CHAPTER 6

Managing Plugins

Plugins are used to open network ports and allow the runtime environment to communicate with devices on the network. This chapter includes these topics:

- Cisco Unified Application Environment Plugins, page 6-1
- Viewing the List of Plugins, page 6-7
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Cisco Unified Application Environment Plugins

The following plugins ship with the Cisco Unified Application Environment.

- Cisco DeviceListX Provider, page 6-1
- H.323 Provider, page 6-2
- JTAPI Provider, page 6-3
- HTTP Provider, page 6-3
- Media Engine Provider, page 6-3
- Presence Provider, page 6-4
- SCCP Provider, page 6-5
- SIP Provider, page 6-6
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Cisco DeviceListX Provider

The Cisco DeviceListX Provider communicates with Cisco Unified Communications Manager to retrieve and cache real-time device information for application use. The Cisco DeviceListX (3.X, 4.X) Provider and SNMP (5.X, 6X) protocols are used to gather this information. Table 6-1 lists the provider parameters.

Table 6-1 Cisco DeviceListX Provider Parameters

Field	Description
Log Level	Type and amount of information system writes to the log for each component
Poll Interval	Interval in minutes between requests sent to Cisco Unified Communications Manager to refresh device information (cache refresh)

The Cisco DeviceListX Provider supports the following extension, which you can invoke on the Cisco DeviceListX Provider page:

Metreos.Providers.CiscoDeviceListX.Refresh—Forces the application server to reinitialize the real-time cache. This is recommended if phone device IP addresses have been changed during high usage of an application that uses the Cisco DeviceListX Provider.

H.323 Provider

The H.323 provider can make and receive H.323 phone calls with call processing nodes within a Cisco Unified Communications Manager cluster. To use the H.323 provider, there must be an H.323 gateway configured on the Cisco Unified Application Environment that points to the IP address of the Cisco Unified Communications Manager. Table 6-2 lists the provider parameters.

Table 6-2 H.323 Provider Parameters

Field	Description
Log Level	Filters all debug output below the specified level
Listen Port	Number of the port on which the stack should listen for incoming H.225 requests
Max Pending Calls	Maximum number of pending calls allowed before the stack starts auto-rejecting calls
H.245 Range (min)	Minimum port number for H.245
H.245 Range (max)	Maximum port number for H.245
Enable Stack Debugging	Logs written to a file for H.323 diagnostics
Stack Debugging Log Level	Log level specifying detail of logs written by the StackDebugger
Stack Debugging Log File	Name of log file for the Stack Debugging Log function
TCP Connect Timeout	Number of seconds that an attempt is made to contact a gateway before giving up. A lower number ensures faster failover.
H323 Service Log Level	Detail level of service log messages

HTTP Provider

The HTTP provider receives HTTP requests over port 8000. These requests are then routed to the appropriate application for processing. Table 6-3 lists the provider parameters.

Table 6-3 HTTP Provider Parameters

Field	Description
Log Level	Filters all debug output below the specified level
Session Expiration Minutes	Number of minutes before HTTP sessions expire

JTAPI Provider

The Java Telephony API (JTAPI) provider abstracts the protocol details of JTAPI calls. JTAPI provider provides the functionality to handle first-party JTAPI call control and third-party JTAPI call control. The provider supports CTI ports, CTI route points and monitored devices. The JTAPI provider communicates with multiple JTAPI services belonging to different Cisco Unified Communications Manager versions. Table 6-4 lists the provider parameters.

Table 6-4 JTAPI Provider Parameters

Field	Description
Log Level	Filters all debug output below the specified level
Max Calls per Device	Maximum number of calls allowed on any first-party CTI Port device (this value must match the equivalent value in Cisco Unified Communications Manager)
Advertise Low-bitrate Codecs	Indicates whether devices should be registered with G.723.1 and G.729a support

Media Engine Provider

The Media Engine provider manages Cisco Unified Media Engines for providing media capabilities to applications. Table 6-5 lists the provider parameters.

Table 6-5 Media Engine Provider

Field	Description
Log Level	Filters all debug output below the specified level
Connect Timeout	Interval in milliseconds before a connection is deemed unsuccessful and the system attempts to retry
Heartbeat Interval	Interval, in seconds, between heartbeat signals to a media engine
Heartbeat Skew	Interval, in seconds, that the Media Engine provider waits for a response to the heartbeat signal
Log Inbound Connect Messages	All inbound connect messages written to the Log Server
Log Outbound Connect Messages	All outbound connect messages written to the Log Server

Table 6-5 Media Engine Provider (continued)

Field	Description
Log Outbound Disconnect Messages	All outbound disconnect messages written to the Log Server
Log Outbound Command Messages	All outbound command messages written to the Log Server
Log Inbound Response Messages	All inbound responses written to the Log Server
Log Real-Time Resource Info	Heartbeat signal information written to the Log Server
Log Media Server Selection	All selection process details written to the Log Server
Log Transaction Metrics	All log transaction metrics written to the Log Server

The Media Engine provider supports these extensions:

Note You should invoke these extensions only under the direction of a Cisco technical support engineer.

- Metreos.MediaControl.RefreshMediaServers—Forces the application server to reinitialize control of the media engines.
- Metreos.MediaControl.ClearMRGCache—Forces the application server to reinitialize the media engine's internal storage.
- Metreos.MediaControl.PrintServerTable—Forces the application server to write a summary of all configured media engines to the application server log.
- Metreos.MediaControl.PrintDiags—Forces the application server to write diagnostic information about currently connected media engines to the application server log.

Presence Provider

The Presence provider uses SIP and SIMPLE (SIP for Instant Messaging and Presence Leveraging Extensions) to communicate with outside systems that support these protocols. This allows applications to receive notification of presence changes in real-time for a user or a group of users. Table 6-6 lists the provider parameters.

Note While the Presence provider can interface with any SIP- or SIMPLE-capable application, the provider has only been tested with and supported on Cisco Unified Presence, Release 6.0.

Table 6-6 Presence Provider Parameters

Field	Description
Log Level	Filter for all debug output (below the specified level).
ServiceLogLevel	Presence service log level.
ServiceTimeout	Time (in seconds) provider waits for Presence service to respond. It should be a positive number.

Table 6-6 Presence Provider Parameters (continued)

Field	Description
SubscribeExpires	Expiration time (in seconds) for each subscription. When it expires, presence service automatically resubscribes to the presence server for notification. The value must fall between the configured minimum and maximum expires time on Cisco Unified Presence.
LogTimingStat	Timing statistics (enabled when selected).
LogMessageBodies	Log of notify XML bodies (enabled when selected).

The Presence provider supports these extensions:

- Metreos.Providers.Presence.PrintSubscriptions
- Metreos.Providers.Presence.ClearSubscriptions

SCCP Provider

The SCCP provider uses the SCCP protocol to create, receive, and control IP telephony calls. The SCCP provider registers as an SCCP 7960 device in Cisco Unified Communications Manager. Table 6-7 lists the basic SCCP parameters.

Note The table below does not list the advanced parameters. They should be allowed to default.

Table 6-7 SCCP Provider Parameters

Field	Description
Log Level	Filter for all debug output (below the specified level)
MaxBurst	Maximum registration messages per burst (5) Valid Range: 1 - 2147483647
InterBurstDelayMs	Milliseconds between bursts (1000) Valid Range: 0 - 2147483647
CallManagerPort	Port on which Cisco Unified Communications Managers listen for registrations (2000) Valid Range: 1024 - 32767
AdvertiseLowBitRateCodecs	Devices registered with G.729a support (No)
MusicOnHoldOption	Music-On-Hold enabled (Yes)
LogCallVerbose	Verbose logging for call enabled (Yes)
LogCallManagerVerbose	Verbose logging for Communications Manager (No)
LogConnectionVerbose	Verbose logging for connection (No)
LogDiscoveryVerbose	Verbose logging for discovery (No)

Table 6-7 SCCP Provider Parameters (continued)

Field	Description
LogRegistrationVerbose	Verbose logging for registration (Yes)
LogSystemVerbose	Verbose logging for system (No)

SIP Provider

The SIP provider uses the SIP protocol to create, receive, and control IP telephony calls between Cisco Unified Communications Manager nodes. The SIP provider either behaves as a SIP trunk or registers as SIP 7961G-GE devices in Cisco Unified Communications Manager. Table 6-8 lists the provider parameters.

Table 6-8 SIP Provider Parameters

Field	Description
Log Level	Filter for all debug output (below the specified level)
DefaultOutboundFromNumber	Default From number for outbound call
SIPTrunkIP	SIP trunk IP address for outbound call (matches the IP used for SIP Trunk in Communications Manager)
SIPTrunkPort	SIP trunk port for outbound call (matches the port used for SIP Trunk in Communications Manager)
MinRegistrationPort	Minimum TCP port number to use for registration with SIP server
MaxRegistrationPort	Maximum TCP port number to use for registration with SIP server
DTMFReception	Signaling protocol that delivers the DTMF tone to the phone.
ServiceLogLevel	SIP service log level
LogTimingStat	Timing statistics (enabled when set)

Timer Provider

The Timer provider makes timers available for use by applications. It does not communicate with any other system. Table 6-9 lists the provider parameters.

Table 6-9 Timer Provider Parameters

Field	Description
Log Level	Filters all debug output below the specified level
Enable Minute Events	Enable minute by minute timer events (enabled when selected)
Enable Hourly Events	Enable hourly timer events (enabled when selected)
Enable Daily Events	Enable daily timer events (enabled when selected)

Viewing the List of Plugins

To view the list of plugins, follow these steps:

Procedure

Step 1 Log in to the Cisco Unified Application Environment Administration.

Step 2 Choose **Plugins > List Plugins**. The List Plugins page displays as described in Table 6-10.

Table 6-10 Plugins

Field	Description
Name	Plugin name
Description	Plugin description
Version	Plugin version
Status	Plugin status

Installing a Plugin

To install a plugin, follow these steps:

Procedure

Step 1 Log in to the Cisco Unified Application Environment Administration.

Step 2 Choose **Plugins > List Plugins**. The List Plugins page appears.

Step 3 Under Install a Plugin, click **Browse...**

Step 4 Highlight the file you want to upload (with a .dll extension), then click **Open**.

Step 5 Click **Upload**.

Enabling or Disabling a Plugin

To enable or disable a plugin, follow these steps:

Procedure

Step 1 Log in to the Cisco Unified Application Environment Administration.

Step 2 Choose **Plugins > List Plugins**. The List Plugins page appears.

Step 3 Select the check box next to the plugin name.

- To enable the plugin, click **Enable**.
- To disable the plugin, click **Disable**.

Uninstalling a Plugin

To uninstall a plugin, follow these steps:

Note Before you uninstall a plugin, you must disable it and stop the application service. See Enabling or Disabling a Plugin, page 6-7 and Managing Services, page 8-3 for more information. Remember to restart the application service after you uninstall the plugin.

Procedure

Step 1 Log in to the Cisco Unified Application Environment Administration.

Step 2 Choose **Plugins > List Plugins**. The List Plugins page appears.

Step 3 Select the check box next to the plugin name, then click **Uninstall**.

Configuring Plugins

To modify or apply configurations to a plugin, follow these steps:

Procedure

Step 1 Log in to the Cisco Unified Application Environment Administration.

Step 2 Choose **Plugins > List Plugins**. The List Plugins page appears.

Step 3 Select the plugin name. The Provider page appears.

Step 4 Enter or change values as needed, then click **Apply**.

For information about the plugins that ship with the Cisco Unified Application Environment, see Cisco Unified Application Environment Plugins, page 6-1.

Step 5 Click **Done** to return to the List Plugins page.

Invoking Extensions

To invoke a an extension, follow these steps:

Procedure

Step 1 Log in to the Cisco Unified Application Environment Administration.

Step 2 Choose **Plugins > List Plugins**. The List Plugins page appears.

Step 3 Select the plugin name. The Provider page appears.

Step 4 Under Extensions, locate the extension you want to invoke, then click **Invoke Extension**.

Step 5 Click **Done** to return to the List Plugins page.