Configure Trusted Relay Points

Trusted Relay Point Overview

A Trusted Relay Point (TRP) is an MTP or transcoder that Cisco Unified Communications Manager can insert into the media stream to act as a control point for call media. The TRP can provide further processing on the stream and can ensure that the stream follows a specific path.

When a call requires a trusted relay point, Cisco Unified Communications Manager allocates an MTP or transcoder that has been enabled with TRP functionality.

Configuration

Both MTPs and transcoders can be configured to provide TRP functionality by checking the **Trusted Relay Point** check box in the **Media Termination Point Configuration** or **Transcoder Configuration** window.

You can configure the TRP requirement for individual calls by setting the **Use Trusted Relay Point** field to **On** for the following configuration windows:

- Phone Configuration
- Gateway Configuration
- Voicemail Port Configuration
- Trunk Configuration
- CTI Route Point Configuration
- Common Device Configuration
- Universal Device Template Configuration
- Various media resource configurations (Annunciator, IVR, MTPs, Transcoders, Conference Bridges, Music On Hold)

Trusted Relay Points Task Flow

Procedure

	Command or Action	Purpose
Step 1	Configure Trusted Relay Point for a Device, on page 2.	Configure trusted relay points (TRP) for one or multiple devices where media ends and insert TRP in Cisco Unified Communications Manager.
Step 2	Configure Trusted Relay Point for Media Termination Point, on page 3.	Configure media termination point (MTP) so that you can use the device as a trusted relay point. **Note** Ensure that a device that is configured as a TRP in Cisco Unified Communications Manager has the appropriate network connectivity and configuration between the TRP and any endpoints that are involved in the call.
Step 3	Configure Trusted Relay Point for Transcoder, on page 3.	Configure transcoder so that you can use the device as a trusted relay point. **Note** Ensure that a device that is configured as a TRP in Cisco Unified Communications Manager has the appropriate network connectivity and configuration between the TRP and any endpoints that are involved in the call.
Step 4	Enable Trusted Relay Point Service Parameter, on page 4.	Enable the TRP service parameter to determine whether a call that requires a TRP is allowed to proceed if no TRP resource is available.

Configure Trusted Relay Point for a Device

You can configure trusted relay points (TRP) for one or multiple devices where media ends and insert TRP in Cisco Unified Communications Manager. By configuring the TRP for a device, the device provides further processing on that stream or acts as a method to ensure that the stream follows a specific path.

Procedure

Step 1 From the Cisco Unified CM Administration, choose **Device** > **Device Settings** > **Common Device Configuration**.

Step 2 To configure a trusted relay point for an existing device, from the **Find and List Common Device Configurations** window, specify the appropriate filters and click **Find**.

Step 3 To configure trusted relay point for a new device, from the **Common Device Configuration** window, click **Add New**.

Step 4 Configure the fields in the **Common Device Configuration** window. See the online help for more information about the fields and their configuration options.

Step 5 In the **Common Device Configuration Information** section, click the **Use Trusted Relay Point** check box.

Step 6 Click **Save**.

What to do next

Configure Trusted Relay Point for Media Termination Point, on page 3.

Configure Trusted Relay Point for Media Termination Point

You can configure a media termination point (MTP) so that you can use a device as a trusted relay point.

Before you begin

Configure Trusted Relay Point for a Device, on page 2.

Procedure

Step 1 From the Cisco Unified CM Administration, choose **Media Resources** > **Media Termination Point**.

Step 2 To configure a trusted relay point for an existing media termination point, from the **Find and List Media Termination Points** window, specify the appropriate filters and click **Find**.

Step 3 To configure trusted relay point for a new media termination point, click **Add New**.

Step 4 Configure the fields on the **Media Termination Point Configuration** window. See the online help for more information about the fields and their configuration options.

Step 5 In the **Media Termination Point Information** section, click the **Use Trusted Relay Point** check box.

Step 6 Click **Save**.

What to do next

Configure Trusted Relay Point for Transcoder, on page 3.

Configure Trusted Relay Point for Transcoder

You can configure a transcoder so that you can use the device as a trusted relay point.

Before you begin

Configure Trusted Relay Point for Media Termination Point, on page 3.

Procedure

Step 1 From the Cisco Unified CM Administration, choose **Media Resources** > **Transcoder**.

Step 2 To configure a trusted relay point for an existing transcoder, from the **Find and List Transcoder** window, specify the appropriate filters and click **Find**.

Step 3 To configure trusted relay point for a new transcoder, click **Add New**.

Step 4 Configure the fields on the **Transcoder Configuration** window. See the online help for more information about the fields and their configuration options.

Step 5 In the **Media Server Transcoder Info** section, click the **Use Trusted Relay Point** check box.

Step 6 Click **Save**.

What to do next

Enable Trusted Relay Point Service Parameter, on page 4.

Enable Trusted Relay Point Service Parameter

You can enable the TRP service parameter to determine whether a call that requires a TRP is allowed to proceed if no TRP resource is available.

Before you begin

Configure Trusted Relay Point for Transcoder, on page 3.

Procedure

Step 1 From the Cisco Unified CM Administration, choose **System** > **Service Parameters**.

Only **Server** drop-down list appears.

Step 2 From the **Service Parameter Configuration** window, choose a server from the **Server** drop-down list.
The **Service** drop-down list appears.

Step 3 Choose a Cisco Unified Communications Manager server from the **Server** drop-down list.
Based on the selected server and service, the service parameters appear.

Step 4 From the Clusterwide Parameters (Device - General) section, choose **`True`** for **Fail Call If Trusted Relay Point Allocation Fails** drop-down list. See the Related Topics section about the fields and their configuration options.

Step 5 From the Clusterwide Parameters (Device - H323) section, choose **`True`** for **Fail Call If MTP Allocation Fails** drop-down list. See the Related Topics section about the fields and their configuration options.

Step 6 Click **Save**.

Call Status When MTP and TRP Service Parameters are Selected

If you check both the **Media Termination Point Required** and the **Use Trusted Relay Point** check boxes for an endpoint, Cisco Unified Communications Manager allocates a Media Termination Point (MTP) that is also a Trusted Relay Point (TRP). If the administrator fails to allocate such an MTP or TRP, the call status appears.

The following table shows the call status with the values of the **Fail Call If Trusted Relay Point Allocation Fails** and the **Fail Call if MTP Allocation Fails** service parameters when a call fails.

Fail Call If TRP Allocation Fails	Fail Call If MTP Allocation Fails	Fail Call?
True	True	Yes
True	False	Yes
False	True	Yes, if MTP is rec MTP is required f
False	False	No

Call Status When MTP and TRP Service Parameters are Not Selected

If both the **Fail Call If Trusted Relay Point Allocation Fails** service parameter and the **Fail Call If MTP Allocation Fails** service parameter are set to **`False`**, the following table shows the call behavior in relationship to the MTP that is required and **Use Trusted Relay Point** configuration and the resource allocation status.

MTP Required	Use TRP	Resource Allocation Status	Call B
Y	Y	TRP allocated	Audio
Y	Y or N	MTP only	Audio
Y	Y or N	None allocated	If MT servic
N	Y	TRP allocated	Audio admis
N	Y	None allocated	Audio suppo

Trusted Relay Points Interactions and Restrictions

Trusted Relay Points Interactions and Restrictions

Feature	Interactions and Restrictions
Resource Reservation Protocol (RSVP)	If RSVP is enabled for the call, Cisco Unified Communications Manager first tries to allocate an RSVPAgent that is also labeled as TRP. Otherwise, another TRP device is inserted between the RSVPAgent and the endpoint.

Feature	Interactions and Restrictions
Transcoder for call	If you need a transcoder for the call and need to allocate it on the same side as the endpoint that needs TRP, Cisco Unified Communications Manager first tries to allocate a transcoder that is also labeled as TRP. Otherwise, another TRP device is inserted between the transcoder and the endpoint.
MTP allocation for endpoint	If you check both the **Media Termination Point Required** check box and the **Use Trusted Relay Point** check box for an endpoint, Cisco Unified Communications Manager should allocate an MTP that is also a TRP. If the administrator fails to allocate such an MTP or TRP, the call status appears.
TRP allocation	In most instances, TRP is allocated after users answer the call, so if a call fails due to failure to allocate the TRP, users may receive fast-busy tone after answering the call. (The SIP outbound leg with MTP required, or H.323 outbound faststart, represents an exception.)
TRP Insertion for endpoint	Cisco Unified Communications Manager must insert a TRP for the endpoint if you have checked the **Use Trusted Relay Point** check box for either the endpoint or the device pool that is associated with the device. The call may fail if Cisco Unified Communications Manager fails to allocate a TRP while the **Fail Call If Trusted Relay Point Allocation Fails** service parameter is set to **`True`**.
TRP and remote users	TRP is not recommended for providing secure solution for work from home remote users. Expressway's Mobile and Remote Access is the recommended solution.

Trusted Relay Points Restrictions

Table 1: Trusted Relay Points Restrictions

Restriction	Description
Insertion of trusted relay point for an endpoint	Cisco Unified Communications Manager must insert a TRP for the endpoint if you have checked the **Use Trusted Relay Point** check box for either the endpoint or the device pool that is associated with the device. The call may fail if Cisco Unified Communications Manager fails to allocate a TRP while the **Fail Call If Trusted Relay Point Allocation Fails** service parameter is set to **`True`**.
Allocation of media termination point for an endpoint	If you check both the **Media Termination Point Required** check box and the **Use Trusted Relay Point** check box for an endpoint, Cisco Unified Communications Manager should allocate an MTP that is also a TRP. If the administrator fails to allocate such an MTP or TRP, the call status appears.

Restriction	Description
Allocation of trusted relay point	In most instances, TRP is allocated after users answer the call, so if a call fails due to failure to allocate the TRP, users may receive fast-busy tone after answering the call. (The SIP outbound leg with MTP required, or H.323 outbound faststart, represents an exception.)