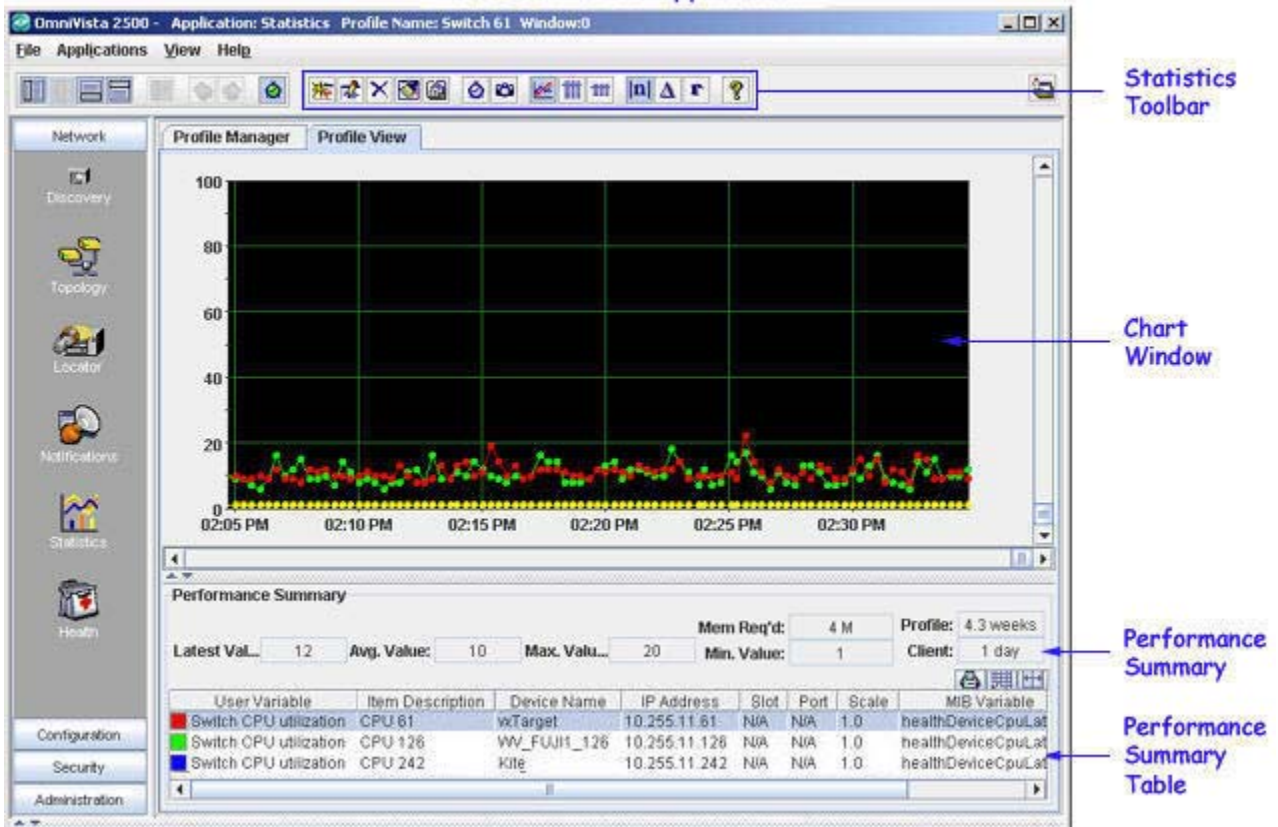


## Getting Started with Statistics

The Statistics application enables you to collect, monitor, and view statistical parameters for devices throughout the network. Statistical data can be graphed (as shown in the screen below), displayed in tables, or exported to a .csv file that can be opened in a spreadsheet for further analysis. The Statistics application performs its own independent polling to collect data, and this polling can be toggled on and off when desired. The polling rate can also be configured.

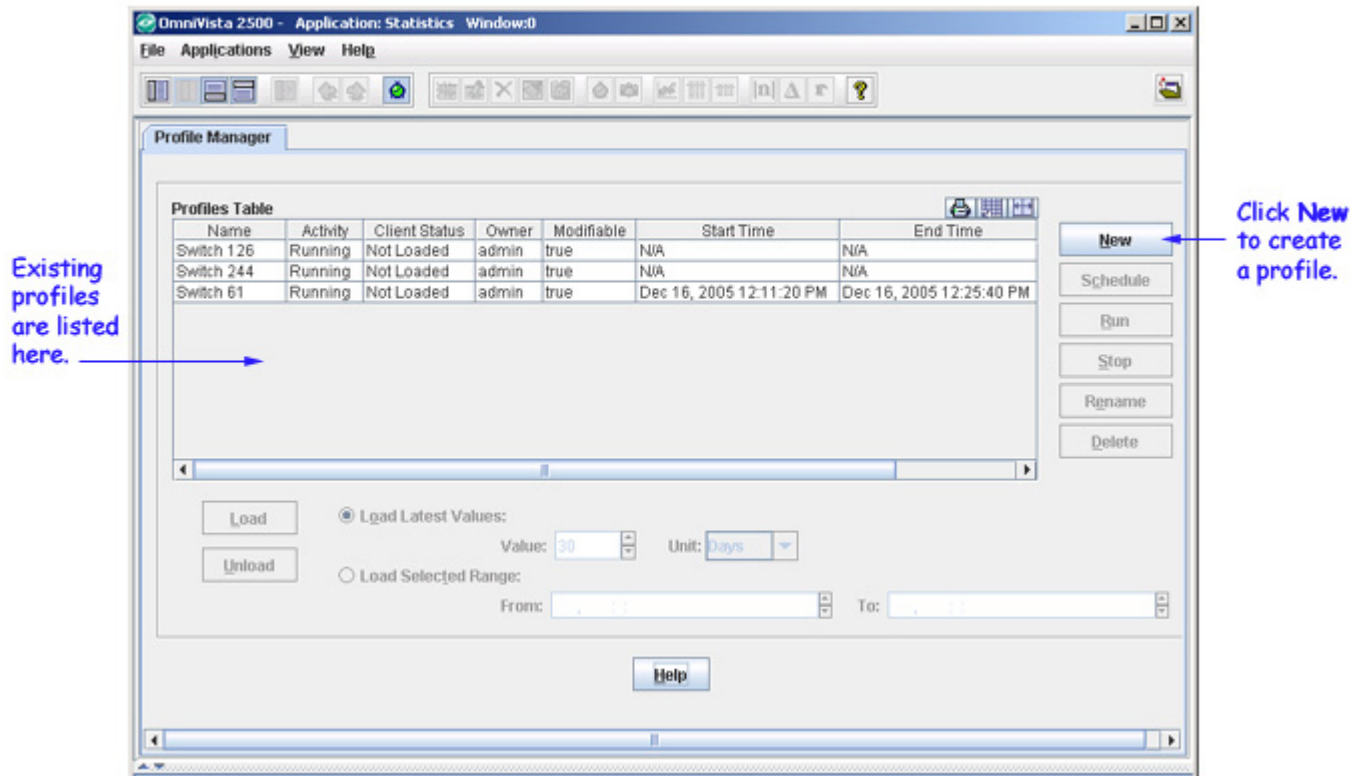
The Statistics Application



## Getting Started Graphing

When you first open the Statistics application, the Profile Manager window appears. If you have already created profiles, they will be listed in the Profiles Table. To start graphing, you must create a profile and add the variables that you want to graph. Follow the steps below to create a profile and start graphing.

Profiles Table Window



When you click the **New** button in the Profile Manager window, the **Add Item** window appears. You can monitor several variables on one switch, or a single variable on a group of switches, or any combination you want to include in the profile. To create a profile, follow the steps in the graphic below.

**Note:** Most variables represent individual MIB objects and are identified by the 🟡 icon. For convenience, "group performance" variables have also been created. Group performance variables represent a collection of related MIB variables and are identified by the 🇺🇸 icon.

1. Click open a device you want to monitor and select a category.

2. Variables for the category selected in step 1 display. Select a variable to graph.

3. Optional. Select the desired scale, line width, line style, and line color to be used for the graph, or accept the defaults.

4. Optional. Enter a description of the variable to be graphed. The description will display in the Performance Summary Table.

5. Click the Add button.

6. Repeat Steps 1 - 5 to add additional switches/variables to the profile, then click the Done button (the Cancel button changes to Done after Add is clicked). Graphing begins when Done is clicked.

If you add more than one variable to the profile, each new variable will be assigned a new line color; or you can select a line color from the **Line Color** drop-down list. You also have the option of entering a **Description** for each variable. See “Getting Started with Profiles” on page 8 for more information on creating and saving profiles.

Graphing starts when you click the **Done** button. Graph lines may not display until a few poll cycles have occurred. Read the graph from right to left. The most current data displays at the right of the graph window. The horizontal axis plots time intervals. The vertical axis plots the values received from network devices.



**Chart Window**  
Displays statistical data in graphical format.

Place the cursor on a line to display specific time/data information.

**Performance Summary**  
Displays information about the selected variable.

**Performance Summary Table**  
Displays the variables being monitored.

## Chart Window

Statistical data is displayed in graphical form in the Chart window. The most recent data is displayed on the right side of the graph. You can view a specific value on the graph by moving the cursor to any point on a line to display the time and the data value.

## Performance Summary

The Performance Summary displays information about the variable that is currently selected in the Performance Summary Table. The fields in the Performance Summary are described below.

### Latest Value

The latest (most recent) value received from the device being monitored.

### Avg Value

The average value received from the device being monitored since the profile was created.

### Max Value

The largest value ever received from the device being monitored since the profile was created.

### Mem Req'd

The amount of client memory used when this profile is loaded. The amount of memory used depends of the number of variables in a profile and the length of the profile.

### Min Value

The smallest value ever received from the device being monitored since the profile was created.

### Profile

The amount of data that is currently loaded on the server, in weeks. The default amount of data

that can be stored on the server for a profile is 4.3 weeks (approximately 30 days). The maximum amount of data that can be stored on the server for a profile is 142.7 weeks (approximately 999 days). When the maximum amount is reached, the oldest data is dropped as new data is added.

### **Client**

The amount of data that is currently loaded on the client. The default amount of data that can be stored on the client for a profile is 1 day. The maximum amount of data that can be stored on the client for a profile is 999 days. However, it is recommended that you load no more than 7 days of data at a high polling rate. When the maximum amount is reached, the oldest data is dropped as new data is added.

### **Performance Summary Table**

The Performance Summary Table lists the variables being monitored in a profile. A pop-up functionality is available in the table, which allows you to add a new variable to the map, edit the description of existing variables, delete the variable and export data. The Performance Summary Table allows for selection of individual or multiple items for export.

The fields in the table are defined below. All the fields in the Performance Summary Table can be moved to any location within the table by drag and drop. For example, the **Item Description** field can be moved to the last column in the table and other fields are automatically adjusted.

### **User Variable**

The "name" of the user variable in Add Item Window (a brief description of the variable).

### **Item Description**

The description of the graphed variable that the user entered in the **Item Description** field of the Add Item Window. The item description can be edited in the Edit Item Window.

### **Category**

The category in the Add Item Window from which the performance variable was selected (e.g., Switch Health).

### **Device Name**

The user-defined device name.

### **IP Address**

The IP address of the device.

### **Slot**

If applicable, the slot number.

### **Port**

If applicable, the port number.

### **Scale**

A multiplier factor used to make individual items on the chart more visible. Multiplier values range from 1.0E-6 to 10000, with the default being 1.0.

### **MIB Variable**

The name of the variable, as defined in the MIB.



## Graphing Options

Whenever data is displayed in Chart View, icons in the Statistics Toolbar provide different graphing options. You can graph the absolute (raw) value of the data, or the delta value of the data (the amount the value returned from the device changed since the last poll), or the rate-per-second value of the data. Go to “Chart View” on page 21 for more information.

Display data in Chart View

Graph absolute value of data

Graph delta value of data (the amount of change since the last poll)

Graph data as rate-per-second

Performance Summary Table lists the variables being monitored.

User Variable	Category	Device Name	IP Address	Slot	Port	Scale	MIB Variable	Item Description
Switch CPU utilization	Switch Health	wxTarget	10.255.11.61	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 61
Switch CPU utilization	Switch Health	WW_FUJII_126	10.255.11.126	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 126
Switch CPU utilization	Switch Health	Kite	10.255.11.242	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 242

## Performance Table View

The **Performance Table View** table displays a row of data for each polling cycle that has taken place for the variable selected in the Performance Summary Table. Each row displays the data as an absolute (raw) value, a delta value (the change since the last poll), and a rate-per-second value, along with a time stamp. Click the Performance Table View icon in the Statistics Toolbar to display a Performance Table for the variable selected in the Performance Summary Table. Some of the fields can be edited in Performance table. Only selected items in Performance table can be exported. Go to “Performance Table View” on page 27 for more information.

Performance Table View

Data displayed is for the variable selected in the Performance Summary Table.

Absolute Value	Delta Value	Rate Value	Date
10	0	0	Dec 16, 2005 2:15:20 PM
9	1	0	Dec 16, 2005 2:15:40 PM
8	1	0	Dec 16, 2005 2:16:00 PM
10	2	0	Dec 16, 2005 2:16:20 PM
9	1	0	Dec 16, 2005 2:16:40 PM
10	1	0	Dec 16, 2005 2:17:00 PM
16	6	0	Dec 16, 2005 2:17:22 PM
14	2	0	Dec 16, 2005 2:17:40 PM
14	0	0	Dec 16, 2005 2:18:01 PM
8	6	0	Dec 16, 2005 2:18:20 PM
8	0	0	Dec 16, 2005 2:18:40 PM
8	0	0	Dec 16, 2005 2:19:00 PM
9	1	0	Dec 16, 2005 2:19:20 PM
12	3	0	Dec 16, 2005 2:19:41 PM
13	1	0	Dec 16, 2005 2:20:00 PM
14	1	0	Dec 16, 2005 2:20:20 PM

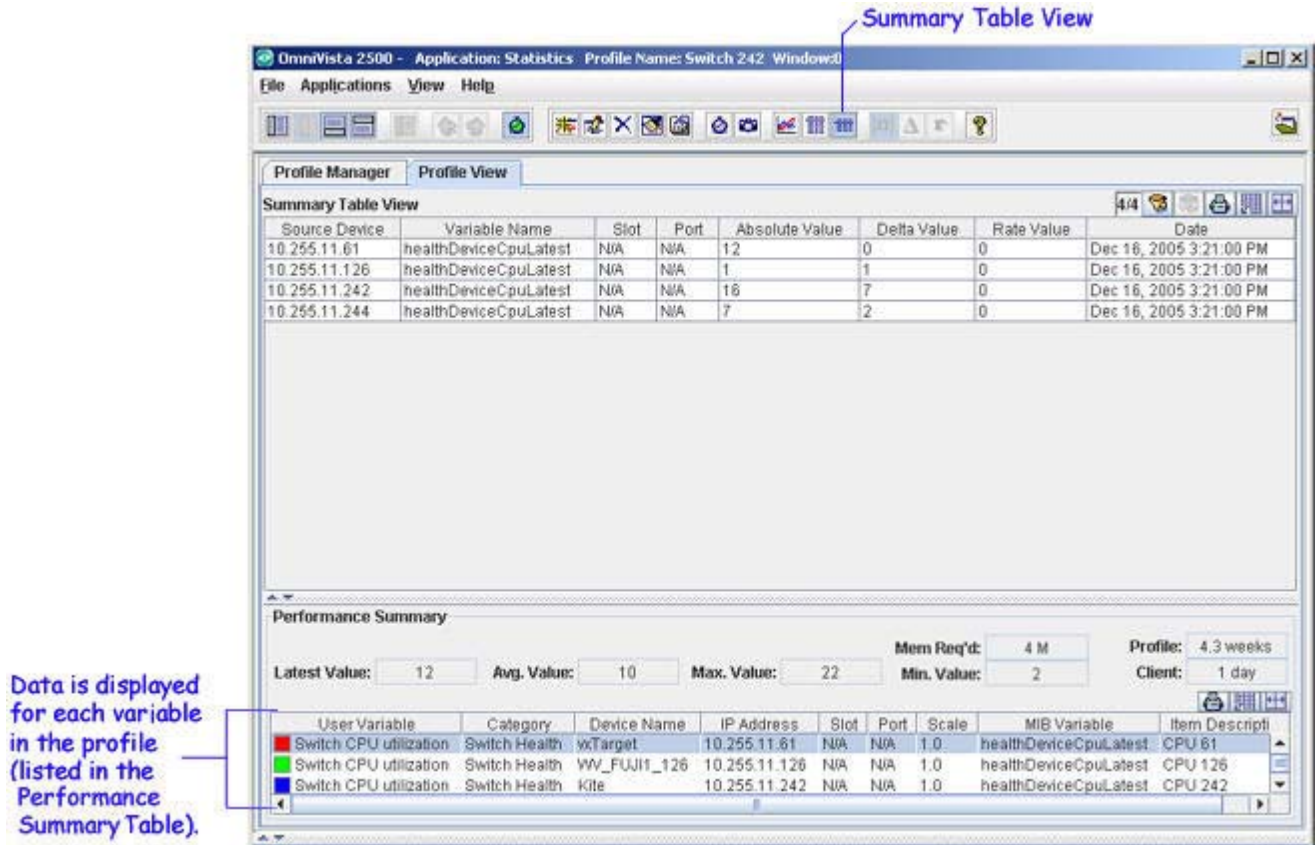
Performance Summary

Latest Value: 7   Avg. Value: 10   Max. Value: 22   Mem Req'd: 4 M   Profile: 4.3 weeks  
 Min. Value: 2   Client: 1 day

User Variable	Category	Device Name	IP Address	Slot	Port	Scale	MIB Variable	Item Description
Switch CPU utilization	Switch Health	WTarget	10.255.11.81	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 81
Switch CPU utilization	Switch Health	YW_FUJH1_126	10.255.11.126	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 126
Switch CPU utilization	Switch Health	Kite	10.255.11.242	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 242

## Summary Table View

Summary Table View displays one row of the most current data for each variable in the profile. Each row provides the source device IP address, the variable name, the slot and port (if applicable) and the latest poll data for the variable as an absolute (raw) value, a delta value (the change since the last poll), and a rate-per-second value, along with a time stamp. Click the Summary Table View icon on the Statistics Toolbar to display profile statistics in Summary Table View. Some of the fields can be edited in Summary table. Only selected items in Summary table can be exported. Go to “Summary Table View” on page 31 for more information.



## Getting Started with Profiles

When you first opened the Statistics Application, the Profile Manager Window was empty. When you displayed the Add Item Window and specified variables for graphing, you created a profile. A profile consists of the variables you specify and their graphing attributes such as line weights, colors, polling rate, etc. However, the profile is only temporary unless you save it on the OmniVista server. If you exit the Statistics Application without saving the profile, you will be asked if you wish to save it and warned that the profile will otherwise be discarded. Saved profiles can be loaded and unloaded in the Statistics Application on any OmniVista client.

## Saving Profiles

When you save a profile on the OmniVista server, the profile continues to run on the server, even when it is not loaded on a client. "Run" means that the variables in the profile continue to be polled and the resulting statistical data is saved on the server. The profile will continue to run on the server unless you explicitly disable its polling or stop it from running (which is the same as disabling its polling). When you stop a profile, all polling of the profile's variables stops and statistical data is not collected.

The Save Profile window enables you to save profiles. When you are ready to save a profile, click on the **File** Menu and select **Save Profile**. You can also right-click on the Chart View, Performance Table, or Summary Table windows and select **Save Profile** from the pop-up menu.





The **Save Profile** window enables you to do two important things (besides saving the profile):

- Assign a name to the profile. Assigning meaningful names to profiles is important because there is no way of knowing the devices and variables contained in a profile without loading the profile into the Statistics Application. When loaded, the devices and variables contained in the profile are listed in the Performance Summary Table. However, if you have many profiles, loading each one to determine its contents could be time-consuming.
- Enable the **Save Data File** option (which is disabled by default). When a profile is running on the server, the variables in the profile are being polled, and the statistical data collected is saved on the server. However, if polling is disabled for the profile or the profile is stopped (which disables polling), the statistical data on the server is deleted, unless **Save Data File** on the Save Profile Window was enabled when the profile was saved. If **Save Data File** was enabled, statistical data on the server is not deleted when polling for the profile is disabled. Note, however, that if you disable polling for a profile, gaps in the saved data will result.

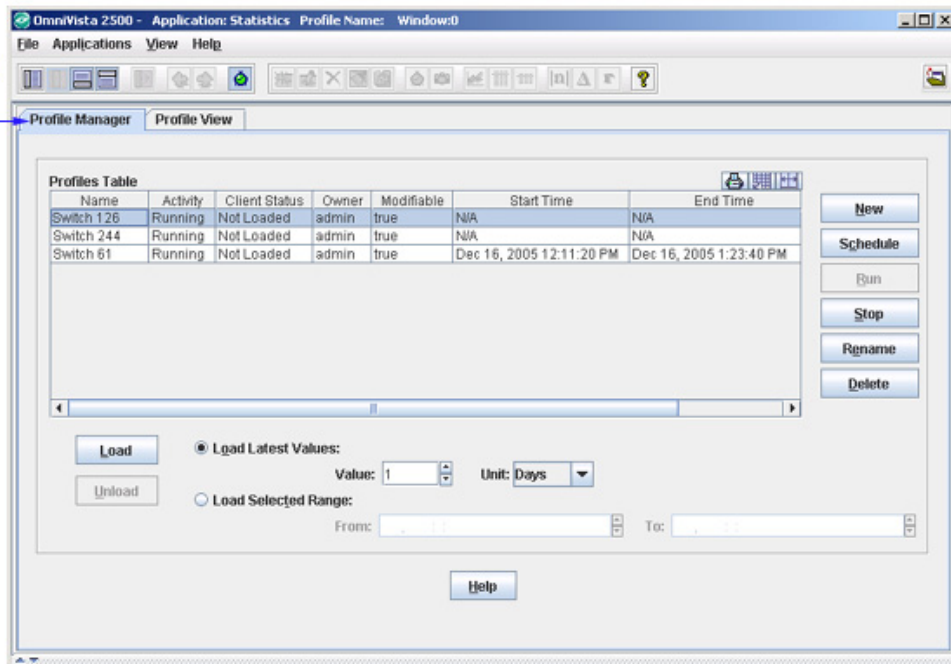
Saved profiles can also be saved under a different name by clicking on the **File** menu and selecting **Save Profile As**. You can also use the Chart View, Performance Table, or Summary Table pop-up menus. When you use this command, the profile's variables and graphing attributes (line weights, colors, polling rate, and so on) are saved under the new profile name but the statistical data from the original profile is not saved.

## Profile Manager

The Profile Manager enables you to manage profiles. To display the Profile Manager, click on the Profile Manager Tab. The Profile Manager Window lists all profiles that are saved on the server and enables you to load a saved profile on an OmniVista client, to unload a profile from the client, to delete saved profiles from the server, and to start and stop profiles running on the server. The Profile Manager also enables you to load a selected, partial portion of a profile's collected statistical data. Go to “The Profile Manager on page 42 for more information.

Profile Manager Window

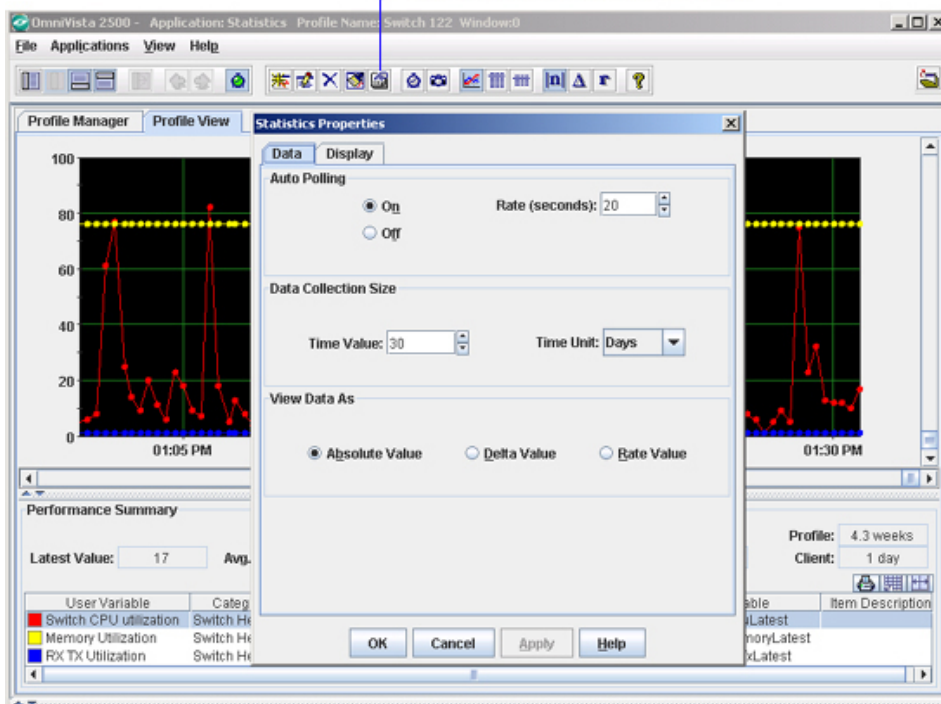
Click Profile Manager tab to bring up window.



## Data Collection and Display Properties

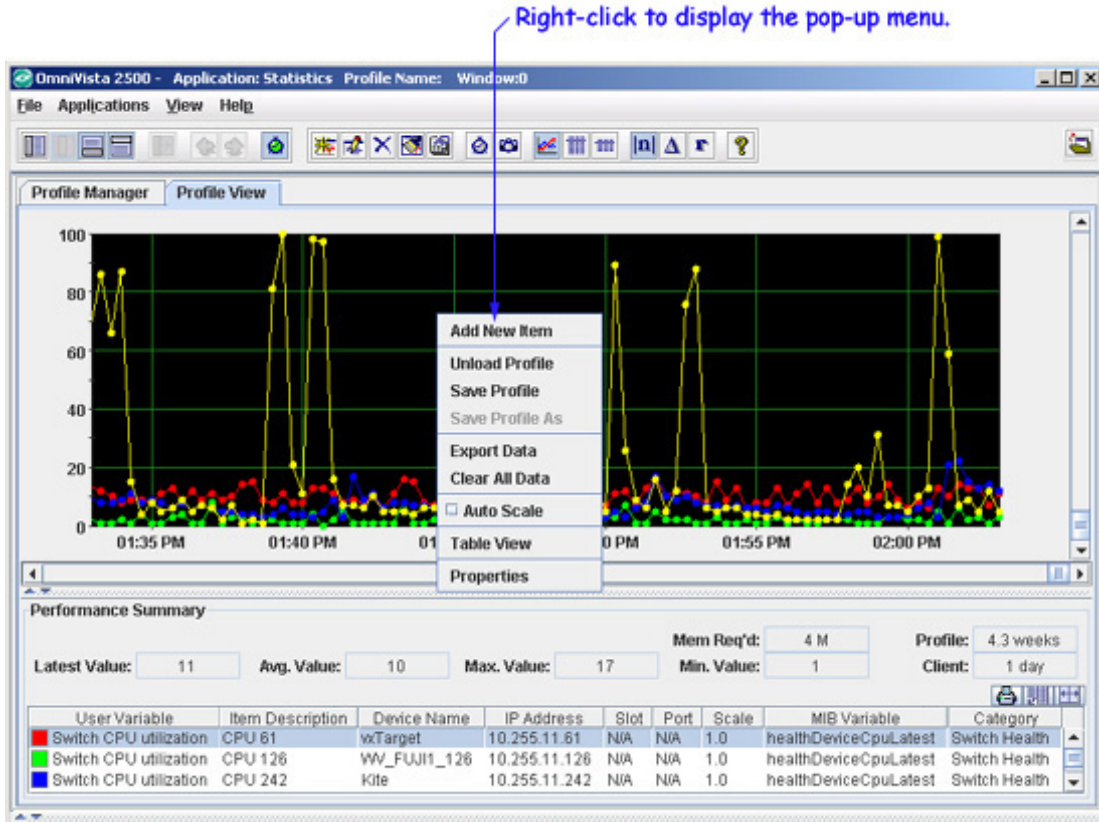
The Statistics Properties Window, shown below, contains two tabs, Data and Display, that enable you to specify how statistical data is collected and displayed. Display the Statistics Properties Window by clicking the Properties icon in the Statistics Toolbar or selecting **Properties** on the Chart View, Performance Table, or Summary Table Pop-Up menu.

Open Statistics Properties Window

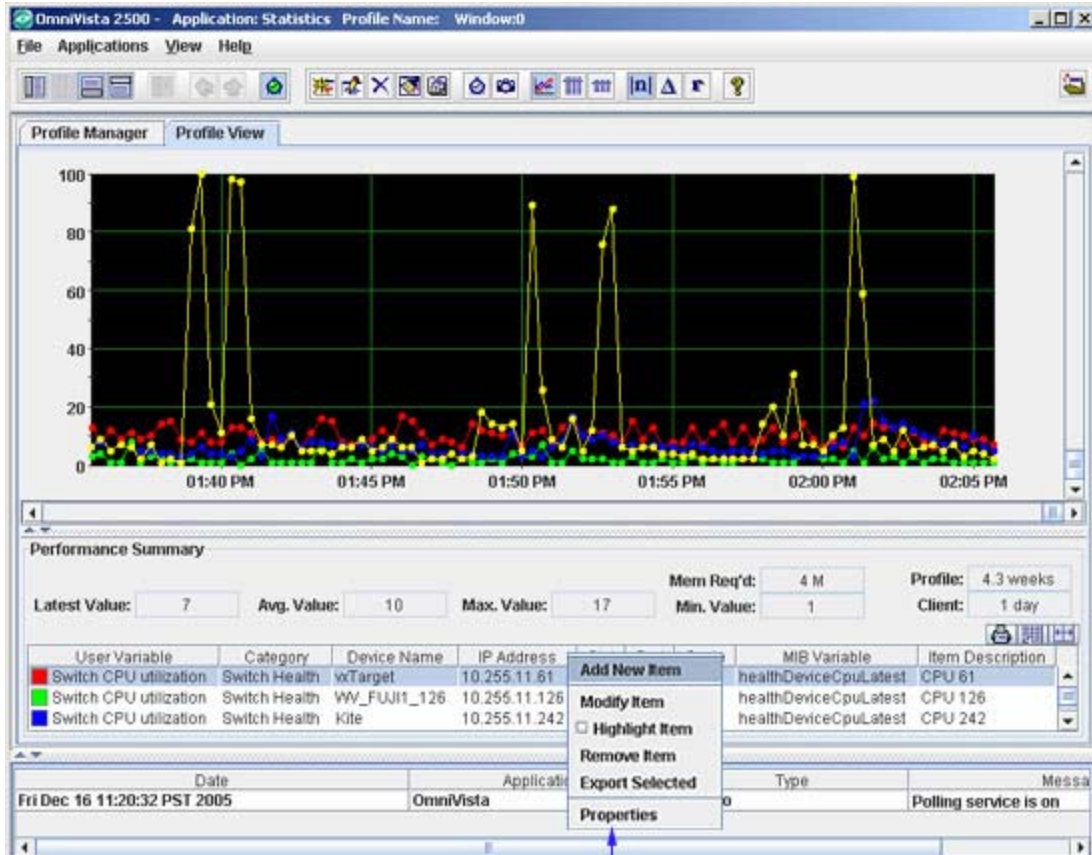


## Statistics Pop-Up Menus

You can right-click anywhere in the Chart View window, a Performance Table, or a Summary Table to display a pop-up menu. Commands specific to each window are displayed. The Chart View Pop-Up Menu is shown below.



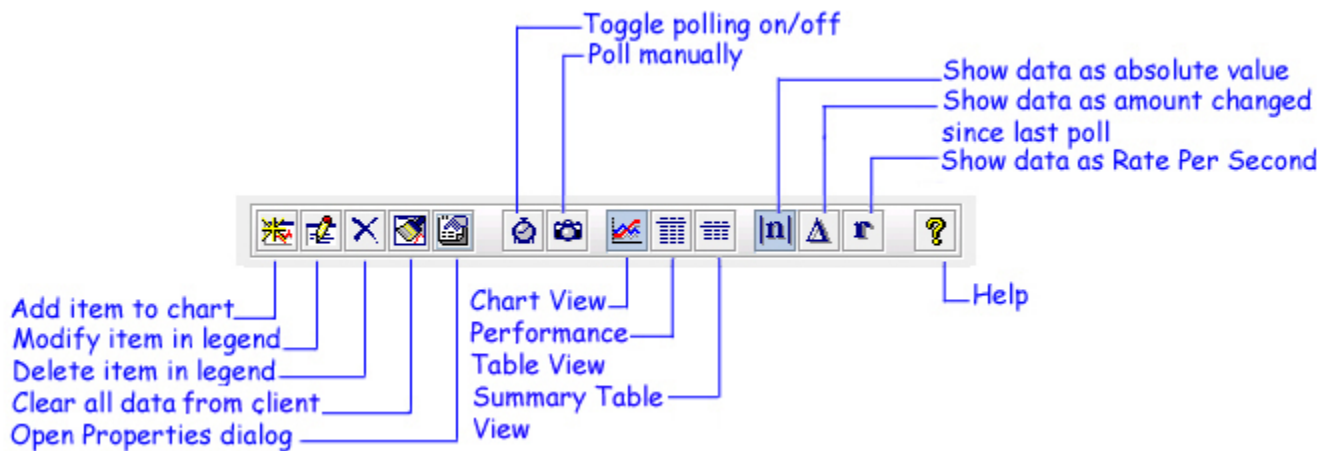
You can also click right on any selected variable in the Performance Summary Table to display the Performance Summary Pop-Up Menu, shown below.

















Right-click on a variable to display the pop-up menu.

## Statistics Toolbar

The Statistics Toolbar is shown and defined below.



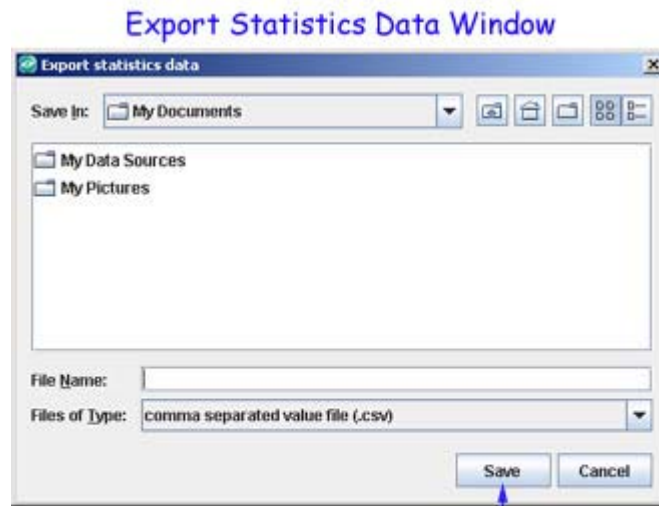


Icon	Tool Tip	Description
	Add item to profile	Opens the Add Item Window, which enables you to add variables to be monitored to a profile.
	Modify item	Opens the Edit Item Window, which enables you to modify graphing attributes or the description of the variable selected in the Performance Summary Table.
	Delete item in legend	Deletes the variable currently selected in the Performance Summary Table from the profile.
	Clear all data	Clears all data from the client, but not from the server.
	Open Properties dialog	Opens the Statistics Properties Window, which enables you to specify data collection and display properties.
	Toggle polling on/off	Turns polling on/off for the profile that is currently loaded.
	Poll manually	Causes an immediate poll of the profile that is currently loaded (rather than waiting for the next polling period).
	Chart View	Displays data as a line graph.
	Performance Table View	Displays, in table format, a row of data for each polling cycle that has taken place for the variable selected in the Performance Summary Table.
	Summary Table View	Displays, in table format, the current values for all variables in the Performance Summary Table.
	Show data as absolute value	Graphs the absolute (raw) value of the data. This is the default.
	Show data as amount changed since last poll	Graphs the delta value of the data - the amount of change since the last poll.
	Show data as rate per second	Graphs the data as rate per second.
	Help	Displays help for the Statistics Application.

## Exporting Statistics Data

The **Export Data** command, which is available on the **File** menu and on the Chart View and Performance Table View Pop-Up Menus, enables you to export statistical data for a profile to a

comma-separated value (.csv) file. Selecting **Export Data** displays the **Export statistics data** window, shown below, which enables you to navigate to the location where you want to save the .csv file.



Navigate to the location where you want to save the data file, enter a file name, and click Save.

Once the data is saved in a .csv file, the file can be viewed and analyzed through any text editor, spreadsheet, or database program. Below is an example of an exported .csv file viewed with Microsoft Excel.

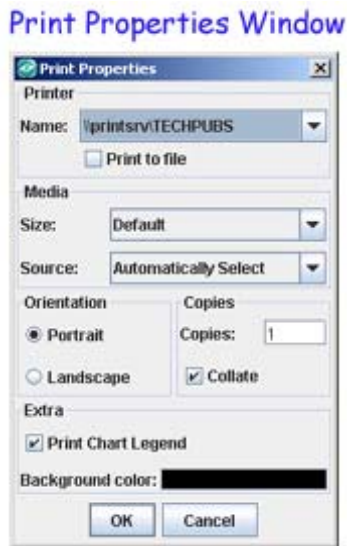
### Exported Statistics Data Viewed in Microsoft Excel

	A	B	C	D	E	F	G	H	I
1	Source Device	Variable Name	Slot	Port	Absolute Value	Delta Value	Rate Value	Date	
2	10.255.11.244	healthDeviceCpuLatest	N/A	N/A	4	0	0	Dec 16 2005 2:15:20 PM	
3	10.255.11.126	healthDeviceCpuLatest	N/A	N/A	2	0	0	Dec 16 2005 2:15:20 PM	
4	10.255.11.242	healthDeviceCpuLatest	N/A	N/A	6	0	0	Dec 16 2005 2:15:20 PM	
5	10.255.11.61	healthDeviceCpuLatest	N/A	N/A	10	0	0	Dec 16 2005 2:15:20 PM	
6	10.255.11.244	healthDeviceCpuLatest	N/A	N/A	3	1	0	Dec 16 2005 2:15:40 PM	
7	10.255.11.126	healthDeviceCpuLatest	N/A	N/A	1	1	0	Dec 16 2005 2:15:40 PM	
8	10.255.11.242	healthDeviceCpuLatest	N/A	N/A	4	2	0	Dec 16 2005 2:15:40 PM	
9	10.255.11.61	healthDeviceCpuLatest	N/A	N/A	9	1	0	Dec 16 2005 2:15:40 PM	
10	10.255.11.244	healthDeviceCpuLatest	N/A	N/A	6	3	0	Dec 16 2005 2:16:00 PM	
11	10.255.11.126	healthDeviceCpuLatest	N/A	N/A	3	2	0	Dec 16 2005 2:16:00 PM	
12	10.255.11.242	healthDeviceCpuLatest	N/A	N/A	5	1	0	Dec 16 2005 2:16:00 PM	
13	10.255.11.61	healthDeviceCpuLatest	N/A	N/A	8	1	0	Dec 16 2005 2:16:00 PM	
14	10.255.11.244	healthDeviceCpuLatest	N/A	N/A	8	2	0	Dec 16 2005 2:16:20 PM	
15	10.255.11.126	healthDeviceCpuLatest	N/A	N/A	1	2	0	Dec 16 2005 2:16:20 PM	
16	10.255.11.242	healthDeviceCpuLatest	N/A	N/A	7	2	0	Dec 16 2005 2:16:20 PM	
17	10.255.11.61	healthDeviceCpuLatest	N/A	N/A	10	2	0	Dec 16 2005 2:16:20 PM	
18	10.255.11.244	healthDeviceCpuLatest	N/A	N/A	15	7	0	Dec 16 2005 2:16:40 PM	
19	10.255.11.126	healthDeviceCpuLatest	N/A	N/A	2	1	0	Dec 16 2005 2:16:40 PM	
20	10.255.11.242	healthDeviceCpuLatest	N/A	N/A	4	3	0	Dec 16 2005 2:16:40 PM	

## Printing a Chart

The **Print Chart** command, which is available on the **File** menu, enables you to create a printout of statistical data for the current profile in the form of a Chart View line graph. Selecting this command displays the Print Properties Window, shown below. If the **Print Chart Legend** checkbox is enabled on the Print Properties Window, the Performance Summary Table will be included in the printout.

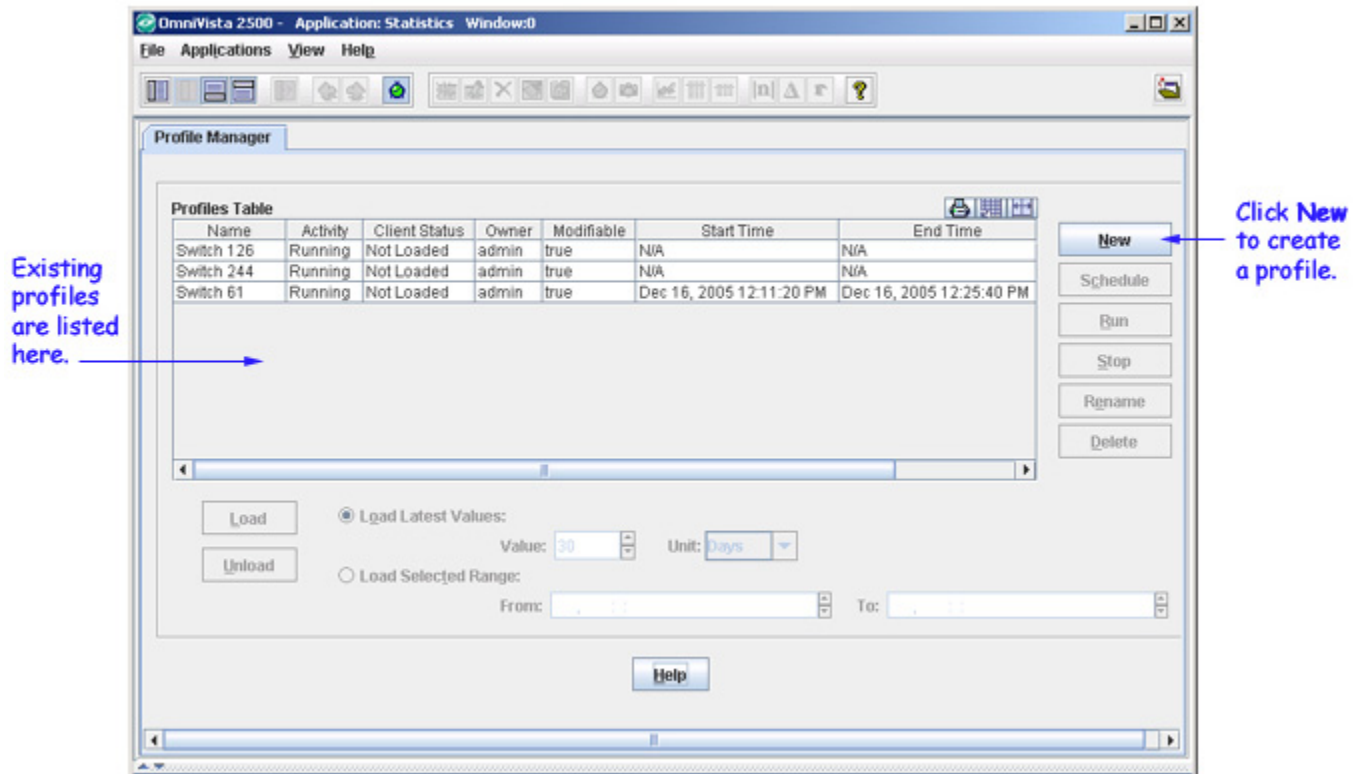
Note that the **Background color** field on the Print Properties window enables you to specify the background color used to print the chart. When the **Print to file** checkbox is enabled, the print job is output to a file, the format of which is determined by the printer driver you have installed. In most cases, the file produced will be in Post Script format.



## Creating a Graph

When you first open the Statistics application, the Profile Manager window appears. To start graphing, you must create a profile and add the variables that you want to graph. If you have already created profiles, they will be listed in the Profiles Table. Follow the steps below to create a profile and start graphing.

## Profiles Table Window

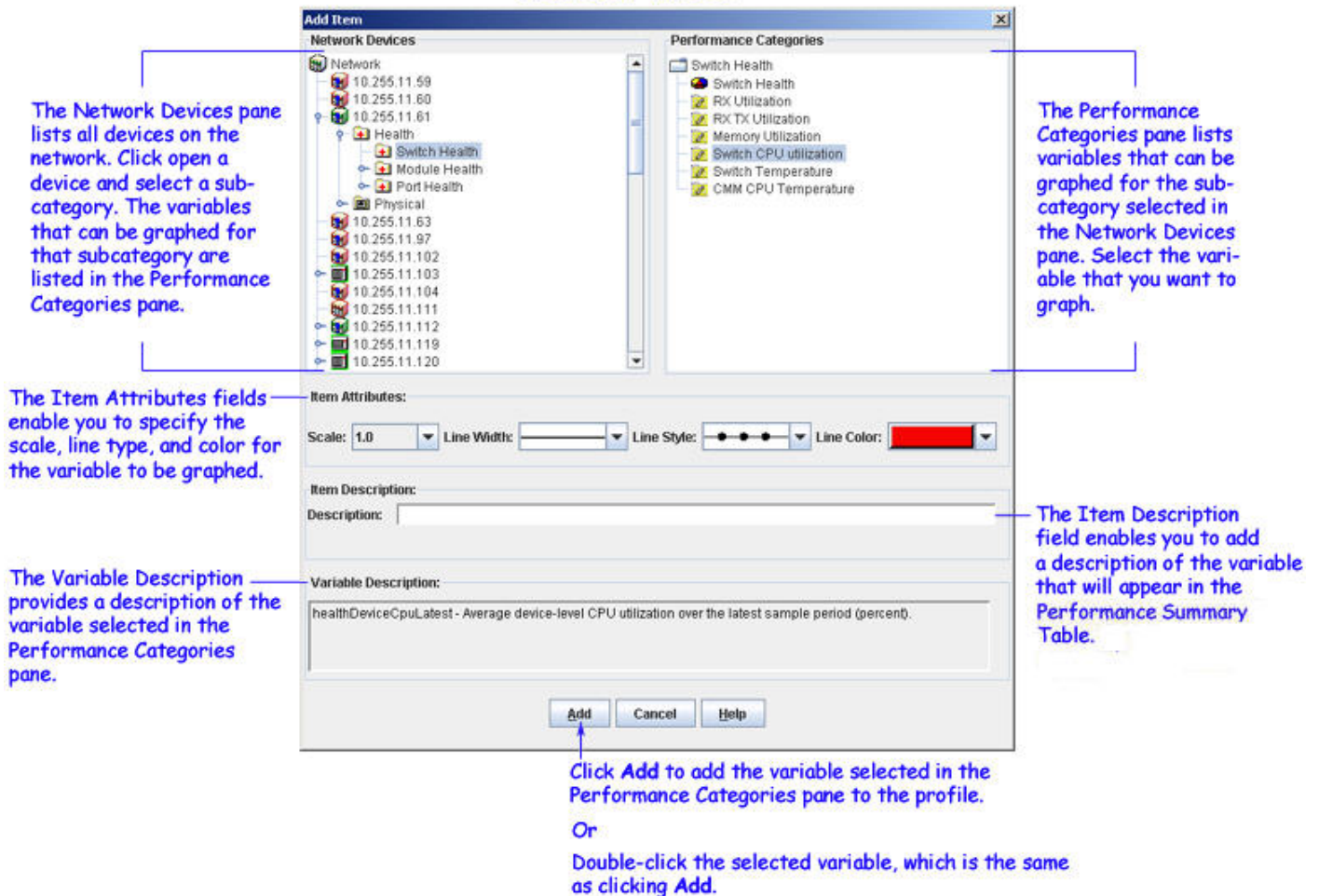


When you click the **New** button in the Profile Manager window, the **Add Item** window appears. You can monitor several variables on one switch, or a single variable on a group of switches, or any combination you want to include in the profile. To create a profile, follow the steps in the graphic below.

**Note on Profiles:** All variables you add for graphing are added to the current, open profile. If you wish to add variables to a different profile, you must first load that profile (select **Load Profile** on the **File** menu). If you wish to add variables to a new profile, you must first unload the current profile (select **Unload Profile** on the **File** Menu).



Add Item Window



## Adding Variables to a Graph

1. Within the Network Devices pane of the Add Item window, click open the folder of the device to be monitored and drill down and select the category, module, or port in which you are interested.
2. Select the variable you want to graph from the Performance Categories pane.

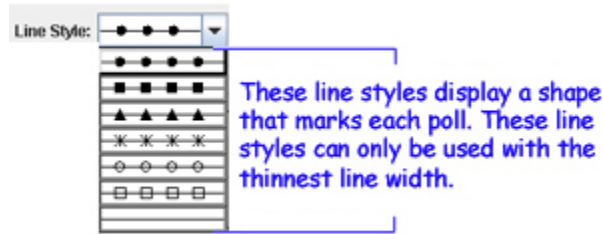
**Note:** Certain non-AOS devices do not fully implement MIB2 variables. Therefore, certain variables may not be supported on these devices. Although, OmniVista will allow you to configure the unsupported variable, no values will be displayed.

3. Set the **Scale** combo box to the scale you want used to graph the variable.

**Note:** When two or more variables are being graphed simultaneously, the graph line for one variable may be disproportionately large (or small), making it difficult to view. If this situation occurs, you may wish to select a different scale for that variable. In this context, scale is really a multiplier. The range of scale values is 1.0E-6 to 10000. The default scale value is 1.0. The scale of a graphed variable is displayed in the Performance Summary table. Always note the scale of a graphed variable. If it is using a scale other than 1.0, the graph line may be misleading.

4. Set the **Line Width** combo box to the line width you want used to graph the variable.

5. Set the **Line Style** combo box to the line style you want used to graph the variable. Note that you can select line styles that display a shape that marks each poll. These line styles can only be used with the thinnest line width.



6. Set the **Line Color** combo box to the color you want used to graph the variable. Note that each time you add a variable, the Statistics application displays a different default color in the **Line Color** combo box. This helps avoid two variables graphing with the same color.

7. If desired, enter a brief description of the variable in the **Item Description** field. This description will display in the Performance Summary Table.

8. Click the **Add** button to add the variable to the graph. Or, double-click the variable in the Performance Categories pane, which is the same as clicking **Add**.

9. Continue adding variables as desired. When you are finished, click **Done** to exit the **Add Item** window. Graphing begins when **Done** is clicked.

## Group Performance Variables

In general, each variable that can be graphed represents a single MIB variable. However, there are also "group performance" variables that represent a collection of related MIB variables. Group performance variables have been created as a convenience, and are identified by the 🌈 icon. The group performance variables are described below.

### AOS Group Performance Variables

#### SNMP Traffic under *Device* > **SNMP**

A group of SNMP traffic MIB variables, including the following: snmpInPkts, snmpOutPkts, snmpInTotalReqVars, snmpInTotalSetVars, snmpInGetNexts, snmpInSetRequests, snmpInGetResponses, snmpOutGetRequests, snmpOutSetRequests, and snmpOutGetResponses.

#### Port Utilization under *Device* > **Utilization**

Port utilization for every active port on the device. Includes the healthPortRxTxLatest MIB variable for every active port on the device.

#### Physical Port under *Device* > **Physical** > *Ethernet Module* > *Ethernet Port* > **Physical Port**

A default group of statistics that includes In Octets, Out Octets, In Unicast Packets, Out Unicast Packets, In Packets Discarded, Out Packets Discarded, In Packets Errors, Out Packets Errors, Unknown Protocol Packets. MIB variables include: ifInOctets, ifOutOctets, ifInUcastPkts, ifOutUcastPkts, ifInDiscards, ifOutDiscards, ifInErrors, ifOutErrors, ifInUnknownProtos.

#### Interface Statistics under *Device* > **Physical** > *Ethernet Module* > *Ethernet Port* > **Physical Port**

A default group of statistics that includes Alignment Errors, FCS Errors, Single Collision Frames, Multiple Collision Frames, Deferred Transmissions, Late Collisions, Excessive

Collisions, Frame Too Long. MIB variables include: dot3StatsAlignmentErrors, dot3StatsFCSErrors, dot3StatsSingleCollisionFrames, dot3StatsMultipleCollisionFrames, dot3StatsDeferredTransmissions, dot3StatsLateCollisions, dot3StatsExcessiveCollisions, dot3StatsFrameTooLongs.

**Default RMON Statistics** under *Device > Physical > Ethernet Module > Ethernet Port > RMON*

A default group of ROM statistics that includes Total Packets Received, CRC Alignment Errors, Undersized Packets, Oversized Packets, Fragments, Jabbers, Collisions. MIB variables include: etherStatsPkts, etherStatsCRCAIalignErrors, etherStatsUndersizePkts, etherStatsOversizePkts, etherStatsFragments, etherStatsJabbers, and etherStatsCollisions.

**Packet Sizes** under *Device > Physical > Ethernet Module > Ethernet Port > RMON*

Includes the total number of packets received (including bad packets) that were between 64 and 1518 octets in length, inclusive (excluding framing bits but including FCS octets). MIB variables include: etherStatsPkts64Octets, etherStatsPkts65to127Octets, etherStatsPkts128to255Octets, etherStatsPkts256to511Octets, etherStatsPkts512to1023Octets, and etherStatsPkts1024to1518Octets.

**Switch Health** under *Device > Health > Switch Health*

A default group of statistics that include RX TX Utilization, Memory Utilization, Switch CPU utilization, Switch Temperature, CMM CPU Temperature. MIB variables include: healthDeviceRxTxLatest, healthDeviceMemoryLatest, healthDeviceCpuLatest, healthDeviceTemperatureChasLatest, and healthDeviceTemperatureCmmCpuLatest.

**Module Health** under *Device > Health > Module Health > Module > Module Health*

A default group of statistics that includes Module Utilization, Memory Utilization, CPU Utilization. MIB variables include: healthModuleRxTxLatest, healthModuleMemoryLatest, and healthModuleCpuLatest.

**XOS Group Performance Variables**

**Default Chassis Vars** under *Device > Chassis*

A group of chassis MIB default variables. MIB variables include: chasPhysicalChanges, chasLogicalChanges, and chasNoOfResets.

**SNMP Traffic** under *Device > SNMP*

A group of SNMP traffic MIB variables. MIB variables include: snmpInPkts, snmpOutPkts, snmpInTotalReqVars, snmpInTotalSetVars, snmpInGetNexts, snmpInSetRequests, snmpInGetResponses, snmpOutGetRequests, snmpOutSetRequests, and snmpOutGetResponses.

**Port Utilization** under *Device > Utilization*

The port utilization for every active port on the device. Port Utilization is the average port-level I/O utilization over the latest sample period, as a percent. Depending on the device type, MIB variables may include health2PortRxTxLatest or ifInOctets, ifOutOctets, and ifSpeed.

**Physical Port** under *Device > Physical > Ethernet Module > Ethernet Port > Ethernet Ports > Physical Port*

A default group of statistics that includes In Frames, Out Frames, In Octets, Out Octets, In Unicast Packets, Out Unicast Packets, In NonUnicast Packets, Out NonUnicast Packets, In Buffer Discards, Out Buffer Discards, In Error Discards, Out Error Discards. MIB variables

include: phyPortFrameIns, phyPortFrameOuts, phyPortInOctets, phyPortOutOctets, phyPortInUcastPkts, phyPortOutUcastPkts, phyPortInNUcastPkts, phyPortOutNUcastPkts, phyPortInBufDiscs, phyPortOutBufDiscs, phyPortInErrDiscs, and phyPortOutErrDiscs.

**Default RMON Statistics** under *Device > Physical > Ethernet Module > Ethernet Port > Ethernet Ports > RMON*

A default group of statistics that includes Total Packets Received, CRC Alignment Errors, Undersized Packets, Oversized Packets, Fragments, Jabbers, Collisions. MIB variables include: etherStatsPkts, etherStatsCRCAAlignErrors, etherStatsUndersizePkts, etherStatsOversizePkts, etherStatsFragments, etherStatsJabbers, and etherStatsCollisions.

**Packet Sizes** under *Device > Physical > Ethernet Module > Ethernet Port > Ethernet Ports > RMON*

The total number of packets received (including bad packets) that were between 64 and 1518 octets in length, inclusive (excluding framing bits but including FCS octets). MIB variables include: etherStatsPkts64Octets, etherStatsPkts65to127Octets, etherStatsPkts128to255Octets, etherStatsPkts256to511Octets, etherStatsPkts512to1023Octets, and etherStatsPkts1024to1518Octets.

**Switch Health** under *Device > Health > Switch Health*

A default group of statistics that includes RX TX Utilization, Backplane Utilization, Memory Utilization, Temperature, MPM CAM utilization as a percent, HRE CAM utilization as a percent, VCC Utilization, Virtual Port Utilization, HRE Collision Utilization. MIB variables include: health2DeviceRxTxLatest, health2DeviceBackplaneLatest, health2DeviceMemoryLatest, healthDeviceTemp, health2DeviceMpmCamLatest, health2DeviceHreCamLatest, health2DeviceVccLatest, health2DeviceVpLatest, and health2DeviceHreCollisionLatest.

**Module Health** under *Device > Health > Module Health > Ethernet Module > Module Health*

A default group of statistics that includes Module Utilization, Backplane Utilization, CAM Utilization, Vcc Utilization. MIB variables include: health2ModuleRxTxLatest, health2ModuleBackplaneLatest, health2ModuleCamLatest, and health2ModuleVccLatest.

**Interface Statistics** under *Device > Physical > Ethernet Module > Ethernet Port > Ethernet > Interface Statistics*

A default group of statistics that includes Alignment Errors, FCS Errors, Single Collision Frames, Multiple Collision Frames, Deferred Transmissions, Late Collisions, Excessive Collisions, Frame Too Long. MIB variables include: dot3StatsAlignmentErrors, dot3StatsFCSErrors, dot3StatsSingleCollisionFrames, dot3StatsMultipleCollisionFrames, dot3StatsDeferredTransmissions, dot3StatsLateCollisions, dot3StatsExcessiveCollisions, and dot3StatsFrameTooLongs.

**Default RMON Statistics** under *Device > Physical > Ethernet Module > Ethernet Port > RMON*

A default group of statistical variables that includes Total Packets Received, CRC Alignment Errors, Undersized Packets, Oversized Packets, Fragments, Jabbers, Collisions. MIB variables include: etherStatsPkts, etherStatsCRCAAlignErrors, etherStatsUndersizePkts, etherStatsOversizePkts, etherStatsFragments, etherStatsJabbers, and etherStatsCollisions.



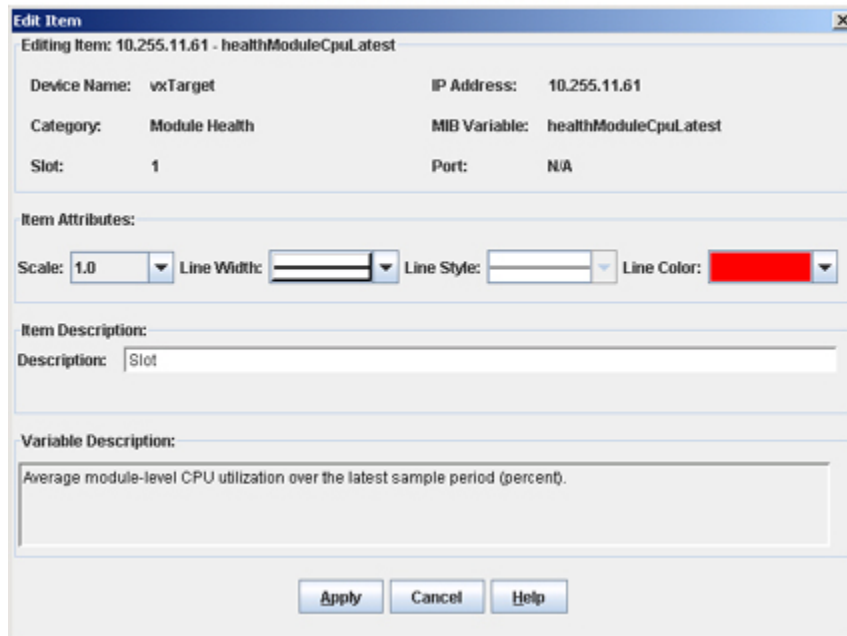
**Packet Sizes** under *Device* > **Physical** > *Ethernet Module* > *Ethernet Port* > **RMON**

The total number of packets received (including bad packets) that were between 64 and 1518 octets in length, inclusive (excluding framing bits but including FCS octets). MIB variables include: etherStatsPkts64Octets, etherStatsPkts65to127Octets, etherStatsPkts128to255Octets, etherStatsPkts256to511Octets, etherStatsPkts512to1023Octets, and etherStatsPkts1024to1518Octets.

**Editing a Variable**

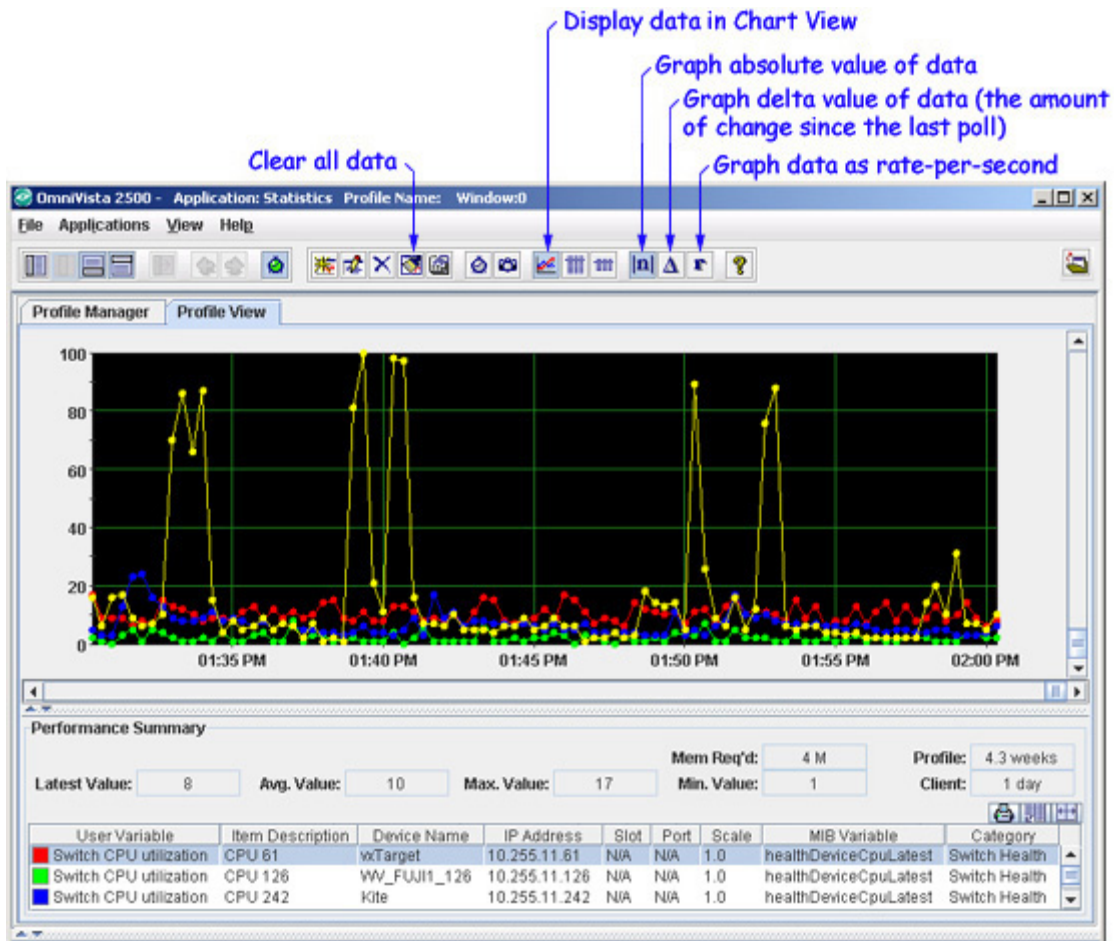
To edit a variable, select the variable in the Statistics Legend Table and click the **Modify Item** icon on the Statistics Toolbar to display the **Edit Item** window. You can also double-click the variable in the Statistics Legend Table. The Edit Item Window enables you to modify the scale, line width, line style, or color used to graph a variable. It also enables you to edit the variable's description, which displays in the Statistics Legend Table.

Edit Item Window



**Chart View**

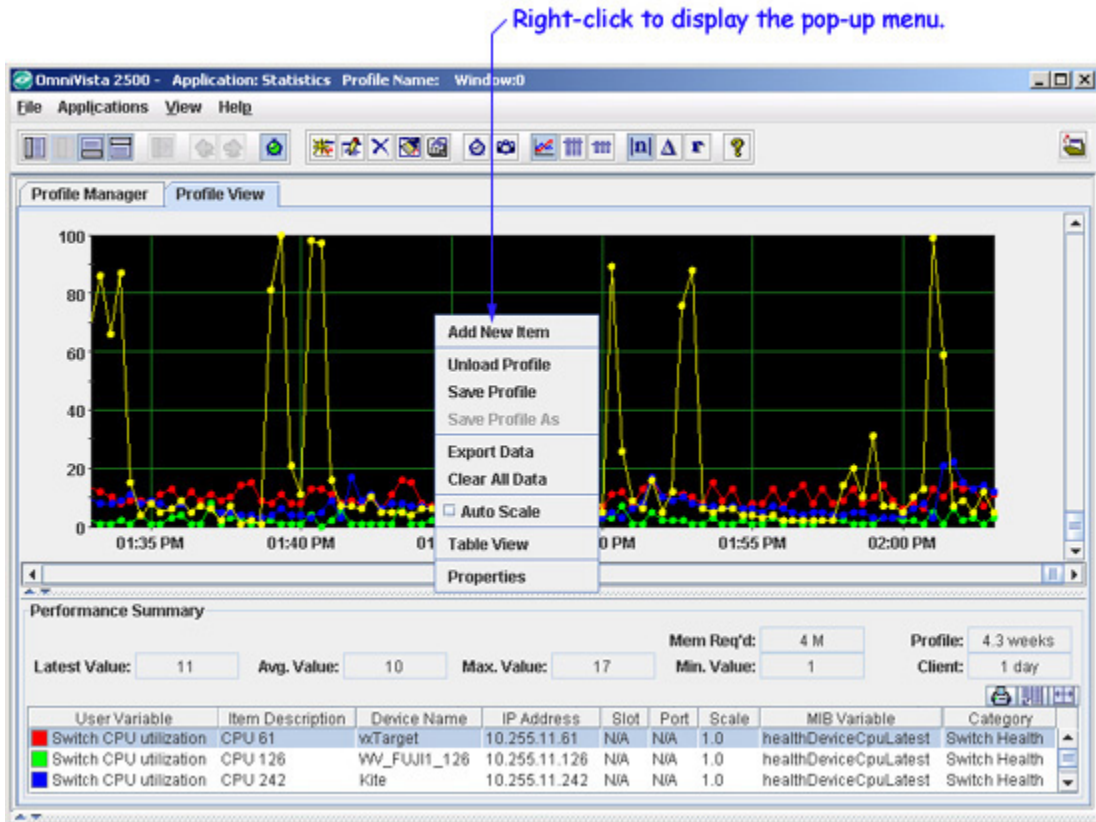
Chart View (the default view) displays statistical data in the form of a line graph, as shown below. If necessary, click on the Chart View icon in the Statistics Toolbar to display data in Chart View. Graphing Icons in the toolbar enable you to shift between graphing the absolute value of the data, the delta value of the data (the amount of change in the data since the last poll), and the rate-per-second of the data.



Read the graph from right to left. The most current data displays at the right of the graph window. The horizontal axis plots time intervals. The vertical axis plots the values received from network devices.

### Chart View Pop-Up Menu

Whenever the Chart View window is displayed, you can right-click anywhere in the window to display the Chart View Pop-Up menu. Each menu item is described below.



### Add New Item

Displays the Add Item window, which enables you to add new variables to the graph and the profile.

### Profile Manager

Displays the Profile Manager window, which enables you to load, unload, and perform other profile management tasks.

### Save Profile

When the current profile is unsaved, this menu item displays the Save Profile window, which enables you to save the profile.

### Save Profile As

Displays the Save Profile window, which enables you to save the profile under a new name.

### Export Data

Enables you to save Statistics data to a comma-separated value (.csv) file. Once the data is saved in a .csv file, it can be viewed through any text editor, spreadsheet, or database program.

Selecting this menu item displays the **Export statistics data** window, shown below, which enables you to navigate to the location where you want to save the .csv file. Go to “Exporting Statistics Data” on page 1 for more information.



Navigate to the location where you want to save the data file, enter a file name, and click Save.

### **Clear All Data**

Clears all current statistical data from the Chart View window and from the client. However, this does not clear or remove any data from the server (assuming that statistical data was being saved on the server in the first place - see Saving Profiles for more information). The **Clear All Data** menu item can be thought of as an "eraser" that wipes the client clean of all current statistical data but does not affect the server.

### **Auto Scale**

Immediately enables/disables auto scaling. When auto scaling is enabled, the vertical scale is automatically adjusted to accommodate and display the maximum data value received. When auto scaling is disabled, the vertical scale is specified by the Vertical Scale Max field in the Display tab of the Statistics Properties Window.

### **Table View**

Switches the display from Chart View to Performance Table View. Performance Table View displays a row of information for each polling cycle that has taken place for the variable selected in the Performance Summary Table.

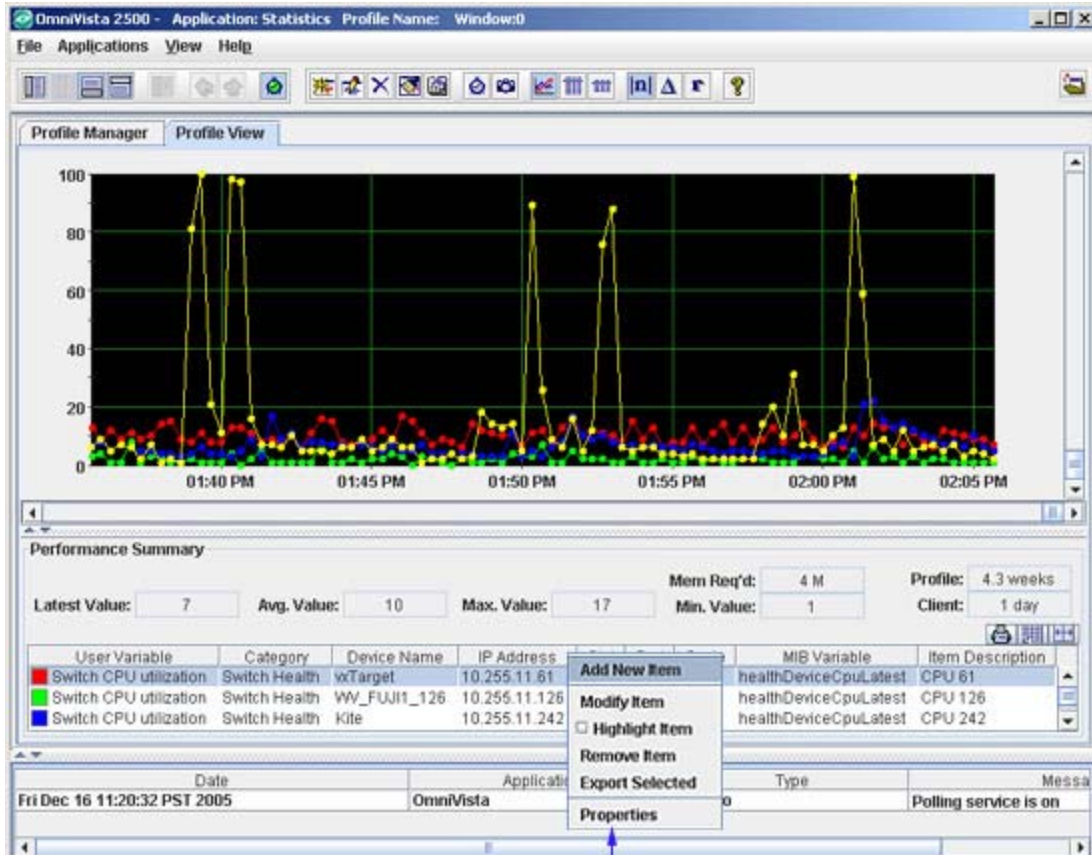
### **Properties**

Displays the Statistics Properties window, which enables you to specify properties for statistical data collection and display.

### **Performance Summary Table Pop-Up Menu**

You can click right on any variable or multiple variable in the Performance Summary Table to display the Performance Summary Pop-Up menu. Each menu item is described below.





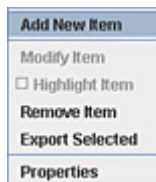
Right-click on a variable to display the pop-up menu.

### Add New Item

Displays the Add Item window, which enables you to add new variables to the graph and the profile.

### Modify Item

Displays the Edit Item window, which enables you to modify the scale, line width, line style, or color used to graph a variable. It also enables you to edit the variable's Item Description, which displays in the Performance Summary Table. If multiple variables are selected in the Performance Summary table, this option is not enabled in the pop-up as shown below:

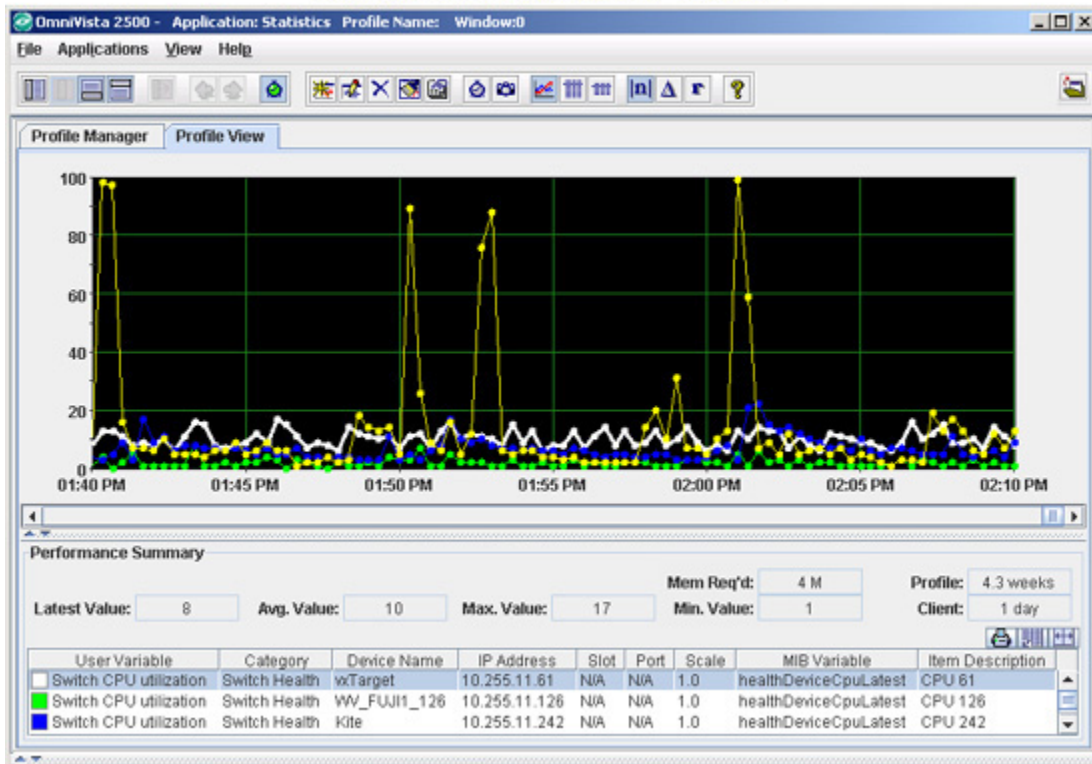


### Highlight Item

Highlights the selected variable in the Chart View Window. Highlighting an item is useful when the graph lines for multiple variables are closely bunched together, such as in the screen shown below. This option is not enabled when multiple variables are selected. When you highlight a

variable, the graph line for that variable is doubled in thickness and displayed in white. If necessary, the display is auto scaled to that variable's highest value.

### Example of a Highlighted Variable



### Remove Item

Immediately deletes the selected variable from the graph and from the profile.

### Export Selected

Save statistics data as a comma-separated value (.csv) file in the desired location. Selecting this menu item displays the Export Statistics Data window, which enables you to navigate to the location where you want to save the .csv file.

### Properties

Displays the Statistics Properties window, which enables you to specify properties for statistical data collection and display.

## Performance Table View

The **Performance Table View** list displays a row of data for each polling cycle that has taken place for the variable selected in the Statistics Legend Table. Each row displays the data as an absolute (raw) value, a delta value (the change since the last poll), and a rate-per-second value, along with a time stamp. Click the Performance Table View icon in the Statistics Toolbar to display a Performance Table for the variable selected in the Statistics Legend Table.

**Performance Table View**

Absolute Value	Delta Value	Rate Value	Date
10	0	0	Dec 16, 2005 2:15:20 PM
9	1	0	Dec 16, 2005 2:15:40 PM
8	1	0	Dec 16, 2005 2:16:00 PM
10	2	0	Dec 16, 2005 2:16:20 PM
9	1	0	Dec 16, 2005 2:16:40 PM
10	1	0	Dec 16, 2005 2:17:00 PM
16	6	0	Dec 16, 2005 2:17:22 PM
14	2	0	Dec 16, 2005 2:17:40 PM
14	0	0	Dec 16, 2005 2:18:01 PM
8	6	0	Dec 16, 2005 2:18:20 PM
8	0	0	Dec 16, 2005 2:18:40 PM
8	0	0	Dec 16, 2005 2:19:00 PM
9	1	0	Dec 16, 2005 2:19:20 PM
12	3	0	Dec 16, 2005 2:19:41 PM
13	1	0	Dec 16, 2005 2:20:00 PM
14	1	0	Dec 16, 2005 2:20:20 PM

**Performance Summary**

Latest Value: 7    Avg. Value: 10    Max. Value: 22    Mem Req'd: 4 M    Profile: 4,3 weeks  
 Min. Value: 2    Client: 1 day

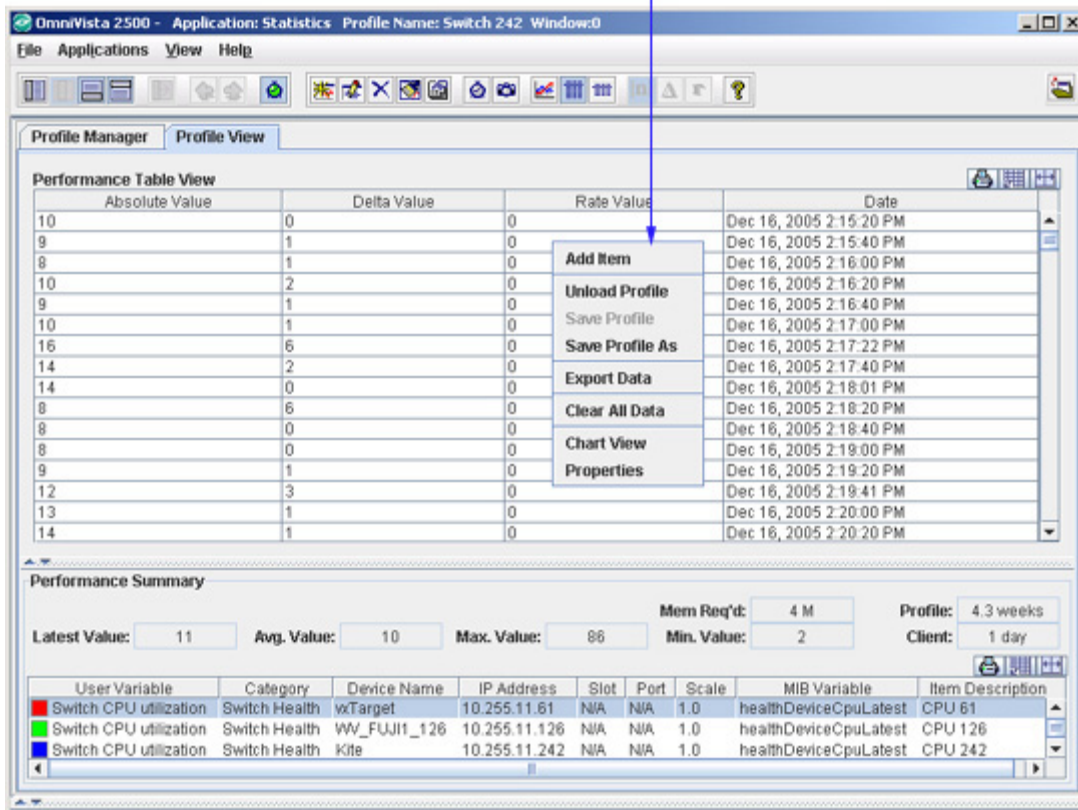
User Variable	Category	Device Name	IP Address	Slot	Port	Scale	MIB Variable	Item Description
Switch CPU utilization	Switch Health	wTarget	10.255.11.61	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 61
Switch CPU utilization	Switch Health	WW_FUJH_126	10.255.11.126	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 126
Switch CPU utilization	Switch Health	Kite	10.255.11.242	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 242

Data displayed is for the variable selected in the Performance Summary Table.

## Performance Table View Pop-Up Menu

Whenever a Performance Table is displayed, you can right-click anywhere in the table to display the Performance Table Pop-Up menu. Each menu item is described below.

Right-click to display the pop-up menu.



**Add Item**

Displays the Add Item window, which enables you to add new variables for monitoring.

**Profile Manager**

Displays the Profile Manager window, which enables you to load, unload, and perform other profile management tasks.

**Save Profile**

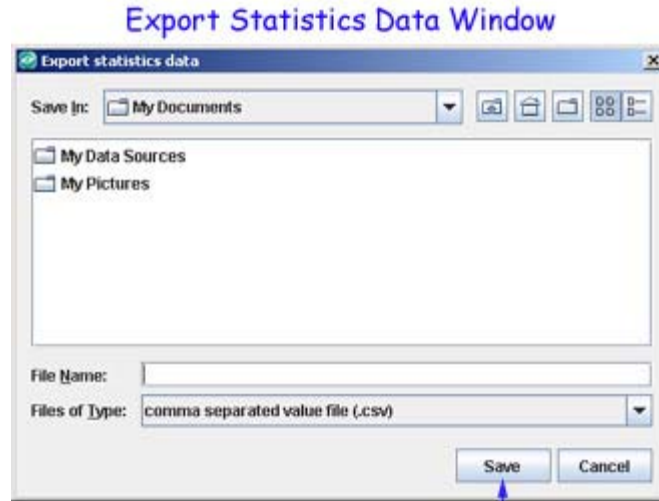
When the current profile is unsaved, this menu item displays the Save Profile window, which enables you to save the profile.

**Save Profile As**

Displays the Save Profile window, which enables you to save the profile under a new name.

**Export Data**

Enables you to save statistics data to a comma-separated value (.csv) file. Once the data is saved in a .csv file, it can be viewed through any text editor, spreadsheet, or database program. Selecting this menu item displays the Export Statistics Data Window, shown below, which enables you to navigate to the location where you want to save the .csv file. Note that when data is exported from Performance Table View, data for the entire profile is exported, not just data for the variable that is currently selected and displayed.



Navigate to the location where you want to save the data file, enter a file name, and click Save.

### **Clear All Data**

Clears all current statistical data from the Performance Table and from the client. However, this does not clear or remove any data from the server. The Clear All Data menu item can be thought of as an "eraser" that wipes the client clean of all current statistical data but does not affect data on the server.

### **Chart View**

Switches the display from Performance Table View to Chart View. Chart View displays statistical data as a line graph.

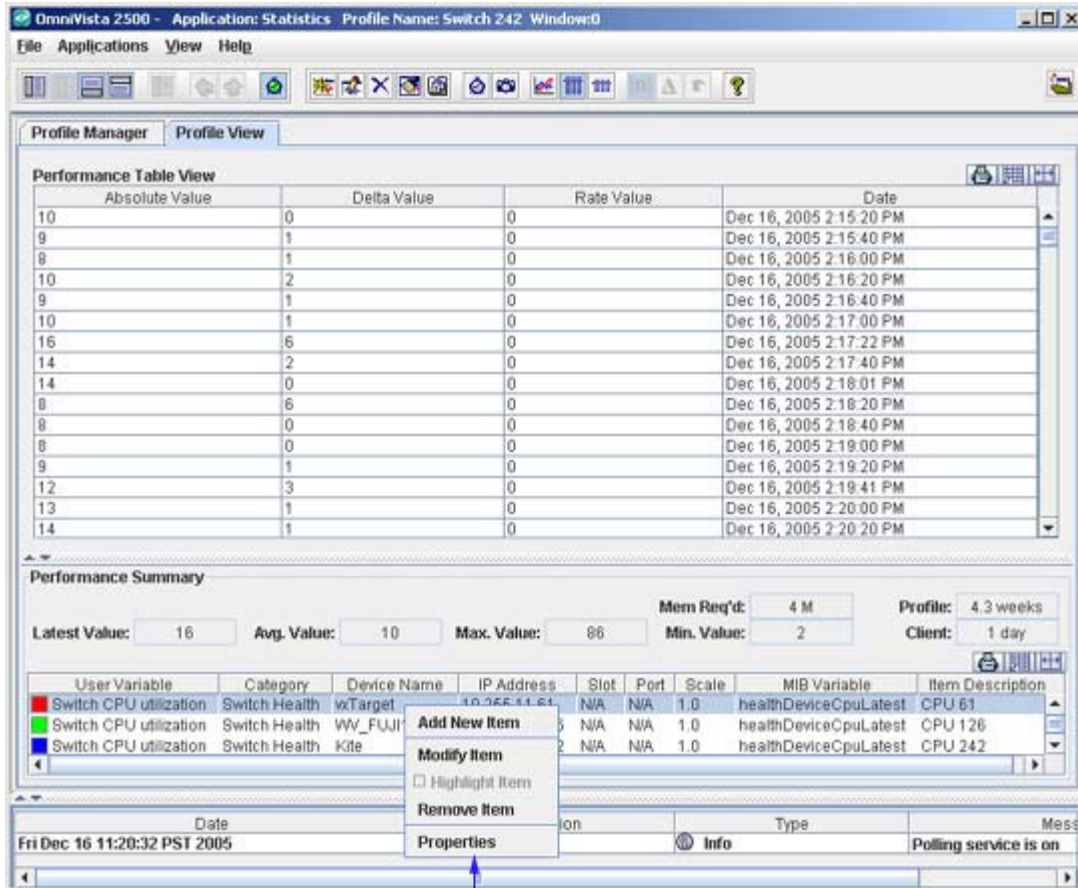
### **Properties**

Displays the Statistics Properties window, which enables you to specify properties for statistical data collection and display.

### **Statistics Legend Table Pop-Up Menu**

You can right-click on any variable in the Statistics Legend Table to display the Statistics Legend Table Pop-Up menu. Each menu item is described below.





Right-click on a variable to display the pop-up menu.

**Add New Item**

Displays the Add Item window, which enables you to add new variables for monitoring.

**Modify Item**

Displays the Edit Item window, which enables you to modify the scale, line width, line style, or color used to graph a variable when in Chart View. It also enables you to edit the variable's Description, which displays in the Statistics Legend Table.

**Highlight Item**

This menu item is not applicable to Performance Table View.

**Remove Item**

Immediately deletes the selected variable.

**Properties**

Displays the Statistics Properties window, which enables you to specify properties for statistical data collection and display.

## Summary Table View

The **Summary Table View** list displays one row of data for each variable in the Performance Summary Table. Each row provides the source device IP address, the variable name, the slot and port (if applicable) and the latest poll data for the variable as an absolute (raw) value, a delta value (the change since the last poll), and a rate-per-second value, along with a time stamp. Click the Summary Table View icon in the Statistics Toolbar to display the **Summary Table View** list.

**Summary Table View**

Source Device	Variable Name	Slot	Port	Absolute Value	Delta Value	Rate Value	Date
10.255.11.61	healthDeviceCpuLatest	N/A	N/A	11	3	0	Dec 16, 2005 4:49:00 PM
10.255.11.126	healthDeviceCpuLatest	N/A	N/A	6	3	0	Dec 16, 2005 4:49:00 PM
10.255.11.242	healthDeviceCpuLatest	N/A	N/A	3	0	0	Dec 16, 2005 4:49:00 PM
10.255.11.244	healthDeviceCpuLatest	N/A	N/A	5	9	0	Dec 16, 2005 4:49:00 PM

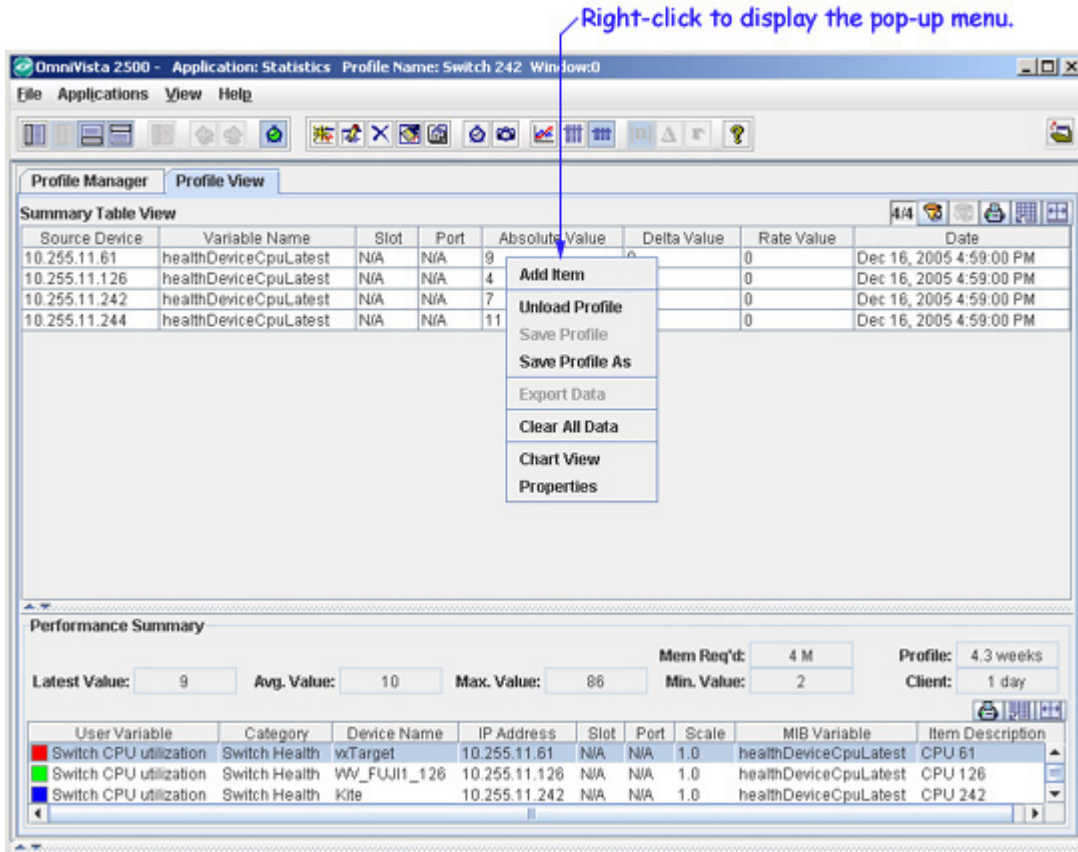
**Performance Summary**

Latest Value: 11    Avg. Value: 10    Max. Value: 86    Mem Req'd: 4 M    Profile: 4.3 weeks  
 Min. Value: 2    Client: 1 day

User Variable	Category	Device Name	IP Address	Slot	Port	Scale	MIB Variable	Item Description
Switch CPU utilization	Switch Health	wxTarget	10.255.11.61	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 61
Switch CPU utilization	Switch Health	WV_FUJII_126	10.255.11.126	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 126
Switch CPU utilization	Switch Health	Kite	10.255.11.242	N/A	N/A	1.0	healthDeviceCpuLatest	CPU 242

## Summary Table View Pop-Up Menu

Whenever a Summary Table is displayed, you can right-click anywhere in the table to display the Summary Table Pop-Up menu. Each menu item is described below.



### Add Item

Displays the Add Item window, which enables you to add new variables for monitoring.

### Profile Manager

Displays the Profile Manager window, which enables you to load, unload, and perform other profile management tasks.

### Save Profile

When the current profile is unsaved, this menu item displays the Save Profile window, which enables you to save the profile.

### Save Profile As

Displays the Save Profile window, which enables you to save the profile under a new name.

### Export Data

This menu item is not applicable to Summary Table View.

### Clear All Data

Clears all current statistical data from the Performance Table and from the client. However, this does not clear or remove any data from the server. The Clear All Data menu item can be thought of as an "eraser" that wipes the client clean of all current statistical data but does not affect data on the server.

### Chart View

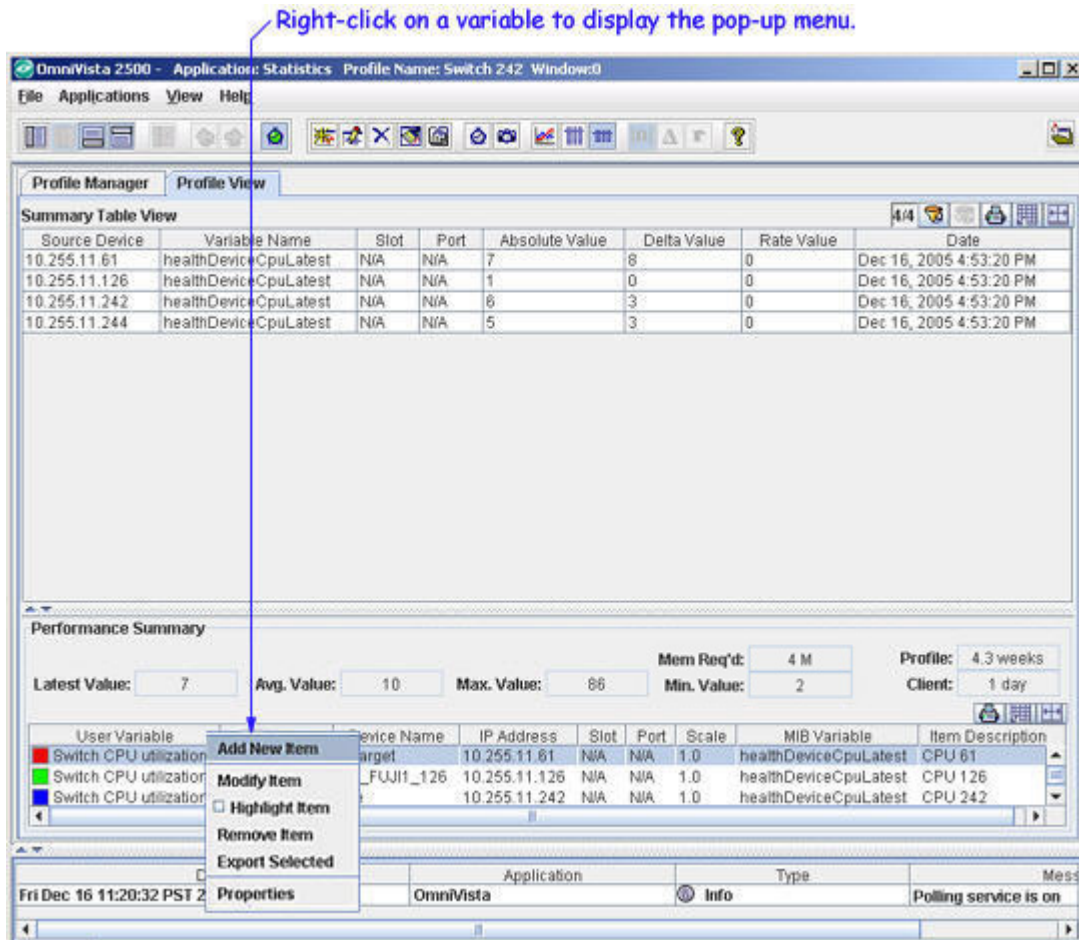
Switches the display from Performance Table View to Chart View. Chart View displays statistical data as a line graph.

### Properties

Displays the Statistics Properties window, which enables you to specify properties for statistical data collection and display.

### Performance Summary Pop-Up Menu

You can right-click on any variable or multiple variables in the Performance Summary Table to display the Performance Summary Pop-Up Menu. Each menu item is described below.



### Add New Item

Displays the Add Item window, which enables you to add new variables for monitoring.

### Modify Item

Displays the Edit Item window, which enables you to modify the scale, line width, line style, or color used to graph a variable when in Chart View. It also enables you to edit the variable's description, which displays in the Performance Summary Table. If multiple variables are selected in the Performance Summary table, this option is not enabled in the pop-up.

### Highlight Item

This menu item is not applicable to Summary Table View.

### Remove Item

Immediately deletes the selected variable.

### Export Selected

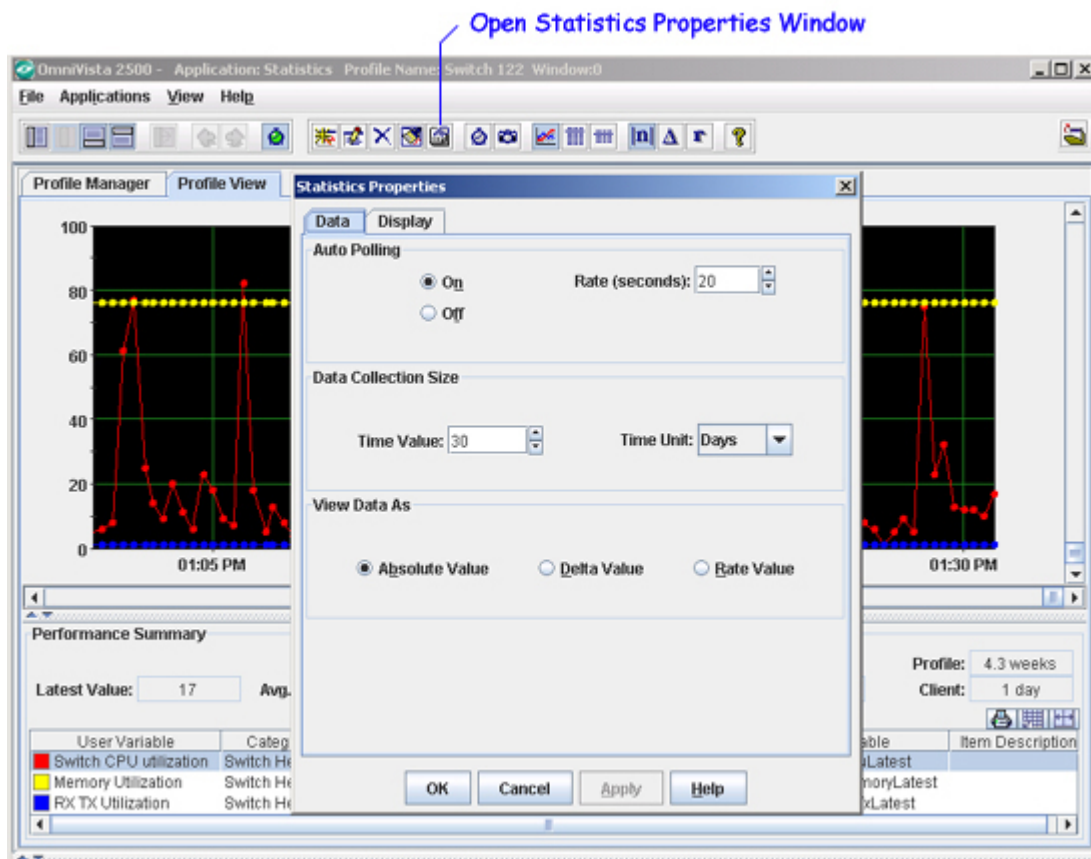
Displays the Export Statistics Data window, which enables you to save the statistics data of a profile in comma-separated variable (.csv) file in a preferred location.

### Properties

Displays the Statistics Properties window, which enables you to specify properties for statistical data collection and display.

## Statistics Properties: Data Tab

The **Statistics Properties** window, shown below, contains two tabs, Data and Display, that enable you to specify how statistical data is collected and displayed. Display the Statistics Properties Window by clicking the Properties icon in the Statistics Application Toolbar or selecting **Properties** on the Chart View, Performance Table, or Summary Table Pop-Up Menus. The sections below explain the fields in the Data tab. When you have set a field as desired, you can click the **Apply** button to apply your change. Clicking the **OK** button applies all changes and closes the window.





## Auto Polling

The Auto Polling fields are used to enable or disable polling for the profile that is currently loaded. When automatic polling is enabled, you can also specify the polling rate. To disable automatic polling, click the **Off** button. To enable automatic polling, click the **On** button. When automatic polling is enabled, specify the desired polling rate, in seconds, by entering the desired rate in the **Rate (seconds)** field, or clicking the arrows until the desired rate is displayed. The automatic polling rate can be set to any value from 1 to 60 seconds.

Enabling automatic polling is the same as commanding a profile to run on the server (which is done by selecting the profile in the Profile Manager window and clicking the **Run** button), or toggling polling on with the Toggle Polling On/Off icon on the Statistics Application Toolbar. Disabling automatic polling performs the same function as stopping a profile from running on the server (which is done by selecting the profile in the Profile Manager window and clicking the **Stop** button), or toggling polling off with the Toggle Polling On/Off icon on the Statistics Application Toolbar.

Whether automatic polling is enabled or disabled, you can always perform a manual poll. A manual poll enables you to gather data immediately, rather than waiting for the next polling cycle (if automatic polling is enabled). To perform a manual poll, click the Poll Manually icon on the Statistics Application Toolbar.

There may be times when you want to temporarily disable automatic polling. For example, if you wish to spend more time viewing and analyzing a certain group of statistics, automatic polling will interfere by updating these statistics when the next polling cycle is performed. To prevent such situations, you can toggle polling off and on with the Toggle Polling On/Off icon on the Statistics Application Toolbar.

**Note:** The Auto Polling settings are saved with the profile and will be reloaded with the profile.

## Data Collection Size

The Data Collection Size fields enable you to specify the amount of data (in days, hours, or minutes) that you want saved on the server. The maximum data collection size is 999 days. When the specified data collection size is reached, new incoming data will begin to overwrite the oldest data. For example, if you specify a data collection size of 23 hours, new incoming data will begin to overwrite the oldest data after 23 hours of data have been saved to the server.

**Note:** When the profile collection process is restarted, old data will be progressively erased and replaced with new data until, again, the profile's collection size is reached.

To specify the Data Collection Size, set the **Time Unit** field to **Hours**, **Days**, or **Minutes**, as desired, then set the **Time Value** field to the desired time period.

**Important Note:** The Data Collection Size settings are saved with the profile and will be reloaded with the profile. The Data Collection Size only increments during time periods when active polling is taking place.

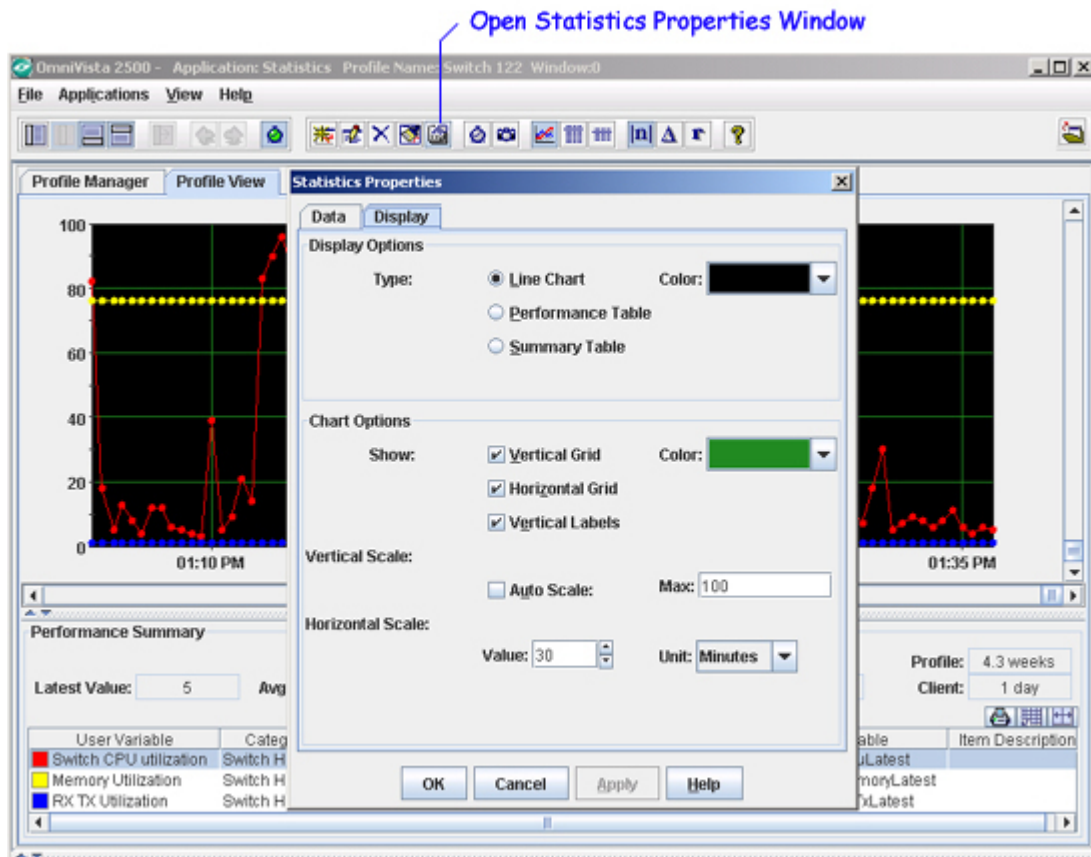
## View Data As

The View Data As fields enable you to specify the manner in which data is graphed. You can select the following:

- **Absolute Value** (the default). The absolute, or raw, value of the data will be graphed.
- **Rate Value**. Data will be graphed as rate per second.
- **Delta Value**. The change between the data obtained in the previous poll and the data obtained in the current poll will be graphed.

## Statistics Properties: Display Tab

The **Statistics Properties** window, shown below, contains two tabs, Data and Display, that enable you to specify how statistical data is collected and displayed. Display the **Statistics Properties** window by clicking the Properties icon in the Statistics Application Toolbar or selecting **Properties** on the Chart View, Performance Table, or Summary Table Pop-Up Menus. The sections below explain the fields in the Display tab. When you have set a field as desired, you can click the **Apply** button to apply your change. Clicking the **OK** button applies all changes and closes the window.



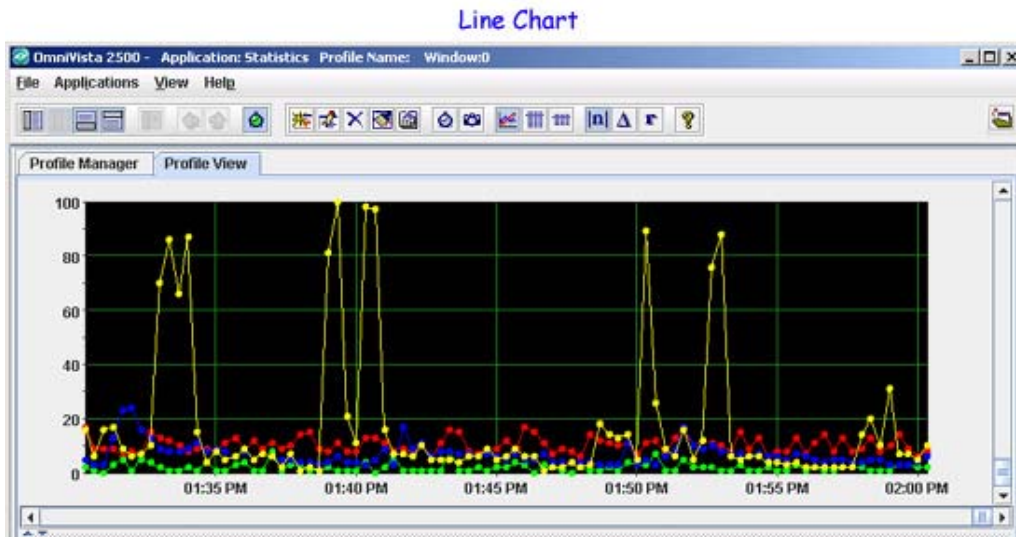
## Display Options

The Display tab enables you to specify how statistical data displayed.

### Type

The Type fields enable you to specify how statistical data is formatted and displayed. You can select the following:

**Line Chart.** Statistical data is displayed as a line chart. An example is shown below.



**Performance Table.** Statistical data is displayed as a Performance Table. An example is shown below. The Performance Table displays a row for each polling cycle that has taken place for the variable selected in the Statistics Legend Table. Each row displays the data as an absolute (raw) value, a delta value (the change since the last poll), and a rate-per-second value, along with a time stamp.

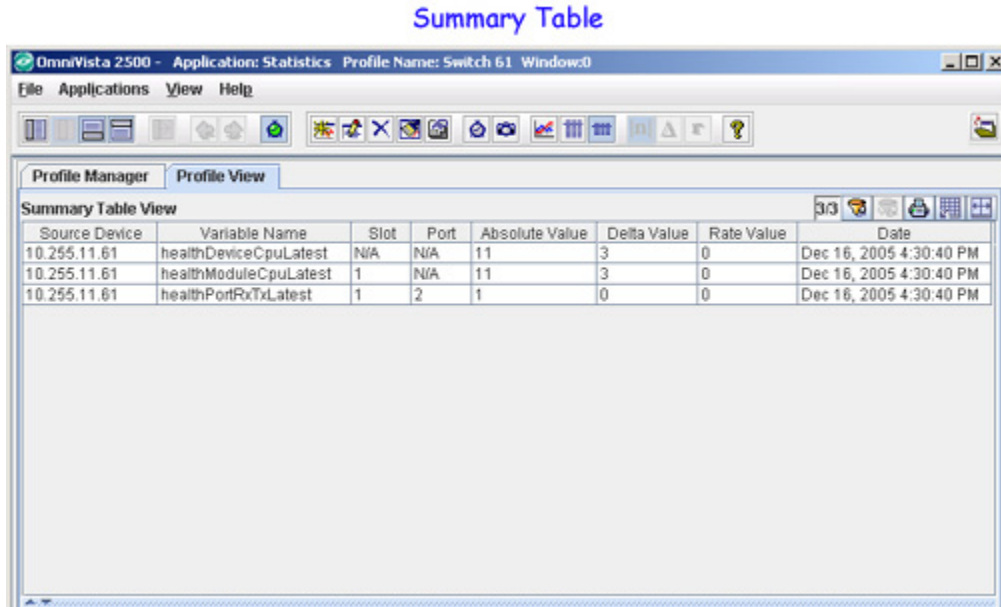
**Note:** There are no display options available for the Performance Table.

Performance Table

Absolute Value	Delta Value	Rate Value	Date
10	0	0	Dec 16, 2005 2:15:20 PM
9	1	0	Dec 16, 2005 2:15:40 PM
8	1	0	Dec 16, 2005 2:16:00 PM
10	2	0	Dec 16, 2005 2:16:20 PM
9	1	0	Dec 16, 2005 2:16:40 PM
10	1	0	Dec 16, 2005 2:17:00 PM
16	6	0	Dec 16, 2005 2:17:22 PM
14	2	0	Dec 16, 2005 2:17:40 PM
14	0	0	Dec 16, 2005 2:18:01 PM
8	6	0	Dec 16, 2005 2:18:20 PM
8	0	0	Dec 16, 2005 2:18:40 PM
8	0	0	Dec 16, 2005 2:19:00 PM
9	1	0	Dec 16, 2005 2:19:20 PM
12	3	0	Dec 16, 2005 2:19:41 PM
13	1	0	Dec 16, 2005 2:20:00 PM
14	1	0	Dec 16, 2005 2:20:20 PM

**Summary Table.** Statistical data is displayed in a table that is summarized by variable. One row is displayed for each variable being graphed. Only the result of the latest poll is displayed in each row. Each row displays the source device, the variable name, the slot and port, and provides the data as an absolute (raw) value, a delta value (the change since the last poll), and a rate-per-second value, along with a time stamp.

**Note:** There are no display options available for the Summary Table.



### Color

When **Line Chart** is selected, the **Color** box enables you to specify the background color of the graph window.

### Chart Options

The Chart Options fields enable you to specify the appearance of the graph window when the Display Option Type is set to **Line Chart**.

### Show

The Show fields enable you to specify the lines displayed in the Chart View Window. You can choose to display, or hide, the Vertical Grid, the Horizontal Grid, and the Vertical Labels. The **Color** box enables you to specify the color of the grid lines.

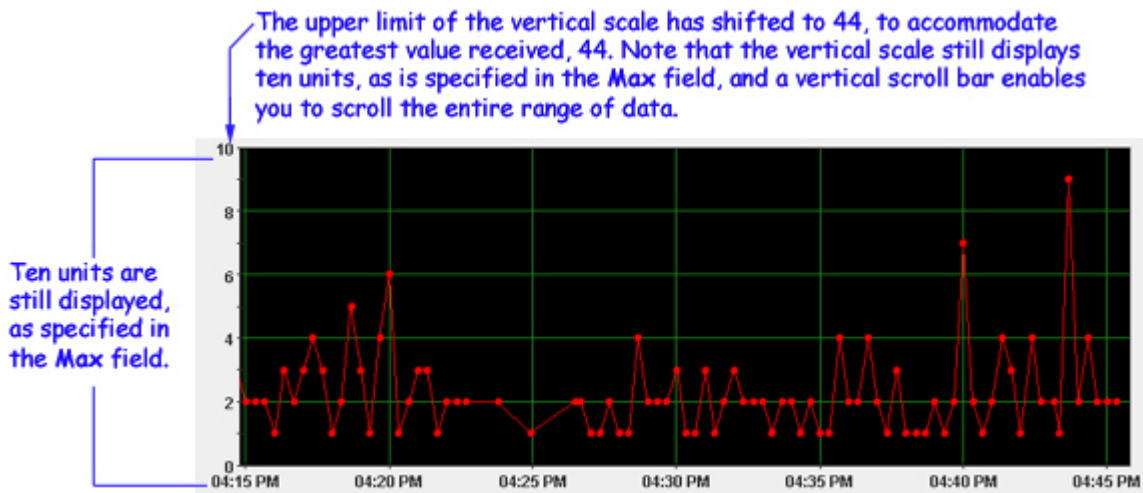
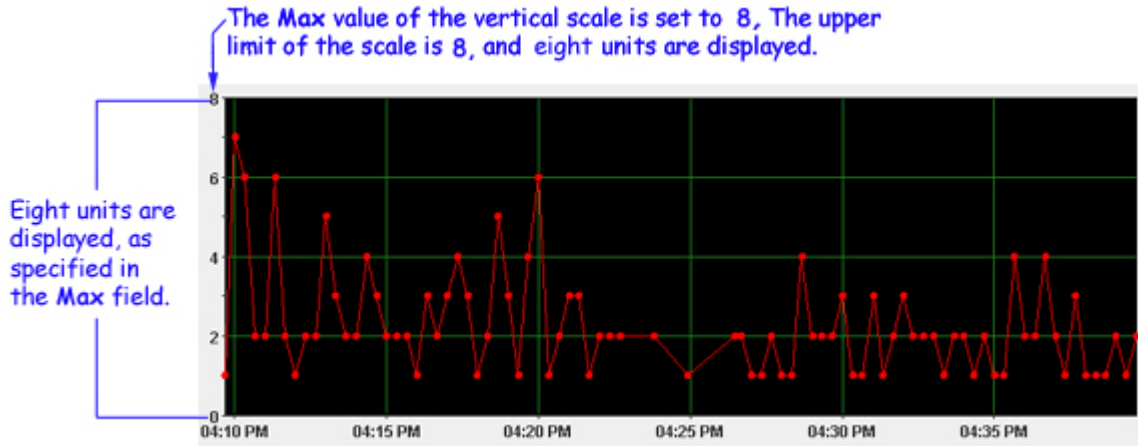
### Vertical Scale

The Vertical Scale fields enable you to specify how the vertical scale functions. You can check the **Auto Scale** checkbox to enable auto scaling. When auto scaling is enabled, the vertical scale is automatically adjusted to accommodate and display the maximum data value received.

If you want more control over the vertical scale, enter the value you want used as the upper limit of the scale in the **Max** field. In the screen shown below, the value in the **Max** field is 10, and 10 displays as the upper limit of the vertical scale. The vertical scale will remain at the **Max** value unless a monitored device returns a value that is greater than the **Max** value. If that occurs, the

upper limit of the vertical scale will be shifted to the greater value received, the vertical display will be shifted accordingly, and a vertical scroll bar will display. An example of this is shown below.

**Note:** The Vertical Scale settings are saved with the profile and will be reloaded with the profile.

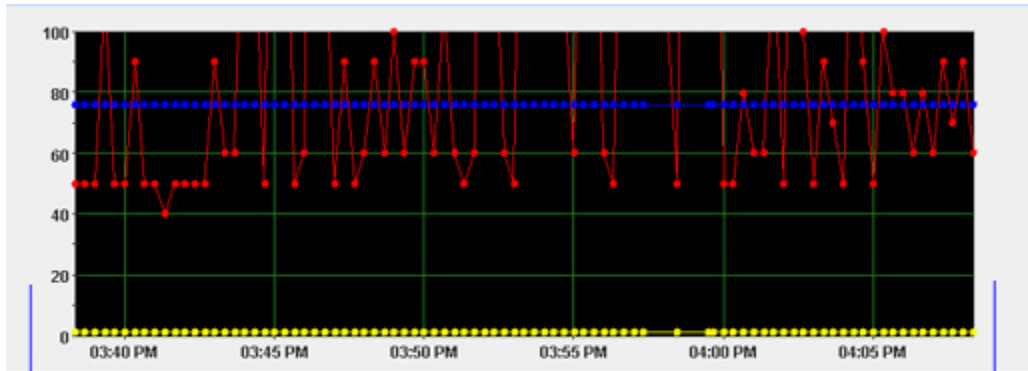


### Horizontal Scale

The Horizontal Scale fields enable you to specify the amount of data that is displayed in the graph window at any one time. (The horizontal scroll bar enables you to scroll over the entire body of collected data.) For example, in the screen shown below, the horizontal scale is set to five minutes, and five minutes of data is displayed in the graph window. The maximum value you can specify for the horizontal scale is 24 hours. To specify the horizontal scale, set the **Unit** combo box to **Hours**, **Minutes** or **Seconds**, as desired. Then enter the desired number of hours, minutes, or seconds in the **Value** field, or click the arrows until the desired value is displayed.

**Note:** The Horizontal Scale settings are saved with the profile and will be reloaded with the profile.





The horizontal scale is set to five minutes, and five minutes of data displays. The horizontal scroll bar enables you to scroll the entire body of collected data.

## Saving Profiles

When you select **Save Profile** (or **Save Profile As**) in the **File** menu or in the Chart View, Performance Table, or Summary Table Pop-Up Menus, the Save Profile (or Save Profile As) Window displays. When you save a profile, it continues to run on the server even when it is not loaded in the Statistics Application. "Run" means that the variables in the profile continue to be polled and the resulting statistical data continues to be saved on the server. When you save a profile, the following information is saved:

- The performance variables, line widths, line styles, line colors, and item descriptions specified via the Add Item window.
- The Auto Polling settings, Data Collection Size settings, Vertical Scale settings, and Horizontal Scale settings specified via the Statistics Properties window.
- The statistical data gathered for the profile.



A saved profile will continue to run on the server unless you:

- Disable polling for the profile via the Statistics Properties window
- Turn polling off for the profile via the Toggle Polling on/off icon on the Statistics Toolbar
- Stop the profile from running via the Profile Manager window (which disables polling for the profile).

Statistical data for a saved profile is saved on the server UNTIL polling for the profile is disabled or the profile is stopped (which disables polling for the profile). If polling for the profile is

disabled, the statistical data saved on the server is deleted unless the **Save Data File** checkbox on the Save Profile Window was enabled when the profile was saved. Note, however, that if you disable polling for a profile, gaps in the saved data will result.

A profile can only be saved once. Once it has been saved, any changes you make to the profile - for example adding or deleting variables, or altering the line widths, line styles, or colors used for graphing - are automatically saved to the profile without user intervention.

Note that saved profiles can be saved under a different name using the **Save Profile As** command on the **File** menu or on the Chart View, Performance Table, or Summary Table Pop-Up Menus. When you use the **Save Profile As** command, the profile's variables and graphing attributes (e.g., line weights, colors, polling rate) are saved under the new profile name but the statistical data from the original profile is not saved.

The Profile Manager enables you to rename saved profiles, delete them, or start/stop them running on the server (i.e., start/stop polling). Display the Profile Manager by selecting **Profile Manager** on the **File** menu or on the Chart View, Performance Table, or Summary Table Pop-Up Menus.

## How to Save a Profile

Follow the steps below to save a profile.

1. Enter a name for the profile in the **Profile Name** field. It is advisable to use meaningful names for profiles, so that glancing at a list of Profiles will enable you to distinguish one from another. For example, in the Save Profile Window shown above, the Profiles List combo box displays the profile name "CPU 100, 106, 116, 242." This means that the profile contains statistics for CPU utilization in switches 100, 106, 116, and 242.

Assigning meaningful names to profiles is important because there is no way of knowing the devices and variables contained in a profile without loading the profile into the Statistics Application. (When loaded, the devices and variables contained in the profile are listed in the Statistics Legend Table.) However, if you have many profiles, loading each one to determine its contents could be time-consuming.

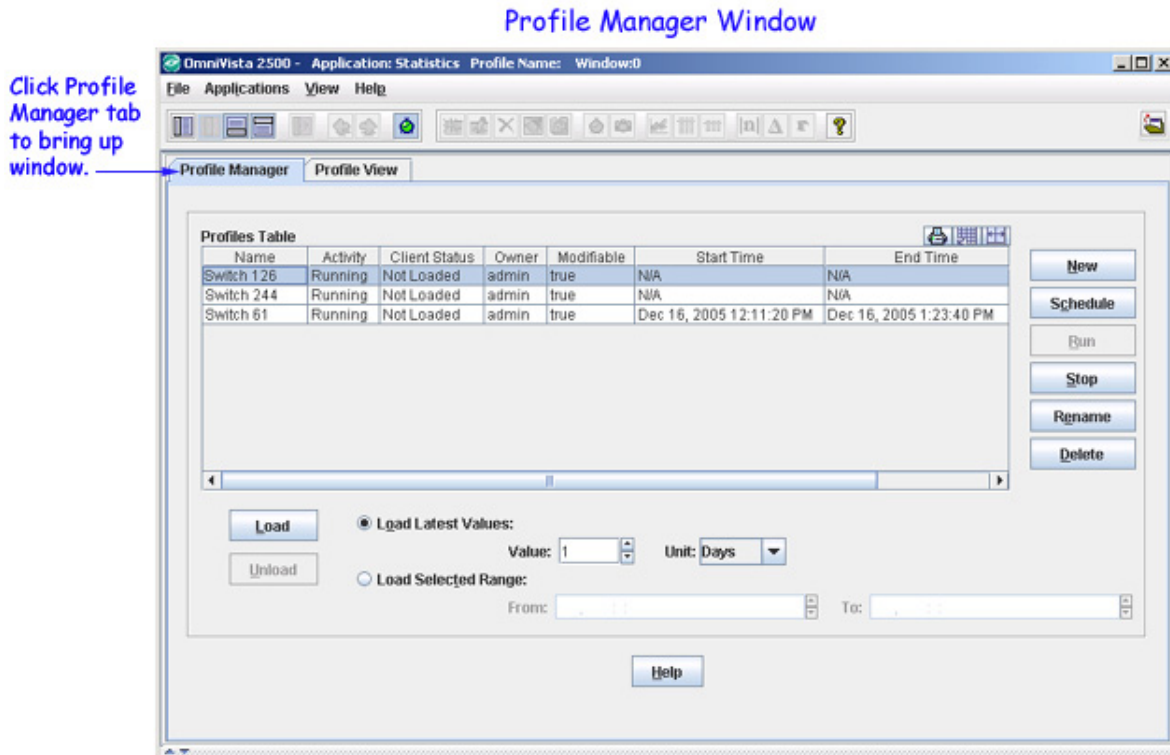
2. If you want statistical data saved on the server even if polling for the profile is disabled, check the **Save Data File** checkbox. If you do not enable **Save Data File**, statistical data that is saved on the server will be deleted if polling for the profile is disabled or if the profile is stopped from running (which disables polling).

**Note:** The data file that is saved to the server cannot be accessed or manipulated in any way. However, it can be exported to a comma separated value (.csv) file and then viewed through a text editor, spreadsheet, or database. An **Export Data** menu option is available on the **File** menu, on the Chart Window pop-up menu, and on the Performance Table pop-up menu.

3. Click **OK** to save the profile on the OmniVista server.

## The Profile Manager

The **Profile Manager** window lists all existing saved profiles and enables you to load/unload a selected profile on the client (in whole or in part), create a new profile, schedule a profile to run at a specific time, start/stop profiles running on the server, rename profiles, and to delete profiles from the server. (Note that profiles can be saved, saved as, or unloaded via commands on the **File** menu.)



### The Profiles Table

The Profiles Table lists all existing saved profiles. The fields in the Profiles Table are as follows:

#### Name

The user-assigned name of the profile.

#### Activity

This field will display **Running** if the profile is currently running on the server. It will display **Not Running** if the profile is not currently running on the server. Multiple profiles can be running on the server at any one time. The Profile Manager enables you to stop a profile running on the server by selecting the profile and clicking the **Stop** button. You can start profiles running on the server by selecting the profile and clicking the **Run** button. Note that when a profile is stopped and is not running on the server, polling for the profile is disabled.

#### Client Status

This field will display **Loaded** if the profile is currently loaded on the client. It will display **Not Loaded** if the profile is not currently loaded on the client. The Profile Manager enables you to load and unload profiles from the client by selecting the profile and clicking the **Load** or **Unload** button.

**Owner**

The login name of the user who created the profile.

**Modifiable**

This field displays **true** or **false** to indicate whether the user who is currently logged in can edit the profile. The user who created the profile can always edit the profile, as can other users that have the same security permissions. Users admin and netadmin (or users with equivalent security permissions) can edit any profile.

**Note:** Take care when editing a profile, as the profile may be open on more than one client. Any changes made to the profile will be reflected on all clients.

**Start Time**



The date and time when the profile started running on the server. The start time will display as **N/A** (not available) if the **Save Data File** checkbox on the Save Profile window was disabled when the profile was saved and if polling for the profile was disabled or the profile was stopped on the server (which disables polling)

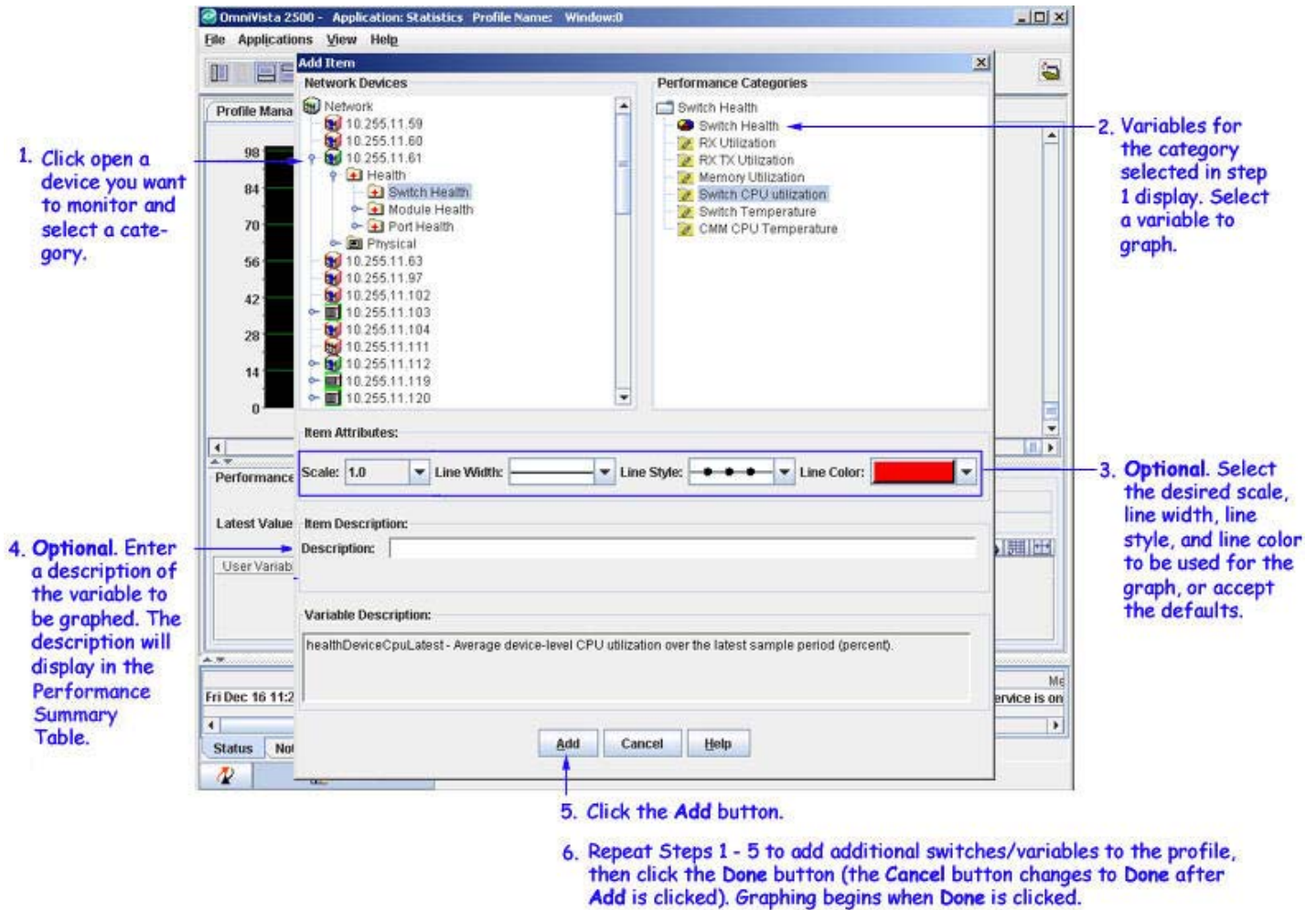
**End Time**

The date and time when the profile stopped running on the server. If this field displays **Current**, the profile is currently running on the server. The end time will display as **N/A** (not available) if the **Save Data File** checkbox on the Save Profile window was disabled when the profile was saved and if polling for the profile was disabled or the profile was stopped on the server (which disables polling).

**Creating a Profile**

Create a new profile by clicking the **New** button in the **Profile Manager** window. When you click the **New** button, the **Add Item** window appears. You can monitor several variables on one switch, or a single variable on a group of switches, or any combination you want to include in the profile. To create a profile, follow the steps in the graphic below.

**Note:** Most variables represent individual MIB objects and are identified by the  icon. For convenience, "group performance" variables have also been created. Group performance variables represent a collection of related MIB variables and are identified by the  icon.



If you add more than one variable to the profile, each new variable will be assigned a new line color; or you can select a line color from the **Line Color** drop-down list. You also have the option of entering a **Description** for each variable. Graphing starts when you click the **Done** button.

Go to the Statistics Properties Data window to configure the profile data properties, then go to the Statistics Properties Display window to configure the profile display properties. When you are ready to save the profile, select **Save Profile** from the **File** menu.

### Scheduling a Profile to Run

The maximum data collection size is 999 days. When the specified data collection size is reached, new incoming data will begin to overwrite the oldest data. For example, if you specify a data collection size of 23 hours, new incoming data will begin to overwrite the oldest data after 23 hours of data have been saved to the server. However, you can schedule profiles to start and stop at specific intervals by specifying a data collection size (e.g., 23 hours) and scheduling the profile to run regularly at a specified time. For example, you could specify a data collection size of 23 hours and schedule the profile to run at a specific time each week.

**Note:** The data collection size for a profile is configured using the Statistics Properties Data window.

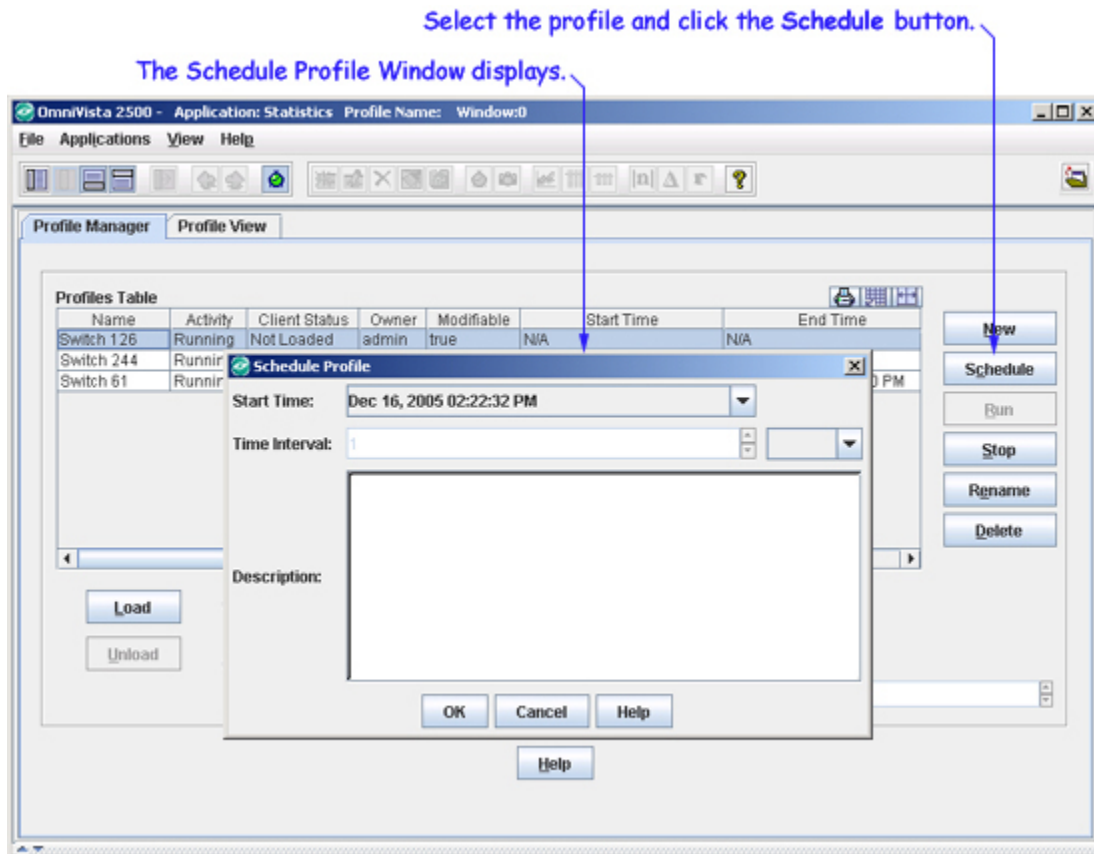


**Warning:** When the profile collection process is restarted, old data is progressively erased and replaced with new data when the profile's collection size is reached.

You can run a regularly-scheduled sampling of the profile. When a profile is set up with this scheduling feature, the profile will actually stop running when the data collection interval is reached. The profile will then automatically re-start at the specified interval.

To set up a schedule, select the profile and click on the **Schedule** button. On the Schedule Profile Window, set the beginning date and time (the default is the current date). To start the scheduling at a future date, click on the arrow in the Start Time field and select a date from the drop-down calendar. Select the interval from the Time Interval drop-down menu (minutes, hours, days or, weeks). Enter an interval in the Time Interval field (e.g., 1 day).

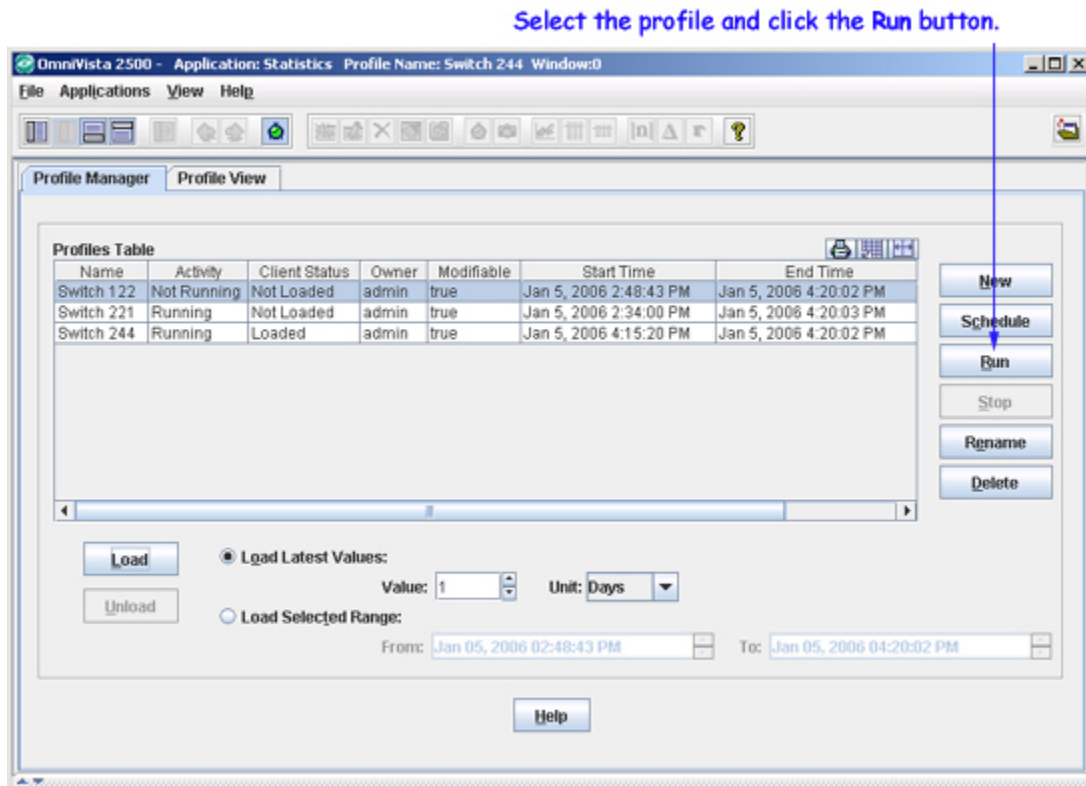
For example, if you schedule the profile to begin running on the current date, and set the Time Interval for 1 week, the profile would run until it reaches the maximum data collection interval for the profile (e.g., 23 hours), and then stop. The profile would then automatically re-start after 1 week and run again for 23 hours.



## Restarting a Profile

When a profile is not running on the server (that is, the variables in the profile are not being polled and no statistical data is being saved on the server), you can restart the profile by selecting it and clicking the **Run** button. When a profile is running on the server, the Activity field in the Profiles Table displays "Running."

**Note:** When a profile is loaded on the client, enabling automatic polling for the profile via the Statistics Properties window, or turning polling on for the profile via the Toggle Polling On/Off icon on the Statistics Application Toolbar, is equivalent to starting the profile via the Profile Manager's **Run** button.



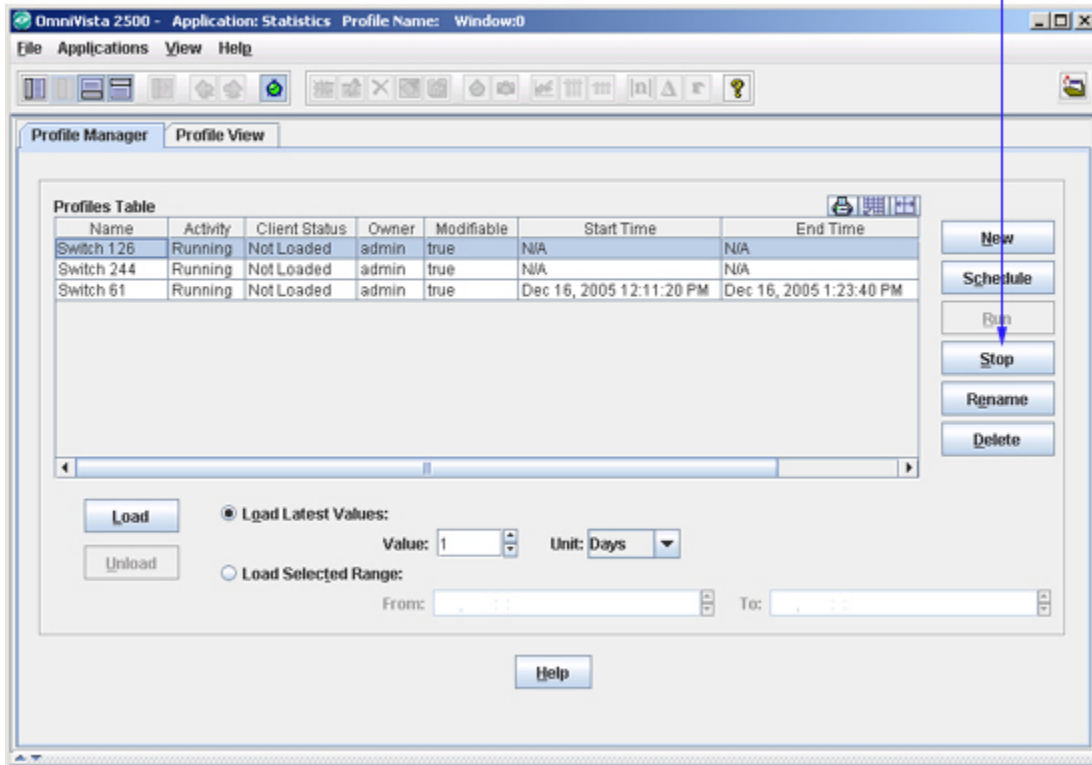
## Stopping a Running Profile

Whether profiles are loaded on the client or not, they continue to run on the server unless you stop them. "Run" means that the variables in the profile continue to be polled and the resulting statistical data is saved on the server. When you stop a profile, all polling of the profile's variables stops and statistical data is not collected. When a profile is stopped, all statistical data on the server is deleted, unless **Save Data File** on the Save Profile window was enabled when the profile was created. If **Save Data File** was enabled, statistical data on the server is not deleted when the profile is stopped. However, gaps in the saved data will result.

To stop a profile that is running on the server, select the profile and click the **Stop** button. When a profile is stopped, the Activity field in the Profiles Table displays "Not Running."

**Note:** When a profile is loaded on the client, disabling automatic polling for the profile via the Statistics Properties window, or turning polling off for the profile via the Toggle Polling On/Off icon on the Statistics Application Toolbar, is equivalent to stopping the profile via the Profile Manager's **Stop** button.

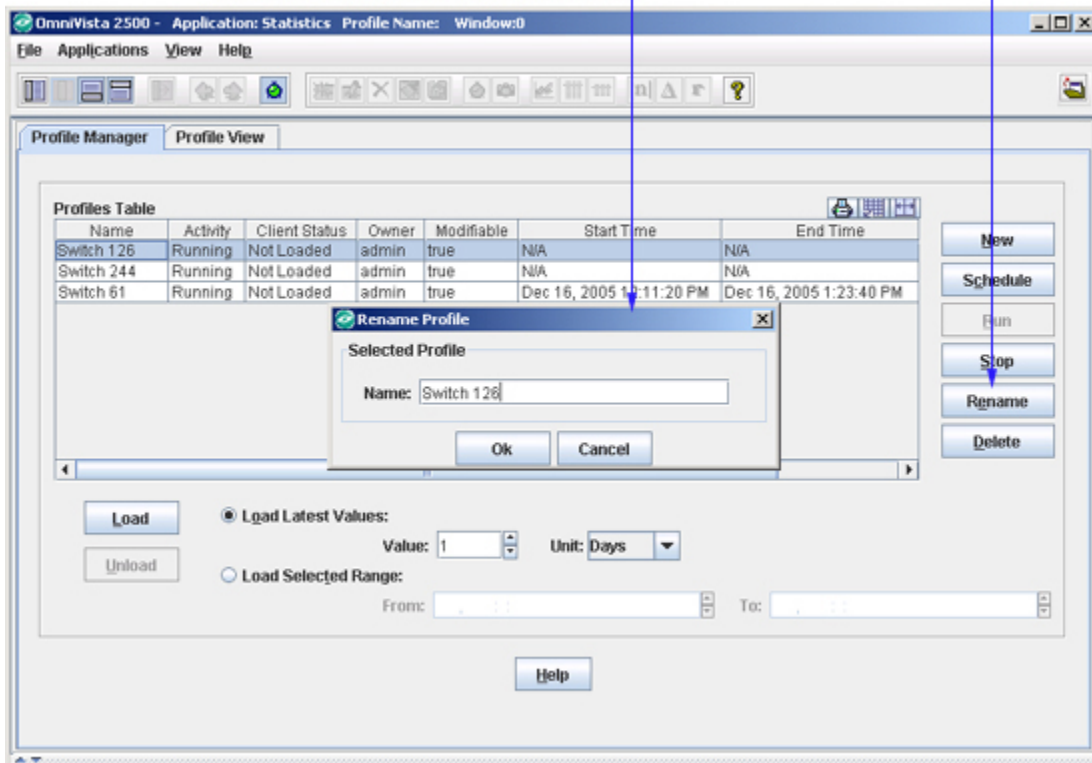
Select the profile and click the Stop button.



## Renaming a Profile

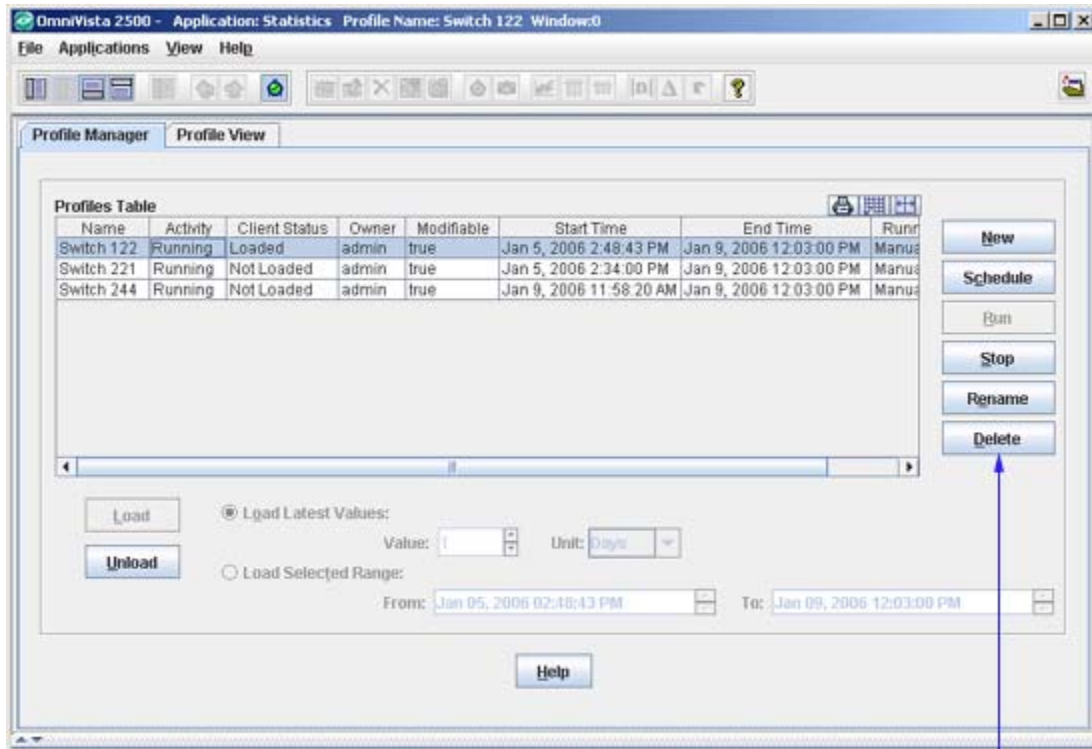
You can rename a profile by selecting the profile in the Profile Manger window and clicking the **Rename** button. The Rename Profile Window displays, as shown below. Enter the new profile name in the **Name** field and click the **OK** button. The profile is renamed on the client and on the server. You can only rename profiles via the Profile Manger Window.

Select the profile you want to rename and click the Rename button.  
The Rename Profile window displays.



## Deleting a Profile

You can delete a profile from the server (and from the client) by selecting the profile in the Profile Manager Window and clicking the **Delete** button. You can delete a profile when it is running (or not running) and when it is loaded on the client (or not loaded on the client). You can only delete profiles via the Profile Manger Window. Note that deleting a profile also deletes all statistical data associated with the profile.



Select the profile you want to delete and click the Delete button.

## Loading a Profile

You can load any profile onto the client (as long as it was previously saved). To load a profile, select the profile and click the **Load** button. If another profile is currently loaded, it is automatically unloaded and the requested profile is loaded onto the client. If an unsaved profile is currently loaded, you are asked if you wish to save the profile before it is unloaded. The fields below enable you to specify the profile data that you want loaded.

### Load Latest Values (the default)

These fields enable you to load the latest data collected on the server. Click the **Load Latest Values** button if it is not already selected, set the **Unit** field to **Minutes**, **Hours**, or **Days**, as desired, and set the **Value** field to the desired time value. Click the **Load** button. You can load a maximum of 999 days worth of data.

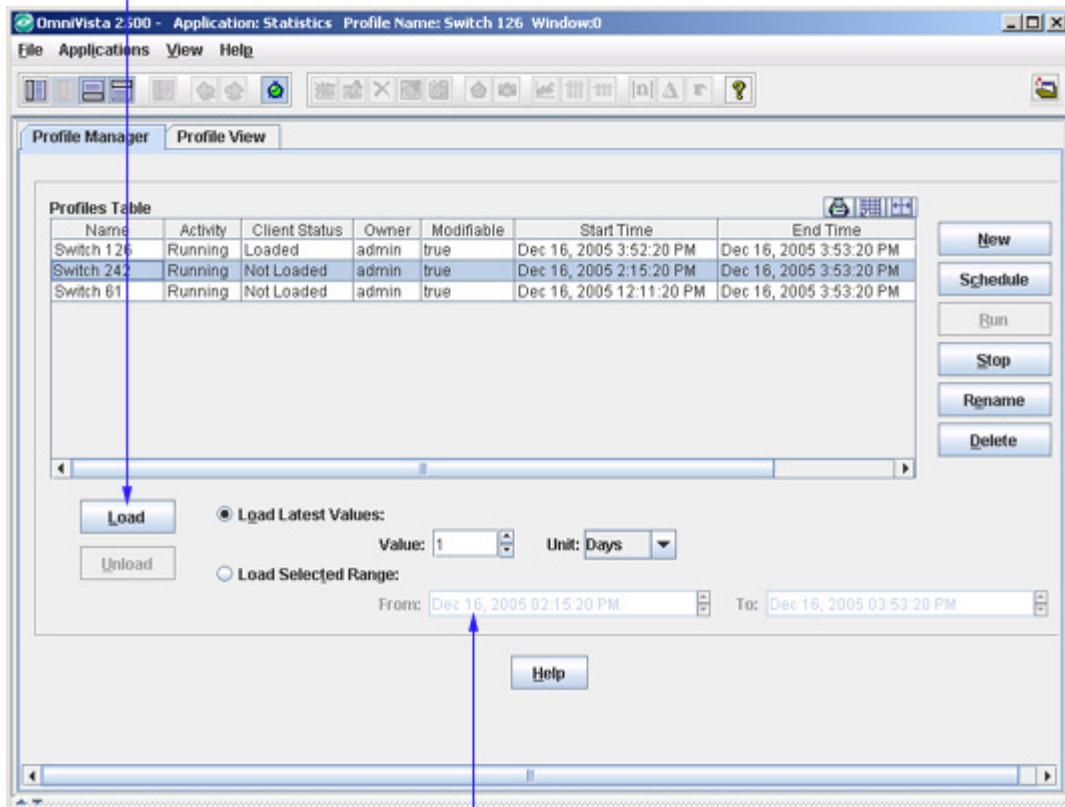
**Note:** The **Load Latest Values** fields default to the data collection size for the profile. Remember that only time periods when active polling is taking place "count" toward the Data Collection Size, so gaps in the data will occur if polling was disabled.

### Load Selected Range

These fields enable you to load profile data from a specified time period. Click the **Load Selected Range** button and set the **From** and **To** fields to the desired date and time before you click **Load**.



Select the profile and click the Load button.



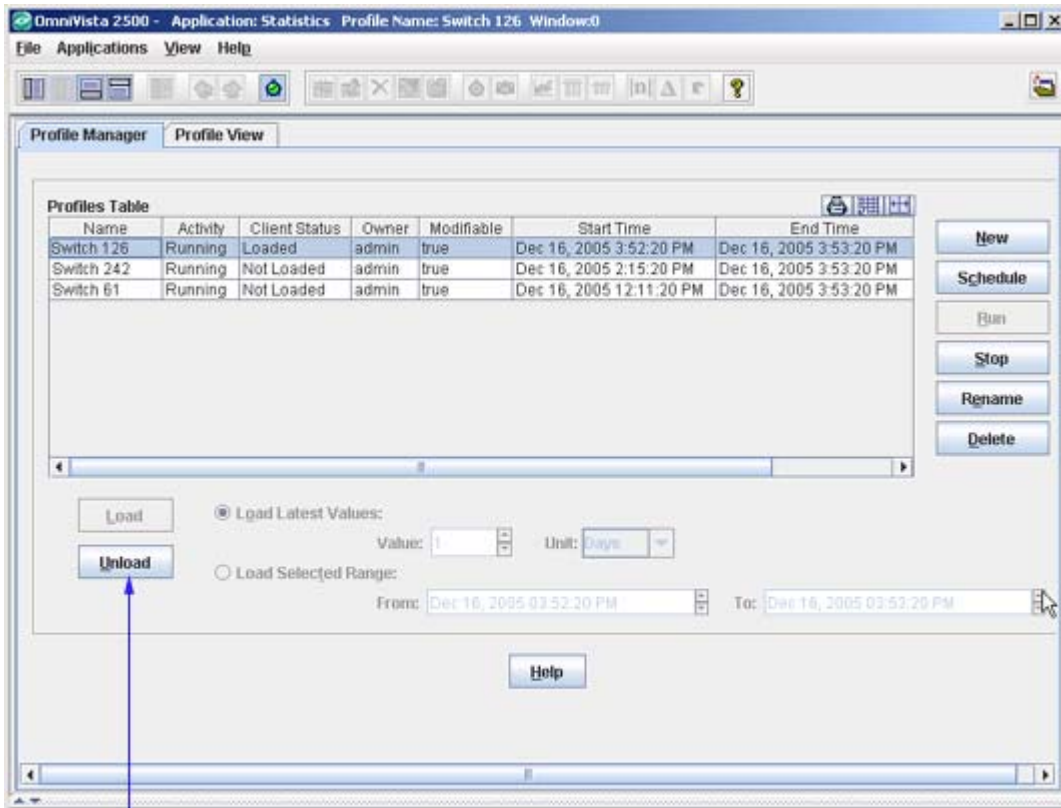
These fields enable you to specify the profile data that will be loaded.

**Load Latest Values.** These fields enable you to specify how much of the most recent profile data - specified in days, hours, or minutes - will be loaded.

**Load Selected Range.** These fields enable you to load profile data from any specified time period.

## Unloading a Profile

You can unload a profile from the client by selecting the profile that is currently loaded on the client in the Profile Manager window and clicking the **Unload** button. The profile is immediately unloaded from the client and the Chart View Window closes. The profile continues to run on the server, however, and can be reloaded when desired. You can also unload the current profile by selecting **Unload Profile** on the **File** menu.

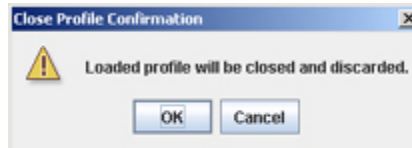


Select the profile that is currently loaded and click the Unload button.

Note that if you attempt to unload an unsaved profile, the following message displays:



Click **Yes** to save the profile before unloading it. The Save Profile window will display, which enables you to assign a name to the profile and perform the save operation. Click **No** to unload the profile without saving it first. The following message will display:



Click **OK** to close and discard the profile, but note that once you have done this there is no way to recover the profile.

## Viewing Multiple Profiles

A client can only have one Statistics profile open at a time. However, it is possible to view two or more profiles simultaneously by running the Statistics Application in additional instances of OmniVista.

1. With the first profile displayed, right-click on the Statistics icon in the Task Bar and select **Run in new Window**.

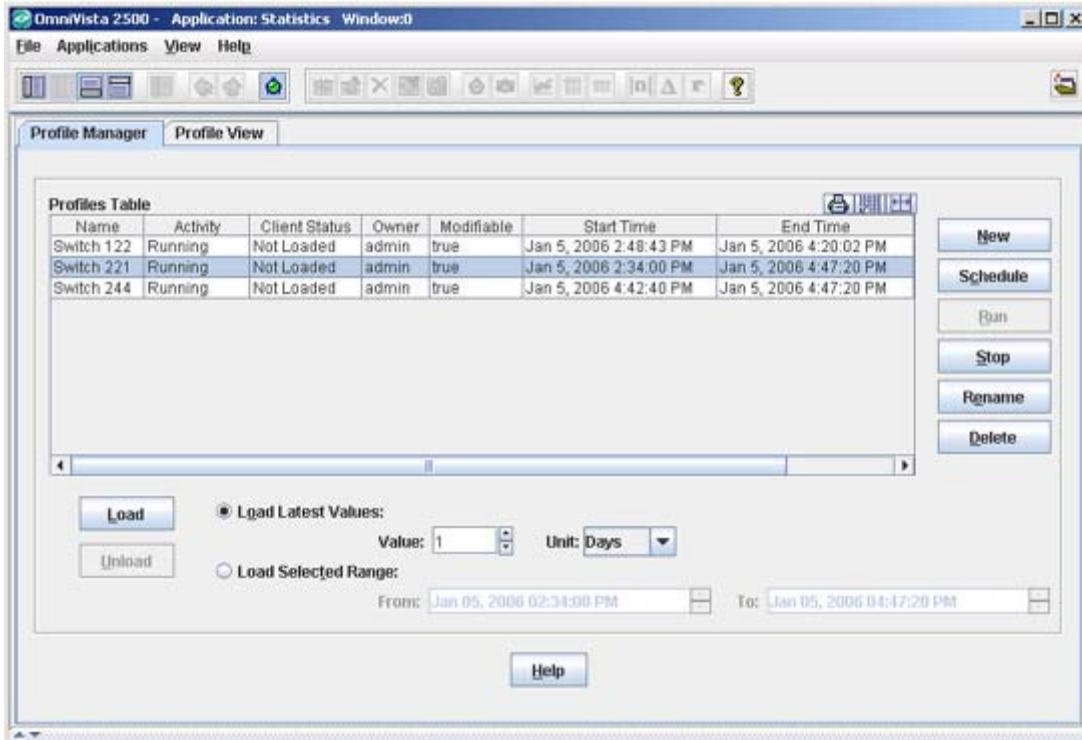
Right-click on Statistics icon.

Run in new Window  
Run in current Window

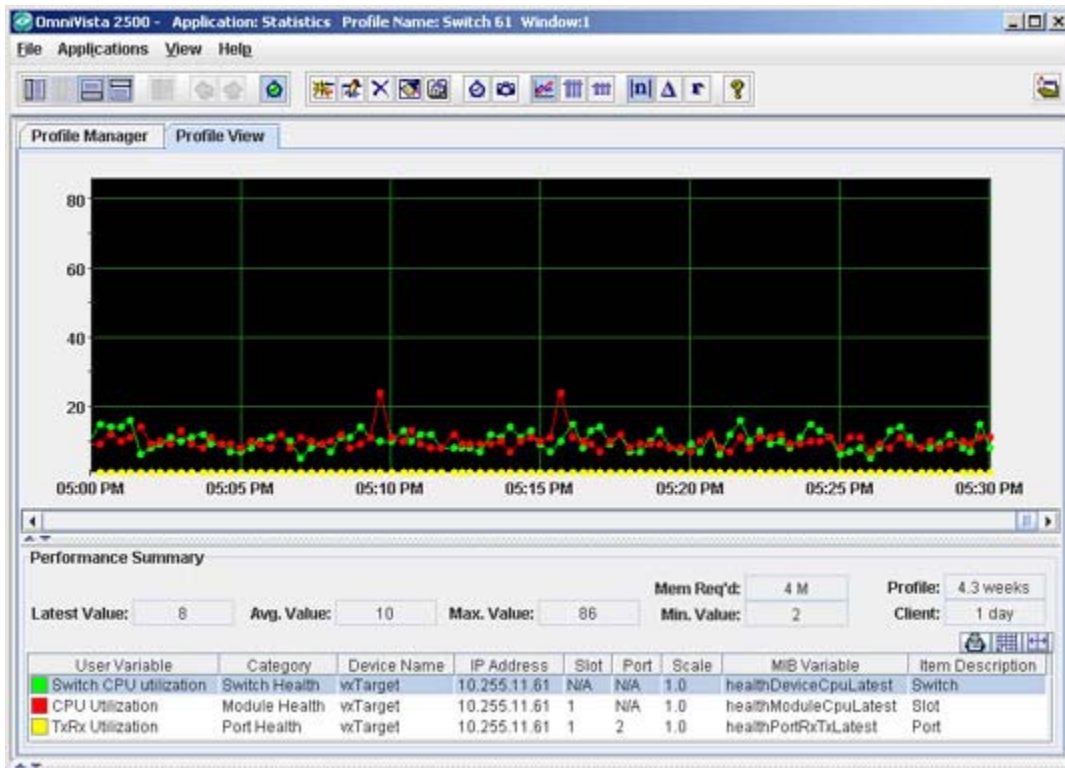
Performance Summary

Latest Val...	9	Avg. Value:	10	Max. Value:	86	Mem Req'd:	4 M	Profile:	4.3 weeks
						Min. Value:	2	Client:	1 day
User Variable	Category	Device Name	IP Address	Slot	Port	Scale	MIB Variable		
Switch CPU utilization	Switch Health	wTarget	10.255.11.61	N/A	N/A	1.0	healthDeviceCpuLatest		
Switch CPU utilization	Switch Health	WV_FUJH_126	10.255.11.126	N/A	N/A	1.0	healthDeviceCpuLatest		
Switch CPU utilization	Switch Health	Kite	10.255.11.242	N/A	N/A	1.0	healthDeviceCpuLatest		

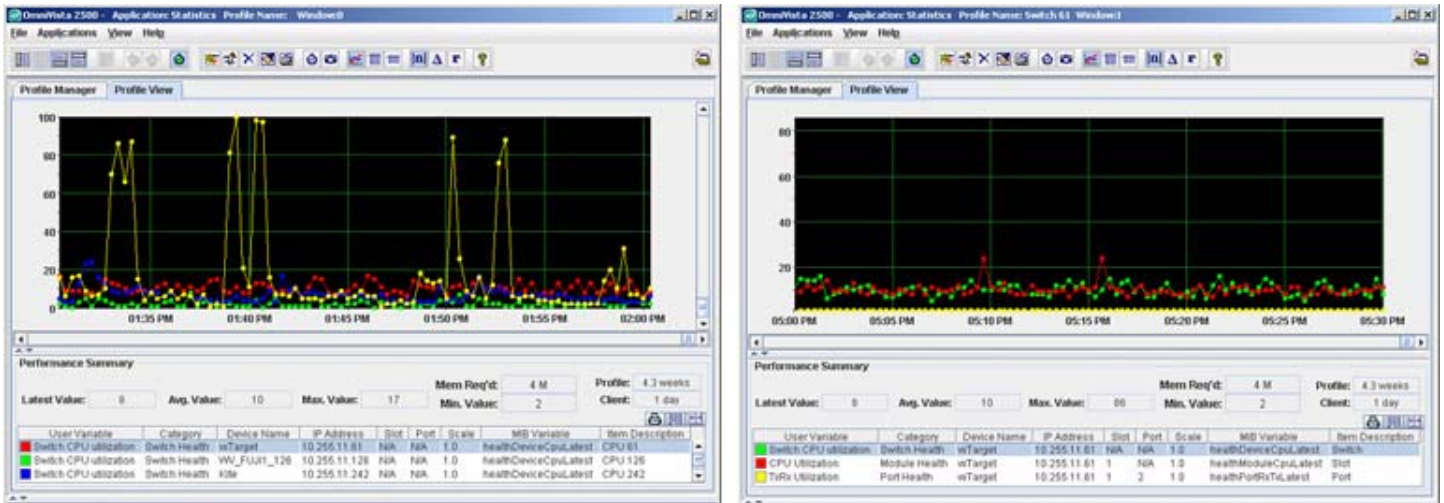
When you select **Run in new Window**, the **Profile Manager** window opens in a new instance of OmniVista, as shown below. Note that additional instances of OmniVista open with the Taskbar, Toolbar, and Status Panel hidden. To display these items, go to the **View** menu and select the item(s) you want to display.



2. Select the profile you want to open in the new instance of OmniVista, and then click **Load**. Data will start displaying in the new window.



3. Resize the windows, so you can see both charts at the same time.



Note that any changes you make to a profile in one instance of OmniVista will be reflected in the other instances of OmniVista. For example, if you change one of the line colors in one window, and then open that profile in the second window, you will see the new line color.