



CHAPTER 17

DMP Remote Control and Its Emulation

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Audience

We prepared this material with specific expectations of you.

- ✔ You want to emulate the DMP remote control on mobile phones or Cisco IP phones.
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Concepts

- [Overview, page 17-1](#)
- [Restrictions, page 17-2](#)
- [Workflow to Provision Emulator Service for IP Phones, page 17-3](#)

Overview

Topics in this section describe a software-based emulator that you can use in place of, or in addition to, the remote control unit for a DMP.



Note

- **Although Cisco sells a physical remote control device for use with DMPs that deliver Cisco Cast programming to their attached displays, the remote control unit is an optional accessory for a DMP.**
 - To learn about the remote control unit, see its documentation on Cisco.com.
 - The emulated remote control supports changing channels for Cisco Cast, navigating in the Cisco Cast menu system, and adjusting audio volume settings for a DMP.
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Restrictions

- [Audio Muting Restrictions, page 17-2](#)
- [Channel-Changing Restrictions, page 17-2](#)
- [DMP 4310G Support, page 17-2](#)
- [User Permissions Restrictions, page 17-2](#)

Audio Muting Restrictions

When your DMP 4400G connects from its SPDIF audio interface to an external display or receiver, your DMP remote control cannot mute the audio. (CSCty77943; CSCth12215)

Channel-Changing Restrictions

- When you use a handheld or emulated remote control to operate the Cisco Cast EPG for a DMP 4400G, avoid changing channels more than once in 3 seconds. Otherwise, the DMP must queue your repeated commands to a buffer and then call them sequentially for processing. This operation can cause a visible lag, during which your display goes black for a split-second (CSCtn04167).
- Remote control keymapping falls out of sync when you change a button's "keypress" MIB value more than 208 times without restarting your DMP (CSCsr61876). Until you have restarted your DMP, any subsequent attempts to change the "keypress" MIB of the affected button will not have any effect.

DMP 4310G Support

The DMP 4310G does not support remote control emulation. This is primarily due to a hardware limitation within the DMP 4310G which cannot process/convert the commands sent by a hand-held remote into keypresses.

Solution Switch to the DMP 4400G or DMP 4305G devices which both support remote control emulation.

User Permissions Restrictions

**Note**

Features of Cisco Cast are hidden from you until your user role assignment is **APPLICATION MANAGER** and you have explicit **WRITE** permissions (CSCtr05337).

Workflow to Provision Emulator Service for IP Phones

You can provision a service from Cisco Unified Communications Manager that emulates the handheld DMP remote control unit on Cisco IP phones. This workflow assumes that you are experienced as an administrator in Cisco Unified Communications Manager and that you use it already to manage a network of IP phones.



Tip Skip this workflow if you will not use any IP phones to emulate the remote control.

1. Complete these tasks in CUCM.

- a. [Activate Services, page 17-4](#)
- b. [Start Services, page 17-5](#)
- c. [Configure URL Parameters, page 17-5](#)
- d. [Enable IP Phone Autoregistration, page 17-6](#)
- e. [Define IP Phone Service Attributes, page 17-6](#)
- f. [Expose the Service to IP Phones, page 17-7](#)



Note Emulator-related configuration changes that you make on your Cisco Unified Communications Manager server do not become useful until after you also configure Cisco Cast to serve the emulator, and configure at least one IP phone to run the emulator.

2. Complete these tasks in Cisco Cast.

- [Configure Emulator Settings in Cast, page 17-8](#)

3. Complete these tasks on phones, as needed.

- a. [Configure an IP Phone to Emulate the Remote Control, page 17-9](#)
- b. [Start the Emulator on an IP Phone, page 17-10](#)
- c. [Start the Emulator on a Mobile Phone, page 17-11](#)
- d. [Use the Emulator on an IP Phone or a Mobile Phone, page 17-11](#)



Note

This workflow is based on Cisco Unified Communications Manager release 6.1. When you use any other release, the workflow might differ slightly in your network. We recommend that you read on Cisco.com the particular revisions of these guides that apply to your network.

- *Cisco Unified Communications Manager Administration Guide*
 - *Cisco Unified Serviceability Administration Guide*
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Procedures

In Cisco Unified Communications Manager

- [Activate Services, page 17-4](#)
- [Start Services, page 17-5](#)
- [Configure URL Parameters, page 17-5](#)
- [Enable IP Phone Autoregistration, page 17-6](#)
- [Define IP Phone Service Attributes, page 17-6](#)
- [Expose the Service to IP Phones, page 17-7](#)

In Cisco Cast

- [Configure Emulator Settings in Cast, page 17-8](#)

On Phones

- [Configure an IP Phone to Emulate the Remote Control, page 17-9](#)
- [Start the Emulator on an IP Phone, page 17-10](#)
- [Start the Emulator on a Mobile Phone, page 17-11](#)
- [Use the Emulator on an IP Phone or a Mobile Phone, page 17-11](#)

Activate Services

Procedure

- Step 1** Log in to Cisco Unified Communications Manager Administration.
- Step 2** Choose **Cisco Unified Serviceability** from the Navigation list, and then click **Go**.
- Step 3** Choose **Tools > Service Activation**.
- Step 4** Examine the Server list.
- Step 5** Choose from it a server that should support remote control emulation.
- Step 6** Click **Go**.
- Step 7** Check the **Check All Services** check box.
- Step 8** Click **Save**, and then click **OK**.
- Step 9** Stop. You have completed this procedure.
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What to Do Next

- Proceed to the [“Start Services” section on page 17-5](#).

Start Services

Before You Begin

- Activate services.

Procedure

- Step 1** Choose **Tools > Control Center - Feature Services**.
- Step 2** Click the Server list and choose from among its options the server where the remote control emulation service should be started for *Cisco Cast*.
- Step 3** Click **Go**.
- Step 4** *Repeat as many times as necessary until every service is running:*
Click the radio button for any service that is not yet running, and then click **Start**.
- Step 5** Stop. You have completed this procedure.
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What to Do Next

- Proceed to the [“Configure URL Parameters” section on page 17-5](#).

Related Topics

- [Activate Services, page 17-4](#)

Configure URL Parameters

Before You Begin

- Start services.

Procedure

- Step 1** Choose **Cisco Unified CM Administration** from the Navigation list, and then click **Go**.
- Step 2** Choose **System > Enterprise Parameters**., and then scroll to the Phone URL Parameters area.
- Step 3** Verify that you have not changed the factory-default values for these parameters.
- URL Authentication
 - URL Directories
 - URL Information
 - URL Services
- Step 4** Click **Save**.
- Step 5** Stop. You have completed this procedure.
-

What to Do Next

- Proceed to the [“Enable IP Phone Autoregistration”](#) section on page 17-6.

Related Topics

- [Start Services](#), page 17-5

Enable IP Phone Autoregistration

Before You Begin

- Configure URL parameters.

Procedure

-
- Step 1** Choose **System > Cisco Unified CM**, and then click **Find**.
- Step 2** Click the name of the server whose managed IP phones should be autoregistered.
- Step 3** Uncheck the Auto-registration disabled on this Cisco Unified Communications Manager check box.
- Step 4** Edit the range of values that starts in the Starting Directory Number field and ends in the Ending Directory Number field.
- Step 5** Click **Save**.
- Step 6** Stop. You have completed this procedure.
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What to Do Next

- Proceed to the [“Define IP Phone Service Attributes”](#) section on page 17-6.

Related Topics

- [Configure URL Parameters](#), page 17-5

Define IP Phone Service Attributes

Before You Begin

- Enable IP phone autoregistration.

Procedure

-
- Step 1** Choose **Cisco Unified CM Administration** from the Navigation list, and then click **Go**.
- Step 2** Choose **Device > Device Settings > Phone Services**.
- Step 3** Click **Add New**.
- Step 4** Enter **Cast** in these fields.
- Service Name
 - ASCII Service Name

- Step 5** Enter this URL in the Service URL field:
http://<DMM_hostname>:8080/etv-remotecontrol-webapp/app/getpin
- Step 6** Click **Save**.
- Step 7** Stop. You have completed this procedure.
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What to Do Next

- Proceed to the [“Expose the Service to IP Phones” section on page 17-7](#).

Related Topics

- [Enable IP Phone Autoregistration, page 17-6](#)

Expose the Service to IP Phones

Before You Begin

- Define IP phone service attributes.

Procedure

- Step 1** Choose **Cisco Unified CM Administration** from the Navigation list, and then click **Go**.
- Step 2** Choose **Device > Phone**.
- Step 3** Click **Find**.
- Step 4** Repeat this sequence of actions for each phone that should subscribe to the emulator:
- a. Click the name—in the Device Name (Line) column—of the managed IP phone that you will configure.

By default, this name is just **SEP** prefixed to the MAC address of the phone. However, your server might be configured to use some other naming format.
 - b. When the page refreshes, choose **Subscribe/Unsubscribe Services** from the Related Links list.

A popup window opens.
 - c. Choose **Cast** from the Select a Service List, and then click **Next**.
 - d. Choose **Cast** from the ASCII Service Name list, and then click **Subscribe**.
 - e. Verify that the message in the Status area says, “Add successful,” and that the Subscribed Services area includes “Cast.”
 - f. Close the popup window.
- Step 5** Click **Go**.
- Step 6** Stop. You have completed this procedure.
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What to Do Next

- Proceed to the “[Configure Emulator Settings in Cast](#)” section on page 17-8.

Related Topics

- [Enable IP Phone Autoregistration](#), page 17-6

Configure Emulator Settings in Cast

**Note**

Options on the Remote Control page might sometimes be dimmed and not available to you.

- Click **Save** to activate dimmed options if this occurs during Step 1.
- This occurs during Step 2 only when your choice is None. Choose either **All DMPs** or **Selected DMPs** to reactivate options that your choice dimmed.

Before You Begin

Complete the workflow in Cisco Unified Communications Manager to provision the emulator to your IP phones.

Procedure

-
- Step 1** Choose **Cast > Remote Control**.
- Step 2** Choose an option from the Display Security PIN on screen list, to set how many of your DMPs should support the emulator.
- All DMPs
 - Selected DMPs
 - None
- Step 3** (As Needed) *Did you choose Selected DMPs in Step 2?*
- If so, click **Display DMP Selections** to refine your list of which DMPs should support the emulator.
- Use check boxes to select and deselect DMPs.
 - Click **Save Selection Changes** to save your work.
 - Click **Close** to dismiss the dialog box.
- Step 4** Choose an option from the Security PIN behavior list.
- Although *Cisco Cast* randomly generates all of its emulator PINs, the fixed and dynamic types differ in their persistence.
- **Fixed**—These PINs persist until the PIN management type is changed.
 - **Dynamic**—These PINs expire and are then regenerated after an update interval that you define.
- No two DMPs in your network will use the same PIN at any one time.

Step 5 (As Needed) Did you choose the dynamic PIN type in [Step 4](#)?

If so, enter at least one digit in the Security PIN update interval (minutes) field.

The interval cannot be any less than 2 min. When you do not enter any value, *Cisco Cast* uses its factory-default interval of 5 min.

Step 6 Enter a shortened URL in the Access URL field for a page that will redirect ultimately to **http://<DMM_hostname>:8080/etv-remotecontrol-webapp/app/index.htm**.



Note The shortened URL must not be more than 24 characters long.

Step 7 Click **Save**.

OR

Click **Cancel** to discard your selections and start over again.

Step 8 Deploy the new emulator settings to your DMPs.

- a. Choose **Digital Media Players > DMP Manager**.
- b. Choose the DMP or DMP group that should use these settings.
- c. Choose **Cast** from the Actions list, and then click **Go**.

Step 9 Stop. You have completed this procedure.

Related Topics

- [Workflow to Provision Emulator Service for IP Phones, page 17-3](#)
- [Configure an IP Phone to Emulate the Remote Control, page 17-9](#)
- [Start the Emulator on an IP Phone, page 17-10](#)
- [Start the Emulator on a Mobile Phone, page 17-11](#)
- [Use the Emulator on an IP Phone or a Mobile Phone, page 17-11](#)

Configure an IP Phone to Emulate the Remote Control

You can configure a Cisco IP Phone from the 7960 series or the 7970 series to emulate the remote control for *Cisco Cast*, and then use keys drawn on its touchscreen to choose options from the electronic program guide, change channels, and adjust audio volume levels.

Before You Begin

Complete the workflow in Cisco Unified Communications Manager to provision the emulator to your IP phones.

Procedure

Step 1 Press **Settings** on your Cisco IP phone.

Step 2 Press ****#**.

A confirmation message at the bottom of the touchscreen says, “Settings Unlocked!”

Step 3 Go to **Network Configuration**, and then press **Select**.

Step 4 Go to **Alternate TFTP**, and then press **Yes**.



Tip If **Alternate TFTP** is not an option in the **Network Configuration** menu, contact the administrator for **Cisco Unified Communications Manager**.

Step 5 Click **Save**.

The IP phone is restarted automatically, so that its configuration changes can take effect.

Step 6 Stop. You have completed this procedure.

Related Topics

- [Workflow to Provision Emulator Service for IP Phones, page 17-3](#)
- [Use the Emulator on an IP Phone or a Mobile Phone, page 17-11](#)

Start the Emulator on an IP Phone

Before You Begin

- Provision the emulator for use on Cisco IP phones.
- Configure emulator settings in *Cisco Cast*.
- Configure your IP phone to emulate the remote control.
- Make note of the generated PIN code in the top-right corner of a DMP display that is showing *Cisco Cast*. The emulator cannot control the corresponding DMP without this PIN.

Procedure

Step 1 Press **Services** on your Cisco IP phone.

Step 2 Highlight the remote control option in the services list, and then press **Select**.

Step 3 Tap the **PIN** field on your touchscreen.

Step 4 Use the keypad to enter the PIN code.

Step 5 Tap **Submit** on the touchscreen.

The touchscreen is refreshed and the emulator starts.

Step 6 Stop. You have completed this procedure.

Related Topics

- [Workflow to Provision Emulator Service for IP Phones, page 17-3](#)
- [Configure Emulator Settings in Cast, page 17-8](#)
- [Use the Emulator on an IP Phone or a Mobile Phone, page 17-11](#)

Start the Emulator on a Mobile Phone

Before You Begin

- Configure emulator settings in *Cisco Cast*.
- Make note of the generated PIN code in the top-right corner of a DMP display that is showing *Cisco Cast*. The emulator cannot control the corresponding DMP without this PIN.
- This procedure assumes that you are using a supported platform. To learn which mobile phone platforms we support in this release, see our release notes on Cisco.com. An unsupported platform might not be capable of running the emulator.

Procedure

- Step 1** Start the Internet browser on your mobile phone.
- Step 2** Go to the URL that you see on the DMP display that is showing *Cisco Cast*.
You are prompted to enter the PIN.
- Step 3** Enter the PIN, and then click **Go**.
The emulator starts.
- Step 4** Stop. You have completed this procedure.
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Related Topics

- [Configure Emulator Settings in Cast, page 17-8](#)
- [Use the Emulator on an IP Phone or a Mobile Phone, page 17-11](#)

Use the Emulator on an IP Phone or a Mobile Phone

Before You Begin

- **(When you will use the emulator on an IP phone)** Complete the workflow in Cisco Unified Communications Manager to provision the emulator to your IP phones.
- Configure emulator settings in *Cisco Cast*.
- Start the emulator on your phone.

Procedure

- Step 1** Consult DMP remote control documentation on Cisco.com and pay particular attention to sections that describe button behaviors. These descriptions apply equally to the physical unit and its emulator.



Note **The emulator has fewer buttons than the physical remote control has.** You cannot invoke behaviors from the emulator which correspond to any buttons that it does not have.

- Step 2** Stop. You have completed this procedure.
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Related Topics

- [Workflow to Provision Emulator Service for IP Phones, page 17-3](#)
- [Configure Emulator Settings in Cast, page 17-8](#)
- [Start the Emulator on an IP Phone, page 17-10](#)
- [Start the Emulator on a Mobile Phone, page 17-11](#)