Configure Trusted Relay Points

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- Trusted Relay Points Task Flow, on page 2
- Trusted Relay Points Interactions and Restrictions, on page 6

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

<table>
<thead>
<tr>
<th>Command or Action</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Step 1</strong></td>
<td>Configure trusted relay points (TRP) for one or multiple devices where media ends and insert TRP in Cisco Unified Communications Manager.</td>
</tr>
<tr>
<td><strong>Step 2</strong></td>
<td>Configure media termination point (MTP) so that you can use the device as a trusted relay point. <strong>Note</strong> 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.</td>
</tr>
<tr>
<td><strong>Step 3</strong></td>
<td>Configure transcoder so that you can use the device as a trusted relay point. <strong>Note</strong> 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.</td>
</tr>
<tr>
<td><strong>Step 4</strong></td>
<td>Enable the TRP service parameter to determine whether a call that requires a TRP is allowed to proceed if no TRP resource is available.</td>
</tr>
</tbody>
</table>

## 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**.
Configure Trusted Relay Points

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.

Related Topics
Call Status When MTP and TRP Service Parameters are Selected, on page 5
Call Status When MTP and TRP Service Parameters are Not Selected, on page 5
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.

<table>
<thead>
<tr>
<th>Fail Call If TRP Allocation Fails</th>
<th>Fail Call If MTP Allocation Fails</th>
<th>Fail Call?</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>True</td>
<td>Yes</td>
</tr>
<tr>
<td>True</td>
<td>False</td>
<td>Yes</td>
</tr>
<tr>
<td>False</td>
<td>True</td>
<td>Yes, if MTP is required for H.323 endpoint. No, if MTP is required for SIP endpoint.</td>
</tr>
<tr>
<td>False</td>
<td>False</td>
<td>No</td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>MTP Required</th>
<th>Use TRP</th>
<th>Resource Allocation Status</th>
<th>Call Behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Y</td>
<td>TRP allocated</td>
<td>Audio call only because no pass-through support exists.</td>
</tr>
<tr>
<td>Y</td>
<td>Y or N</td>
<td>MTP only</td>
<td>Audio call only. No TRP support.</td>
</tr>
<tr>
<td>Y</td>
<td>Y or N</td>
<td>None allocated</td>
<td>If MTP required is checked for H.323 endpoint, supplementary services will be disabled.</td>
</tr>
<tr>
<td>N</td>
<td>Y</td>
<td>TRP allocated</td>
<td>Audio or video call depends on endpoint capabilities, and call admission control (CAC). Supplementary services still work.</td>
</tr>
<tr>
<td>N</td>
<td>Y</td>
<td>None allocated</td>
<td>Audio or video call. Supplementary services still work, but no TRP support exists.</td>
</tr>
</tbody>
</table>
Trusted Relay Points Interactions and Restrictions

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

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.

Trusted Relay Points Restrictions

<table>
<thead>
<tr>
<th>Restriction</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insertion of trusted relay point for an endpoint</td>
<td>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.</td>
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### Trusted Relay Points Restrictions

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<tr>
<th>Restriction</th>
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<tr>
<td>Allocation of media termination point for an endpoint</td>
<td>If you check both the <strong>Media Termination Point Required</strong> check box and the <strong>Use Trusted Relay Point</strong> 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.</td>
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**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.)