# Cisco TelePresence Conductor with Cisco VCS (B2BUA)

## Deployment Guide

TelePresence Conductor XC4.0
Cisco VCS X8.5.3

August 2015

# Contents

# Introduction

## About the Cisco TelePresence Conductor

Cisco TelePresence Conductor manages video conference bridge resources, providing resiliency and increased capacity across your video conferencing network. The TelePresence Conductor integrates tightly with the call control devices Cisco TelePresence Video Communication Server (Cisco VCS) and Cisco Unified Communications Manager, as well as with the conference bridges Cisco TelePresence MCU and Cisco TelePresence Server.

The TelePresence Conductor enables endpoints with sufficient privileges to create and enter a conference by dialing a single number or URI (known as rendezvous conferences). It also supports Multiway conferences, which are initiated when two endpoints already in a call together add another endpoint.

The TelePresence Conductor performs conference bridge resource management and call routing to an appropriate conference bridge. If the size of the conference grows beyond the capacity of a single conference bridge, the conference is cascaded to additional conference bridges. TelePresence Server version 4.0(1.57) or later is required for cascading to work.

The TelePresence Conductor is capable of preferentially selecting conference bridges for conferences based on their properties. For example, conference bridges could be selected based on geographic location or on video quality (such as HD or SD).

This version of the TelePresence Conductor supports the Cisco VCS in the following two types of deployments:

- Using the Cisco VCS's external policy service interface
  This method may be discontinued in future versions of the TelePresence Conductor software.
- Using the TelePresence Conductor's back-to-back user agent (B2BUA)
  This method requires a SIP trunk between the Cisco VCS and the TelePresence Conductor. It is the preferred method to use.

This document describes the deployment method using the TelePresence Conductor's B2BUA. For more information on the deployment using the Cisco VCS's external policy server interface, see *Cisco TelePresence Conductor with Cisco VCS (Policy Service) Deployment Guide*.

The TelePresence Conductor supports the Cisco VCS in standalone and clustered modes.

You can configure up to 20 TelePresence Conductors or TelePresence Conductor clusters per Cisco VCS or Cisco VCS cluster using a suitable non-overlapping dial plan.

## About this document

This document describes how to configure a Cisco VCS (or Cisco VCS cluster), a TelePresence Conductor and the conference bridges that are used by the system. Following the steps in this deployment guide will allow you to configure the above devices to provide the following functionality:

- An endpoint user can call the rendezvous conference alias **`meet.<meeting name>.HD@vcs.domain`**. If they are the first person to call this alias, TelePresence Conductor creates a new conference and they are routed to it. The conference is created preferentially on a conference bridge with high definition ports, if there are not any ports available on the HD conference bridge then the conference will be created on the SD conference bridge. Alternatively, if the conference already exists then the alias is routed to it.

- An endpoint user can call the rendezvous conference alias **meet.<meeting name>.SD@vcs.domain**. If they are the first person to call this alias, a new conference is created by TelePresence Conductor and they are routed to it. The conference is created preferentially on a conference bridge with standard definition ports; if there are not any ports available on this conference bridge then the call is rejected. If the conference already exists then they are routed to it.
- An endpoint user can dial the conference **meet.boss@vcs.domain** and arrive at a conference and have the endpoint **boss@vcs.domain** automatically dialed into the conference.
- An endpoint user can call the alias **teach.<lecture_name>@vcs.domain** and create or join a Lecture-type conference as a host on a conference bridge with SD ports or, if there are no SD ports available, a conference on the HD conference bridge.
- An endpoint user can call the alias **learn.<lecture name>@vcs.domain** and create or join a lecture-type conference as a host on a conference bridge with SD ports or, if there are no SD ports available, a conference on the HD conference bridge.
- If the size of a **meet.<meeting name>.HD@<domain>** conference or a **teach.<lecture name>@vcs.domain** conference grows to a point where the resources required exceed those available on the conference bridge on which it is being hosted, and ports are available on a second conference bridge, then the TelePresence Conductor will direct new conference participants to the second conference bridge and set up a cascade between the conference bridges, provided there are available resources there.

This document also describes how to check that the system is working as expected.

Detailed descriptions of system configuration parameters for the Cisco VCS, TelePresence Conductor and conference bridges can be found in the Administrator Guides and online help for each product. Both the Cisco VCS and the TelePresence Conductor web interfaces offer field help (accessed by clicking the icon next to each input field) and a context-sensitive help system (accessed by clicking the icon in the top right corner of each page).

## Related documentation

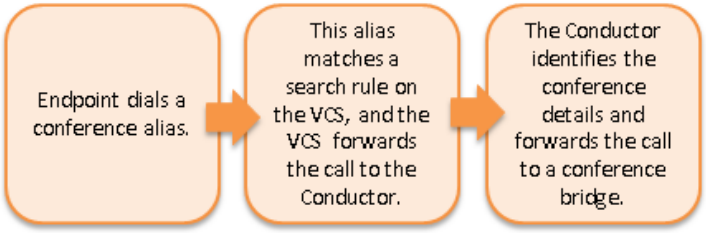
This document focuses on the use of a single TelePresence Conductor. For more details on how to deploy a cluster of TelePresence Conductors see *Cisco TelePresence Conductor Clustering with Cisco VCS (B2BUA) Deployment Guide*.

This document describes how to configure the TelePresence Conductor with regex conference aliases using the web interface. If you are using Cisco TMSPE to provision CMRs (Collaboration Meeting Rooms), omit the tasks that set up conference templates, conference aliases and auto-dialed participants on the TelePresence Conductor and instead follow *Cisco TelePresence Management Suite Provisioning Extension with Cisco VCS Deployment Guide*.

For details on how to deploy TelePresence Conductor with Unified CM see *Cisco TelePresence Conductor with Cisco Unified Communications Manager Deployment Guide*.

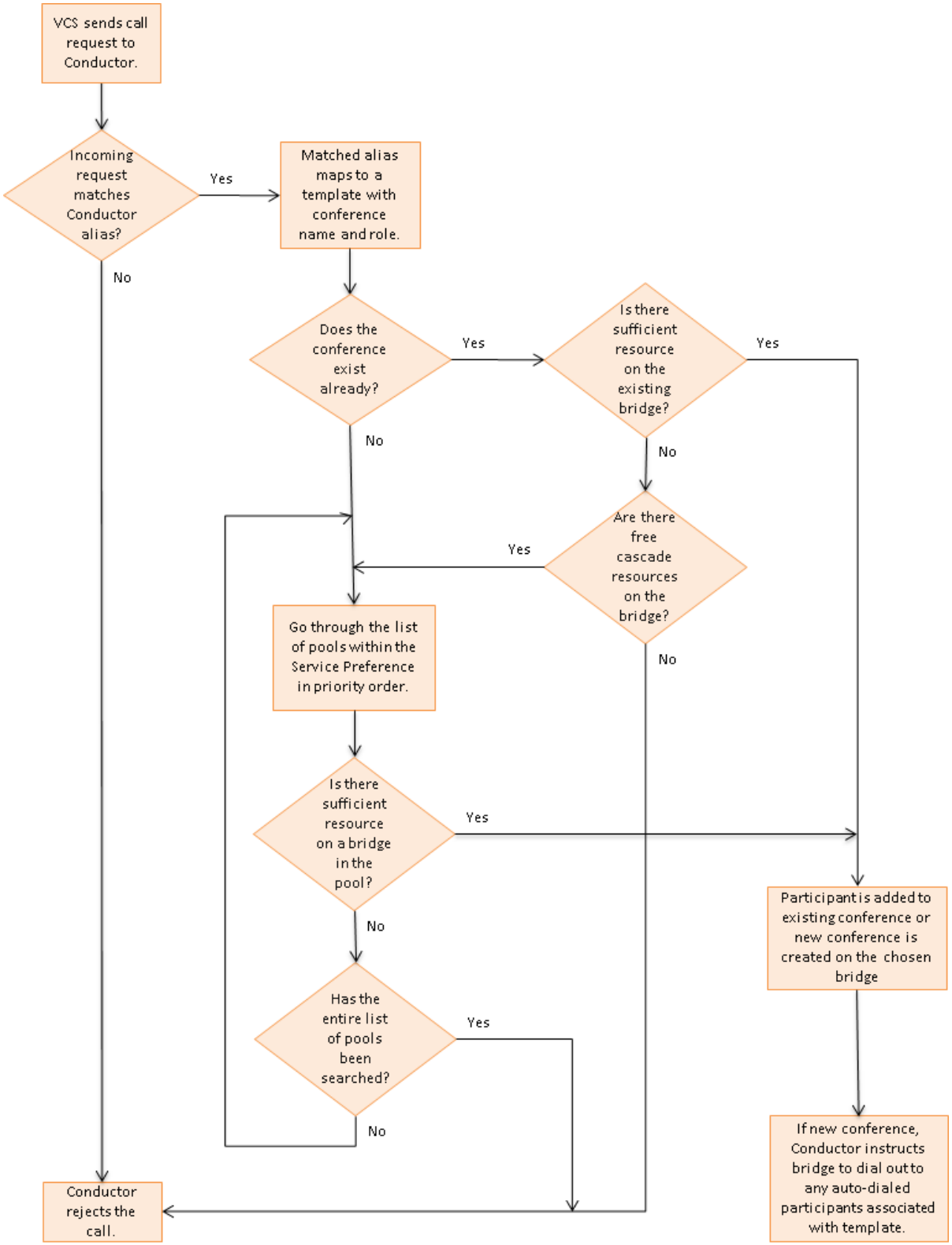
## Call flow with the TelePresence Conductor

To better understand the configuration steps taken in this document it is useful to understand how the call flows through the different parts of the video network:

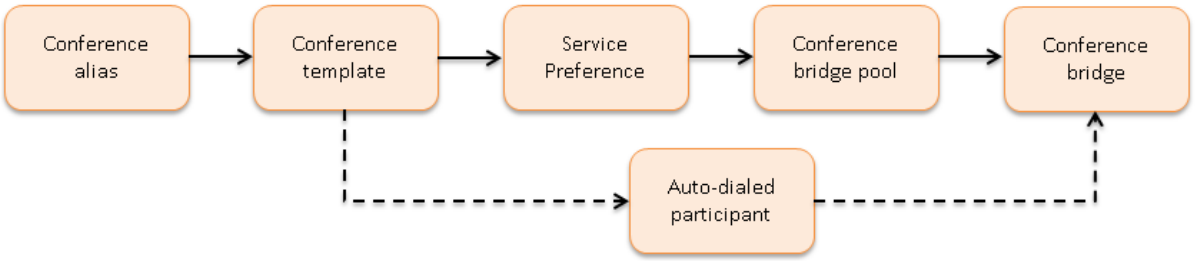



When these parts of the call flow are complete, the call is set up and media flows between the endpoint and the conference bridge.

# TelePresence Conductor conference bridge selection process



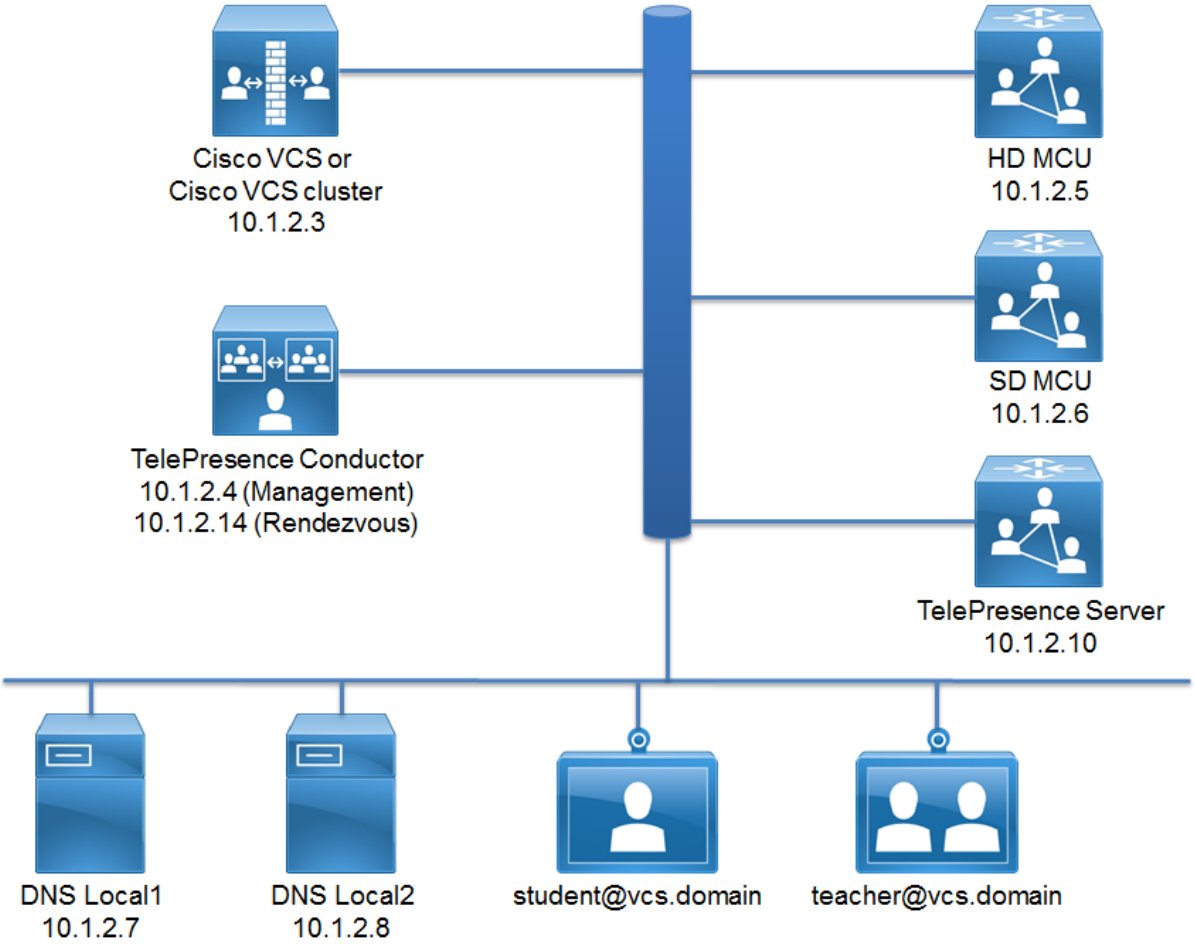
In a simplified format the set of steps for a conference to be created when the TelePresence Conductor receives an individual valid conference request is:




The dotted line indicates an optional step that occurs concurrently with the normal conference request processing.

# Example network deployment

The example network shown below is used as the basis for the deployment configuration described in this document.




Elements on the internal network have an internal network domain name. This internal network domain name is not resolvable by a public DNS.

For example, the Cisco VCS is configured with an internally resolvable name of vcs.internal-domain.net (which resolves to an IP address of 10.1.2.3 by the internal DNS servers).

## Cisco TelePresence network elements

### Cisco VCS

The Cisco VCS acts as a SIP registrar, SIP proxy, and H.323 gatekeeper for devices that are located on the internal network.

### Conference bridges

Conference bridges are network devices that enable multiple video calls to come together in a multipoint video conference. TelePresence Conductor version XC4.0 supports the conference bridge types

TelePresence MCU and TelePresence Server.

## Endpoints

These are devices that receive and make video calls. They can be software clients on PCs and Macs such as Jabber Video (Movi), desktop endpoints such as the EX90 and 9971, or room systems such as the MX300.

# Deploying TelePresence Conductor with Cisco VCS

## Prerequisites

Before starting the system configuration, ensure you have met the following criteria:

- The Cisco VCS (or Cisco VCS cluster) must be running version X7.0 or later and must already be configured to act as a SIP registrar and proxy. Ensure that the system has been tested by registering at least three endpoints to it and that they are all capable of calling each other. For more information, see *VCS Administrator Guide*.
- The TelePresence Conductor must be powered on, running version XC4.0 and accessible over the network. For assistance in reaching this stage, see *Cisco TelePresence Conductor Administrator Guide*.
- The TelePresence Conductor must have an IP address configured for management and it must be possible to add an additional unique IP address on the TelePresence Conductor to fulfill the requirements for creating a Location supporting rendezvous type calls for use by Cisco VCS.
- One or more conference bridges are powered on and accessible over HTTP/HTTPS and SIP TLS. Basic configuration for the conference bridge should be completed as described in the relevant Installation Guide.
  These bridges must be dedicated for use by TelePresence Conductor – no other devices must try to route calls to them except via the TelePresence Conductor.
- The following Cisco TelePresence MCUs are supported by the TelePresence Conductor:
  - 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

  **Note:** For all TelePresence MCUs we recommend that you install the latest software version (4.5), otherwise some features will not be supported.
- The following Cisco TelePresence Servers are supported by the TelePresence Conductor:
  - TelePresence Server 7010 version 3.0(2.46) or later
  - TelePresence Server MSE 8710 version 3.0(2.46) or later
  - TelePresence Server version 3.1 or later on Virtual Machine
  - TelePresence Server version 3.1 or later on Multiparty Media 310/320

  **Note:** For all TelePresence Servers we recommend that you install the latest software version (4.1), otherwise some features will not be supported. TelePresence Server version 4.0(1.57) or later is required for cascading to work.
- This guide assumes the conference bridges are connected to the network on their port A.
- A web browser is available with access to the web interfaces of the Cisco VCS, TelePresence Conductor and conference bridges that are being configured.

## Designing a dial plan

A dial plan defines all the aliases and call routes within your network.

Before you add the Cisco TelePresence Conductor to your network, you will need to consider as part of your dial plan:

- The types of conferences required (see *Cisco TelePresence Conductor Administrator Guide* for more information).
- The form of the conference aliases that users will dial in order to create or join conferences.

If you are integrating the TelePresence Conductor into an existing deployment it is important that the elements of your dial plan that are used by the TelePresence Conductor are complementary to, and do not conflict with, those elements that are already in use in your deployment.

This deployment guide uses the following dial plan elements and configures the TelePresence Conductor and Cisco VCS accordingly:

| Element | Format |
|---|---|
| Conference aliases for lecture hosts on TelePresence MCUs | teach.<name of lecture>@vcs.domain |
| Conference aliases for lecture guests on TelePresence MCUs | learn.<name of lecture>@vcs.domain |
| Conference aliases for high definition meeting participants on TelePresence MCUs | meet.<meeting name>.HD@vcs.domain |
| Conference aliases for standard definition meeting participants on TelePresence MCUs | meet.<meeting name>.SD@vcs.domain |
| Conference aliases for lecture hosts on TelePresence Servers | teachts.<name of lecture>@vcs.domain |
| Conference aliases for lecture guests on TelePresence Servers | learnts.<name of lecture>@vcs.domain |
| Conference aliases for high definition meeting participants on TelePresence Servers | meetts.<meeting name>.HD@vcs.domain |
| Conference aliases for standard definition meeting participants on TelePresence Servers | meetts.<meeting name>.SD@vcs.domain |

# Configuring the TelePresence MCUs

These tasks can be skipped, if only TelePresence Servers are used as conference bridges in your deployment

## Task 1: Resetting TelePresence MCU configuration to default

To ensure that all TelePresence MCUs used by this TelePresence Conductor have the same configuration settings applied, reset the TelePresence MCU configuration to its default values:

1. Create an xml file that only contains the following text:
   **`<configuration/>`**
2. Go to the web interface of the TelePresence MCU you want to configure and log in as an administrator.
3. Go to **Settings > Upgrade**.

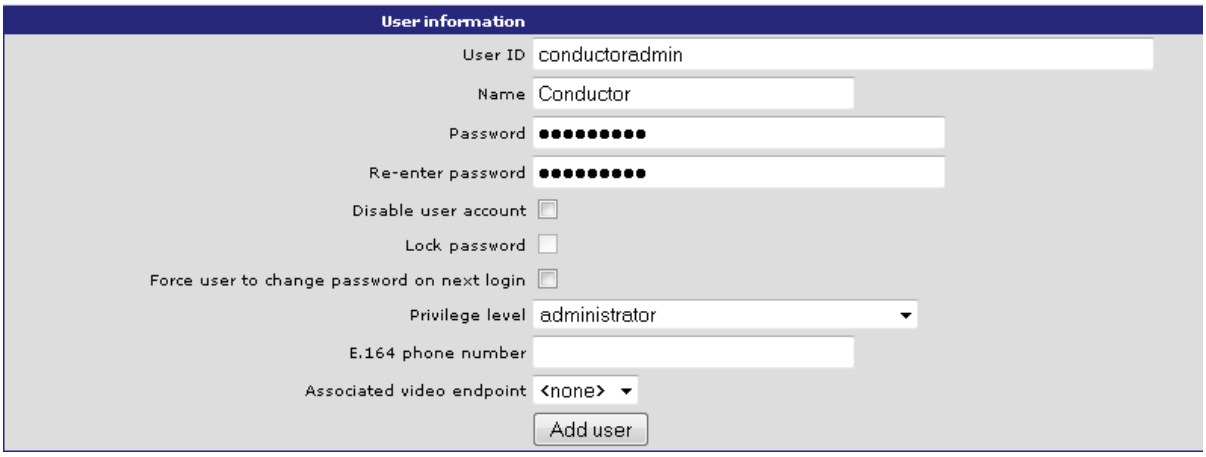
4. In the **Restore configuration** section ensure that the **Overwrite settings** - **Network settings** and **User settings** - are NOT checked.
5. Next to **Backup file to be restored** click on **Choose File** and select the xml file you created earlier.
6. Click **Restore backup file**.
7. Go to **Settings > Shutdown** to shut down and subsequently restart the TelePresence MCU.

## Task 2: Creating a user

For the TelePresence Conductor to communicate with the TelePresence MCU it must use credentials for a user that has administrator rights. We recommend that you create a dedicated administrator level user for this task.

1. On the TelePresence MCU go to **Users** and click **Add new user**.
2. Enter the following in the relevant fields:

| | |
|---|---|
| **User ID** | Enter a username for the TelePresence Conductor to use. |
| **Name** | Enter a name for this user. |
| **Password** | Enter a password for the TelePresence Conductor to use. |
| **Force user to change password on next login** | Uncheck. |
| **Privilege level** | Select *administrator*. |




3. Click **Add user**.

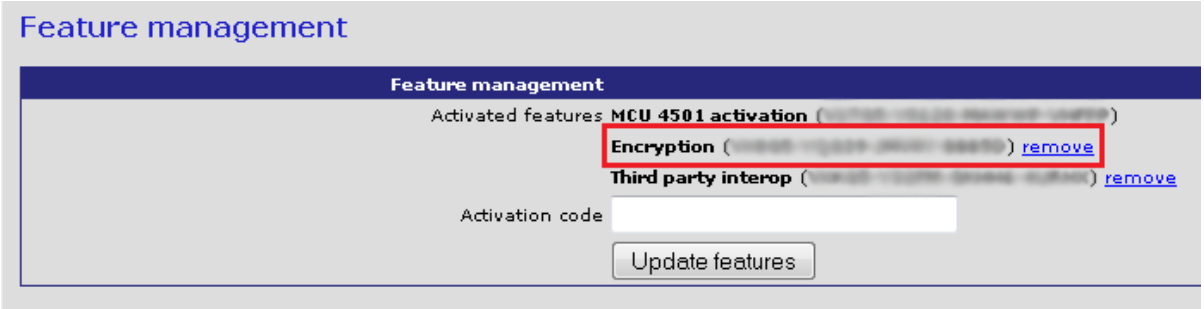
## Task 3: Installing an encryption key

The TelePresence MCU has the ability to use a secure connection for communications. These security features are enabled with the **Encryption** option key. You must install this option key in order for this deployment to work.

To verify that the key is installed or to install the key:

1. Go to **Settings > Upgrade**.
2. Go to the **Feature Management** section and verify that the **Encryption key** is installed. If the key is not

installed, enter the **Activation code** and click **Update features**.




To enable the use of encryption on the TelePresence MCU:

1. Go to **Settings > Encryption**.
2. Set **Encryption status** to *Enabled*.
3. Set **SRTP encryption** to *Secure transport (TLS) only*.
4. Click **Apply changes**.
5. Go to **Network > Services**.
6. Ensure that **Secure web (port 443)** is checked.
7. Ensure that **Encrypted SIP (TLS)** is checked.
   SIP (TLS) must also be configured on the Cisco VCS.
8. Ensure that **SIP (TCP)** is unchecked.
9. Ensure that **SIP (UDP)** is unchecked.
10. Ensure that **Incoming H.323** is checked. H.323 is required for TelePresence MCU cascading to work.
11. Click **Apply changes**.

| TCP service | | Port A IPv4 |
|---|---|---|
| Web | ☑ | 80 |
| Secure web | ☑ | 443 |
| Incoming H.323 | ☑ | 1720 |
| SIP (TCP) | ☐ | 5060 |
| Encrypted SIP (TLS) | ☑ | 5061 |
| Streaming (Windows Media Player) | ☐ | 1755 |
| Streaming (other) | ☐ | 554 |
| FTP | ☐ | 21 |

| UDP service | | Port A IPv4 |
|---|---|---|
| SNMP | ☐ | 161 |
| SIP (UDP) | ☐ | 5060 |
| H.323 gatekeeper | ☐ | 1719 |

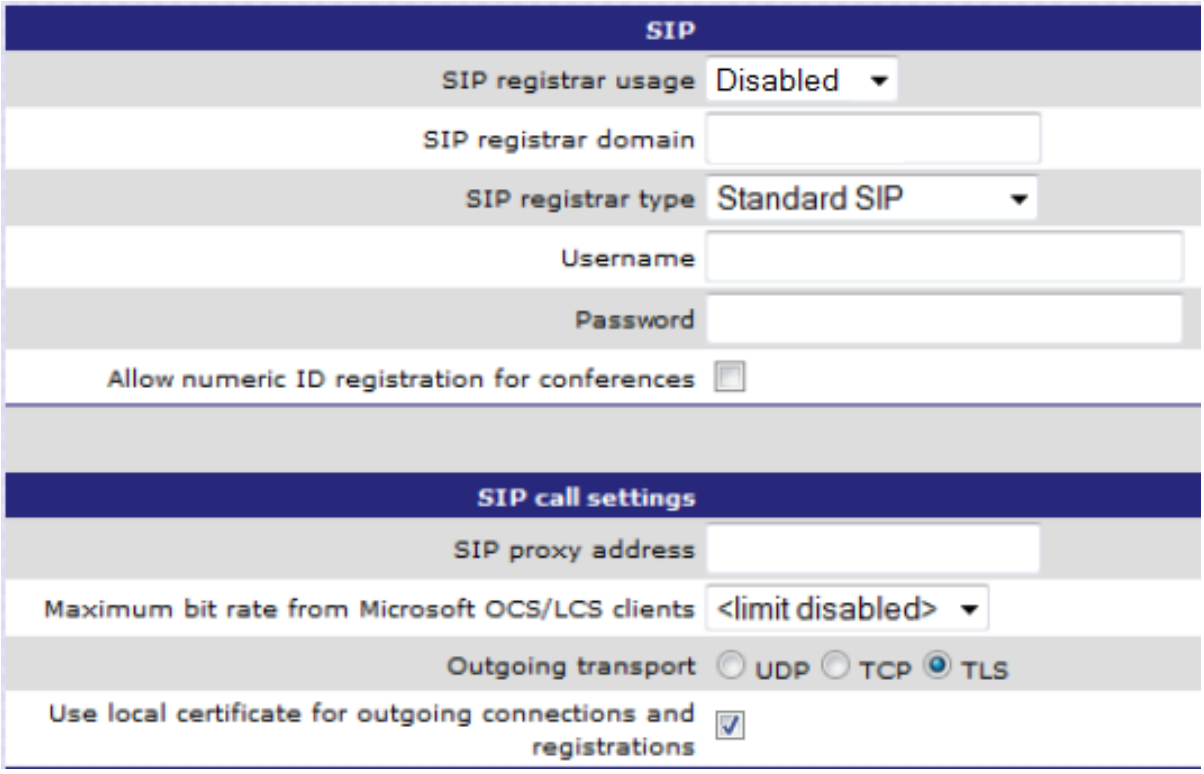
Apply changes

12. Repeat the steps for any other TelePresence MCUs

## Task 4: Configuring SIP

1. Go to **Settings > SIP**.
2. Enter the following in the relevant fields, leave other fields as their default values:

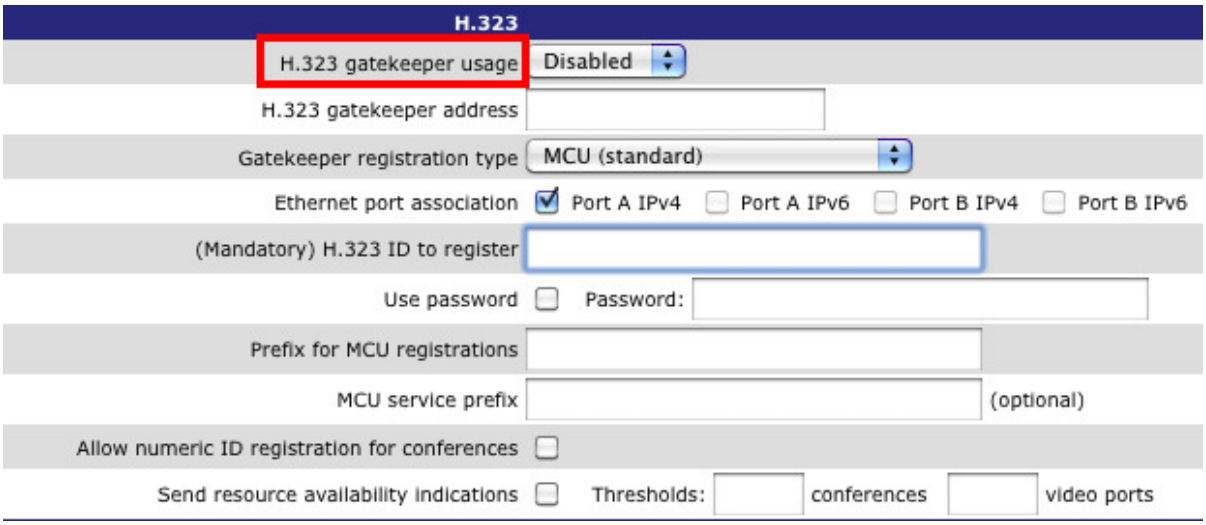
| | |
|---|---|
| **SIP registrar usage** | Select *Disabled*. |
| **SIP proxy address** | Leave blank. |
| **Outgoing transport** | Select *TLS*. |
| **Use local certificate for outgoing connections and registrations** | Check this box. |




3. Click **Apply changes**.
4. Repeat the steps for any other TelePresence MCUs.

## Task 5: Disabling H.323 registration

1. Go to **Settings > H.323**.
2. Set **H.323 gatekeeper usage** to *Disabled*.
3. Leave all other fields as their default values.

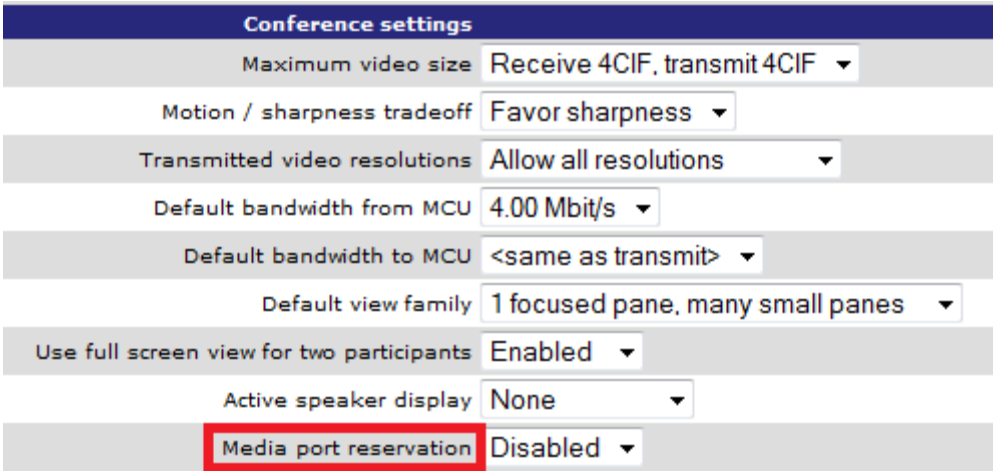



4. Click **Apply changes**.
5. Repeat the steps for any other TelePresence MCUs.

## Task 6: Changing miscellaneous settings

On all conference bridges:

1. Go to **Settings > Conferences**
2. Under **Conference Settings** ensure **Media port reservation** is set to *Disabled*.




3. Click **Apply changes**.
4. Go to **Gatekeeper > Built in Gatekeeper**.
5. Under **Configuration** ensure **Status** is set to *Disabled*.
   **Note:** The MCU 5300 series does not have a built-in Gatekeeper.


6. Click **Apply changes**.
7. Repeat the steps for any other TelePresence MCUs.

# Configuring the TelePresence Server

These tasks can be skipped, if only TelePresence MCUs are used as conference bridges in your deployment.

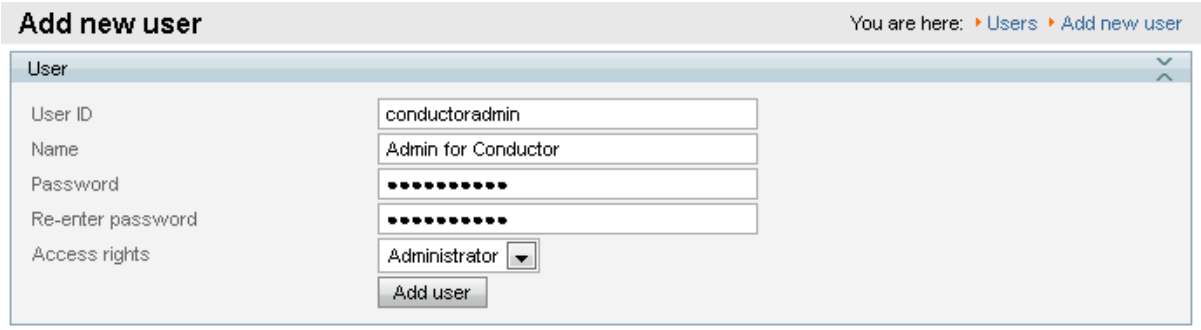
## Task 7: Creating a user

For the TelePresence Conductor to communicate with the TelePresence Server it must use credentials for a user that has administrator rights. We recommend that you create a dedicated administrator level user for this task.

1. Go to the web interface of the TelePresence Server you want to configure and log in as an administrator.
2. Go to **User > Add New User**.
3. Enter the following in the relevant fields:

| | |
|---|---|
| **User ID** | Enter a username for the TelePresence Conductor to use. |

| | |
|---|---|
| **Name** | Enter a name for this user. |
| **Password** | Enter a password for the TelePresence Conductor to use. |
| **Access rights** | Select *Administrator*. |




4. Click **Add user**.

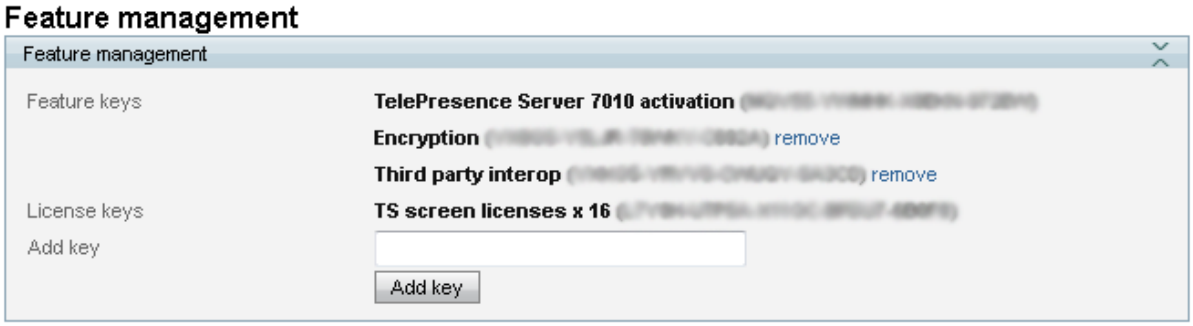
## Task 8: Installing an encryption key

The TelePresence Server has the ability to use a secure connection for communications. These security features are enabled with the **Encryption** option key. For TelePresence Server version 4.1(2.33) or earlier, you must install the option key in order for this deployment to work. Beginning with version 4.2, it is no longer required.

**Note**: The term "Encryption Key" is replaced with "Media Encryption Key" beginning in version 4.2. Most customers outside of Russia will still want to install this key. Encryption keys installed in TelePresence Servers running a software version earlier than 4.2 are automatically converted to media encryption keys when upgrading to version 4.2 or later.

To verify that the *Encryption* key is installed or to install the key, perform the following tasks:

1. Go to **Configuration > Upgrade**.
2. Go to the **Feature management** section and verify that the **Encryption** key is installed. If the key is not installed, enter the key into the **Add key** field and click **Add key**.




To verify that TLS is enabled on the TelePresence Server:

1. Go to **Network > Services**.
2. Ensure that **Encrypted SIP (TLS)** is checked.

3. Ensure that **Incoming H.323**, **SIP (TCP)** and **SIP (UDP)** are not checked.
   H.323 is not available on TelePresence Server on Media 310/320 or Virtual Machine platforms.
4. Ensure that **HTTPS** is enabled on port 443.

| | Port A | |
|---|---|---|
| TCP service | IPv4 | |
| HTTP | ☑ | 80 |
| HTTPS | ☑ | 443 |
| Incoming H.323 | ☐ | 1720 |
| SIP (TCP) | ☐ | 5060 |
| Encrypted SIP (TLS) | ☑ | 5061 |
| FTP | ☑ | 21 |

| | Port A | |
|---|---|---|
| UDP service | IPv4 | |
| SIP (UDP) | ☐ | 5060 |

| Ephemeral Port Range | |
|---|---|
| Minimum | 49152 |
| Maximum | 65535 |

Apply changes

5. Click **Apply changes**.

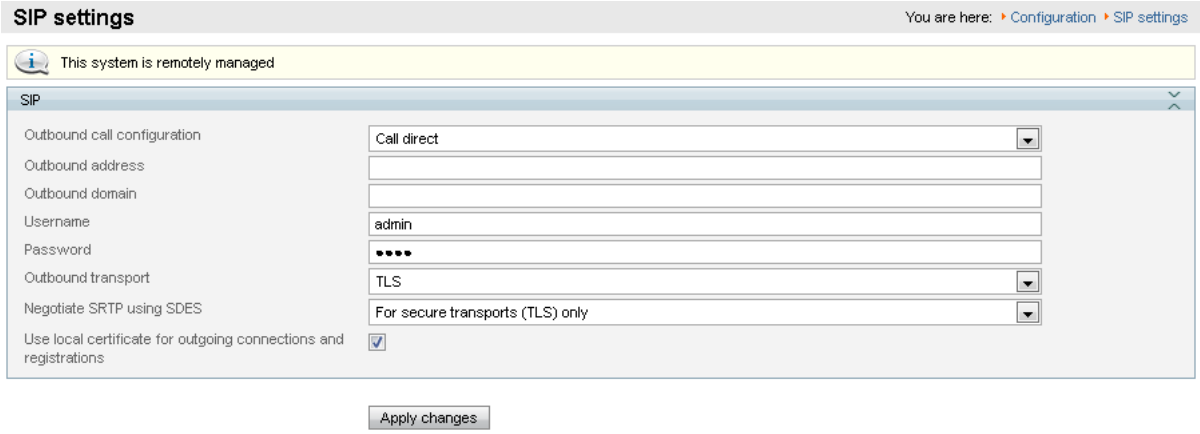
## Task 9: Configuring SIP

For the TelePresence Server to support auto-dialed participants, the TelePresence Server needs to know where to direct signaling requests.

1. Go to **Configuration > SIP settings**.
2. Enter the following values into the relevant fields:

| | |
|---|---|
| **Outbound call configuration** | Select *Call direct* from the drop-down list. |
| **Outbound address** | Leave blank. |

| | |
|---|---|
| **Outbound domain** | Leave blank. |
| **Username** | Leave blank. |
| **Password** | Leave blank. |
| **Outbound transport** | Select *TLS*. |
| **Negotiate SRTP using SDES** | Select *For secure transports (TLS) only*. |
| **Use local certificate for outgoing connections and registrations** | Check the box. |

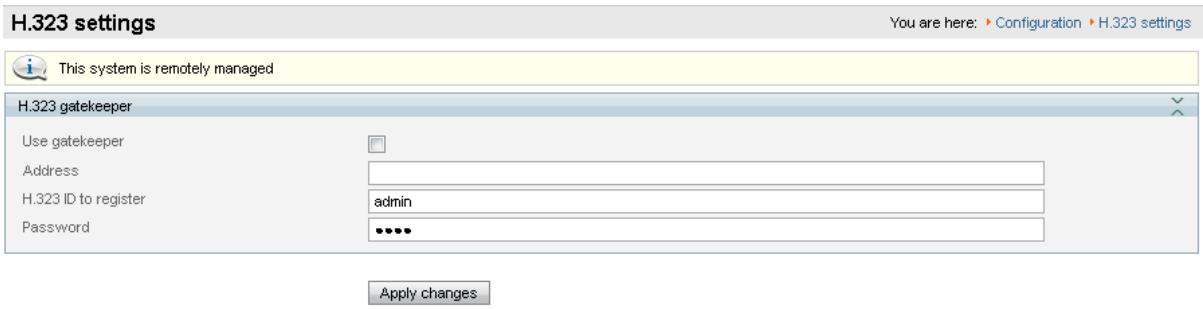



3. Click **Apply changes**.
4. Repeat the steps for any other TelePresence Servers.

## Task 10: Disabling H.323 registration

Perform the following steps to disable H323 registration to a gatekeeper:

1. Go to **Configuration > H323 Settings**.
2. Uncheck the box for **Use gatekeeper**.
3. Leave all other fields as their default values.




4. Click **Apply changes**.
5. Repeat the steps for any other TelePresence Servers.

### Task 11: Configuring the operational mode

(This task is not relevant for Cisco TelePresence Server on Virtual Machine or Cisco TelePresence Server on Multiparty Media 310/320.)

1. Go to **Configuration > Operation mode**.
2. Select *Remotely managed* from the drop down list. This enables the TelePresence Conductor to manage the TelePresence Server.


3. Click **Apply changes**.
4. For the changes to take effect, the TelePresence Server must be restarted. Go to **Configuration > Shutdown**.
5. Click **Shutdown TelePresence Server**.
6. Click **Confirm TelePresence Server shutdown**.
7. Click **Restart TelePresence Server**.
8. After about 3 minutes, the TelePresence Server will be available to the TelePresence Conductor.

## Configuring the Cisco VCS

### Task 12: Adding the TelePresence Conductor as a neighbor zone

1. Go to **Configuration > Zones > Zones**.
2. Click **Create new zone**.
3. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter 'Conductor' for example. |
| **Type** | Select *Neighbor*. |
| **H.323 mode** | Select *Off*. |
| **SIP transport** | Select *TLS*.<br>Set the port to 5061. |
| **Peer 1 address** | Enter the TelePresence Conductor's rendezvous IP address for Cisco VCS (not the TelePresence Conductor's primary LAN IP address used to manage the TelePresence Conductor). This will be added on the TelePresence Conductor in Task 17: Adding an IP address for Cisco VCS rendezvous conferences on TelePresence Conductor [p.28]. |
| **Zone profile** | Select *Custom*. |
| **Automatically respond to SIP searches** | Select *On*. |

**Create zone**

You are here: Configuration ▸ Zones ▸ Zones ▸ Create zone

**Configuration**

| | |
|---|---|
| Name | * Conductor |
| Type | * Neighbor |
| Hop count | * 15 |

**H.323**

| | |
|---|---|
| Mode | On |
| Port | * 1719 |

**SIP**

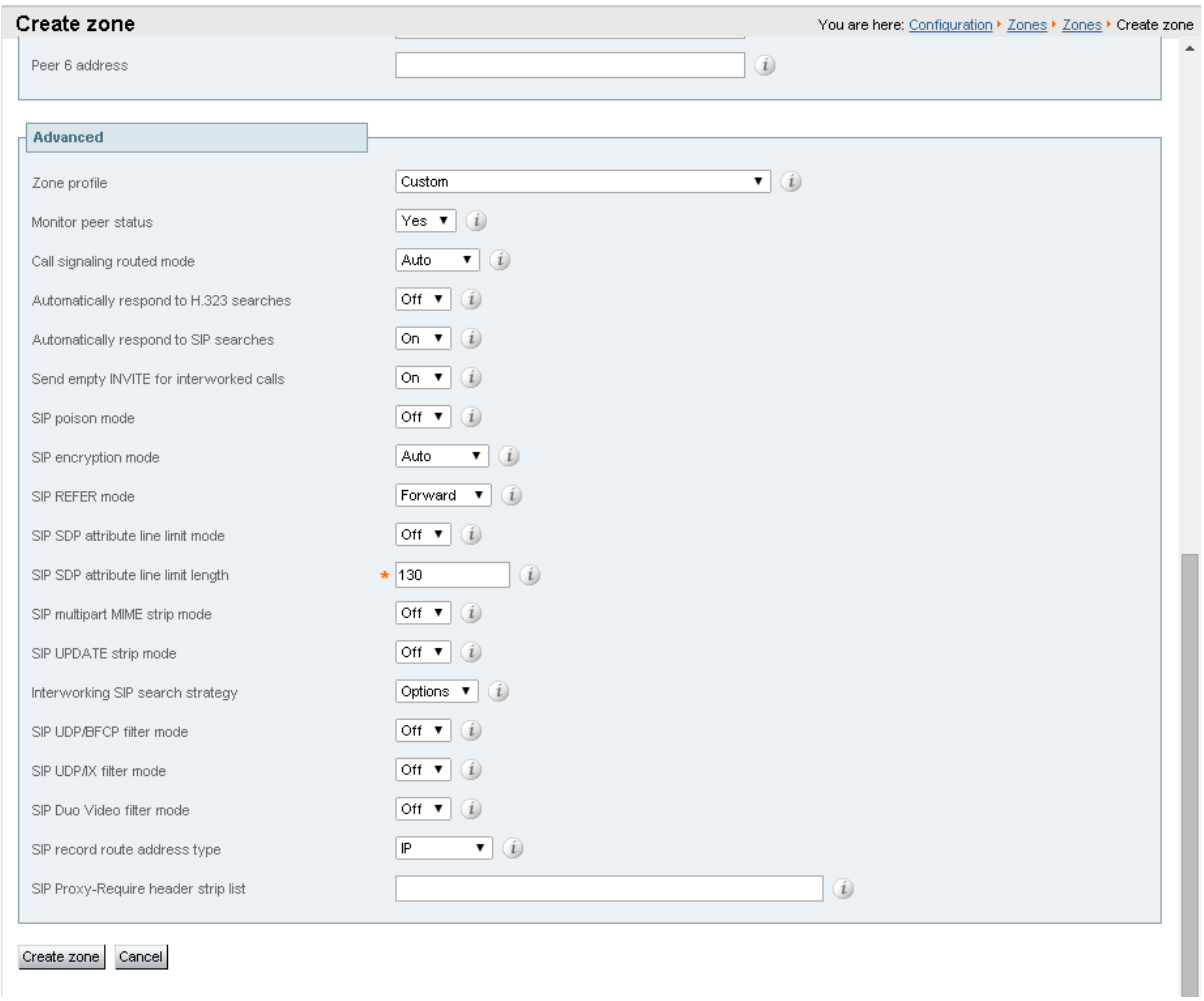
| | |
|---|---|
| Mode | On |
| Port | * 5061 |
| Transport | TLS |
| TLS verify mode | Off |
| Accept proxied registrations | Allow |
| Media encryption mode | Auto |
| ICE support | Off |

**Authentication**

| | |
|---|---|
| Authentication policy | Do not check credentials |
| SIP authentication trust mode | Off |

**Location**

| | |
|---|---|
| Peer 1 address | 10.1.2.14 |
| Peer 2 address | |




4. Click **Create zone**.

## Task 13: Configuring a search rule with the TelePresence Conductor neighbor zone as the target

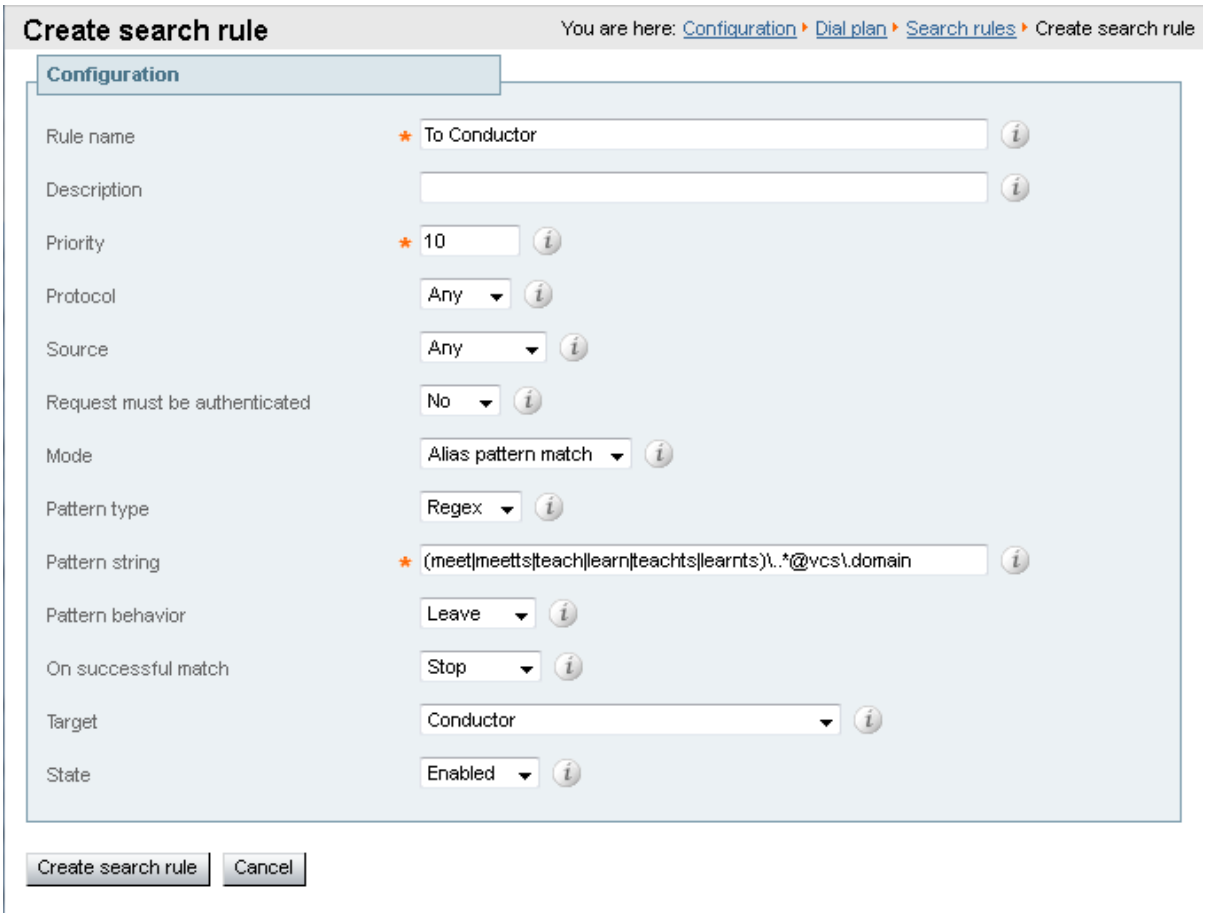
Search rules define where the Cisco VCS routes calls. In this case we want calls matching the format of our conference aliases to be sent to the TelePresence Conductor.

To configure the search rule:

1. Go to **Configuration > Dial plan > Search rules**.
2. Click **New**.
3. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Rule name** | Enter 'To Conductor' for example. |
| **Priority** | Enter '10' for example. |
| **Mode** | Select *Alias pattern match*. |
| **Pattern type** | Select *Regex*. |

| | |
|---|---|
| **Pattern string** | Enter `(meet\|meetts\|teach\|learn\|teachts\|learnts)\..*@<SIP domain>`<br>**Note:** Replace `<SIP domain>` with the appropriate SIP domain for your network. |
| **Pattern behavior** | Select *Leave*. |
| **On successful match** | Select *Stop*. |
| **Target** | Select *Conductor*. |




4. Click **Create search rule**.

# Configuring the TelePresence Conductor

This section of the guide assumes that the TelePresence Conductor is reachable over the network. For assistance in reaching this stage, see *Cisco TelePresence Conductor Administrator Guide*.

The TelePresence Conductor will only accept calls when the following criteria are met:

- The TelePresence Conductor has its root and admin passwords changed from their default values. This is a security feature.
- The TelePresence Conductor is configured with at least one conference bridge with a 'usable' status. This is to ensure that requests are not sent to members of a TelePresence Conductor cluster that have lost connectivity with the conference bridges.

## Task 14: Changing the administrator password

1. Log into the TelePresence Conductor as the user 'admin' and with the default password 'TANDBERG'.
2. Go to **Users > Administrator accounts**.
3. Click **View/Edit** for the 'admin' user.
4. Enter a new password.
5. Click **Save**.

**Note:** The TelePresence Conductor will not handle conference requests if it has the administrator password set to its default value.

## Task 15: Changing the root password

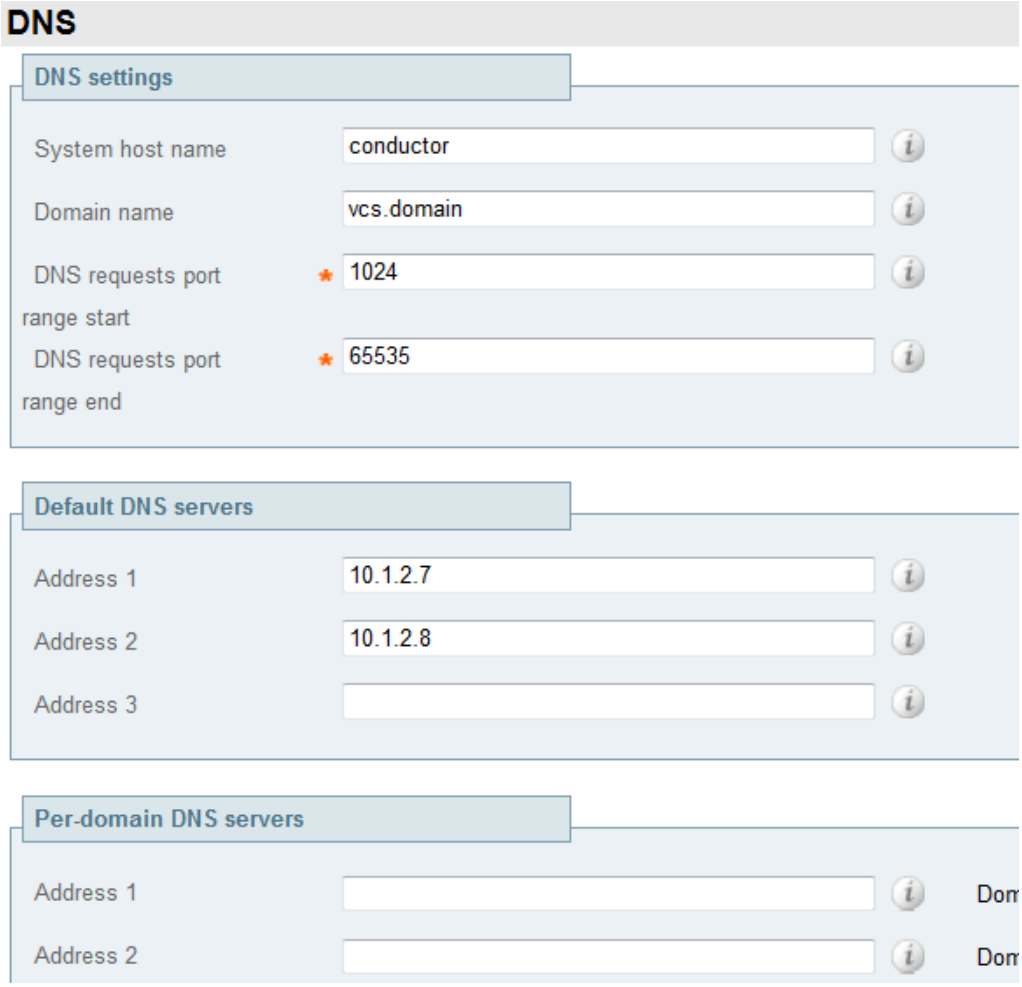
1. Log in to the TelePresence Conductor as root (default password = 'TANDBERG'). By default you can only do this using SSH or a serial connection.
2. Type **`passwd`**.
3. Enter the new password, and when prompted, retype the new password.
4. You will receive the message:
   **`passwd: password updated successfully`**
5. Type 'exit' to log out of the root account.

**Note:** The TelePresence Conductor will not handle conference requests if it has the root password set to its default value.

## Task 16: Changing the system settings

1. Log into the TelePresence Conductor as a user with administrator rights.
2. Go to **System > DNS**.
3. Enter the following in the relevant fields:

| | |
|---|---|
| **System host name** | Enter the hostname of your TelePresence Conductor. |
| **Domain name** | Enter the domain for your TelePresence Conductor.<br>This must match the domain that is configured on the Cisco VCS. To see the list of domains, go to **Configuration > Domains** on your Cisco VCS. |
| **Address 1** | Enter the IP address of the DNS server. |
| **Address 2** | Enter the IP address of your backup DNS server. |

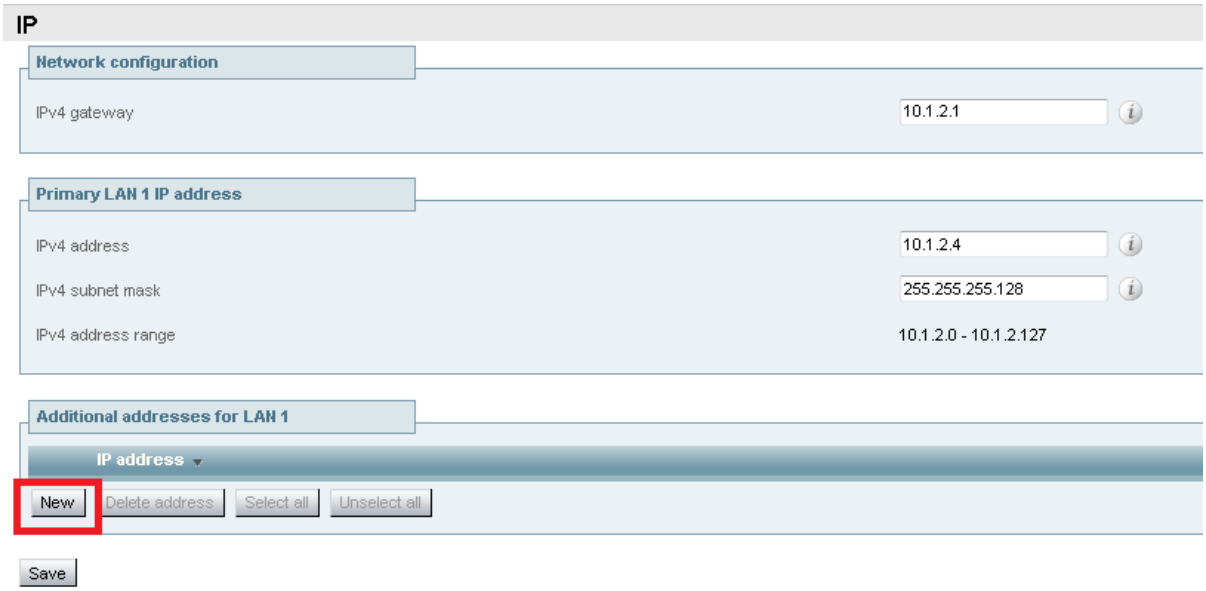



**Note:** The FQDN of the TelePresence Conductor is <System host name>.<Domain name>.

4. Click **Save**.
5. Go to **System > Time** if the default servers are unreachable then it may be necessary to enter alternate NTP servers.
6. Ensure that under the **Status** section the State is *Synchronized*. This can take a couple of minutes.

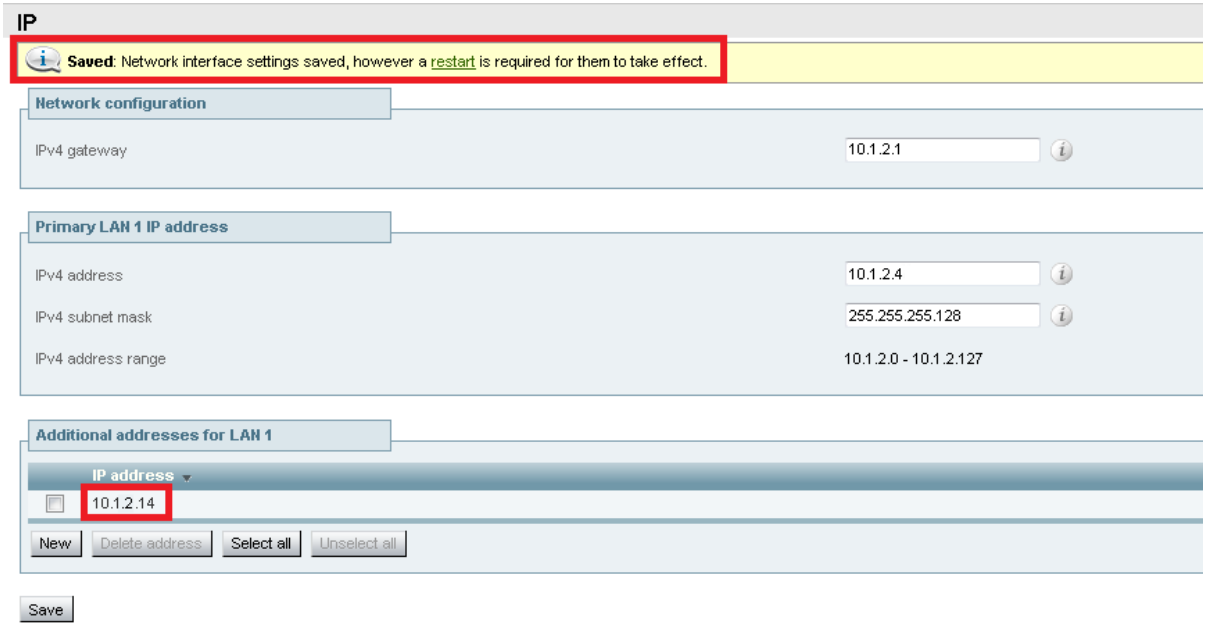
## Task 17: Adding an IP address for Cisco VCS rendezvous conferences on TelePresence Conductor

1. Go to **System > Network interfaces > IP**.
2. In the **Additional addresses for LAN 1** section click **New**.




3. Enter the new IP address to be used.
   **Note:** The IP address must be on the same subnet as the primary TelePresence Conductor IP interface, and must be reserved for use by this TelePresence Conductor alone. It will be used as the **Peer 1 address** in the Cisco VCS neighbor zone created earlier on in the process.
4. Click **Add address**.

5. In the **Additional addresses for LAN 1** list, verify that the IP address was added correctly.




6. Go to **Maintenance > Restart options**.
7. Click **Restart** so that network interface changes are applied.
8. Wait for the TelePresence Conductor to restart.
9. To verify the new TelePresence Conductor IP address is active on the network, ping the IP address from another device.

## Task 18: Configuring a Location for Cisco VCS

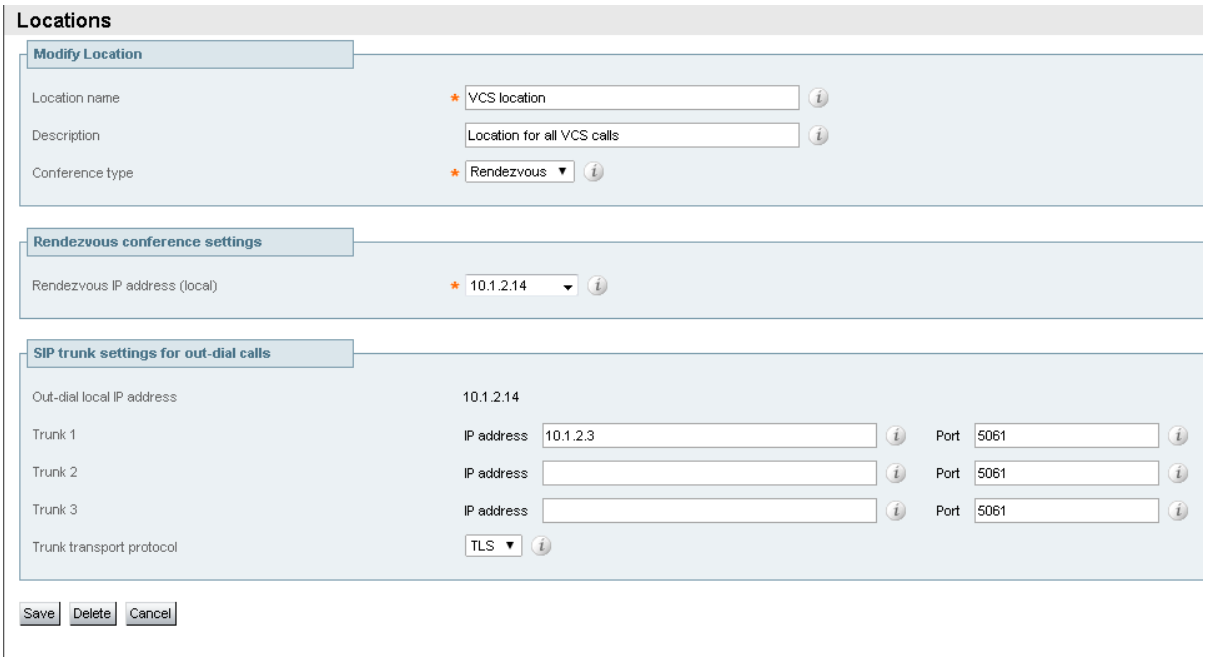
A Location is used to allow the Cisco VCS to forward conference call requests directly to the TelePresence Conductor back-to-back-user-agent (B2BUA). A single Location can be set up for all traffic between any Cisco VCS (or Cisco VCS cluster) and the TelePresence Conductor.

Because the Cisco VCS only supports rendezvous conferences (not ad hoc), a conference alias is required. Endpoints registered to a Cisco VCS are able to initiate a Multiway conference, which is similar to an ad hoc conference initiated by endpoints registered to a Unified CM, but still uses a conference alias to create a spontaneous rendezvous conference.

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

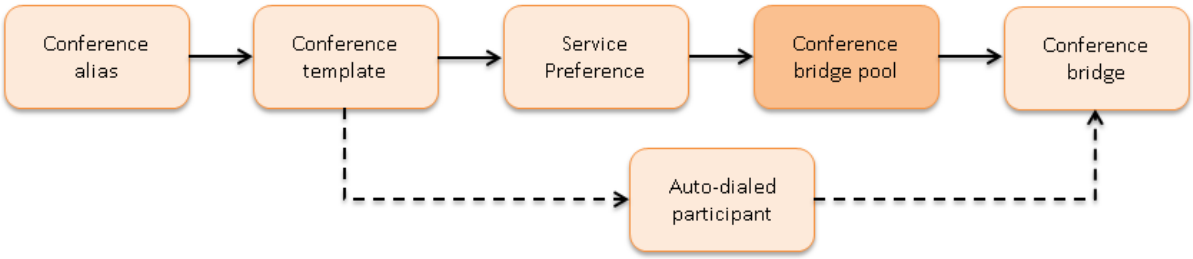
| | |
|---|---|
| **Location name** | Enter a name for the Location, for example `VCS location`. |
| **Conference type** | Select *Rendezvous*. |
| **Rendezvous IP address** | From the drop down list, select the TelePresence Conductor IP address to be used for Cisco VCS calls. This must match the **Destination address** of the neighbor zone on the Cisco VCS. |

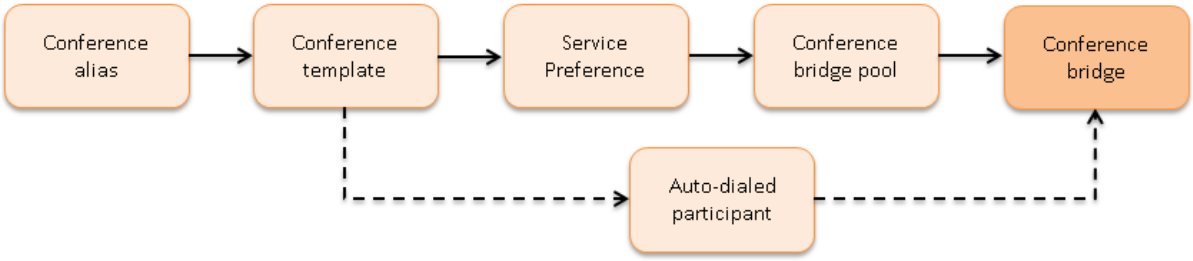
| | |
|---|---|
| **Trunk 1 IP address** | This is only required if TelePresence Conductor needs to forward auto-dialed participants or any other out-dialed calls such as those initiated by Cisco TMS to the Cisco VCS.<br>Enter the IP address of the Cisco VCS.<br>Enter the additional trunk IP addresses and ports if you are using a Cisco VCS cluster.<br>If you specify more than one trunk IP address, the TelePresence Conductor considers all trunk IP addresses for a Location as equivalent. It may use any of the trunk IP addresses defined, as long as the destination is reachable. If the SIP trunk destination that the TelePresence Conductor currently uses becomes unreachable, it will automatically use another reachable destination. The TelePresence Conductor maintains only one of the destinations, it does not load balance the dial-out calls across the configured destinations. |
| **Trunk 1 Port** | Enter '5061'. |
| **Trunk protocol** | Select *TLS*. |




4. Click **Add location**.

## Task 19: Setting up conference bridge pools





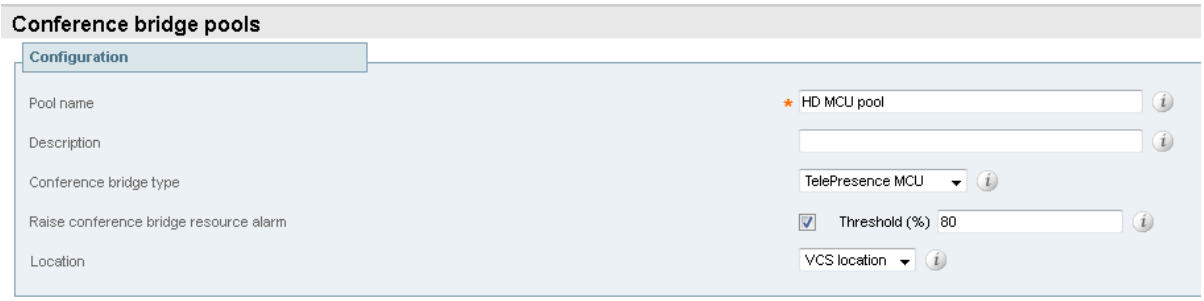

To set up a conference bridge pool, you need to create a conference bridge pool and then add one or more conference bridges to it. The following examples show how to set up conference bridge pools for:

- TelePresence MCU hosted HD conferences
- TelePresence MCU hosted SD conferences
- TelePresence Server hosted HD conferences
- TelePresence Server hosted SD conferences

**Note:** We strongly recommend that all conference bridges within a pool have the same capacity, so that conferences can be distributed efficiently across conference bridges. If there are conference bridges with different capacities in the same pool, this may lead to unbalanced conference placement in some scenarios.

### Creating a TelePresence MCU HD conference bridge pool

1. Go to **Conference configuration > Conference bridge pools**.
2. Click **New**.
3. In the **Pool name** field enter a name for the conference bridge pool, for example `HD MCU pool`.
4. Choose the correct **Conference bridge type**, in this case *TelePresence MCU*.
5. Select from the drop-down list the **Location** configured for the Cisco VCS.



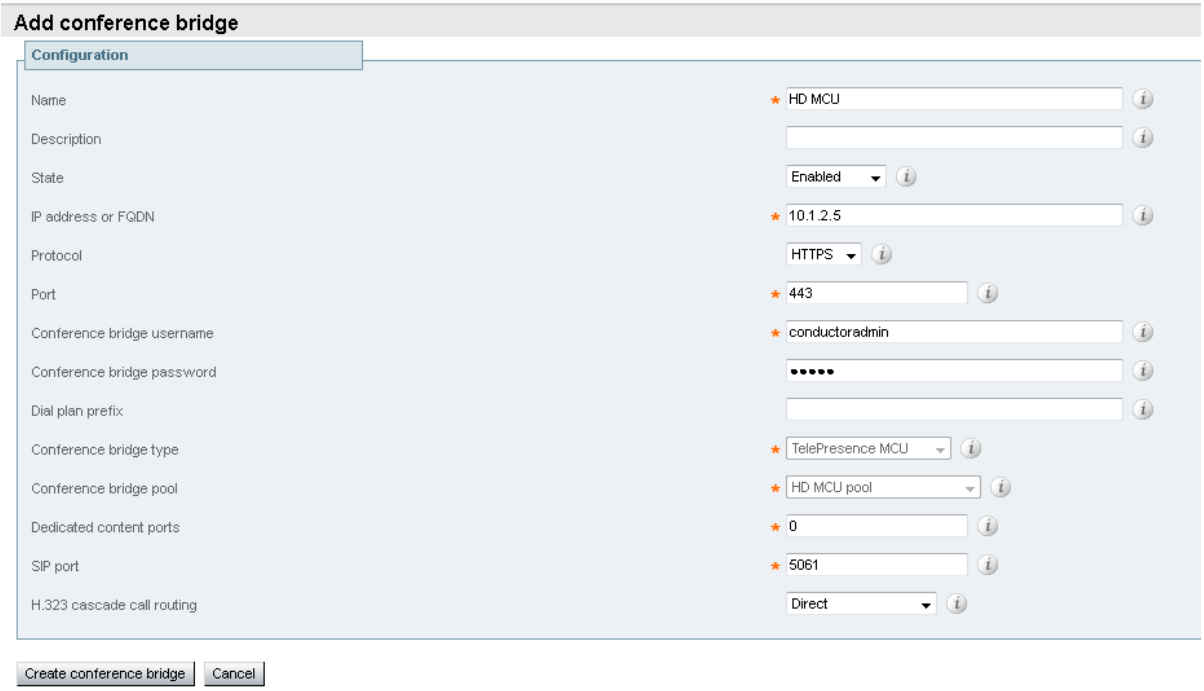

6. Click **Create pool**.

### Adding a TelePresence MCU to the HD conference bridge pool

1. From the **Conference bridge pools** page click **Create conference bridge**.
2. Enter the following in the relevant fields:

| | |
|---|---|
| **Name** | Enter a name for the conference bridge, for example `HD MCU`. |
| **State** | Select *Enabled*. |
| **IP address or FQDN** | Enter the IP address of the HD conference bridge. |

| | |
|---|---|
| **Protocol** | Select *HTTPS*. |
| **Port** | Enter '443'. |
| **Conference bridge username** | Enter the conference bridge admin username, for example **`conductoradmin`**. (This is created in Task 2: Creating a user [p.14].) |
| **Conference bridge Password** | Enter the conference bridge password for this user. |
| **Dial plan prefix** | Leave this blank. |
| **Dedicated content ports** | Enter the appropriate value for your TelePresence MCU. To discover if a TelePresence MCU has any dedicated content ports follow the steps given in Appendix 2: Identifying dedicated content ports on a Cisco TelePresence MCU [p.75]. |
| **SIP port** | Enter the SIP port on which the conference bridge listens for SIP TLS traffic, typically this is '5061'. |
| **H.323 cascade call routing** | Select *Direct*. |




3. Click **Create conference bridge**.
4. Ensure that under the **Conference bridges in this pool** section, under the **Status** header the conference bridge is listed as *Active*.
5. Repeat the steps to add any further TelePresence MCUs to the conference bridge pool.

### Creating a TelePresence MCU SD conference bridge pool.

Repeat the steps under Creating a TelePresence MCU HD conference bridge pool [p.31] to create a TelePresence MCU SD conference bridge pool. Enter the same values for the fields, apart from the **Pool name**, which should be `SD MCU pool`, for example.

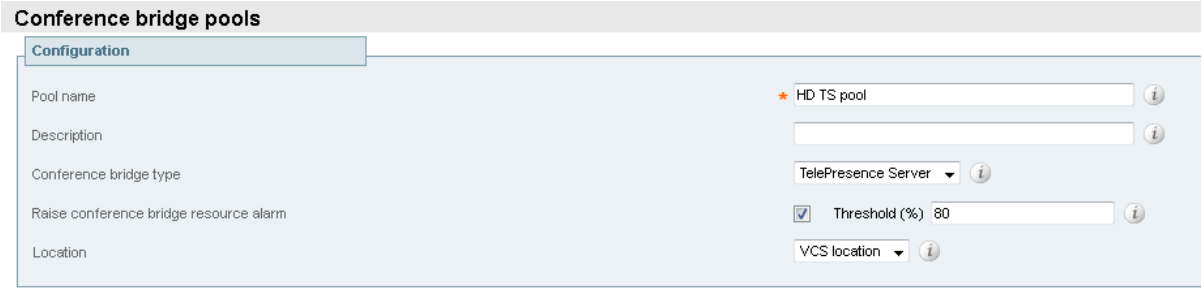
### Adding a TelePresence MCU to the SD conference bridge pool

Repeat the steps under Adding a TelePresence MCU to the HD conference bridge pool [p.31] to add a TelePresence MCU to the SD conference bridge pool. Enter the same values for the fields, apart from:

| | |
|---|---|
| **Name** | Enter a name for the conference bridge, for example `SD MCU`. |
| **IP address or FQDN** | Enter the IP address of the SD conference bridge. This must be a different IP address from the HD conference bridge. |
| **Dial plan prefix** | Leave this blank. |

### Creating a TelePresence Server HD conference bridge pool

1. Go to **Conference configuration > Conference bridge pools**.
2. Click **New**.
3. In the **Pool name** field enter a name for the conference bridge pool, for example `HD TS pool`.
4. Choose the correct **Conference bridge type**, in this case *TelePresence Server*.
5. Select from the drop-down list the **Location** configured for the Cisco VCS.




6. Click **Create pool**.

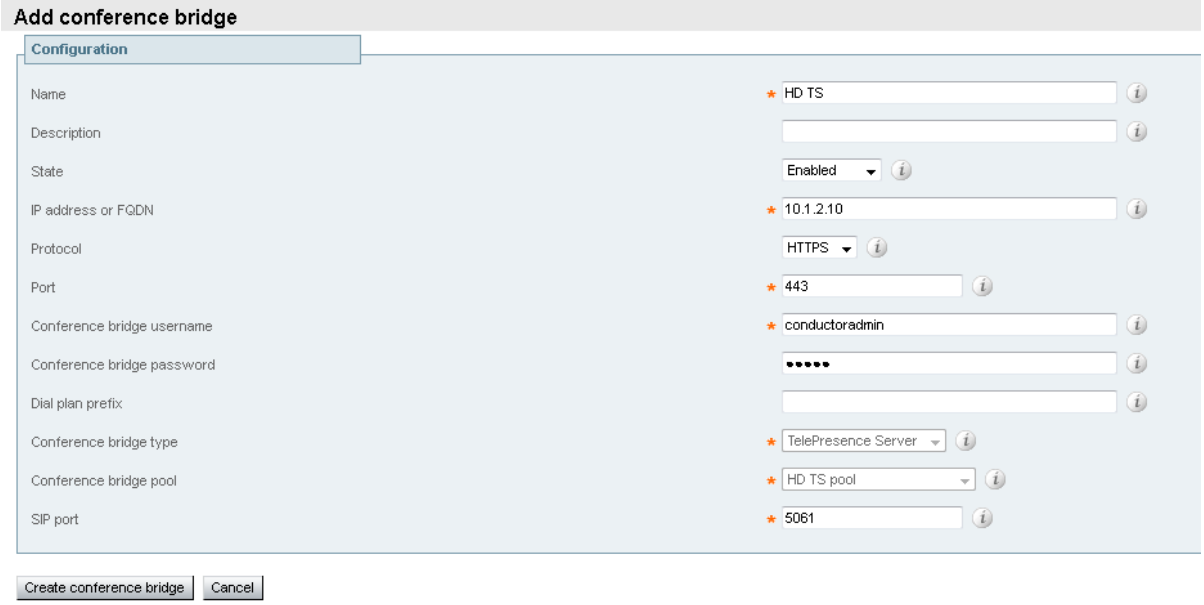
### Adding a TelePresence Server to the HD conference bridge pool

Before adding a TelePresence Server to the conference bridge pool, ensure that the **Operation mode** on the TelePresence Server is set to *Remotely managed* (see Task 11: Configuring the operational mode [p.22]).

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

| | |
|---|---|
| **Name** | Enter a name for the conference bridge, for example `HD TS`. |
| **State** | Select *Enabled*. |
| **IP address or FQDN** | Enter the IP address of the HD conference bridge. |
| **Protocol** | Select *HTTPS*. |

| | |
|---|---|
| **Port** | Enter '443'. |
| **Conference bridge username** | Enter the conference bridge admin username, for example `conductoradmin`. (This is created in Task 7: Creating a user [p.18].) |
| **Conference bridge Password** | Enter the conference bridge password for this user. |
| **Dial plan prefix** | This must be left blank. |
| **SIP port** | Enter the SIP port on which the conference bridge listens for SIP TLS traffic, typically this is '5061'. |




3. Click **Create conference bridge**.
4. Ensure that under the **Conference bridges in this pool** section, under the **Status** header the conference bridge is listed as *Active*.
5. Repeat the steps to add any further TelePresence Servers to the conference bridge pool.

### Creating a TelePresence Server SD conference bridge pool

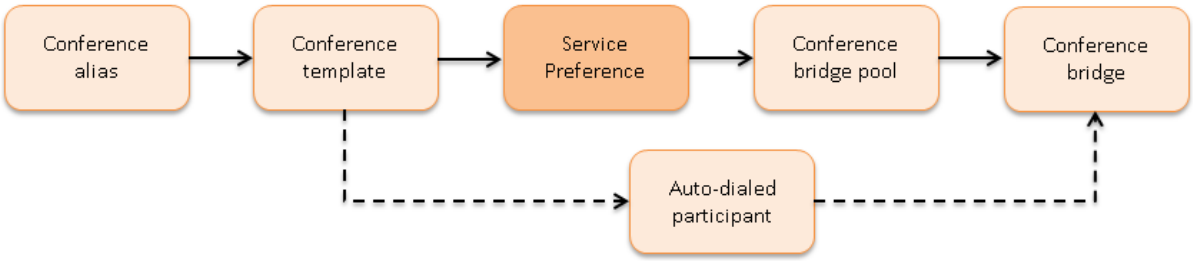
Repeat the steps under Creating a TelePresence Server HD conference bridge pool [p.33] to create a TelePresence Server SD conference bridge pool. Enter the same values for the fields, apart from the **Pool name**, which should be `SD TS pool`, for example.

### Adding a TelePresence Server to the SD conference bridge pool

Repeat the steps under Adding a TelePresence Server to the HD conference bridge pool [p.33] to add a TelePresence Server to the SD conference bridge pool. Enter the same values for the fields, apart from:

| | |
|---|---|
| **Name** | Enter a name for the conference bridge, for example `SD TS`. |
| **IP address or FQDN** | Enter the IP address of the SD conference bridge. This must be a different IP address from the HD conference bridge. |
| **Dial plan prefix** | This must be left blank. |

## Task 20: Creating Service Preferences



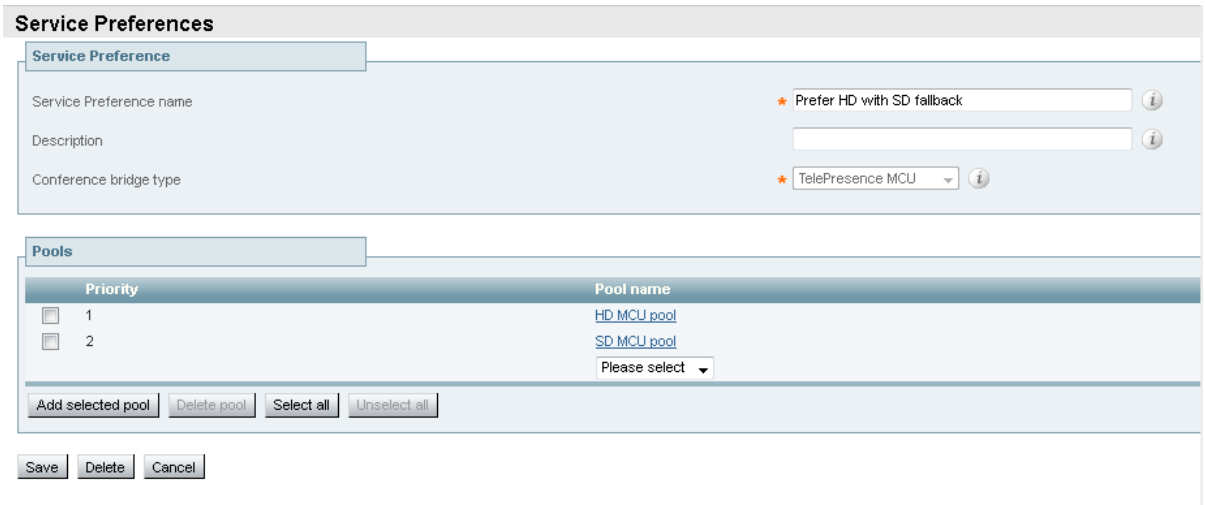

A Service Preference is a prioritized list of conference bridge pools that defines the order in which resources are used for conferences. During the configuration process, the conference bridge type is chosen as either *TelePresence MCU* or *TelePresence Server*. You cannot mix the two types of conference bridges. A conference can be cascaded from one conference bridge to another, taking into account the prioritized list of conference bridge pools.

The following examples show how to create Service Preferences for:

- TelePresence MCU hosted HD conferences
- TelePresence MCU hosted SD conferences
- TelePresence Server hosted HD conferences
- TelePresence Server hosted SD conferences

### Creating a Service Preference for TelePresence MCU hosted HD conferences

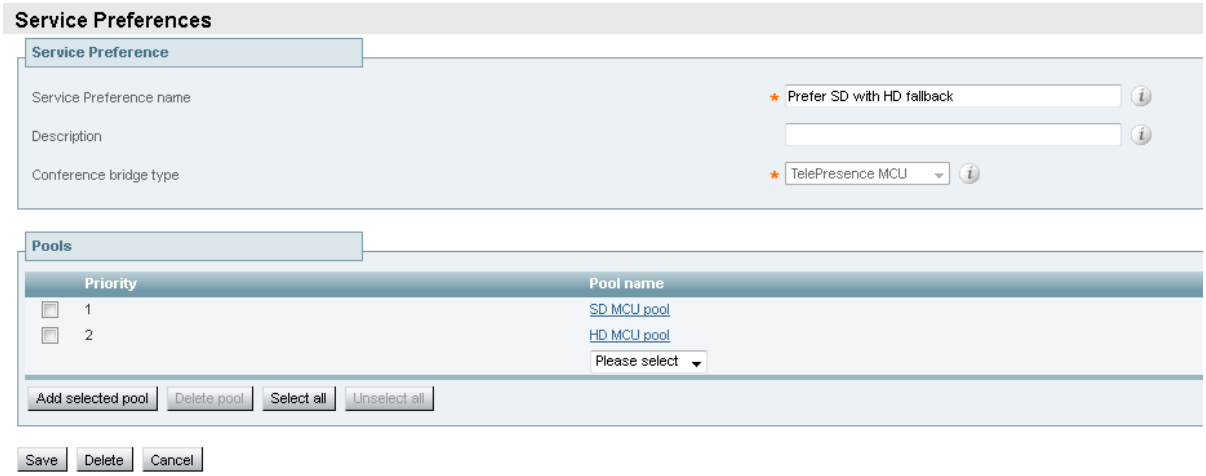
1. Go to **Conference configuration > Service Preferences**.
2. Click **New**.
3. In the **Service Preference name** field enter `Prefer HD with SD fallback`.
4. In the **Conference bridge type** field, choose *TelePresence MCU*.
5. Click **Add Service Preference**.
6. In the **Pools** section of the page under **Pool name** select *HD MCU pool*.
7. Click **Add selected pool**.
8. In the **Pools** section of the page under **Pool name** select *SD MCU pool*.
9. Click **Add selected pool**.




10. Click **Save**.

### Creating a Service Preference for TelePresence MCU hosted SD conferences

1. Go to **Conference configuration > Service Preferences**.
2. Click **New**.
3. In the **Service Preference name** field enter `Prefer SD with HD fallback`.
4. In the **Conference bridge type** field, choose *TelePresence MCU*.
5. Click **Add Service Preference**.
6. In the **Pools** section of the page under **Pool name** select *SD MCU pool*.
7. Click **Add selected pool**.
8. In the **Pools** section of the page under **Pool name** select *HD MCU pool*.
9. Click **Add selected pool**.

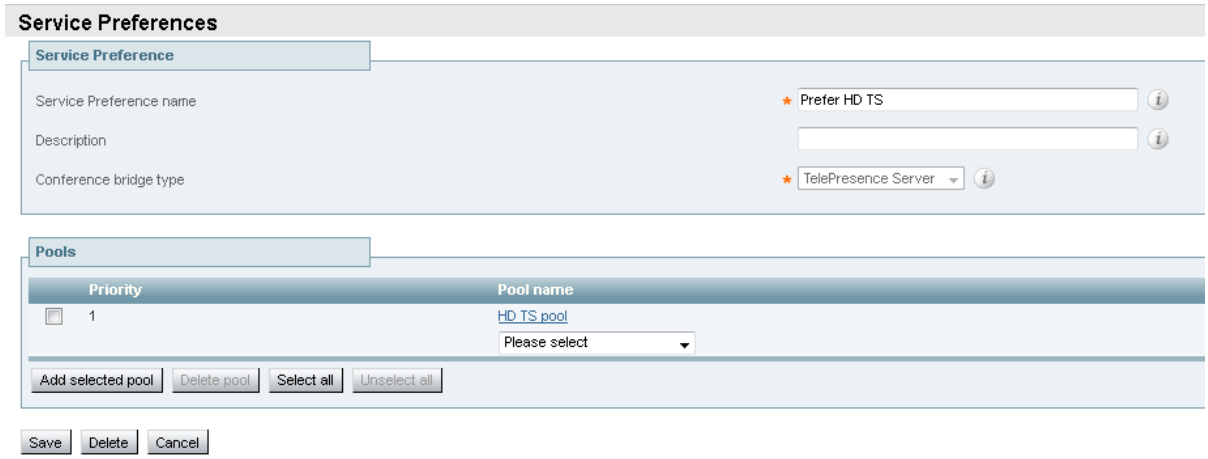



10. Click **Save**.

### Creating a Service Preference for TelePresence Server hosted HD conferences

1. Go to **Conference configuration > Service Preferences**.
2. Click **New**.

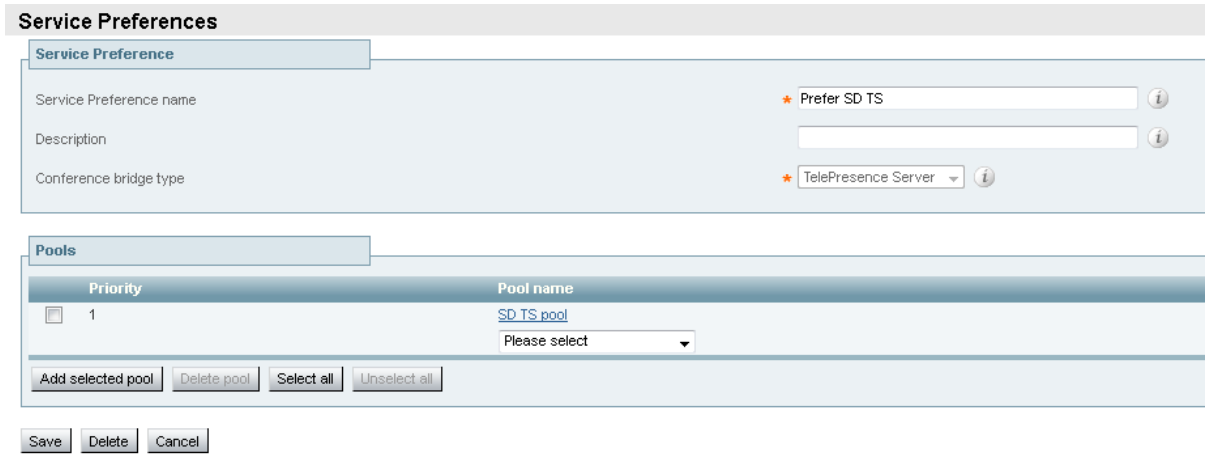
3. In the **Service Preference name** field enter `Prefer HD TS`.
4. In the **Conference bridge type** field, choose *TelePresence Server*.
5. Click **Add Service Preference**.
6. In the **Pools** section of the page under **Pool name** select *HD TS pool*.
7. Click **Add selected pool**.




8. Click **Save**.

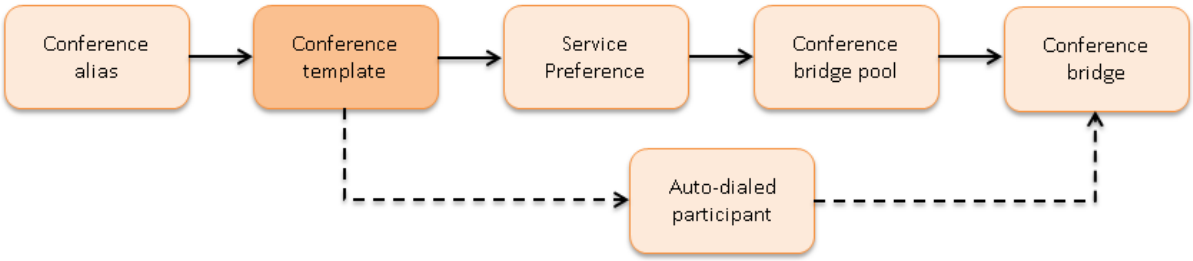
### Creating a Service Preference for TelePresence Server hosted SD conferences

1. Go to **Conference configuration > Service Preferences**.
2. Click **New**.
3. In the **Service Preference name** field enter `Prefer SD TS`.
4. In the **Conference bridge type** field, choose *TelePresence Server*.
5. Click **Add Service Preference**.
6. In the **Pools** section of the page under **Pool name** select *SD TS pool*.
7. Click **Add selected pool**.




8. Click **Save**.

## Task 21: Creating conference templates for Meeting-type conferences




A Meeting-type conference template provides all its participants with the same privileges and requires one or more conference aliases. The following examples show how to create conference templates for:

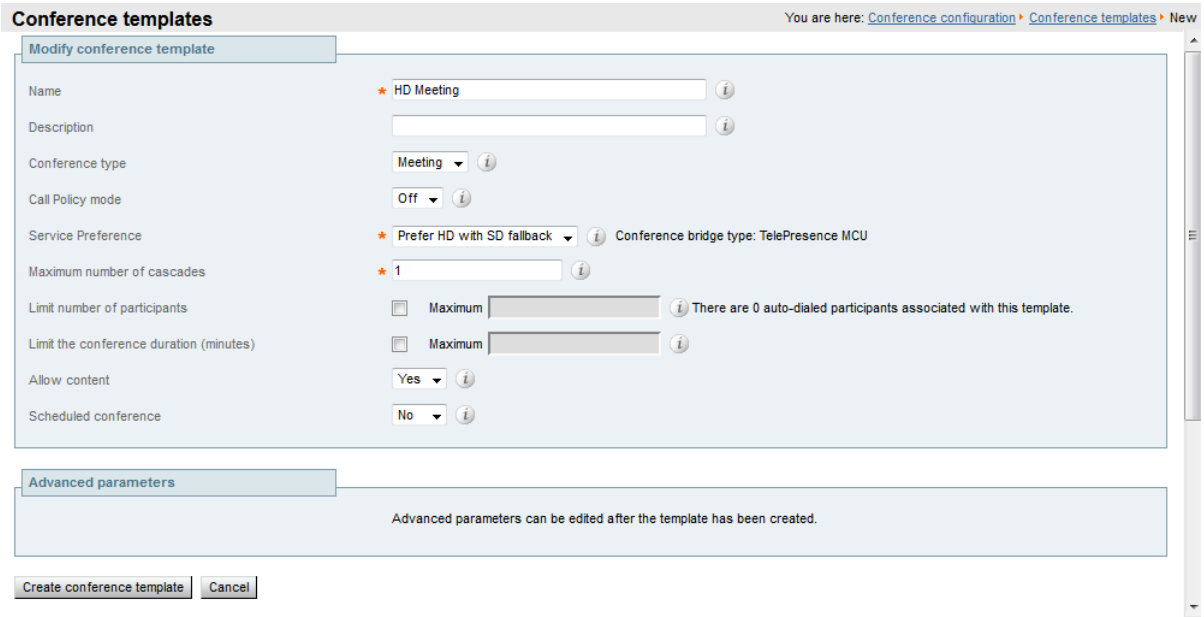
- 'HD Meetings' hosted on TelePresence MCUs
- 'SD Meetings' hosted on TelePresence MCUs
- 'HD Meetings' hosted on TelePresence Servers
- 'SD Meetings' hosted on TelePresence Servers

### Creating a conference template for an 'HD Meeting' hosted on TelePresence MCUs

This template uses a Service Preference that prioritizes HD pools over SD pools for TelePresence MCU resources.

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** | Enter a name for the conference template, for example `HD Meeting`. |
| **Conference type** | Select *Meeting*. |
| **Service Preference** | Select *Prefer HD with SD fallback*. |
| **Maximum number of cascades** | To enable cascading enter '1' or, if you want to cascade to more than one conference bridge, a higher number. To disable cascading, enter '0'. |
| **Limit number of participants** | Specify a limited number of participants, if required.<br>The number includes any auto-dialed participants.<br>**Note:** No preference is given to participants who have organized a conference. If the maximum number of participants is reached before the participant who organized the conference has dialed in, this participant is rejected. |




4. Click **Create conference template**.

**Note:** If you would like to make changes to the advanced template parameters, which change settings on the conference bridges, see the section *Adding and editing advanced template parameters* within the current *Cisco TelePresence Conductor Administrator Guide*.

### Creating a conference template for an 'SD Meeting' hosted on TelePresence MCUs

This template uses a Service Preference that prioritizes SD pools over HD pools for TelePresence MCU resources.

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

| | |
|---|---|
| **Name** | Enter a name for the conference template, for example `SD meeting`. |
| **Conference type** | Select *Meeting*. |
| **Service Preference** | Select *Prefer SD with HD fallback*. |
| **Maximum number of cascades** | To enable cascading enter '1' or, if you want to cascade to more than one conference bridge, a higher number. To disable cascading, enter '0'. |

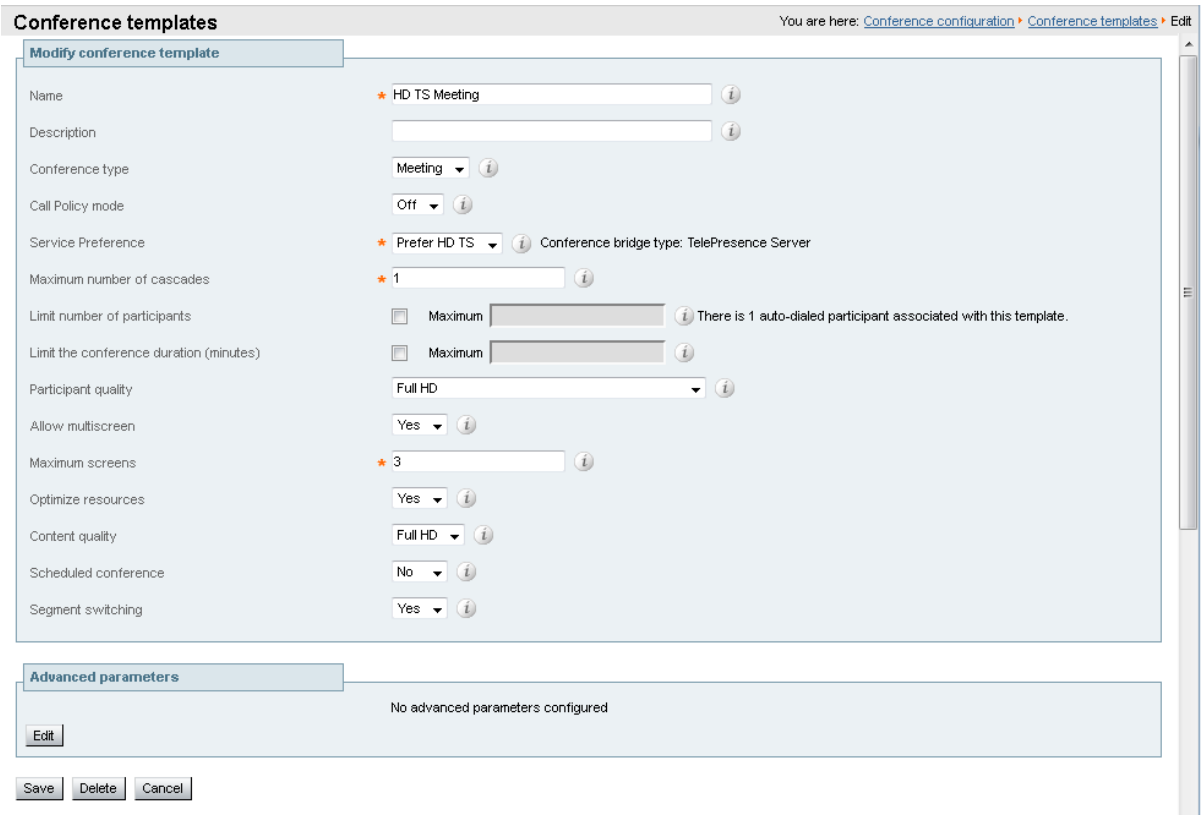
### Creating a conference template for an 'HD Meeting' hosted on TelePresence Servers

The following steps demonstrate how to create an HD meeting template for a TelePresence Server.

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** | Enter a name for the conference template, for example `HD TS meeting`. |
| **Conference type** | Select *Meeting*. |

| | |
|---|---|
| **Call Policy mode** | This feature is not supported for this deployment. To define which participants can create a conference use the field **Allow conference to be created** on the **Conference aliases** page instead. |
| **Service Preference** | Select *Prefer HD TS*. |
| **Maximum number of cascades** | To enable cascading enter '1' or, if you want to cascade to more than one conference bridge, a higher number. To disable cascading, enter '0'.<br>TelePresence Server version 4.0(1.57) or later is required for cascading to work. |
| **Limit number of participants** | Specify a limited number of participants, if required.<br>The number includes any auto-dialed participants.<br>**Note:** No preference is given to participants who have organized a conference. If the maximum number of participants is reached before the participant who organized the conference has dialed in, this participant is rejected. |
| **Participant quality** | Choose one of the HD choices from the drop-down box.<br>When using a CTS3000 or TX9000 you must select *Full HD (1080p 30fps / 720p 60fps video, multi-channel audio)* or a custom quality setting that has an audio quality level of multi-channel, otherwise insufficient resources will be allocated to display multiple screens. |
| **Allow multiscreen** | Decide whether this conference will support multiscreen systems, or whether it will only display single screen systems and the center camera of a multiscreen system. The default is *No*.<br>If *Yes* is selected, the endpoint does not support TIP (Telepresence Interoperability Protocol) and the expectation is for multiscreen systems to have all three screens active, then create a pre-configured endpoint to match each multiscreen system in the call. (To do this go to **Conference configuration > Pre-configured endpoints**).<br>For more information on pre-configuring endpoints see *Cisco TelePresence Conductor Administrator Guide*. |
| **Content quality** | Select the maximum content quality allowed for this conference. |




4. Click **Create conference template**.

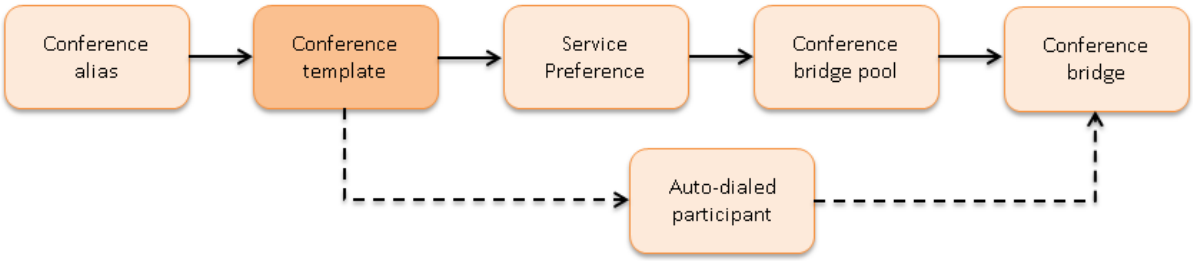
**Note:** If you would like to make changes to the advanced template parameters, which change settings on the conference bridges, see the section *Adding and editing advanced template parameters* within the current *Cisco TelePresence Conductor Administrator Guide*.

### Creating a conference template for an 'SD Meeting' hosted on TelePresence Servers

Repeat the steps under Creating a conference template for an 'HD Meeting' hosted on TelePresence Servers [p.39] to create a conference template for an 'SD Meeting' hosted on TelePresence Servers. Enter the same values for the fields, apart from:

| | |
|---|---|
| **Name** | Enter a name for the conference template, for example `SD TS meeting`. |
| **Service Preference** | Select *Prefer SD TS*. |
| **Participant quality** | Choose one of the SD choices from the drop-down box.<br>CTS3000 endpoints require the audio level to be set to multi-channel to be allocated sufficient resources to display three screens. The pre-defined SD setting does not have an audio level of multi-channel, which will result in only the center screen of the CTS3000 to be displayed. |

## Task 22: Creating conference templates for Lecture-type conferences




A Lecture-type conference template defines two role types, host and guest, with different privileges and requires at least one conference alias per role type. The following examples show how to create conference templates for:

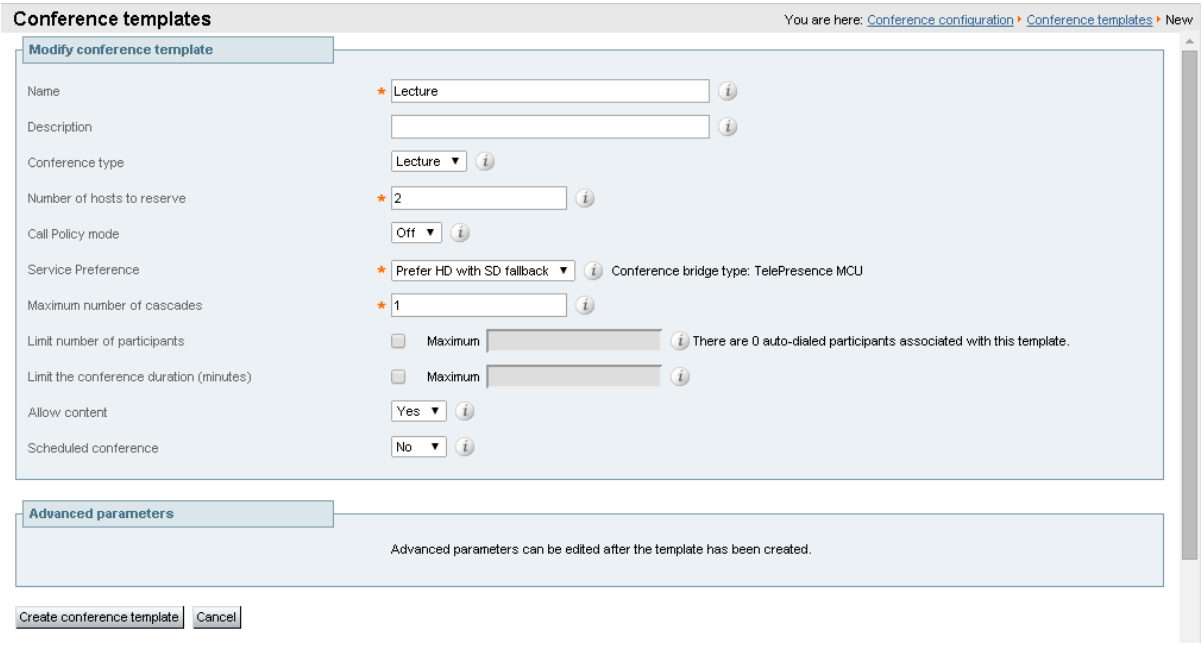
- Lecture-type conferences hosted on TelePresence MCUs
- Lecture-type conferences hosted on TelePresence Servers

### Creating a conference template for a Lecture-type conference hosted on HD TelePresence MCUs

The following steps set up a 'Lecture' template that uses an TelePresence MCU Service Preference:

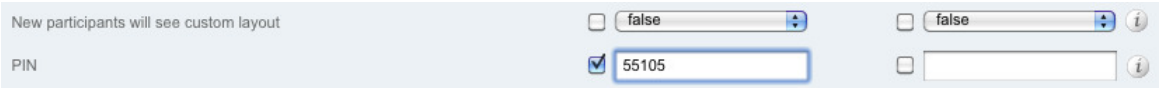
1. Go to **Conference configuration > Conference templates**.
2. Click **New**.
3. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter a name for the conference template, for example `Lecture`. |
| **Conference type** | Select *Lecture*. |
| **Number of hosts to reserve** | Enter '2' in this example. |
| **Call Policy mode** | This feature is not supported for this deployment. To define which participants can create a conference use the field **Allow conference to be created** on the **Conference aliases** page instead. |
| **Service Preference** | Select *Prefer HD with SD fallback*. |
| **Maximum number of cascades** | To enable cascading enter '1' or, if you want to cascade to more than one conference bridge, a higher number.<br>To disable cascading, enter '0'. |
| **Limit number of participants** | Specify a limited number of participants, if required.<br>The number includes any auto-dialed participants and any reserved hosts.<br>**Note:** No preference is given to participants who have organized a conference. If the maximum number of participants is reached before the participant who organized the conference has dialed in, this participant is rejected. |

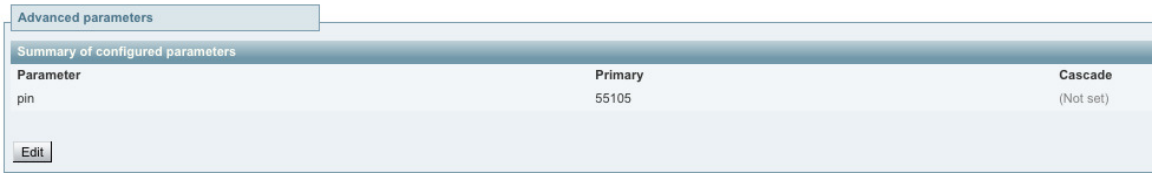



4. Click **Create conference template**.
5. Click **View/Edit** for the Lecture template.
6. Click **Edit** under the **Advanced parameters** section.
7. Enter the following in the relevant fields, leave other fields as their default values:

| Field | Input |
|---|---|
| PIN | Check the on box next to the field in the primary column then enter a PIN for the host to use when entering the conference.<br>**Note:** For TelePresence MCU software versions lower than 4.3 a guest PIN must be specified if a host PIN is specified. |




8. Click **Save** to exit the advance parameters.



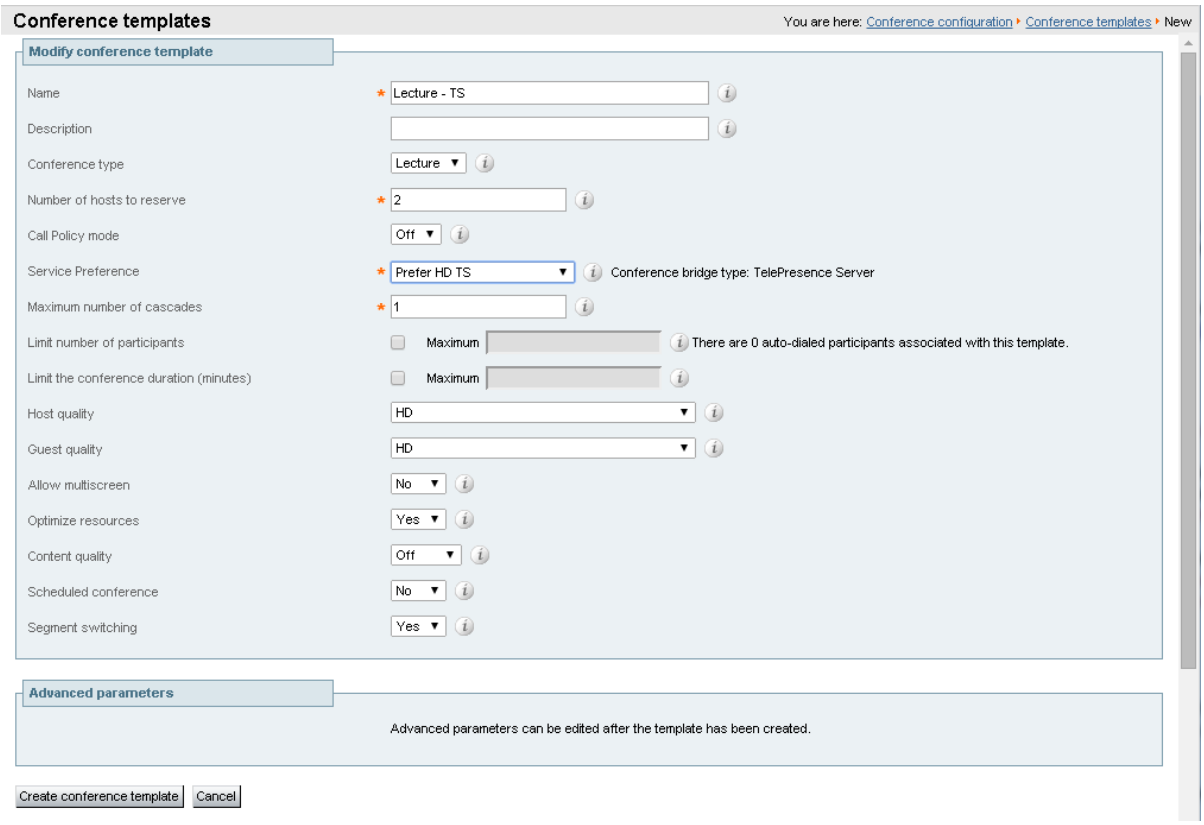

9. Click **Save** on the **Conference template** page.

### Creating a conference template for a Lecture-type conference hosted on HD TelePresence Servers

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:

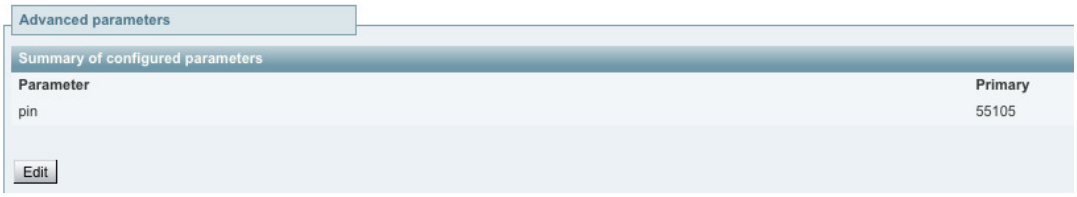
| | |
|---|---|
| **Name** | Enter a name for the conference template, for example `Lecture - TS`. |
| **Conference type** | Select *Lecture*. |
| **Number of hosts to reserve** | Enter '2' in this example. |
| **Call Policy mode** | This feature is not supported for this deployment. To define which participants can create a conference use the field **Allow conference to be created** on the **Conference aliases** page instead. |
| **Service Preference** | Select *Prefer HD TS*. |
| **Maximum number of cascades** | To enable cascading enter '1' or, if you want to cascade to more than one conference bridge, a higher number.<br>To disable cascading, enter '0'.<br>TelePresence Server version 4.0(1.57) or later is required for cascading to work. |
| **Limit number of participants** | Specify a limited number of participants, if required.<br>The number includes any auto-dialed participants and any reserved hosts.<br>**Note:** No preference is given to participants who have organized a conference. If the maximum number of participants is reached before the participant who organized the conference has dialed in, this participant is rejected. |
| **Host quality** | Enter the maximum quality setting to apply to hosts using this conference template.<br>When using a CTS3000 or TX9000 you must select *Full HD (1080p 30fps / 720p 60fps video, multi-channel audio)* or a custom quality setting that has an audio quality level of multi-channel, otherwise insufficient resources will be allocated to display multiple screens. |
| **Guest quality** | Enter the maximum quality setting to apply to guests using this conference template.<br>When using a CTS3000 or TX9000 you must select *Full HD (1080p 30fps / 720p 60fps video, multi-channel audio)* or a custom quality setting that has an audio quality level of multi-channel, otherwise insufficient resources will be allocated to display multiple screens. |
| **Allow multiscreen** | Decide whether this conference will support multiscreen systems, or whether it will only display single screen systems and the center camera of a multiscreen system. The default is *No*.<br>If *Yes* is selected, the endpoint does not support TIP (Telepresence Interoperability Protocol) and the expectation is for multiscreen systems to have all three screens active, then create a pre-configured endpoint to match each multiscreen system in the call. (To do this go to **Conference configuration > Pre-configured endpoints**).<br>For more information on pre-configuring endpoints see *Cisco TelePresence Conductor Administrator Guide*. |
| **Content quality** | Select the maximum quality allowed for this conference. |




4. Click **Create conference template**.
5. Click **View/Edit** for the Lecture - TS template.
6. Click **Edit** under the **Advanced parameters** section.
7. Enter the following in the relevant field, leave other fields as their default values:

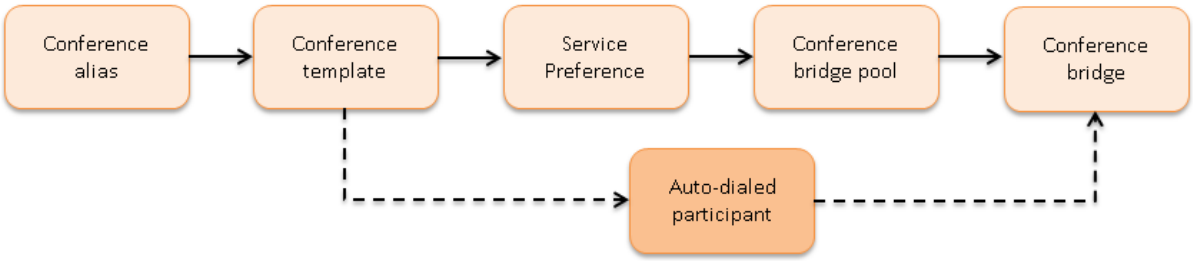
| | |
|---|---|
| **PIN** | Check the on box next to the **Pin** field and then enter a PIN for the host to use when entering the conference. |

8. Click **Save** to exit the advance parameters.




9. Click **Save** on the **Conference template** page.

## Task 23: Creating the auto-dialed participants




An auto-dialed participant is a participant that is automatically dialed from the conferencing resource at the start of the conference. The auto-dialed participant is associated with templates and is commonly used for dialing an endpoint, an external audio bridge, or a recording device.

Although the TelePresence Conductor and its conference bridges use SIP to call auto-dialed participants, H.323 endpoints can be called into a conference through the Cisco VCS's inter-working feature.

The following examples show how to create an auto-dialed participant for:

- an endpoint to join the 'HD Meeting'
- a recording device to join the 'Lecture' hosted on TelePresence MCUs
- a recording device to join the 'Lecture - TS' hosted on TelePresence Servers

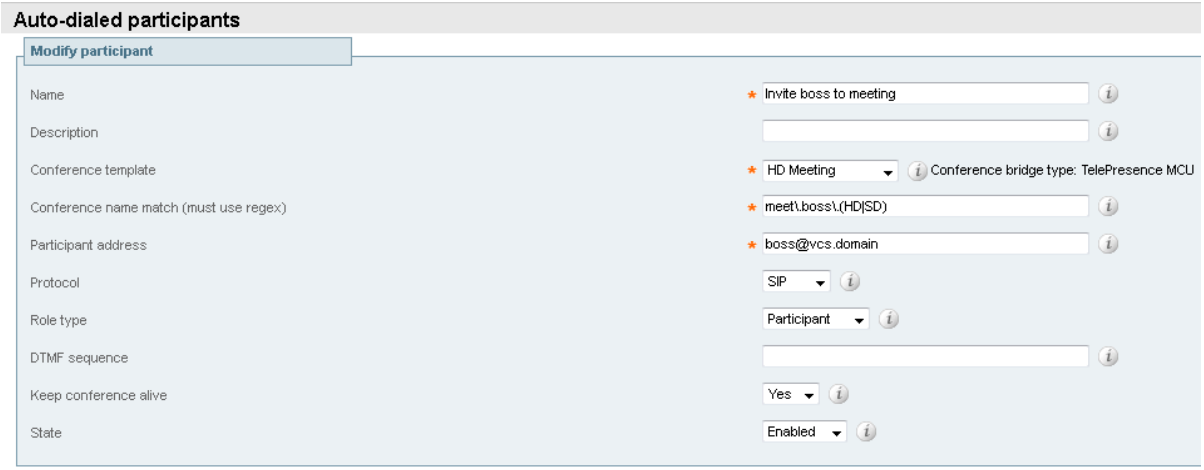
**Note:** Auto-dialed participants that are multiscreen endpoints are not supported. For multiscreen auto-dialed participants only the center screen is displayed in the conference.

### Creating an auto-dialed participant for an endpoint

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

| | |
|---|---|
| **Name** | Enter a name for the auto-dialed participant, for example `Invite boss to meeting`. |
| **Conference template** | Select *HD Meeting*. |
| **Conference name match** | Enter `meet\.boss\.(HD\|SD)`. |
| **Address** | Enter `boss@<SIP domain>`. |

| | |
|---|---|
| **Protocol** | Select *SIP*. |
| **Role type** | Select *Participant*. |
| **Keep conference alive** | Select *Yes*. |




4. Click **Create participant**.
5. Click **View/Edit** for the 'Invite boss to meeting' auto-dialed participant.
6. At the bottom of the page, there is a chart with the templates that are associated with this auto-dialed participant. Verify this association is correct.

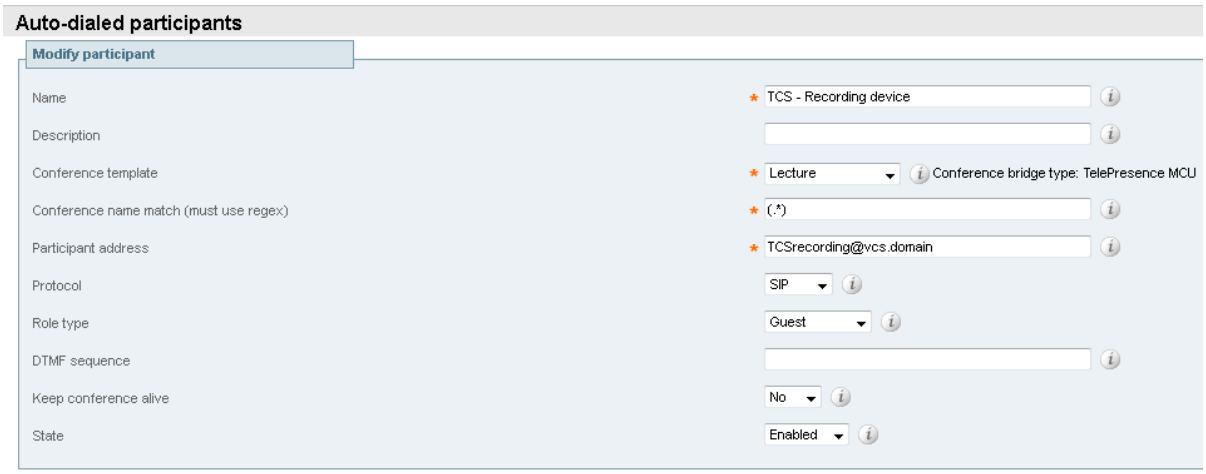
| Template associated with this auto-dialed participant | Description | Type |
|---|---|---|
| HD Meeting | | Meeting |

7. Click **Save**.

### Creating an auto-dialed participant for a recording device joining a TelePresence MCU hosted conference

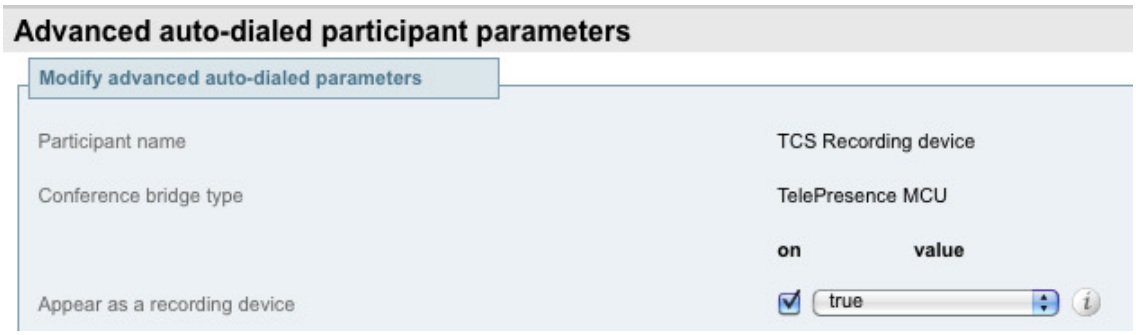
1. Go to **Conference configuration > Auto-dialed participants**.
2. Click **New**.
3. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter a name for the auto-dialed participant, for example `TCS – Recording device`. |
| **Conference template** | Select *Lecture* to use with the 'Lecture' meeting on TelePresence MCUs. |
| **Conference name match** | Enter `(.*)` This will match on all conference names. |
| **Address** | Enter `TCSrecording@<SIP domain>`. |
| **Protocol** | Select *SIP*. |
| **Role type** | Select *Guest*. |
| **Keep conference alive** | Select *No*. |




4. Click **Create participant**.
5. Click **View/Edit** for the 'TCS - Recording device' auto-dialed participant.
6. Click **Edit** under the **Advanced parameters** section.
7. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Appear as a recording device** | Check the **on** box next to the field and then change the value to *True* from the drop-down list. |




8. Click **Save** to exit the advance parameters.


9. At the bottom of the page, there is a chart with the templates that are associated with this auto-dialed participant. Verify this association is correct.

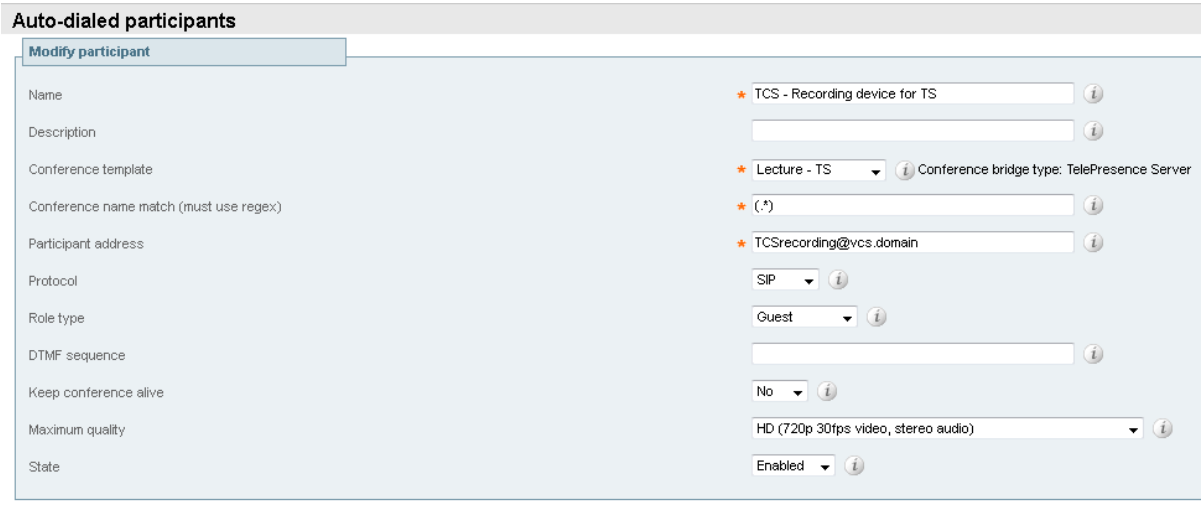

10. Click **Save** on the **Auto-dialed participants** page.

### Creating an auto-dialed participant for a recording device joining a TelePresence Server hosted conference

1. Go to **Conference configuration > Auto-dialed participants**.
2. Click **New**.

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

| | |
|---|---|
| **Name** | Enter a name for the auto-dialed participant, for example **`TCS – Recording device for TS`**. |
| **Conference template** | Select *Lecture* to use with the Lecture meeting on the TelePresence Server |
| **Conference name match** | Enter **`(.*)`** This will match on all conference names. |
| **Address** | Enter **`TCSrecording@<SIP domain>`** |
| **Protocol** | Select *SIP*. |
| **Role type** | Select *Guest*. |
| **Keep conference alive** | Select *No*. |
| **Maximum quality** | Enter the maximum quality setting to apply to this auto-dialed participant. |

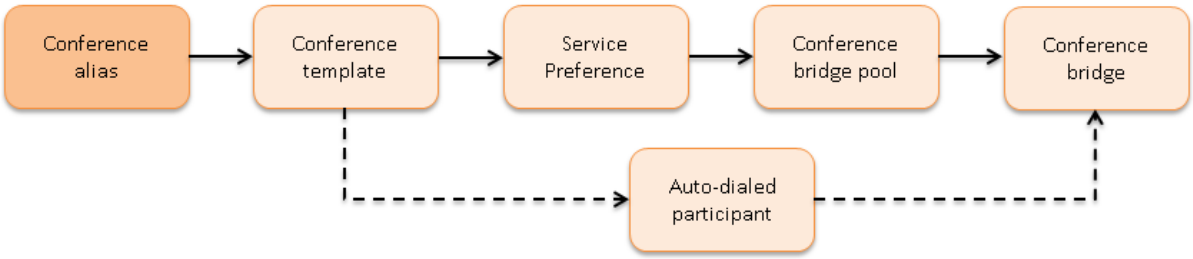



4. Click **Create participant**.
5. At the bottom of the page, there is a chart with the templates that are associated with this auto-dialed participant. Verify this association is correct.

| Template associated with this auto-dialed participant | Description | Type |
|---|---|---|
| Lecture - TS | | Lecture |

6. Click **Save** on the **Auto-dialed participants** page.

## Task 24: Creating conference aliases for the Meeting-type conferences



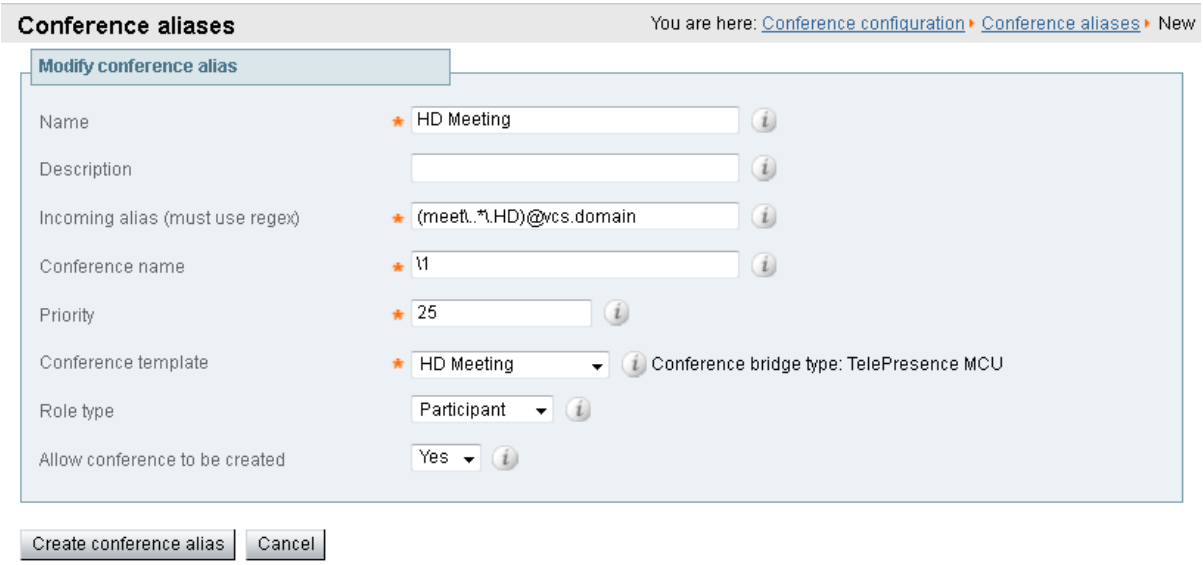

Meeting-type conferences require one or more conference aliases for the role-type of 'Participant'. The following examples show how to create a conference alias for:

- TelePresence MCU hosted 'HD Meeting' conference template
- TelePresence MCU hosted 'SD Meeting' conference template
- TelePresence Server hosted 'HD Meeting' conference template
- TelePresence Server hosted 'SD Meeting' conference template

### Creating a conference alias for the TelePresence MCU hosted 'HD Meeting' template

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 `HD Meeting`. |
| **Incoming alias** | Enter `(meet\..*\.HD)@vcs.domain` for example<br>This pattern will match `meet.<any_characters>.HD@vcs.domain` |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '25' for example. |
| **Conference template** | Select *HD Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |




4. Click **Create conference alias**.

### Creating a conference alias for the TelePresence MCU hosted 'SD Meeting' template

Repeat the steps under Creating a conference alias for the TelePresence MCU hosted 'HD Meeting' template [p.50] to create a conference alias for the 'SD Meeting' hosted on TelePresence MCUs. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter a name for the alias, for example `SD Meeting`. |
| **Incoming alias** | Enter `(meet\..*\.SD)@vcs.domain` for example.<br>This pattern will match `meet.<any_characters>.SD@vcs.domain` |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '40' for example. |
| **Conference template** | Select *SD Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

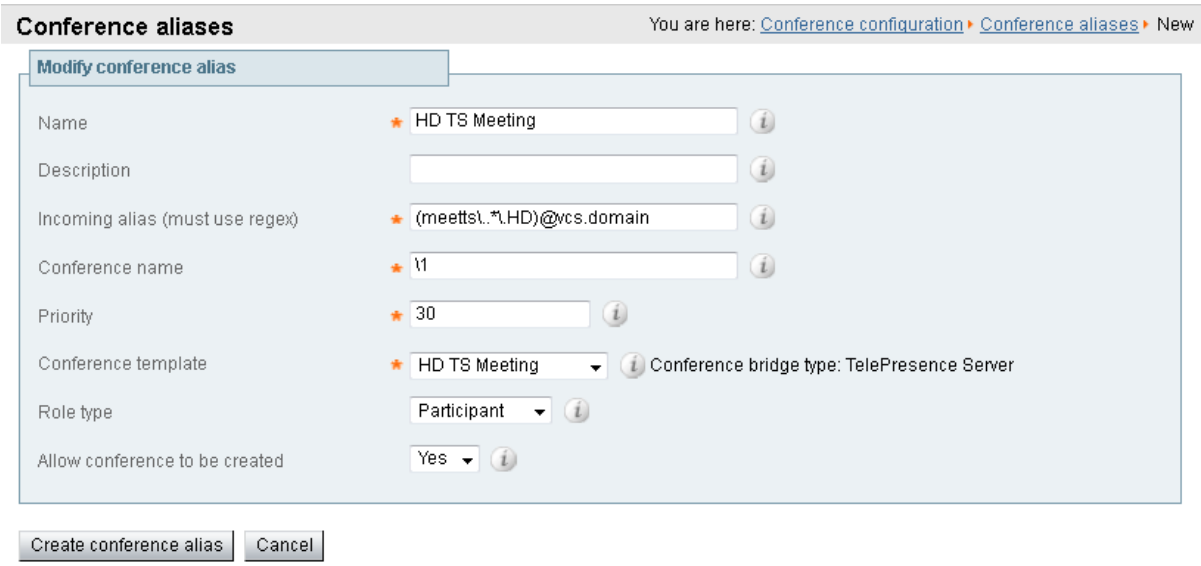
### Creating a conference alias for the TelePresence Server hosted 'HD TS Meeting' template

The following steps create a conference alias that uses the 'HD TS Meeting' template and hosts the conference on a TelePresence Server:

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 `HD TS Meeting`. |
| **Incoming alias** | Enter `(meetts\..*\.HD)@vcs.domain` for example.<br>This pattern will match `meetts.<any_characters>.HD @vcs.domain` |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '30' for example. |
| **Conference template** | Select *HD TS Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |




4. Click **Create conference alias**.

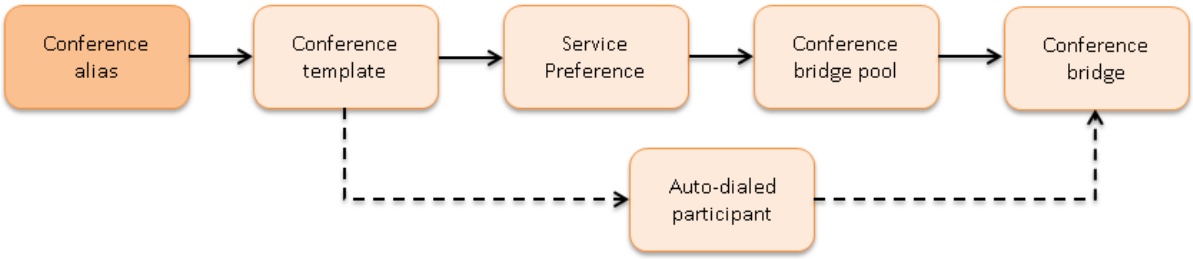
### Creating a conference alias for the TelePresence Server hosted 'SD TS Meeting' template

Repeat the steps under Creating a conference alias for the TelePresence Server hosted 'HD TS Meeting' template [p.51] to create a conference alias for the 'SD Meeting' hosted on TelePresence Servers. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter a name for the alias, for example `SD TS Meeting`. |
| **Incoming alias** | Enter `(meetts\..*\.SD)@vcs.domain` for example.<br>This pattern will match `meetts.<any_characters>.SD@vcs.domain` |

| | |
|---|---|
| **Conference name** | Enter `\1` |
| **Priority** | Enter '45' for example. |
| **Conference template** | Select *SD TS Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

## Task 25: Creating conference aliases for the Lecture-type templates




Lecture-type conferences require one or more conference aliases per role-type. The role types are 'Host' and 'Guest'. The following examples show how to create a conference alias for:

- TelePresence MCU hosted 'Lecture' template with a role of 'Host'
- TelePresence MCU hosted 'Lecture' template with a role of 'Guest'
- TelePresence Server hosted 'Lecture-TS' template with a role of 'Host'
- TelePresence Server hosted 'Lecture - TS' template with a role of 'Guest'

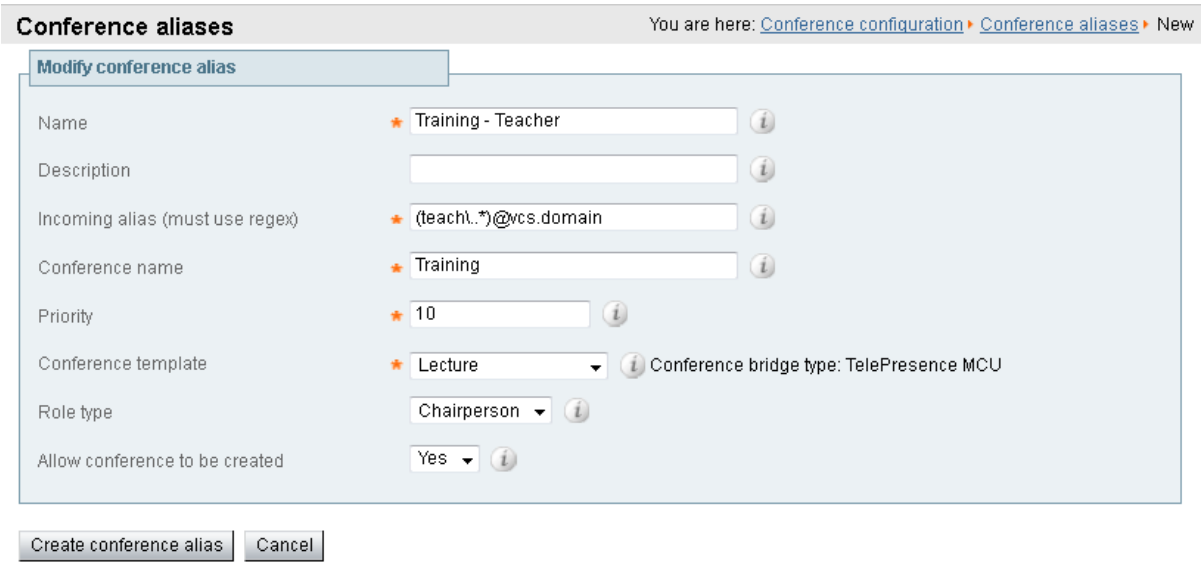
**Note:** When configuring conference aliases for 'Lecture'-type conferences, you must ensure that the **Conference name** for the 'Host' alias and the 'Guest' alias resolve to the same string. If you do not, they will end up in separate conferences.

### Creating a conference alias for the TelePresence MCU hosted 'Lecture' template with a role of 'Host'

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 `Training - Teacher` |
| **Incoming alias** | Enter `(teach\..*)@vcs.domain` for example.<br>This pattern will match `teach.<any_characters>@vcs.domain` |
| **Conference name** | Enter `Training` |

| | |
|---|---|
| **Priority** | Enter '10' for example. |
| **Conference template** | Select *Lecture*. |
| **Role type** | Select *Host*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |



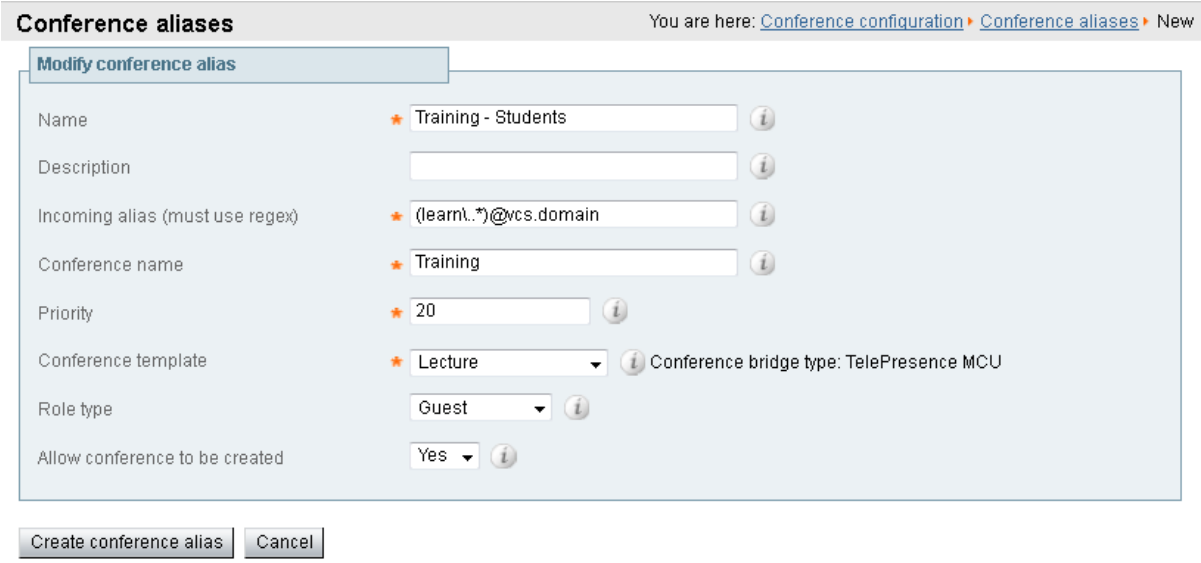

4. Click **Create conference alias**.

### Creating a conference alias for the TelePresence MCU hosted 'Lecture' template with a role of 'Guest'

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 `Training - Students` |
| **Incoming alias** | Enter `(learn\..*)@vcs.domain` for example.<br>This pattern will match `learn.<any_characters>@vcs.domain` |
| **Conference name** | Enter `Training` |
| **Priority** | Enter '20' for example. |

| | |
|---|---|
| **Conference template** | Select *Lecture*. |
| **Role type** | Select *Guest*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |



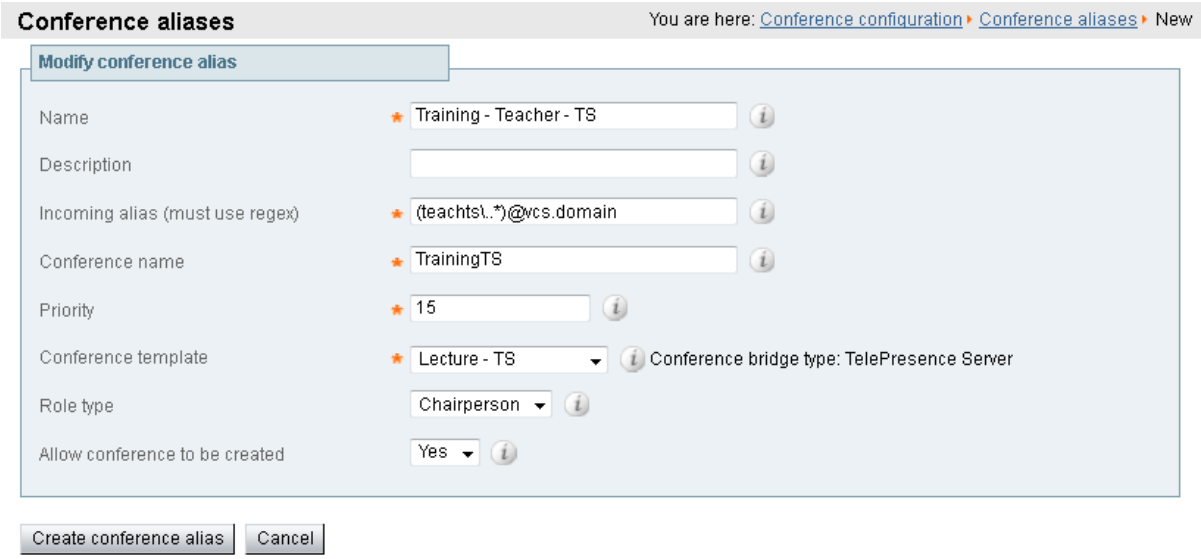

4. Click **Create conference alias**.

### Creating a conference alias for the TelePresence Server hosted 'Lecture - TS' template with a role of 'Host'

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 `Training – Teacher - TS` |
| **Incoming alias** | Enter `(teachts\..*)@vcs.domain` for example.<br>This pattern will match `teachts.<any_characters>@vcs.domain` |
| **Conference name** | Enter `TrainingTS` for example. |
| **Priority** | Enter '15' for example. |
| **Conference template** | Select *Lecture - TS*. |

| | |
|---|---|
| **Role type** | Select *Host*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |



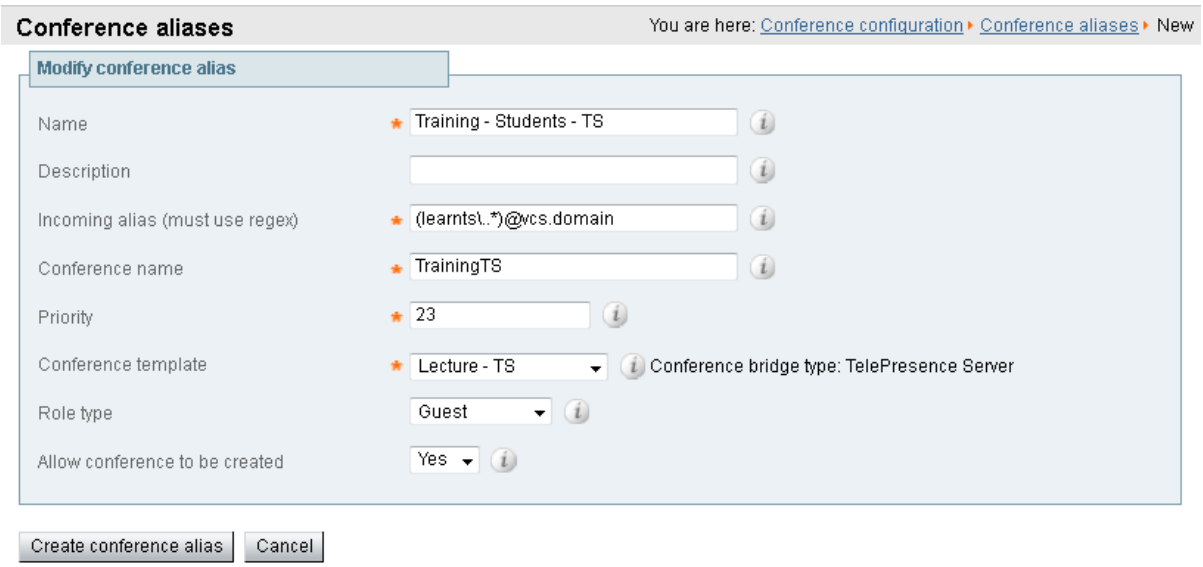

4. Click **Create conference alias**.

### Creating a conference alias for the TelePresence Server hosted 'Lecture - TS' template with a role of 'Guest'

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 `Training – Students – TS` |
| **Incoming alias** | Enter `(learnts\..*)@vcs.domain` for example.<br>This pattern will match `learnts.<any_characters>@vcs.domain` |
| **Conference name** | Enter `TrainingTS` for example. |
| **Priority** | Enter '23' for example. |
| **Conference template** | Select *Lecture - TS*. |
| **Role type** | Select *Guest*. |

| | |
|---|---|
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |




4. Click **Create conference alias**.

# Testing system configuration

When the configuration described in the previous sections is complete, you should test that the system is working correctly.

## Creating a Meeting-type conference

To test that two or more endpoints can join an HD TelePresence MCU conference based on a template with a type of Meeting, dial **meet.test.HD@<SIP domain>** from each endpoint. Both endpoints should be taken to the same conference.

To test that two or more endpoints can join an HD TelePresence Server conference based on a template with a type of Meeting, dial **meetts.test.HD@<SIP domain>** from each endpoint. Both endpoints should be taken to the same conference.

## Adding an auto-dialed participant

To test that auto-dialed participants are called when an HD Meeting TelePresence MCU conference is created, dial **meet.boss.HD@<SIP domain>** from an endpoint. The auto-dialed participants **boss@<SIP domain>** and **TCSrecording@<SIP domain>** should receive a call from the TelePresence MCU conference bridge.

To test that auto-dialed participants are called when an HD Meeting TelePresence Server conference is created, dial **meetts.boss.HD@<SIP domain>** from an endpoint. The auto-dialed participants **boss@<SIP domain>** and **TCSrecording@<SIP domain>** should receive a call from the TelePresence Server conference bridge.

## Creating a Lecture-type conference

To test that two or more endpoints can use different aliases to join the same TelePresence MCU conference based on a template with a type of Lecture, have one endpoint dial **teach.test@<SIP domain>** to represent the teacher and have the other endpoint dial **learn.test@<SIP domain>**. All endpoints should be taken to the same conference. The endpoints that dialed **learn.test@<SIP domain>** will see a blank screen until the endpoint that dialed **teach.test@<SIP domain>** enters the conference.

To test that two or more endpoints can use different aliases to join the same TelePresence Server conference based on a template with a type of Lecture, have one endpoint dial **teachts.test@<SIP domain>** to represent the teacher and have the other endpoint dial **learnts.test@<SIP domain>**. All endpoints should be taken to the same conference. The endpoints that dialed **learnts.test@<SIP domain>** will see a blank screen until the endpoint that dialed **teachts.test@<SIP domain>** enters the conference.

## Testing cascading

To check that cascading is working properly it is necessary to occupy all the ports on the first conference bridge so that the TelePresence Conductor cascades the conference to the second conference bridge. If there are enough endpoints registered to the Cisco VCS you can test this by adding callers to the conference until it is cascaded. Alternatively, you can increase the number of host resources to be reserved by a Lecture-type template to a level that fills the primary conference bridge. This will cause the conference to be cascaded when guests dial in to a conference that is based on that template.

# Creating a system backup

To create a backup of TelePresence Conductor system data:

1. Go to **Maintenance > Backup and restore**.
2. Optionally, enter an **Encryption password** with which to encrypt the backup file.
   If a password is specified, the same password will be required to restore the file.
3. Click **Create system backup file**.
4. After the backup file has been prepared, a pop-up window appears and prompts you to save the file (the exact wording depends on your browser). The default name is in the format:
   **<software version>_<hardware serial number>_<date>_<time>_backup.tar.gz**.
   (The file extension is normally **.tar.gz.enc** if an encryption password is specified. However, if you use Internet Explorer to create an encrypted backup file, the filename extension will be **.tar.gz.gz** by default. These different filename extensions have no operational impact; you can create and restore encrypted backup files using any supported browser.)
   The preparation of the system backup file may take several minutes. Do not navigate away from this page while the file is being prepared.
5. Save the file to a designated location.

Log files are not included in the system backup file.

For more information see *Cisco TelePresence Conductor Administrator Guide* or the TelePresence Conductor's online help.

# Troubleshooting

## Tracking a call from Cisco VCS to TelePresence Conductor

### Event log

To see the events associated with a particular call on both Cisco VCS and TelePresence Conductor look at the search history on the Cisco VCS (**Status > Search history**, then click **View** for a particular call). Searching for the tag associated with that call in the event log on the TelePresence Conductor yields the events associated with that call:

- For calls which create conferences this tag is then associated with all future events associated with this conference (for example, conference destruction and auto-dialed participant requests to the conference bridge).
- For calls which are joining existing conferences, the tag is associated with their conference join request.

A full explanation of all the terms in the event log can be found in *Cisco TelePresence Conductor Administrator Guide*.

The call tag is specific to a call across multiple Cisco VCSs.

### Diagnostic log

Use diagnostic logging (**Maintenance > Diagnostics > Diagnostic logging**) to see the call signaling in the Cisco VCS.

## Tracking a conference on the TelePresence Conductor

### Event log

To see all events associated with a particular conference alias (i.e. across multiple individual conferences) filter by Conference_alias_UUID in the event log either by copying it to the filter box from the event log or by clicking on the hyperlink.

### Diagnostic log

Use diagnostic logging (**Maintenance > Diagnostics > Diagnostic logging**) to see the call signaling in the TelePresence Conductor Back-to-back-user-agent (B2BUA).

## Specific issues

### Unable to enable more than one conference bridge

If only a single conference bridge can be enabled, the reason could be that there is no valid release key installed on the TelePresence Conductor.

Contact your Cisco account representative to obtain release key and option keys.

### TelePresence Conductor does not communicate with any conference bridges

If the TelePresence Conductor is running without a release key, only a single un-clustered conference bridge is supported.

If the only conference bridge that is enabled on the TelePresence Conductor is clustered, the conference bridge shows as *Unusable* on the **Conference bridge status** page (**Status > Conference bridges**) and the TelePresence Conductor is unable to communicate with any conference bridges.

Contact your Cisco account representative to obtain release key and option keys.

## Conference does not get created

If a conference does not get created, check the list of alarms on the TelePresence Conductor.

If the alarm “Invalid JSON found” has been raised on theTelePresence Conductor and any JSON strings entered into the **Custom parameter** field on the **Advanced template parameters** or **Advanced auto-dialed participant parameters** pages contain double quotes, see Alarm "Invalid JSON found" raised for valid JSON string [p.64].

## Auto-dialed participant not connected

If the auto-dialed participant does not get called:

1. On the TelePresence Conductor go to **Conference configuration > Auto-dialed participants** and verify that the settings for the auto-dialed participant are correct, specifically check that:
   - **Participant address** is correct.
   - **Conference name match** will match a valid conference.
   - **State** of the participant is *Enabled*.
2. On the TelePresence Conductor go to **Status > Logs > Event Log > All events** to check whether the TelePresence Conductor tried to call the auto-dialed participant.
3. On the TelePresence Conductor ensure that all conference bridge pools, which can be used by this auto-dialed participant, have a **Location** set. To do this:
   a. Go to **Conference configuration > Auto-dialed participants** and check what the name of the associated conference template is.
   b. Go to **Conference configuration > Conference templates** and check what the name of the associated Service Preference is.
   c. Go to **Conference configuration > Service Preference** and check what the names of the associated Conference bridge pools are.
   d. Go to **Conference configuration > Conference bridge pools**, select each Conference bridge pool identified above and check that it has a Location other than *None* set for the **Location** field.
4. On the TelePresence Conductor go to **Conference configuration > Locations** and verify that
   - the **Conference type** is *Rendezvous*
   - the **SIP trunk settings for out-dial calls** are set correctly to route the auto-dialed participant back to Cisco VCS.
5. On the TelePresence MCU, verify how the conference bridge will dial the auto-dialed participant. Go to **Settings > SIP** and verify that
   - **SIP registrar usage** is *Disabled*
   - **SIP proxy address** is blank
   - **Outgoing transport** is *TLS*
   - **Use local certificate for outgoing connections and registrations** is checked
6. On the TelePresence Server go to **Configuration > SIP Settings** and verify that the **Outbound call configuration** is set to *Call direct*.

## Guests are disconnected when hosts remain on the cascade MCU only

Guest participants are disconnected from the primary conference bridge even though there are host participants still present on a cascade conference bridge for the same conference. This occurs when:

- The conference bridge type is TelePresence MCU
- The conference template advanced parameter **Disconnect when last host leaves** is set to *true*
- All hosts that were dialed into the primary TelePresence MCU have disconnected
- There are still one or more hosts remaining on a cascade TelePresence MCU
- There are still one or more guests remaining on the primary TelePresence MCU

This issue does not occur on TelePresence Servers, even if the equivalent API parameter **`disconnectOnChairExit`** has been set to *true* via the custom advanced template parameters.

## Pre-configured endpoint cannot join conference

When you pre-configure single-screen and multiscreen endpoints on the TelePresence Conductor, you specify the address of each codec used by the endpoint.

In certain scenarios the address of the endpoint may change depending on where it registers to (for example if the domain portion of the URI is the IP address of the peer the endpoint is registering to). If not all addresses that the endpoint can be known as are listed in the pre-configured endpoints configuration in TelePresence Conductor, the TelePresence Conductor may not recognize its address and the endpoint will use the template default settings rather than the known endpoint settings.

To resolve this, you must ensure that all possible addresses that could be used by the codec are listed.

To do this:

1. On the TelePresence Conductor, go to **Conference configuration > Pre-configured endpoints**.
2. From the list of pre-configured endpoints select the endpoint in question.
3. In the **Codecs** section at the bottom of the page, click on the first codec.
4. In the **Optional address** fields, ensure that all possible addresses from which calls for this codec could be received are listed.
5. Click **Save**.
6. Repeat steps 3-5 for each codec configured for that endpoint.

## Only one screen of a multiscreen endpoint is used

### Insufficient configuration

By default, templates on the TelePresence Conductor are configured to provision single-screen systems or the primary screen of multiscreen systems only. If you have a multiscreen endpoint but only the screen related to the main codec is being used in a conference, then ensure that the template being used is set to allow multiscreen systems, as follows:

1. On the TelePresence Conductor, go to **Conference configuration > Conference templates**.
2. Click on the template that is being used for the relevant conference.
3. From the **Allow multiscreen** drop-down menu, select *Yes*.
4. Click **Save**.

If using a Cisco TelePresence System (CTS) endpoint, you must also configure the conference template to use multi-channel audio. If not, insufficient resources will be allocated to the endpoint resulting in only one of the three screens being used.

To provision an endpoint to use multi-channel audio:

1. On the TelePresence Conductor, go to **Conference configuration > Quality settings**.
2. Ensure that there is at least one quality setting with the following configuration:
   - 720p 30fps multi-channel audio, or
   - 720p 60fps multi-channel audio, or
   - 1080p 30fps multi-channel audio.

   If not, create a new quality setting by clicking **New**.
3. Go to **Conference configuration > Conference templates**.
4. Click on the template that is being used for the relevant conference.
5. From the **Participant quality** drop-down menu (for Meetings), or either the **Host quality** or **Guest quality** drop-down menu (for Lectures), select the appropriate multi-channel audio quality setting.
6. Click **Save**.

### Cascaded conferences

Only single screen endpoints are supported on cascade links connecting TelePresence Servers. Therefore, if a multiscreen endpoint joins a conference on a cascade conference bridge, participants on the same cascade bridge will see all screens, whereas participants on the primary bridge and on other cascade bridges will only see one screen (the screen showing the loudest speaker).

## Encrypted calls drop on Cisco TelePresence System (CTS) Series endpoints

When a CTS is registered to a Unified CM, which has a SIP trunk to a Cisco VCS and this Cisco VCS is connected to a TelePresence Conductor via the TelePresence Conductor's B2BUA, calls will drop when the conference that the CTS dials into is hosted on a TelePresence Server and when the SIP session is refreshed. In this scenario we recommend that you create a SIP trunk directly from the Unified CM to the TelePresence Conductor as detailed in the *Optimized Conferencing for Cisco Unified Communications Manager Solution Guide*.

## Conference name displayed on conference bridge is different from conference name that was configured

TelePresence MCUs support conference names of up to 31 characters and TelePresence Servers support conference names of up to 80 characters. If the TelePresence Conductor has a conference name that is longer than the maximum number of supported characters it will hash the name and pass the hash value to the conference bridge for it to use as the conference name. The TelePresence Conductor will continue to use the original name itself.

If a conference name is longer than 31 (for TelePresence MCU) or 80 (for TelePresence Server) characters, you can view the hashed value on the **Conferences status** page (**Status > Conferences**):

- **Name:** shows the conference name used by the TelePresence Conductor
- **Conference name:** shows the hashed value, i.e. the conference name used by the conference bridge.

### Alarm "Invalid JSON found" raised for valid JSON string

It may be possible for the alarm “Invalid JSON found” to be raised even though the JSON string that was entered into the **Custom parameter** field on the **Advanced template parameters** or **Advanced auto-dialed participant parameters** pages appears to have been entered correctly. The alarm is raised if the JSON string contains double quotes (“) with the Unicode value of 147 instead of the Unicode value 34. The Unicode value 147 is used in some external editors from which you may have copied the JSON string.

Sending the JSON string with the unsupported double quotes to the conference bridge will prevent the conference from being created.

To work around this issue, re-type the double quotes contained in the JSON string within the user interface field.

## Error messages

**Error communicating with mcu error="Method not supported"** – this may be because a physical TelePresence Server has been added as a TelePresence MCU bridge or the slave conference bridge of a cluster has been configured.

**Unsupported conference bridge software version** - this may be because a physical TelePresence MCU has been added as a TelePresence Server bridge.

## Regular expression match and replace

A regular expression replace of \12\2 will replace with 12th bracket match and follow it with the 2nd bracket match.

If a match of the 1st bracket match, followed by the insertion of the literal digit 2 followed by the 2nd bracket match is required, then named matches need to be used. These work as follows:

**(?P<id>123)456(789)** will store

**123** as **\1**

**789** as **\2**

**123** as named replace: **<id>** (the name used inside the "<" and ">" is user selectable)

to replace, use:

**\g<id>**

so to replace the 1st bracket match, followed by the insertion of the literal digit 2 followed by the 2nd bracket match use:

**\g<id>2\2**

# Appendix 1: Configuring TelePresence Conductor and Cisco VCS to support numeric dial strings

To support numeric dial strings perform the tasks outlined in the body of this deployment guide, add the transform detailed below and substitute the remaining tasks for adding search rules and conference aliases:

On the Cisco VCS:

- Adding a transform to add a domain when none exists [p.65]
- Adding a search rule for numeric dial strings [p.66]

On the TelePresence Conductor:

- Adding numeric conference aliases for Meeting-type conferences [p.67]
- Adding numeric conference aliases for Lecture-type conferences [p.71]

## Adding a transform to add a domain when none exists

For consistency with both SIP and H.323 dialing, this deployment scenario always uses the URI form for routing calls (that is, dialed_digits@domain). When the Cisco VCS receives a call request, the dialed number:

- will contain the 4 digit extension number that identifies the specific endpoint to route to
- may or may not include a domain (only included when a SIP endpoint is making the call)

Thus, a transform is needed to ensure that the dialed number is transformed into a consistent form, in this case to add the domain (vcs.domain) if required. To achieve this, a regex is used: **`([^@]*)`** transforms to **`\1@vcs.domain`** (any dialed information which does not contain a domain – does not contain an '@' – has the '@vcs.domain' added.)

See *Regular expression reference* in the Reference section of *Cisco TelePresence Conductor Administrator Guide* or Online Help for further details.

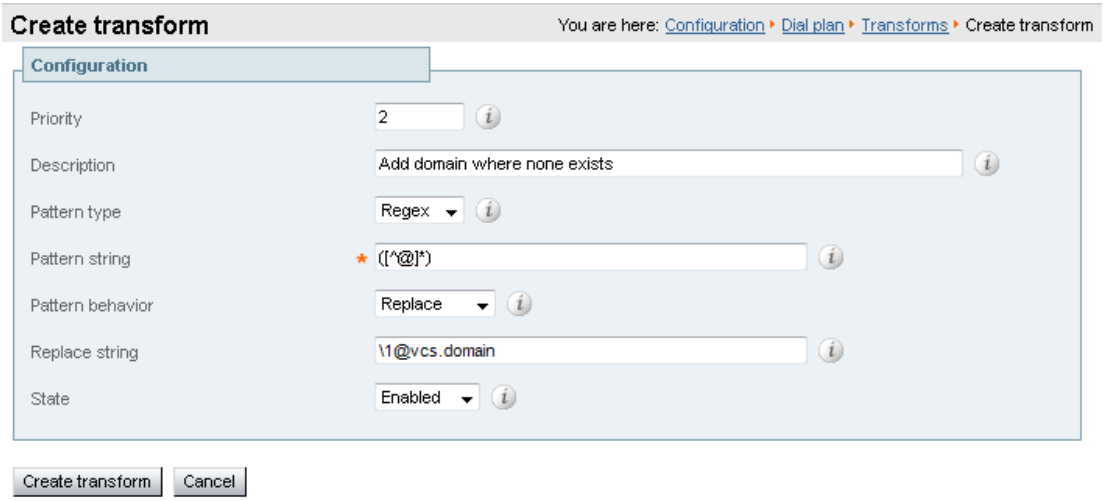
To create the transform:

1. Log on to the Cisco VCS as a user with administrator privileges.
2. Go to **Configuration > Dial plan > Transforms**.
3. Click **New**.
4. Configure the fields as follows:

| | |
|---|---|
| **Priority** | 2 |
| **Description** | "Add domain where none exists" for example |
| **Pattern type** | *Regex* |
| **Pattern string** | ([^@]*) |
| **Pattern behavior** | *Replace* |

| | |
|---|---|
| **Replace string** | \1@vcs.domain |
| **State** | *Enabled* |

5. Click **Create transform**.




# Adding a search rule for numeric dial strings

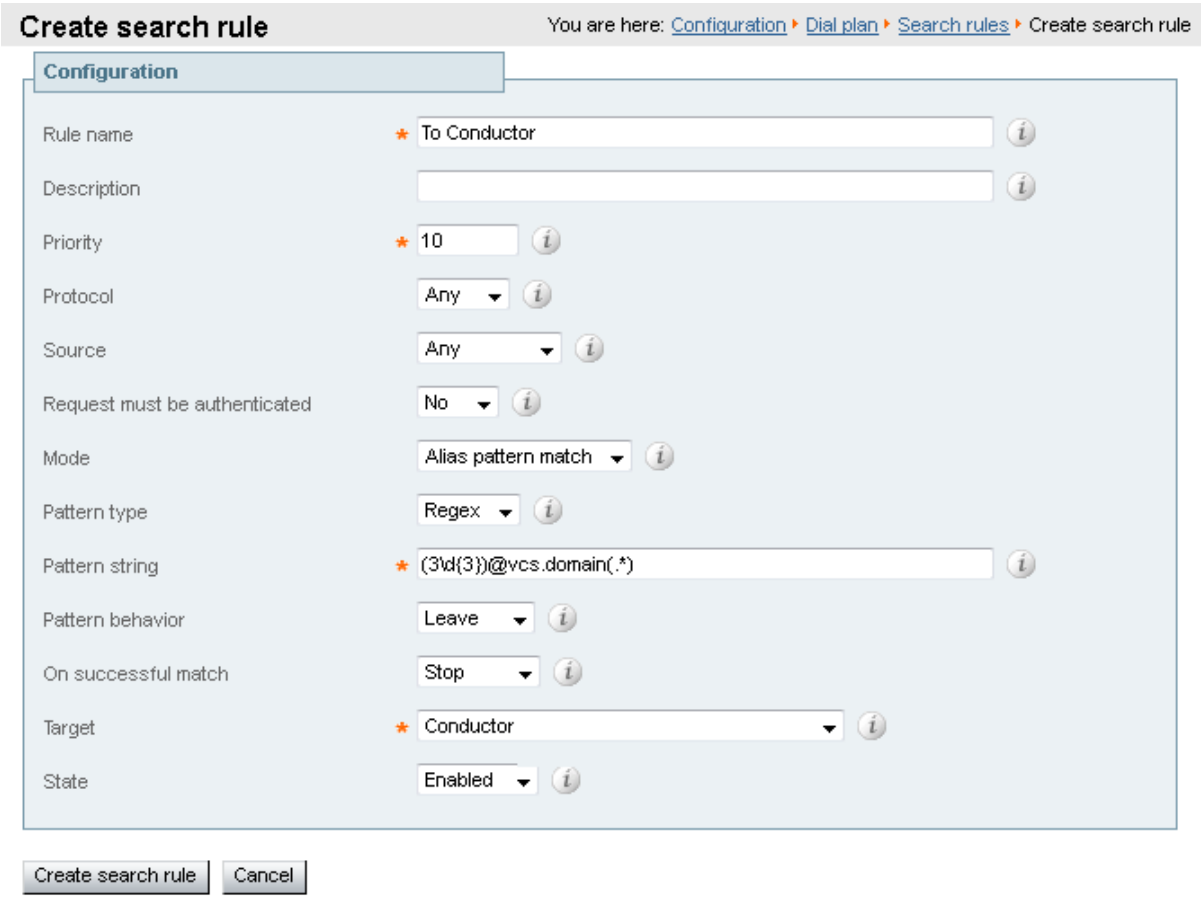
Substitute the following steps for Task 13: Configuring a search rule with the TelePresence Conductor neighbor zone as the target [p.24] if you would like to use numeric dial strings in your deployment.

To configure the search rule:

1. Go to **Configuration > Dial plan > Search rules**.
2. Click **New**.
3. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Rule name** | Enter 'To Conductor' for example. |
| **Priority** | Enter '10' for example. |
| **Mode** | Select *Alias pattern match*. |
| **Pattern type** | Select *Regex*. |
| **Pattern string** | Enter (3\d{3})@vcs.domain(.*) for example.<br>This matches 3XXX@vcs.domain with X representing a single digit. Because of the transform you added earlier, dial strings without a domain are also matched. |
| **Pattern behavior** | Select *Leave*. |

| | |
|---|---|
| **On successful match** | Select *Stop*. |
| **Target** | Select *Conductor*. |




4. Click **Create search rule**.

# Adding numeric conference aliases for Meeting-type conferences

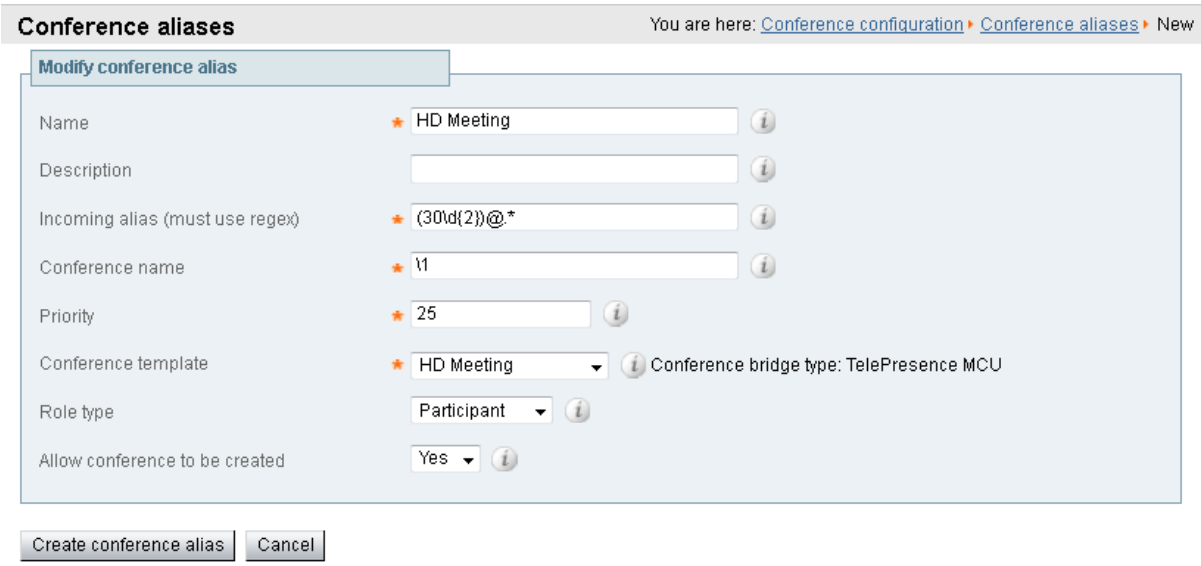
Substitute the following steps for Task 24: Creating conference aliases for the Meeting-type conferences [p.50] if you would like to use numeric dial strings in your deployment.

## Creating a conference alias for the TelePresence MCU hosted 'HD Meeting' template

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 `HD Meeting`. |
| **Incoming alias** | Enter `(30\d{2})@.*`<br>This pattern will match a numerical alias of 30XX (X being single digits), with any domain. |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '25' for example. |
| **Conference template** | Select *HD Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |




4. Click **Create conference alias**.

## Creating a conference alias for the TelePresence MCU hosted ‘SD Meeting’ template

Repeat the steps under Creating a conference alias for the TelePresence MCU hosted ‘HD Meeting’ template [p.67] to create a conference alias for the 'SD Meeting' hosted on TelePresence MCUs. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter a name for the alias, for example `SD Meeting`. |

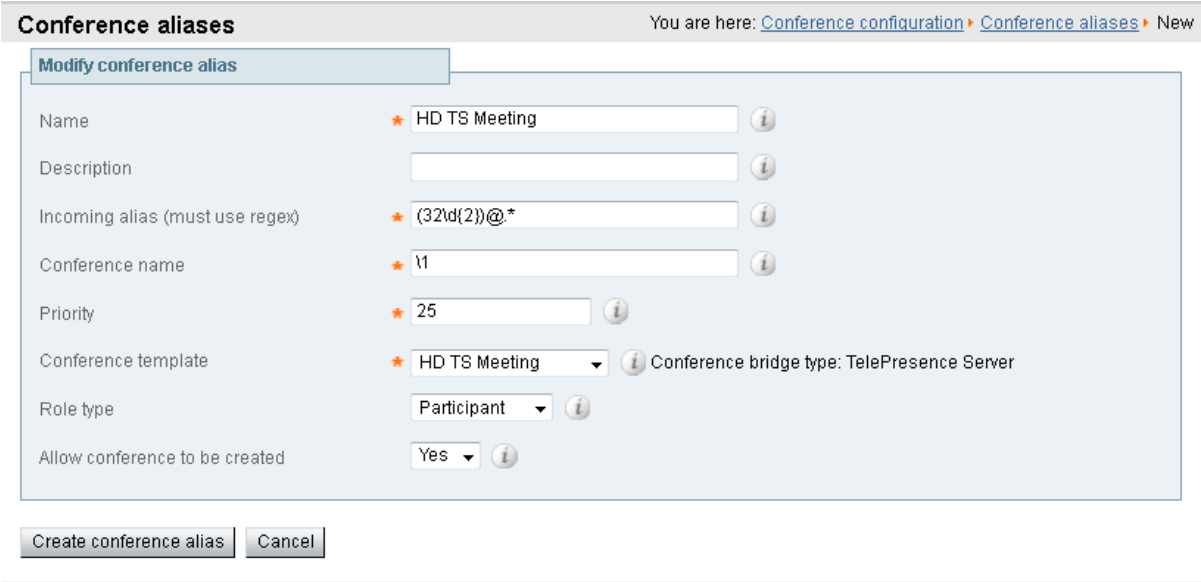
| | |
|---|---|
| **Incoming alias** | Enter `(31\d{2})@.*`<br>This pattern will match a numerical alias of 31XX (X being single digits), with any domain. |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '40' for example. |
| **Conference template** | Select *SD Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

## Creating a conference alias for the TelePresence Server hosted 'HD TS Meeting' template

The following steps create a conference alias that uses the 'HD TS Meeting' template and hosts the conference on a TelePresence Server:

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 `HD TS Meeting`. |
| **Incoming alias** | Enter `(32\d{2})@.*`<br>This pattern will match a numerical alias of 32XX (X being single digits), with any domain. |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '30' for example. |
| **Conference template** | Select *HD TS Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |




4. Click **Create conference alias**.

## Creating a conference alias for the TelePresence Server hosted ‘SD TS Meeting’ template

Repeat the steps under Creating a conference alias for the TelePresence Server hosted ‘HD TS Meeting’ template [p.69] to create a conference alias for the 'SD Meeting' hosted on TelePresence Servers. Enter the following in the relevant fields, leave other fields as their default values:

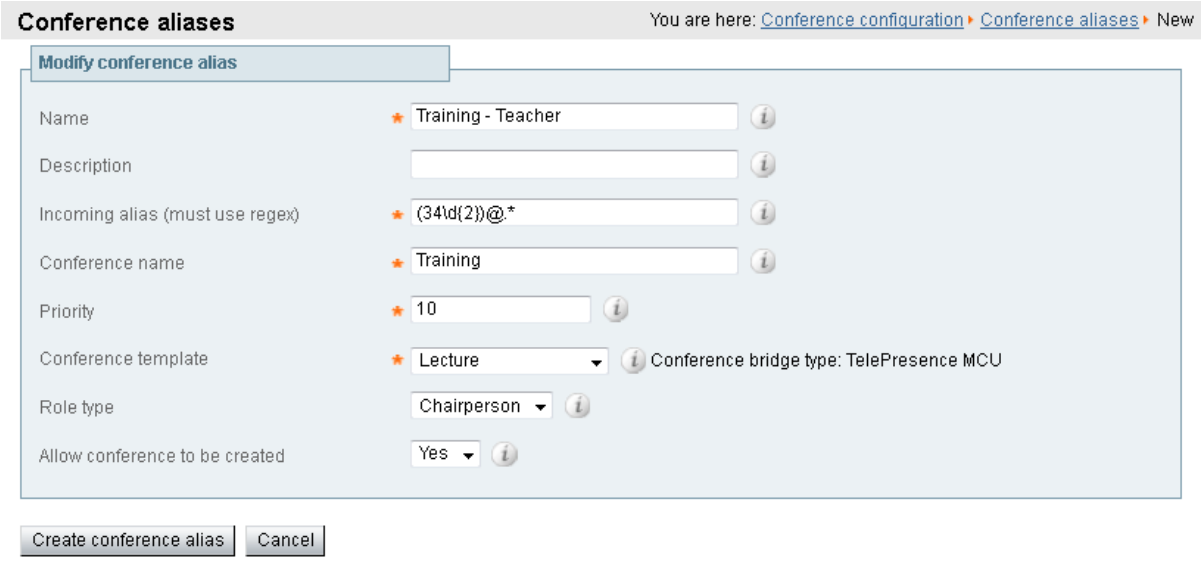
| | |
|---|---|
| **Name** | Enter a name for the alias, for example `SD TS Meeting`. |
| **Incoming alias** | Enter `(33\d{2})@.*`<br>This pattern will match a numerical alias of 33XX (X being single digits), with any domain. |
| **Conference name** | Enter `\1` |
| **Priority** | Enter '45' for example. |
| **Conference template** | Select *SD TS Meeting*. |
| **Role type** | Select *Participant*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

# Adding numeric conference aliases for Lecture-type conferences

## Creating a conference alias for the TelePresence MCU hosted 'Lecture' template with a role of 'Host'

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 `Training - Teacher` |
| **Incoming alias** | Enter `(34\d{2})@.*`<br>This pattern will match a numerical alias of 34XX (X being single digits), with any domain. |
| **Conference name** | Enter `Training` |
| **Priority** | Enter '10' for example. |
| **Conference template** | Select *Lecture*. |
| **Role type** | Select *Host*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

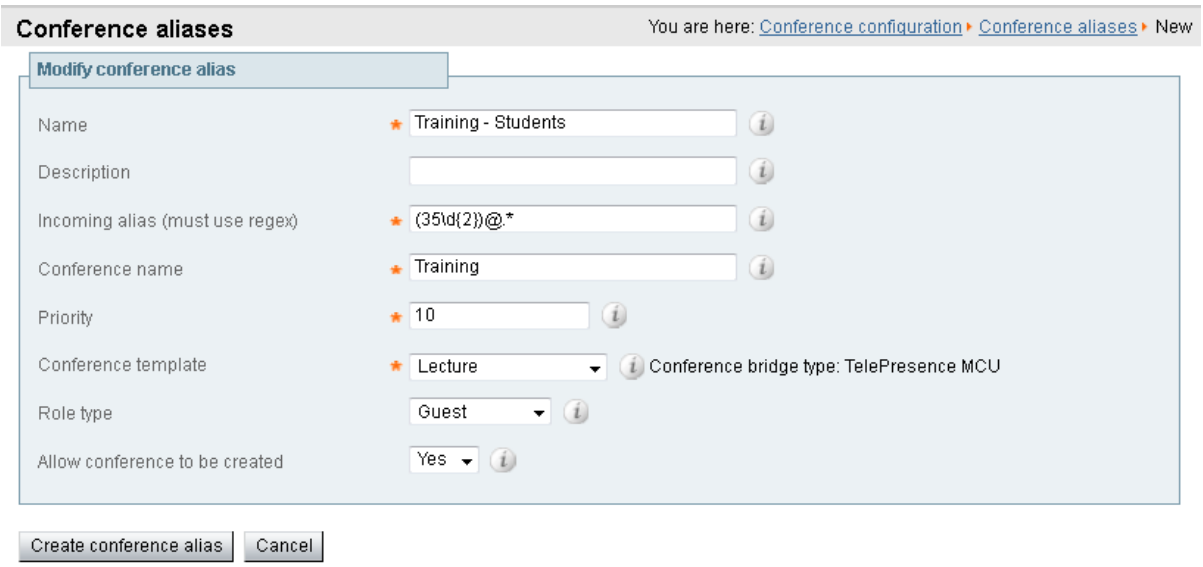



4. Click **Create conference alias**.

## Creating a conference alias for the TelePresence MCU hosted 'Lecture' template with a role of 'Guest'

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 `Training - Students` |
| **Incoming alias** | Enter `(35\d{2})@.*`<br>This pattern will match a numerical alias of 35XX (X being single digits), with any domain. |
| **Conference name** | Enter `Training` |
| **Priority** | Enter '20' for example. |
| **Conference template** | Select *Lecture*. |
| **Role type** | Select *Guest*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

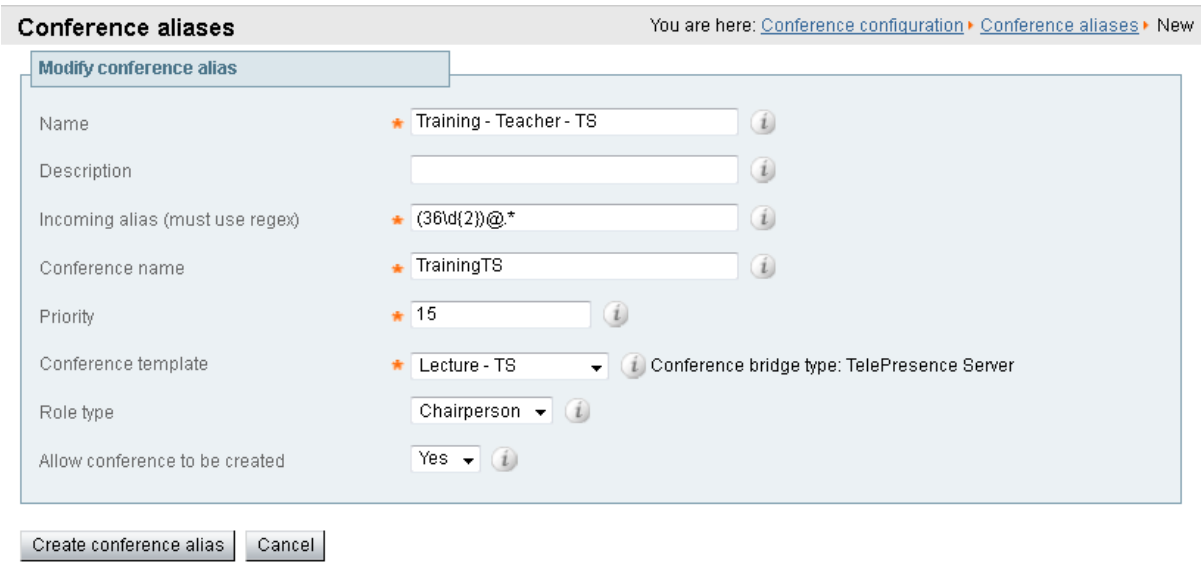



4. Click **Create conference alias**.

## Creating a conference alias for the TelePresence Server hosted 'Lecture - TS' template with a role of 'Host'

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 `Training – Teacher - TS` |
| **Incoming alias** | Enter `(36\d{2})@.*`<br>This pattern will match a numerical alias of 36XX (X being single digits), with any domain. |
| **Conference name** | Enter `TrainingTS` for example. |
| **Priority** | Enter '15' for example. |
| **Conference template** | Select *Lecture - TS*. |
| **Role type** | Select *Host*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

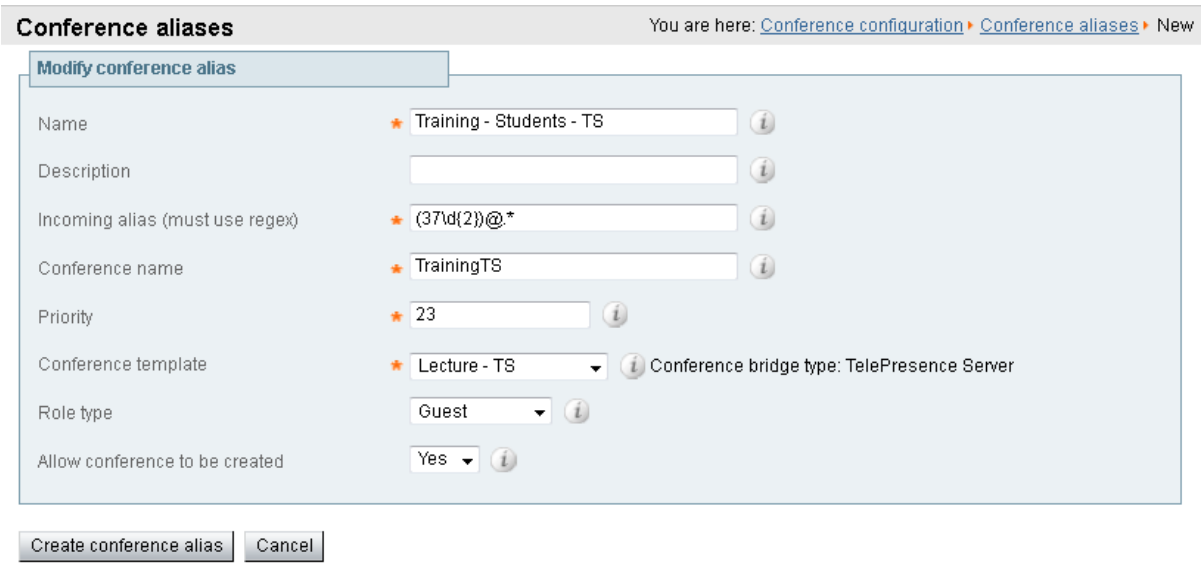



4. Click **Create conference alias**.

## Creating a conference alias for the TelePresence Server hosted 'Lecture - TS' template with a role of 'Guest'

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 `Training – Students – TS` |
| **Incoming alias** | Enter `(37\d{2})@.*`<br>This pattern will match a numerical alias of 37XX (X being single digits), with any domain. |
| **Conference name** | Enter `TrainingTS` for example. |
| **Priority** | Enter '23' for example. |
| **Conference template** | Select *Lecture - TS*. |
| **Role type** | Select *Guest*. |
| **Allow conference to be created** | Select *Yes* if participants dialing this alias should be able to create the conference. If you select *No*, you need to define another alias resulting in the same conference with **Allow conference to be created** set to *Yes* or the conference must be created via the TelePresence Conductor's API.<br>See Appendix 3: Allow conference to be created [p.76] for more information. |

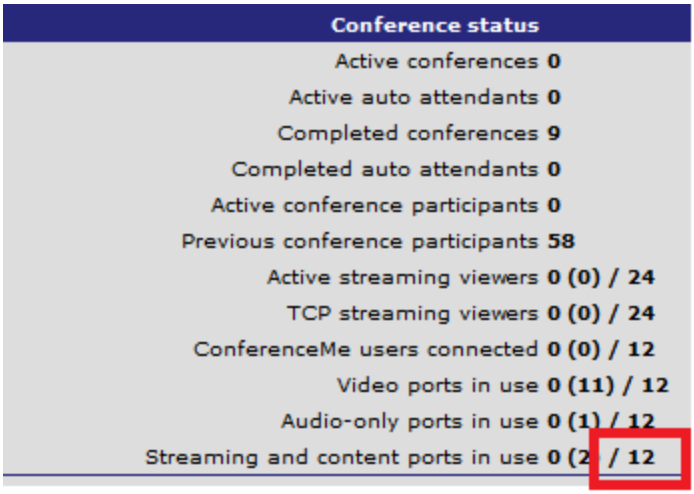



4. Click **Create conference alias**.

# Appendix 2: Identifying dedicated content ports on a Cisco TelePresence MCU

This information is available on the spec sheet for the TelePresence MCU, but it is also available through the web interface, the steps below describe how to locate and use this information.

1. Go to the TelePresence MCU in a browser.
2. Log in as administrator.
3. Go to **Status > Conferences** and look at the line marked **Streaming and content ports in use 0 (0)/##**, where ## is the number of dedicated content ports of this TelePresence MCU.



# Appendix 3: Allow conference to be created

Similar to the Call Policy mode, which is only applicable to deployments using the Cisco VCS's external policy service interface, the field **Allow conference to be created** on the **Conference aliases** page, allows call control to define whether participants can create a conference or just join the conference after it has been created.

For each alias associated with a conference template, define whether the participants dialing the alias are allowed to create the conference or not.

To define an alias for participants who are allowed to create a conference:

1. On the TelePresence Conductor go to **Conference configuration > Conference aliases**.
2. Fill in all required fields with the relevant values according to Task 24: Creating conference aliases for the Meeting-type conferences [p.50] or Task 25: Creating conference aliases for the Lecture-type templates [p.53].
3. For the field **Allow conference to be created** select *Yes*.

To define an alias for participants who are not allowed to create a conference and can only join the conference after it has been created:

1. On the TelePresence Conductor go to **Conference configuration > Conference aliases**.
2. Fill in all required fields with the relevant values according to Task 24: Creating conference aliases for the Meeting-type conferences [p.50] or Task 25: Creating conference aliases for the Lecture-type templates [p.53]
3. For the field **Allow conference to be created** select *No*.

Where a conference alias has been set up with **Allow conference to be created** set to *No*, a conference can be started using either one of the following methods:

- by making a call to a second conference alias that matches to the same conference and has **Allow conference to be created** set to *Yes*.
  The two conference aliases must either have the same **Conference name** defined or a regex replace string (in the **Conference name** field) that results in the same conference name for both conference aliases.
- by creating the conference via the TelePresence Conductor's API, for example using Cisco TMS.

**Note:** Participants dialing the conference alias that has **Allow conference to be created** set to *No* before the conference is created on the TelePresence Conductor will be rejected.

# Appendix 4: Migrating from a policy service deployment to a B2BUA deployment

To migrate from a deployment using the TelePresence Conductor as a policy service to a deployment using the TelePresence Conductor's back-to-back user agent (B2BUA) the following tasks must be completed:

On the TelePresence MCU (if using TelePresence MCUs):


- Task 1: Installing the encryption key on the TelePresence MCU [p.77]
- Task 2: Modifying the SIP settings on the TelePresence MCU [p.79]
- Task 3: Disabling H.323 gatekeeper usage on the TelePresence MCU [p.80]


On the TelePresence Server (if using TelePresence Servers):


- Task 4: Installing the encryption key on the TelePresence Server [p.81]
- Task 5: Modifying the SIP settings on the TelePresence Server [p.82]
- Task 6: Disabling H.323 gatekeeper usage on the TelePresence Server [p.83]


On the TelePresence Conductor:


- Task 7: Adding an IP Address for Cisco VCS rendezvous conferences [p.84]
- Task 8: Configuring a Location for Cisco VCS rendezvous conferences [p.85]
- Task 9: Modifying the conference bridge pool settings [p.86]
- Task 10: Modifying the conference bridge settings [p.87]


On the Cisco VCS:


- Task 11: Removing the TelePresence Conductor as a policy service [p.87]
- Task 12: Modifying neighbor zone configuration [p.87]
- Task 13: Modifying search rule configuration [p.90]


**Note:** Call Policy mode is not supported in the B2BUA deployment. To define which participants can create a conference use the field **Allow conference to be created** on the **Conference aliases** page of the TelePresence Conductor instead. See Appendix 3: Allow conference to be created [p.76].

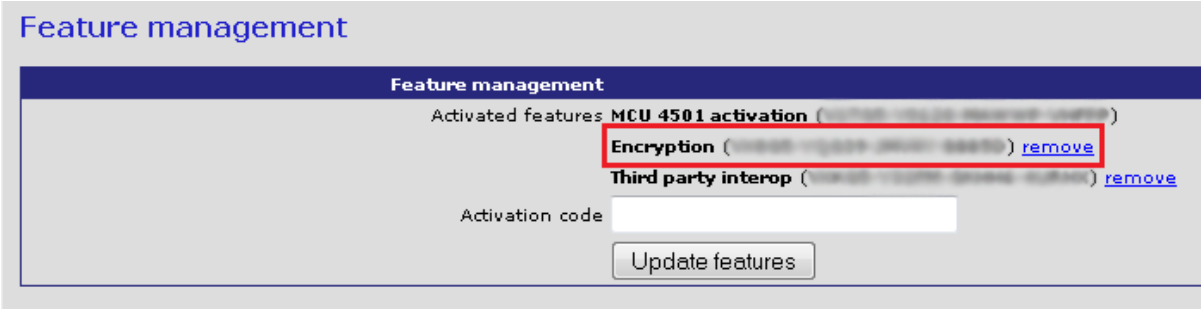
## Task 1: Installing the encryption key on the TelePresence MCU

In a deployment using the TelePresence Conductor's back-to-back user agent (B2BUA) the conference bridge must have the **Encryption** option key installed.

To verify that the key is installed or to install the key:

1. Go to **Settings > Upgrade**.
2. Go to the **Feature Management** section and verify that the **Encryption key** is installed. If the key is not

installed, enter the **Activation code** and click **Update features**.




To enable the use of encryption on the TelePresence MCU:

1. Go to **Settings > Encryption**.
2. Set **Encryption status** to *Enabled*.
3. Set **SRTP encryption** to *Secure transport (TLS) only*.
4. Click **Apply changes**.
5. Go to **Network > Services**.
6. Ensure that **Secure web (port 443)** is checked.
7. Ensure that **Encrypted SIP (TLS)** is checked.
   SIP (TLS) must also be configured on the Cisco VCS.
8. Ensure that **SIP (TCP)** is unchecked.
9. Ensure that **SIP (UDP)** is unchecked.
10. Ensure that **Incoming H.323** is checked. H.323 is required for TelePresence MCU cascading to work.
11. Click **Apply changes**.

| | Port A |
|---|---|
| TCP service | IPv4 |
| Web | ☑ 80 |
| Secure web | ☑ 443 |
| Incoming H.323 | ☑ 1720 |
| SIP (TCP) | ☐ 5060 |
| Encrypted SIP (TLS) | ☑ 5061 |
| Streaming (Windows Media Player) | ☐ 1755 |
| Streaming (other) | ☐ 554 |
| FTP | ☐ 21 |

| | Port A |
|---|---|
| UDP service | IPv4 |
| SNMP | ☐ 161 |
| SIP (UDP) | ☐ 5060 |
| H.323 gatekeeper | ☐ 1719 |

Apply changes

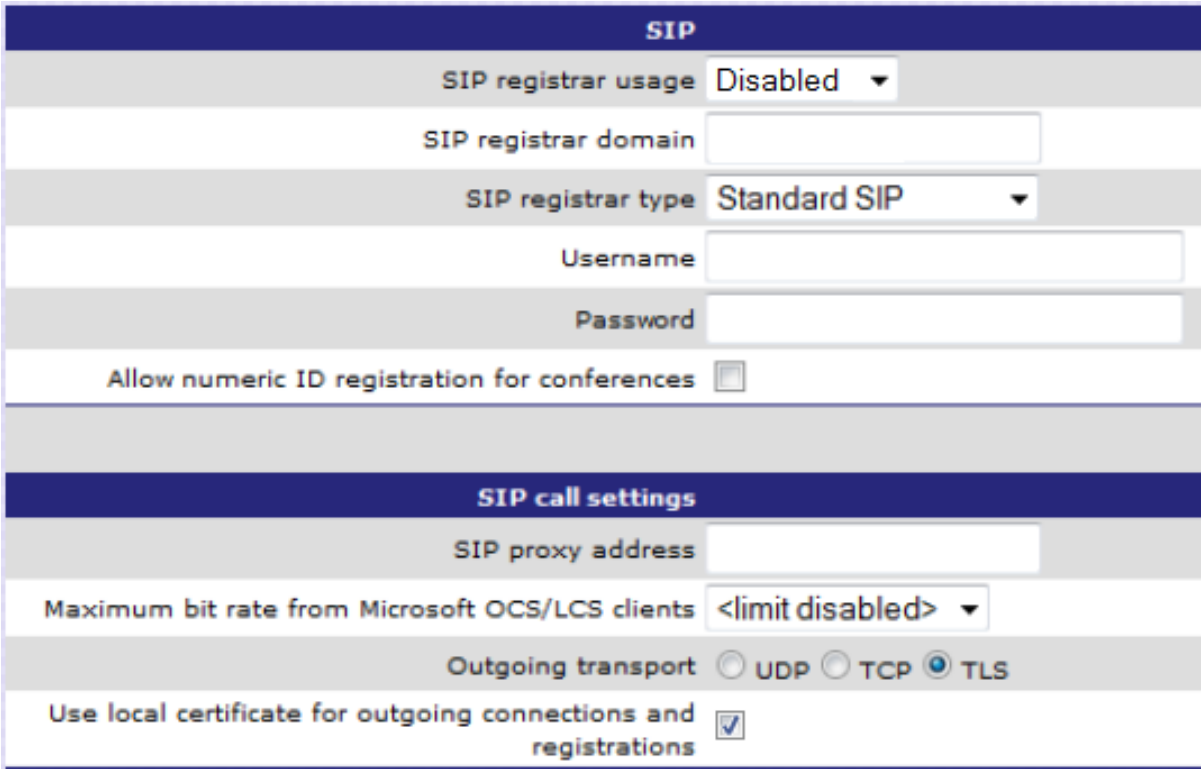
12. Repeat the steps for any other TelePresence MCUs

## Task 2: Modifying the SIP settings on the TelePresence MCU

On the TelePresence MCU:

1. Go to **Settings > SIP**.
2. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **SIP registrar usage** | Select *Disabled*. |
| **SIP proxy address** | Leave blank. |
| **Outgoing transport** | Select *TLS*. |
| **Use local certificate for outgoing connections and registrations** | Check this box. |

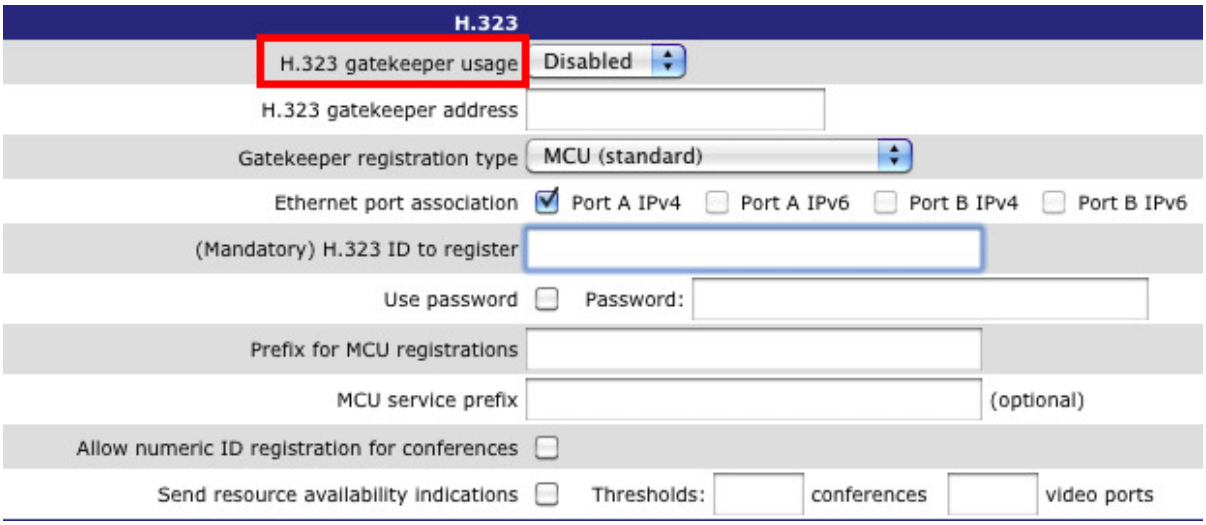



3. Click **Apply changes**.
4. Repeat the steps for any other TelePresence MCUs.

## Task 3: Disabling H.323 gatekeeper usage on the TelePresence MCU

On the TelePresence MCU:

1. Go to **Settings > H.323**.
2. Set **H.323 gatekeeper usage** to *Disabled*.
3. Leave all other fields as their default values.



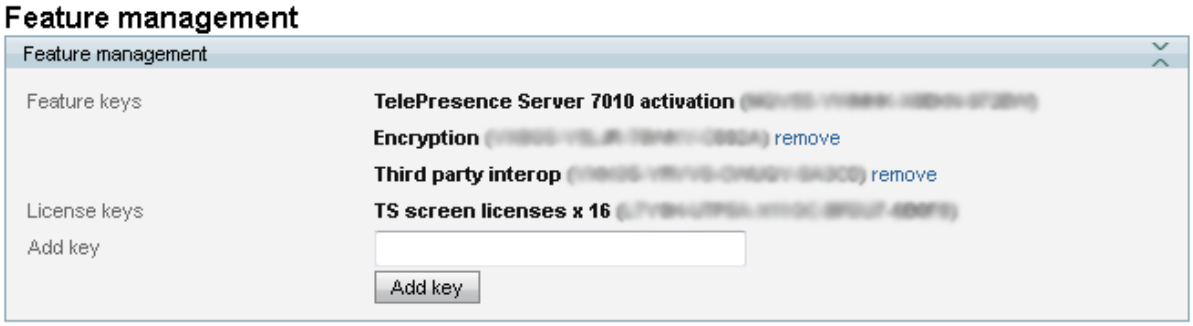

4. Click **Apply changes**.
5. Repeat the steps for any other TelePresence MCUs.

# Task 4: Installing the encryption key on the TelePresence Server

In a deployment using the TelePresence Conductor's back-to-back user agent (B2BUA) the conference bridge must have the **Encryption** option key installed.

To verify that the *Encryption* key is installed or to install the key, perform the following tasks:

1. Go to **Configuration > Upgrade**.
2. Go to the **Feature management** section and verify that the **Encryption** key is installed. If the key is not installed, enter the key into the **Add key** field and click **Add key**.




To verify that TLS is enabled on the TelePresence Server:

1. Go to **Network > Services**.
2. Ensure that **Encrypted SIP (TLS)** is checked.
3. Ensure that **Incoming H.323**, **SIP (TCP)** and **SIP (UDP)** are not checked.
   H.323 is not available on TelePresence Server on Media 310/320 or Virtual Machine platforms.

4. Ensure that **HTTPS** is enabled on port 443.

| | Port A | |
|---|---|---|
| TCP service | IPv4 | |
| HTTP | ☑ | 80 |
| HTTPS | ☑ | 443 |
| Incoming H.323 | ☐ | 1720 |
| SIP (TCP) | ☐ | 5060 |
| Encrypted SIP (TLS) | ☑ | 5061 |
| FTP | ☑ | 21 |

| | Port A | |
|---|---|---|
| UDP service | IPv4 | |
| SIP (UDP) | ☐ | 5060 |

| Ephemeral Port Range | |
|---|---|
| Minimum | 49152 |
| Maximum | 65535 |

Apply changes

5. Click **Apply changes**.

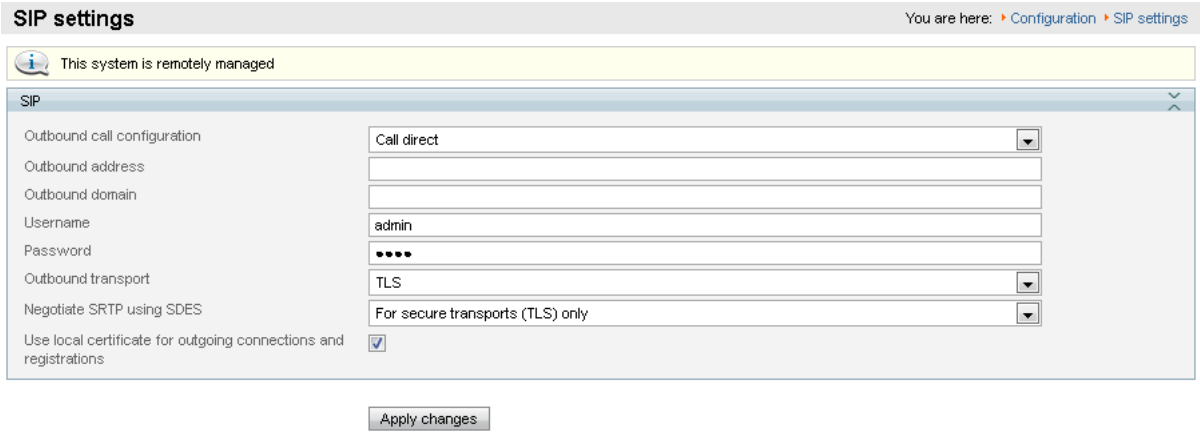
# Task 5: Modifying the SIP settings on the TelePresence Server

On the TelePresence Server:

1. Go to **Configuration > SIP settings**.
2. Enter the following values into the relevant fields:

| | |
|---|---|
| **Outbound call configuration** | Select *Call direct* from the drop-down list. |
| **Outbound address** | Leave blank. |
| **Outbound domain** | Leave blank. |

| | |
|---|---|
| **Username** | Leave blank. |
| **Password** | Leave blank. |
| **Outbound transport** | Select *TLS*. |
| **Negotiate SRTP using SDES** | Select *For secure transports (TLS) only*. |
| **Use local certificate for outgoing connections and registrations** | Check the box. |

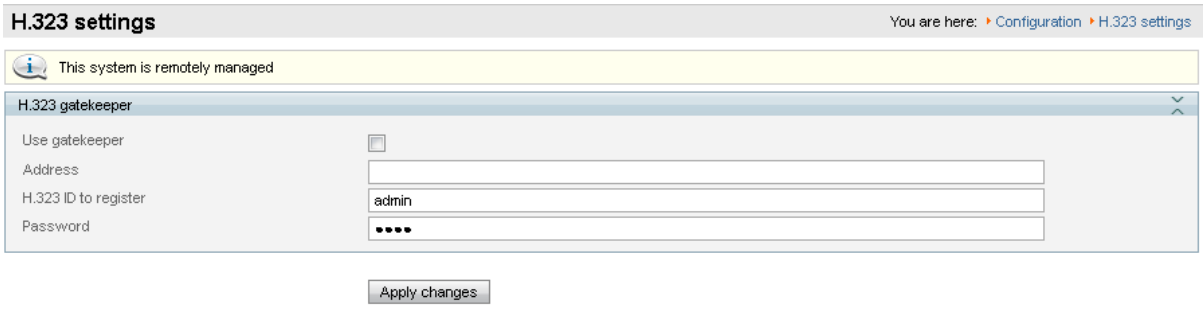



3. Click **Apply changes**.
4. Repeat the steps for any other TelePresence Servers.

# Task 6: Disabling H.323 gatekeeper usage on the TelePresence Server

Perform the following steps to disable H323 registration to a gatekeeper:

1. Go to **Configuration > H323 Settings**.
2. Uncheck the box for **Use gatekeeper**.
3. Leave all other fields as their default values.



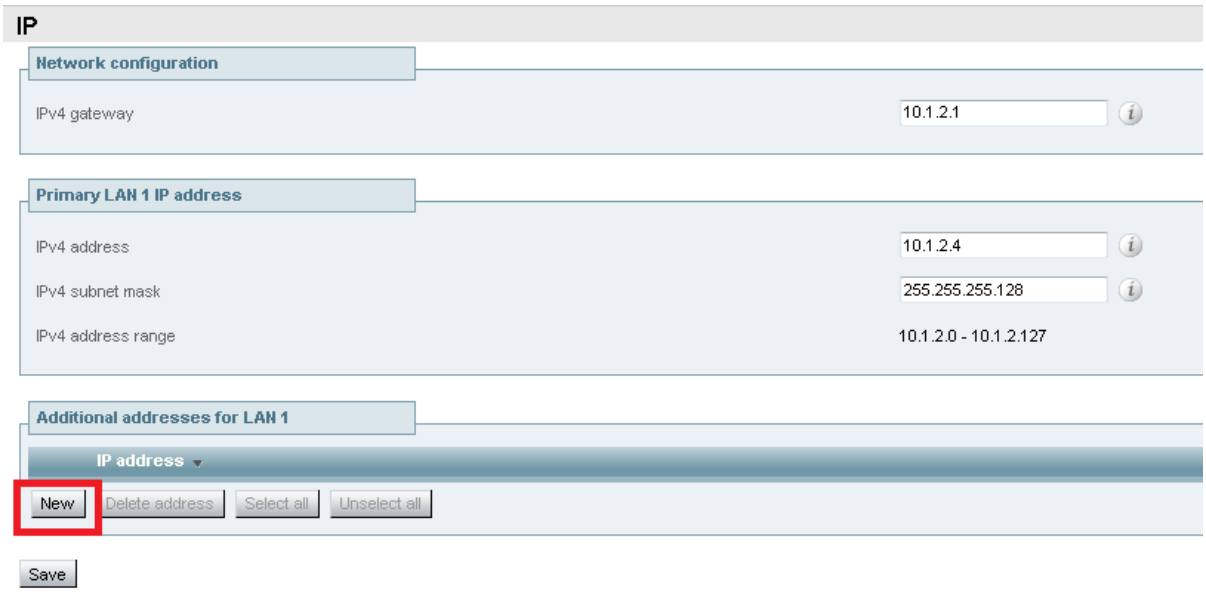

4. Click **Apply changes**.
5. Repeat the steps for any other TelePresence Servers.

# Task 7: Adding an IP Address for Cisco VCS rendezvous conferences

This task describes how to add an additional IP address for Cisco VCS rendezvous conferences on TelePresence Conductor.

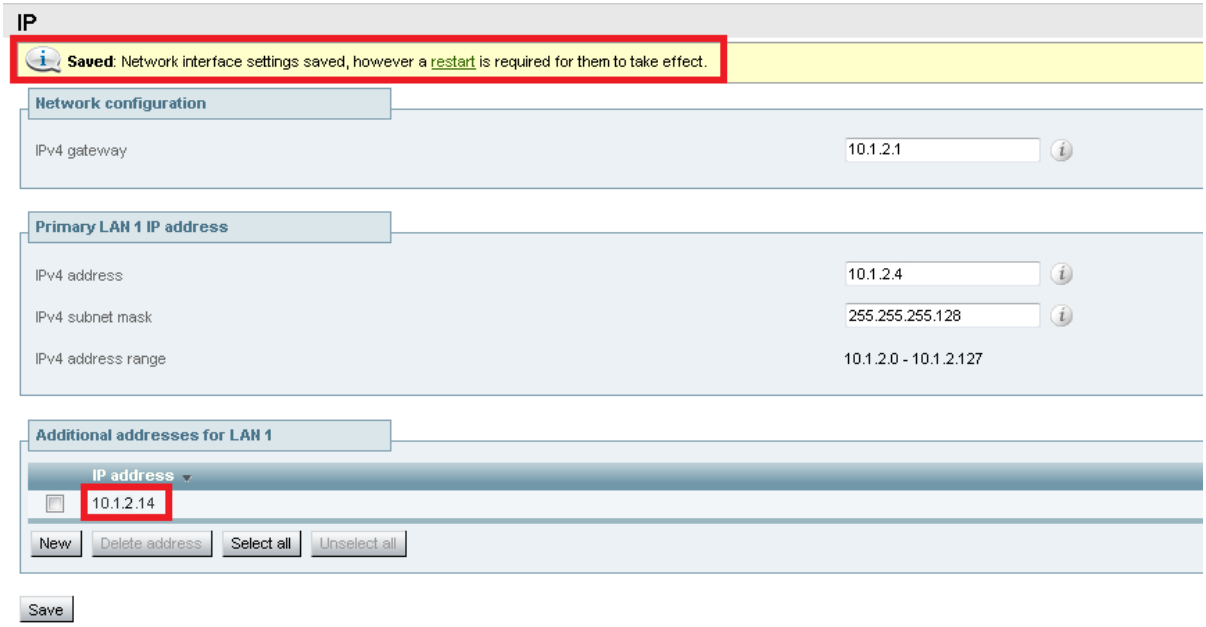
On the TelePresence Conductor:

1. Go to **System > Network interfaces > IP**.
2. In the **Additional addresses for LAN 1** section click **New**.




3. Enter the new IP address to be used.
   **Note:** The IP address must be on the same subnet as the primary TelePresence Conductor IP interface, and must be reserved for use by this TelePresence Conductor alone. It will be used as the **Peer 1 address** in the Cisco VCS neighbor zone created earlier on in the process.
4. Click **Add address**.

5. In the **Additional addresses for LAN 1** list, verify that the IP address was added correctly.




6. Go to **Maintenance > Restart options**.
7. Click **Restart** so that network interface changes are applied.
8. Wait for the TelePresence Conductor to restart.
9. To verify the new TelePresence Conductor IP address is active on the network, ping the IP address from another device.

# Task 8: Configuring a Location for Cisco VCS rendezvous conferences

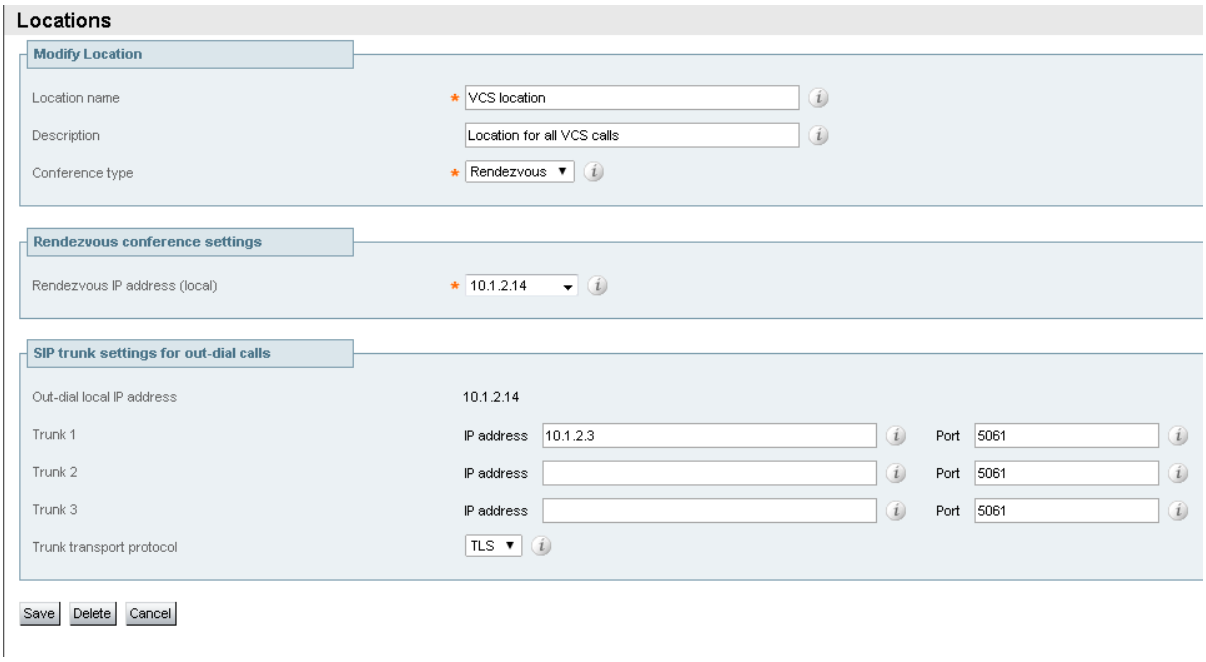
This task describes how to add a Location to TelePresence Conductor for all Cisco VCS rendezvous conferences.

On the TelePresence Conductor:

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

| | |
|---|---|
| **Location name** | Enter a name for the Location, for example `VCS location`. |
| **Conference type** | Select *Rendezvous*. |
| **Rendezvous IP address** | From the drop down list, select the TelePresence Conductor IP address to be used for Cisco VCS calls. This must match the **Destination address** of the neighbor zone on the Cisco VCS. |

| | |
|---|---|
| **Trunk 1 IP address** | This is only required if TelePresence Conductor needs to forward auto-dialed participants or any other out-dialed calls such as those initiated by Cisco TMS to the Cisco VCS.<br>Enter the IP address of the Cisco VCS.<br>Enter the additional trunk IP addresses and ports if you are using a Cisco VCS cluster.<br>If you specify more than one trunk IP address, the TelePresence Conductor considers all trunk IP addresses for a Location as equivalent. It may use any of the trunk IP addresses defined, as long as the destination is reachable. If the SIP trunk destination that the TelePresence Conductor currently uses becomes unreachable, it will automatically use another reachable destination. The TelePresence Conductor maintains only one of the destinations, it does not load balance the dial-out calls across the configured destinations. |
| **Trunk 1 Port** | Enter '5061'. |
| **Trunk protocol** | Select *TLS*. |



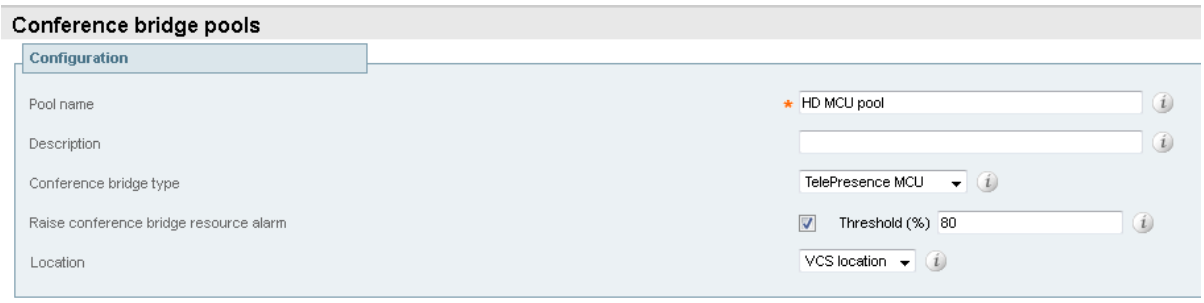

4. Click **Add location**.

# Task 9: Modifying the conference bridge pool settings

This task describes how to modify the conference bridge pool settings on the TelePresence Conductor to point to the Cisco VCS Location.

On the TelePresence Conductor:

1. Go to **Conference configuration > Conference bridge pools**.
2. Click on the **View/Edit** link for the conference bridge pool.
3. Select from the drop-down list the **Location** configured for the Cisco VCS.




4. Click **Save**.
5. Repeat the steps for any other conference bridge pools.

# Task 10: Modifying the conference bridge settings

This task describes how to modify the conference bridge settings on the TelePresence Conductor.

On the TelePresence Conductor:

1. Go to **Conference configuration > Conference bridges**.
2. Click on the **View/Edit** link for the conference bridge.
3. Edit the following fields:

| | |
|---|---|
| **Dial plan prefix** | Clear this field. |
| **H.323 cascade call routing** | Select *Direct*. |

4. Click **Save**.
5. Repeat the steps for any other conference bridges.

# Task 11: Removing the TelePresence Conductor as a policy service

On the Cisco VCS:

1. Go to **Configuration > Dial plan > Policy services**.
2. Tick the policy service pointing to the TelePresence Conductor and click **Delete**.

# Task 12: Modifying neighbor zone configuration

This task describes how to delete the neighbor zones for the conference bridges and create a neighbor zone for the TelePresence Conductor.

On the Cisco VCS:

1. Go to **Configuration > Zones > Zones**.
2. Tick the boxes next to all the neighbor zones that are configured for conference bridges connected to the TelePresence Conductor to which you wish to create a SIP trunk.
   **Note:** Double check the list of neighbor zones to make sure that you have only ticked neighbor zones that are no longer needed.

3. Click **Delete**.
4. Click **Create new zone**.
5. Enter the following in the relevant fields, leave other fields as their default values:

| | |
|---|---|
| **Name** | Enter 'Conductor' for example. |
| **Type** | Select *Neighbor*. |
| **H.323 mode** | Select *Off*. |
| **SIP transport** | Select *TLS*.<br>Set the port to 5061. |
| **Peer 1 address** | Enter the TelePresence Conductor's rendezvous IP address for Cisco VCS (not the TelePresence Conductor's primary LAN IP address used to manage the TelePresence Conductor). This will be added on the TelePresence Conductor in Task 17: Adding an IP address for Cisco VCS rendezvous conferences on TelePresence Conductor [p.28]. |
| **Zone profile** | Select *Custom*. |
| **Automatically respond to SIP searches** | Select *On*. |

**Create zone**

You are here: Configuration ▸ Zones ▸ Zones ▸ Create zone

**Configuration**

| | |
|---|---|
| Name | * Conductor |
| Type | * Neighbor |
| Hop count | * 15 |

**H.323**

| | |
|---|---|
| Mode | On |
| Port | * 1719 |

**SIP**

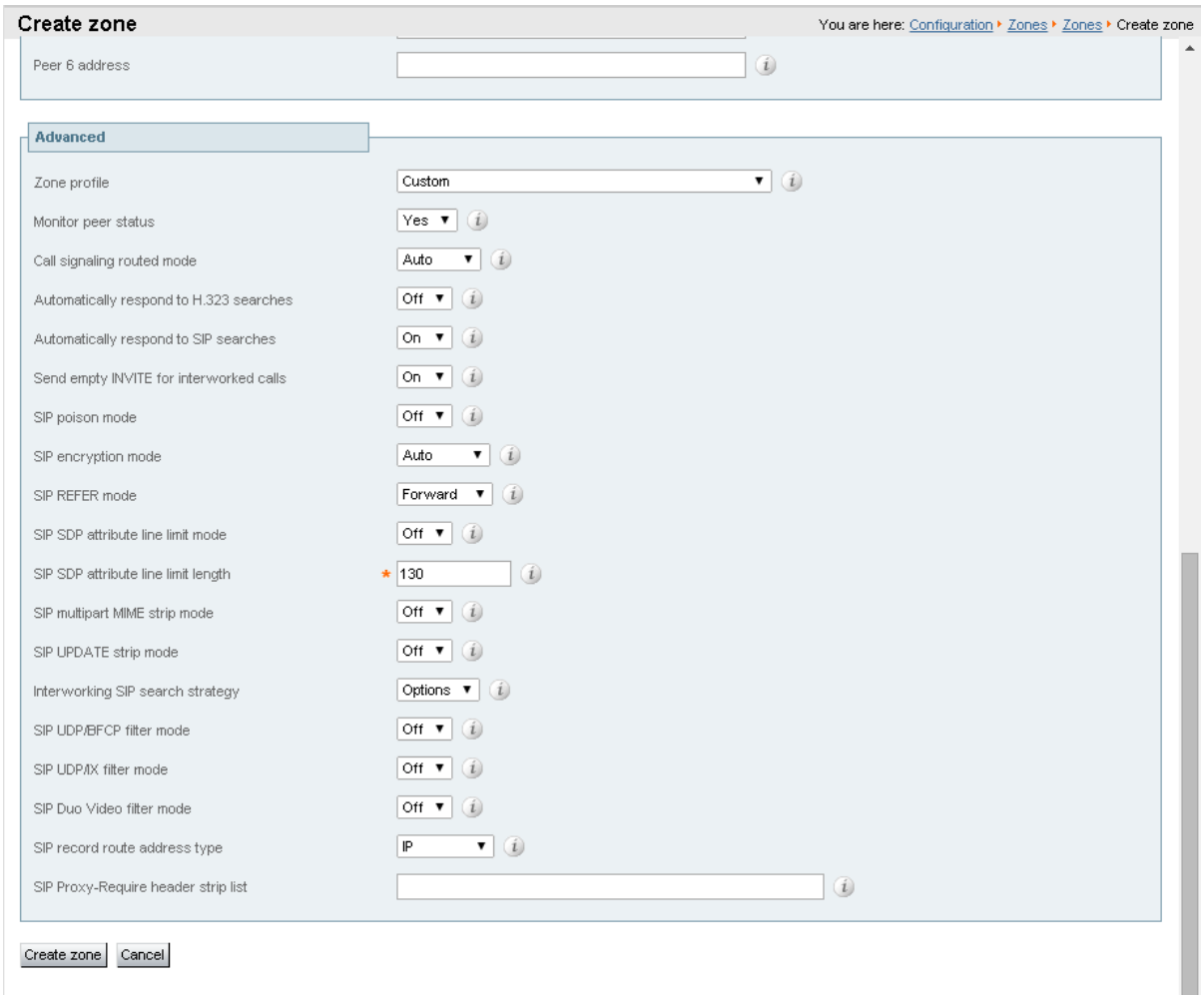
| | |
|---|---|
| Mode | On |
| Port | * 5061 |
| Transport | TLS |
| TLS verify mode | Off |
| Accept proxied registrations | Allow |
| Media encryption mode | Auto |
| ICE support | Off |

**Authentication**

| | |
|---|---|
| Authentication policy | Do not check credentials |
| SIP authentication trust mode | Off |

**Location**

| | |
|---|---|
| Peer 1 address | 10.1.2.14 |
| Peer 2 address | |




5. Click **Create zone**.

# Task 13: Modifying search rule configuration

This task describes how to modify the search rule on the Cisco VCS to point to the TelePresence Conductor neighbor zone instead of to the TelePresence Conductor Policy Service.

On the Cisco VCS:

1. Go to **Configuration > Dial plan > Search rules**.
2. Find the search rule that points to the TelePresence Conductor Policy Service and click on the **View/Edit** link.
3. Modify the search rule to contain the following data:

| | |
|---|---|
| **Rule name** | Modify the rule name to 'To Conductor' for example, to indicate that the search rule is now pointing to the TelePresence Conductor neighbor zone instead of the Policy Service. |
| **Priority** | Enter '10' for example. |
| **Mode** | Select *Alias pattern match*. |

| | |
|---|---|
| **Pattern type** | Select *Regex*. |
| **Pattern string** | Enter `(meet\|meetts\|teach\|learn\|teachts\|learnts)\..*@<SIP domain>`<br>**Note:** Replace `<SIP domain>` with the appropriate SIP domain for your network. |
| **Pattern behavior** | Select *Leave*. |
| **On successful match** | Select *Stop*. |
| **Target** | Select *Conductor*. |

# Document revision history

The following table summarizes the changes that have been applied to this document:

| Date | Description |
|---|---|
| March 2015 | Updated for XC3.1 |
| January 2015 | Updated for XC3.0 |
| November 2014 | Corrected the troubleshooting information on auto-dialed participants |
| August 2014 | Updated for XC2.4 |
| April 2014 | Updated for XC2.3 |
| May 2014 | Corrected recommendation about Incoming H.323 needing to be selected on TelePresence MCUs. |
| August 2013 | Updated for XC2.2. |
| August 2013 | Corrected the zone profile setting on the Cisco VCS and added the description of an issue to the troubleshooting section. |
| May 2013 | Initial release. |