



CHAPTER 6

Polling

Polling is the active watching, or monitoring, of your network by Cisco netManager. This is done in a variety of ways, depending on the service monitors you have configured on your devices. The default polling is done through Internet Control Message Protocol (ICMP). The default polling interval for Cisco netManager is 60 seconds for active monitors. The default polling interval for performance monitors is 120 seconds. The polling interval for performance monitors can be configured.

Only a subset of the device data is polled each time. This is data related to device or service status and statistical data. Static data like version information, description, etc. are collected when the device is discovered. If there is a need to refresh this data, the device will need to be rediscovered. See [Rediscovering Devices, page 5-27](#) for more information on how to rediscover devices.

A small amount of data is sent from the Cisco netManager computer across the network to the device it is watching. If the device is up, it echoes the data back to the Cisco netManager computer. Cisco netManager considers a device down when it does not send the data back.

Changing How You Poll Devices

After a device is added to the database, Cisco netManager begins watching that device using ICMP (Internet Control Message Protocol.) Cisco netManager sends a message to the device, then waits for the echo reply. If the reply is not returned, Cisco netManager considers it an unresponsive device and changes the status color of the device.

By default, Cisco netManager uses the IP address of the device to send this message. You can change this to use the hostname or the Windows name of the computer, and you can change the means it uses to poll the devices.

To change how you poll a device:

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- Step 1** From the Devices tab, right-click on the device and select **Properties**.
 - Step 2** Click the **General** icon.
 - Step 3** Select the type of poll you want to check the device with in the **Polling type** list box.
 - Step 4** Select IP address or hostname from the **Poll using** list box.
 - Step 5** If you select hostname in the **Poll using** box, you must complete the **hostname** box.
 - Step 6** Click **OK** to save changes.
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Using Maintenance Mode

This feature lets you place devices in Maintenance mode, where they will not be polled by the engine.

Any device placed in maintenance mode is not polled, and actions are not fired for it, but it remains in the device list and historical data is preserved. By default, maintenance mode is represented by an orange color in both the device list view and the map view.

The mode can be set in two ways:

- **Force this device into maintenance mode now.** Set this option manually by selecting **Device Properties > Polling**.
- **Scheduled maintenance times.** Schedule maintenance times for the device.
- Click **Add** to schedule a new maintenance time for the device.
- Select an existing entry, then click **Edit** to change a scheduled time.
- Select an existing entry, then click **Remove** to delete a scheduled time from the list.

Setting How Often Your Devices Are Polled

The default polling interval is 60 seconds. You can change this on a per device basis.

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- Step 1** From the Devices tab, right-click on the device and select **Properties**.
 - Step 2** Click the Polling icon.
 - Step 3** Change the interval in the **Poll Interval** box.
 - Step 4** Click **OK** to save changes.
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Stopping and Starting Polling

To stop or start the polling on all devices by turning the polling engine off or on:

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- Step 1** From the main menu, click **Configure > Program Options**.
 - Step 2** Click the **General** icon.
 - Step 3** Select the **Enable polling engine** to turn on polling. Clear the selection to turn polling off.
 - Step 4** Click **OK** to save changes.

In the bottom right corner of the Cisco netManager console, the Polling icon shows if the engine is active or not.

Stopping and Starting Polling On a Monitor

To stop and start polling on a per-monitor basis:

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- Step 1** From the Devices tab, right-click on the device and select **Properties**.
- Step 2** Click the **Active Monitor** icon.
- Step 3** Select the Active Monitor you want to change the polling on.
- Step 4** Click **Edit** to view the Monitor Properties for that monitor.
- Step 5** Click the **Polling** icon.
- Step 6** Select **Enable polling for this Active Monitor** to turn polling on, clear the option to turn it off.
- Step 7** Click **OK** to save changes.
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Dependencies Overview

By default, Cisco netManager polls all devices and active monitors in your device list, unless you manually turn off polling for the system as a whole, or at the device and monitor level. The dependency feature gives you the ability to avoid turning off polling to devices, and instead makes polling dependent on the status of another device's active monitor(s) in your database.

Setting dependencies on one device's active monitors will place another device up or down depending on the type of dependency you configure.

There are two types of dependencies:

- **Up Dependency** can be thought of as describing that something is “behind” something else. The dependent device will only be polled if the device “in front” of it is up.
- **Down Dependency** can be thought of as describing that something is “in front of” something else. The dependent devices in front will not be polled unless the device further down the line is down.

Example

If you have devices behind a router, up dependent on the router's ping active monitor, those devices will not be polled unless that router's ping attempts are successful. Should the router's ping active monitor fail, the devices behind the router will be placed in the unknown state. Without the dependency, the devices behind the router would fire off actions when they become unreachable due to the router's failed ping attempts. With the dependency, only actions on the router will fire.

Setting Dependencies

To set dependencies, double-click on a device from the Devices tab and select **Device Properties > Polling**. Click either **Up Dependency...** or **Down Dependency...** to bring up the Device Dependencies dialog and configure the up or down dependency.

- Using the Map View

In My Network view, go to **View > Map View**. Right-click on a selected device and select **Set Dependencies** and either **Set Up Dependency on** or **Set Down Dependency on**. The cursor changes to the Set Dependency arrow. Click on any device in the current group to set the dependency.

Selected **Display > Polling Dependency Arrows** to view the dependency between the two devices.

In the Map View, you are not able to set dependencies across groups. However, you can make shortcuts to the devices you want to set dependencies on in a group, and set the dependencies there.

Using the Device Dependencies Dialog

The Device Dependencies dialog is the same for both up and down dependencies with the exception that one sets up dependencies and the other sets down dependencies. Up dependencies are signified with an upward green arrow icon, while down dependencies is signified with a downward red arrow.

- Check the first box on the dialog to either poll only if Any one or Every one of the active monitors selected are up or down on device, depending on the type of dependency you are setting.
- To select a device for the dependency, click the browse (...) button.
- Choose either **All active monitors** or **Specific active monitors** and check the active monitors you want to associate with the dependency.

The statement at the bottom of the dialog is automatically generated for you to assist you in understanding the type of dependency you are creating.

An example statement would read:

"ATL145 is dependent on QATEST-WIN2K's FTP and HTP and Ping active monitors being up. (ATL145 is "behind" QATEST-WIN2K.)"

Viewing Dependencies

After you have set up your dependencies, you can view dependency lines in the Map view, as long as the devices appear in the same group. If the devices are not in the same group, you will have to refer to the Polling section of Device Properties to view the dependencies.

In the graphic above, the devices have an up dependency on the router, and the router has a down dependency on the hub. If the router's active monitors were to fail, the hub would be polled, and the devices behind the router would not be polled. When the router's active monitors are successful, the hub is not polled, but the devices behind the router are.

IPX Support

To poll IPX devices, Microsoft's NWLink IPX/SPX Compatible Transfer Protocol must be installed and running on the Cisco netManager console (the system on which you installed Cisco netManager).

To add the IPX protocol:

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- Step 1** Open the Network applet in the Windows Control Panel.
- Step 2** If you are using Windows NT, in the **Select Network Protocol** dialog box, select Microsoft, then select the IPX/SPX-compatible Protocol and follow the online instructions.
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- If you are using Microsoft Windows 2000 or XP, in the **Select Network Component** dialog box, select Microsoft, then select the IPX/SPX-compatible Component and follow the online instructions.
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