Cisco Unified MeetingPlace Release 8.0 -- Configuring the Hardware Media Server Using the MSA Interface

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About the Tabs Under the MCU Button in the MSA Interface for the Hardware Media Server

When you select the MCU button from the Media Server Administrator (MSA) interface for the Hardware Media Server, you can configure management policies, media processing, call management protocols, and services. <u>Table: MSA Interface Tabs for the MCU Button</u> explains the tabs that appear when you select the MCU button in the MSA interface for the Hardware Media Server.

Table: MSA Interface Tabs for the MCU Button

Tab name	Description	For more information, see
Status	Lists resource usage information and the number of calls and meetings currently in progress.	Viewing the Status of the Hardware Media Server
Settings	Contains operational settings for the Hardware Media Server.	How to Configure Settings for the Hardware Media Server
Media Processing	Lists the Audio and Video Blades currently registered with the Hardware Media Server.	Viewing Media Processors for the Hardware Media Server
Protocols	Displays protocol information.	About Hardware Media Server Protocols
Services	Lists and allows you to edit the meeting types.	Working with Services of the Hardware Media Server
Event Log	Lists alarm events.	Viewing the Event Log for the Hardware Media Server

Viewing the Status of the Hardware Media Server

The Status tab displays information about Hardware Media Server resource usage and performance. <u>Table:</u> <u>Status Tab Sections</u> lists the information in the Status tab.

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Table: Status Tab Sections

Section Name	Field Name	Description
Status	Current status	 Current operational state of the Hardware Media Server as follows: Error-Hardware Media Server is not registered to a gatekeeper or the web connection is down. OK
Resource Meter	CPU usage%	Percentage of Hardware Media Server resources currently in use. We recommend that this value not exceed 90 percent.
Conferences	Number of active conferences	 Number of meetings currently being hosted on the Hardware Media Server.
Conferences	Number of active calls	 Number of calls currently being hosted on the Hardware Media Server.

How to Configure Settings for the Hardware Media Server

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

- Setting the User Interface Language for the Hardware Media Server
- Configuring Dynamic Layouts for the Hardware Media Server
- How to Configure Alert Indications for the Hardware Media Server
- <u>Sending Advanced Commands for the Hardware Media Server</u>
- Opening a Telnet Terminal for the Hardware Media Server

Setting the User Interface Language for the Hardware Media Server

In the Basics section of the Settings tab, you can configure the language that the Hardware Media Server supports. <u>Table: Supported Languages in the MSA Interface for the Hardware Media Server</u> lists the languages that the Hardware Media Server supports.

 ${\bf Table: Supported\ Languages\ in\ the\ MSA\ Interface\ for\ the\ Hardware\ Media\ Server}$

Language	Administrator Interface	Text Overlay on Meeting Video
English		
Chinese	•	•
Japanese	•	•
Portuguese	•	
Spanish	•	•
Russian	•	•

Table: Status Tab Sections 3

Note: For Chinese or Japanese fonts to display correctly in the MSA interface for the Hardware Media Server, the computer on which the web browser is running must support the relevant languages. On a Microsoft Windows operating system, you can set the default language in Control Panel > Regional and Language Options.

Procedure

- 1. Select **MCU** on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select **Basics**.
- 4. Select a language in the User interface language field.
- 5. Select **Upload**.

Configuring Dynamic Layouts for the Hardware Media Server

You can define the video layouts for video callers from the Dynamic Layouts section of the Settings tab. When selected, the meeting layout changes automatically as participants join or leave meetings.

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select **Dynamic Layouts**.
- 4. Select a layout image to select or deselect that specific layout.

How to Configure Alert Indications for the Hardware Media Server

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

- Enabling Alert Indications and Setting Security Levels for the Hardware Media Server
- Configuring SNMP Trap Servers
- Editing SNMP Trap Servers
- <u>Deleting SNMP Trap Servers</u>

Enabling Alert Indications and Setting Security Levels for the Hardware Media Server

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

<u>Table: Hardware Media Server Alert Indications</u> lists alert indications as well as the SNMP trap associated with them.

<u>Table: Standard SNMP Trap Event Types</u> lists the structure of the standard *coldStart* and *warmStart* traps (as defined in <u>RFC 1907</u>) and the standard *linkDown* and *linkUp* traps (as defined in <u>RFC 1573</u>).

Table: Hardware Media Server 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 meeting PIN is incorrect.
Call disconnected by remote endpoint	A call disconnects normally by a remote endpoint.
Card extract/Hot Swap	
Corrupt WEB data	Corrupt web files are present in the Hardware Media Server.
Gatekeeper registration state change	A change occurs in the registration status of the Hardware Media Server with the gatekeeper.
General alarm	A system failure is detected.
Incompatible sw version install	An attempt to burn a version of the Hardware Media Server 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 Hardware Media Server failed.
Max resource meter	A high CPU level (85%) is reached in the Hardware Media Server.
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.
Power-down	The Hardware Media Server is shutting down.
Power-up	The Hardware Media Server has begun operation.
Services table is changed	The service table has been modified.

Table: Standard SNMP Trap Event Types

Event Type	Trap is sent when
Cold start	The Hardware Media Server has been reset using the button on the front panel.
Warm start	The Hardware Media Server has been reset using the MSA interface.
	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

- 1. Select **MCU** on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select Alert Indications.
- 4. Check **Enabled** for the events that you want to display in the event log.
- 5. Choose one of the following severities in the Severity column for each event that you enable:
 - ♦ Cleared (0)- One or more previously reported alarms have been cleared.
 - ◆ Information (1)-Notification of a non-erroneous event.
 - ◆ Critical (2)-A service-affecting event has occurred and requires immediate corrective action.
 - ♦ Major (3)-A service-affecting event has occurred and requires corrective action to prevent the condition becoming more serious.
 - ♦ Minor (4)-A non-service-affecting event has occurred and requires corrective action to prevent the condition becoming more serious.
 - ♦ Warning (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 select Select All to select all events or Clear All to clear all events.

Configuring SNMP Trap Servers

You can specify the IP address, port, enabled traps for multiple SNMP trap servers to which the Hardware Media Server sends SNMP traps, and events to display in the Event Log tab from the Alert Indications section of the Settings tab.

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select Alert Indications.
- 4. Select **Add...** in the SNMP Traps Server section.
- 5. Enter the IP address for the SNMP trap server in the SNMP Trap server address field in the SNMP Trap Server Properties window.
- 6. Enter the port of the SNMP trap server in the Port field. The default port for SNMP servers is 162.
- 7. To disable a trap, follow these steps:
 - 1. Select it in the Enabled traps list.
 - 2. Select Remove.
 - 3. Select **Remove All** to remove all traps.
- 8. To enable a trap, follow these steps:
 - 1. Select it in the Enabled traps list.
 - 2. Select Add....
 - 3. Select **Add All** to enable all traps.
- 9. Select **Upload** to save your settings.

The system displays the configured SNMP trap server in the SNMP Trap Servers section.

Procedure 6

Editing SNMP Trap Servers

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select Alert Indications.
- 4. Select the configured SNMP trap server in the SNMP Trap Servers section.
- 5. Select **Edit...**.
- 6. Select **Upload** when you finish your edits.

Deleting SNMP Trap Servers

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select Alert Indications.
- 4. Select the configured SNMP trap server in the SNMP Trap Servers section.
- 5. Select **Delete**.

Sending Advanced Commands for the Hardware Media Server

In the Advanced section of the Settings tab, you can send text-based commands used for enhanced control of the Hardware Media Server. Advanced commands are not case-sensitive.

Caution! We do not recommend that you perform this procedure unless you are an advanced user.

Table: List of Available Advanced Commands lists all of the available advanced commands.

Table: List of Available Advanced Commands

Command	Description	Parameters	Default
CS Log	Show-Dumps detailed information on the internal status of the Hardware Media Server.	Show, Start, Stop	
	Start-Initiates a "Show" operation and enables detailed logging for the Hardware Media Server.		
	Stop-Initiates a "Show" operation and changes the log levels to the ones		

	used before the "Start" operation.		
Conference control Web refresh interval			
		All-Text positioned away from horizontal and vertical borders.	
Font align	Determines whether text overlay (TOL) on a video screen is positioned	Horizontal-Text positioned away from horizontal borders and centered horizontally.	All
Font align	away from picture borders.	Vertical-Text positioned away from vertical borders and centered vertically.	All
		None-Text is always positioned bottom center.	
NTP synchronization period	Sets the Network Time Protocol synchronization period (in seconds) between the Video Blade and the NTP server.		21600
		Fatal-The Hardware Media Server cannot continue to provide service. This is an unrecoverable error.	
		Error-User functionality problem (for example, call connect failure or no resources available).	
Notify level	Sets the Hardware Media Server log notify level filter.	Warning-User functionality problem but the Hardware Media Server can continue to provide service.	Debug 1
		Info-Status prints for Customer Support use.	
		Advanced-Similar to Info but more detailed.	
		Debug 1 through Debug 4-Debug levels. The higher the level, the more details the system provides.	
QualiVision Settings hide	Disables the QualiVision Settings section in the Settings tab.		hidden

QualiVision settings show	Enables the QualiVision Settings section in the Settings tab.		hidden
RTP Base Port			
Set MTU size	Determines the maximum packet size across the network.		1500
Set terminal baudrate	Sets the baud rate of a serial terminal.	High (57600) Low (9600)	Low (9600)
SIP bandwidth attribute type			
SIP hide stack			
SIP show stack			
SIP show status			
SIP video capability description type			

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select Advanced.
- 4. Select **Commands...** to open the Advanced Commands window.
- 5. Enter a command in the Command field, or choose a command from the Available Commands list.
- 6. Enter a parameter value for the command (where applicable) in the Parameters field, or choose a parameter from the Available Parameters list.
- 7. Select **Send**.

The system displays the results of the advanced command in the Response field, indicating whether the Hardware Media Server received and executed the command. If you send an invalid command, the system displays a "bad parameter" or "NOT FOUND" message.

Opening a Telnet Terminal for the Hardware Media Server

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Settings** tab.
- 3. Select Advanced.
- 4. Select **Telnet** to open a separate browser with a Telnet terminal.
- 5. Select **Disconnect** when you finish the Telnet session.

Procedure 9

Viewing Media Processors for the Hardware Media Server

The Media Processing tab displays a list of data processors, video processors, and servers currently registered with the Hardware Media Server. The Media Processing tab includes the following columns and fields:

- Type-Types of media processors registered with the current Hardware Media Server. The following types can appear in this column:
 - ◆ Audio Blade-Processor responsible for the signaling (H.323/SIP) and voice portions of a call
 - ♦ Video Blade-Processor responsible for the video portion of a call.
- IP Address-IP address of the blade with which the media processor operates.
- Description-User-defined description of the media processor.
- Total-Total number of media processor units currently registered.

About Hardware Media Server Protocols

This read-only tab shows the Audio Blade configuration for interacting with internal Cisco Unified MeetingPlace components and is primarily used to debug system problems.

Working with Services of the Hardware Media Server

- About Hardware Media Server Services
- How to Edit Services for the Hardware Media Server

About Hardware Media Server Services

A service (also known as a meeting type) can be regarded as a meeting template. A service is the mechanism that defines the qualities and capabilities of a meeting. A service is identified by its prefix, which always starts with 6000. When Cisco Unified MeetingPlace starts a meeting, it searches for a service that has the primary characteristics (audio codecs and video bandwidth) it is looking for, and uses that service definition to determine all the other meeting characteristics.

Notes:

- You cannot add or remove services.
- Do not increase the bandwidth of standard rate video services beyond 384 Kbps. High rate video services must have a bandwidth setting higher than 384Kbps.
- High capacity audio services can only use G.711 and G.729 codecs. High quality audio services must contain either G.722 or iLBC.
- Audio codec priority has no effect when calls go through Cisco Unified Communications Manager.

The Hardware Media Server comes with six predefined services for audio and video conferencing for use with Cisco Unified MeetingPlace. The predefined services are factory tuned to be suitable in most cases for

Cisco_Unified_MeetingPlace_Release_8.0_--_Configuring_the_Hardware_Media_Server_Using_the_MSA_Interface voice and video calls. We recommend starting with these services and modifying them as necessary to suit your needs.

How to Edit Services for the Hardware Media Server

<u>Table: Services and Supported Media Types</u> lists the services that are available on the Services tab and the media type that those services support.

Table: Services and Supported Media Types

Service	Media Type
Audio Only High Capacity	Voice
High Rate Video High Capacity Audio	Voice, Video
Standard Rate Video High Capacity Audio	Voice, Video
Audio Only High Quality	Voice
High Rate Video High Quality Audio	Voice, Video
Standard Rate Video High Quality Audio	Voice, Video

The following sections detail how to edit specific fields in the available services.

- Configuring the Maximum Call Rate
- Configuring the Maximum Layout
- Configuring Advanced Video Settings
- Configuring 3G Layout Settings
- Configuring Advanced Audio Settings

Configuring the Maximum Call Rate

The call rate for each Audio Blade is three to five calls per second, which allows for bursts of calls.

We do not recommend that you configure the maximum call rate for voice and video except under the guidance of Cisco TAC.

Configuring the Maximum Layout

The Max layout parameter lists the video layout displaying the maximum number of participants to which the meeting view can expand.

The choice of layouts for the service depends on the type of processing mode. The default layout is 1+7

Cisco_Unified_MeetingPlace_Release_8.0_--_Configuring_the_Hardware_Media_Server_Using_the_MSA_Interface participants.

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Services** tab.
- 3. Select a service.
- 4. Select **Edit...**.

The system displays a picture of the current maximum layout in the Max layout field.

- 5. Select Change....
- 6. Select a new layout.
- 7. Select **OK**.

Configuring Advanced Video Settings

Caution! We do not recommend that you configure the video codec, video image size, participant layout options, theme, and additional layouts for a particular service except under the guidance of Cisco TAC. Doing so may have unwanted repercussions to your system. For example, if you remove H.264 from the list, recordings will not include video.

Configuring 3G Layout Settings

In the Additional Layouts section of the Advanced Video Settings dialog box you can configure the layout options for 3G videophone users.

Procedure

- 1. Select MCU on the sidebar.
- 2. Select the **Services** tab.
- 3. Select a service.
- 4. Select Edit....

The system displays the Automatic Service Definition dialog box.

5. Select Advanced Video Settings.

The system displays the Advanced Video Settings dialog box.

- 6. Select **Enable 3G videophone layout** from the Additional Layouts section in order to limit the layout for 3G videophone users.
- 7. Select **Settings** to select the layout in the 3G Layout Settings dialog box.
- 8. Select Change.
- 9. Select a new layout.
- 10. Select **OK** to return to the 3G Layout Settings dialog box.
- 11. Select **OK** to return to the Automatic Service Definition dialog box.

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Configuring Advanced Audio Settings

We do not recommend that you add or remove audio codecs except under the guidance of Cisco TAC.

Viewing the Event Log for the Hardware Media Server

The Event Log tab displays a list of reported alarm events. You configure these events from the Alert Indications section of the Settings tab.

The Event Log tab displays the following information:

- Event ID-Identifier for the specified alarm event.
- Type-Type of event.
- Time-Date and time when the reported event occurred.
- Severity-Severity of the reported event.
- Message-Error message used to report the event.

Related Topics

• How to Configure Alert Indications for the Hardware Media Server

Importing Configuration Settings for the Hardware Media Server

We recommend that you *do not* import the settings of a saved Hardware Media Server configuration file to the current Hardware Media Server.