



Webex WFO and Unified CCE Integration Guide

For Deployments with New WFM

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Americas Headquarters

Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
<http://www.cisco.com>
Tel: 408 526-4000
800 553-NETS (6387)
Fax: 408 527-0882

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Audience

- The integration's supported and unsupported features
- High-level architecture overview
- Configuration procedures
- Specific integration details

This integration guide is primarily designed for customers as well as official Cisco partners who typically install and configure Webex WFO for customers. Additionally, Cisco implementation engineers, support engineers, sales engineers, development, and marketing can find helpful information in this guide.

Introduction

Webex WFO is a unified workforce optimization (WFO) software suite, which integrates with Cisco Contact Center platforms such as Cisco Unified Contact Center Enterprise (Unified CCE) to provide call recording, quality management, workforce management, voice-of-the-customer (VoC) analytics, and reporting. The details on the supported integration are listed below.

IMPORTANT When you select Webex WFO WFM as your WFM solution, Professional Services handles the full implementation process. This includes the design and discovery, execution, testing and validation, and trainings phases.

Data Integrations

This document describes the integration information for the following Cisco Contact Center platforms (also referred to as ACDs).

IMPORTANT For simplicity, all products are referred as Cisco Unified CCE for the remainder of this document.

- Cisco Webex CCE – Webex Contact Center Enterprise
- Cisco Unified CCE – Unified Contact Center Enterprise
- Cisco Unified CCE with ECE – Unified Contact Center Enterprise with enabled Enterprise Chat and Email
- Cisco PCCE – Package Contact Center Enterprise
- Cisco PCCE with ECE – Package Contact Center Enterprise with enabled Enterprise Chat and Email

Quality Management (QM)

Quality Management is the heart of the Workforce Optimization suite. It is the beginning of the data trail which leads to the voice of the customer. Take serving your customer to the next level with a focus on quality and engage your agents to drive retention.

Available Features

Feature	Available	Currently Unavailable
Webex WFO records audio	x	
Webex WFO imports audio recording		x
Webex WFO storage required for storing audio in the Cloud	X Amazon S3 storage	
Webex WFO screen recording supported	x	
Webex WFO initiates audio pause and resume (manual and automatic)	x	
Webex WFO ingests audio pause and resume		x
Webex WFO initiates screen recording pause and resume (manual and automatic)	x	
Webex WFO ingests screen recording pause and resume		x
Agent web recording controls and recording controls API	x	
Recordings encrypted	x	
Stereo recording	x	
Live voice monitoring	x	
Live screen monitoring	x via Smart Desktop client	
Sync supported	x	
Type of sync	Users, Teams, and Queues	

Feature	Available	Currently Unavailable
Contact metadata imported	x	
Supports multichannel integration	*, **	
CRM Integration	**	

*Import via API

** Open product integration review

Edge Components

Component	Required	Not Required
Data Server	x	
Smart Desktop for screen recording, live screen monitoring, and desktop analytics features	x	
Smart Desktop on Windows OS	(available)	
Smart Desktop on Mac OS		(unavailable)

See the *Webex WFO Installation Guide* for more information on installing the Webex WFO Data Server and Smart Desktop.

Workforce Management (WFM)

Webex WFO WFM synchronizes data for configuration purposes and historical data association. It synchronizes historical and real-time data for use with scheduling and forecasting of the workforce.

BEST PRACTICE Always configure call type as "Yes". When call type is configured as "Yes", it is used to collect queue statistics. If "No" is selected as the call type, then precision queues and skill groups are used to collect queue statistics. Agent and agent queue data is always based on precision queues and skill groups. For further information, see Integration Details - WFM Data.

Available Features

Feature	Available	Currently Unavailable
Real-time adherence data feed	X	
Real-time adherence data feed (omni-channel)		X
Historical data feed - queue statistics	X	
Historical data feed - agent statistics	X	
Historical data feed - agent queue statistics	X	
Forecasting (voice)	X	
Forecasting (chat)	X ECE is required	
Forecasting (email)	X ECE is required	

Cisco Analytics

Cisco Analytics features a repository of ready-made advanced analytics applications to help you create a big impact without the learning curve. Unlock the goldmine of intelligence buried in your contact center and transform every customer and agent contact into actionable insights.

Available Features

Feature	Available	Currently Unavailable
Speech Analytics (Speech-to-Text)	x	
Desktop Analytics	x	
Text Analytics	x	

Feature	Available	Currently Unavailable
Dashboards with drill-down	x	
Predictive Evaluation Score	x	
Predictive NPS	x	
Sentiment Analysis	x	
Agent Smart Benchmarking	x	
Advanced Speech Search	x	

Insights

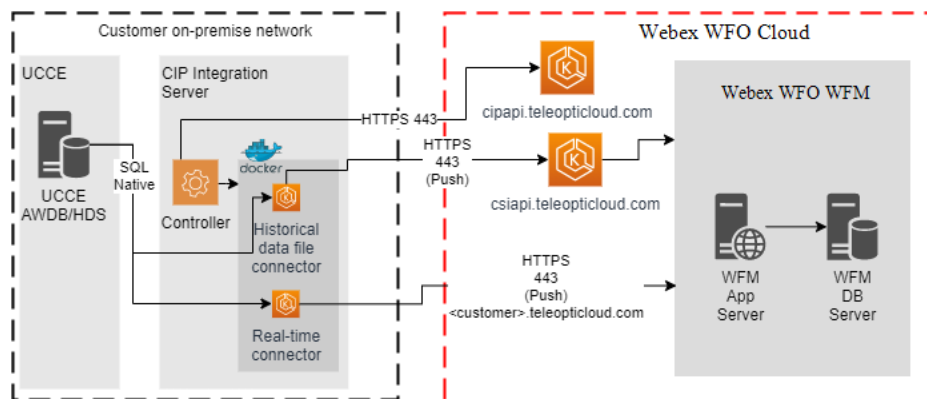
Insights is an AI-powered BI solution that is a core part of the Webex WFO suite. Insights provides blended, non-siloed reporting that enables you to seamlessly combine all of your workforce engagement management and customer interaction data from across Webex WFO. Insights empowers you to visualize your Webex WFO data through actionable reports and dashboards. You need an Insights license for access to the listed features. See [How licenses work](#) and [Manage roles and permissions](#) for more information.

Available Features

Feature	Supported	Currently Unsupported
Pre-built dashboards	X	
Machine learning powered analysis	X	
Custom themes	X	
Autograph (automated data visualization)	X	
Visual options (custom data visualization)	X	
Dashboard sharing	X	

Webex WFO and Cisco Unified CCE Architecture for WFM

The architecture diagram below shows the connection between Cisco Unified CCE and Webex WFO WFM only.



Integration Details - WFM Data

Webex WFO WFM allows you to schedule agents and forecast agent scheduling requirements, as well as monitor if agents are following their schedules.

BEST PRACTICE Always configure call type as "Yes". When call type is configured as "Yes", it is used to collect queue statistics. If "No" is selected as the call type, then precision queues and skill groups are used to collect queue statistics. Agent and agent queue data is always based on precision queues and skill groups.

Call types is the recommended choice for Webex WFO WFM forecasts if the customer's routing strategies (routing scripts) are configured correctly. There is no clear connection between call types and skill groups.

Therefore, if you need to pull agent queue statistics reports, you always need to use "Not Defined" queues because the relationship between call types and skill groups is not always one-to-one or one-to-many. This is also why skill groups do not need to be added to Webex WFO WFM workloads.

Precision queues are a set of attributes assigned to agents, not to call routing. They are agent-based routing that reflects the receiving agent's capability to respond to the callers' questions, rather than the type of call the callers are asking for (the skill).

Skill groups group agents and the destination of a call routed by a call type. If no agents are logged on to the skill group or if the call type strategy decides to route the call to another skill group due to, for example, a lack of available agents, then the skill group will never know that the call even took place, but the call type will.

Forecasts are completely independent of agents' activities. Webex WFO WFM forecasts work with skill-based routing that analyzes the callers' behavior, which in Cisco Unified CCE is call types (where the routing strategy is defined).

For Queue statistics, Webex WFO WFM prefers call type-based integrations, rather than the use of precision queues or skill groups.

Dialed numbers are mapped to call types, which are in turn mapped to routing scripts. Call types are used for granular tracking of how a call flowed through a routing script. Examples include after hours, holidays, or emergencies. This, together with the option to track the selected menus by callers, is very important for reporting and for Webex WFO WFM forecasts, as the skill setup is based on the callers' behavior patterns.

Queue Statistics

Call type is the preferred choice because call type is the highest level of the reporting entities. Reporting entities are call type, precision queues, and skill groups. Call type reports provide the most insight into call treatment and a caller's overall experience with the system.

A call type is a category of incoming call and is used to select a routing script for a call. Administrators can create call types that correlate to the type of service the caller wants and can change the call type during a routing script to direct the call to a new routing script or to gather report metrics for different legs or transactions.

For example, your system may have call types configured for the following situations:

- Transfers and conferences, to direct the call to a different routing script and gather call type report metrics for transfers and conferences.
- Individual transactions in CVP (Customer Voice Portal) Self-Service and Information Gathering applications, to report on those transactions.
- Queuing, to separate Information Gathering and queue metrics. For example, you might change the call type when a call completes an Information Gathering script and enters a queue.
- CVP Ring No Answer (RONA), to direct calls to a routing script designed for this situation, and to use call type reports to see how calls that experience CVP RONA are eventually handled.

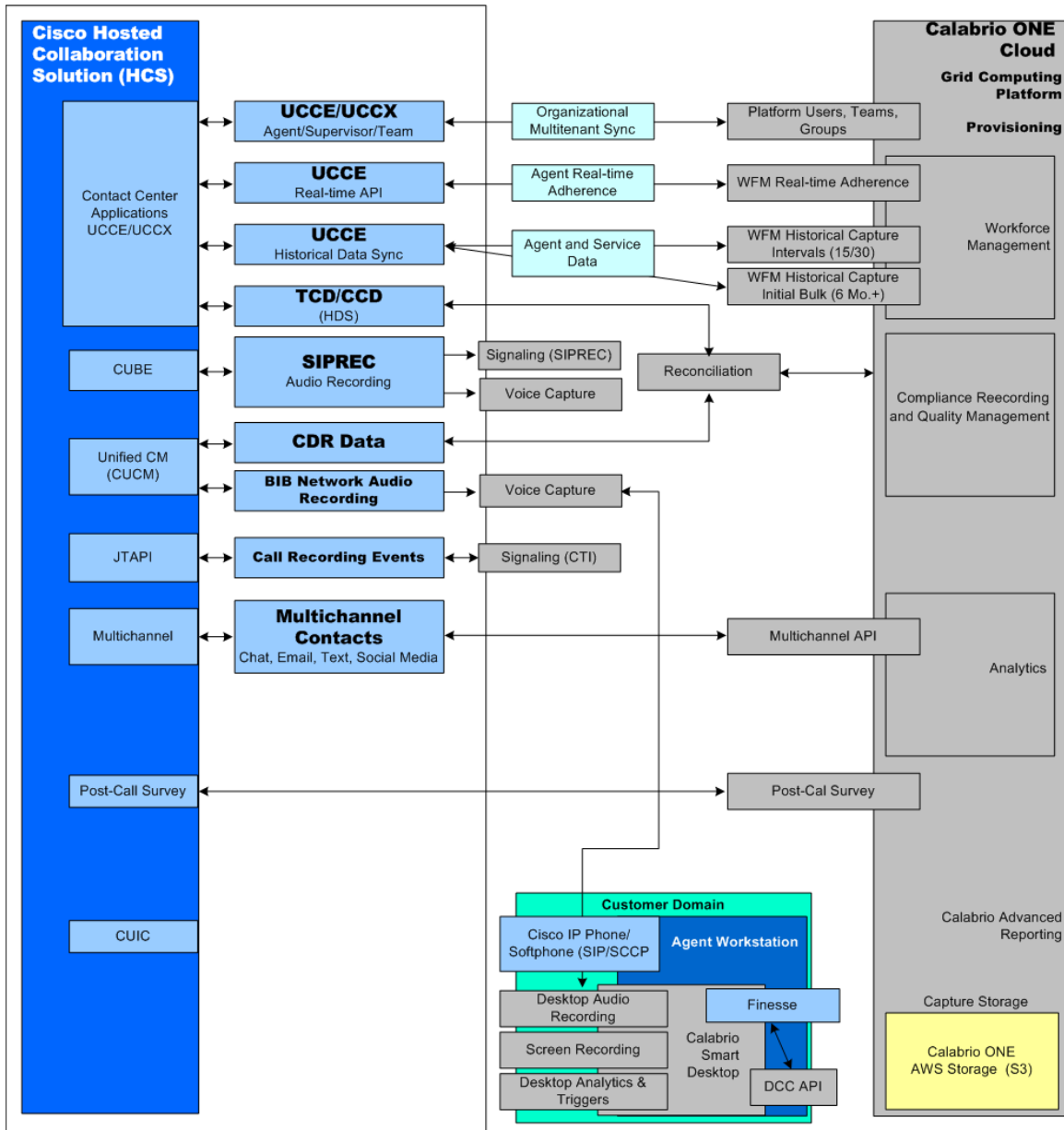
- Supervisor and Emergency Assist, to direct the assistance request to a routing script that assigns the request to the team's primary or secondary supervisor, and to use call type reports to view data about supervisor assistance requests.

Key call type metrics include the following.

- Average speed of answer.
- Number of calls received and handled.
- Number of calls abandoned while being routed to CVP, at CVP, while being routed to an agent, or while being offered to an agent.

Cisco Hosted Collaboration Solution (HCS)

The Webex WFO platform integrates with a Cisco Hosted Collaboration Solution (HCS) for Unified CCE in the same way that it integrates with a single Cisco Unified CCE solution. Webex WFO can connect to individual instances of Cisco HCS Unified CCE to create a multitenant solution. Each connection is specific to the intended customer, and segmented from other tenants. The Webex WFO data server can connect to multiple instances of Cisco Unified CCE to sync agent, supervisor, and team information independently by customer.



Configure Cisco Unified Contact Center Enterprise

Follow the steps detailed below to set up and configure Cisco Unified CCE.

NOTE See [Set up Webex WFO WFM](#) for set up information specific to WFM.

- [Step 1: Add Cisco Unified CCE as an ACD](#)
- [Step 2: Configure a Data Server](#)
- [Step 3: Customize Your Configuration](#)

Step 1: Add Cisco Unified CCE as an ACD

Prerequisites

- The Administer ACD permission
- A System Administrator license
- A Data Server installed and configured. See “Installing Webex WFO Data Server” in the *Webex WFO Installation Guide for Cloud or On-Premises Deployments* for more information.
- Customers need to provide database credentials for a user with permissions to query the database tables.

Page Location

Webex WFO > Application Management > Global > System Configuration > ACD Configuration

Procedures

Add Cisco Unified CCE as an ACD

1. Click **Add**.
2. Select **Cisco Unified CC Enterprise** from the **Select ACD** drop-down list. Cisco Unified CCE appears as **Cisco Unified CC Enterprise** in the ACD drop-down list.
3. Enter a unique name for the Cisco Unified CCE ACD in the **Name** field.
4. Click **OK**.
5. Configure the fields. See Field Descriptions below for more on the available fields.
6. Click **Test Connection** to ensure your entries are correct and Webex WFO is connected to the ACD.
7. Click **Save**.


Field Descriptions

The following fields appear when you select Cisco Unified CC Enterprise as your ACD.

Section	Description
Historical Reporting Interval	<p>The historical data reporting interval that is configured in your Unified CCE system.</p> <p>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.</p>
ACD Filtering	<p>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.</p> <p>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.</p> <p>If you change a filter that uses the Service Name in the Prefix</p>

Section	Description
	<p>Type drop-down list, all previously synced service queues stay active, even if they are not captured by the changed filter.</p> <p>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.</p>
IP Configuration	<p>This is used to get historical data.</p> <p>HDS Primary IP Address or Hostname—The IP address or host name of the primary historical database server (HDS).</p> <p>HDS Secondary IP Address or Hostname— (Optional) The IP address or host name of the secondary historical database server.</p> <p>AWDB Primary IP Address or Hostname—The IP address or host name of the primary Admin Workstation database server (AWDB).</p> <p>AWDB Secondary IP Address or Hostname— (Optional) The IP address or host name of the secondary Admin Workstation database server.</p> <p>Unified CC Instance—The instance name of the Microsoft SQL Server for the Unified CCE database.</p>
Authentication	<p>This is used to get historical data. Select the authentication method the database login uses:</p> <p>NT—If you select NT Authentication, the following fields appear:</p> <ul style="list-style-type: none"> ▪ Username ▪ Password ▪ Domain ▪ Peripheral ID—The ICM peripheral ID for the system.

Section	Description
	<p>SQL—If you select SQL Authentication, the following fields appear:</p> <ul style="list-style-type: none"> ■ 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	<p>This is used to get agent real-time data.</p> <p>Primary CTI IP Address or Hostname—The IP address or host name of the primary CTI server associated with the system.</p> <p>Primary CTI Port—The port of the primary CTI server associated with the system.</p> <p>Secondary CTI IP Address or Hostname—The IP address or host name of the secondary CTI server associated with the system.</p> <p>Secondary CTI Port—The port of the secondary CTI server associated with the system.</p>
Departments	<p>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).</p>
CDR Reconciliation Configuration	<p>(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.</p> <p>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</p>

Section	Description
	<p>subdirectories are created:</p> <ul style="list-style-type: none"> ■ 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: <ul style="list-style-type: none"> ■ 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 Path parameter: /cdr/ ■ CdrFailures ■ uploaddir—The Data Server places reconciled CDR and Unified CCE data in this folder until the data is uploaded. ■ UploadFailures <p> NOTE This field is used for Quality Management purposes only.</p>
Synchronization Interval	<p>Interval (Minutes)—The length of the interval at which the ACD is synchronized with the Data Server. This is how often the Data Server attempts to synch the user, team, and service queue to Webex WFO.</p>
Capture Settings	<p>ACD Capture Delay—Select the amount of time WFM waits before pulling ACD statistics after an interval ends. The default delay is 15 minutes.</p> <p>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</p>

Section	Description
	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.

Step 2: Configure a Data Server

Prerequisites

- A Cisco Unified Contact Center Enterprise (Cisco Unified CCE) ACD configured.
- Webex WFO Data Server downloaded and installed.

Page Location

Application Management > Global > System Configuration > Data Server Configuration

Procedures

Configure the Data Server

1. Select the Data Server you want to use from the **Select Data Server Configuration** drop-down list.
2. Configure the fields as described.

Display Name — Enter the display name of the Data Server you selected.

Regional Data Server ACD Sync Settings — Select the **Enable Sync** check box and then move the Cisco Unified CCE ACD you configured from **Available** to **Assigned**.

3. Configure the remaining fields as desired. See the “Configure the Data Server” topic in the *Webex WFO User Guide* for more on the available fields.
4. Click **Test Connection** to ensure your entries are correct and the Data Server is properly configured.
5. Click **Save**.

Step 3: Customize Your Configuration

After completing steps one and two, data has successfully synced from your Cisco Unified CCE ACD to Webex WFO. You can do much more to use Webex WFO to its fullest potential. The topics listed below can be found in their entirety in the *Webex WFO User Guide*. You can also find the topics listed below by navigating to the page locations in Webex WFO (for example, Location: Application Management > QM > QM configuration > Metadata Manager). Then click the **Help** button in the top right corner of the page.

Quality Management

- **Manage Associations with ACD Devices** — (Location: Application Management > QM > QM Configuration > Device Associations) After you sync devices through the Data Server, you can use the **Device Associations** page to associate devices from your ACD with Webex WFO users, recording groups, and recording types.
- **Configure Telephony Groups** — (Location: Application Management > QM > QM Configuration > Telephony Groups) Telephony Groups provide the structure used to create the recording infrastructure. Telephony groups consist of at least one signaling source, one signaling group, one signaling server, one recording group, and your contact center devices. Learn more about telephony groups and their configuration procedures on this page.
 - **Configure Cisco Unified Communication Manager (Unified CM)** — You can configure SOAP Administrative XML Layer (AXL) users and JTAPI users. The CTI service makes use of the users to log in to Unified CM. A CTI Signaling service from your Webex WFO Signaling server is used for edge server recording environments to track start and stop events and capture CTI metadata for call recordings. A Unified CM cluster is composed of a set of Unified CM servers that share the same database and resources and have one or more CTI Managers.

Analytics

- **Text Search** — (Location: Interactions > Text Search filter) Use the Text Search filter to mine data in your transcribed calls for phrases and specific terms in calls using search queries and result filters .
- **Predictive Evaluation Scores** — (Location: Application Management > Analytics > Task Manager) Allows you to use a variety of factors to determine a likely evaluation score for a contact.
- **Predictive Net Promoter Scores** — (Location: Application Management > Analytics > Task Manager) Creates a model using customer contacts, agent performance, and other factors to determine a likely Net Promoter Score for a contact .

Users

- **Manage Users** — (Location: Application Management > Global > User Configuration) See this section to learn more about editing and configuring users and teams after they have been synced from your ACD. When users are synced from the ACD, Webex WFO creates a new user and associates an ACD user profile with that user. Users must have one or more roles assigned to them and each role can have various permissions enabled. A role is a collection of permissions, and a permission controls which applications and actions are available to a user who has been assigned a role.

Set up Webex WFO WFM

This section explains, at a high-level, the setup procedures for Webex WFO WFM.

Prerequisites

During the implementation project's technical discovery sessions, the Cisco professional services team presents the intended solution and distribution of the components included in the Webex WFO WFM delivery. At this stage, a decision on the location of the integration services is to be agreed upon by you and the professional services team. The Webex WFO WFM solution requires that the integration server is hosted in your network. The agreed server hosting the integration services is referenced as the “integration server.”

Set up Cisco Unified CCE

Step 1: Set up Unified CCE

Historical and real-time data is stored within a MS SQL database, on the Unified CCE server.

1. Create the SQL login on the Cisco Unified CCE databases AWDB and HDS.
2. Assign the SQL login with read-only permissions.
3. Provide the following information to your Cisco professional services contact person.
 - Database name of AWDB
 - SQL login
 - SQL password

IMPORTANT It is the your responsibility to test the database connectivity from the server to make sure that the user account is set up correctly.

Step 2: Configure the integration server

To avoid internet traffic impacting resources on your local network, the Webex WFO WFM solution requires an integration server to be hosted in the your network. After the you and Cisco professional services engineers agree to the location of the integration services, the engineers configure the integration server.

Step 3: Configure Cisco WFM

This step is handled by Cisco professional services.