Cisco TelePresence Conductor with Cisco TelePresence Management Suite

Deployment Guide

XC1.2
TMS 14.1

D15001.03

October 2013

Contents

Introduction

This document is intended to be used with the Cisco TelePresence Conductor Deployment Guide (XC1.2) (D14827).

This document describes how to configure Cisco TelePresence Conductor, Cisco VCS and Cisco TelePresence MCUs with Cisco TMS. This deployment enables scheduling of conferences with participants hosted on MCUs behind a TelePresence Conductor.

You will be shown how to configure the TelePresence Conductor with templates and aliases that are reserved for scheduling. These templates and aliases can be configured to use bridges that are only used by scheduled conferences to guarantee availability, or can use bridges shared with Rendezvous conference calls for optimum bridge utilization.

This document also details how to book and edit conferences with this deployment. A section on limitations is included at the end.

For administrators with a Cisco TMS and MCUs already in place who are introducing a TelePresence Conductor to their environment, the document describes how to migrate so that existing future conferences are rebooked on the TelePresence Conductor. Reverting back to standalone MCUs is also covered.

Administrators implementing TelePresence Conductor Scheduling with Cisco TMS are assumed to be familiar with all the infrastructure products included in the deployment.

TelePresence Conductor scheduling limitations

Several limitations to TelePresence Conductor scheduling have been discovered since the release of Cisco TMS 14.1, TelePresence Conductor XC1.2, and this document.

The following are open TelePresence Conductor issues at the time of XC2.2 release:

- TelePresence Conductor does not properly load balance multiple scheduled meetings beginning at the same time across multiple MCUs or TelePresence Servers in a bridge pool. This can lead to situations where one MCU or TelePresence Server will fill up and calls will be rejected while others in the same bridge pool are underutilized.
  - As a workaround for MCUs, we recommend only adding identical capacity MCUs to a bridge pool and configuring either a content, chairperson, or cascade port on the Conference Template. Bug toolkit identifier: CSCui42818.
  - As a workaround for TelePresence Server, we recommend only adding one TelePresence Server to a bridge pool. Bug toolkit identifier: CSCui42822.
- In some situations, Cisco TMS is unable to add more than 30 dial-out participants to TelePresence Conductor-scheduled meetings, while dial-in participants are still able to join. Bug toolkit identifier: CSCui59829.
- TelePresence Conductor waits up to 30 seconds before releasing resources between meetings. This may cause denial of inbound and outbound calls for back-to-back meetings and utilization spikes when participants repeatedly leave and join a meeting. Bug toolkit identifier: CSCuf34880.

The above limitations will be addressed in coming releases of TelePresence Conductor and Cisco TMS. An updated deployment guide for Cisco TMS with TelePresence Conductor will be made available at that time.

The following issues have been addressed in Cisco TMS 14.3:

- In some situations, Cisco TMS would not add dial-out participants to conferences scheduled with TelePresence Conductor due to not determining that the meeting was successfully created. Dial-in

participants would still be able to join. Bug toolkit identifier: CSCui50615.

- Cisco TMS could fail to add dial-out participants to a TelePresence Conductor-scheduled conference when an alias was quickly reused. Bug toolkit identifier: CSCui57322.
- Some conferences scheduled in Cisco TMS were not created correctly on TelePresence Conductor, and Cisco TMS never requested that TelePresence Conductor Conductor dial out to the participants. Bug toolkit identifier: CSCui24558.

How to use this document

This document relies on the Cisco TelePresence Conductor Deployment Guide (XC1.2) (D14827). That document illustrates how administrators can differentiate between HD and SD MCUs. This document illustrates how administrators can differentiate between scheduled and non-scheduled MCUs.

For the purposes of this deployment guide we will assume that administrators want to differentiate between conference bridge pools for scheduled and non-scheduled conferences. In practice, you may also want to differentiate by other criteria, for example HD and SD conferences. With the knowledge gained from the TelePresence Conductor deployment guide, used in conjunction with this guide, you will be able to adjust your configuration accordingly.

Therefore to create this example deployment:

1. Follow the TelePresence Conductor deployment guide, keeping in mind that:
   - Instead of setting up bridge pools tailored for SD and HD quality, you need to set up pools for scheduled and non-scheduled conferences. In all the instructions, substitute “scheduled” for “HD” and “non-scheduled” for “SD”.
   - Cisco TMS schedules Meeting type conferences only; the TelePresence Conductor conference type Lecture referenced in the document is not supported .
2. When you reach the chapter 'Configuring TelePresence Conductor', move to this document and follow Configuring the TelePresence Conductor [p.7].

Prerequisites

TelePresence Conductor requirements

A Cisco TelePresence Conductor unit that is powered on, running XC1.2 software and accessible over the network. For assistance in reaching this stage, see Cisco TelePresence Conductor Getting Started (D14829).

Cisco TMS requirements

- A server running Cisco TMS version 14.1 or later.
- In order to work with TelePresence Conductor, Cisco TMS must be set up to allow communication over HTTPS.

Cisco VCS requirements

A Cisco TelePresence Video Communication Server (Cisco VCS) or a Cisco VCS cluster, running version X6 or later, configured according to the chapter: Configuring the Cisco VCS, in the Cisco TelePresence Conductor Deployment Guide (XC1.2) (D14827).

Cisco TelePresence MCU requirements

One or more of the following Cisco TelePresence MCU Series conference bridges, running the appropriate software version and configured according to the chapter: Configuring the conference bridges, in the Cisco TelePresence Conductor Deployment Guide (XC1.2) (D14827):

- MCU 4200 series version 4.2 or later
- MCU 4500 series version 4.2 or later
- MCU 5300 series version 4.3(2.17) or later
- MCU MSE 8420 version 4.2 or later
- MCU MSE 8510 version 4.2 or later

Dial plan

Set up your dial plan according to the chapter: Designing a dial plan, in the Cisco TelePresence Conductor Deployment Guide (XC1.2) (D14827).

Configuring the TelePresence Conductor

This section describes how to configure your TelePresence Conductor to work when conferences are going to be scheduled by Cisco TMS. Perform these procedures in the order they are listed.

Note: You must read the How to use this document [p.5] section before following the instructions below.

Creating a conference bridge pool for scheduled conferences

The following steps demonstrate how to configure TelePresence Conductor with a conference bridge pool that is dedicated for scheduled conferences only. This conference bridge pool must not be included in any Service Preferences used by conference templates for non-scheduled conferences.

1. Log into the TelePresence Conductor as a user with administrator rights.
2. Go to **Conference Configuration > Conference bridges > Conference bridge pools**.
3. Click **New**.
4. In the **Pool name** field enter a name, for example: `Scheduled MCUs`.
5. Click **Create pool**.

Adding a conference bridge to the conference bridge pool for scheduled conferences

1. Click **Add conference bridge**.
2. Enter the following in the relevant fields:

Name	A name for your conference bridge, for example: `MCU for scheduled conferences`.
IP address or FQDN	The IP address or FQDN of the conference bridge.
Protocol	The protocol the TelePresence Conductor will use to communicate with the conference bridge. Enter: *HTTPS*
Port	The port number the TelePresence Conductor will use to communicate with the conference bridge: Enter: *443*
Conference bridge username	A conference bridge administrator username, for example: `conductoradmin`. See the *Cisco TelePresence Conductor Deployment Guide (XC1.2)*, section *Configuring the conference bridges*.
Conference bridge Password	The password for the username above.
Dial plan prefix	The prefix that has been defined as part of a Cisco VCS search rule to route calls to this MCU.
Dedicated content ports	Enter the number of dedicated content ports for your MCU. This is found on the MCU under **Settings > Media ports**.

3. Click **Create conference bridge**.
4. Ensure that under **Conference bridges in this pool** the status of the conference bridge is listed as *Active*.
5. Repeat the steps above for all the bridges you want to use for scheduled conferences.

Creating a conference bridge pool for non-scheduled conferences

1. Log into the TelePresence Conductor as a user with administrator rights.
2. Go to **Conference Configuration > Conference bridges > Conference bridge pools**.
3. Click **New**.
4. In the **Pool name** field enter a name, for example: **`Non-scheduled MCUs`**.
5. Click **Create pool**.

Adding a conference bridge to the conference bridge pool for non-scheduled conferences

1. Click **Add conference bridge**.
2. Enter the following in the relevant fields:

Name	A name for your conference bridge, for example: **`MCU for non-scheduled conferences`**.
IP address or FQDN	The IP address or FQDN of the conference bridge.
Port	The port number the TelePresence Conductor will use to communicate with the conference bridge: • HTTP = **`80`** • HTTPS = **`443`**
Protocol	The protocol the TelePresence Conductor will use to communicate with the conference bridge: • *HTTP* • *HTTPS*
Conference bridge username	A conference bridge administrator username, for example: **`conductoradmin`**. See the *Cisco TelePresence Conductor Deployment Guide (XC1.2)*, section *Configuring the conference bridges*.
Conference bridge Password	The password for the username above.
Dial plan prefix	The alpha-numeric prefix that has been defined as part of a Cisco VCS search rule to route calls to this MCU.
Dedicated content ports	Enter the number of dedicated content ports for your MCU. This is found on the MCU under **Settings > Media ports**.

3. Click **Create conference bridge**.

4. Ensure that under **Conference bridges in this pool** the conference bridge is listed as *Active*.
5. Repeat the steps above for all the bridges you want to use for non-scheduled conferences.

Adding a Service Preference for scheduled conferences

The following steps demonstrate how to configure TelePresence Conductor with a Service Preference that uses only conference bridges that have been dedicated for scheduled conferences.

1. Go to **Conference configuration > Conference bridges > Conference bridge Service Preferences**.
2. Click **New**.
3. In the **Service Preference name** field enter, for example: `Scheduled resources only`.
4. In the **Pools** section of the page under **Pool name** select *MCUs reserved for scheduling*.
5. Click **Add selected pool**.
6. Click **Save**.

Adding a Service Preference for scheduled conferences with fallback

1. Go to **Conference configuration > Conference bridges > Conference bridge Service Preferences**.
2. Click **New**.
3. In the **Service Preference name** field enter, for example: `Scheduled resources with non-scheduled fallback`.
4. In the **Pools** section of the page under **Pool name** select *MCUs reserved for scheduling*.
5. Click **Add selected pool**
6. In the **Pools** section of the page under **Pool name** select *Non-scheduled MCUs*.
7. Click **Add selected pool**.
8. Click **Save**.

Creating a conference template for scheduled conferences

The following steps demonstrate how to create a Meeting-type conference template, which uses the Service Preference that favors the resources reserved for scheduling, with a fallback to non-scheduled resources. When using Cisco TMS for scheduling conferences on TelePresence Conductor note the following:

- Only Meeting-type conference templates are supported.
- Cisco TMS must have exclusive control of the conference templates that are used for scheduled conferences. Separate conference templates have to be set up for non-scheduled conferences.
- Conference bridges used for scheduled conferences cannot be used for non-scheduled conferences as well.

To create a conference template for scheduled conferences:

1. Go to **Conference configuration > Conference templates**.
2. Click **New**.

3. Enter the following in the relevant fields, leave other fields as their default values:

Name	A name for the template, for example: **`Scheduled meeting`**.
Conference type	Select *Meeting*.
Call Policy mode	Select *On*. You will set up call policy on the Cisco VCS in Configuring the Cisco VCS to prevent participants initiating scheduled conferences [p.16]
Conference bridge Service Preference	Select *Scheduled resources with non-scheduled fallback*.
No. of cascade ports to reserve	Enter '1'.

4. Click **Create conference template**.

Configuring Cisco TMS

Adding TelePresence Conductor and MCUs to Cisco TMS

For functionality such as ad hoc call discovery, snapshots, and call detail records (CDRs) in Cisco TMS, MCUs must be added to both TelePresence Conductor and Cisco TMS, in that order.

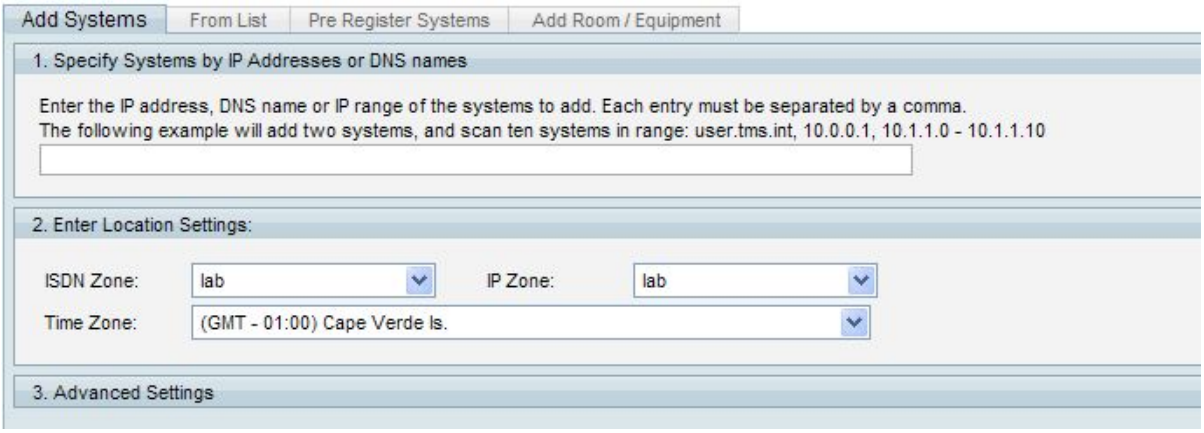
To ensure that Cisco TMS recognizes each MCU as being managed by TelePresence Conductor:

1. Add the TelePresence Conductor to Cisco TMS using its IP address following the instructions in the Adding systems to Cisco TMS [p.11] section below.
2. Add each MCU to Cisco TMS following the instructions in the Adding systems to Cisco TMS [p.11] section below:
   - If you specified an IP address in the **IP Address or FQDN** field on TelePresence Conductor, add the MCUs by IP address.
   - If you specified an FQDN in the **IP Address or FQDN** field on TelePresence Conductor, add the MCUs by host name.

Adding systems to Cisco TMS

To add systems to Cisco TMS:

1. Go to **Systems > Navigator**. Select a folder for the system.
2. Click **Add Systems**.



3. Enter either the IP address, the DNS name, an IP range, or a comma-separated list of IP addresses and/or DNS names.
4. Select **Time Zone**, **IP Zone**, and **ISDN Zone** for the system from the drop-down lists.
5. Click the **Advanced Settings** section heading to expand it if you need to add authentication details, configuration template, or SNMP discovery options.
   Do not fill in the **Admin Password** field.
6. Click the **Next** button at the bottom of the page to start adding the system.
   A progress window will be shown as Cisco TMS connects to the address and determines the type of system being added, and the system's configuration.
7. You will now be prompted if a password is needed to access the system. Enter the password and click **Next**.

- When adding a TelePresence Conductor you will see a number of errors. This is expected, just click on **Add System Despite Warnings**.

8. Click **Finish Adding Systems** to return to the main **Navigator** view.
   Your new system will now be in the designated folder.

Verifying connection settings

To verify that MCUs already added to TelePresence Conductor and Cisco TMS have compatible settings check the following for all MCUs:

1. In TelePresence Conductor:
   a. Go to **Conference configuration > Conference bridges > Conference bridge pools**.
   b. Note the address for this MCU.
   c. Click the MCU on the list to view its properties, which include the **IP address or FQDN** setting.
2. In Cisco TMS:
   a. Go to **Systems > Navigator** and select the MCU.
   b. Open the **Connection** tab.
   c. Verify that either **IP Address** or **Host Name** matches the **IP address or FQDN** setting on TelePresence Conductor.

Setting TelePresence Conductor as the default MCU

When TelePresence Conductor has been added to Cisco TMS and a default alias has been created, you can choose to set it as the default MCU in booking:

1. Go to **Administrative Tools > Configuration > Conference Settings**.
2. In **Advanced Conference Options**, set **Preferred MCU Type in Routing** to Cisco TelePresence Conductor.
3. If you want all calls to go through TelePresence Conductor, also set **External MCU Usage in Routing** to *Always*.
4. Click **Save**.

Restricting TelePresence Conductor resources used by Cisco TMS

If you want to restrict the resources Cisco TMS will schedule for the TelePresence Conductor:

1. Go to **Systems > Navigator >** select the TelePresence Conductor **> Settings tab > Edit Settings > Max Number of Concurrent Scheduled Calls**.
2. Set this value to less than or equal to the capacity of the bridges available for scheduling.

Using this setting:

Max Number of Concurrent Scheduled Calls	Explanation
Lower than the actual number of available ports	Offers a higher guarantee of scheduled calls succeeding as it takes into account possible cascade ports, content ports and other scenarios where more ports are used than expected.
Exactly the number of available ports	As above but there is a small chance that calls could fail as this doesn't take into account ports used for cascading, content etc.
Higher than the actual number of available ports	Allows overbooking: this can be useful if conferences are often booked but then don't take place or if users frequently overbook resources.
Leave this setting empty	Does not limit the number of ports that can be booked.

Note: This setting only restricts what Cisco TMS will schedule on the TelePresence Conductor. Cisco TMS will not make any changes to the TelePresence Conductor's configuration.

Creating conference aliases

The alias pattern specifies a range of conference addresses that participants can dial to join a conference. The alias is linked to a template on the TelePresence Conductor.

Creating a conference alias for scheduled calls

Creating the alias in Cisco TMS

To create an alias:

1. Go to **Systems > Navigator** and select the newly added TelePresence Conductor.
2. Open the **Aliases** tab and select the **Edit Aliases** menu option.
3. Fill in the following fields:

Name	Give the alias a name, for example: `Scheduled meeting`.
Alias Pattern	The pattern can be fixed or can contain a variable, which is denoted by `%`. We strongly recommend that the alias pattern contains a domain. The alias pattern must match both: • a search rule on Cisco VCS targeting the Conductor Policy Service. • a conference alias which has been created on TelePresence Conductor. Examples: • Variable: `meet.%.scheduled@example.org`, `1234.%.scheduled@example.org` • Fixed: `allhands@example.org`, `1234@example.org`
Default	Specify which alias is the default that will be used for conferences booked in Cisco TMS on this TelePresence Conductor. We recommend setting an alias with a variable part rather than a fixed alias as the default for optimum scalability. If this is the first alias you are creating, it will automatically be set as the default.
Description	Enter a description of this alias.
In Use	A green check mark indicates that this alias is booked in current or future conferences and therefore cannot be deleted or have its pattern modified. Clicking on **Details** gives the id of all conferences the alias is booked in. If this is the first alias you are creating, this column will be blank.

4. Click **Save**.

Note: The TelePresence Conductor conference type Lecture is not supported in Cisco TMS. Only conference templates using the Meeting conference type are supported.

Creating the alias on the TelePresence Conductor

Copying the regular expression of the alias pattern

1. In Cisco TMS, click on the **View Aliases** menu option.

The **Regular Expression** column displays the alias pattern you have created as a regular expression. This can be copied and used when configuring both the Cisco VCS search rules and the TelePresence Conductor aliases.

2. Copy the regular expression and go to the web interface of the TelePresence Conductor.

Using the regex to create a conference alias for the 'Scheduled meeting' template

The following steps create a conference alias that matches a scheduled Meeting-type conference for the Service Preference 'Scheduled resources with non-scheduled fallback':

1. Go to **Conference configuration > Conference aliases**.
2. Click **New**.
3. Enter the following in the relevant fields, leave other fields as their default values:

Name	Enter a name for the alias, for example: `Scheduled meeting`.
Incoming alias	Paste the regular expression you copied from Cisco TMS, for example: `(meet\..*\.scheduled)@<SIP domain>`. This pattern will match `meet.[any_characters].scheduled@example.org`.
Conference name	Enter a regular expression (regex) replace string that defines how the incoming alias will be modified to result in the conference name, for example: `\1` .
Priority	Enter the priority for this conference alias. The priority is used when the alias that has been dialed matches more than one conference alias. In such cases, the conference alias with the highest priority (closest to 1) will be used. Enter for example: `25`.
Conference template	Select *Scheduled meeting*.
Role name	Select *Participant*.

4. Click **Create conference alias**.

Configuring additional settings on the Cisco VCS and MCUs

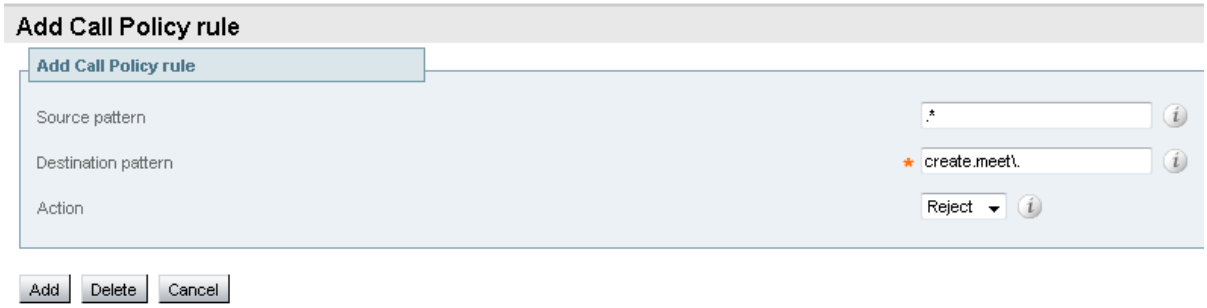
In addition to setting up the Cisco TMS and TelePresence Conductor, you must configure these settings on the Cisco VCS and MCUs before the deployment will work correctly.

Configuring the Cisco VCS to prevent participants initiating scheduled conferences

This prevents dial-in participants from initiating the conference by calling the scheduled conference alias. Cisco TMS will initiate the conference at the scheduled start time.

On the Cisco VCS:

1. Go to **VCS Configuration > Call Policy > Configuration** and set **Call Policy mode** to *Local CPL*, and click **Save**.
2. Carry out the steps below for alias 'Scheduled meeting' and any other aliases that have been created for scheduled conferences:
   a. Go to **VCS Configuration > Call Policy > Rules**.
   b. Click **New** to create a new rule.
   c. In the **Source pattern** field:
      - If using authentication on the Cisco VCS, enter `.*`
      - If not using authentication, leave blank.
   d. In the **Destination pattern** field enter the Conductor Call Policy prefix (by default: `create.`) and then the alias prefix (in our example: `meet\.`).
   e. Set **Action** to *Reject* and click **Save**.



Use the context-sensitive help on the Cisco VCS for more information on call policy rules.

Configuring MCU conference templates

To safeguard against dial-in participants that have been assigned as the conference chair ending the conference if they choose to disconnect, the following setting must be applied on each MCU:

1. Go to **Conferences > Templates > Top level template**.
2. Set **When only guests remain** to *Take no action* and click **Save**.

Booking and editing conferences with Cisco TMS and Cisco TelePresence Conductor

Booking a conference

1. Book a conference as normal in Cisco TMS using **Booking > New Conference**.
   You do not need to add the TelePresence Conductor to the conference manually if it is set as the default MCU in **Conference Settings**.
2. Once you have added the participants to the conference, click on the **Connection Settings** tab to display the **TelePresence Conductor Settings** tab and fill in the fields as appropriate:

Field	Description
Alias	Select the alias you want to use as your conference dial-in address. The aliases displayed in the drop-down have been configured in **Systems > Navigator >** select a TelePresence Conductor **> Aliases** tab **> Edit Aliases**.
Variable	If the alias is not fixed, you can change the variable part to contain something appropriate for your conference. As you type in the **Variable** field, you will see the preview change to reflect what you are typing. The variable can contain any alphanumeric characters. An example of a variable might be the name of the person who is hosting the conference. The **Variable** field is pre-populated by Cisco TMS with the first available number (to create a unique address) from 10000 and upwards. Note that this default value is hard-coded in Cisco TMS. If you do not change the variable, the auto-generated address which you can see in the **Preview** field will be used for the conference.
Address Preview	A preview of the address which participants will use to dial into the conference. As you change the variable part, the blue part of the address shown in this field will change.
Description	This field contains the description added for the alias in **Systems > Navigator >** select a TelePresence Conductor **> Aliases tab > Edit Aliases**. This field is not displayed if there is no description for the alias you have selected.

3. To check that your chosen alias is available, click **Check Address Availability**.
4. Click **Save Conference**.

The following scheduling options are not supported for TelePresence Conductor in Cisco TMS:

- Media port reservation—do not enable this on the MCUs.
- Conference templates
- Participant templates
- Distribution
- TelePresence Conductor conference type Lecture. Only conference templates using the Meeting conference type are supported.

Editing a conference

Edit the conference as normal in Cisco TMS using **Booking > List Conferences**.

In addition, you can change the conference address from the **TelePresence Conductor Settings** tab.

Migrating from and reverting to standalone MCUs

This section covers the scenario where you already have MCUs in Cisco TMS which you have scheduled in future conferences, and how to move those conferences onto the TelePresence Conductor. It also covers the scenario where you want to remove TelePresence Conductor and go back to using individual MCUs for your future booked conferences.

Migrating from stand-alone MCUs

If you have MCUs which are already added to your TelePresence Conductor in Cisco TMS, they will probably have been booked in future conferences, and call history will have been stored for these MCUs in Cisco TMS.

When you transition to TelePresence Conductor scheduling, Cisco TMS and TelePresence Conductor will have no knowledge of the resources which have already been booked on these MCUs, which may lead to double-bookings, failed calls, and erroneous monitoring data. To avoid this, follow the migration strategy presented below:

1. Once the TelePresence Conductor has been set up, add it to Cisco TMS and configure the aliases.
2. Add each MCU to TelePresence Conductor following the instructions for adding bridges in *Cisco TelePresence Conductor Deployment Guide*.
   In the **IP Address or FQDN** field, make sure to match the MCU's connection setting in Cisco TMS as described in Verifying connection settings [p.12].
3. Go to **Systems > Navigator** and select the TelePresence Conductor.
   a. Open the **Settings** tab.
   b. Click **Force Refresh**.
      Cisco TMS will now know that the MCUs are part of the TelePresence Conductor's Conference bridge pools.
4. Make TelePresence Conductor the preferred MCU, following the steps in Setting TelePresence Conductor as the default MCU [p.12].
5. For each MCU:
   a. Go to **Systems > Navigator** and select the MCU.
   b. Open the **Settings** tab.
   c. Click **Force Refresh**.
      This will stop the MCUs from being directly bookable.
6. Go to **Booking > List Conferences**.
7. Filter on all the MCUs and select the date range that covers all your future bookings. Click **Search**.
8. Edit each conference:
   a. Click on each conference to launch the **View Conference** window, then click **Edit**.
      If the booking is part of a recurrent series and you have made changes to individual instances, select **Edit this occurrence** to make the necessary changes to each individual instance. Updating an entire series at once will re-book the conference series and cancel any changes to individual instances.
   b. Remove the MCU as a participant, then click **Save**.
      This will generate a new route using the TelePresence Conductor.
      Any changes that were made when booking the initial conference, such as call direction, must be made again. Distribution will be handled automatically.
   c. As all dial-in participants will now have a new dial-in number, forward the new conference confirmation email to the participants to make them aware of the change.
   d. Repeat the above steps for each conference.

Reverting back to standalone MCUs

1. In the TelePresence Conductor's web interface, delete the MCUs from all Conference bridge pools. This may require deletion of any bridge pools, service preferences, templates and aliases that reference these MCUs.
   It is essential that you delete the MCUs, rather than simply disabling them, as the latter would not disassociate them from the TelePresence Conductor in Cisco TMS.
2. In the the web interface of each MCU:
   a. Go to **Settings > H.323** and enable **Allow numeric ID registration for conferences**.
   b. Go to **Settings > SIP** and enable **Allow numeric ID registration for conferences**.
3. In Cisco TMS, go to **Systems > Navigator** and select the TelePresence Conductor.
   a. Open the **Settings** tab.
   b. Click **Force Refresh**.
      Cisco TMS will now know that the MCUs are no longer part of the TelePresence Conductor's Conference bridge pools.
4. In Cisco TMS, for each MCU:
   a. Go to **Systems > Navigator** and select the MCU.
   b. Open the **Settings** tab.
   c. Click **Force Refresh**.
   d. Go to **Edit Settings**
   e. In the **TMS Scheduling Settings** section, enable **Allow Booking** and the appropriate **Allow incoming...** and **Allow outgoing...** dialing options.
5. Go to **Booking > List Conferences**.
6. Filter on the TelePresence Conductor and select the date range that covers all your future bookings. Click **Search**.
7. Edit each conference:
   a. Click on each conference to launch the **View Conference** window, then click **Edit**.
      If the booking is part of a recurrent series and you have made changes to individual instances, select **Edit this occurrence** to make the necessary changes to each individual instance. Updating an entire series at once will re-book the conference series and cancel any changes to individual instances.
   b. Remove the TelePresence Conductor as a participant, then click **Save**.
      This will generate a new route using one or more MCUs.
      Any changes that were made when booking the initial conference, such as call direction, must be made again.
   c. As all dial-in participants will now have a new dial-in number, forward the new conference confirmation email to the participants to make them aware of the change.
   d. Repeat the above steps for each conference.
8. Ensure that the Cisco VCS is configured with appropriate neighbor zones and search rules so that it will route the relevant aliases to the relevant MCUs.

Limitations

- On TelePresence Conductor, templates can have related auto-dialed participants so that every time a conference is created based on that template, one or more participants are dialed automatically and join the conference. Administrators must be aware that if there are auto-dialed participants configured for templates, more resources will be used than are visible in Cisco TMS.
- If TelePresence Conductor is clustered, Cisco TMS will not take advantage of multiple peers and will only use a single TelePresence Conductor. For this reason, in a clustered TelePresence Conductor environment, add only one of the TelePresence Conductor peers to Cisco TMS.
- Cisco TMS cannot change any settings on the TelePresence Conductor. In **Systems > Navigator >** select a TelePresence Conductor **> Settings** tab **> Edit Settings**, the **Max Number of Concurrent Scheduled Calls** setting does not influence the TelePresence Conductor in any way. This setting allows administrators to restrict the resources Cisco TMS will schedule for the TelePresence Conductor. See Restricting TelePresence Conductor resources used by Cisco TMS [p.12].
- Call Detail Records (CDRs) from TelePresence Conductor-managed MCUs will not contain any ConferenceIDs.
- TelePresence Conductor itself does not feed back any conference CDRs to Cisco TMS.
- IP dialing is not supported when scheduling conferences with a TelePresence Conductor.

The following scheduling options are not supported for TelePresence Conductor in Cisco TMS:

- Media port reservation—do not enable this on the MCUs.
- Conference templates
- Participant templates
- Distribution
- TelePresence Conductor conference type Lecture. Only conference templates using the Meeting conference type are supported.

MCU Failover

When using a TelePresence Conductor in front of MCUs, the following must be noted:

- Cisco TMS will poll the TelePresence Conductor, not the MCUs, so will have no knowledge of whether an MCU has failed. MCU failover where Cisco TMS moves participants to another MCU if the one hosting the conference fails is not supported when a TelePresence Conductor is used. Instead if the Cisco TMS connection to the TelePresence Conductor fails, Cisco TMS will move the conference to another TelePresence Conductor or available MCU.
- We recommend that the setting: **Cisco TMS > Administrative Tools > Configuration > Conference Settings > Automatic MCU Failover**: *If conference start or MCU polling fails* is not used, as it is possible that Cisco TMS could lose the connection to the TelePresence Conductor but that all the participants and MCUs are still connected to each other and the conference has not been affected. If you want to use Automatic MCU Failover we recommend choosing: *If conference start fails*.