



Cisco V.150 Minimum Essential Requirements (MER)

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V.150 Overview

The V.150 Minimum Essential Requirements feature allows you to make secure calls in a modem over IP network. The feature uses a dial-up modem for large installed bases of modems and telephony devices operating on a traditional public switched telephone network (PSTN). The V.150.1 recommendation specifically defines how to relay data from modems and telephony devices on a PSTN into and out of an IP network through a modem. The V.150.1 is an ITU-T recommendation for using a modem over IP networks that support dial-up modem calls.

The Cisco V.150.1 Minimum Essential Requirements feature complies with the requirements of the National Security Agency (NSA) SCIP-216 Minimum Essential Requirements (MER) for V.150.1 recommendation. The SCIP-216 recommendation has simplified the existing V.150.1 requirements.

Cisco V.150.1 MER feature supports the following interfaces:

- Media Gateway Control Protocol(MGCP) T1(PRI and CAS) and E1(PRI) trunks
- Session Initiation Protocol (SIP) trunks
- Skinny Client Control Protocol (SCCP) for analog gateway endpoints
- Secure Communication Interoperability Protocol-End Instruments (SCIP-EI)

Prerequisites for Cisco V.150.1 MER

Your system should already be set up with basic call control functionality. For instructions on how to set up the call control system, refer to the [System Configuration Guide for Cisco Unified Communications Manager](#).

For Unified Communications Manager, you must have one of the following releases installed:

- The minimum version is Release 10.5(2) SU3

- For 11.0, the minimum version will be 11.0(1) SU2 available in Spring 2016
- All releases from 11.5(1) on support this feature
- You must have *Cisco IOS Release 15.6(2)T* or later.

V.150 is not supported with Media Termination Point (MTP). We recommend that you remove MTP from devices, trunks, and gateways that are handling V.150 calls.

Configure V.150 Task Flow

Complete these tasks to add V.150 support in Unified Communications Manager.

Procedure

	Command or Action	Purpose
Step 1	To Configure Media Resource Group Task Flow, on page 3 , perform the following subtasks: <ul style="list-style-type: none"> • Configure Media Resource Group for Non-V.150 Endpoints, on page 4 • Configure a Media Resource Group List for Non-V.150 Endpoints, on page 4 • Configure Media Resource Group for V.150 Endpoints, on page 4 • Configure a Media Resource Group List for V.150 Endpoints, on page 5 	Add Media Resource Group and Media Resource Group List for V.150 and non V.150 devices.
Step 2	Configure the Gateway for Cisco V.150 (MER), on page 5	Add V.150 functionality to a gateway.
Step 3	Configure V.150 MGCP Gateway Port Interface, on page 6	If you want to use V.150 support across an MGCP gateway, add V.150 support to the port interface.
Step 4	Configure V.150 SCCP Gateway Port Interface, on page 6	If you want to use V.150 support across an SCCP gateway, add V.150 support to the port interface.
Step 5	Configure V.150 Support for Phone, on page 7	Add V.150 support to the phones that will be placing V.150 calls.
Step 6	To Configure SIP Trunk Task Flow, on page 8 , perform one or any of the following subtasks: <ul style="list-style-type: none"> • Configure SIP Profile for V.150, on page 8 • Set the Clusterwide V.150 Filter, on page 8 	Add V.150 support to the SIP trunk that will be used for V.150 calls.

	Command or Action	Purpose
	<ul style="list-style-type: none"> • Add V.150 Filter to SIP Trunk Security Profile, on page 9 • Configure SIP Trunk for V.150, on page 10 	
Step 7	To use the V.150 MER feature, you also need to configure IOS on your gateway to support the feature.	For more information on IOS gateway configuration settings, see http://www.cisco.com/c/en/us/td/docs/ios/12_4t/12_4t4/mer_cg_15_1_4M.html .

Configure Media Resource Group Task Flow

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- The minimum version is Release 10.5(2) SU3
- For 11.0, the minimum version will be 11.0(1) SU2
- All releases from 11.5(1) on support this feature
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V.150 is not supported with Media Termination Point (MTP). We recommend that you remove MTP from devices, trunks, and gateways that are handling V.150 calls.

Complete these tasks to configure two sets of media resource groups: a media resource group with MTP resources for non-V.150 calls, and a media resource group without MTP resources for V.150 calls.

Procedure

	Command or Action	Purpose
Step 1	Configure Media Resource Group for Non-V.150 Endpoints, on page 4	You can configure the Media Resource Group with MTP for non-V.150 endpoints.
Step 2	Configure a Media Resource Group List for Non-V.150 Endpoints, on page 4	Configure a Media Resource Group list that includes your MTP Media Resources for non-V.150 endpoints.
Step 3	Configure Media Resource Group for V.150 Endpoints, on page 4	Configure Media Resource Group without MTP resources for secure V.150 calls.
Step 4	Configure a Media Resource Group List for V.150 Endpoints, on page 5	Configure a Media Resource Group list without MTP after adding the required resources in the Media Resource Group for secure V.150 endpoints.

Configure Media Resource Group for Non-V.150 Endpoints

Use this procedure to add a new media resource group that includes MTP resources for non-V.150 endpoints.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Media Resources > Media Resource Group**.
 - Step 2** Click **Add New**.
 - Step 3** In the **Name** field, enter the media resource group name as **Do not use with V.150 devices**.
 - Step 4** From the **Available Media Resources** field, choose only MTP devices and click the **down-arrow key**. The selected devices appear in the **Selected Media Resources** field.
 - Step 5** Click **Save**.
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Configure a Media Resource Group List for Non-V.150 Endpoints

[Configure Media Resource Group for Non-V.150 Endpoints, on page 4](#)

Use this procedure to add new media resource group list with MTP resources for non-V.150 end points.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Media Resources > Media Resource Group List**.
 - Step 2** Click **Add New**.
 - Step 3** In the **Name** field, enter a name for the media resource group list as **Non- V.150**.
 - Step 4** From the **Available Media Resources** field, choose the V.150 MER resource group named **Do not use with V.150 Devices** and click the **down-arrow key**. The selected devices appear in the **Selected Media Resources** field.
 - Step 5** Click **Save**.
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Configure Media Resource Group for V.150 Endpoints

Use this procedure to add new media resource group without MTP resources for V.150 devices.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Media Resources > Media Resource Group**.
- Step 2** Click **Add New**.
- Step 3** In the **Name** field, enter the media resource group name as **For use with V.150 devices**.
- Step 4** From the **Available Media Resources** field, choose multiple devices except the MTP resources and click the **down-arrow key**.

The selected devices appear in the **Selected Media Resources** field.

Step 5 Click **Save**.

Configure a Media Resource Group List for V.150 Endpoints

[Configure Media Resource Group for V.150 Endpoints, on page 4](#)

Use this procedure to add a media resource group list without MTP resources for V.150 devices.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Media Resources > Media Resource Group List**.
- Step 2** Click **Add New**.
- Step 3** In the **Name** field, enter a name for the media resource group list as **V.150**.
- Step 4** From the **Available Media Resources** field, choose the V.150 MER resource group named **For V.150 Devices** and click the **down-arrow key**.
The selected media resource groups appear in the **Selected Media Resources** field.
- Step 5** Click **Save**.
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Configure the Gateway for Cisco V.150 (MER)

Use this procedure to configure the gateway for Cisco V.150 (MER).

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Device > Gateway**.
- Step 2** Click **Add New**.
- Step 3** Choose the gateway from the **Gateway Type** drop-down list.
- Step 4** Click **Next**.
- Step 5** From the **Protocol** drop-down list, choose a protocol.
- Step 6** Depending on which Protocol you chose for the gateway, perform:
- For MGCP, in the **Domain Name** field, enter the domain name that is configured on the gateway.
 - For SCCP, in the **MAC Address (Last 10 Characters)** field, enter the gateway MAC address.
- Step 7** From the **Unified Communications Manager Group** drop-down list, choose **Default**.
- Step 8** In the **Configured Slots, VICs and Endpoints** area, perform the following steps:
- a) From each **Module** drop-down list, select the slot that corresponds to the Network Interface Module hardware that is installed on the gateway.
 - b) From each **Subunit** drop-down list, select the VIC that is installed on the gateway.
 - c) Click **Save**.

The **port icons** appear. Each **port icon** corresponds to an available **port interface** on the gateway. You can configure any **port interface** by clicking the corresponding **port icon**.

- Step 9** Complete the remaining fields in the **Gateway Configuration** window. See the online help for more information about the fields and their configuration options.
- Step 10** Click **Save**.

Configure V.150 MGCP Gateway Port Interface

Use this procedure to configure V.150 MGCP gateway port interface.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Device > Gateway**.
- Step 2** Enter the appropriate search criteria to modify the settings for an existing gateway and click **Find**.
- Step 3** In the **Configured Slots, VICs, and Endpoints** area, locate the module and subunit on which you want to configure a port for V.150 MER and click the corresponding **port icon**.
- Step 4** From the **Device Protocol** drop-down list, choose **Digital Access T1** or **Digital Access PRI** and click **Next**.
- Note** The **Device Protocol** drop-down list is displayed only if T1 port is selected in the **Configured Slots, VICs, and Endpoints** area.

The **Gateway Configuration** window now displays the port interface configuration.

- Step 5** Select the **Media Resource Group List** named **V.150**.
- Step 6** Check the **V150 (subset)** check box.
- Step 7** Configure the remaining fields, if applicable. See the online help for more information about the fields and their configuration options.
- Step 8** Click **Save**.
- Step 9** (Optional) If you want to configure additional port interfaces for the gateway, from the **Related Links** drop-down list, choose **Back to MGCP Configuration** and click **Go**. You can select a different port interface.

Configure V.150 SCCP Gateway Port Interface

Use this procedure to configure V.150 SCCP gateway port interface.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Device > Gateway**.
- Step 2** Enter the appropriate search criteria to modify the settings for an existing SCCP gateway and click **Find**.
- Step 3** In the **Configured Slots, VICs, and Endpoints** area, locate the module and subunit on which you want to configure a port for V.150 MER and click the corresponding **port icon**.
- Step 4** Select the **Media Resource Group List** named “**V.150**”.

- Step 5** In the **Product Specific Configuration Layout** area, if the **Latent Capability Registration Setting** drop-down list appears, select **Modem Relay** or **Modem Relay and Passthrough**.
- Step 6** Configure the remaining fields, if applicable. See the online help for more information about the fields and their configuration options.
- Step 7** Click **Save**.
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Configure V.150 Support for Phone

Use this procedure to add V.150 support for a phone. The following phone types support V.150:

- Cisco 7962—Third party SCCP end point registered as Cisco 7962
- Cisco 7961G-GE—Third party SCCP end point registered as Cisco 7961G-GE
- Third Party AS-SIP Endpoints

Procedure

- Step 1** Required: Create an End User with the User ID same as the intended phone number.
- Step 2** Required: Configure the **Digest Credentials** field in the **End User Configuration** window for Third Party AS-SIP SIP endpoints.
- For more information on how to configure a new End User, see the “Provision End Users Manually” chapter in the [System Configuration Guide for Cisco Unified Communications Manager](#)
- Step 3** From Cisco Unified Communications Manager Administration, choose **Device > Phone**.
- Step 4** Perform either of the following steps:
- To configure V.150 on an existing phone, click **Find** and select the phone.
 - To configure a new phone for V.150, click **Add New**.
- Step 5** From the **Phone Type** drop-down list, select one of the phone types that supports V.150, and click **Next**.
- Step 6** For third party SCCP endpoints registered as Cisco 7962, select **SCCP** from the **Device Protocol** drop-down list, and click **Next**.
- Step 7** From the **Media Resource Group List** drop-down menu, select **V.150**.
- Step 8** For third party AS-SIP SIP endpoints only, Configure the following fields:
- From the **Digest User** drop-down select the end user for this phone. The end user will be used for digest authentication.
 - Leave the **Media Termination Point Required** check box unchecked.
 - Check the **Early Offer support for voice and video calls** check box.
- Step 9** Click **Save**.
- Step 10** Click **Apply Config**.
- Step 11** Click **OK**.
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Configure SIP Trunk Task Flow

Use this procedure to configure SIP Trunk task flow.

Procedure

	Command or Action	Purpose
Step 1	Configure SIP Profile for V.150, on page 8	Configure a SIP Profile with SIP Best Effort Early Offer support for the SIP trunk.
Step 2	Set the Clusterwide V.150 Filter, on page 8	Optional. Configure a clusterwide default setting for SIP V.150 SDP Offer Filtering.
Step 3	Add V.150 Filter to SIP Trunk Security Profile, on page 9	Configure a V.150 Filter within a SIP Trunk Security Profile that you can assign to specific SIP trunks.
Step 4	Configure SIP Trunk for V.150, on page 10	Configure V.150 support for the SIP trunks that will handle V.150 calls.

Configure SIP Profile for V.150

Use this procedure to configure a SIP Profile with SIP Best Effort Early Offer support for the SIP trunk.

Procedure

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- Step 1** In Cisco Unified Communications Manager Administration, choose **Device > Device Settings > SIP Profile**.
- Step 2** Perform either of the following steps:
- To create a new profile, click **Add New**.
 - To select an existing profile, click **Find** and select a SIP profile.
- Step 3** In the **Name** field, enter the SIP name for V.150.
- Step 4** In the **Description** field, enter the description for V.150.
- Step 5** From the **Early Offer Support for Voice and video class** drop-down list, choose **Select Best Effort (no MTP inserted)**.
- Step 6** Enter any other configuration settings that you want. See the online help for more information about the fields and their configuration options.
- Step 7** Click **Save**.
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Set the Clusterwide V.150 Filter

Use this procedure to configure a clusterwide default setting for SIP V.150 SDP Offer filtering.



Note If you configure a **SIP V.150 SDP Offer Filtering** value within a SIP Trunk Security Profile that is different than the clusterwide service parameter setting, the security profile setting overrides the cluster-wide service parameter setting for the trunks that use that security profile.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **System > Service Parameters**.
 - Step 2** From the **Server** drop-down list, choose an active server.
 - Step 3** From the **Service** drop-down list, choose **Cisco CallManager**.
 - Step 4** In the **Clusterwide Parameters (Device- SIP)** section, configure a value for the **SIP V.150 SDP Offer Filtering** service parameter.
 - Step 5** Choose **SIP V.150 SDP Offer Filtering** from the drop-down list.
 - Step 6** Specify the desired filtering action.
 - Step 7** Click **Save**.
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Add V.150 Filter to SIP Trunk Security Profile

Use this procedure to assign a V.150 Filter within a SIP Trunk Security Profile.



Note If you configure a **SIP V.150 SDP Offer Filtering** value within a SIP Trunk Security Profile that is different than the clusterwide service parameter, the security profile setting overrides the cluster-wide service parameter setting for the trunks that use that security profile.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **System > Security > SIP Trunk Security Profile**.
- Step 2** Perform one of the following tasks:
 - Enter search criteria and Click **Find** to choose an existing profile from the list to modify the settings for an existing SIP Trunk Security Profile.
 - Click **Add New** to add a new SIP Trunk Security Profile.
- Step 3** Configure a value for the **SIP V.150 Outbound SDP Offer Filtering** drop-down list.

Note The default setting is to use the value of the **SIP V.150 Outbound SDP Offer Filtering** cluster-wide service parameter.
- Step 4** Configure any remaining fields in the **SIP Trunk Security Profile Configuration** window. See the online help for more information about the fields and their configuration options.

Step 5 Click **Save**.

Configure SIP Trunk for V.150

Use this procedure to configure settings for a SIP trunk.

Procedure

- Step 1** From Cisco Unified Communications Manager Administration, choose **Device > Trunk**.
- Step 2** Perform either of the following steps:
- To create a new profile, click **Add New**.
 - Click **Find** and select a SIP trunk, to select an existing trunk.
- Step 3** For new trunks, do the following:
- From the **Trunk Type** drop-down list, choose **SIP Trunk**.
 - From the **Protocol Type** drop-down list, choose **SIP**.
 - From the **Trunk Service Type** drop-down list, choose **None(Default)**.
 - Click **Next**.
- Step 4** Enter the SIP trunk name in the **Name** field.
- Step 5** Enter the SIP trunk description in the **Description** field.
- Step 6** From the **Media Resource Group List** drop-down list, choose the Media resource group list named “V.150”.
- Step 7** Configure the destination address for the SIP trunk:
- a) In the **Destination Address** text box, enter an IPv4 address, fully qualified domain name, or DNS SRV record for the server or endpoint that you want to connect to the trunk.
 - b) If the destination is a DNS SRV record, check the **Destination Address is an SRV** check box.
 - c) To add additional destinations, click (+) button. You can add up to 16 destinations for a SIP trunk.
- Step 8** From the **SIP Trunk Security Profile** drop-down list, assign the SIP trunk security profile that you configured for this trunk.
- Step 9** From the **SIP Profile** drop-down list, assign the SIP profile that you set up with the Best Effort Early Offer setting.
- Step 10** Leave the **Media Termination Point Required** check box unchecked.
- Step 11** Configure any additional fields in the **Trunk Configuration** window. See the online help for more information about the fields and their configuration options.
- Step 12** Click **Save**.
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