



CHAPTER 7

Polling Devices

Polling devices at regular intervals helps you detect devices and check the health of devices. You can also poll a device to identify and delete it. When a device is polled, Prime Collaboration receives data on many parameters. The managed network devices are polled periodically to synchronize the device data with the Prime Collaboration database.

You can poll devices to:

- Check whether the devices can be reached
- Configure device polling devices
- Schedule polling of devices
- Display a list of devices that are not reachable for a certain period of time

You should be a Network Administrator, or a System Administrator to perform this task in Local Authentication mode.

Configuring Polling Parameters for TelePresence Monitoring Settings

The Prime Collaboration poller manager supports the following polling intervals for TelePresence Monitoring Settings:

- **System Status Polling Interval—Prime Collaboration:**
 - Collects CPU and memory utilization, and peripheral status for endpoints and multipoint switches, using SNMP and HTTP (HTTPS) [for Cisco C and Ex series endpoints].
 - Collects CPU and memory data from call and session controllers, using RTMT.
 - Collects service status from call and session controllers using the Real-Time Monitoring Tool (RTMT), and from multipoint switches and application managers, using HTTP (HTTPS).
- **Call Statistics Polling Interval—Prime Collaboration** collects calls statistics data, such as latency, jitter, packet loss, resolution, and so forth from endpoints and conferencing devices using SNMP and HTTP (HTTPS), respectively.

This data is polled only when a session is in-progress.

- **Interface Statistics Polling Interval—Prime Collaboration** collects data related to network device interfaces. The data includes interface status, utilization, errors and so on. The Interface profile uses SNMP to poll devices.

This profile is used only when the troubleshooting workflow is triggered either automatically or manually.

- **Flow Statistics Polling Interval**—Prime Collaboration collect data related to packet flow from the network devices, using mediatrace and HTTP. The polling is performed only if the Cisco Mediatrace is enabled on the network devices.

This profile is used only when the troubleshooting workflow is triggered either automatically or manually.

- **Scheduled Session Polling Interval**—Prime Collaboration collects scheduled sessions data from management applications, using HTTP (HTTPS).
- **Session Polling Interval**—Prime Collaboration collects multipoint (ad hoc and static) sessions data from the conferencing devices, using HTTP (HTTPS).
- **Endpoint Registration Polling Interval**—Collects TelePresence and IP Phone registration data from the call and session control devices, using HTTP (RIS is also used for Cisco Unified CM).
- **Ad hoc Session Polling Interval**—Collects point-to-point and multisite sessions data from the call and session control devices. Prime Collaboration uses JTAPI for Cisco Unified CM and HTTP for Cisco VCS.

Reachability—The ICMP ping operation is performed to check whether the managed devices are reachable or not. After three consecutive polling failures, an unreachability notification is generated. An unreachable alarm is triggered for this notification.

The ICMP ping operation performed during the initial discovery, checks the accessibility of a device. The ICMP ping operation performed during polling, checks the reachability of the managed devices. This polling is performed every 2 minutes on all managed devices except for network devices.

You must define the polling interval, based on the frequency and type (ad hoc or scheduled) of the video sessions in your company.



Note

Sometimes, there may be an inconsistency in the status of the endpoints and the IP phones in the Endpoint Monitoring page. This is because the endpoints are polled for every 5 minutes (by default) and call and session control devices are polled for every 15 minutes (by default). After the polling is complete, the status for the endpoints and the IP phones are consistent.

The polled data is compared against pre-defined threshold values. If the thresholds have been exceeded, or values have fallen below acceptable levels, Prime Collaboration generates the appropriate events. For more information on threshold settings, see the [Cisco Prime Collaboration 9.0 Fault Management Guide](#).

Configuring Polling Parameters for Voice Endpoints

Configuring polling parameters include:

- [Setting Polling Parameters, page 7-3](#)
- [Polling SNMP Configuration, page 7-5](#)
- [Setting Polling Priority, page 7-6](#)

You can define polling values for groups. Devices can belong to system-defined or user-defined groups. Groups are synchronized from Device Group. Devices can belong to multiple groups, and have specific polling settings. The group with the highest polling priority becomes the *overriding group*.

**Note**

You cannot create a group in the Polling Parameters page. Groups are synchronized from **Device Group**. See [Device Group Selector, page 5-4](#) for more information.

For example, if a device belongs to Cisco Unified CM and Voice Gateway groups, look at the polling group priority hierarchy. If the Cisco Unified CM polling group has the highest priority, then the device will be polled according to the Cisco Unified CM polling group. See [Setting Polling Priority, page 7-6](#) for more information.

You will see the device group selector pane in the polling parameters page. You can select the group you want to update. For information on device group selector, see [Device Group Selector, page 5-4](#).

Prime Collaboration is configured with default settings for polling parameters. You can use the default settings, edit them, and restore them to default settings at any time.

In many cases, it might be acceptable to use the default settings for polling parameters. However, depending on how important a device group is, you can increase or decrease the polling interval to accomplish either of the following objectives:

- Minimize the impact on the polled devices
- Enhance the resolution of the collected data

In addition, you can enhance the performance and utilization of devices by adjusting thresholds, taking into account the following information:

- Location of the devices in the IP fabric
- Resource constraints

For information on Threshold Settings, see the [Cisco Prime Collaboration 9.0 Fault Management Guide](#).

Setting Polling Parameters

When you change the polling parameter settings, the changes are applied for the entire group and not just the device. To open the Polling Parameters page, choose **Administration > System Setup > Polling & Threshold > UC Polling Settings**.

You will see the device group selector from which you can select the group you want to view or edit. For information on how to select device group, see [Device Group Selector, page 5-4](#).

From the Polling Parameters page, you can perform any of the following tasks:

- [Viewing Polling Parameters, page 7-3](#)
- [Editing Polling Parameters, page 7-4](#)
- [Restoring Default Polling Parameters, page 7-4](#)

Viewing Polling Parameters

When you view polling settings for a device group, you can see the devices that are members of the device group, and see the default as well as current values for the polling parameters. Devices that belong to multiple groups use the polling settings of the overriding group.

Interface and port polling is controlled at the device level; in other words, switches have a specific polling setting, and that setting determines when the switch ports are polled.

Step 1 Choose **Administration > System Setup > Polling & Threshold > UC Polling Settings**.

- Step 2** Select a device group for which you can set polling parameters. Generally, this is a device group that does not contain subgroups.
- Step 3** Click **View**. The Polling Parameters report opens in a separate window.
- Step 4** When you are done viewing polling parameters, close the window.

Editing Polling Parameters

When you edit Prime Collaboration polling parameters, you edit settings that are associated with device groups, not with individual devices. When you have finished all changes to polling parameters (and thresholds and priorities), apply all changes.

- Step 1** Choose **Administration > System Setup > Polling & Threshold > UC Polling Settings**.

- Step 2** Select a device group for which you can set polling parameters.
Generally, this is a device group that does not contain subgroups.

- Step 3** Click **Edit**.

The Polling Parameters: Edit page appears.



Note To enable performance polling for users to see the HighPortUtilization event, select Polling Enabled for Voice Utilization Settings.

- Step 4** To edit all parameters, repeat the following steps for each parameter type:

- a. Select a parameter type.
- b. Change the parameters appropriately for each setting.
You cannot edit some of the fields because they are grayed out.

- Step 5** Save the settings; do either of the following:

- Click **Save**;
Your changes are saved in the database.

Or

Click **Cancel**;
The Polling Parameters: Edit dialog box closes.

Your changes will not go into effect until you have applied them.

- Step 6** Click **Apply**.

This saves the settings, close the Polling Parameters: Edit dialog box, and apply changes to the system.

- Step 7** When a confirmation dialog box appears, click **Yes**.

Restoring Default Polling Parameters

You can restore all parameter settings for a device group to default values using this procedure. If, instead, you want to restore only a few functions or settings, see [Parameter Types, Device Groups, and Polling Settings, page 7-6](#).

Before You Begin

To review default polling settings before you apply them, view the Polling Parameter Summary for the device group. See [Viewing Polling Parameters, page 7-3](#). Current settings along with the default settings are displayed.

To restore default polling parameters:

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- Step 1** Choose **Administration > System Setup > Polling & Threshold > UC Polling Settings**.
 - Step 2** Select a device group for which you can restore polling parameters.
Generally, this is a device group that does not contain subgroups.
 - Step 3** Click **Restore Default Settings**.
A confirmation dialog box appears.
 - Step 4** Click **Yes**.
The settings are stored in the database, but not yet applied to the IP fabric.
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View the Overriding Polling Group for a Device

Use the Polling Parameter report or Thresholds report to identify a device's overriding group.

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- Step 1** Choose **Administration > System Setup > Polling & Threshold**.
 - Step 2** To view the overriding polling groups, select **UC Polling Settings**.
A device can have different overriding polling and threshold groups.
 - Step 3** Select a device group that the device is a member of and click **View**.
The appropriate report opens.
 - Step 4** Locate the device in which you are interested, and look at the Overriding Group column.
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Polling SNMP Configuration

If an SNMP query does not respond in time, Prime Collaboration times out. Prime Collaboration retries contacting the device for as many times as you indicate. The timeout period is doubled for every subsequent retry.

For example, if the timeout value is 4 seconds and the retry value is 3 seconds, Prime Collaboration waits 4 seconds before the first retry, 8 seconds before the second retry, and 16 seconds before the third retry.

The SNMP timeout and retry values are global settings. Change these values as follows:

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- Step 1** Choose **Administration > System Setup > Polling & Threshold > UC Polling SNMP Configuration**.
 - Step 2** Select a new SNMP timeout setting. The default is 4 seconds.
 - Step 3** Select a new Number of Retries setting. The default is 3 retries.
 - Step 4** Click **Apply**, and then click **Yes** to confirm.
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Setting Polling Priority

A device group can have different overriding polling groups.

You can set the priority for the Device polling groups

To set priorities:

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- Step 1** Choose **Administration > System Setup > Polling and Threshold > UC Polling & Threshold Priority Setting**.
- The Setting Priorities: Queue page appears, displaying the groups in priority order. A device can have different overriding polling and threshold groups.
- Step 2** Select the Polling groups — Device Polling Groups radio button for polling settings.
- For threshold priority settings, see the [Cisco Prime Collaboration 9.0 Fault Management Guide](#).
- Step 3** Rearrange the groups according to your preference (the closer the group is to the top of the list, the higher its priority):
- Select a group.
 - Move the group up or down using the Up and Down buttons.
- Step 4** Click **Save**.
- The changes are now saved in the database.
- Step 5** Click **Apply**. The changes do not take effect until you apply them to Prime Collaboration.
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To find the overriding group for a device, you can select any device group to which the device belongs and view a Polling Parameters report.



Note

- After you adjust polling and threshold settings, you must apply changes to have Prime Collaboration start using your changes. When you save changes, Prime Collaboration sets the polling in the selected group. When you apply changes, Prime Collaboration recalculates group membership, based on group priority and uses the new polling and threshold settings to gather information from the devices.
 - If you are updating polling parameters in several pages, you need not apply changes every time. You can click “Apply” once, after updating all the pages.
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Parameter Types, Device Groups, and Polling Settings

This section provides information on polling settings for each parameter type:

- [Data Settings—Polling, page 7-7](#)
- [Voice Health Settings—Polling, page 7-7](#)
- [Voice Utilization Settings—Polling, page 7-8](#)

Data Settings—Polling

Data settings enable you to poll for device reachability, environment, ports and interfaces, and processor and memory utilization. [Table 7-1](#) lists all data settings and polling intervals for each setting.

Table 7-1 Data Settings—Polling Settings and Default Polling Intervals

Data Polling Settings	Intervals (in seconds)	Usage Notes
Access Port Settings	<ul style="list-style-type: none"> 30 minimum. 3600 maximum. 1200 default —You can adjust the default polling interval in 1-second increments. 60 minimum. 3600 maximum. 240 default —You can adjust the default polling interval in 1-second increments. 	<p>To enable polling for Access Port Settings, you must enable polling for Connector Port and Interface Settings.</p> <p>The same timeout and retry values are used for Access Port Settings and Connector Port and Interface Settings. When you update the timeout and retry value for either of these settings, polling updates the values for both. ¹</p>
Connector Port and Interface Settings		
Environment Settings		<p>Environment Settings and Processor and Memory Utilization Settings are not available for all device groups.</p> <p>Some voice-enabled device groups have similar settings available for Voice Health Settings parameter type.</p>
Processor and Memory Utilization Settings		
Reachability Settings		—

1. Customer Voice Portal devices have access port and connector port and interface settings disabled by default.



Note

- Polling for voice-enabled ports and interfaces is controlled by voice health settings.
- Polling is enabled by default for user-defined groups.

Voice Health Settings—Polling

Voice health settings control polling for voice-enabled devices, device pools, ports, interfaces, and Cisco Unified Communications Applications. Data that is collected includes Cisco Unified CM cluster connectivity and processor and memory utilization on Media Convergence Servers (MCS) and on voice gateways. Voice health settings default polling intervals (in seconds) are:

- Minimum:
 - 240—For clusters in the Cisco Unified Communications Manager or Cluster device group.
 - 30—For all other device groups.
- Maximum—3600.
- Default—240. You can adjust the default polling interval in 1-second increments.



Note

Polling is enabled by default for user-defined groups.

Voice Utilization Settings—Polling

Voice Utilization Settings control performance polling. Performance polling collects utilization and capacity planning data from supported devices.

Performance polling is enabled by default.

When performance polling is enabled, Prime Collaboration collects performance and capacity data that:

- Is accessible from monitoring dashboards in the form of performance graphs.
- Is stored in data files on disk for further analysis; for information about data files.
- Is measured against Voice Utilization Settings thresholds.

When thresholds are violated, Prime Collaboration generates events related to performance and capacity problems in an application, on an interface, or on a device. For example, high utilization of ports, channel, and resources of a device.

Voice Utilization Settings default polling interval values (in seconds) are:

- 30 minimum
- 3600 maximum
- 240 default—You can adjust the default polling interval in 1-second increments.

Table 7-2 lists the types of ports and resources that are polled on each device group.

Table 7-2 *Voice Utilization Settings—Supported Ports and Resources*

Device Group	Analog Ports	Digital Ports	Other Ports	Resources
CommunicationManager Express	—	—	—	IP phone registered
Cisco Unified Communications Manager or Cluster	—	—	—	Location bandwidth
Gatekeeper	—	—	—	Total and Interzone bandwidth
Media Server	FXS FXO	T1/E1 PRI, T1 CAS BRI	Unity inbound and outbound	CommunicationManager MOH Multicast/Unicast, MTP, Transcoder, HW/SW conference
Meeting Place	—	—	Audio/Video Port	—
Unity Express	—	—	—	Session, Capacity, Orphaned mailbox
VoiceGateway	FXS FXO E&M	T1/E1 PRIT1/ E1 CASBRI	—	DSP
VoiceMailGateway	—	—	PBX, VM	—