



Cisco IP Phone 7800 and 8800 Series Migration Guide (On-Premises to Multiplatform Phones)

First Published: 2019-04-01

Last Modified: 2021-11-22

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CHAPTER 1

Introduction

- [Introduction, on page 1](#)
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Introduction

This document provides instructions to perform authorized migration of Cisco IP Phone 8800 series and Cisco IP Phone 7800 series to Multiplatform firmware that is able to interoperate with third-party call control system (for example BroadSoft, Asterisk, Metaswitch).

If you are a third-party call control system (for example BroadSoft, Asterisk, Metaswitch) administrator and plan to migrate any Cisco IP Phone 7800 series and Cisco IP Phone 8800 series to Multiplatform firmware, you can refer this document. This document assumes that you are familiar with phone administration on Cisco Unified Communications Manager and on the third-party call control system.

Scope

This document provides information on the migration of Cisco on-premises phone firmware to Cisco multiplatform phone firmware.

This document doesn't contain information on configuring the phones.

Before you start the migration, you will need to have at least one of the same model with multiplatform firmware installed on your system.

The following table (list) contains the only phone models that can be migrated.

Table 1: Supported Phone Models for Migration

7800 Series (* limitations apply)	8800 Audio series	8800 Video series
CP-7811-K9=	CP-8811-K9=	CP-8845-K9=
CP-7821-K9= *(V03 to V24)	CP-8841-K9=	CP-8865-K9=
CP-7841-K9= *(V04 or later)	CP-8851-K9=	

7800 Series (* limitations apply)	8800 Audio series	8800 Video series
CP-7861-K9= *(V03 or later)	CP-8861-K9=	
CP-7832-K9=	CP-8832-K9= *(V07 and earlier)	

Related Documentation

For detailed administration information of on-premises phones, see the following *Administration Guides*:

- Cisco IP Phone 7800 Series—*Cisco IP Phone 7800 Series Administration Guide* and *Cisco IP Conference Phone 7832 Administration Guide*:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/unified-ip-phone-7800-series/products-maintenance-guides-list.html>

- Cisco IP Phone 8800 Series—*Cisco IP Phone 8800 Series Administration Guide* and *Cisco IP Conference Phone 8832 Administration Guide*:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/unified-ip-phone-8800-series/products-maintenance-guides-list.html>

For detailed administration information of multiplatform phones, see the following *Administration Guides*:

- Cisco IP Phone 7800 Series with Multiplatform Firmware—*Cisco IP Phone 7800 Series Multiplatform Phones Administration Guide* and *Cisco IP Conference Phone 7832 Multiplatform Phones Administration Guide*:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ip-phone-7800-series-multiplatform-firmware/products-maintenance-guides-list.html>

- Cisco IP Phone 8800 Series with Multiplatform Firmware—*Cisco IP Phone 8800 Series Multiplatform Phones Administration Guide* and *Cisco IP Conference Phone 8832 Multiplatform Phones Administration Guide*:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ip-phone-8800-series-multiplatform-firmware/tsd-products-support-series-home.html>

For detailed provisioning information of multiplatform phones, see the following *Provisioning Guides*:

- Cisco IP Phone 7800 Series with Multiplatform Firmware—*Cisco IP Phone 7800 Series and Cisco IP Conference Phone 7832 Multiplatform Phones Provisioning Guide*:

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ip-phone-7800-series-multiplatform-firmware/products-installation-guides-list.html>

- Cisco IP Phone 8800 Series with Multiplatform Firmware—*Cisco IP Phone 8800 Series and Cisco IP Conference Phone 8832 Multiplatform Phones Provisioning Guide* :

<https://www.cisco.com/c/en/us/support/collaboration-endpoints/ip-phone-8800-series-multiplatform-firmware/products-installation-guides-list.html>



CHAPTER 2

Migration Process

- [Conversion Process Workflow, on page 3](#)
- [Prepare for the Migration , on page 3](#)

Conversion Process Workflow

You can migrate the phone in one step without upgrading the phone to an intermediary firmware.

Use this workflow to migrate an on-premises phone to a multiplatform phone (MPP).



Important The migration process factory resets the phone, and the phone will lost information such as contacts and call history.

Procedure

	Command or Action	Purpose
Step 1	Prepare for the Migration , on page 3	Set up your phone for the pre-conversion process.
Step 2	Upgrade Your Enterprise Phone with the Latest On-Premises Firmware , on page 4	Upgrade your phone with the latest firmware.
Step 3	Migration to Multiplatform Phone Firmware Upgrade, on page 5	Upgrade the migration firmware of your phone to multiplatform phone firmware.

Prepare for the Migration

You need to prepare your phone before you start with the migration process.

Before you begin

- Migration License files—You can download the files from the License Registration Portal.

- Migration firmware files—The eDelivery email instructions you get with the license file contain a URL to the download page. Use this URL to download the zip file. Extract the files to your computer and upload them to the TFTP or HTTP server.
- Multiplatform phones firmware files—You can download these files from the Cisco's Software Download page.
- Valid TFTP or HTTP server address

Procedure

Step 1 Upload the following files to your TFTP or HTTP server that you use to transfer the files to your phone.

- Migration License files
- Migration firmware files
- MPP phones firmware files

See the *Before You Begin* section to know how to get the files.

Step 2 Host the firmware files on the server. You can also host the firmware files on the TFTP server.

`http://your-file-server.com/sip88xx.11-2-3MPP-398.loads`

Note The above example is only applicable for the Cisco IP Phone 8800 Series Multiplatform phones with audio features. You need to choose correct firmware file based on the on the phone model.

Step 3 Host the license files on the server. You can also host the license files on the TFTP server.

`http://your-file-server.com/Ent-2-Mpp-licenses/AB123456DE78.lic`

where:

your-file-server.com—server to host the files.

Ent-2-Mpp-licenses—name of the directory where enterprise to MPP conversion license files are extracted from a zip file.

AB123456DE78.lic—license file name (upper case MAC address).

Step 4 If you want to migrate the phones automatically at once, set up the supported DHCP options or EDOS redirection.

- For more information on DHCP options, see [DHCP Options Auto Provisioning, on page 7](#)
- For more information on EDOS setup, see [Cloud Provisioning \(EDOS\) References, on page 9](#)

Migration firmware is a flavour of MPP firmware. Hence, in this setup, you can use the same DHCP options and EDOS redirection that is supported in any MPP phones.

Upgrade Your Enterprise Phone with the Latest On-Premises Firmware

Your enterprise phone must be running Firmware Release 12.5(1) or later.

Procedure

- Step 1** Use the on-premises release notes to obtain the latest firmware.
- Cisco IP Phone 7800 Series: <https://www.cisco.com/c/en/us/support/collaboration-endpoints/unified-ip-phone-7800-series/products-release-notes-list.html>
 - Cisco IP Phone 8800 Series: <https://www.cisco.com/c/en/us/support/collaboration-endpoints/unified-ip-phone-8800-series/products-release-notes-list.html>
- Step 2** Use this document to upgrade individual on-premises phone to the firmware load 12.5 or later.
- <https://www.cisco.com/c/en/us/support/docs/unified-communications/unified-communications-manager-callmanager/213288-upgrade-ip-phone-firmware-individually.html>
-

Migration to Multiplatform Phone Firmware Upgrade

You can upgrade your phone with migration firmware to a Multiplatform phone firmware in one of these ways:

You can upgrade your phone to a Multiplatform phone firmware in one of these ways:

- [Migrate your Phone to a Multiplatform Phone Directly , on page 5](#)—Migrates the phone directly in one-step.
- [Provision the Phone Automatically, on page 6](#)—Provision the phones automatically when you upgrade multiple phones at once.

Migrate your Phone to a Multiplatform Phone Directly

You can now migrate your enterprise phone to a multiplatform phone easily in one step without using transition firmware load.

Before you begin

- Valid FTP server address
- Signed MPP COP file (Firmware Release 11.3(5) or later)
- CUCM server access
- An enterprise phone running SIP Firmware Release 14.(1) or later. But phone running with SIP Firmware Release earlier than 14.(1) still needs E2M COP file for the migration.

To upgrade your phone with latest firmware load, see [Upgrade Your Enterprise Phone with the Latest On-Premises Firmware , on page 4](#).

Procedure

- Step 1** In the CUCM server, select **Device > Phone**, find the specific phone and enter the MPP load file name as the **Phone Load Name**.
- Step 2** In the **Load Server** parameter, enter the load server IP address and save the settings.
- Step 3** Click **Apply Config**.

The **Requested Load ID** parameter displays the MPP load provided by you. If you access the **Phone information** screen on the phone, you can view the the same MPP firmware load. After the MPP firmware migration completes, the **Status > Product information > Software version** displays the MPP firmware load used for the process and indicates successful migration. The phone might ask for the migration license to authorize.

- Step 4** On the phone web interface of the migrated MPP phone, select **Voice > Provisioning**.
- Step 5** In the **Firmware Upgrade** section, configure the **Transition Authorization Rule** parameter by entering a value to obtain and authorize the licence from the server.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<Trans_Auth_Rule ua="na">http://10.74.51.81/prov/migration/E2312.lic</Trans_Auth_Rule>
```

- Step 6** In the **Transition Authorization Type** parameter, set the license type.

You can also configure this parameter in the configuration file (cfg.xml) by entering a string in this format:

```
<Trans_Auth_Type ua="na">Classic</Trans_Auth_Type>
```

- Step 7** Select **Ext(n) > Proxy and Registration**, and enter the corresponding proxy in the **Proxy** parameter. Then add the **User ID** under the **Subscriber Information** section.

- Step 8** Click **Submit All Changes**.

To verify if the migration is successful, check the **Software Version** and **Transition Authorization Type** values from the **Info > Status > Product Information**. You can also access **Transition Authorization Status** parameter from **Info > Download Status** to check if the authorization is successful.

Provision the Phone Automatically

Procedure

Provision your phone that is running migration firmware using DHCP options 66,160,159,150 or with EDOS cloud provisioning.

Ensure both authorization (license) file URL and upgrade URL are specified in your XML configurations in this format:

```
<Upgrade_Ruleua="na">http://your-file-server.com/sip88xx.11-2-3MPP-398.loads</Upgrade_Rule>
```

```
<Trans_Auth_Ruleua="na">http://your-file-server.com/$MAU.lic</Trans_Auth_Rule>
```

```
<Trans_Auth_Type ua="na">Classic</Trans_Auth_Type>
```

Note The above examples are only applicable for the Cisco IP Phone 8800 Series Multiplatform phones with audio features. You need to choose correct firmware file based on the on the phone model.

- For more information on DHCP options, see [DHCP Options Auto Provisioning, on page 7](#)
- For more information on EDOS setup, see [Cloud Provisioning \(EDOS\) References, on page 9](#)

DHCP Options Auto Provisioning

This DHCP option based auto provisioning works only if the Profile Rule starts with “/” character. For new phones or during the factory reset of a multiplatform phone, the Profile Rule is set to /\$PSN.xml to ensure successful auto provisioning. The phone supports DHCP options 66,160,159,150,60,43, and 125.

The supported DHCP options can be configured manually in one of the formats:

- **URL format 1**

```
<schema>://<domain><:port>/<path>
```

- **URL Format 2**

```
<schema>://<domain><:port>
```

- **IP Format 1**

```
<ip address>
```

- **Multiformat**

```
Multiformat: <url1 or ip1>;<url2 or ip2>
```

For example: DHCP Option 66 uses IP Format1, DHCP Option 150 uses multiformat with IP1; IP2, DHCP Option 160 and option 159 uses URL format 1 or URL format 2.

The following tail options are added in subsequent attempts if some URL does not work.

- tail 1: Profile Rule(\$PSN.xml)
- tail 2: /Cisco/\$PN/\$MA.cfg

For all supported DHCP options, the DHCP auto provision URL will be attempted in the following way:

1. If full URL (URL Format 1) is specified as DHCP option—the full URL is attempted and in addition tail1 and tail 2 are also attempted.

For example, if URL

```
https://10.23.45.67/path
```

is specified as DHCP option, following attempts are made.

- https://10.23.45.67/path
- https://10.23.45.67/path/\$PSN.xml

For example

```
https://10.23.45.67/path/8851-3PCC.xml
```

- https://10.23.45.67/path/Cisco/\$PN/\$MA.cfg

For example

```
https://10.23.45.67/path/Cisco/CP-8851-3PCC/001234ab45de.cfg
```

2. If URL format 2 is specified as DHCP option—two attempts are made with tail 1 and tail 2.

For example, if URL

```
https://10.23.45.67
```

is specified as DHCP option, the following attempts are made.

- `https://10.23.45.67/$PSN.xml`

For example:

```
https://10.23.45.67/8851-3PCC.xml
```

- `https://10.23.45.67/Cisco/$PN/$MA.xml`

For example:

```
https://10.23.45.67/Cisco/CP-8851-3PCC/001234ab45de.cfg
```

3. If IP format 1 is specified as DHCP option, total six attempts are made—two attempts are made with tail 1 and tail 2 with TFTP as schema, two attempts are made with tail 1 and tail 2 with HTTP as schema, and two attempts are made with tail 1 and tail 2 with HTTPS as schema.

For example: IP: 10.23.45.67 is specified as DHCP option for Cisco IP Phone Cisco 8851 with MAC 001234ab45de, the following attempts are made.

tftp:

- `tftp://10.23.45.67/$PSN.xml`

For example:

```
tftp://10.23.45.67/8851-3PCC.xml
```

- `tftp://10.23.45.67/Cisco/$PN/$MA.cfg`

For example:

```
tftp://10.23.45.67/Cisco/CP-8851-3PCC/001234ab45de.cfg
```

http:

- `http://10.23.45.67/$PSN.xml`

For example:

```
http://10.23.45.67/8851-3PCC.xml
```

- `http://10.23.45.67/Cisco/$PN/$MA.cfg`

For example:

```
http://10.23.45.67/Cisco/CP-8851-3PCC/001234ab45de.cfg
```

https:

- `https://10.23.45.67/$PSN.xml`

For example:

```
https://10.23.45.67/8851-3PCC.xml
```

- `https://10.23.45.67/Cisco/$PN/$MA.cfg`

For example:

`https://10.23.45.67/Cisco/CP-8851-3PCC/001234ab45de.cfg`

4. If multiformat is specified as DHCP option—based on “;” delimiter, the following attempts are made.
 - The first part of URL1 or IP1 is attempted based on the above DHCP options.
 - The second part URL2 or IP2 is attempted based on the above DHCP options.

Cloud Provisioning (EDOS) References

Navigate from the following documentation URLs and refer to publications on EDOS related information.

- **Account setup instructions:**

<https://community.cisco.com/t5/collaboration-voice-and-video/customer-device-activation-cda-web-portal-account-setup/ta-p/3707234>

- **Quick Start Guide:**

<https://community.cisco.com/t5/collaboration-voice-and-video/cloud-provisioning-setup-overview/ta-p/3707240>

- **User Guide:**

<https://community.cisco.com/t5/collaboration-voice-and-video/cisco-customer-device-activation-web-portal-user-guide/ta-p/3707237>

- **API Instructions:**

<https://community.cisco.com/t5/collaboration-voice-and-video/customer-device-activation-rc-api-provisioning-user-guide/ta-p/3707229>



APPENDIX **A**

Support Information


- [If You Need Phone Information](#), on page 11
- [If You Have Firmware Migration Problems](#) , on page 12
- [Additional Information and Help](#), on page 14

If You Need Phone Information

Find the IP Address of the Phone

You can gather information about your phone IP address to help your administrator troubleshoot.

Procedure

- Step 1** Press **Applications** .
- Step 2** Select **Status** > **Network Status** > ..
- Step 3** View the phone IP address in the **IPv4 status** or in the **IPv6 status** fields.
-

Find the Current Firmware Load

You can gather information about your phone firmware to help your administrator troubleshoot.

Procedure

- Step 1** Press **Applications** .
- Step 2** Select **Status** > **Product Information** > **Software version** to view the firmware version of the phone.
-

If You Have Firmware Migration Problems

If you experience problems during the firmware migration, your administrator can help troubleshoot the root cause of the problem. You can gather information to help your administrator troubleshoot.

You can provide the following report to your administrator to help resolve the issues:

1. Increase the Log Debug Level. See [Change the Log Levels](#) , on page 12
2. Start capturing ethernet packets, reproduce the problem, and stop the packet capture. Collect the packet captures. See [Capture Ethernet Packets](#), on page 12
3. Generate a problem report and download the report with a Problem Report Tool (PRT). See [Generate a Problem Report](#), on page 13 and [Download the Problem Reports](#), on page 13
4. Reset the Debug Level to **NOTICE**. See [Change the Log Levels](#) , on page 12

Change the Log Levels

By default, the log files capture routine information. When you are troubleshooting problems, you can increase the debug level to capture detailed logs.



Caution A debug log level of **DEBUG** can cause delays in the system. Only use **DEBUG** while you collect logs about a problem and return the level to **NOTICE** as soon as possible.

Procedure

- Step 1** On the phone web page, select **Admin Login > Advanced**.
 - Step 2** Select **Voice > System**.
 - Step 3** In the **Optional Network Configuration** section, set the **Debug Level** field to **DEBUG**.
 - Step 4** Click **Submit All Changes**.
 - Step 5** After the detailed log files are captured, set the **Debug Level** to **NOTICE**.
 - Step 6** Click **Submit All Changes**.
-

Capture Ethernet Packets

The Ethernet packets contain detailed information that can be used to troubleshoot problems.

Procedure

- Step 1** On the phone web page, select **Admin Login > Advanced**.
- Step 2** Select **Info > Debug Info**.

- Step 3** In the **Problem Report Tool** section, click the **Start Packet Capture** button in the **Packet Capture** field.
- Step 4** Choose **All** to capture all packets that the phone receives and select **Host IP Address** to capture packets only when source or destination is the IP address of the phone.
- Step 5** Reproduce your problem.
- Step 6** When you want to stop the packet capture, click **Stop Packet Capture**.
- Step 7** Click **Submit**.
You see a file name link in the **Capture File** field. This file contains the filtered packets. Click this file name link to download it.
-

Generate a Problem Report

To help troubleshoot the issues that you experience during firmware migration, logs from the Problem Report Tool can be used. You can generate PRT logs using the phone web page and upload them to a remote log server.

Procedure

- Step 1** On the phone web page, select **Admin Login > Advanced**.
- Step 2** Select **Info > Debug Info**.
- Step 3** In the **Problem Reports** section, click **Generate PRT**.
- Step 4** Enter the following information in the **Report Problem** screen:
- Enter the date that you experienced the problem in the **Date** field. The current date appears in this field by default.
 - Enter the time that you experienced the problem in the **Time** field. The current time appears in this field by default.
 - In the **Select Problem** drop-down list box, choose the description of the problem from the available options.
- Step 5** Click **Submit** in the **Report Problem** screen.
- The **Submit** button is enabled only if you select a value in the **Select Problem** drop-down list box.
- You get a notification alert on the phone web page that indicates if the PRT upload was successful or not.
-

Download the Problem Reports

After you generate the problem reports, you need to download the reports to help resolve any issues that you experience during firmware migration.

Procedure

- Step 1** On the phone web page, select **Admin Login > Advanced**.
 - Step 2** Select **Info > Debug Info**.
 - Step 3** In the **Problem Reports** area, click the problem report file to download.
 - Step 4** Save the file to your local system and open the file to access the problem reporting logs.
-

Additional Information and Help

If you experience problems while running migration firmware, you can factory reset the phone to troubleshoot the problem. To factory reset your phone, perform one of the following instructions.

Factory Reset the Phone from the Phone Menu

To troubleshoot the phone you can perform a factory reset.

Procedure

- Step 1** Press **Applications** .
 - Step 2** Select **Device Administration**.
 - Step 3** Select **Factory reset** and confirm.
-

Factory Reset the Phone with the Keypad

Use these steps to reset the phone to factory default settings using the phone keypad.

You have two methods to perform the factory reset by using the keypad:

- **Method 1** (recommended): Press **# > 123456789*0#**
- **Method 2**: Press **0 > 369#**

Before you begin

You must know if your phone is an original hardware release or if the hardware has been updated and re-released.

Procedure

- Step 1** Unplug the phone:
 - If using PoE, unplug the LAN cable.

- If using the power cube, unplug the power cube.

Step 2 Wait 5 seconds.

Step 3 Press and hold # and plug the phone back in.

Step 4 Do one of the following actions:

- **Method 1:** Press and hold # and plug the phone back in.
- **Method 2:** Press and hold 0 and plug the phone back in.

Only the Cisco IP Phone 6821 support the method.

Only the Cisco IP Phone 8845, 8865, 8841, 8851 and 8861 support the method. And the hardware version of Cisco IP Phone 8841, 8851, and 8861 must be 15 or later.

Step 5 On earlier hardware versions, the Mute button lights up. Wait for the Mute button to turn off.

Step 6 Press #, then press **123456789*0#** in sequence.

When you press **1**, the lights on the headset button turns off. The light on the Select button flashes when a button is pressed.

After you press these buttons, the phone goes through the factory reset process.

If you press the buttons out of sequence, the phone powers on normally.

Caution Do not power down the phone until it completes the factory reset process, and the main screen appears.

Step 7 Do one of the following actions:

- **Method 1:** Press **123456789*0#** in sequence.

After you press these buttons, the phone goes through the factory reset process.

If you press the buttons out of sequence, the phone powers on normally.

Caution Do not power down the phone until it completes the factory reset process, and the main screen appears.

- **Method 2:** Press **369#** in sequence.

For Cisco IP Phone 6821, after you press these buttons, the phone still remains on the same screen, and all LEDs change to solid green.

After you press these buttons, the phone still remains on the same screen, and all LEDs change to solid green.

For the Cisco IP Phone 8845, 8865, 8841, 8851 and 8861, the phone screen disappears. At the same time, the lights on the Headset, Speaker, and Mute are flashing.

Step 8 If you use the **Method 2**, unplug and plug in the phone again to reboot it.

After the phone reboots, the main screen appears.

