Configuring the Dolby® Conference Phone with Cisco® Unified Communications Manager

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Information about this guide

This guide describes the configuration required for setting up Cisco® Unified Communications Manager to work with a Dolby® Conference Phone.

This guide presumes an enterprise network environment and does not cover provisioning of the service. For additional information, contact BT Conferencing support directly.

Prerequisites

The following sections cover the information needed in order to proceed with the Cisco Unified Communications Manager configuration of your Dolby Conference Phone. You may need to speak to your local System Administrator to get these details.

System settings

You will need the following information in order to configure the phone. Take a look at what is required and have that information available before you start.

Note: Your local System Administrator can provide these details.

<table>
<thead>
<tr>
<th>Attributes</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>802.1x username</td>
<td>Optional: Username/password will be required for the phone to access the LAN and acquire an IP address if LAN authentication is in place.</td>
<td></td>
</tr>
<tr>
<td>802.1x password</td>
<td>If your network is configured this way, you can “discover” your VLAN settings by turning on the <strong>Enable LLDP</strong> setting.</td>
<td></td>
</tr>
<tr>
<td>Do the LAN switches have LLDP enabled?</td>
<td>The Dolby Conference Phone requires 13W of power to be delivered over the LAN cable. A power injector (not supplied) may also be used if PoE switches are not present.</td>
<td>Yes/No</td>
</tr>
<tr>
<td>Do the LAN switches support Power over Internet (PoE)?</td>
<td>The MAC address of the Dolby Conference Phone is required as part of the Cisco Unified Communications Manager configuration.</td>
<td></td>
</tr>
<tr>
<td>MAC Address of Dolby Conference Phone</td>
<td>The IP address of the Cisco Unified Communications Manager.</td>
<td></td>
</tr>
</tbody>
</table>
Dolby Conference Phone MAC address

You need to know the Dolby Conference Phone MAC address, which is available in two locations on the phone:

- Turn the phone over to find the address printed on a label, or
- Select 🛠 > Status > Device Info menu.

(Optional) Configure 802.1x

**Note:** Depending on your network settings and phone software version, this procedure may not be necessary.

If your LAN uses 802.1x authentication, you need to configure this on the phone before you can proceed.

To configure 802.1x authentication:

1. From the phone’s home screen, tap 🛠 and then Administrative Settings.
2. Enter the Administrator password and press Enter.
3. Select Network Configuration > 802.1x.

Cisco Unified Communications Manager IP addresses

The Dolby Conference Phones that you are deploying must be able to communicate with the Cisco Unified Communications Manager server over your network, which may necessitate them being on the same side of the organization firewall.

You will need the IP address of the Cisco Unified Communications Manager servers—primary and secondary—that you want to use.
Cisco Unified Communications Manager licensing

Each Dolby Conference Phone requires:

- Three Device License Units (DLU) if using a software licensing model, or
- One Enhanced User Connect License (UCL) if using a Unified Workspace License (UWL).

**Note:** The minimum license required to support a 3rd party SIP phone is an Enhanced User Connect License (UCL).

Cisco Unified Communications Manager SIP proxy servers

In a clustered Cisco Unified Communications Manager deployment, the SIP proxy servers must be members of the Cisco Unified Communications Manager Group that is applied to the device pool where the Dolby Conference Phones reside.

Locations for both the Device Pool as well as the Cisco Unified Communications Manager Group are found under the System menu, as shown in the following screens.
**Device Pool Information**

**Cisco Unified CM Administration**

- **System**
- **Call Routing**
- **Media Resources**
- **Advanced Features**
- **Device**
- **Application**
- **User Management**
- **Bulk Administration**
- **Help**

**Device Pool Configuration**

- **Status**
  - Status: Ready

**Device Pool Information**

- **Device Pool**
  - NYC (5 members***)

**Device Pool Settings**

- **Device Pool Name**
  - NYC
- **Cisco Unified Communications Manager Group**
  - CCM-B
- **Calling Search Space for Auto-registration**
  - TAAS
- **Ad hoc CSS**
  - <None>
- **Preferred Call Transfers**
  - Default
- **Intercompany Media Services Enrolled Group**
  - <None>

**Roaming Sensitive Settings**

- **Data/Time Group**
  - US Eastern
- **Region**
  - NYC
- **User Location Group List**
  - NYC-MHGL
- **Location**
  - NYC
- **Network Locale**
  - United States
- **SRST Reference**
  - NYC
- **Connection Monitor Duration**
  - Default
- **Single Button Barge**
  - Default
- **Join Across Lines**
  - Default
- **Physical Location**
  - NYC

**Group Information**

**Cisco Unified CM Administration**

**Cisco Unified CM Group Configuration**

- **Status**
  - Status: Ready

**Cisco Unified Communications Manager Group Information**

- **Cisco Unified Communications Manager Group: CCM-B (used by 934 devices)**

**Cisco Unified Communications Manager Group Settings**

- **Name**
  - CCM-B
- **Auto-registration Cisco Unified Communications Manager Group**

**Cisco Unified Communications Manager Group Members**

**Available Cisco Unified Communications Managers**

- wvr-ccm-d1
- wvr-ccm-d2
- 1275-ccm-01

**Selected Cisco Unified Communications Managers**

- wvr-ccm-d1
- wvr-ccm-d2
- 1275-ccm-01

---

* indicates required item.

**Selected Cisco Unified Communications Managers are ordered by highest priority.

** Only active Cisco Unified Communications Managers are available for adding to Cisco Unified Communications Manager Groups.
Process overview

The following flow diagram provides an overview of the process needed to set up the Cisco Unified Communications Manager to support the Dolby Conference Phone.

- The first three procedures are performed, in this order, using the Cisco Unified Communications Manager administrative web interface.

- The final step is performed using the Administrative web interface of the Dolby Conference Phone.

**Note:** The security profile setup is a one-time procedure necessary to create a security profile for the Cisco Unified Communications Manager.

**Cisco Unified Communications Manager Configuration Steps for Dolby Conference Phone**

1. Manual Cisco Unified Communications Manager configuration
2. Create a security profile
3. Add a system user
4. Add a device entry
5. Configure the phone
6. Phone configured for Cisco Unified Communications Manager
Cisco: Create a security profile

Note: The security profile setup is a one-time procedure necessary to create a security profile for the Cisco Unified Communications Manager.

To create a security profile for the Cisco Unified Communications Manager:

1. From the task bar, select System > Security > Phone security profile.
2. Click Add New to add a new phone security profile type.
3. Select Phone Security Profile type > Third-party SIP Device (Advanced) and click Next.
4. Under Phone Security Profile Information, enter the following information:
   a. In Name, enter a profile name.
   b. (Optional) Enter a description.
   c. Check Enable Digest Authentication.
   d. Click Save.
Result: *Add successful* displays in the status bar.

**Note:** TLS transport is not supported with Cisco Unified Communications Manager.
Cisco: Add a system user

To create a unique user for each phone you integrate with Cisco Unified Communications Manager:

1. Select **User Management > End User**.
2. Click **Add New**.
3. In the **User ID** text box, enter a user ID according to your organization’s system and account policies.
4. In the **Last name** field, enter a last name.

5. In the **Digest Credentials** and **Confirm Digest Credentials** fields, enter the digital credentials for the phone.

6. Click **Save**.

**Result:** *Add successful* displays in the status bar.
Cisco: Add a device entry

To add Dolby Conference Phone information to the Cisco Unified Communications Manager:

1. Select **Device > Phone**.
2. Click **Add New**.
3. Select **Phone Type > Third-party SIP Device (Basic)**; click **Next**.
4. Enter the device information in the text boxes, as shown:
   - **MAC Address**: DolbyConference Phone MAC address.
   - **Device Pool**: default.
   - **Phone Button Template**: select **Third-party SIP Device (Basic)**.
   - **Common Phone Profile**: standard phone profile.
   - **Location**: Hub_None
   - **Device Mobility Mode**: default.
   - **Owner User ID**: DolbyVoice (as specified in [Cisco: Add a system user](#)).
   - **Use Trusted Relay Point**: default.
   - **Always Use Prime Line**: default.
5. Configure the protocol-specific information, as shown:
   - **Presence Group**: standard presence group.
   - **Device Security Profile**: select the profile you created for the phone security settings in [Cisco: Add a system user](#).
   - **Rerouting Calling Search Space**: select an option to enable call forwarding on the phone.
   - **SIP Profile**: enter the SIP profile you want to use.
   - **Digest User**: select the user you created in [Cisco: Add a system user](#).

   ![Protocol Specific Information](image)

6. Click **Save**.

   **Result**: *Add successful* displays in the status bar.

7. Click **Apply Config**.

   A new window opens and **Status: Ready** displays. Click **OK**.
Cisco: Add a Directory Number (DN) link

**Note:** This step is not specific to the Dolby Conference Phone, but you may need to perform it if it has not been set up previously.

To add a Directory Number (DN) link:

1. In the Association Information area, click on the Line [1] — Add a new DN link.

![Association Information](image)

2. Enter the directory number information in text boxes shown in the directory number information page:
   - **Directory Number**: extension number of the device. Use this number when you update the configuration files on the provisioning server.
   - **Alerting Name**: (optional) enter an alerting name.
   - **ASCII Alerting Name**: (optional) enter an alerting name.
3. Enter the directory number information in the text boxes shown in the directory number settings area:
   - **Voice Mail Profile**: select the profile to match the Cisco Unified Communications Manager system requirements.
   - **User Hold MOH Audio Source**: select 1-SampleAudioSource (the default).

4. In the **Call Forward and Call Pickup Settings** area, choose the appropriate calling search space and set values for No Answer Ring Duration.

5. Enter the following information in the **Line 1 on Device** area:
   - In **Display (Caller ID)**, enter a caller ID. ASCII Display (Caller ID) is set to the same value.

6. In the **Multiple Call/Call Waiting Settings on Device SEP (MAC)** area:
   - **Maximum Number of Calls**: 3
   - **Busy Trigger**: 3

7. Click **Save**.

**Result**: *Add successful* displays in the status bar.
Configure the phone

The next part of the process involves configuring the Dolby Conference Phone with the Cisco Unified Communications Manager parameters you’ve set up in the previous steps (the ones appended with “Cisco” in the title).

Prerequisite: Enable IP PBX or Dual Mode

By default, the Dolby Conference Phone works as an IP PBX phone. It can also be configured to work with a conferencing service provider like BT MeetMe with Dolby Voice®.

In IP PBX Only mode, the home screen appears as shown below.

![Home screen in IP PBX Only mode](image)

In Dual mode, the home screen appears as shown below.

![Home screen in Dual mode](image)

The following table lists the parameters you can configure for this feature.

<table>
<thead>
<tr>
<th>Configuration Parameter Description</th>
<th>Configuration Parameter Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Select the operational mode.</td>
<td>Features.OperationMode</td>
</tr>
</tbody>
</table>

To set the operational mode, go to Settings > Features and select the appropriate option.
Register the Dolby Conference Phone to the Cisco Unified Communications Manager

Use this procedure to register the Dolby Conference Phone to the Cisco Unified Communications Manager.

1. If you don’t have it already, find the phone’s IP address:
   a. From the phone’s home screen, tap ![Settings icon] > ![More options icon] and then About > General.
   b. Scroll down until you see the IP address:

   ![General settings screen]

2. Using the IP address, enter the following in the browser address bar: https://<your phone IP address>.

   ![Dolby Conference Phone login screen]

Result:
3. Log in the Dolby Conference Phone using the default credentials:
   - Username = admin
   - Password = 1739

4. Select Settings > IP PBX Settings > Account.

5. Change the Account settings as shown:
   - **Display Name**: Dolby Voice (but you can rename this to anything that makes sense for your organization)
   - **Extension Number/Address**: Extension number (mandatory)
   - **Display Number**: Extension number
   - **Transport Type**: Auto (works with TCP and UDP)
   - **Secure Media**: Mandatory
   - **Transport Port**: 5060
To set the SIP Domain on Cisco Unified Communications Manager, go to System > Enterprise Parameters Configuration and enter the domain in the Organization Top Level Domain field.

6. Next, change the Server settings as shown:
   - **Primary Call Server/Outbound Proxy**: IP address of Cisco Unified Communications Manager (mandatory)
   - **Primary Server/Outbound Proxy port**: 5060
   - If Cisco Unified Communications Manager subscriber is available, enter the details in the Secondary Call Server/Outbound Proxy field

7. Update the credentials, these settings are mandatory for digest authentication):
   a. Enter the User Credential Name created in Cisco: Add a system user.
   b. Enter the User Credential Password created in Cisco: Add a system user.
   c. Confirm the password and Save.
If the information entered is correct, the phone registers with Cisco Unified Communications Manager.

8. To verify the registration with Cisco Unified Communications Manager, go to **Status > System > Device**.
Appendix

Map the Cisco Unified Communications Manager configuration to the phone

Note: This information is needed in order to register the Dolby Conference Phone to the Cisco Unified Communications Manager.

The following table maps the Cisco Unified Communications Manager configuration to the Dolby Conference Phone configuration parameters.

Cisco Unified Communications Manager to Dolby Conference Phone Parameter Mapping

<table>
<thead>
<tr>
<th>Cisco Unified Communications Manager Configuration</th>
<th>Dolby Conference Phone Configuration Parameter</th>
</tr>
</thead>
<tbody>
<tr>
<td>User ID under User Management/End User</td>
<td>Sip.Credential.Name</td>
</tr>
<tr>
<td>Digest credentials under User Management/End User</td>
<td>Sip.Credential.Password</td>
</tr>
<tr>
<td>Directory Number</td>
<td>Sip.Account.UserName</td>
</tr>
<tr>
<td>Primary server IP address (or outbound proxy)</td>
<td>Sip.Pbx.OutboundProxy1</td>
</tr>
<tr>
<td>Secondary server IP address (or outbound proxy)</td>
<td>Sip.Pbx.OutboundProxy2</td>
</tr>
</tbody>
</table>

Note: To set the SIP Domain on Cisco Unified Communications Manager, go to System > Enterprise Parameters Configuration and enter the domain in the Organization Top Level Domain field.