



CHAPTER 2

Basic Configuration for the Cisco Unified Videoconferencing 3545 MCU

This section describes the following topics:

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- [Configuring Settings for the 3545 MCU, page 2-2](#)
- [Viewing Media Processors for the 3545 MCU, page 2-11](#)
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Viewing the Status Tab for the Cisco Unified Videoconferencing 3545 MCU

The Status tab in the MCU interface displays information about MCU resource usage and performance. [Table 2-1](#) lists the information in the Status tab.

Table 2-1 **Status Tab Sections**

| Section Name | Description |
|----------------|--|
| Status | Indicates the current operational state of the MCU as follows: <ul style="list-style-type: none">• Error—Indicates that the MCU is not registered to a gatekeeper, or that the web connection is down.• OK. |
| Resource Meter | <ul style="list-style-type: none">• CPU Usage (%) field—Indicates the percentage of MCU resources currently occupied. We recommend that this value not exceed 90 percent. |
| Conferences | <ul style="list-style-type: none">• Number of active conferences—Indicates the number of conferences currently hosted on the MCU.• Number of calls—Indicates the current number of calls on the MCU. |

Configuring Settings for the 3545 MCU

In the Settings tab, you can perform the tasks described in the following sections:

- [Setting the User Interface Language, page 2-2](#)
- [Setting the Unit Identifier, page 2-3](#)
- [Setting an Operator Number, page 2-4](#)
- [Configuring DTMF Control, page 2-4](#)
- [Configuring Themes, page 2-5](#)
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- [Enabling and Disabling High Definition Continuous Presence, page 2-3](#)

Setting the User Interface Language

In the Basics section of the Settings tab, you can configure the language that the MCU supports. [Table 2-2](#) lists the languages that the MCU supports.

Table 2-2 Supported Languages in the MCU User Interface

| Language | Administrator Interface | Conference Control Interface | Text Overlay on Conference Video |
|------------|-------------------------|------------------------------|----------------------------------|
| English | * | * | * |
| Chinese | * | * | * |
| Japanese | * | * | |
| Portuguese | * | * | * |
| Spanish | * | * | * |
| Russian | * | * | * |



Note

To view Chinese or Japanese fonts properly in the Administrator interface, the computer (where the web browser is running) should support the appropriate languages. You should set its default language (which you select from the Control Panel > Regional and Language Options menu) accordingly.

Procedure

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- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
 - Step 2** Click the **Settings** tab.
 - Step 3** Click **Basics**.
 - Step 4** In the User interface language field, select the required language.
-

Setting the Unit Identifier

In the Basics section of the Settings tab, you can set the Cisco Unified Videoconferencing 3545 MCU identifier. This identifies the MCU in the following situations:

- During gatekeeper/SIP registration.
- When inviting endpoints—When inviting endpoints into a conference.
- In text the overlay for the cascaded MCU in cascaded conferences.

Procedure

- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Basics** (if not already selected).
- Step 4** In the MCU Identifier field, enter an identifier (up to a maximum of 15 characters). For example, “London office.”
-

Enabling and Disabling High Definition Continuous Presence

In the Basics section of the Settings tab, you can enable or disable High Definition Continuous Presence.

Procedure

- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Basics** (if not already selected).
- Step 4** In the General section, select or deselect the Enable High Definition Continuous Presence check box.



Note You must reset for changes to take effect.

If you select Enable High Definition Continuous Presence, the port capacity is reduced by 8 high rate or 16 standard rate ports per EMP blade. Each EMP supports a maximum number of 12 SCCP ports when enabling High Definition Continuous Presence.

Setting an Operator Number

During a conference, you can invite an Operator to join and provide consultation and support. To do this, in the Basics section of the Settings tab, you set the E.164 number of the designated operator that the MCU dials when a user clicks the Operator button in the Conference Control interface.

Procedure

- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
 - Step 2** Click the **Settings** tab.
 - Step 3** Click **Basics**.
 - Step 4** In the pre-defined endpoints section, in the Operator field, enter an E.164 number for the operator.
-

Configuring DTMF Control

In the Conference Control section of the Settings tab, you can activate Dual Tone Multi-Frequency (DTMF) and H.243 conference control. DTMF and H.243 conference control allow you to perform the following actions on a conference from the remote control or keypad of your endpoint:

- Moderate conference
- Mute or unmute your line
- Control your volume
- Block or unblock admission to a conference (users only)
- Invite new participants (users only)

Procedure

- Step 1** In the Administrator interface, click **MCU** (if not already selected).
 - Step 2** Click the **Settings** tab.
 - Step 3** Click **Conference Control**.
 - Step 4** Select **Enable DTMF Conference control**.
 - Step 5** In the DTMF Conference Control prefix field, choose a symbol for starting the DTMF conference control session. You can select pound (#) or asterisk (*). The default is *.
 - Step 6** Select **Enable H.243 Conference control**.
-

Configuring Themes

In the Themes section of the Settings tab, you can preview pre-configured video display settings and configure custom themes. You select theme options when configuring services. You can configure a custom theme specifying the text font, color, background color, and border settings for active participants.

**Note**

This feature requires Cisco Unified Videoconferencing 3545 EMP Enhanced Media Processor support.

Procedure

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- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Themes**.
- Step 4** Select one of the themes from the Theme field.
- If you select Classic, you can configure the font size, subframe and border color. Follow step 5 to step 10.
- If you select Modern, you can configure the font size only. Go to step 6 and then jump to step 10.
- If you select any other theme, the font size, subframe and border color are automatically set. Go to step 10.
- Step 5** In the Font background transparency field, choose one of the following settings:
- None—A solid background against which the text appears.
 - Half—A moderate background against which the text appears.
 - Full—A transparent background against which the text appears.
- Step 6** In the Font size field, choose a font size:
- Step 7** In the Font foreground color, Font background color and Empty subframe color fields, click to select a color for these settings.
- Step 8** You can display a default border around all participant sub-frames. Select **Display default border** and click to select the default border color.
- Step 9** Select **Display active speaker border** to set a default border for the active speaker.
- Step 10** The Basic font field displays the font currently installed on the MCU. Select **Enable extended font** to enable Asian fonts.

You can view the effects of your settings in the Preview section. This section displays the selected theme settings. This includes a layout with four sub-frames, the theme border highlight colors, active speaker border highlight color, font formatting, screen background color, and text background settings.

Configuring Quality of Service

In the Quality of Service section of the Settings tab, you can assign a priority level to video and voice calls. This section describes how to configure these Quality of Service (QoS) settings using either pre-configured system settings or by creating your own settings.

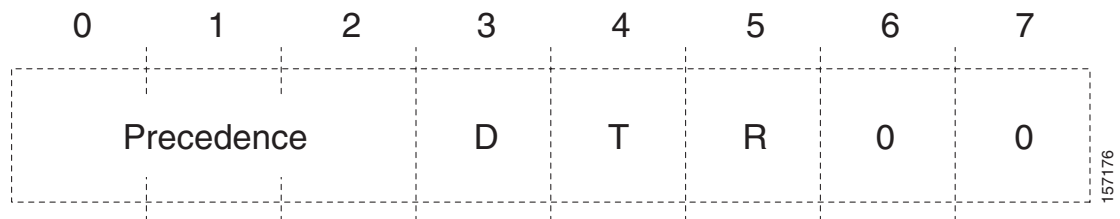
Quality of Service settings involve configuring the MCU to add a Quality of Service (QoS) IP Precedence code in the IP header of outbound packets. Routers on the network that support QoS can give precedence to such coded packets and facilitate the efficient transmission of packets. You can set priority levels on the MCU for voice calls, video calls or both.

The Type of Service (ToS) field in the IP header contains eight bits and indicates the following three abstract quality of service parameters:

- Delay (D)
- Throughput (T)
- Reliability (R)

You use the abstract parameters to choose the actual service parameters when transmitting a datagram through a particular network. The abstract parameters represent the three-way trade off between low delay, high throughput and high reliability. Increasing the performance of one of these parameters might result in reduced performance of the other two. [Table 2-2](#) represents the ToS field in the IP header.

Figure 2-1 TOS Field in the IP Header



Note

The same fields can also be used to set DiffServ codepoint values

The function of each bit of the ToS field is as follows

- Bits 0-2: Precedence (an independent measure of the importance of the datagram)
- Bit 3: 0 = normal delay, 1 = low delay
- Bit 4: 0 = normal throughput, 1 = high throughput
- Bit 5: 0 = normal reliability, 1 = high reliability
- Bits 6-7: reserved for future use

The possible Precedence settings are as follows:

- 111 = Network Control
- 110 = Internetwork Control
- 101 = CRITIC/ECP
- 100 = Flash Override
- 011 = Flash
- 010 = Immediate

- 001 = Priority
- 000 = Routine

Procedure

- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Quality of Service**.
- Step 4** In the Quality of service support field, set the required IP ToS value for each media type by clicking one of the following radio buttons:
- **None**—Select to disable Quality of Service support
 - **Default**—Select to assign the default IP ToS value for each media type. The default settings represent Cisco recommendations.
 - **Custom**—Select to assign your own IP ToS value for each media type.
- If you select **Default**, the system automatically enters Quality of Service settings. If you select **Custom**, follow the steps below.
- Step 5** In the Voice Priority field of the Video Calls section, enter a whole number from 0 to 63 to set the priority level of voice packets that the MCU sends out. The default value is 34.
- Step 6** In the Video Priority field of the Video Calls section, enter a whole number from 0 to 63 to set the priority level of video packets that the MCU sends out. The default value is 34.
- Step 7** In the Voice Priority field of the Voice Calls section, enter a whole number from 0 to 63 to set the priority level of voice packets that the MCU sends out. The default value is 46.
-

Configuring MCU Dynamic Layouts

In the Dynamic Layouts section of the Settings tab you can define the exact layout transition order used by conferences.

Dynamic layouts are activated individually for each service. When selected, the conference layout changes automatically as participants join or leave.



Note This feature works only with an EMP.

Procedure

- Step 1** In the Administrator interface, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Dynamic Layouts**.
- Step 4** Click a layout image to select or deselect that specific layout.
-

Configuring MCU Alert Indications

In the Alert Indications section of the Settings tab, you can select which events trigger Simple Network Management Protocol (SNMP) traps. You can also define multiple SNMP servers to which the MCU sends the SNMP traps and configure which events to display in the Event Log tab.

This section describes the following topics:

- [Enabling Cisco Unified Videoconferencing 3545 MCU Alert Indications and Setting Security Levels, page 2-8](#)
- [Configuring SNMP Trap Servers, page 2-10](#)
- [Editing SNMP Trap Servers, page 2-10](#)
- [Deleting SNMP Trap Servers, page 2-11](#)

Enabling Cisco Unified Videoconferencing 3545 MCU Alert Indications and Setting Security Levels

In the Alert Indications section of the Settings tab, you can configure which alerts will be enabled and set a severity level for each one.

[Table 2-3](#) lists alert indications as well as the SNMP trap associated with them.

[Table 2-4](#) lists the structure of the standard *coldStart* and *warmStart* traps (as defined in RFC 1907) and the standard *linkDown* and *linkUp* traps (as defined in RFC 1573).

Table 2-3 *MCU Alert Indications*

| Event Type | Trap is sent when... |
|---------------------------------------|--|
| Abnormal disconnect | A call disconnects for a reason other than normal, busy, or no answer. |
| Authentication failure | The conference PIN is incorrect. |
| Call disconnected by remote endpoint | A call disconnects normally by a remote endpoint. |
| Card extract/Hot swap | A card has been removed from the Cisco Unified Videoconferencing 3545 chassis under power or inserted into the Cisco Unified Videoconferencing 3545 chassis under power. |
| Corrupt WEB data | Corrupt web files are present in the MCU. |
| Gatekeeper registration state change | A change occurs in the registration status of the MCU with the gatekeeper. |
| General alarm | A system failure is detected. |
| Incompatible software version install | An attempt to burn a version of the MCU software onto incompatible hardware occurs. |
| Loss of Ethernet | The network returns after going down. Indicates the time at which the network was restored. |
| MP lost | Communication with a registered media processor has broken. |
| MP registration failure | The media processor registration to the MCU failed. |
| Max resource meter | A high CPU level (85%) is reached in the MCU. |
| Network problem | A problem occurs on the network. |
| Overheating | The configured temperature thresholds for the device are exceeded. Overheating can cause serious damage to the functioning of the device. |

Table 2-3 *MCU Alert Indications (continued)*

| Event Type | Trap is sent when... |
|---------------------------|--------------------------------------|
| Power-down | The MCU is shutting down. |
| Power-up | The MCU has begun operation. |
| Services table is changed | The service table has been modified. |

Table 2-4 *Standard SNMP Trap Event Types*

| Event Type | Trap is sent when... |
|------------|---|
| Cold start | The MCU has been activated by inserting the card into a Cisco Unified Videoconferencing 3545 chassis under power or has been reset using the button on the front panel. |
| Warm start | A reset of the MCU has been performed using the Administrator interface. |
| Link down | Standard SNMP MIB trap indicating that the network connection is down with details about the cause and time of connection loss. |
| Link up | Standard SNMP MIB trap indicating that the network connection has been reestablished. |

Procedure

-
- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Alert Indications**.
- Step 4** In the Events section, select the check boxes in the **Enabled in the Event Log** column for all the events that you want to display in the event log.
- Step 5** For each event you enable, choose one of the following severities in the Severity column:
- Cleared—Enumeration 0. One or more previously reported alarms have been cleared.
 - Information—Enumeration 1. Notification of a non-erroneous event.
 - Critical—Enumeration 2. A service-affecting event has occurred and requires immediate corrective action.
 - Major—Enumeration 3. A service-affecting event has occurred and requires corrective action to prevent the condition becoming more serious.
 - Minor—Enumeration 4. A non-service-affecting event has occurred and requires corrective action to prevent the condition becoming more serious.
 - Warning—Enumeration 5. A potential or impending service-affecting event has been detected, but no significant events have occurred yet. Action should be taken to further diagnose and correct the problems to prevent the condition becoming more serious.



Tip

You can click **Select All** to select all events or **Clear All** to clear all events.

Configuring SNMP Trap Servers

In the Alert Indications section of the Settings tab, you can define the IP address, port, and enabled traps for multiple SNMP trap servers to which the MCU sends the SNMP traps, and specify which events to display in the Event Log tab.

Procedure

- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Alert Indications**.
- Step 4** In the SNMP Traps Server section, click **Add**.
The SNMP Trap Servers Properties dialog box appears.
- Step 5** In the SNMP Trap server address field, enter the address for the SNMP trap server.
- Step 6** In the Port field, enter the port of the SNMP trap server. The default port for SNMP servers is 162.
- Step 7** In the Enabled traps section, select which traps you want to enable:
- To disable a trap, click it in the Enabled traps area and then click **Remove**.
 - To enable a trap, click it in the Disabled traps area and then click **Add**.
 - To enable all traps, click **Add All**.
 - To disable all traps, click **Remove All**.
- Step 8** Click **Upload** to save your settings.
The configured SNMP trap server appears in the SNMP Trap Servers section.
-

Editing SNMP Trap Servers

In the Alert Indications section of the Settings tab, you can edit a configured SNMP trap server.

Procedure

- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
- Step 2** Click the **Settings** tab.
- Step 3** Click **Alert Indications**.
- Step 4** In the SNMP Trap Servers section, click the configured SNMP trap server and then click **Edit**.
- Step 5** Click **Upload** when you finish your edits.
-

Deleting SNMP Trap Servers

You can delete configured SNMP trap servers in the Alert Indications section of the Settings tab.

Procedure

-
- Step 1** In the Administrator interface, on the sidebar, click **MCU** (if not already selected).
 - Step 2** Click the **Settings** tab.
 - Step 3** Click **Alert Indications**.
 - Step 4** In the SNMP Trap Servers section, click the configured SNMP trap server and then click **Delete**.
-

Viewing Media Processors for the 3545 MCU

In the Media Processing tab, you can view the list of data and video processors and servers currently registered with the MCU and access the web interface (if available) of registered devices to modify settings. The Media Processing tab includes the following columns and fields:

- **Type**—This column displays the types of media processors registered with the current MCU. The following types can appear in this column:
 - **MCU**—The MCU itself which is responsible for the signaling (H.323/SIP) and audio portions of a call.
 - **EMP**—The video processor responsible for the video portion of a call.
 - **IP Address**—This column displays the IP address of the device on which the media processor operates.
 - **Description**—This column displays a user-defined description of the media processor.
 - **Total**—This field displays the total number of media processor units currently registered.



Note

The MCU rejects an EMP without the correct version if it tries to register with it. Notice of this rejection appears in the Event Log tab.

Viewing the Event Log for the 3545 MCU

The Event Log tab displays a list of reported alarm events. These events are configured in the Alert Indications section of the Settings tab.

The Event Log tab displays the following information:

- **Event ID**—Displays the identifier for the specified alarm event.
- **Type**—Displays the type of event.
- **Time**—Displays the date and time when the reported event occurred.
- **Severity**—Displays the severity of the reported event.
- **Message**—Displays the error message used to report the event

Saving Configuration Settings for the 3545 MCU

You can save MCU configuration settings to a file and then export this file to a storage device on your network. You can use the saved configuration file to restore the settings to the current MCU or to configure a similar MCU.

An exported configuration file saves most of the current Board section settings and all of the current MCU section settings.


Note

You cannot save configuration settings in the System category.

You must use the Export button on the toolbar to save the configuration settings to a file. The Export button appears only when MCU section settings are activated. When you save a configuration file, the current Board section settings are saved in the file. If you want to change these settings for export, click Upload on the toolbar to save these settings to configuration memory prior to saving the configuration file.

Procedure

Step 1 In the MCU interface, on the sidebar, click Board.

Step 2 Make sure that the settings in the Basics, Addressing, Web and Users tabs are correct.


Note

Date parameters are not saved to the configuration file.

Step 3 Click **Upload** to save these settings.

Step 4 On the sidebar, click **MCU**.

Step 5 Review each of the configuration pages to ensure that these are the configuration settings you want to save.

Step 6 Click **Upload** to save these settings.

Step 7 On the toolbar, click **Export**.


Note

A dialog box appears indicating that you are navigating away from the page without saving the changes. Select the option to continue.

The File Download dialog box appears.

Step 8 Save the configuration settings file to your chosen location. The file extension .ini is automatically appended to the file name.

Importing Configuration Settings for the 3545 MCU

You can import the settings of a saved MCU configuration file from a storage device on your network. You can use the saved configuration file to restore the settings to the current MCU or to configure another MCU.

Procedure

Step 1 In the MCU interface, on the sidebar, click **MCU**.

Step 2 On the toolbar, click **Import**.

The Import a Configuration File page appears.

Step 3 Click **Browse**.

The Choose file dialog box appears.

Step 4 Navigate to and select the configuration file you want to import.



Note The file must have an .ini extension.

Step 5 Click **Open**.

The file path appears in the File Name field.

Step 6 Click **Import**.



Note You can verify the settings by clicking **MCU** or **Board** on the sidebar. However, to save the settings in either section, you must click **Upload** to save them before viewing the next section.

Step 7 Click **Upload** to save the settings in configuration memory.



Note Uploading the file resets the device.
