



Cisco TelePresence Conductor Geographic Cascading Deployment Guide

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Introduction

About Geographic Cascading

Geographic Cascading is a way of reducing WAN bandwidth by using the Conductor to generate cascade links between conference bridges in different regions. The intent is that users join conferences in their home region. This limits the use of WAN bandwidth between regions because there is only one video stream going between the different regions.

Geographic Cascading involves choosing one region to host the “master” conference, which is the conference that all other “slave” conferences generate cascade links into. The participants in the master and slave conferences have different conference experiences.

Geographic Cascading involves many elements of the video network operating in tight coordination. It requires a strong knowledge of the technologies involved and considerable amount of forward planning. As a result if you are intending to implement forms of geographic cascade not outlined in this document it is highly recommended that you enlist the help of the Cisco Advanced Services team to aid in planning and execution of the necessary configuration.

The user experience in cascaded conferences

The video stream sent from the slave conference bridge to the master conference bridge is the active speaker on the slave conference. This allows the active speaker on a slave conference bridge to be seen in the master conference in the same way in which other participants would be.

The video stream from the cascade master contains whatever conference layout is used on the master conference bridge. If no layout is specified on the master conference bridge then it defaults to a full-screen view of the active speaker. The video stream from the master conference bridge is shown full-screen to all participants on the slave conference. This can result in an active speaker on the slave conference bridge seeing themselves.

In what situations should Geographic Cascading be used?

The generation of cascade links involves the use of one additional port on the master and slave conference bridge respectively. This along with the participant layouts in cascaded conferences makes the use of geographic cascading unsuited to small conferences. It is recommended that Geographic Cascades are used for large conferences.

Geographic Cascading involves the designation of a certain conference as being the master conference. This is the conference which all other conferences dial into.



About this document

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

- An endpoint user can call the alias **allhands-amer@<SIP domain>**. If this is the first person to call this alias, a new conference is created by TelePresence Conductor and the user is routed to it. The conference is created on a conference bridge in the AMER region.
- An endpoint user who is leading the meeting can dial **chair-allhands-amer@<SIP domain>**. If this is the first person to call this alias, a new conference is created by TelePresence Conductor and the user is routed to it. The conference is created on a conference bridge in the AMER region.

- An endpoint user can call the alias **allhands-<region>@<SIP domain>**. If this is the first person to call this alias, a new conference is created by TelePresence Conductor and the user is routed to it. The conference is created preferentially on a conference bridge in the APAC region. When the conference is started a cascade link is generated between this slave conference and the master conference in AMER.

This document takes you through the steps required to configure the Cisco VCSs, TelePresence Conductor and conference bridges to perform the actions above. It also describes how to check that the system is working as expected.

Descriptions of system configuration parameters for the Cisco VCS, TelePresence Conductor and conference 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).

Prerequisites

Before starting the system configuration, ensure you have access to:

- A Cisco VCS (or Cisco VCS cluster) running version X6 or later. This must already be configured to act as a H.323 gatekeeper and optionally as a SIP registrar and proxy. Ensure that the system has been tested by registering at least three endpoints to it and ensuring that they are all capable of calling each other. For more information, see the *VCS Administrator Guide* (D14049).
- A TelePresence Conductor unit that is powered on and accessible over the network. For assistance in reaching this stage please see *Cisco TelePresence Conductor Getting Started Guide* (D14829).
- The initial configuration of the TelePresence Conductor completed as per steps 1-3 of the *TelePresence Conductor Deployment Guide* (XC1.2).
- Two or more conference bridges that are powered on and accessible over the network. These conference bridges should be located in different regions. Basic configuration for the conference bridge should be completed as described in the relevant *Getting Started Guide*. Cisco MCU software must be version 4.2 or later. The following Cisco MCUs are supported by TelePresence Conductor:
 - 4200 Series
 - 4500 Series
 - 5300 series
 - 8420 Media Blade
 - 8510 Media2 Blade

Note: this guide assumes the conference bridges are connected to the network on port A.

- A web browser with access to the web interfaces of the Cisco VCS, TelePresence Conductor and conference bridges that are being configured.

Configuration

Configuring TelePresence Conductor on the VCS(s)

For all the VCSs in the network that will contact the TelePresence Conductor directly it is recommended to complete the steps below.

A policy service is in essence a location to which HTTP or HTTPS requests containing various details about a call can be sent. CPL (Call Policy Language) is returned by the call policy service and governs what should be done with that call. The TelePresence Conductor's policy service either rejects calls or routes them to the appropriate conference bridge.

Step 1: Adding the TelePresence Conductor as a policy service

To configure the VCS with the TelePresence Conductor as a call policy service:

1. Go to the Cisco VCS web interface and log in as an admin user.
2. Go to the **Policy services** page (**VCS configuration > Dial plan > Policy services**).
3. Click **New** to create a new policy service pointing at the TelePresence Conductor.
4. Input the following into the relevant fields, leaving other fields as their default values:

Name	Enter 'Conductor Policy Service'
Protocol	Select <i>HTTPS</i>
Certificate Verification Mode	If you have configured the Cisco VCS with a Root CA that is valid for the Certificate on the TelePresence Conductor you can select <i>On</i> . Otherwise select <i>Off</i> . Certificates can be loaded onto TelePresence Conductor through the web UI at Maintenance > Security certificates > Server Certificate Note: Setting HTTPS certificate verification mode makes HTTPS communication highly insecure and is not recommended for production systems.
HTTPS certificate revocation list CRL checking	Select <i>Off</i>
Server 1 address	Enter the TelePresence Conductor's IP address
Path	Enter <code>api/conference_controller/conference/conference_factory.cpl</code> Note: If you are using a printed copy of this document to copy and paste the above into the field go to the TelePresence Conductor online help and navigate to: Before you start > Configuring a VCS for use with the TelePresence Conductor
Username	Enter the username of the TelePresence Conductor administration user. This appears on the TelePresence Conductor's Administrator accounts page (Users > Administrator accounts)
Password	Enter the password of the TelePresence Conductor administration user
Default CPL	Enter <code><reject status='504' reason='Conductor policy service unavailable' /></code>

Create policy service

Yo

Configuration

Name	★ Conductor Policy Service i
Description	i
Protocol	HTTPS ▾ i
Certificate verification mode	On ▾ i
HTTPS certificate revocation list (CRL) checking	Off ▾ i
Server 1 address	★ 10.1.2.4 i
Server 2 address	i
Server 3 address	i
Path	i
Status path	status i
Username	admin i
Password	●●●●●●●●●●●●●●●●●●●● i
Default CPL	<reject status='504' reason='Conductor pi i

Create policy service
Cancel

1. Click **Create policy service**.

Note: Until the VCS updates its TelePresence Conductor status, the status of the TelePresence Conductor policy service under [VCS configuration > Dial plan > Policy services](#) will list as active. Once the VCS queries the TelePresence Conductor for its status this will change to inactive. This is expected behavior. **The TelePresence Conductor policy service will only list itself as active when the following criteria are met:**

1. The TelePresence Conductor has its root and admin passwords changed from their default values. This is a security feature.
2. The TelePresence Conductor has at least one conference bridge configured and with a 'usable' status. This is to ensure no requests are sent to members of a TelePresence Conductor cluster that have lost connectivity with the conference bridges.

Step 2: Configuring a search rule with the TelePresence Conductor policy service as the target

Search rules define where the VCS routes each call. 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 the [Search rules](#) page ([VCS configuration > Dial plans > Search rules](#)).
2. Click **New**.
3. Input the following into the relevant fields, leaving other fields as their default values:

Rule Name	Enter 'Allhands To Conductor Policy Service' for example
Priority	Enter '10' for example
Source	Select <i>Any</i>
Request must be authenticated	Select <i>No</i>
Mode	Select <i>Alias pattern match</i>
Pattern type	Select <i>Regex</i>
Pattern string	Enter <code>.*allhands.*@<SIP domain></code> Note: Replace <SIP domain> with the appropriate sip domain for your network.
Pattern Behavior	Select <i>Leave</i>
On Successful Match	Select <i>Stop</i>
Target	Select <i>Conductor Policy Service</i>
State	Select <i>Enabled</i>

Create search rule You are here: [VCS configuration](#) ▶ [Dial plan](#) ▶ [Search rule](#)

Configuration

Rule name * i

Description i

Priority * i

Source i

Request must be authenticated i

Mode i

Pattern type i

Pattern string * i

Pattern behavior i

On successful match i

Target * i

State i

4. Click **Create search rule**.

Configuring the conference bridge pools on TelePresence Conductor and VCS

Setting up regional conference bridge pools

For each regional conference bridge pool you want to configure follow the steps below.

1. Log into the TelePresence Conductor as a user with administrator rights.
2. Go to the **Conference bridge pools** page (**Conference Configuration > Conference bridges > Conference bridge pools**).
3. Click **New**.
4. In the **Pool name** field enter the regions name for example "AMER mcu pool"

Conference bridge pools

You are here: [Conference configuration](#) > [Confere](#)

Configuration

Pool name	*	<input type="text" value="Amer MCU pool"/>	<i>i</i>
Description		<input type="text"/>	<i>i</i>
Conference bridge type		<input type="text" value="TelePresence MCU"/>	<i>i</i>
Raise conference bridge resource alarm	<input checked="" type="checkbox"/>	Threshold (%) <input type="text" value="80"/>	<i>i</i>

Conference bridges in this pool

There are no conference bridges in this pool.

5. Click **Create pool**
6. For each conference bridge you want to add to the pool follow the instructions in **Adding a new conference bridge to TelePresence Conductor and the VCS** to add a conference bridge to TelePresence Conductor and the VCS.

Adding a new conference bridge to TelePresence Conductor and the VCS

Step 1: Adding a conference bridge to an existing pool in TelePresence Conductor

This section assumes you are adding a conference bridge to an existing pool. Select a pool to add a conference to from the [Conference bridge pools](#) page ([Conference Configuration > Conference bridges > Conference bridge pools](#)).

1. Click **Add conference bridge**.
2. Input the following values into the relevant fields:

Name	Enter an appropriate name for the conference bridge 'AMER MCU 1' for example
IP address or FQDN	Enter the conference bridge's IP address
Port	Enter '80' if using HTTP or '443' if using HTTPS to communicate with the conference bridge.
Protocol	Select <i>HTTP</i> or <i>HTTPS</i> for secure communication. Note: HTTP mode is highly insecure and is not recommended for production systems.
Conference bridge username	Enter the username of a user with admin rights
Conference bridge Password	Enter the conference password of the above user
Dial plan prefix	Enter a prefix appropriate to your dial plan. For example AMERMCU1 Note: Remember this prefix you will need it when configuring the conference bridge search rule on the VCS.
Dedicated Content Ports	Enter the appropriate value for your conference bridge. To discover if a conference bridge has any dedicated content ports follow the steps given in Appendix 5: Identifying Dedicated Content Ports on an MCU

Add conference bridge You are here: [Conference configuration](#) > [Conference br](#)

Configuration

Name * i

Description i

State i

IP address or FQDN * i

Protocol i

Port * i

Conference bridge username * i

Conference bridge password i

Dial plan prefix * i

Conference bridge type * i

Conference bridge pool * i

Dedicated content ports * i

3. Click **Create conference bridge**.
4. Ensure that under the **Status** header under conference bridges in this pool the conference bridge is listed as *Active*. (You may need to refresh the page to update the value listed here.)

	Name	Address	State	Username	Dial plan prefix	Status	Status detail
<input type="checkbox"/>	AMER MCU 1	10.50.159.80	✔ Enabled	admin	AMERMCU1	Active	

Otherwise check the settings configured for this MCU as well as network connectivity using the [Maintenance > Tools > Network Utilities > Ping](#)

Step 2: Adding the conference bridge as a neighbor zone

To configure the VCS with **Neighbor zones** for your conference bridges:


1. Log in to the VCS as a user with admin rights.
2. Go to the **Zones** page ([VCS configuration > Zones](#)).
3. Click **Create new zone**.
4. Input the following into the relevant fields, leave other fields as their default values:


Name	<p>Enter 'AMER MCU 1' for example</p> <p>Note: Remember this name you will need it when configuring the conference bridge search rule on the VCS.</p>
Type	Select <i>Neighbor</i>
Sip Transport	<p>Select <i>TLS</i> if your conference bridge has the encryption option key Select <i>TCP</i> otherwise.</p> <p>Note: ensure that the SIP transport protocol matches the protocol selected for SIP registration on the conference bridge.</p> <p>Note: Changing the transport method from TLS from TCP or vice versa <i>does not</i> change the port from 5061 to 5060. This must be done manually.</p>
Peer 1 address	Enter the conference bridge's IP address
Zone Profile	<p>If the VCS is running 7.0.x or later select <i>Infrastructure Device</i> If the VCS is running 6.x select <i>Non-registering Device</i></p> <p>Note: These Zone profiles perform no aliveness checking. As a result an 'Active' status given by this zone cannot be relied upon to indicate VCS to conference bridge communication is possible.</p>


Create zone

You e


Configuration


Name * AMER MCU 1 

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 

Authentication

Authentication policy Do not check credentials ▾ ⓘ

SIP authentication trust mode Off ▾ ⓘ

Location

Peer 1 address 10.50.159.80 ⓘ

Peer 2 address ⓘ

Peer 3 address ⓘ

Peer 4 address ⓘ

Peer 5 address ⓘ

Peer 6 address ⓘ

Advanced

Zone profile Infrastructure device ▾ ⓘ

H.323 call signaling port ★ 1720 ⓘ

5. Click **Create zone**.

Step 3: Adding a search rule pointing to the conference bridge's neighbor zone

To configure the Search rule:

1. Go to the **Search rules** page (**VCS configuration > Dial plans > Search rules**).
2. Click **New**.
3. Input the following into the relevant fields, leave other fields as their default values:

Rule Name	Enter a suitable name 'To AMER MCU 1' for example
Priority	Enter '15' for example
Mode	Select <i>Alias Pattern Match</i>
Pattern Type	Select <i>Prefix</i>

Pattern String	Enter the Dial plan prefix configured in Step 1
Pattern Behavior	Select <i>Strip</i>
On successful match	Select <i>Stop</i>
Target	Select the neighbor zone configured in Step 2

Create search rule

You are here

Configuration

Rule name *

Description

Priority * i

Source i

Request must be authenticated i

Mode i

Pattern type i

Pattern string *

Pattern behavior i

On successful match i

Target * i

State i

4. Click **Create search rule**.

Step 4: Conference bridge specific configuration

Configure the conference bridge as per the **Configuring the conference bridges** section of the Cisco TelePresence Conductor Deployment Guide.

Configuring the master conference on TelePresence Conductor

Each geographic conference has a pre-defined master conference. This is the conference that all the slave conferences dial into. The master and slave conferences have different configurations.

Step 1: Configuring a regional service preference

1. Login to the TelePresence Conductor as a user with administrative rights.
2. Go to **Conference configuration > Conference bridges > Conference bridge Service Preferences**
3. Click **New**
4. In the **Service Preference name** field enter an appropriate name for this regional service preference for example "AMER service preference".
5. In the **Pools** section of the page under **Pool name** select an appropriate conference bridge pool for this region, for example "AMER MCU Pool"

Conference bridge Service Preferences

You are here: [Conference configuration](#)

Conference bridge Service Preference

Service Preference name ★ AMER service preference i

Description i

Conference bridge type ★ TelePresence MCU i

Pools

Priority	Pool name
	AMER MCU pool ▼

Add selected pool
Delete pool
Select all
Unselect all

Add Service Preference
Cancel

6. Click **Add selected pool**
7. Repeat steps 5-6 for any additional conference bridge pools in this region.

Step 2: Configuring a master conference template

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

Name	Enter a name appropriate for this region, for example "allhands-amer (master region)"
Conference type	Select <i>Lecture</i>
No. of chairperson ports to reserve	<p>Enter a value appropriate to your geographic conference.</p> <p>To guarantee the geographic cascade will work it is necessary to reserve a number of chairperson ports equal to or greater than the total number of slave conferences plus the total number of endpoints that are expected to join on the master conference as chairpeople. At least one person must join the master conference as a chairperson to prompt the MCU into sending video.</p>
Conference bridge Service Preference	Select the service preference configured in Step 1
No. of cascade ports to reserve	Enter '0'
Conference layout	Select a preferred default layout.

Conference templates

You are here: >

Modify conference template

Name	*	<input type="text" value="allhands-amer (master region)"/>	
Description		<input type="text"/>	
Conference type		Lecture	
No. of chairperson ports to reserve	*	<input type="text" value="3"/>	
Call Policy mode		Off	
Conference bridge Service Preference	*	AMER service preference	
No. of cascade ports to reserve	*	<input type="text" value="0"/>	
Limit number of participants		<input type="checkbox"/> Maximum <input type="text" value="0"/>	There are 0 auto-d
Limit the conference duration (minutes)		<input type="checkbox"/> Maximum <input type="text" value="0"/>	

Advanced

Conference layout		<div style="display: flex; align-items: center;"> <div style="border: 1px solid #ccc; padding: 2px; font-size: small;">Choose layout</div> </div>	
Chair PIN		<input type="text"/>	
Guest PIN		<input type="text"/>	
Parameters to pass on to primary MCU		New	
Parameters to pass on to cascade MCU		New	
Allow content		Yes	

Create conference template

Cancel

4. Click **Create conference template**

Step 3: Configuring a chairperson conference alias for the master conference

This is the conference alias the chairs and the slave conference bridges should dial to join the conference. At least one endpoint must join the conference as a chair to trigger the conference bridges to send video.

1. Go to the **Conference aliases** page (**Conference configuration > Conference aliases**).
2. Click **New**.
3. Input the following into the relevant fields, leave other fields as their default values:

Name	Enter an appropriate name for the region of the master conference for example "allhands AMER chair"
Incoming alias	Enter an appropriate regex for the region the master conference is being hosted in for example "chair-allhands-amer@< SIP domain>"
Conference name	Enter an appropriate name for the region the master conference is being hosted in for example "allhands-amer"
Priority	Enter '20'
Conference template	Select the template configured in Step 2
Role Name	Select <i>Chairperson</i>

Conference aliases

Modify conference alias

Name	*	<input type="text" value="allhands AMER chair"/>	
Description		<input type="text"/>	
Incoming alias (must use regex)	*	<input type="text" value="chair-allhands-amer@example.cisco.com"/>	
Conference name	*	<input type="text" value="allhands-amer"/>	
Priority	*	<input type="text" value="10"/>	
Conference template	*	<input type="text" value="allhands-amer (master region)"/>	
Role name		<input type="text" value="Chairperson"/>	

4. Click **Create conference alias**

Step 4: Configuring a guest conference alias for the master conference

This is the conference alias most users in the master conference region should call to reach the conference.








1. Go to the **Conference aliases** page (**Conference configuration > Conference aliases**).
2. Click **New**.
3. Input the following into the relevant fields, leaving other fields as their default values:

Name	Enter an appropriate name for the region of the master conference, for example "allhands AMER guest"
Incoming alias	Enter an appropriate regex for the region the master conference is being hosted in, for example "allhands-amer@< SIP domain>"
Conference name	Enter an appropriate name for the region the master conference is

	being hosted in, for example "allhands-amer"
	This must be the same as the name entered in Step 3
Priority	Enter '20'
Conference template	Select the template configured in Step 2
Role Name	Select <i>Guest</i>

Conference aliases

Modify conference alias

Name	*	<input type="text" value="allhands AMER guest"/>	
Description		<input type="text"/>	
Incoming alias (must use regex)	*	<input type="text" value="allhands-amer@example.cisco.com"/>	
Conference name	*	<input type="text" value="allhands-amer"/>	
Priority	*	<input type="text" value="20"/>	
Conference template	*	<input type="text" value="allhands-amer (master region)"/>	
Role name		<input type="text" value="Guest"/>	

- Click **Create conference alias**

Configuring slave conferences on TelePresence Conductor

Slave conferences dial into the master conference on TelePresence Conductor. For each slave conference it is necessary to complete the steps below.

Step 1: Configuring a regional Service Preference

1. Log into the TelePresence Conductor as a user with administrative rights.
2. Go to **Conference configuration > Conference bridges > Conference bridge Service Preferences**
3. Click **New**
4. In the **Service Preference name** field enter an appropriate name for this regional service preference for example "APAC service preference".
5. In the **Pools** section of the page under **Pool name** select the appropriate conference bridge pool for this region, for example "APAC MCU Pool"

Conference bridge Service Preferences You are here: [Conference configuration](#)

Conference bridge Service Preference

Service Preference name ★ APAC Service preference ⓘ

Description ⓘ

Conference bridge type ★ TelePresence MCU ▼ ⓘ

Pools

Priority	Pool name
	APAC MCU pool ▼

6. Click **Add selected pool**
7. Repeat steps 5-6 for any additional conference bridge pools in this region.

Step 2: Configuring a slave conference template

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

Name	Enter a name appropriate for this region for example "allhands-apac (slave)"
------	--

Conference type	Select <i>Meeting</i>
Conference bridge Service Preference	Select the Service Preference configured in Step 1
No. of cascade ports to reserve	Enter '0'

Conference templates

Modify conference template

Name * i

Description i

Conference type i

Call Policy mode i

Conference bridge Service Preference * i

No. of cascade ports to reserve * i

Limit number of participants Maximum i Ther
template.

Limit the conference duration (minutes) Maximum i

Advanced

Conference layout i

Participant PIN i

Parameters to pass on to primary MCU

Parameters to pass on to cascade MCU

Allow content i

4. Click **Create conference template**

Step 3: Configuring a conference alias for the slave conference

1. Go to the **Conference aliases** page (**Conference configuration > Conference aliases**).
2. Click **New**.

- Input the following into the relevant fields, leave other fields as their default values:

Name	Enter an appropriate name for the region of the slave conference for example "allhands APAC"
Incoming alias	Enter an appropriate regex for the region the slave conference is being hosted in i.e. allhands-apac@< SIP domain>
Conference name	Enter an appropriate name for the region the slave conference is being hosted for example "allhands-apac"
Priority	Enter '10'
Conference template	Select the template configured in Step 2
Role Name	Select <i>Participant</i>

Conference aliases

Modify conference alias

Name	*	<input type="text" value="allhands-apac (slave)"/>	
Description		<input type="text"/>	
Incoming alias (must use regex)	*	<input type="text" value="allhands-apac@example.cisco.com"/>	
Conference name	*	<input type="text"/>	
Priority	*	<input type="text" value="30"/>	
Conference template	*	<input type="text" value="allhands-apac (slave)"/>	
Role name		<input type="text" value="Participant"/>	

- Click **Create conference alias**

Step 4: Configuring a cascade link for the slave conference

- Go to the **Autodialed participants** page (**Conference configuration > Autodialed participants**).
- Select **New**
- Input the following into the relevant fields, leave other fields as their default values:

Name	Enter an appropriate name for the cascade link for example "allhands-apac => allhands-amer cascade link"
Conference template	Select the conference template configured in Step 2
Conference name	Enter the conference name configured in Step 3
Participant address	Enter the chairperson address for the primary conference configured in Step 3: Configuring a conference alias for the Master conference

Protocol	Select <i>H.323</i>
Keep conference alive	Select <i>No</i>
Role type	Select <i>Participant</i>
	<i>Note that this is the role of the participant from the perspective of the slave MCU</i>

4. Under “Advanced parameters” click **New**
5. Select *linkType* and click **Add**
6. On the popup window select **add anyway**
7. Click **Edit**
8. Select *cascadeSlaveToMaster*
9. Click **Ok**

Auto-dialed participants Y

Modify participant

Name	★ allhands-apac => allhands-amer cascade i
Description	i
Conference template	★ allhands-apac (slave) i
Conference name match (must use regex)	★ allhands-apac i
Participant address	★ chair-allhands-amer@example.cisco.com i
Protocol	H.323 i
Role type	Participant i
DTMF sequence	i
Keep conference alive	No i
Conference layout	None i
Additional parameters	<div style="border: 1px solid #ccc; padding: 5px;"> linkType: cascadeSlaveToMaster New </div>
State	Enabled i

Create participant
Cancel

10. Click **Create participant**

Testing system configuration

Once you have completed the configuration described in the previous sections, you should test that the system is working correctly as follows.

Step 1: Dial endpoints into the master conference

To test that endpoints can join the master conference dial endpoints into the guest alias and the chair alias you have configured on TelePresence Conductor for the master conference. These endpoints should experience a normal conferencing experience.

Step 2: Dial endpoints into slave conferences

To test that endpoints can join the slave conference and the cascade link is generated correctly by the conference bridge, dial the alias for the slave conference as defined on TelePresence Conductor.

All endpoints on the slave conference(s) should see the same conference layout. This conference layout should show the active participants from each of the slave conferences (assuming the layout has enough “windows” for all the video streams).

Appendix 1: Intelligent search rules for routing endpoints to regional conferences

The method outlined in the above document for directing endpoints to TelePresence Conductor using search rules has its benefits and disadvantages. Chief amongst the disadvantages is it requires each of the users to know which region they are in and the corresponding conference alias they should dial.

This can be prevented in the situation where each region has its own associated VCS, by using the search rule pointed at TelePresence Conductor append a region specific suffix to a call to the geographic conference.

For example if the different conference aliases follow the pattern `allhands-<region>@<SIP domain>` the following search rule could be used in each region:

Rule Name	Enter 'Allhands To Conductor Policy Service' for example
Priority	Enter '5' for example
Source	Select <i>Any</i>
Request must be authenticated	Select <i>No</i>
Mode	Select <i>Alias pattern match</i>
Pattern type	Select <i>Regex</i>
Pattern string	Enter <code>allhands@<SIP domain></code> Note: Replace <SIP domain> with the appropriate sip domain for your network.
Pattern Behavior	Select <i>replace</i>
Replace match	Enter the alias that matches the conference alias for this region on the TelePresence Conductor, for example "allhands-amer@<SIP domain>"
On Successful Match	Select <i>Stop</i>
Target	Select <i>Conductor Policy Service</i>
State	Select <i>Enabled</i>

The drawback of this approach is that there may be good reasons for certain users being on the master conference even if it is not in their region. Users on the master conference retain control over the viewtype they use, amongst other things.

It is therefore a good idea to implement the above search rule in addition, but at a higher priority to the search rule described in the section **Configuring TelePresence Conductor on the VCS(s)**.

There are other methods of routing users to the correct conferences such as CPL or external policy servers, to implement either it is recommended you read the appropriate documentation.

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