

Managing Remote Resources Using Resource Manager

Introduction

It is very useful to monitor network resources from a central point. For example, you may want to be alerted if the utilization of a router exceeds a certain point, if a host stops responding, or if the disk space on a server falls below a certain level. However, the remote monitoring of critical network resources has traditionally been problematic because polling the resource from the network manager occupies excessive bandwidth, tying up valuable network resources. TrafficDirector's Resource Manager solves this problem.

Note The Resource Manager function is available as an option on SwitchProbe high-performance hardware agents. It is not available on other third-party RMON agents.

TrafficDirector's Resource Manager lets you select and monitor network resources without tying up the network. Resource Manager is a single-agent, single-domain tool that combines both DomainView and remote SNMP management into a single device. This device provides active management for all critical resources at the remote site, including private MIBs, while eliminating regular polling between management station and agent.

The result is that the *agent* polls the resource, so that polling is limited to the segment and does not tie up the network.

You can see the results of your resource monitoring in the Resource Manager window. In addition, you can use Watchdog to set up traps. In this way, you'll be notified when selected resource conditions occur.

For example, suppose you want to monitor available disk space on a server. First, use Resource Manager to create a proxy resource on the agent to read the MIB variable for server disk space. (This assumes that the MIB on the agent you use has a variable that reads this value.) Then select a host so that the agent knows which device you are referring to. You can now use Watchdog to create a trap that triggers an alarm when the disk space variable falls below a pre-determined value.

The agent polls the resource at the interval you specified when you set up the proxy resource, and triggers an alarm when the disk space falls below the specified threshold.

Resource Manager lets you select either of two types of proxy resource:

- Remote Protocol Ping (IP Ping), which tells you if the resource is responding.
- Remote SNMP "get," which provides the value of the variable and detects any errors in reading the variable.

Using Resource Manager

You can install new proxy resources, or view or delete existing proxy resources at an agent.

Installing Proxy Resources on an Agent

To use the Resource Manager to install proxy resources on a specific agent, do the following:

- Step 1** Select the agent from the list box in the Traffic Director main window.
- Step 2** Click on **Resource Manager** from the TrafficDirector window. The Resource Manager window appears. Note that the selected agent appears at the top of the window.

Selecting the Type of Proxy Resource

There are two types of proxy resource: SNMP and IP Ping. The resources that appear in the Resource Manager list box, as well as the resources you add, view, or delete, reflect the type of resource you select. The default selection is SNMP.

To select the type of proxy resource you will add, view, or delete:

- Step 1** Select the **Type** menu.
- Step 2** Click on either **SNMP** or **IP Ping**.

Selecting the Sample Interval

You can select the interval at which the proxy resources update TrafficDirector. The range is from 15 seconds to 5 minutes. The default is 1 minute.

To select the sample interval:

- Step 1** Select the **Sample** menu.
- Step 2** Click on the desired sample interval.

The Resource Manager List Box

The content of the Resource Manager list box is given below.

List Box Heading	What it Tells You
Host	The name or IP address of the host associated with the resource. You have to specify a host so that the agent knows which device you are referring to.

The following variables are shown for SNMP resources only:

MIB	The name of the MIB associated with this proxy resource.
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List Box Heading	What it Tells You
Variable.instance	The MIB variable that you want to monitor. For example, free disk space in a server. Instance is a way to index into multiple instances of the same MIB variable. A MIB variable can have more than one instance. If it does, the MIB variable name requires that you provide the instance you want to monitor. If there is only one instance of the MIB variable, set Instance=1 .
Value	The value of the last update of the variable being monitored. For example, if you're monitoring free disk space, Value is the amount of free disk space remaining.
Errors	The number of errors, if any, encountered when the agent polls the resource. If errors are detected, the value reported in the Value field may be inaccurate.

Adding a SNMP "Get" Proxy Resource

You add an SNMP "get" proxy resource when you want to monitor a selected MIB variable on a network resource. The proxy resource returns the value of that variable at each polling interval, and any associated errors.

To add a new SNMP "get" proxy resource at an agent:

- Step 1** Select the agent from the list box in the TrafficDirector window. You cannot add a proxy resource to an agent group.
- Step 2** Click on **Resource Manager** from the TrafficDirector Main window. The Resource Manager window appears.
- Step 3** From the **Type** menu, click on **SNMP**. All currently installed SNMP resources for the agent you selected appear in the list box.
- Step 4** Click on the **Add** button. The Add SNMP Resource window appears.
- Step 5** In the Host field, enter the name or IP address of the host for which you want to add the resource.
- Step 6** The MIB list box displays a list of MIBs for the agent you selected. Highlight the appropriate MIB and select it by clicking on the **Select** button beneath the list box. A MIB is a pre-defined database that determines the type of information an SNMP agent collects.

When you select a MIB, TrafficDirector fills in both the **Community** and the **Poll Interval** fields, as well as the **Variable Name and OID** list box.

- The **Community** is a string identifier for the SNMP agent and host you want to read. It sets read and write privileges for the host and agent. It is usually set to **public**, for universal privilege, but you can set it to other values to restrict access.
- The **Poll Interval** is the number of seconds between samples. You can change this interval. The allowed range is a decimal integer from 1 to 65535 seconds. The default is 60 seconds.

- **Variables** are the various MIB variables that you can select and monitor with the new proxy resource. Variables are specific to each MIB and are published with the MIB's information. Consult the MIB information manual to select the correct variable. The Variable **OID is the Object Identifier for the object, as defined by the variable's location in the SNMP MIB hierarchy.**

- Step 7** Highlight the appropriate **Variable Name and OID** from the list box and click on the **Select** button beneath the list box to select it.
- Step 8** Enter the appropriate value in the **Variable Instance** field. This must be a decimal number and must match the value given in your MIB data.
- Step 9** Click on **OK** to add the new proxy resource or **Cancel** to return to the Resource Manager window.

TrafficDirector lists the new proxy resource in the list box on the Resource Manager main window.

Adding an IP Ping Resource

An IP ping proxy resource simply pings the resource and tells you if it responds. When associated with a Watchdog trap, this provides an effective way of periodically checking critical network resources and receiving automatic notification if a resource goes down.

To add a new IP Ping proxy resource at an agent:

- Step 1** Select the agent to which you want to add this proxy resource from the list box in the TrafficDirector window.
- Step 2** Click on the Resource Manager from the TrafficDirector window. The Resource Manager window appears (see Figure 9-5).
- Step 3** Select **IP Ping** from the **Type** menu. All current IP Ping resources appear in the list box for the selected agent.
- Step 4** Select the **Add** button. The Add IP Ping Resource window appears.

The Add IP Ping Resource window has two fields:

- **Host** is the IP address of the host for this resource. The host name may be used as an alternative.
- **Ping Interval** is the time in seconds between queries (pings). The range is a decimal integer from 1 to 3600. The default is 60 seconds.

- Step 5** Enter the IP address or the name of the host for the new resource in the **Host** field.
- Step 6** Enter the ping interval in seconds in the **Ping Interval** field.
- Step 7** Click on **OK** to install the new proxy resource, or **Cancel** to return to the Resource Manager window.
- Step 8** The resource is listed with the selected agent in the list box on the Resource Manager window.

Viewing a Proxy Resource

You may want to view a summary of all the values associated with a resource. This includes the values you enter when you define the proxy resource, and the values that appear for the resource in the Resource Manager window.

To view a resource in detail:

- Step 1** Select the appropriate agent from the list box on the TrafficDirector window.
- Step 2** Click on **Resource Manager** from the TrafficDirector window. The Resource Manager window appears.
- Step 3** Using the **Type** menu, select either SNMP or IP Ping to list the type of resource you want to view. All existing resources of that type for the selected agent appear in the list box.
- Step 4** From the list box, select the resource you want to view in more detail.
- Step 5** Click on **View**. Depending on the type of resource you have selected, either the View SNMP Resource window appears, or the View IP Ping Resource window appears. You cannot change the information in a view window.
- Step 6** When you are finished viewing the window, click on **OK** to return to the Resource Manager window.

Deleting a Proxy Resource

When you no longer need to poll a certain variable, it is a good idea to delete the proxy resource associated with it to conserve network resources.

To delete a proxy resource:

- Step 1** Select the appropriate agent from the list box on the TrafficDirector window.
- Step 2** Select **Resource Manager** from the TrafficDirector window. The Resource Manager window appears.
- Step 3** Highlight the resource you want to delete in the list box in the Resource Manager window.
- Step 4** Select **Delete**. A cautionary window appears asking if you want to continue.
- Step 5** Select **OK** to delete the resource or **Cancel** to return to the Resource Manager window.

Launching Watchdog from Resource Manager

You can launch Watchdog and set alarm thresholds directly from Resource Manager. Watchdog is described in Chapter 12.

To launch Watchdog:

- Step 1** Select the **Tools** menu.
- Step 2** Select Watchdog. The Watchdog window appears.

Getting Agent Information

You can view a description of the selected agent's system information and interface configuration directly from Resource Manager.

To view agent information:

- Step 1** Select the **Tools** menu.
- Step 2** Click on Agent Info. The Agent Information window appears.
- Step 3** Click on **OK** when you are finished viewing the agent information.

Printing Resource Manager Data

You can print the data contained in the Resource Manager window at any time. To do so:

- Step 1** Select the File menu.
- Step 2** Click on Print. TrafficDirector prints Resource Manager data to your default printer.

Exiting Resource Manager

To exit Resource Manager:

- Step 1** Select the **File** menu.
- Step 2** Click on Exit.