

# Migration Tools Guide for Cisco BroadWorks, Webex for BroadWorks, and BroadCloud to Wholesale RTM Solutions

Version: 2.0

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## Overview

The purpose of this document is to provide detailed instructions on the use of tools used to migrate from Cisco BroadWorks, Webex for BroadWorks and BroadCloud to Wholesale and Webex Calling. This document covers a set of migration tools that helps to migrate existing Cisco BroadWorks, Webex4BroadWorks, and BroadCloud customers to the Wholesale Route-to-Market solution.

## Migration Impact

The post-migration impacts are as follows:

### Administrators

After the migration, administrators must:

- Begin using Partner Hub and Control Hub to configure features rather than CommPilot.
- Reconfigure any features that are not part of the migration.  
**Note:** You need to manually migrate the features that are not automatically migrated after the migration tools are completed.

### Users

Supported features should work post-migration the same that they worked before the migration. Webex Calling features not supported by the migration must be reconfigured on Webex after the migration:

- Users will lose their call history and message history.
- Users will lose all personal key-line settings and customizations and must reconfigure these settings after the migration. Examples include speed dials.
- Users must reset their access codes and passwords at first login.
- Users who use the UC-One client are required at first login to upgrade to the Webex App.

## Migration Tools Architecture

The Migration Tools architecture consist of four different tools:

1. **Extract Tool**

## Migration Tools for BroadWorks to Wholesale RTM Migrations

- a. Extracts enterprises, groups, numbers, users, services, phones, and soft clients from Cisco BroadWorks. BroadCloud partners must submit an extract request in the Service Provider Portal.

### 2. Transform Tool

- a. Transforms the information extracted by the extract tool into a JSON file that can be edited.

### 3. Provisioning Tool

- a. Uses the JSON output file from the Transform Tool to provision customers, locations, numbers, users, services, and phones using [Webex Public APIs](#).

### 4. Device Move Tool

- a. Uses the Transform Tool JSON output file the Transform Tool to rebuild the profiles and reboot phones, activate numbers in the Wholesale RTM solution, and deactivate phone numbers in Cisco BroadWorks.
- b. This tool supports reverting phone and soft client profiles and number activation back in Cisco BroadWorks.
- c. BroadCloud partners must submit a migration request in the Service Provider Portal.

The following illustration represents how the four tools work sequentially by communicating with Cisco BroadWorks, Public APIs, and uploading metrics to the Webex services for future analytics after the administrator launches the migration tasks.

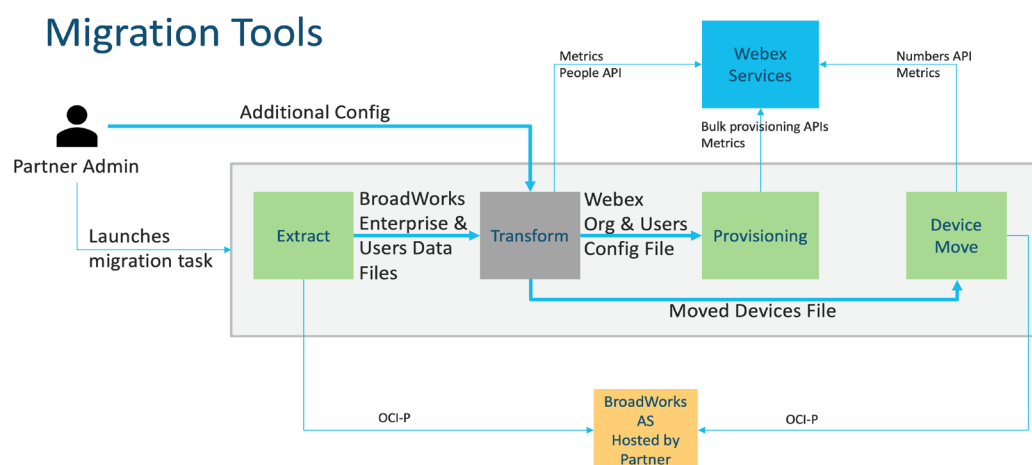


Figure 1 Migration Tools

## Requirements

Before running migration tools, the partner must meet the following requirements:

1. The partner and partner administrator account must be onboard in the Wholesale RTM solution. During the pre-sale stage, partners are not required to be onboarded into the Wholesale RTM solution for running the extract tool.
2. The partner must go through the pre-migration checklist to make sure all requirements are met.
3. Cisco BroadWorks system administrator credentials are required to run the extract and device move tools. This is not applicable for BroadCloud partners.
4. The extract and device move tools must be run from the secondary Cisco BroadWorks Application Server during a maintenance window to minimize risk. BroadCloud partners will run the Device Move Tool from the Service Provider Portal.
5. Review the list of supported Webex Calling devices - <https://help.webex.com/en-us/article/qkwt4j/Supported-devices-for-Webex-Calling>.
6. Review the list of non-supported Webex Calling devices devices - <https://help.webex.com/en-us/article/qkwt4j/Supported-devices-for-Webex-Calling>.
7. Partners must ask their account team at Cisco to get the supported firmware version for phones and devices.
8. UC-One clients must upgrade to the following versions:
  - a. Desktop Communicator clients must be version 22.9.12 or higher
  - b. Mobile Connect clients must be version 3.9.14 or higher.
9. The administrator's machine must have:
  - JDK/JRE 1.8 is required for the Provisioning Tool.
  - MAC and Linux machines require Python 3.10.5 or higher for the Transform Tool.
10. Customers must have a valid billing address, and end users must have a business email address configured in Cisco BroadWorks. If the values are not set, partner administrators must contact their customers to get them. These details must be added to the CSV (comma-separated values) files before running the transform tool. Example CSV file are provided with the transform tool.

## Migration Plan

The migration plan has 3 stages:

1. Preparation

## Migration Tools for BroadWorks to Wholesale RTM Migrations

- Get a copy of user data with the Extract Tool
  - Generate a token using the Token Generator Tool
  - Use the Transform Tool to format user data
2. Provisioning
- Get the latest user data with the Extract Tool
  - Use the Transform Tool to format user data
  - Provision users with the Provisioning Tool
3. Migration
- Migrate Devices with the Device Move Tool
  - Migrations Without Devices [ Activating Phone Numbers Through Control Hub ]

If the partner administrators don't have devices to move from Cisco BroadWorks to Wholesale, then running the device move tool is not necessary. Partner administrators can use the public link below to activate the phone numbers directly through the Control Hub portal.

<https://help.webex.com/en-us/article/wkj3f0/Manage-phone-numbers-in-Control-Hub>

**Note:** Deactivating the phone numbers in Cisco BroadWorks is optional if the partner administrators activate their phone numbers through Control Hub.

## Features Automatically Migrated to Wholesale Calling

These user features are automatically migrated by the migration tools:

- Voice Messaging settings and custom greetings (voice messages are **not** migrated)
- Alternate Numbers
- BroadWorks Anywhere
- Busy Lamp Field
- CallerId (Custom name and phone number)
- Call Waiting
- Call Forwarding settings (Call Forwarding Always/Busy/No Answer/Not Reachable)
- Call Intercept
- Do Not Disturb
- Fax settings
- Remote Office
- Shared Call Appearance
- Simultaneous Ring Personal (including schedule and selective criteria)

## Migration Tools for BroadWorks to Wholesale RTM Migrations

- Call Notify (Including schedule and selective criteria)
- Anonymous Call Rejection
- Selective Call Rejection
- Selective Call Forwarding
- Directed Call Pickup and Barge-In
- Barge-in Exempt
- Push to Talk
- Privacy

These group features are automatically migrated by the migration tools:

- Auto-Attendant
  - One level only
  - Custom greetings
  - Call Forwarding settings (always, busy, selective)
  - Alternate numbers
  - Holiday menu is **NOT** available in Webex
  - Selective Call Rejection
- Cisco BroadWorks Call Center Standard and BroadCloud Call Queue:
  - Basic configuration
  - Custom greetings
  - Agents and supervisors
  - Call Forwarding settings (always, busy, selective)
  - Alternate numbers
  - Music-on-hold
- Call Park
- Call Pickup
- Hunt Group
  - Call Forwarding settings (always, busy, selective, not reachable)
  - Alternate numbers
- Location code (one per location or group)
- Paging Group
- Schedules (Group-level only, enterprises schedules are not migrated)
- Voice Portal
- Virtual Line

- Music on Hold

## Supported Devices

Supported phones will be automatically created and assigned to users in Webex Calling by the provisioning tool. The phones marked “yes” in the column “Supported in the Device Move tool” will also be automatically moved from Cisco BroadWorks or BroadCloud to Webex Calling when the device move tool is run. Phones marked “NO” in that column need a manual intervention to change the DMS URL in the Cisco BroadWorks device template or in the phone itself.

The last column provides the mapping of phone models to the “Device Type” column of the file transform-tool/input/newphones.csv. (See Transform Tool for more information on newphones.csv).

Phone Model	Supported in Device Move tool	Device Type in newphones.csv
Cisco MPP 6821	Yes	DMS Cisco 6821
Cisco MPP 6841	Yes	DMS Cisco 6841
Cisco MPP 6851	Yes	DMS Cisco 6851
Cisco MPP 6861	Yes	DMS Cisco 6861
Cisco MPP 6871	Yes	DMS Cisco 6871
Cisco MPP 7811	Yes	DMS Cisco 7811
Cisco MPP 7821	Yes	DMS Cisco 7821
Cisco MPP 7832	Yes	DMS Cisco 7832
Cisco MPP 7841	Yes	DMS Cisco 7841
Cisco MPP 7861	Yes	DMS Cisco 7861
Cisco MPP 8811	Yes	DMS Cisco 8811
Cisco MPP 8832	Yes	DMS Cisco 8832
Cisco MPP 8841	Yes	DMS Cisco 8841
Cisco MPP 8845	Yes	DMS Cisco 8845
Cisco MPP 8851	Yes	DMS Cisco 8851
Cisco MPP 8861	Yes	DMS Cisco 8861
Cisco MPP 8865	Yes	DMS Cisco 8865
Cisco MPP 8875	Yes	DMS Cisco 8875
Cisco ATA191	Yes	DMS Cisco 191
Cisco ATA192	Yes	DMS Cisco 192
Polycom VVX101	Yes	DMS Polycom VVX101
Polycom VVX150	Yes	DMS Polycom VVX150
Polycom VVX201	Yes	DMS Polycom VVX201
Polycom VVX250	Yes	DMS Polycom VVX250
Polycom VVX301	Yes	DMS Polycom VVX301
Polycom VVX311	Yes	DMS Polycom VVX311
Polycom VVX350	Yes	DMS Polycom VVX350



## Migration Tools for BroadWorks to Wholesale RTM Migrations

Polycom VVX401	Yes	DMS Polycom VVX401
Polycom VVX411	Yes	DMS Polycom VVX411
Polycom VVX450	Yes	DMS Polycom VVX450
Polycom VVX501	Yes	DMS Polycom VVX501
Polycom VVX601	Yes	DMS Polycom VVX601
Polycom Trio 8300	Yes	DMS Polycom Trio8300
Polycom Trio 8500	Yes	DMS Polycom Trio8500
Polycom Trio 8800	Yes	DMS Polycom Trio8800
Polycom SoundStation 5000	Yes	DMS Polycom SSIP5000
Polycom SoundStation 6000	Yes	DMS Polycom SSIP6000
Yealink T33G	Yes	DMS Yealink T33G
Yealink T41S	Yes	DMS Yealink T41S
Yealink T42S	Yes	DMS Yealink T42S
Yealink T43U	Yes	DMS Yealink T43U
Yealink T46U	Yes	DMS Yealink T46U
Yealink T46S	Yes	DMS Yealink T46S
Yealink T48S	Yes	DMS Yealink T48S
Yealink T48U	Yes	DMS Yealink T48U
Yealink T53W	Yes	DMS Yealink T53W
Yealink T54W	Yes	DMS Yealink T54W
Yealink T57W	Yes	DMS Yealink T57W
Yealink T58V	Yes	DMS Yealink T58V
Yealink CP920	Yes	DMS Yealink CP920
Yealink CP960	Yes	DMS Yealink CP960
Yealink W52B	Yes	DMS Yealink W52P
Yealink W56B	Yes	DMS Yealink W56P
Yealink W60B	Yes	DMS Yealink W60P
Yealink W70B	Yes	DMS Yealink W70P
Yealink CP925	Yes	DMS Yealink CP925
Yealink CP965	Yes	DMS Yealink CP965

## Non-Supported Devices

If the customer uses the unsupported devices by the Wholesale RTM solution, then those devices are not eligible for migration. In this case, you have the following options:

1. Provision new phones on Cisco BroadWorks before you migrate.
2. Leave the old phones in Cisco BroadWorks, and users must install the Webex App to make and receive calls.

## Selection of Wholesale Calling Packages

The migration tools have a set of defaults for selecting Wholesale Calling packages for subscribers. If a different package is desired later, these can be changed in Control Hub by a partner admin.

### Cisco BroadWorks Migration Package Configuration

All subscribers from migrating from Cisco BroadWorks will default to the Webex Calling Package. If the Webex Voice Package is desired for subscribers who do not have Call Waiting or Voicemail assigned, this can be enabled in the Transform Tool's partner.cfg file by uncommenting the line USE\_WEBEX\_VOICE\_PACKAGE.

### Webex for BroadWorks Migration Package Mapping

Webex for BroadWorks Packages are automatically mapped to Wholesale Calling Packages. This is not configurable.

Webex for BroadWorks Package	Wholesale Calling Package
Softphone	Webex Voice
Basic	Webex Calling
Standard	Webex Suite
Premium	Webex Suite

### BroadCloud Migration Package Mapping

Migrations from BroadCloud Carrier map packages based upon the station type. Default mapping can be configured in the Transform Tool's config file conf/rialto\_station\_type\_to\_wholesale\_package.csv.

BroadCloud Carrier Station Type	Wholesale Calling Package
Basic	Webex Voice
Conference Room	Webex Voice
Messaging	Webex Voice
Standard	Webex Voice
Executive	Webex Suite
All other station types	Webex Voice

## Transforming a Cisco BroadWorks or BroadCloud User Account into a Webex Calling Workspace

A Webex Workspace is a phone that is shared among many people, for example: for example: phones in a conference room, warehouse, or lobby. Such phones can be configured in Webex Calling

as Webex workspaces instead of Webex users. An option is available to transform user accounts from Cisco BroadWorks or BroadCloud Carrier into workspaces automatically during the migration process.

Steps:

1. In the file `transform_tool/input/users.csv`, assign the “common\_area” package to the users to be transformed into a Workspace  
*Example: bwuser@domain,,,common\_area*
2. (BroadCloud Only) To convert all user accounts of a specific station type into workspaces, add an entry to `transform-tool/conf/rialto_station_type_to_wholesale_package.csv` and set the Wholesale package to “common\_area\_calling”  
*Example: conference\_room\_v2,common\_area\_calling*
3. Run the transform tool
4. Run the provisioning tool
5. Open Control Hub of the newly created customer organization and set a SIP domain (see the figure 2, Configuring a SIP domain in Control Hub)
6. Run the provisioning tool again. This will create the workspaces and assign phones to it.

### Limitations:

- Configuration of user features (e.g., call forwarding, do not disturb) is not automatically migrated to the workspace.

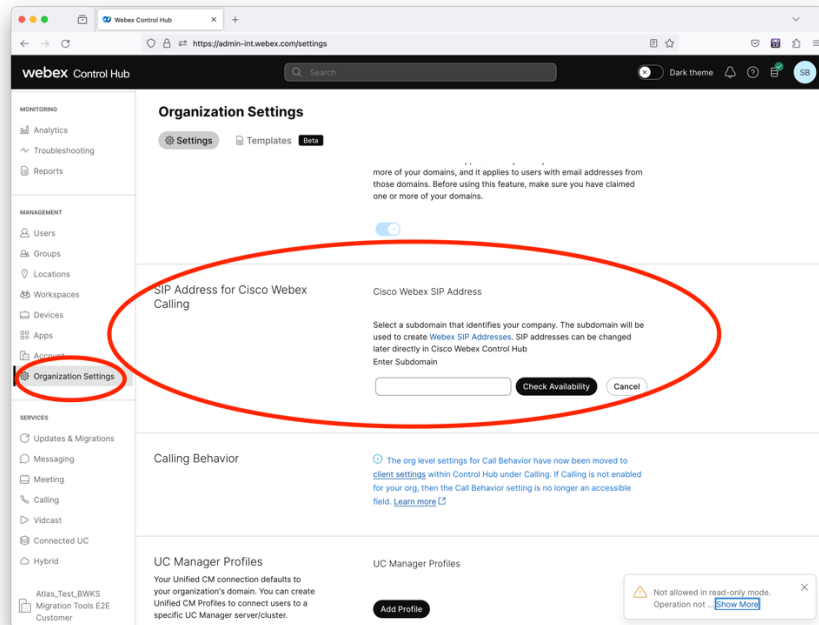


Figure 2 Configuring a SIP domain in Control Hub

## Token Generator Tool

Partner administrators run this token generator utility tool at least one time before starting to run migration tools. Running this tool is a one-time activity after the partner account gets onboarded into the Wholesale RTM solution. This tool allows partner administrators to log in via web browser to get the unique TOKEN that is needed to update to the partner configuration files for the migration tools.

### Prerequisites

1. After downloading, extract the migration tool binaries
  - a. Set the JRE/JDK environment path in the token\_generator.sh for MAC and token\_generator.bat for Windows. If JAVA\_HOME path already exists, it will be reused by the tool.

MAC: `JAVA_HOME="/Users/cisco/jdk/zulu@1.8.282/Contents/Home/"`

Windows: `JAVA_HOME=C:\Progra~1\Java\jre1.8.0_321`

Note : This step is optional

## Instructions to Run

Run the following command in the terminal inside the token generator directory:

Note:

- The ports below must be available for running the token generator tool.
- At least one of these mentioned ports must be open for connection in the user's computer.

**Ports:** 8080, 50009, 50010, 50011, 50012, and 50013

### Windows

*token\_generator.bat*

### macOS

*./token\_generator.sh*

## Output:

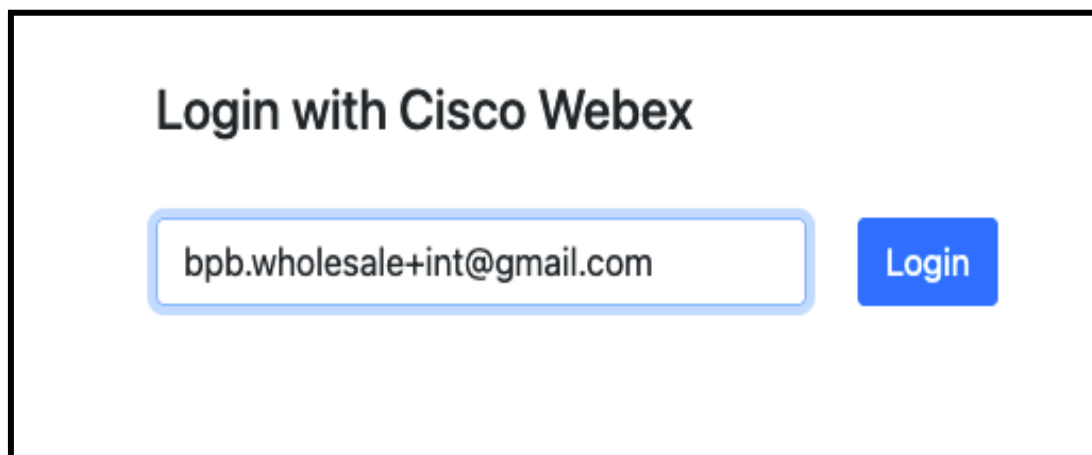
*Tool Name: Token Generator Tool*

*Version: 1.13.0*

*Load the URL in your web browser: <http://localhost:8080>*

Open the URL in the web browser on the terminal, login with the partner administrator credentials to get the TOKEN and copy the same for further usage.

The user interface illustrations are given below for reference:



*Figure 3 : Login with Cisco Webex*

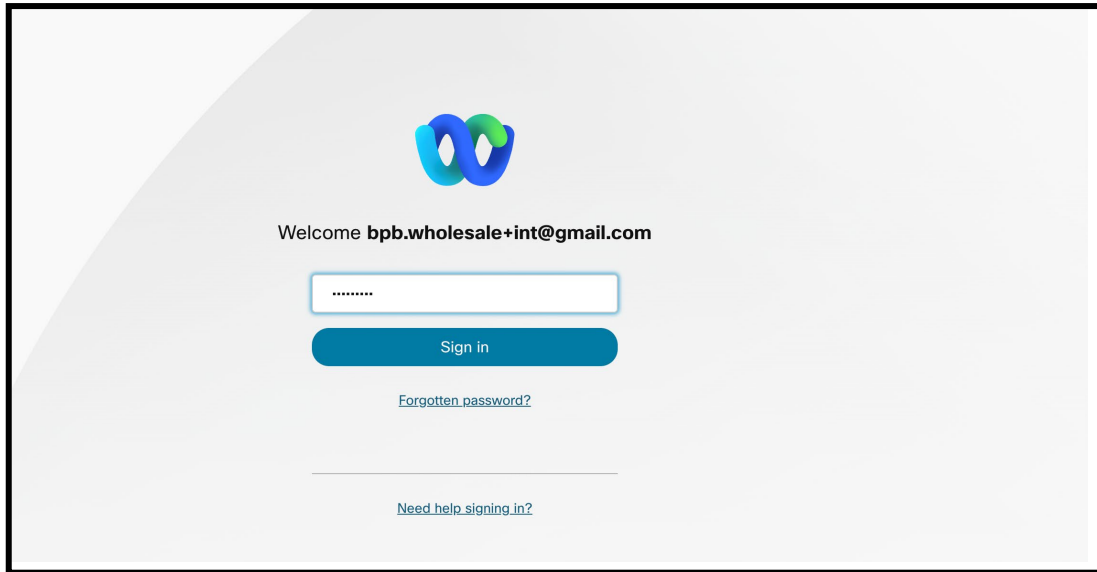


Figure 4 : Credentials window



Figure 5 : Token Generation

## Cisco BroadWorks Setup Tasks

Configure the following steps, before running the extract and device move tools in the secondary BroadWorks server

Note:

- This is applicable for Cisco BroadWorks and Webex for BroadWorks.
- These steps are NOT applicable to BroadCloud.

## Enable OCI-P Connectivity

The device move tool communicates with the BroadWorks through OCI-P commands, to enable OCI-P connectivity use the steps below:

**Step 1:** Use the CLI to configure General Settings:

Run the following command in CLI to change to the GeneralSettings directory:

```
AS_CLI> cd /Applications/OpenClientServer/GeneralSettings.
```

Run the following command in CLI to get the current GeneralSettings:

```
AS_CLI/Applications/OpenClientServer/GeneralSettings> get
clientPort = 2208
clientPortEnabled = true
secureClientPort = 2209
secureClientPortEnabled = true
systemDomain = <>
```

If your settings do not match the above, use the **set** command to reconfigure your settings.

**Step 2:** Use the CLI to configure the OCI Proxy:

Change the directory to OCI Proxy:

```
AS_CLI> cd /Applications/OpenClientServer/OCIProxy
```

Run the following CLI to get current settings. You should see the following:

```
AS_CLI/Applications/OpenClientServer/OCIProxy> get
enabled = true
enabledLoginLevelScreening = false
enableResponseCaching = false
responseCacheDurationHours = 24
responseCacheRenewPeriodMins = 30
messageQueueCapacity = 50
messageQueueTimeoutSeconds = 1800
```

If your settings do not match the above, use the **set** command to reconfigure your settings.

**Step 3:** Use the CLI to configure OCI Provisioning:

Change to the Provisioning directory:

```
AS_CLI> cd /System/NetworkAccessLists/OCI/Provisioning
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

Run the following command to get the current OCI Provisioning settings:

```
AS_CLI/System/NetworkAccessLists/OCI/Provisioning> get
```

```
Address Description
```

```
=====
```

```
127.0.0.1 local as
```

**Step 4:** Run the command below in CLI to verify that your configuration is correct:

```
AS_CLI/Maintenance/ManagedObjects> get broadworks and check
```

```
that your output looks OK.
```

```
See below for sample output:
```

```
AS_CLI/Maintenance/ManagedObjects> get broadworks
```

```
BroadWorks Managed Objects
```

```
=====
```

```
* Server:
```

```
Identity.....: AS
```

```
Version.....: Rel_21.sp1_1.551
```

```
Administrative State...: Unlocked
```

```
* Applications:
```

```
Name Version Deployed Administrative State Effective State
```

```
=====
```

```
ExecutionAndProvisioning 21.sp1_1.551 true Unlocked Unlocked
```

```
FlashPolicy 21.sp1_1.551 false Unlocked Stopped
```

```
OpenClientServer 21.sp1_1.551 true Unlocked Unlocked
```

```
WebContainer 21.sp1_1.551 true Unlocked Unlocked
```

```
4 entries found.
```

```
* Hosted Applications:
```

```
Name Version Context Path Deployed
```

```
=====
```

```
CommPilot 21.sp1_1.551 / true
```

```
DeviceManagementFiles 21.sp1_1.551 /DeviceManagement true
```

```
JWSFiles 21.sp1_1.551 /FileRepos true
```

```
MediaFiles 21.sp1_1.551 /media true
```

```
OCIFiles 21.sp1_1.551 /ocifiles true
```

```
5 entries found.
```

## Verify Open Client Server is Deployed and Active

Use the commands below to deploy and start the Open Client Server on the secondary Application Server if it is not deployed or have not started already.

**Step 1:** Deploy the server with the following CLI command:

```
AS_CLI/Maintenance/ManagedObjects> deploy application OpenClientServer
```



## Migration Tools for BroadWorks to Wholesale RTM Migrations

**Step 2:** Start the server with this command:

```
AS_CLI/Maintenance/ManagedObjects> start application OpenClientServer
```

### Enable Numbers Activation

Execute the following commands in CLI to enable the activation of the numbers:

**Step 1:** Run the `AS_CLI> cd SubscriberMgmt/NumberActivation` command.

**Step 2:** Run the `AS_CLI> set dnMode groupAndUserActivationEnabled` command.

**Step 3:** At the confirmation prompt, enter Y.

## Extract Tool

### Extract Tool for BroadCloud

The extract tool is integrated in the BroadCloud Service Provider portal. A Service Provider Admin can:

1. Submit extract requests for up to 50 customers<sup>1</sup> per request.
2. Download the extracted data file, in ZIP format, for up to 28 days from request submission date.

The figures below show the Service Provider portal.

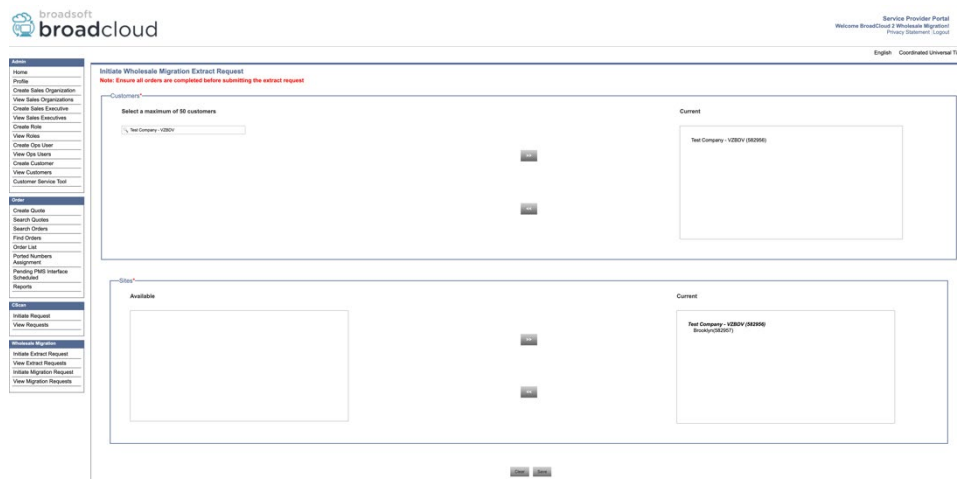


Figure 6 : Service Provider portal

<sup>1</sup> Extract request cannot be submitted for the same customer more than 10 times in a day.

## Migration Tools for BroadWorks to Wholesale RTM Migrations

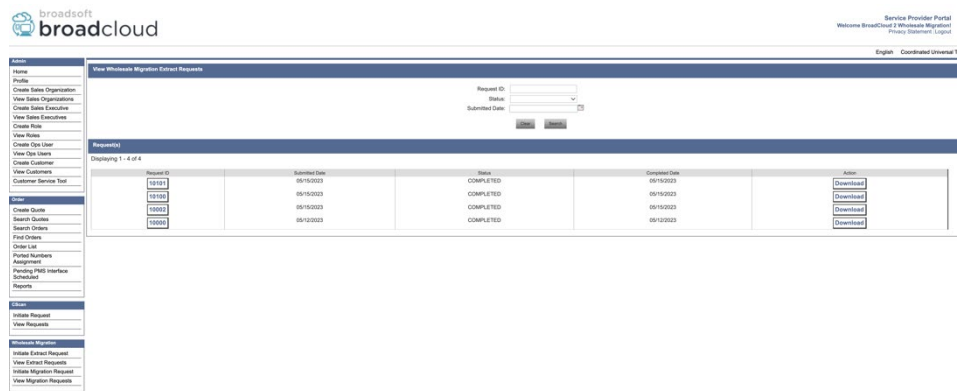


Figure 7 : Service Provider portal

## Extract Tool for Cisco BroadWorks and Webex for BroadWorks

1. The Extract tool runs on the secondary Cisco BroadWorks Application Server within the partner network and connects via OCI-P.
2. The tool pulls raw enterprise, group, numbers, users, services, devices, and soft client's data from the Cisco BroadWorks or BroadCloud platform and outputs this data to XML files that provide the inputs for the Transform tool.

The next sections explain how to install and configure the extract tool.

## Prerequisites

1. SCP the extract tool binaries to secondary Cisco BroadWorks Application Server.
2. SSH to the secondary Cisco BroadWorks Application Server to configure the prerequisites and run the extract tool.
3. Configure the Service Provider and Group ID to extract from Cisco BroadWorks in the conf/exportTool.yml. Refer to the below sample YAML snippet:

*ServiceProviderID-A:*

- GroupID-A1
- GroupID-A2
- GroupID-A3

*ServiceProviderID-B:*

- ALL

## Migration Tools for BroadWorks to Wholesale RTM Migrations

4. Ensure the secondary Cisco BroadWorks Application Server User ID, Password, and Host Name are correct in the conf/partner.cfg file:

```
BROADWORKS_USER_ID = admin
BROADWORKS_PASSWORD = admin
BROADWORKS_HOST_NAME = localhost
REFRESH_TOKEN = Partner administrator's refresh token copied from the Token Generator tool.
MIGRATION_MODE = Supported values are webex_for_broadworks_to_wholesale. The default value is
broadworks_to_wholesale. Use webex_for_broadworks_to_wholesale for Webex for BroadWorks migrations.
```

### Note:

- The `REFRESH\_TOKEN` property is mandatory for a Webex for BroadWorks migration.
1. Modify the JDK/JRE environment path in the export.sh file if the secondary Cisco BroadWorks Application Server JDK/JRE environment path is different than the file:  

```
JAVA_HOME=/usr/local/java/java_base
```

### Instructions to Run

Run the command below in the secondary Cisco BroadWorks Application Server from the extract tool directory:

```
./export.sh
```

### Terminal Logs

The following logs are available in the terminal on successful export: Running BroadSoft Data Export Tool:

```
Running BroadSoft Data Export Tool
*****
Starting Export Tool v: 1.15.0
Export started for SP=collabmigrationtestSP_engg, Group=collabmigrationtestGRP_engg
Exporting users for SP=collabmigrationtestSP_engg, Group=collabmigrationtestGRP_engg
Export users completed for SP=collabmigrationtestSP_engg, Group=collabmigrationtestGRP_engg
Export completed for SP=collabmigrationtestSP_engg, Group=collabmigrationtestGRP_engg
Export completed
Export Dump Zip Directory : output/20221017223452_ExportTool
Export Dump Zip File name :extracted_data_1666060500618.zip
Zip file with the name extracted_data_1666060500618.zip has been created
ZIP file creation process completed
Exported files converted as ZIP file
*****
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

### Output

An output ZIP (*extracted\_data\_<timestamp>.zip*) file will be available in the same extract tool directory. Use the command below to view and use the ZIP file for the Transform Tool input:

```
ls -ltr
drwxr-xr-x 2 bwadmin bwadmin 4096 Oct 4 11:53 lib/
-rwxr-xr-x 1 bwadmin bwadmin 956719 Oct 4 11:53 exportTool.jar
-rwxr-xr-x 1 bwadmin bwadmin 2635 Oct 4 11:53 export.sh
drwxr-xr-x 2 bwadmin bwadmin 4096 Oct 5 05:04 conf/
drwxrwxr-x 3 bwadmin bwadmin 4096 Oct 17 22:34 output/
drwxrwxr-x 2 bwadmin bwadmin 4096 Oct 17 22:34 logs/
-rw-rw-r-- 1 bwadmin bwadmin 46341 Oct 17 22:35 extracted_data_1666060500618.zip
```

## Transform Tool

This Transform Tool is run for all migrations.

The Transform tool runs on any computer, including a partner's administrator laptop, and uses the Webex Public APIs. It reads the extract tool output ZIP (*extracted\_data\_<timestamp>.zip*) file as an input and transforms the raw XML into a JSON format that is used by the Provisioning Tool.

### Prerequisites

After downloading and extracting the Migration tools binaries, configure the following prerequisites:

1. Set the `REFRESH_TOKEN` (Token copied from the Token Generator Tool) and `NAME_OF_MAIN_LOCATION` in the `conf/partner.cfg` file:

```
REFRESH_TOKEN=MzUwYjJjODEtYmQ4MS00NGVhLTgwNGUtZjQ1NTEyZTViNzJkOTdj
NAME_OF_MAIN_LOCATION=Main
```

2. Optionally set the `PROVISIONING_ID` (copied from the template in Partner Hub) in the `conf/partner.cfg` file:

```
PROVISIONING_ID=YmE4MjFkZGYtYTIkNy00NDdlLWlwODctYmNkOTM2NjUyYWQ1
```

Note: To get more complete verification of the customer email address you can optionally set the `PROVISIONING_ID`.

3. Configure missing information in the `input/customers.csv` file (see next section) if missing.
4. Add the end user email address in the `input/users.csv` file.
5. If new phones are to be provisioned, add the mac address and email address of the user's new phone to `input/newphones.csv` file. This is required only if the partner administrators want to provision new phones in Wholesale calling.
6. Optionally enable usage of MAC addresses from the User-Agent header of the SIP REGISTER message when the MAC address is not available in the Cisco BroadWorks device profile. Uncomment the line "`USE_MAC_ADDRESS_FROM_SIP_REGISTER=yes`" in file `conf/partner.cfg`

### Filling-up the `input/customers.csv`

The file `input/customers.csv` provides data that maybe missing in Cisco BroadWorks or BroadCloud. This file can be left empty if all mandatory information is already available. You don't have to fill in all columns, only the missing information is mandatory.

Note : All these fields are optional

The table below explains the most important columns in `input/customers.csv`.

Column Name	Rules
Id	- in Cisco BroadWorks enterprise mode: a) this is the Cisco BroadWorks serviceProviderId for the enterprise. b) Also, a separate line is needed for each group within the enterprise. The Id is the Cisco BroadWorks groupId. - in BroadWorks service provider mode, this is the Cisco BroadWorks groupId. - in BroadCloud, this is the Rialto customerId.
externalId	This is an identifier that matches the partner's internal identifier for this customer. This column must be unique within a Webex partner org. This column is optional, a unique identifier will be generated automatically by the transform tool. This column is not used for groups within an enterprise.
customerName	For the enterprise, this column is used as the Webex customer name field. For a group within an enterprise, this column is used as the location name. <i>Location names must be unique within an enterprise.</i>
primaryEmail	This is used as the email address of the Webex customer admin. This column is optional for groups within an enterprise.
Address columns	For an enterprise, the address is used as the billing address and the first location address. For a group within an enterprise, the address is used as the location address.
timezone	Please refer appendix for the timezone information.
language	<a href="https://help.webex.com/en-us/article/934ty8/Languages-Webex-supports">https://help.webex.com/en-us/article/934ty8/Languages-Webex-supports</a>
defaultvoicemailpin	<a href="https://help.webex.com/en-us/article/n72vuiw">https://help.webex.com/en-us/article/n72vuiw</a>

## Instructions to Run

Run the Transform Tool in any operating system. Use the below steps to run the tool in Windows and macOS:

### Windows

Execute the command below to run the Transform Tool in Windows:

```
transform.bat -extract=<Extract-Tool-Output-Zip-file> -customers=<Input-Path-Customers-CSV> -users=<Input-Path-Users-CSV> -newphones=<Input-Path-NewPhones-CSV>
```

### macOS

Execute the following steps to run the transform tool on MAC OS:

1. Create a virtual environment and install dependencies to run the transform tool using Python:

```
python3 -m venv venv
source venv/bin/activate
python3 -m pip install requests
```

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```
python3 -m pip install requests-oauthlib
```

### 2. Run the transform tool:

```
./transform.sh -extract=<Extract-Tool-Output-Zip-file> -customers=<Input-Path-Customers-CSV> -users=<Input-Path-Users-CSV> -newphones=<Input-Path-NewPhones-CSV>
```

### Customer/User Precheck

The Transform Tool makes API calls to Webex to catch potential provisioning issues. By default, it will validate the customer's address and primary email. If the PROVISIONING\_ID value is specified in the conf/partner.cfg file, it will also validate location information. The precheck results are included in the exception report.

Additionally, the following optional parameters can be added when running the transform tool:

- **-precheck**  
In addition to running the precheck API for the customer information, the Transform Tool will also run the precheck API for the subscriber emails.
- **-precheckinfo**  
By default, only precheck errors (i.e., issues that will block provisioning) are included in the exception report. Adding this flag will include successful precheck results as well (e.g., if a Webex organization already exists that can be automatically attached).

Note : precheckinfo takes extra time to run.

### Terminal Logs

The following logs in the terminal on successful transform:

```
Summary Report
```

```
BroadWorks enterprises that can be successfully migrated: 1
```

```
BroadWorks enterprises that cannot be migrated: 0
```

```
BroadWorks users that can be successfully migrated: 4
```

```
BroadWorks users that cannot be migrated: 0
```

```
Phones that can be successfully migrated: 3
```

```
Phones that are not compatible with Webex Calling: 0
```

### Exception Report

Transform Tool generates the exception report inside the `output/<timestamp>/exception_report.txt` directory. You can use this report to identify the issues that will affect the migration and fix them in the Cisco BroadWorks system.

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After modifying the user data to resolve the exception, rerun the Extract and Transform Tools with the new data. The sample exception report file as follows:

*Exception Report*

*Tue Oct 18 08:12:09 2022*

*Enterprises with Communication Barring Feature*

*Recommendation: manually configure the Outgoing Calling Plan in Control Hub*

---

*collabmigrationtestGRP\_engg*

### Output

An output JSON (*customer.json*) file will be available in the *output/<timestamp>/<groupid>* directory.

The sample *customer.json* file is as follows:

```
{
  "customer": {
    "provisioningId": "!!!!!!!!!!REPLACE_WITH_PROVISIONINGID!!!!!!!!!!",
    "packages": [
      "webex_calling",
      "common_area_calling"
    ],
    "externalId": "external_id_engg_grp1",
    "address": {
      "addressLine1": "100 Main Street",
      "addressLine2": "",
      "city": "Gaithersburg",
      "stateOrProvince": "MD",
      "zipOrPostalCode": "20877",
      "country": "US"
    },
    "customerInfo": {
      "name": "Engineering Group - 1",
      "primaryEmail": "amareswaranvel+engineeringgroup1@gmail.com"
    },
    "provisioningParameters": {
      "calling": {
        "location": {
          "name": "Main",
          "address": {
            "addressLine1": "100 Main Street",
            "addressLine2": ""
          }
        }
      }
    }
  }
}
```



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```
"city": "Gaithersburg",
"stateOrProvince": "MD",
"zipOrPostalCode": "20877",
"country": "US"
},
"timezone": "America/New_York",
"language": "en_us",
"numbers": [
  "+15205551101",
  "+15205551102",
  "+15205551103",
  "+15205551104",
  "+15205551105",
  "+15205551106",
  "+15205551107",
  "+15205551108",
  "+15205551109",
  "+15205551110"
],
"mainNumber": "+15205551101"
}
}
}
},
"broadworks_info": {
  "service_provider_id": "collabmigrationtestSP_engg",
  "group_id": "collabmigrationtestGRP_engg"
},
"subscribers": [
  {
    "amareswaranvel+benjaminjack@gmail.com": {
      "subscriber": {
        "customerId": "!!!!!!!!!!REPLACE_WITH_CUSTOMERID!!!!!!!!!!",
        "email": "amareswaranvel+benjaminjack@gmail.com",
        "package": "webex_calling",
        "provisioningParameters": {
          "firstName": "Benjamin",
          "lastName": "Jack",
          "primaryPhoneNumber": "+15205551102",
          "extension": "1102"
        }
      }
    }
  },
}
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

```
"features": [  
  {  
    "/v1/people/{personId}/features/voicemail": {  
      "enabled": true,  
      "sendBusyCalls": {  
        "enabled": true,  
        "greeting": "DEFAULT"  
      },  
      "sendUnansweredCalls": {  
        "enabled": true,  
        "greeting": "DEFAULT",  
        "numberOfRings": 3  
      },  
      "messageStorage": {  
        "mwiEnabled": true,  
        "storageType": "EXTERNAL",  
        "externalEmail": "engineering17861@mailnator.com"  
      }  
    }  
  }  
],  
"devices": [  
  {  
    "cisUuid": "!!!!!!!!!!REPLACE_WITH_PERSONID!!!!!!!!!!",  
    "product": "DMS Cisco 7861",  
    "mac": "CC98914EAAD7"  
  }  
]  
}  
},  
{  
  "amareswaranvel+lucasoliver@gmail.com": {  
    "subscriber": {  
      "customerId": "!!!!!!!!!!REPLACE_WITH_CUSTOMERID!!!!!!!!!!",  
      "email": "amareswaranvel+lucasoliver@gmail.com",  
      "package": "webex_calling",  
      "provisioningParameters": {  
        "firstName": "Lucas",  
        "lastName": "Oliver",  
        "primaryPhoneNumber": "+15205551103",  
        "extension": "1103"  
      }  
    }  
  }  
}
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

```
},
"features": [
  {
    "/v1/people/{personId}/features/voicemail": {
      "enabled": true,
      "sendBusyCalls": {
        "enabled": true,
        "greeting": "DEFAULT"
      },
      "sendUnansweredCalls": {
        "enabled": true,
        "greeting": "DEFAULT",
        "numberOfRings": 3
      },
      "messageStorage": {
        "mwiEnabled": true,
        "storageType": "EXTERNAL",
        "externalEmail": "engineering16821@mailnator.com"
      }
    }
  }
],
"devices": [
  {
    "cisUuid": "!!!!!!!!!!REPLACE_WITH_PERSONID!!!!!!!!!!",
    "product": "DMS Cisco 6821",
    "mac": "5486BCAE7E45"
  }
]
},
{
  "amawarwanvel+leojackson@gmail.com": {
    "subscriber": {
      "customerId": "!!!!!!!!!!REPLACE_WITH_CUSTOMERID!!!!!!!!!!",
      "email": "amawarwanvel+leojackson@gmail.com",
      "package": "webex_calling",
      "provisioningParameters": {
        "firstName": "Leo",
        "lastName": "Jackson",
        "primaryPhoneNumber": "+15205551104",
        "extension": "1104"
      }
    }
  }
}
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

```
    }
  },
  "features": [
    {
      "/v1/people/{personId}/features/voicemail": {
        "enabled": true,
        "sendBusyCalls": {
          "enabled": true,
          "greeting": "DEFAULT"
        },
        "sendUnansweredCalls": {
          "enabled": true,
          "greeting": "DEFAULT",
          "numberOfRings": 3
        },
        "messageStorage": {
          "mwiEnabled": true,
          "storageType": "EXTERNAL",
          "externalEmail": "engineeringmacpc@mailnator.com"
        }
      }
    }
  ],
  "devices": []
}
},
{
  "amareswaranvel+owenalex@gmail.com": {
    "subscriber": {
      "customerId": "!!!!!!!!!!REPLACE_WITH_CUSTOMERID!!!!!!!!!!",
      "email": "amareswaranvel+owenalex@gmail.com",
      "package": "webex_calling",
      "provisioningParameters": {
        "firstName": "Owen",
        "lastName": "Alexander",
        "primaryPhoneNumber": "+15205551101",
        "extension": "1101"
      }
    }
  },
  "features": [
    {
      "/v1/people/{personId}/features/voicemail": {
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

```
"enabled": true,
"sendBusyCalls": {
  "enabled": true,
  "greeting": "DEFAULT"
},
"sendUnansweredCalls": {
  "enabled": true,
  "greeting": "DEFAULT",
  "numberOfRings": 3
},
"messageStorage": {
  "mwiEnabled": true,
  "storageType": "EXTERNAL",
  "externalEmail": "engineering8811@mailnator.com"
}
}
}
],
"devices": [
  {
    "cisUuid": "!!!!!!!!!!REPLACE_WITH_PERSONID!!!!!!!!!!",
    "product": "DMS Cisco 8811",
    "mac": "F87B204E4066"
  }
]
}
},
"auto_attendants": [],
"call_queues": [],
"hunt_groups": [],
"schedules": [],
"call_parks": [],
"call_pickups": [],
"paging_groups": [],
"voice_portals": [
  {
    "name": "Automated Voice Portal",
    "firstName": "Automated",
    "lastName": "Voice Portal",
    "languageCode": "en_us",
    "phoneNumber": "+15205551105",
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

```
"extension": "1105"
}
],
"shared_call_appearances": [],
"business_communicator_desktop_to_upgrade_to_webex_app": [
  "PC Comm - Engg Device Profile"
],
"connect_client_to_upgrade_to_webex_app": [],
"locations": [],
"webex_for_broadworks_info": {
  "users": [
    {
      "id":
"Y2IzY29zcGFyazovL3VzL1NVQINDUKICRVIVY2QzNGViNWYtYTVmMi00OWQ1LTlkNWMTZTg1MDJiMDE4YTQ5"
    }
  ],
  "hydra_orgId":
"Y2IzY29zcGFyazovL3VzL09SR0FOSVpBVEIPTi9jMjIiYTMwNC1mODQ4LTRlOTktYWVmYy0zYWwRIMjBmYTgzZTg",
  "hydra_customer_config_id":
"Y2IzY29zcGFyazovL3VzL0VOVEVSUFJJU0UvYmlyMzA1MDEtMTUzMS00MzNiLTlIM2QtODExY2FIYTEyYmVk"
}
}
```

**Note:** The `webex\_for\_broadworks\_info` JSON property is present for Webex for BroadWorks migrations only. The `broadcloud\_info` JSON property is present for BroadCloud migrations only.

## Provisioning Tool

The Provisioning tool can run on any machine usually the (partner's administrator laptop) and uses the Webex Public APIs. It reads the transform tool output JSON (*customer.json*) file as an input and provisioning the customers, locations, numbers, users, services, and devices in the Webex Wholesale RTM solution.

## Prerequisites

Configure the following prerequisites inside the provisioning tool directory:

1. Install Java 8, 11, or 17 on the computer. Java is available from many sources, including:  
<https://learn.microsoft.com/en-us/java/openjdk/download>  
<https://aws.amazon.com/corretto/>  
[https://download.oracle.com/java/17/latest/jdk-17\\_macos-x64\\_bin.dmg](https://download.oracle.com/java/17/latest/jdk-17_macos-x64_bin.dmg)
2. After downloading and extracting the Migration tools binaries, set the JAVA\_HOME environment variable in the provisioning\_tool.sh for MAC and provisioning\_tool.bat for Windows.
3. The partner.cfg file:

## Migration Tools for BroadWorks to Wholesale RTM Migrations

- Set the WHOLESale\_PROVISIONING\_ID and REFRESH\_TOKEN (Token copied from the Token Generator Tool). The partner administrators must contact their account team to get the PROVISIONING\_ID:

```
WHOLESale_PROVISIONING_ID = Y2U4YWQxYmQtMWZlNy00NjRiLWExMmItMGJkODMzN2U5NmU0  
REFRESH_TOKEN=MzUwYjJjODEtYmQ4MS00NGVhLTgwNGUtZjQ1NTEyZTViNzJkOTdj
```

- Set ALLOW\_ADMIN\_INVITE\_EMAILS to false, if partner don't want to send welcome email to the users. Default value is true.
4. Use WEBEX4BWKS\_EMAIL\_SUBJECT property for Webex for BroadWorks migrations to send the change password request email subject for Webex for BroadWorks subscribers.
  5. Use WEBEX4BWKS\_EMAIL\_BODY property for Webex for BroadWorks migrations to send the change password request email body for Webex for BroadWorks subscribers.

For BroadCloud migrations same region,

1. Tool will skip the numbers, devices and Shared Call Appearances provisioning.
2. Tool will create users and virtual users with extension and temporary extension.

For BroadCloud migrations another region,

1. Tool will provision numbers, devices and Shared Call Appearances.
2. Tool will create users and virtual users with actual phone numbers and extension.

Note : All Europe BroadCloud migrations are to another region.

## Instructions to Run

Use the below steps to run the tool in Windows and macOS:

### Windows

Execute the following steps to run the tool on Windows OS:

*To provision single customer:*

```
provision.bat -input=<Transform-Tool-Output-Customer-JSON-File-Path>
```

*To provision multiple customers:*

```
provision.bat -input=<Transform-Tool-Timestamp-Output-Directory-Path>
```

### macOS

Execute the following steps to run the tool on MAC OS:

*To provision single customer:*

## Migration Tools for BroadWorks to Wholesale RTM Migrations

```
./transform.sh -input=<Transform-Tool-Output-Customer-JSON-File-Path>
```

To provision multiple customers:

```
./transform.sh -input=<Transform-Tool-Timestamp-Output-Directory-Path>
```

## Terminal Logs

Following are the logs in the terminal on successful provisioning:

```
Tool Name: Provisioning Tool
```

```
Version: 1.15.0
```

```
***** Started Processing File : input/customer.json *****
```

```
Provisioning Customer
```

```
Waiting for customer external_id_engg_grp1 to complete provisioning...
```

```
Waiting for customer external_id_engg_grp1 to complete provisioning...
```

```
Customer external_id_engg_grp1 status : provisioned
```

```
Provisioning Numbers
```

```
Provisioning Users
```

```
Provisioning User Features
```

```
Provisioning Greetings
```

```
Provisioning Schedules
```

```
Provisioning Devices
```

```
Provisioning Shared Call Appearances
```

```
Provisioning Auto Attendants
```

```
Provisioning Call Queues
```

```
Provisioning Hunt Groups
```

```
Provisioning Group Pagings
```

```
Provisioning Call Parks
```

```
Provisioning Call Pickups
```

```
Provisioning Voice Portal
```

```
***** Completed File : input/customer.json *****
```

## Output

Provisioning Tool generates success and error reports inside the `output/<external_id>/*.success/error` files. Review output success and error logs to verify successful provisioning.

**Note:** After successful provisioning, customer administrators and end users will receive an email from the Wholesale RTM solution.



## Migration Tools for BroadWorks to Wholesale RTM Migrations

Partner administrators can verify the customer provisioning in the Partner Hub and Control Hub Portal. Refer to the following illustrations from the Partner Hub and Control Hub Portal:

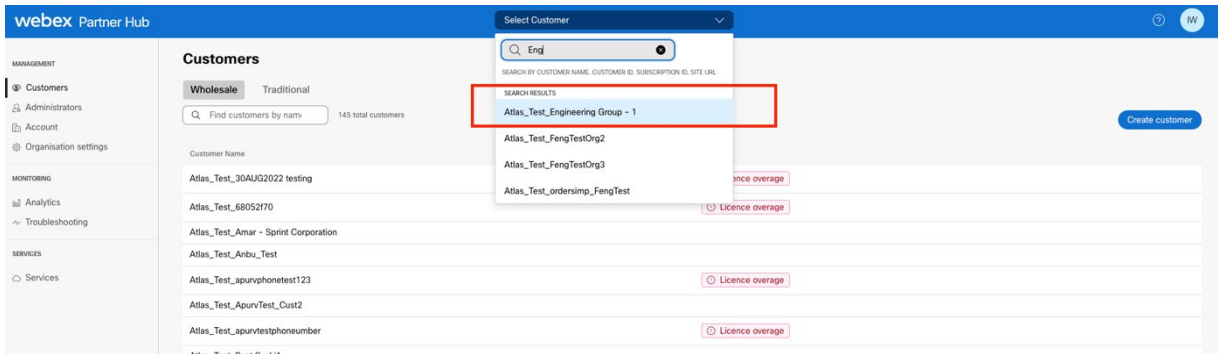


Figure 8 : Partner Hub

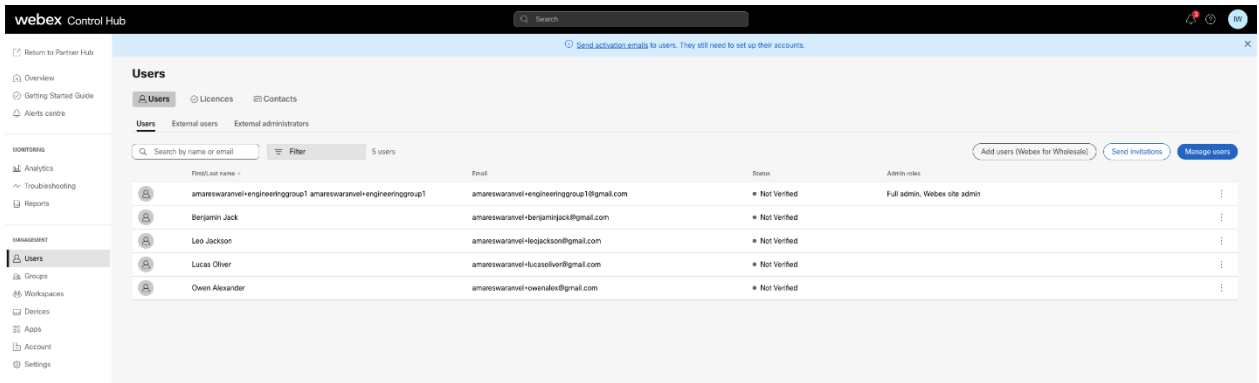


Figure 9 : Control Hub

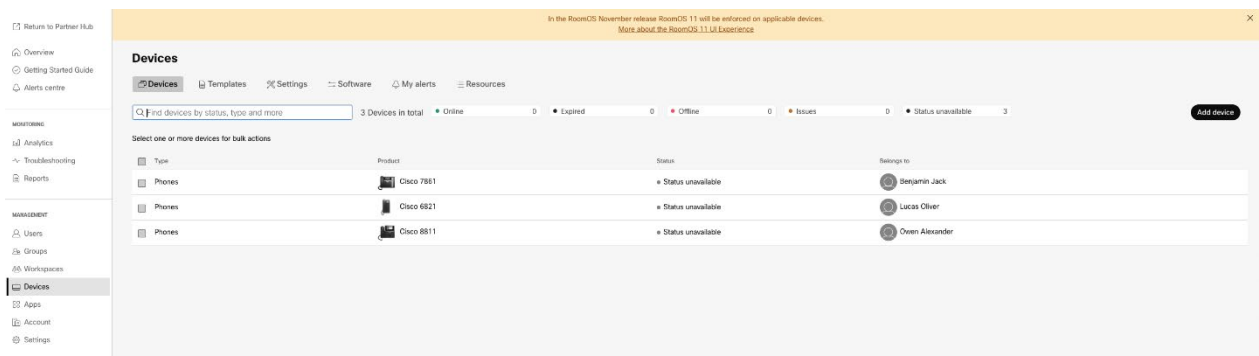
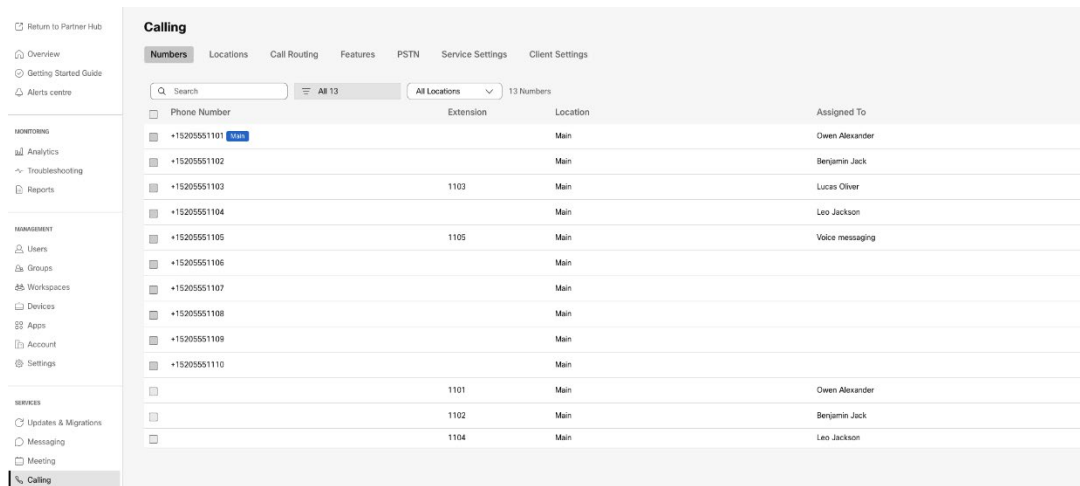


Figure 10 : Devices

## Migration Tools for BroadWorks to Wholesale RTM Migrations



The screenshot shows the 'Calling' section of a management console. It features a sidebar with navigation options like 'Return to Partner Hub', 'Overview', and 'Monitoring'. The main content area is titled 'Calling' and includes a 'Numbers' tab. A search bar and filters are visible at the top. Below is a table listing phone numbers, their extensions, locations, and assigned users.

Phone Number	Extension	Location	Assigned To
+1520551101		Main	Owen Alexander
+1520551102		Main	Benjamin Jack
+1520551103	1103	Main	Lucas Oliver
+1520551104		Main	Leo Jackson
+1520551105	1105	Main	Voice messaging
+1520551106		Main	
+1520551107		Main	
+1520551108		Main	
+1520551109		Main	
+1520551110		Main	
	1101	Main	Owen Alexander
	1102	Main	Benjamin Jack
	1104	Main	Leo Jackson

Figure 11 : Calling

## Device Move Tool

### Device Move Tool for BroadCloud

For BroadCloud partners, use the Service Provider portal to submit a migration request for numbers, devices and SCA migrations.

Within the Service Provider portal, a migration request can include up to 50 customers. A maximum of 10 requests can be submitted within a day.

The figures below show the Service Provider portal.



Figure 12 : Service Provider portal

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Figure 13 : Service Provider portal

### Device Move Tool for Cisco BroadWorks and Webex for BroadWorks

For Cisco BroadWorks and Webex for BroadWorks migrations, the tool runs on the secondary Cisco BroadWorks Application Server within the partner network and connects to the AS via OCI-P. It uses the Transform Tool output JSON (*customer.json*) file as input and execute the OCI-P commands to migrate devices and soft clients.

On successful operation, the Device Move Tool will:

1. De-register devices from the Cisco BroadWorks and register them in Wholesale.
2. Users using the UC-One client will redirect to the Webex App on first-time login.
3. Deactivate the Phone Numbers from Cisco BroadWorks or remove the phone numbers from BroadCloud.
4. Activate numbers in Wholesale.
5. Create Shared Call Appearances in Wholesale for BroadCloud migrations. [This step is applicable only for BroadCloud migrations].

**Note:** If there are no devices registered with Cisco BroadWorks or BroadCloud that has to be migrated, then there is no need to run the Device Move Tool.

### SCP and SSH

1. SCP the device move tool to the secondary Cisco BroadWorks Application Server.
2. SSH to the secondary Cisco BroadWorks Application Server to configure the prerequisites and run the device move tool.

### Prerequisites

1. Set the REFRESH\_TOKEN (*Token copied from the Token Generator Tool*) in the conf/partner.cfg file:

```
REFRESH_TOKEN=MzUwYjJjODEtYmQ4MS00NGVhLTgwNGUtZjQ1NTEyZTViNzJkOTdj
```

## Migration Tools for BroadWorks to Wholesale RTM Migrations

2. Ensure the secondary Cisco BroadWorks Application Server User ID, Password, and Host Name are correct in the `conf/deviceMoveTool.conf` file:

```
BROADWORKS_USER_ID = admin
BROADWORKS_PASSWORD = admin
BROADWORKS_HOST_NAME = localhost
```

3. Verify the JDK/JRE environment path is correct in `devicemove.sh`

```
JAVA_HOME=/usr/local/java/java_base
```

### Polycom Phones

To move Polycom phones from Cisco BroadWorks to Wholesale Calling, a partner administrator must create a new Identity/Device Profile Type File at the System level in Cisco BroadWorks **each** Polycom device template. Refer to figure 14 and upload the custom file `device-move-tool/conf/deviceProfile/{region}/polycom_vvx.cfg`. After uploading the new device file, ensure the newly created file exists at the Group level. Also ensure that file `migration_%BWMAC ADDRESS%.cfg` does not conflict with any existing file in your system).

**Note:** `device-move-tool/conf/deviceProfile/{region}/polycom_vvx2.cfg`

It is used internally by the device move tool.

The migration process for Polycom phones :

1. The device move tool replaces file `%BWMACADDRESS%.cfg` at the device level with `polycom_vvx2.cfg`. Note that this file refers to `migration_%BWMAC ADDRESS%.cfg`.
2. Rebuild the device profiles at the group level or device level<sup>2</sup>.
3. The device move tool asks the Cisco BroadWorks Application Server to reboot phones at the group level or device level.
4. After the reboot request, Polycom phones download and process `%BWMACADDRESS%.cfg`, which asks the Polycom phones to download and process `migration_%BWMACADDRESS%.cfg`, which sets the `device.prov.serverName` to `https://plcm.sipflash.com`<sup>3</sup>
5. The Polycom phone downloads `%BWMACADDRESS%.cfg` from `https://plcm.sipflash.com` and will be managed by the Webex Calling DMS.

---

<sup>2</sup> Acting at the group level or device level depends on the configuration of parameter `deviceLevelRebuild` in file

<sup>2</sup> Acting at the group level or device level depends on the configuration of parameter `deviceLevelRebuild` in file `device-move-tool/conf/partner.cfg`.

<sup>3</sup> `https://plcm.sipflash.com` for the US region, other regions have different URLs.

## Migration Tools for BroadWorks to Wholesale RTM Migrations

device-move-tool/conf/partner.cfg.

3 https://plcm.sipflash.com for the US region, other regions have different URLs.

The screenshot shows a web browser window displaying the BroadSoft administration interface. The page title is "Identity/Device Profile Type File Add". The breadcrumb navigation shows "System > DMS Polycom VVX311". The user is logged in as "Default Administrator". The page contains several form fields and options:

- Device Access File Format:** migration\_%BWMACADDRESS%.cfg
- Repository File Format:** migration\_%BWMACADDRESS%.cfg
- File Category:**  Static  Dynamic Per-Type  Dynamic Per-Device
- File Customization:** Disallow (dropdown menu)
- Allow Upload from Device
- Default Extended File Capture Mode
- Assign File:**  Manual  Custom
- Upload File:** Parcourir... polycom\_vvx.cfg
- Currently Using File:** (empty text area)
- File Authentication:**
  - Authentication Mode:**  MAC-Based  User Name and Password
  - MAC Address In:**  HTTP Request URI  HTTP Header  Client Certificate
  - MAC Address Format:** (empty text field)
  - Device Access HTTP Authentication:**  Basic  Digest
  - Allowed Access Protocols:**  http  https  tftp

Figure 14 : Identity/Device Profile type File Add

**Note:** The field "MAC address in:", use the same values as the other files in the Polycom template. (In the figure 14, use HTTP request URI, but this may not be appropriate for the partner's Cisco BroadWorks Application Server deployment).

### Instructions to Run

There are two methods to invoke the DMT, first one is to invoke through single customer at a time and the other is to run through multiple customers simultaneously.

The Device Move Tool is run from the secondary Cisco BroadWorks Application Server inside the device move tool directory:

## Migration Tools for BroadWorks to Wholesale RTM Migrations

For device move single customer:

```
./devicemove.sh -input=<Transform-Tool-Output-Customer-JSON-File-Path>
```

```
./devicemove.sh -input=/tmp/customername.json
```

For device move multiple customers:

```
./devicemove.sh -input=<Transform-Tool-Timestamp-Output-Directory-Path>
```

```
ls -l /tmp/directoryofcustomers/
```

```
customer1.json
```

```
customer2.json
```

```
customer3.json
```

Additionally, the device move tool supports migrate single/specific phone(s) from 1.35.0 release.

Use the command below:

```
./devicemove.sh -integration -input= <Transform-Tool-Output-Customer-JSON-File-Path> -  
macaddress=4CBC4883A6F8,48256741CBE9
```

## Terminal Logs

Following are the logs in the terminal on successful running the device move tool for device migration:

Tool Name: Device Move Tool

Version: 1.15.0

Device Tool Started...

Valid Devices for migration :

```
-----  
| Device Type | Mac | Version | Email |  
-----
```

```
| DMS Cisco 7861 | CC98914EAAD7 | Cisco-CP-7861-3PCC/11.3.7_cc98914ead7_ |  
amareswaranvel+benjaminjack@gmail.com |
```

```
| DMS Cisco 6821 | 5486BCAE7E45 | Cisco-CP-6821-3PCC/11.3.7_5486bcae7e45_ |  
amareswaranvel+lucasliver@gmail.com |
```

```
| DMS Cisco 8811 | F87B204E4066 | Cisco-CP-8811-3PCC/11.3.7_f87b204e4066_ |  
amareswaranvel+owenalex@gmail.com |  
-----
```

Do you want to migrate all these devices? ([Y]es or [N]o)

yes

Uploading Device Profiles for DMS Cisco MPP LC

Rebuild Device Process Started

Rebuild Device Process Completed Successfully

Reboot Process Started

## Migration Tools for BroadWorks to Wholesale RTM Migrations

Reboot Process Completed Successfully

Modifying profiles for Business Communicator under group collabmigrationtestGRP\_engg

Activate webex phone numbers process started for customer org id : 85ea1d6f-ff9e-41a1-843f-7362aaf12b4c

Activate webex phone numbers process completed for customer org id : 85ea1d6f-ff9e-41a1-843f-7362aaf12b4c

Deactivate broadworks phone numbers process started for groupId : collabmigrationtestGRP\_engg

Deactivate broadworks phone numbers process completed for groupId : collabmigrationtestGRP\_engg

Device Migration Completed

### Device Move Tool Output

After the device migration, devices have come online and ready to make/receive calls. Refer to figure 15 to see an example of the device status:

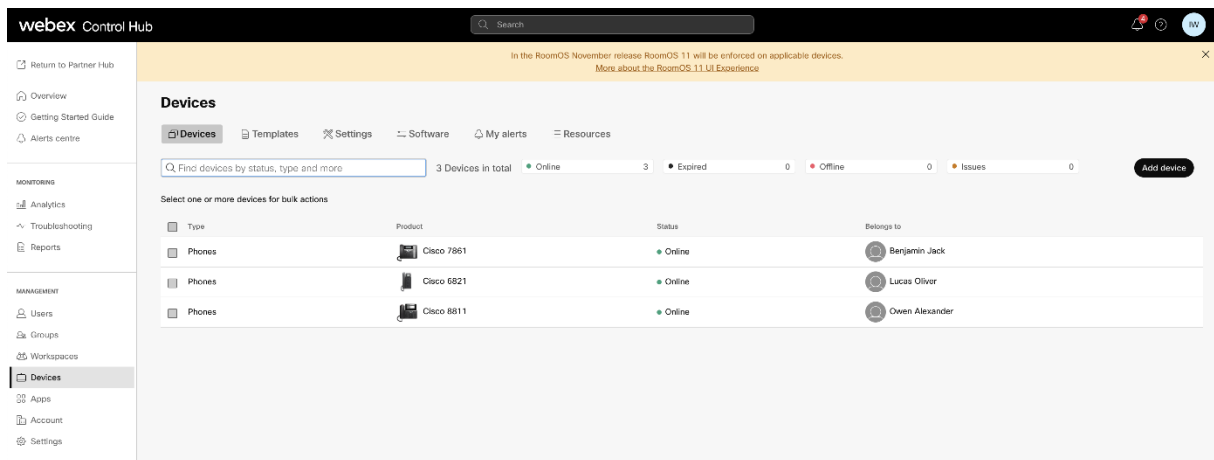


Figure 15 : Device status

After the device migration, numbers have come active. Refer to figure 16 to see an example of numbers are active:

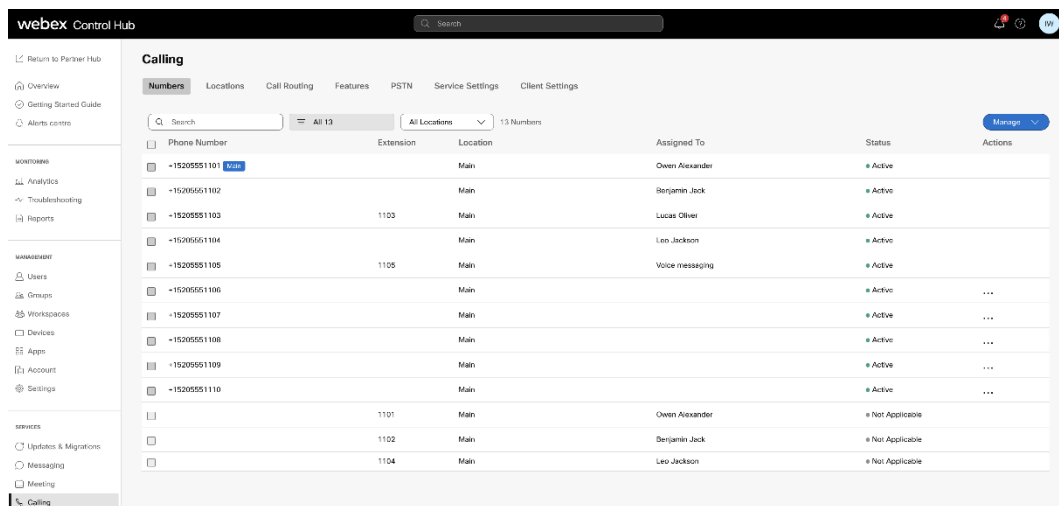


Figure 16 : Numbers active

## Revert Migration

The revert operation must be executed for one enterprise at a time.

Note: Device Move Tool does not inactivate the numbers in the Wholesale Calling due to technical limitations during the revert operation.

### Revert Migration – BroadCloud Carrier

The revert process for BroadCloud partners is as follows:

1. Open a ticket with Cisco TAC to request a device revert
2. Run the Device Move Tool on revert mode:
  - a. Phone numbers will be unassigned from Webex Calling, leaving users and services with extensions only.
  - b. Email addresses in Webex Calling will be reverted to temporary email addresses.
  - c. Phones will be deleted from Webex Calling
  - d. Phone numbers, email addresses used as alternatedIds, and phones will be recreated in BroadCloud
  - e. Phones will be rebooted
3. Partner administrators must move PSTN phone numbers back to BroadCloud Carrier.

### Revert Migration – Cisco BroadWorks and Webex for BroadWorks

The revert process for Cisco BroadWorks and Webex for BroadWorks is as follows:

1. Open a ticket with Cisco TAC to request a device revert
2. Run the Device Move Tool on revert mode on the secondary BroadWorks Application Server to revert the device migrations.

This will set the DMS URL back to the service provider DMS URL for device profiles in Cisco BroadWorks and re-activate phone numbers.

3. The Webex Calling Team sets the DMS URL back to the service provider DMS URL in device profiles in Webex Calling.
4. Partner administrators must deactivate or delete the phone numbers in the Webex Calling through the Control Hub portal.
5. Partner administrators must move PSTN phone numbers back to Cisco BroadWorks.

### Instructions to run Device Move Tool in Revert Mode



## Migration Tools for BroadWorks to Wholesale RTM Migrations

Follow the steps below to run the Device Move Tool in revert mode:

Run the command below in the secondary Cisco BroadWorks Application Server inside the device move tool directory:

### Revert Profiles

```
./devicemove.sh -input= <Transform-Tool-Output-Customer-JSON-File-Path> -revertProfiles
```

### Revert Numbers

```
./devicemove.sh -input= <Transform-Tool-Output-Customer-JSON-File-Path> -revertNumbers
```

## Terminal Logs

We will get the following logs in the terminal on successful running the device move tool for revert operation:

### Revert Profiles

Tool Name: Device Move Tool

Version: 1.15.0

Device Tool Started for Revert Process...

Devices that can be moved back from Webex Calling to BroadWorks:

```
-----  
| Device Type | Mac | Version | Email |  
-----  
| DMS Cisco 7861 | CC98914EAAD7 | Cisco-CP-7861-3PCC/11.3.7_cc98914eaa7_ | amareswaranvel+benjaminjack@gmail.com |  
| DMS Cisco 6821 | 5486BCAE7E45 | Cisco-CP-6821-3PCC/11.3.7_5486bcae7e45_ | amareswaranvel+lucasoliver@gmail.com |  
| DMS Cisco 8811 | F87B204E4066 | Cisco-CP-8811-3PCC/11.3.7_f87b204e4066_ | amareswaranvel+owenalex@gmail.com |  
-----
```

Do you want to move back these devices from Webex Calling to BroadWorks? (Yes, Y, No, N):

yes

Uploading Device Profiles for DMS Cisco MPP LC

Rebuild Device Process Started

Rebuild Device Process Completed Successfully

Reboot Process Started

Reboot Process Completed Successfully

Device Migration Completed for Deprovision Process

### Revert Numbers

Tool Name: Device Move Tool

Version: 1.15.0

Do you want to continue reverting numbers to Broadworks ? ([Y]es or [N]o):

Y

## Migration Tools for BroadWorks to Wholesale RTM Migrations

[+15205551101, +15205551102, +15205551103, +15205551104, +15205551105, +15205551106, +15205551107, +15205551108, +15205551109, +15205551110]

Starting revert

Activate broadworks phone numbers process started for groupId : collabmigrationtestGRP\_engg

Activate broadworks phone numbers process completed for groupId : collabmigrationtestGRP\_engg

Device Migration Revert process Completed Successfully

## Appendix

### Time Zones

USA:

"timeZones":["America/Adak","America/Anchorage","America/Chicago","America/Denver","America/Los\_Angeles","America/New\_York","America/Phoenix","Pacific/Honolulu"]

Canada:

"timeZones":["America/Dawson\_Creek","America/Edmonton","America/Halifax","America/Montreal","America/Regina","America/St\_Johns","America/Vancouver","America/Winnipeg"]

Australia:

"timeZones":["Australia/Adelaide","Australia/Brisbane","Australia/Broken\_Hill","Australia/Darwin","Australia/Hobart","Australia/Lord\_Howe","Australia/Perth","Australia/Sydney"]

France: "timeZones":["Europe/Paris"]

Portugal: "timeZones":["Atlantic/Azores","Europe/Lisbon"]}

UK: "timeZones":["Europe/London"]

Italy: "timeZones":["Europe/Rome"]