield	Robin	Robin.Butterfield@Calab..	SC - Call Eval (%) III	3.00	58.02
Duff	Alan	CALABRIO\alan.duff\gag..	% Form with KPI Questions	1.00	100.00
Duff	Alan	CALABRIO\alan.duff\gag..	Clone of SC - Call Eval (%) III Rev 2	1.00	70.50
Duff	Alan	CALABRIO\alan.duff\gag..	TEST EVALUATION_APPEAL	1.00	100.00
Evaluator	Amerc	evalamericas@calabriod..	SC Evaluation	3.00	50.83
Evans	David	CALABRIO\david.evans\..	SC Evaluation	7.00	70.95
Hebbar	Shravan	Shravan.Hebbar@accent..	Clone of SC - Call Eval (%) III Rev 2	1.00	100.00
Iske	Greg	CALABRIO\greg.iske\Gr..	SC Evaluation	1.00	23.33
Johnsen	Gerry	CALABRIO\johnseg\gerr..	SC - Call Eval (%) IV	1.00	4.00
Kouri	Michael	michael.a.kouri@accentu..	Jim's Evaluation Form	1.00	100.00
Kouri	Michael	michael.a.kouri@accentu..	TEST EVALUATION_APPEAL	1.00	80.00
Laehn	Taylor	CALABRIO\taylor.laehn\l..	GT_NoApproval_Percentage	1.00	71.00
Laehn	Taylor	CALABRIO\taylor.laehn\l..	SC Evaluation	1.00	79.17
Moilanen	Mary	Mary.Moilanen@Calabrio..	% Form with KPI Questions	4.00	61.25
Moilanen	Mary	Mary.Moilanen@Calabrio..	SC - Call Eval (%) III	7.00	86.17
Nyberg	Robert	CALABRIO\robert.nyberg..	SC Evaluation	1.00	100.00
Risk	Sally	CALABRIO\sally.risk\Sall..	Cust. Experience	1.00	85.00
Risk	Sally	CALABRIO\sally.risk\Sall..	TEST EVALUATION_APPEAL	1.00	80.00
Wolff	Greg	CALABRIO\wolffg\Greg...	SC - Call Eval (%) III	1.00	96.50

[Form]:SC - Call Eval (%) III,SC Evaluation,SC - Call Eval (%) IV,GT_NoApproval_Percentage,GT_Approval_Percentage,% Form with KPI Questions,Cust. Experience,Jim's Evaluation Form,RA-EVAL,Marcus Test Form,Clone of SC - Call Eval (%) III Rev 2,Sample YMK %-based Eval,Gagori Test Sample Rubric,Evaluation Test Form - AV,TEST EVALUATION_APPEAL,Sample QA Form

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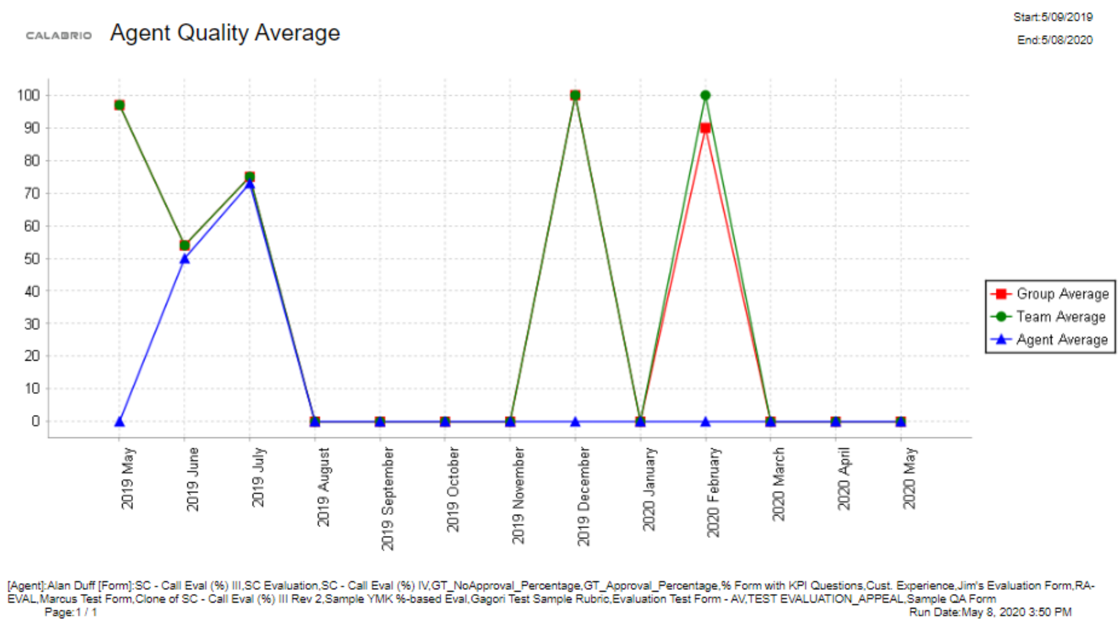
Run Date:May 8, 2020 3:41 PM

Fields in this report

Field	Description
Average Score (%)	The average score for the form, section, or question.
End	The end of the day or interval, or the end of the period covered by the report.
Eval Form	The evaluation form used to score the contact.
First Name	The evaluator’s first name. You can see the evaluator’s first name if you have the View Evaluator Details permission.
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Start	The start time of the day or interval or the start of the period covered by the report.
Total Evaluations	The total number of evaluations performed using the specified evaluation form during the specified time period.
User ID	The Windows login of the person who accessed the archives.

Quality Averages Graph

This graph displays quality averages over time for an agent, team, and/or group. This can include one evaluation form or all point-based or percentage-based forms.



Fields in this report

Field	Description
End	The end of the day or interval, or the end of the period covered by the report.
Group Average	The average score of all contacts evaluated for agents in the group.
Start	The start time of the day or interval or the start of the period covered by the report.
Team Average	The average evaluation score of all the team’s evaluations.

Question Scores

The Question Scores report displays the scores for each question on an evaluation form. This can include one evaluation form or all point-based or percentage-based forms for an individual agent, group, or team.

CALABRIO **Agent Question Scores**

Start:3/14/2021
End:3/14/2022

Group	Team	Last Name	First Name	Agent ID	Form	Average Score
Default Group	Default Team	Agent	Therese	Therese Agent	% Form with KPI Questions	0.00

Section Weight(%):25.00	Section: Greetings		Average Score:	50.00
Question Weight(%)	Question			
50.00	1.1 Agent identifies company and themselves?	100.00		
50.00	1.3 Agent verifies customer via PIN or security questions?	0.00		
Section Weight(%):25.00	Section: Applications		Average Score:	100.00
Question Weight(%)	Question			
100.00	2.3 Stays within appropriate applications?	100.00		
Section Weight(%):25.00	Section: Handling Call		Average Score:	80.00
Question Weight(%)	Question			
100.00	3.4 Suggests customer upgrade membership or add users	80.00		
Section Weight(%):25.00	Section: Closing		Average Score:	100.00
Question Weight(%)	Question			
50.00	4.1 Reads and gains approval of disclosures	100.00		
50.00	4.4 Thanks the customer on the company's behalf	100.00		

Group	Team	Last Name	First Name	Agent ID	Form	Average Score
Default Group	Default Team	Agent	Therese	Therese Agent	TEST EVALUATION_AP..	80.00

Section Weight(%):100.00	Section: Section 1		Average Score:	80.00
Question Weight(%)	Question			
50.00	1.1 Question 1	100.00		
50.00	1.2 Question 2	60.00		

CALABRIO **Team Question Scores**

Start:3/15/2021
End:3/15/2022

Group	Team	Last Name	First Name	Agent ID	Form	Recordings	Exceed	Evaluations	Meet	Below	Average Score
Default Group	Default Team				% Form with KPI Questions	423	4	7	1	2	76.07

Section Weight(%):25.00	Section: Greetings		Average Score:	71.43
Question Weight(%)	Question			
50.00	1.1 Agent identifies company and themselves?	75.00		
50.00	1.3 Agent verifies customer via PIN or security questions?	66.67		
Section Weight(%):25.00	Section: Applications		Average Score:	75.00
Question Weight(%)	Question			
100.00	2.3 Stays within appropriate applications?	75.00		
Section Weight(%):25.00	Section: Handling Call		Average Score:	86.67
Question Weight(%)	Question			
100.00	3.4 Suggests customer upgrade membership or add users	86.67		
Section Weight(%):25.00	Section: Closing		Average Score:	100.00
Question Weight(%)	Question			
50.00	4.1 Reads and gains approval of disclosures	100.00		
50.00	4.4 Thanks the customer on the company's behalf	100.00		

Fields in this report

Field	Description
Agent ID	The agent's system ID number.
Average Score (%)	The average score for the form, section, or question.
Below	The number of evaluated contacts that are below expectations.
End	The end of the day or interval, or the end of the period covered by the report.

Field	Description
Evaluations	The total number of evaluations.
Exceeds	The number of evaluated contacts that exceed expectations.
First Name	The evaluator’s first name. You can see the evaluator’s first name if you have the View Evaluator Details permission.
Form	The name of the evaluation form.
Group	The name of the group.
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Meets	The number of evaluated contacts that meet expectations.
Question	The text of the question that appears in the evaluation form.
Question Weight	A percentage applied to a question in an evaluation form. The sum of the question weights in each section of the form is 100 percent.
Recordings	The number of recordings.
Section	The name of the section in the evaluation form.
Section Weight	A percentage applied to a section in an evaluation form. The sum of the section weights in the form is 100 percent.
Start	The start time of the day or interval or the start of the period covered by the report.
Team	The name of the team. When associated with an agent, the team is the agent’s current team.

Interaction Access by Contact

The Interaction Access by Contact report displays a list of archived recordings for a specific agent that were accessed over a specified period. It enables you to determine if a significant number of recordings concerning a particular contact, called number, or calling number were reviewed.

Fields in this report

Field	Description
Accessed Date	The date when the contact was accessed.
Accessed Time	The time when the contact was accessed.
Accessed Time Zone	The time zone where the contact was accessed.
Agent First Name	The agent’s first name.
Agent ID	The agent’s system ID number.
Agent Last Name	The agent’s last name.
Called Number	The DID (Direct Inward Dialing) or DNIS (Dialed Number Identification Service) number of the phone that received the call. Displays “unknown” if the called number is unlisted or blocked.
Calling Number	The Caller ID or ANI (Automatic Number Identification) of the calling party. Displays “unknown” if the calling number is unlisted or blocked.
Contact Date	The date the contact occurred.
Contact ID	The conversation’s unique ID.
End	The end of the day or interval, or the end of the period covered by the report.
Start	The start time of the day or interval or the start of the period covered by the report.
User First Name	The user’s first name.
User ID	The Windows login of the person who accessed the archives.
User Last Name	The user’s last name.

Interaction Access by User

The Interaction Access by User report displays users who accessed the recordings over a specified period.

Fields in this report

Field	Description
Accessed Date	The date when the contact was accessed.
Accessed Time	The time when the contact was accessed.
Accessed Time Zone	The time zone where the contact was accessed.
Agent First Name	The agent’s first name.
Agent ID	The agent’s system ID number.
Agent Last Name	The agent’s last name.
Called Number	The DID (Direct Inward Dialing) or DNIS (Dialed Number Identification Service) number of the phone that received the call. Displays “unknown” if the called number is unlisted or blocked.
Calling Number	The Caller ID or ANI (Automatic Number Identification) of the calling party. Displays “unknown” if the calling number is unlisted or blocked.
Contact Date	The date the contact occurred.
Contact ID	The conversation’s unique ID.
End	The end of the day or interval, or the end of the period covered by the report.
Start	The start time of the day or interval or the start of the period covered by the report.
User First Name	The user’s first name.
User ID	The Windows login of the person who accessed the archives.
User Last Name	The user’s last name.

Scores All Data

The Scores All Data report displays average evaluation scores by group, team, or agent per form. This can include one evaluation form or all point-based or percentage-based forms.

Team Scores All Data

Start:4/30/2019
End:4/29/2020

Group	Team	Form	Recordings	Evaluations	Exceed	Meet	Below	Average Score
Collections	Red Team	Collections Phone Evaluation 3.0	47	2	0	2	0	69.38

Section Weight(%):50.00	Section: Customer Experience	Average Score: 62.50
Question Weight(%)	Question	Average Score
10.00	1.1 The agent provided an appropriate introduction and greeting.	100.00
30.00	1.2 The agent was engaged and properly built a human connection with the customer.	75.00
20.00	1.3 The agent was professional and spoke with confidence.	50.00
10.00	1.4 The agent effectively controlled the call.	50.00
20.00	1.5 The agent demonstrated ownership of the customer's concerns/issues and related tasks.	50.00
10.00	1.6 The agent provided a proper closing.	50.00

Section Weight(%):50.00	Section: Technical	Average Score: 75.00
Question Weight(%)	Question	Average Score
10.00	2.1 The agent left a timely complete note(s).	75.00
20.00	2.2 The agent provided a recap of the Root Cause for Delinquency (RCD).	50.00
10.00	2.3 The agent reviewed the next steps that have been mutually agreed upon.	50.00
20.00	2.4 The agent confirmed the specific date by which the action steps will take place.	100.00
10.00	2.5 The agent received confirmation where the customer has committed themselves to act, and be closer to a solution.	50.00
20.00	2.6 The agent verified the contact's email address and phone number.	100.00
10.00	2.7 The agent verified the address.	100.00
0.00	2.8 Payment in full was received.	0.00

Section Weight(%):0.00	Section: Liabilities	Average Score: 100.00
Question Weight(%)	Question	Average Score
12.50	3.1 The agent did not leave a note on the account(s).	100.00
12.50	3.2 The agent did not avoid distractions during the call, holding or ACW.	100.00
12.50	3.3 The agent did not make the required recorded line notification(s).	100.00
12.50	3.4 The agent provided substantially incorrect information or lied to the customer.	100.00
12.50	3.5 The agent shared account information with an unauthorized contact.	100.00
12.50	3.6 The agent instructed the customer to take unsafe action.	100.00
12.50	3.7 The agent assumed liability when it has not been confirmed.	100.00
12.50	3.8 The required SML form was not submitted.	100.00

Group	Team	Form	Recordings	Evaluations	Exceed	Meet	Below	Average Score
Collections	Red Team	CS Audit - 2nd TEST.2.1	47	1	1	0	0	100.00

Section Weight(%):0.00	Section: General Info	Average Score: 100.00
Question Weight(%)	Question	Average Score
20.00	1.1 Audit Type - Call	100.00
20.00	1.2 Audit Type - Change	0.00
20.00	1.3 Inbound	0.00
20.00	1.4 Outbound	100.00
20.00	1.5 Provider	0.00

Section Weight(%):2.50	Section: Call Opening	Average Score:
Question Weight(%)	Question	Average Score
50.00	2.1 Did the rep state their name and greeting?	0.00
50.00	2.3 Did the rep advise the call is recorded?	0.00

Section Weight(%):5.00	Section: HIPAA Verification	Average Score:
Question Weight(%)	Question	Average Score
50.00	3.1 Did the rep verify the caller is authorized to make their request?	0.00
50.00	3.2 Did the rep verify the correct date of birth?	0.00

Fields in this report

Field	Description
Agent ID	The agent's system ID number.
Average Score (%)	The average score for the form, section, or question.

Field	Description
Below	The number of evaluated contacts that are below expectations.
End	The end of the day or interval, or the end of the period covered by the report.
Evaluations	The total number of evaluations.
Exceeds	The number of evaluated contacts that exceed expectations.
First Name	The evaluator's first name. You can see the evaluator's first name if you have the View Evaluator Details permission.
Form	The name of the evaluation form.
Group	The name of the group.
Last Name	The evaluator's last name. You can see the evaluator's last name if you have the View Evaluator Details permission.
Meets	The number of evaluated contacts that meet expectations.
Question	The text of the question that appears in the evaluation form.
Question Weight	A percentage applied to a question in an evaluation form. The sum of the question weights in each section of the form is 100 percent.
Recordings	The number of recordings.
Section	The name of the section in the evaluation form.
Section Weight	A percentage applied to a section in an evaluation form. The sum of the section weights in the form is 100 percent.
Start	The start time of the day or interval or the start of the period covered by the report.
Team	The name of the team. When associated with an agent, the team is the agent's current team.

Section Scores

The Section Scores report displays the average score for each section of an evaluation form over a specified period. This can be run by agent, team, and/or group.

CALABRIO **Agent Section Scores**

Start:3/14/2021
End:3/14/2022

Group	Team	Last Name	First Name	Agent ID	Form	Average Score
Americas	East-Team	Bennett	Belinda	Belinda Bennett	Digital_Services - 2021 v1-test	78.33

Section Weight(%):10.00	Section: Greet	Average Score:	66.67
Question Weight(%)	Question		
33.33	1.1 Immediate attention to customer?	100.00	
33.33	1.2 Proper company greeting?	0.00	
33.34	1.3 Responds appropriately to customer and situation?	100.00	
Section Weight(%):20.00	Section: Analyze	Average Score:	75.00
Question Weight(%)	Question		
25.00	1.1 Probes to understand what and why?	100.00	
25.00	1.2 Demonstrates expertise by clarity of questions?	100.00	
25.00	1.3 Gives the correct information?	0.00	
25.00	1.4 Confident in the answers given?	100.00	
Section Weight(%):20.00	Section: Solve/Confim	Average Score:	100.00
Question Weight(%)	Question		
16.67	1.1 Identifies and discusses all appropriate solutions, options and/or alternatives with Caller?	100.00	
16.67	1.2 Does not place on hold for over 45 seconds?	100.00	
16.67	1.3 If more hold time is needed, did they ask permission?	100.00	
16.67	1.4 Did we apologize for the excessive hold time when we returned to the phone call?	100.00	
16.67	1.5 Find ways to help instead of saying "No" to all erquests-seek supervisor approval if needed.	100.00	
16.65	1.6 Did the agent transfer to the appropriate department?	100.00	
Section Weight(%):20.00	Section: System Tools	Average Score:	50.00
Question Weight(%)	Question		
50.00	1.1 Effectively utilizes internal systems or tools to assist co-worker?	0.00	
50.00	1.2 Assigned proper wrap-up code	100.00	
Section Weight(%):20.00	Section: Communication	Average Score:	100.00
Question Weight(%)	Question		
25.00	1.1 Was courteous and respectful to co-worker/caller throughout the call?	100.00	
25.00	1.2 Demonstrates effective listening skills?	100.00	
25.00	1.3 Effectively manages time on the call (does not chit-chat unnecessarily)	100.00	
25.00	1.4 Has a positive voice/tone throughout the phone call?	100.00	
Section Weight(%):10.00	Section: Closing	Average Score:	66.67
Question Weight(%)	Question		
33.33	1.1 Recap- Clearly communicates and gives clear instruction ?	0.00	
33.33	1.2 Check for additional needs or issues	100.00	
33.34	1.3 Thank the Caller using proper close	100.00	

[Agent]:Belinda Bennett [Form]:Digital_Services - 2021 v1-test
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Run Date: March 14, 2022 4:01 PM

Fields in this report

Field	Description
Agent ID	The agent's system ID number.
Average Score (%)	The average score for the form, section, or question.
Below	The number of evaluated contacts that are below expectations.
End	The end of the day or interval, or the end of the period covered by the report.

Field	Description
Evaluation	The total number of evaluations.
Exceeds	The number of evaluated contacts that exceed expectations.
First Name	The evaluator’s first name. You can see the evaluator’s first name if you have the View Evaluator Details permission.
Form	The name of the evaluation form.
Group	The name of the group.
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Meets	The number of evaluated contacts that meet expectations.
Question	The text of the question that appears in the evaluation form.
Question Weight	A percentage applied to a question in an evaluation form. The sum of the question weights in each section of the form is 100 percent.
Recordings	The number of recordings.
Section	The name of the section in the evaluation form.
Section Weight	A percentage applied to a section in an evaluation form. The sum of the section weights in the form is 100 percent.
Start	The start time of the day or interval or the start of the period covered by the report.
Team	The name of the team. When associated with an agent, the team is the agent’s current team.

Surveys All Data

The Surveys All Data report displays collective post-call survey scores.

Fields in this report

Field	Description
Agent ID	The agent’s system ID number.
Average Score (%)	The average score for the form, section, or question.
First Name	The evaluator’s first name. You can see the evaluator’s first name if you have the View Evaluator Details permission.
Form	The name of the evaluation form.
Group	The name of the group.
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Question	The text of the question that appears in the evaluation form.
Question Weight	A percentage applied to a question in an evaluation form. The sum of the question weights in each section of the form is 100 percent.
Surveys	The number of surveys.
Team	The name of the team. When associated with an agent, the team is the agent’s current team.

Survey Form Scores

The Survey Form Scores report displays the average scores for post-call surveys.

Fields in this report

Field	Description
Agent ID	The agent’s system ID number.
Average Score (%)	The average score for the form, section, or question.
First Name	The evaluator’s first name. You can see the evaluator’s first name if you

Field	Description
	have the View Evaluator Details permission.
Form	The name of the evaluation form.
Group	The name of the group.
Last Name	The evaluator’s last name. You can see the evaluator’s last name if you have the View Evaluator Details permission.
Question	The text of the question that appears in the evaluation form.
Question Weight	A percentage applied to a question in an evaluation form. The sum of the question weights in each section of the form is 100 percent.
Recordings	The number of recordings.
Surveys	The number of surveys.
Team	The name of the team. When associated with an agent, the team is the agent’s current team.

System Status

The System Status report displays system and administrative events associated with agents configured for recording. You can choose to view messages generated by the service at the INFO, WARN, or ERROR level, or at all levels. Information is available for the past seven days, including the current day.

The Media web app writes events that warn when free space is low on the Site Upload server or when uploads stop because free space is too low.

Fields in this report

Field	Description
Category	The application associated with the event.
Date	The date of the reported information.
End	The end of the day or interval, or the end of the period covered by the

Field	Description
	report.
IP Address	The IP address of the computer on which the event occurred.
Level	The level of the event messages that are displayed: ■ ALL—All event level messages ■ INFO—Informational messages for events that are not errors but might be useful for troubleshooting ■ WARN—Warning messages for events that are nuisance malfunctions but do not interfere with the program's operation ■ ERROR—Error messages for events that prevent the program from continuing to work
Machine	The universally unique identifier (UUID) of the computer on which the event occurred.
Message	The event message.
Start	The start time of the day or interval or the start of the period covered by the report.
Time	The time of the contact or event.

User Recording Status

The User Recording Status report displays user and recording events associated with the agents configured for recording. You can choose to view messages generated by the service at the INFO, WARN, or ERROR level, or at all levels. Information is available for the past seven days, including the current day.

Fields in this report

Field	Description
Category	The application associated with the event.
Date	The date of the reported information.

Field	Description
End	The end of the day or interval, or the end of the period covered by the report.
First Name	The evaluator's first name. You can see the evaluator's first name if you have the View Evaluator Details permission.
IP Address	The IP address of the computer on which the event occurred.
Last Name	The evaluator's last name. You can see the evaluator's last name if you have the View Evaluator Details permission.
Level	The level of the event messages that are displayed: ▪ ALL—All event level messages ▪ INFO—Informational messages for events that are not errors but might be useful for troubleshooting ▪ WARN—Warning messages for events that are nuisance malfunctions but do not interfere with the program's operation ▪ ERROR—Error messages for events that prevent the program from continuing to work
Machine	The universally unique identifier (UUID) of the computer on which the event occurred.
Message	The event message.
Start	The start time of the day or interval or the start of the period covered by the report.
Team	The name of the team. When associated with an agent, the team is the agent's current team.
Time	The time of the contact or event.
User ID	The Windows login of the person who accessed the archives.

WFM standard reports

The standard reports available in WFM are listed below.

NOTE WFM standard reports reflect data as it appears in the tenant time zone configured by your system administrator. If you request a WFM report and your display time zone is ahead of the tenant time zone, your report might not contain any data.

NOTE Some values in reports are calculated values, and subject to rounding up or down. Because of this rounding, they might differ slightly from historical data values.

Agent and team performance reports

- Agent and Team Productivity

Service queue performance reports

- Agent Interval
- Agent Service Queue Interval
- Interval Service Queue
- Service Queue Agent Interval
- Team Agent Interval
- Team Interval

Schedule view reports

- Assigned Exception
- Agent Overtime
- Agent Schedule Daily
- Agent Schedule Weekly
- Agent Task Percentages
- Service Queue Schedule By Agent
- Service Queue Schedule By Interval
- Team Schedule Task Hours

Performance analysis reports

- Agent Report Card
- Performance Daily
- Performance Interval

Planning reports

- Vacation Status
- Shift Budget Analysis

Strategic planning reports

- Facility Planning (Hardware)
- Staff Planning
- Hiring Plan
- Budgetary Planning

Agent Interval

The Agent Interval report displays the selected agents' activity over half-hour intervals on a selected date. You can select which fields to display, except for Agent and Interval, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Average Handle Time	The average ACD contact processing (cross interval) time for the agent for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where:

Field	Definition
	A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average work time = A ÷ B Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval

Field	Definition
Busy Other State Time	The amount of time the agent is logged in but is not in service during the interval.
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.
Date	The date of the reported information.
In-Service Time	The amount of time that the agent was in a state ready to take an ACD contact or was handling an ACD contact during the interval. This includes Ready, Talk, Hold, and Work time.
Occupancy %	The percentage of time in the interval the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % = A ÷ B Where: A = Total handle time for handled contacts B = Total In Service time
Ready State Time	The amount of time the agent is logged in and waiting to take an ACD call during the interval.
Utilization %	Utilization percentage is the percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in during the interval. Utilization % = A ÷ B Where: A = Total handle time for handled contacts (total reported by the ACD) B = Total in session (login) time (total reported by the ACD)

Agent Overtime

The Agent Overtime report displays the number of overtime hours worked by selected agents in selected teams or service queues over a selected date range.

You can also select which fields to display, except for Agent Name and Date, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Duration	The length of time an activity lasts.
End Time	The end time of the day.
Start Time	The start time of the work shift.
Username	The agent’s user name.

Agent Report Card

The Agent Report Card report displays performance information.

If QM installed and if WFM is configured to import evaluation form information, the Evaluation Form drop-down list displays a list of the evaluation forms used in QM to evaluate agent performance. If an evaluation form is selected, the data in the Agent Report Card will reflect only data from agent evaluations that use the selected evaluation form and meet all other report selection criteria.

The goal metrics section displays the default field values set for the following statistics.

Statistic	Default Value
Average Quality Score	75
Average Calls Per Hour	10
Adherence %	75
Conformity %	0
Occupancy %	0

Statistic	Default Value
Utilization %	0
Average Handle Time	0
Average Talk Time	0
Average Work Time	0
Average Hold Time	0
Average Ready Time	0

You can modify these goals as desired. When the Agent Report Card is generated, the agent's or team's performance against these goals is indicated. The values displayed are weighted averages.

Fields in this report

Field	Definition
Adherence %	The percentage describing how well agents stick to their planned work schedule within the interval. This information is available for agents who have productivity data. Adherence % = (A ÷ B) × 100 Where: A = Total minutes in adherence B = Total minutes not in adherence C = Total configured schedule adherence minutes
Average Calls Per Hour	The calculation of the average number of calls per hour. Average calls per hour = 3600 ÷ (A + B) Where: A = Talk time in seconds for ACD calls completed during the interval B = After call work time in seconds for ACD calls

Field	Definition
	completed during the interval
Average Handle Time	The average ACD contact processing (cross interval) time for the agent for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval
Average Hold Time	Actual average on hold (cross interval) time for the agent for ACD contacts handled in the interval. This includes hold time for transfers and conferences. The average will be zero if Calls Handled is zero for the interval. Average hold time = A ÷ B Where: A = Amount of time agents placed contacts on hold during the interval, including hold time for transfers and conferences B = Number of contacts placed on hold during the period. A call might have been placed on hold multiple times.
Average Quality Score	The average quality score of calls the agent completed during the interval. The quality scores come from calls that are evaluated using Recording

Field	Definition
	and Quality Management. Average quality score = A ÷ B Where: A = Sum of the overall quality scores for evaluated calls the agent completed during the interval B = Total evaluated calls the agent completed during the interval
Average Ready Time	The actual average amount of time in seconds the agent is in the Ready agent state. The average will be zero if Calls Handled is zero for the interval. Both cross interval and within interval data is used in the calculation. Average ready time = A ÷ B Where: A = The amount of time the agent is in the Ready agent state during the interval B = Number of contacts completed during the interval
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval

Field	Definition
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average work time = A ÷ B Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval
Conformance %	Conformance is the percentage of time in the interval an agent works the right amount of time regardless of the time of day the agent works. Schedule conformance does not take arrival and departure times into account. For example, an agent who is scheduled to work from 8:00 AM to 4:00 PM but instead works from 10:00 AM to 6:00 PM would be conforming, but not adhering, to the schedule. This information is available for agents who have productivity data. Conformance is calculated according to the following formula: Conformance % = (A ÷ B) × 100 Where: A = Total time during the interval the agent is in service, whether or not the agent is scheduled to be in service B = Total time during the interval the agent is scheduled to be in service, whether or not the agent is actually in service
Occupancy %	The percentage of time in the interval the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % = A ÷ B Where:

Field	Definition
	A = Total handle time for handled contacts B = Total In Service time
Utilization %	Utilization percentage is the percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in during the interval. Utilization % = A ÷ B Where: A = Total handle time for handled contacts (total reported by the ACD) B = Total in session (login) time (total reported by the ACD)

Agent Schedule Daily

The Agent Schedule Daily report details selected agents' scheduled activities by day for a selected date range.

Fields in this report

Field	Definition
Activity Duration	The duration of a scheduled activity, in minutes.
Activity End Time	An activity's scheduled ending time.
Activity Start Time	An activity's scheduled starting time.
Activity Type	The type of activity: assignment, break, closed service, exception, lunch, or project.
Service Queue	The name of the service queue that the agent supports.

Agent Schedule Weekly

The Agent Schedule Weekly report details selected agents' scheduled activities by week, starting on a selected date.

You can also select which fields to display, except for Agent Name, Agent Number, Arr (arrival time), and Dep (departure time), which are required. By default, all fields are selected.

Fields in this report

Field	Definition
In-Service Hours	The number of hours the agent is scheduled to be in service.
Paid Hours Assignment	The amount of paid assignment time scheduled for the agent for the interval.
Paid Hours Break	The amount of paid break time scheduled for the agent for the interval.
Paid Hours Closed Service	The amount of paid closed service queue time scheduled for the agent for the interval.
Paid Hours Exception	The amount of paid exception time scheduled for the agent for the interval.
Paid Hours Lunch	The amount of paid lunch time scheduled for the agent for the interval.
Paid Hours Project	The amount of paid project time scheduled for the agent for the interval.
Paid Hours Total	The total paid hours for the interval. Paid Hours Total = In-Service Hours + Paid Hours Break + Paid Hours Lunch + Paid Hours Exception + Paid Hours Project + Paid Hours Assignment + Paid Hours Closed Service

Agent Service Queue Interval

The Agent Service Queue Interval report displays agent activity for selected agents in selected service queues over half-hour intervals on a selected date.

You can also select which fields to display, except for Agent, Interval, and Service Queue, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Average Handle Time	The average ACD contact processing (cross interval) time for the agent for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be

Field	Definition
	zero if Calls Handled is zero for the interval. Average work time = A ÷ B Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.
End	The end of the day or interval, or the end of the period covered by the report.

Agent Task Percentages

The Agent Task Percentages report displays selected agents' activities in terms of percentages of total work time for selected agents over a selected date range by day, week, or month.

You can also select which fields to display, except for Agent Name and Date, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Percent Assignment	The percentage of scheduled assignment time for the interval. Percent assignment = (A ÷ B) × 100 Where: A = Scheduled assignment work time for the interval B = Total scheduled time for the interval
Percent Break	The percentage of scheduled break time for the interval.

Field	Definition
	Percent break = (A ÷ B) × 100 Where: A = Scheduled break time for the interval B = Total scheduled time for the interval
Percent Closed	The percentage of closed time for the interval. Percent closed = (A ÷ B) × 100 Where: A = Scheduled closed time for the interval B = Total scheduled time for the interval
Percent Exception	The percentage of exception time for the interval. Percent exception = (A ÷ B) × 100 Where: A = Scheduled exception time for the interval B = Total scheduled time for the interval
Percent In-Service	The percentage of in-service time for the interval. Percent in service = (A ÷ B) × 100 Where: A = Scheduled in-service time for the interval B = Total scheduled time for the interval
Percent Lunch	The percentage of lunch time for the interval. Percent lunch = (A ÷ B) × 100 Where: A = Scheduled lunch time for the interval B = Total scheduled time for the interval

Field	Definition
Percent Overtime	The percentage of overtime time for the interval. Percent overtime = (A ÷ B) × 100 Where: A = Scheduled overtime time for the interval B = Total scheduled time for the interval
Percent Project	The percentage of project time for the interval. Percent project = (A ÷ B) × 100 Where: A = Scheduled project time for the interval B = Total scheduled time for the interval
Username	The agent’s user name.

Agent and Team Productivity

The Agent and Team Productivity report displays the agent’s or team’s productivity statistics over a selected date range by day, week, or month. Statistics are reported only for time periods during which the agent is logged in or for when your ACD reports data.

> **NOTE** If you select only one or more teams, then a Team Productivity Report is produced. If you select one or more teams and one or more agents, then an Agent Productivity Report is produced.

> **NOTE** The values for Adherence % and Conformance % in this report are based on data calculated before adherence or conformance calculation enhancements were made. As a result, the values are simple averages and not weighted averages.

Fields in this report

Field	Definition
ACD ID	The agent’s identifier in the ACD.
Adherence %	The percentage describing how well agents stick to their planned work

Field	Definition
	schedule within the interval. This information is available for agents who have productivity data. Adherence % = (A ÷ B) × 100 Where: A = Total minutes in adherence B = Total minutes not in adherence C = Total configured schedule adherence minutes
Agent Name	The agent's full name.
Average Handle Time	The average ACD contact processing (cross interval) time for the agent for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval
Average Hold Time	Actual average on hold (cross interval) time for the agent for ACD contacts handled in the interval. This includes hold time for transfers and conferences. The average will be zero if Calls Handled is zero for the interval. Average hold time = A ÷ B

Field	Definition
	Where: A = Amount of time agents placed contacts on hold during the interval, including hold time for transfers and conferences B = Number of contacts placed on hold during the period. A call might have been placed on hold multiple times.
Average Not Ready Time	The average amount of time the agent is in the Not Ready agent state. The average will be zero if Calls Handled is zero for the interval. Both cross interval and within interval data is used in the calculation. Average not ready time = A ÷ B Where: A = The amount of time the agent is in the Not Ready agent state during the interval B = Number of contacts completed during the interval
Average Ready Time	The actual average amount of time in seconds the agent is in the Ready agent state. The average will be zero if Calls Handled is zero for the interval. Both cross interval and within interval data is used in the calculation. Average ready time = A ÷ B Where: A = The amount of time the agent is in the Ready agent state during the interval B = Number of contacts completed during the interval
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C

Field	Definition
	Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average work time = A ÷ B Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.
Calls Outbound	**Calls Outbound** The number of external outbound ACD calls the agent completed during the interval.
Calls Per Hour	The number of ACD calls handled per hour. Both cross interval and within interval data is used in the calculation. Calls per hour = (A × 3600) ÷ B Where: A = Number of calls handled during the hour

Field	Definition
	B = Total in service time in seconds during the hour
Calls Transferred	The number of ACD calls transferred and conferenced initiated by the agent during the interval.
Conformance %	Conformance is the percentage of time in the interval an agent works the right amount of time regardless of the time of day the agent works. Schedule conformance does not take arrival and departure times into account. For example, an agent who is scheduled to work from 8:00 AM to 4:00 PM but instead works from 10:00 AM to 6:00 PM would be conforming, but not adhering, to the schedule. This information is available for agents who have productivity data. Conformance is calculated according to the following formula: Conformance % = (A ÷ B) × 100 Where: A = Total time during the interval the agent is in service, whether or not the agent is scheduled to be in service B = Total time during the interval the agent is scheduled to be in service, whether or not the agent is actually in service
Date	The date of the reported information.
Employee ID	The agent’s employee ID number.
Occupancy %	The percentage of time in the interval the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % = A ÷ B Where: A = Total handle time for handled contacts B = Total In Service time

Field	Definition
Total Handle Time	The actual total ACD contact handling time (cross intervals) in seconds for the agent or service queue in the interval. This includes talk, hold, and work time. Total handle time = Talk time + Hold time + Work time
Total Hold Time	Actual total hold time (across intervals) in seconds for the agent, including hold time for transfers and conferences during the interval.
Total In-Service Time	Total in-service time (within the interval) is the total time, in seconds, that the agent was in a state ready to take an ACD contact or was handling an ACD contact during the interval. In Service time = Talk time + Hold time + Work time + Reserved time + Ready time
Total Login Time	The total login time (within the interval) in seconds for the agent during the interval. In session time = Talk time + Hold time + Work time + Reserved time + Ready time + Not Ready time + Other time
Total Not Ready Time	Total not ready time (within the interval) is the total time in seconds the agent was in the Not Ready agent state during the interval.
Total Ready Time	Total ready time (within the interval) is the total time in seconds the agent was in the Ready agent state during the interval.
Total Talk Time	Actual total talk time (across intervals) the agent was on ACD contacts. The time runs from when the agent answers an ACD contact until when the agent disconnects the contact, and does not include hold time.
Total Work Time	Actual total work time (cross interval) in seconds for the agent.
Utilization %	Utilization percentage is the percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in during the interval. Utilization % = A ÷ B

Field	Definition
	Where: A = Total handle time for handled contacts (total reported by the ACD) B = Total in session (login) time (total reported by the ACD)

Assigned Exception

The Assigned Exception report displays all occurrences of a selected exception type assigned to selected agents over a selected date range. Exception types are created and maintained on the Manage exception types page (Application Management > Activities > Exception Types).

NOTE It is possible to have all-day exceptions on dates for which schedules have not yet been run. If that is the case, then the Start, End, and Duration fields for those exceptions will be empty. Once a schedule has been run for those dates, the report will display values in those fields.

Fields in this report

Field	Definition
Agent ID	The agent’s system ID number.
Date	The date of the reported information.
Duration	The length of time an activity lasts.
End	The end of the day or interval, or the end of the period covered by the report.
Entire Day	An exception that lasts the entire work shift.
Exception	The name of the exception.
Start	The start time of the day or interval or the start of the period covered by the report.

Budgetary Planning

The Budgetary Planning report displays the estimated wage cost per role for the identified time frame.

In order to run this report, you must already have a strategic forecast generated for the service queue.

The human resources displayed in this report are configured on the Manage strategic resources page. No matter how the resource cost is configured (monthly, yearly, or as a one-time expenditure) on the Strategic Resources page, the value is converted to a monthly cost. This value is used in calculating this report.

How the report is calculated

The number of each human resource type to be planned for any given month = (forecasted agent count for the month) × (resource ratio of the base resource to the agent resource) × (resource ratio for this resource) × (resource cost).

> **EXAMPLE**
>
> If there is one supervisor for every 10 agents, and one manager for every two supervisors, and the cost per manager is $5,000, then the formula to compute the cost of managers needed in a month where the forecasted number of agents is 100 is:
>
> Cost of managers per month = (100) × (1 ÷ 10) × (1 ÷ 2) × (5,000) = $25,000 for 5 managers

The fields that appear in the report depend on the human resources that are configured on the Strategic Resources page. You cannot customize the order in which the fields appear.

Facility Planning (Hardware)

The Facility Planning (hardware) report displays the capital items (equipment, furniture, and fixtures) that are projected to be used by the select service queue during the selected date range.

The capital items displayed in this report are configured on the Manage strategic resources page.

In order to run this report, you must already have a strategic forecast generated for the service queue.

How the report is calculated

The number of a capital item to be planned for any given month = (forecasted agent count for the month) × (resource ratio of the base resource to the agent resource) × (resource ratio for this resource).

> **EXAMPLE**
>
> If there is one supervisor for every 10 agents and one phone for every two supervisors, then the formula to compute the number of phones needed in a month where the forecasted number of agents is 100 is:

100 × (1/10) × (1/2) = 5 phones

The fields that appear in the report depend on the capital items that are configured on the Strategic Resources page. The Month field is required. You cannot customize the order in which the fields appear.

Hiring Plan

The Hiring Plan report displays the projected number of employees required to be at each hiring stage to meet required staffing levels during the identified time frame.

- The human resources displayed in this report are configured on the Manage strategic resources page.
- In order to run this report, you must already have a strategic forecast generated for the service queue.
- The current resource count from the Strategic Resources page is used as the starting point in the report.
- The attrition value you enter as part of the report request is applied to the current resource count. The difference between this computed value and the forecasted resource requirement for the month in the hiring plan is the resource gap that needs to be filled by the hiring plan.
- The attrition rate for each of the hiring steps is applied. Working backward from this figure, the required resource count at the beginning of each step is calculated.

Fields in this report

Field	Definition
Attrition Rate	The rate of loss of employees to promotion, transfer, or termination.
Duration	The length of time an activity lasts.
End Date	The end date of the reported information.
FTE	The number of full time equivalent (FTE) employees.
Start Date	The start date of the reported information.

The report also contains the following summary information in the header:

- Target FTE—The FTE calculated for the selected time period by your strategic plan.
- Available FTE —The available FTE (after attrition based on current count) calculated for the selected time period by your strategic plan.
- FTE Gap—The difference between the Target FTE and the Available FTE.

Interval Service Queue

The Interval Service Queue report displays comprehensive statistics for selected service queues over half-hour intervals on a selected date.

You can also select which fields to display. By default, all fields are selected.

Fields in this report

Field	Definition
Agents Actual	The count of full time equivalent (FTE) agents supporting the service queue during the interval. Agent time is included only when the agent is in service. Agents actual = A ÷ 1800 Where: A = In service time, in seconds, for agents scheduled to support the service queue during the interval
Agents Forecast	The number of forecasted agents required for the service queue during the interval. Agents forecast = Sum of forecasted agents ÷ Number of intervals with at least one forecasted agent
Agents Projected	The projected number of agents required for the service queue during the interval. This is a trend calculation based on the current trend of actual and forecasted agents. Agents projected = sum of agents projected ÷ number of intervals with at least one projected agent

Field	Definition
Agents Scheduled	The number of agents scheduled for the service queue during the interval.
Agents Shrinkage	The number of agents expected after shrinkage is applied. Agents Shrinkage = Agents Scheduled – (Agents Scheduled × Shrinkage Percent) ÷ 100
Average After-Contact Work Time Actual	The actual after contact work time during the interval.
Average After Contact Work Time Forecast	The forecasted average after contact work time during the interval.
Average Talk Time Actual	The actual average talk time during the interval.
Average Talk Time Forecast	**Average Talk Time Forecast** The forecasted average talk time for the interval.
Calls Abandoned	**Calls Abandoned** The number of ACD calls routed to the service queue during the interval where the caller hung up while in queue or while ringing at the agent's phone. Calls are counted for the interval in which the caller hung up.
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.
Calls Reforecast	The reforecasted number of calls routed to the service queue during the interval.
Calls Offered Actual	The actual number of calls routed to the service queue during the interval that are answered or end in the service queue. In most cases the call is counted in the interval during which it is routed to the service queue.
Calls Offered Forecast	The forecasted number of calls routed to the service queue during the interval.

Field	Definition
Handled %	The percentage of calls handled by the agent out of the total number of calls offered to the agent. Handled % = (A ÷ B) × 100 Where: A = The number of ACD calls handled by the agent while logged in during the interval B = The total number of ACD calls offered to the agent while logged in during the interval
Interval	The start time of the half-hour schedule interval.
Occupancy % Actual	The actual percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % = A ÷ B Where: A = Total handle time for handled contacts B = Total In Service time
Occupancy % Forecast	The forecasted percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % forecast = Sum(occupancy forecast) ÷ Sum (contacts offered forecast)
Precision %	The gap between forecasted calls and actual offered calls, expressed as a percentage. Precision % = (A ÷ B) × 100 Where:

Field	Definition
	A = Forecasted calls B = Actual calls offered
Shrinkage %	Value is not supported. Returns null/blank.

These fields appear in interactive service queues only

Field	Definition
Average Speed of Answer Time Actual	The actual average amount of time that callers spend in queue waiting for their calls to be answered.
Average Speed of Answer Time Forecast	The forecasted average amount of time calls spend in queue waiting for their calls to be answered.
Seconds Service Level Scheduled	The scheduled number of seconds within which a call must be answered if it is to meet the service level objective.
Service Level % Actual	The actual service level percentage, a speed-of-answer goal that is often expressed as a percentage for answering calls within a specified number of seconds. Rollups of this value (for example, the value displayed in the coverage drawer, the summary row of the Forecast page, and in reports) is based on a weighted calculation using the interval service level % and contacts offered.
Service Level % Forecast	The forecasted percentage of calls answered within the service-level-threshold time, per interval.
Service Level % Goal	The goal percentage of calls to be answered within the service level threshold time, per interval.
Service Level % Scheduled	The anticipated percentage of calls answered within the service level threshold time, per interval. This is a real-time calculation made when the report is generated.

Field	Definition
Service Level % Shrinkage	The anticipated service level percentage based on the anticipated agents after shrinkage. For example, if you have a Service Level % Scheduled of 80 percent, and 10 agents scheduled with a Shrinkage % of 10 percent, then agents shrinkage would be closer to nine agents, and the Service Level % Shrinkage would be less than 80 percent.

This field appears in non-interactive service queues only

Field	Definition
Maximum Contacts in Queue	The maximum number of non-interactive contacts in queue for the interval. For interactive service queues, reports display a dash for this field.

Performance Daily

The Performance Daily report displays statistics for selected service queues over a selected date range that describe the service queues' actual versus forecast performance and the forecast's accuracy.

You can also select which fields to display, except for Service and Date, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Abandon %	The percentage of calls abandoned during the interval. Abandoned % = (A ÷ B) × 100 Where: A = Number of calls abandoned while the call was in queue or ringing the agent's phone for the service queue during the interval, whether or not the call persisted for less time than the service level seconds

Field	Definition
	B = Number of calls offered for the service queue during the interval
Average Handle Time Actual	The actual average handle time during the interval. Average handle time actual = total handle time actual ÷ calls handled
Average Handle Time Forecast	The forecasted average handle time during the interval. Average handle time forecast = total handle time forecast ÷ calls offered forecast
Average Speed of Answer	The average amount of time that callers spend in queue waiting for their calls to be answered. Average speed of answer = A ÷ B Where: A = Queue time of calls that were answered during the interval. Queue time includes the time from when the ACD queues the call to the service queue until the time when the agent answers the call. B = Number of calls for the service queue that were answered during the interval.
Calls Offered Actual	The actual number of calls routed to the service queue during the interval that are answered or end in the service queue. In most cases the call is counted in the interval during which it is routed to the service queue.
Calls Offered Forecast	The forecasted number of calls routed to the service queue during the interval.
Forecast Accuracy	The percentage of forecasted calls to actual calls offered for the service queue during the interval. Forecast accuracy = (A ÷ B) × 100

Field	Definition
	Where: A = Forecasted calls for the service queue during the interval B = Actual calls offered for the service queue during the interval
Handle Time Accuracy	A measure of how accurate the forecast handle time is. Handle time accuracy = (A ÷ B) × 100 Where: A = Forecast average handle time B = Actual average handle time

This field appears in non-interactive service queues only

Field	Definition
Maximum Contacts in Queue	The maximum number of non-interactive contacts in queue for the interval. For interactive service queues, reports display a dash for this field.

This field appears in interactive service queues only

Field	Definition
Service Level % Actual	The actual service level percentage, a speed-of-answer goal that is often expressed as a percentage for answering calls within a specified number of seconds. Rollups of this value (for example, the value displayed in the coverage drawer, the summary row of the Forecast page, and in reports) is based on a weighted calculation using the interval service level % and contacts offered.

Performance Interval

The Performance Interval report displays statistics for selected service queues for a specified date that describe the service queue's actual versus forecast performance and the forecast's accuracy for each half-hour interval.

You can also select which fields to display, except for Service, Date, and Interval, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Abandon %	The percentage of calls abandoned during the interval. Abandoned % = (A ÷ B) × 100 Where: A = Number of calls abandoned while the call was in queue or ringing the agent's phone for the service queue during the interval, whether or not the call persisted for less time than the service level seconds B = Number of calls offered for the service queue during the interval
Agents Actual	The count of full time equivalent (FTE) agents supporting the service queue during the interval. Agent time is included only when the agent is in service. Agents actual = A ÷ 1800 Where: A = In service time, in seconds, for agents scheduled to support the service queue during the interval
Agents Actual – Agents Forecast	The number of Agents Actual minus the number of Agents Forecast.
Agents Actual – Agents	The number of Agents Actual minus the number of Agents Scheduled.

Field	Definition
Scheduled	
Agents Forecast	The number of forecasted agents required for the service queue during the interval. Agents forecast = Sum of forecasted agents ÷ Number of intervals with at least one forecasted agent
Agents Scheduled	The number of agents scheduled for the service queue during the interval.
Agents Scheduled – Agents Forecasted	The number of Agents Scheduled minus the number of Agents Forecast.
Average Handle Time Actual	The actual average handle time during the interval. Average handle time actual = total handle time actual ÷ calls handled
Average Handle Time Forecast	The forecasted average handle time during the interval. Average handle time forecast = total handle time forecast ÷ calls offered forecast
Average Speed of Answer	The average amount of time that callers spend in queue waiting for their calls to be answered. Average speed of answer = A ÷ B Where: A = Queue time of calls that were answered during the interval. Queue time includes the time from when the ACD queues the call to the service queue until the time when the agent answers the call. B = Number of calls for the service queue that were answered during the interval.
Calls Offered Actual	The actual number of calls routed to the service queue during the interval that are answered or end in the service queue. In most cases the call is

Field	Definition
	counted in the interval during which it is routed to the service queue.
Calls Offered Forecast	The forecasted number of calls routed to the service queue during the interval.
Forecast Accuracy	The percentage of forecasted calls to actual calls offered for the service queue during the interval. Forecast accuracy = (A ÷ B) × 100 Where: A = Forecasted calls for the service queue during the interval B = Actual calls offered for the service queue during the interval
Handle Time Accuracy	A measure of how accurate the forecast handle time is. Handle time accuracy = (A ÷ B) × 100 Where: A = Forecast average handle time B = Actual average handle time

This field appears in non-interactive service queues only

Field	Definition
Maximum Contacts in Queue	The maximum number of non-interactive contacts in queue for the interval. For interactive service queues, reports display a dash for this field.

This field appears in interactive service queues only

Field	Definition
Service Level % Actual	The actual service level percentage, a speed-of-answer goal that is often

Field	Definition
	expressed as a percentage for answering calls within a specified number of seconds. Rollups of this value (for example, the value displayed in the coverage drawer, the summary row of the Forecast page, and in reports) is based on a weighted calculation using the interval service level % and contacts offered.

Service Queue Agent Interval

The Service Queue Agent Interval report displays agent statistics for selected agents in selected service queues over half-hour intervals on a selected date.

You can also select which fields to display, except for Agent, Interval, and Service, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Average Handle Time	The average ACD contact processing (cross interval) time for the agent for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval

Field	Definition
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average work time = A ÷ B Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.

Service Queue Schedule By Agent

The Service Queue Schedule By Agent report displays agent schedules for a selected date, agent category, and service queue.

This report shows the hourly schedule for the selected day. Each agent’s schedule is coded to show the activity scheduled for each hour. Coverage for each service queue is also shown.

Agent activity codes are as follows.

Code	Description
X	In service
B	Break
L	Lunch
A	Assignment
C	Closed service
P	Project
E	Exception
–	Not available
<blank>	Available but not scheduled

Service queue coverage codes are as follows.

Code	Description
–	Fewer agents scheduled in service than the forecast requires
*	Agents scheduled in service match requirements
+	More agents scheduled in service than the forecast requires.

Service Queue Schedule By Interval

The Service Queue Schedule By Interval report displays the schedule for selected service queues for a selected date by half-hour intervals.

You can also select which fields to display, except for Service and Date, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Agents Forecast	The number of forecasted agents required for the service queue during the interval. Agents forecast = Sum of forecasted agents ÷ Number of intervals with at least one forecasted agent
Agents Scheduled	The number of agents scheduled for the service queue during the interval.
Agents Scheduled – Agents Forecasted	The number of Agents Scheduled minus the number of Agents Forecast.
Assignment	The time scheduled for the agent and classified as assignment type work.
Break	The amount of break time scheduled for the agent during the interval.
Closed	The amount of closed time scheduled for the agent during the interval. Closed time is time scheduled for the agent during contact center closed hours, when the contact center is not accepting calls for the service queue.
Exception	The name of the exception.
In-Service	The amount of agent in-service time scheduled during the interval for the service queue.
Interval	The start time of the half-hour schedule interval.
Lunch	The amount of lunch time scheduled for the agent for the interval.
Project	The amount of project time scheduled for the agent for the interval.
Total	The total time scheduled for the agents supporting the service queue for the interval. Total = in service + break + lunch + exception + project + assignment + closed

Shift Budget Analysis

The Shift Budget Analysis report displays the cost per shift for a service queue. You can only view this report for service queues for which you have previously submitted a Shift Budget Analysis Request (see the *System Administrator Guide*).

Fields in this report

Field	Definition
Calls Per Hour	The number of ACD calls handled per hour. Both cross interval and within interval data is used in the calculation. Calls per hour = (A × 3600) ÷ B Where: A = Number of calls handled during the hour B = Total in service time in seconds during the hour
Calls Per Paid Hour	The number of total calls handled divided by the number of paid hours.
Cost Per Call	The average cost per call for the day.
Daily Budget	The calculated total cost for the day.
Hourly Rate	The wage rate used in the calculations of the report.
Hours In-Service	The total number of in-service hours for the day.
Hours Paid	The total number of paid hours per day.
Number of Days	The total number of days of the week included in the report. For example, if the report is broken out by days of the week and the report covers three weeks, there will be three Mondays, three Tuesdays, and so on. The number of days for Monday is therefore three.
Service Queue	The name of the service queue that the agent supports.
Shift Length	The length of a work shift for a service queue.

Field	Definition
Total Calls	The total number of calls for the day.
Utilization %	Utilization percentage is the percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in during the interval. Utilization % = A ÷ B Where: A = Total handle time for handled contacts (total reported by the ACD) B = Total in session (login) time (total reported by the ACD)

Staff Planning

The Staff Planning report displays the projected number of employees needed to meet required staffing levels for the identified time frame.

The human resources displayed in this report are configured on the Manage strategic resources page.

In order to run this report, you must already have a strategic forecast generated for the service queue.

How the report is calculated

The number of each human resource type to be planned for any given month = (forecasted agent count for the month) × (resource ratio of the base resource to the agent resource) × (resource ratio for this resource).

> **EXAMPLE**
>
> If there is one supervisor for every 10 agents and one manager for every two supervisors, then the formula to compute the number of managers needed in a month where the forecasted number of agents is 100 is:
>
> 100 × (1/10) × (1/2) = 5 managers

The fields that appear in the report depend on the human resources that are configured on the Strategic Resources page. You cannot customize the order in which the fields appear.

Team Agent Interval

The Team Agent Interval report displays statistics for each agent of a selected team on a selected date who has activity during every half-hour interval.

You can also select which fields to display, except for Agent and Interval, which are required. By default, all fields are selected.

Fields in this report

Field	Definition
Average Handle Time	The average ACD contact processing (cross interval) time for the agent for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C Where: A = Total talk time for ACD contacts handled during the interval

Field	Definition
	B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average work time = A ÷ B Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval
Busy Other State Time	The amount of time the agent is logged in but is not in service during the interval.
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.
Date	The date of the reported information.
In-Service Time	The amount of time that the agent was in a state ready to take an ACD contact or was handling an ACD contact during the interval. This includes Ready, Talk, Hold, and Work time.
Occupancy %	The percentage of time in the interval the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % = A ÷ B Where:

Field	Definition
	A = Total handle time for handled contacts B = Total In Service time
Ready State Time	The amount of time the agent is logged in and waiting to take an ACD call during the interval.
Team	The name of the team. When associated with an agent, the team is the agent's current team.
Utilization %	Utilization percentage is the percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in during the interval. Utilization % = A ÷ B Where: A = Total handle time for handled contacts (total reported by the ACD) B = Total in session (login) time (total reported by the ACD)

Team Interval

The Team Interval report displays statistics on the activity for the selected teams on the selected date during each interval in which there was activity for that team.

> **NOTE** The totals for the Average Talk Time, Average Work Time, and Average Handle Time columns are calculated as follows:
> The sum of the Average <Talk, Work, or Handle> Time for each interval during the day is divided by the total Calls Handled during the day, rounded to the nearest second.

Fields in this report

Field	Definition
Average Handle Time	The average ACD contact processing (cross interval) time for the agent

Field	Definition
	for the interval. The average will be zero if calls handled is zero for the interval. Average handle time = (A + B + C) ÷ D Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total after contact work time for ACD contacts handled during the interval D = Total number of ACD contacts handled during the interval
Average Talk Time	The average in-contact talk time (across intervals) for the handled ACD contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average talk time = (A + B) ÷ C Where: A = Total talk time for ACD contacts handled during the interval B = Total hold time for ACD contacts handled during the interval C = Total number of ACD contacts handled during the interval
Average Work Time	The average after contact work time (cross interval) in seconds for the ACD handled contacts for the agent for the interval. The average will be zero if Calls Handled is zero for the interval. Average work time = A ÷ B

Field	Definition
	Where: A = After contact work time for contacts completed during the interval B = Number of contacts completed during the interval
Busy Other State Time	The amount of time the agent is logged in but is not in service during the interval.
Calls Handled	The number of ACD contacts that the service queue or agent completed during the interval. If a contact spans multiple intervals, it is counted only in the interval when the after contact work for the contact is completed.
Date	The date of the reported information.
In-Service Time	The amount of time that the agent was in a state ready to take an ACD contact or was handling an ACD contact during the interval. This includes Ready, Talk, Hold, and Work time.
Occupancy %	The percentage of time in the interval the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in and ready to handle contacts during the interval. Occupancy % = A ÷ B Where: A = Total handle time for handled contacts B = Total In Service time
Ready State Time	The amount of time the agent is logged in and waiting to take an ACD call during the interval.
Utilization %	Utilization percentage is the percentage of time the agent spends handling ACD contacts in relation to the total amount of time the agent is logged in during the interval. Utilization % = A ÷ B

Field	Definition
	Where: A = Total handle time for handled contacts (total reported by the ACD) B = Total in session (login) time (total reported by the ACD)

Team Schedule Task Hours

The Team Scheduled Task Hours report displays a breakdown of the daily time allotted to various activities for the selected team over a selected date range.

Fields in this report

Field	Definition
Assignment Paid	The amount of paid time classified as assignment type work.
Assignment Unpaid	The amount of unpaid time classified as assignment type work.
Break Paid	The amount of paid break time scheduled for the agent during the interval.
Break Unpaid	The amount of unpaid break time scheduled for the agent during the interval.
Closed Paid	The amount of paid closed time scheduled for the agent during the interval.
Closed Unpaid	The amount of unpaid closed time scheduled for the agent during the interval.
Exception Paid	The amount of paid exception time scheduled for the agent during the interval.
Exception Unpaid	The amount of unpaid exception time scheduled for the agent during the interval.

Field	Definition
In-Service	The amount of agent in-service time scheduled during the interval for the service queue.
Lunch Paid	The amount of paid lunch time scheduled for the agent for the interval.
Lunch Unpaid	The amount of unpaid lunch time scheduled for the agent for the interval.
Project Paid	The amount of paid project time scheduled for the agent for the interval.
Project Unpaid	The amount of unpaid project time scheduled for the agent for the interval.
Total Paid	The total hours of paid time scheduled for the interval. Total paid + break paid + lunch paid + exception paid + project paid + assignment paid + closed paid
Total Unpaid	The total hours of unpaid time scheduled for the interval.

Vacation Status

The Vacation Status report displays a summary of selected agents' time off status for the selected date.

You can select the kind of time off to display. When you select a type of time off to include in the report, you will see the total hours, used hours, approved hours, and remaining hours for that type of time off.

Fields in this report

Field	Definition
Agent Name	The agent's full name.
Approved Hours	The number of time off hours that have been requested and approved.
End Date	The end date of the reported information.
Remaining Hours	The number of time off hours that remain for the agent for the vacation type.

Field	Definition
Start Date	The start date of the reported information.
Total Hours	The total number of time off hours for the vacation type.
Used Hours	The number of time off hours that have been used for the vacation type.
Vacation Plan Name	The name of the vacation plan assigned to the agent.
Vacation Type	The type of time off hours in the vacation plan.