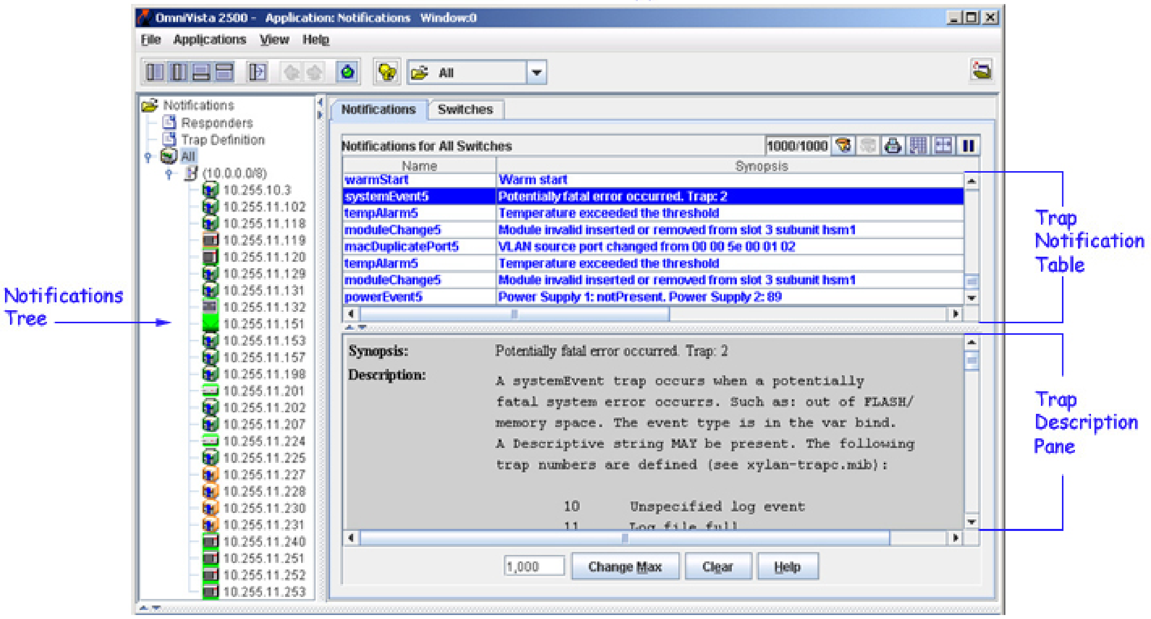
Getting Started with Notifications

The Notifications application is used to monitor switch activity and configure trap management tasks, including:

- Monitoring switch activity through the Trap Notifications Table.
- Handling basic Trap Management tasks, such as changing the maximum number of notifications displayed on the client, clearing entries from the Trap Notifications table, acknowledging a trap, exporting traps, etc.
- Configuring Automatic Trap Responders. OmniVista can be configured to send an e-mail or run an external process on the OmniVista server when a specified trap is received. The trap can be specified by severity level or through the use of filters.

The Notifications Application



Notifications for All Switches

Name	Synopsis
warmStart	Warm start
systemEvent5	Potentially fatal error occurred. Trap: 2
tempAlarm5	Temperature exceeded the threshold
moduleChange5	Module invalid inserted or removed from slot 3 subunit hsm1
macDuplicatePort5	VLAN source port changed from 00 00 5e 00 01 02
tempAlarm5	Temperature exceeded the threshold
moduleChange5	Module invalid inserted or removed from slot 3 subunit hsm1
powerEvent5	Power Supply 1: notPresent. Power Supply 2: 89

Synopsis: Potentially fatal error occurred. Trap: 2

Description:

```
A systemEvent trap occurs when a potentially
fatal system error occurrs. Such as: out of FLASH/
memory space. The event type is in the var bind.
A Descriptive string MAY be present. The following
trap numbers are defined (see xylan-trapc.mib):

         10      Unspecified log event
         11      Log file full
```

Notifications Tree

Use the Notifications tree to navigate through the application and find the appropriate window to work from. The Notifications application has three main windows:

- Click the **Responders** icon to display the Automatic Trap Responder window. This window is used to configure the response (if any) that you want OmniVista to take when a specified trap is received on the OmniVista server. The trap can be specified by severity level or through the use of filters. The response can take the form of an e-mail sent to a user-specified address and/or the execution of an external program or script on the OmniVista server.
- Click the **Trap Definition** icon to display the Trap Definitions window. This window displays a list of all supported traps, as defined in the MIBs. It gives a brief description of each trap and allows you to edit a trap's severity level and trap synopsis if desired.
- Click the **All** icon to display the Trap Notifications window displaying the Notifications tab and the Switches tab. The Trap Notifications tab displays a list of traps received from switches that are visible to the logged-in user. The list can be configured to display notifications for a single switch,

or for all switches. To learn how to configure switches to send traps, see the Configure Traps Help. The Switches tab displays a list of all the discovered switches in a tabular form.

Pop-Up Menus

Pop-Up Menus are available in the Trap Notifications tree and in the Trap Notifications table. These menus are used to perform functions within the Notification application (e.g., configure traps, acknowledge traps).

Using Pop-Up Menus

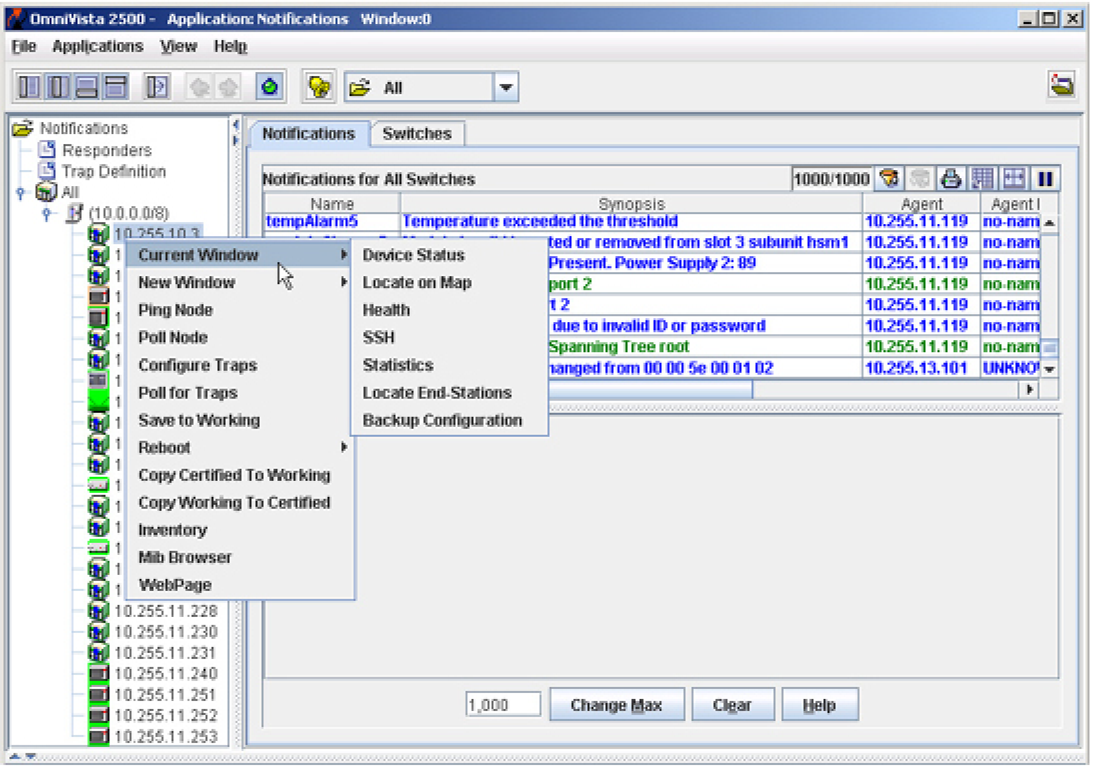
Pop-up menus are used to perform functions within the Notification application (e.g., configure traps, acknowledge traps). Pop-up menus are available in the Notifications Tree and in the Trap Notifications Table.

> **Note**: A new feature starting from Release 2.4 allows you to manually poll an individual switch by right-clicking the switch in the Notifications tree or the Notifications table and selecting **Poll for Traps** from the pop-up menu. The switch will immediately be polled for traps. See the Topology application Help for a description of each pop-up menu item.

Notifications Tree Pop-Up Menu

Right-click any switch in the Notifications tree to display the pop-up menu, shown below. Different menu items display on the pop-up menu for AOS switches, XOS switches, and third-party switches. Refer to the Topology application Help for information on individual pop-up menu commands.

The Notifications Tree Pop-Up Menu



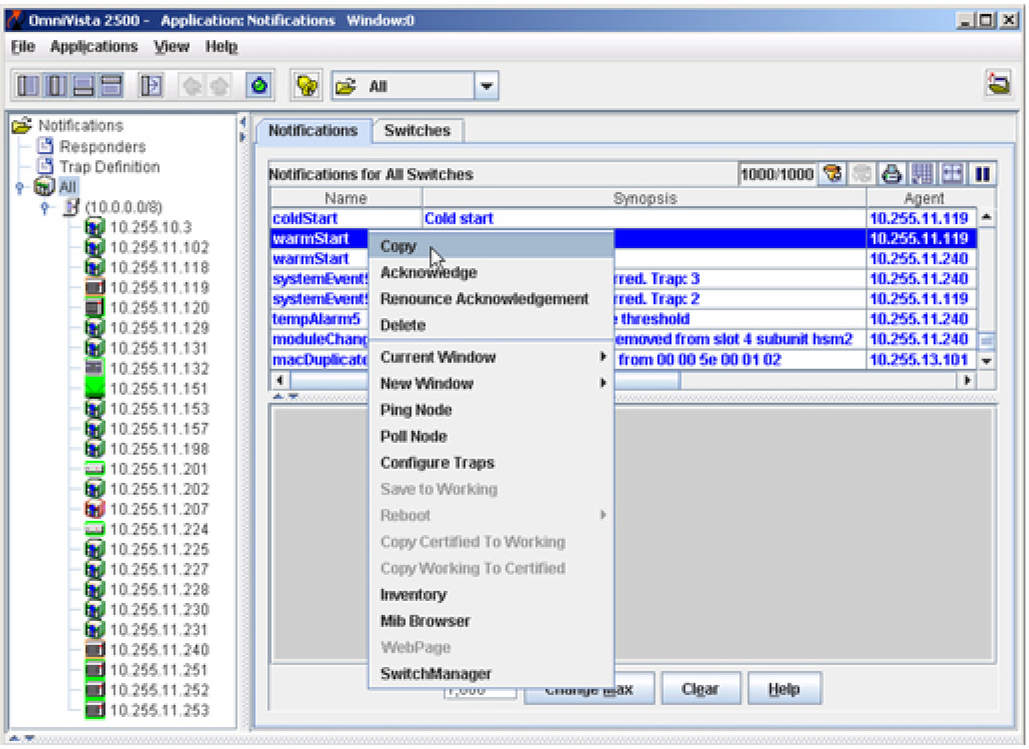
Notifications for All Switches 1000/1000

Name	Synopsis	Agent	Agent I
tempAlarm5	Temperature exceeded the threshold	10.255.11.119	no-nam
	ted or removed from slot 3 subunit hsm1	10.255.11.119	no-nam
	Present. Power Supply 2: 89	10.255.11.119	no-nam
	port 2	10.255.11.119	no-nam
	t 2	10.255.11.119	no-nam
	due to invalid ID or password	10.255.11.119	no-nam
	Spanning Tree root	10.255.11.119	no-nam
	hanged from 00 00 5e 00 01 02	10.255.13.101	UNKNO'

Trap Notifications Table Pop-Up Menu

Right-click any notification (or group of notifications) to display the pop-up menu, shown below. Different menu items are displayed in the pop-up menu for AOS switches, XOS switches, and third-party switches. The **Copy**, **Acknowledge**, **Renounce Acknowledgement**, and **Delete** menu items are used to manage traps. Click here for further information on these menu items. Refer to the Topology application Help for information on all other pop-up menu commands.

The Trap Notifications Table Pop-Up Menu



Notifications for All Switches 1000/1000

Name	Synopsis	Agent
coldStart	Cold start	10.255.11.119
warmStart		10.255.11.119
warmStart		10.255.11.240
systemEvent!	rred. Trap: 3	10.255.11.240
systemEvent!	rred. Trap: 2	10.255.11.119
tempAlarm5	e threshold	10.255.11.240
moduleChang	emoved from slot 4 subunit hsm2	10.255.11.240
macDuplicat	from 00 00 5e 00 01 02	10.255.13.101

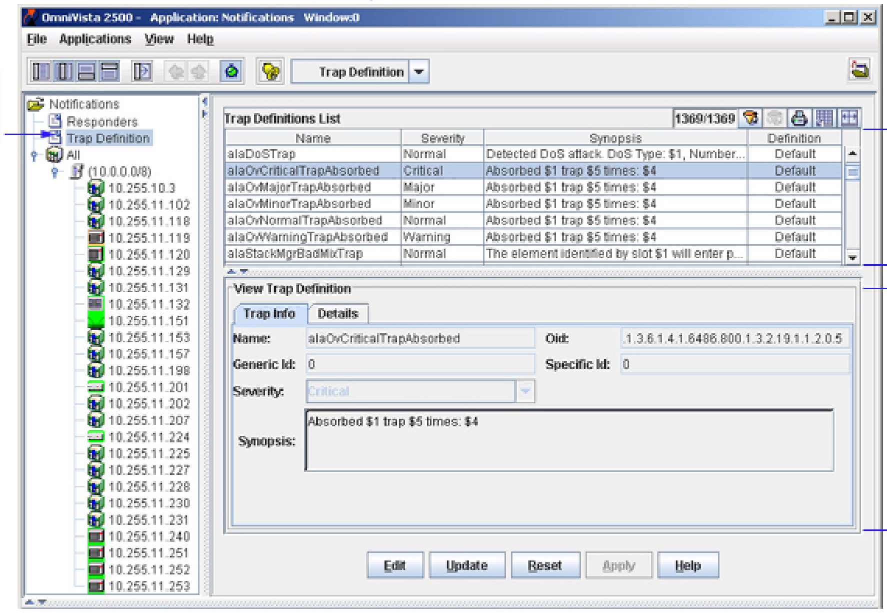
The Trap Definition Window

The Trap Definition window displays a list of all the supported traps, as defined in the MIBs. Use the Trap Definitions window to:

- View detailed information about individual traps
- Edit a trap's Synopsis and Severity fields
- Reset trap Synopsis and Severity fields to the installation defaults.

To access the Trap Definitions pane, click **Trap Definition** in the Notifications tree. You can also select **Trap Definition** from the drop-down list at the top of the window.

The Trap Definition Window



Trap Definitions List 1369/1369

Name	Severity	Synopsis	Definition
alaDoSTrap	Normal	Detected DoS attack. DoS Type: $1, Number...	Default
alaOvCriticalTrapAbsorbed	Critical	Absorbed $1 trap $5 times: $4	Default
alaOvMajorTrapAbsorbed	Major	Absorbed $1 trap $5 times: $4	Default
alaOvMinorTrapAbsorbed	Minor	Absorbed $1 trap $5 times: $4	Default
alaOvNormalTrapAbsorbed	Normal	Absorbed $1 trap $5 times: $4	Default
alaOvWarningTrapAbsorbed	Warning	Absorbed $1 trap $5 times: $4	Default
alaStackMgrBadMixTrap	Normal	The element identified by slot $1 will enter p...	Default

View Trap Definition

Trap Info | Details

Name: alaOvCriticalTrapAbsorbed

Oid: .1.3.6.1.4.1.6486.800.1.3.2.19.1.1.2.0.5

Generic Id: 0

Specific Id: 0

Severity: Critical

Synopsis: Absorbed $1 trap $5 times: $4

Click on Trap Definition to open window.

Trap Definitions List

View/Edit Pane

The Trap Definition pane includes two sections: the Trap Definitions List and the View/Edit Pane.

Viewing a Trap Definition

Use the scroll bar in the **Trap Definitions List** table to glance through all of the traps. If you only want to see a certain group of traps (e.g., all ATM traps, or all traps with severity level "warning"), you can do so by creating and applying a filter. For details on how to do this, see the Filter Help, which is available when you click on the Filter icon at the top of the Trap Definitions List.

To view information about a single trap, select the trap in the **Trap Definitions List** table, then view the information in the View/Edit pane. The View/Edit pane consists of two tabs, the Trap Info tab and the Details tab.

Trap Info Tab

The **Trap Info** tab displays the trap definition fields.

Name. Name of the trap, as defined in the MIB.

Generic ID. Generic trap ID number. Only SNMPv1 traps make use of a generic ID. For SNMPv2 and SNMPv3 traps, this field will show a value of zero.

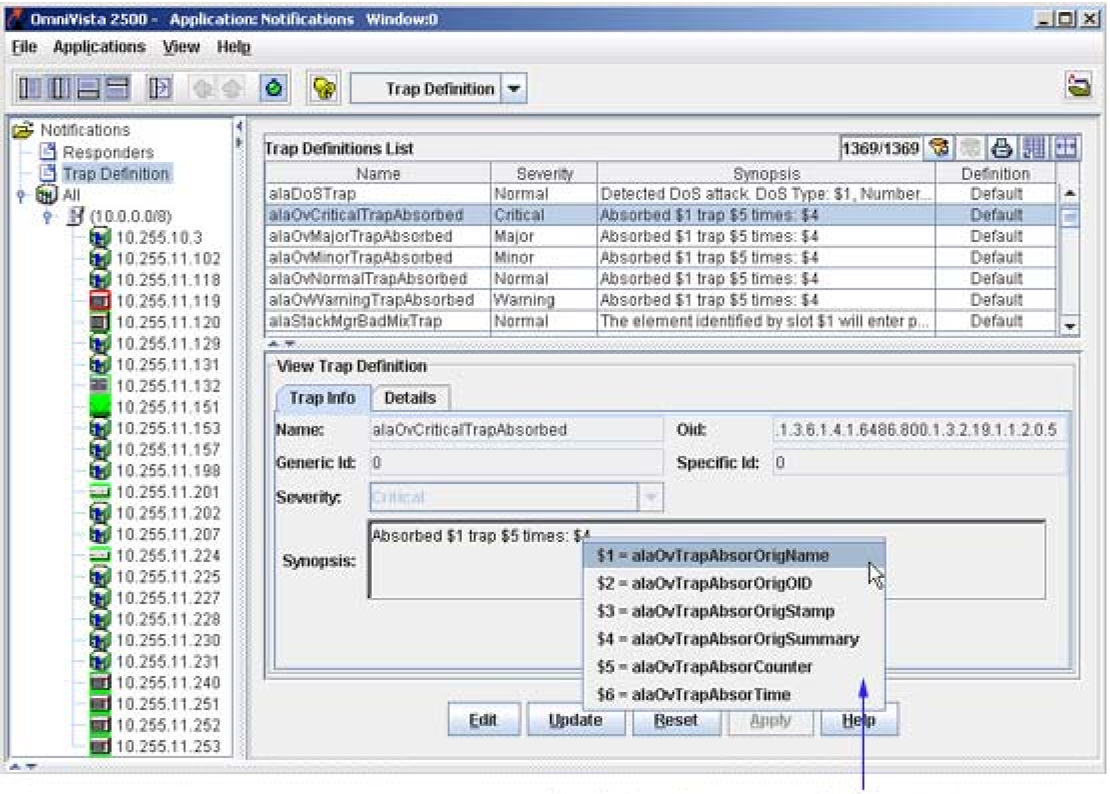
Severity. Severity level assigned to the trap as defined in the Notifications Application's Trap Definitions window. Possible values are: Normal, Warning, Minor, Major, and Critical. If desired, you can edit the Severity Level (see Editing Trap Severity).

OID. Trap object identifier number.

Specific ID. Trap specific ID number. Only SNMPv1 traps make use of a specific ID. For SNMPv2 and SNMPv3 traps, this field will show a value of zero.

Synopsis. Text description of the trap. Note that certain traps have associated SNMP trap variables. If a trap synopsis includes a dollar sign symbol, this means that the trap has one or more associated variables. Right-click in the Synopsis field to see a drop-down list of the associated trap variables. The drop-down list is accessible whether you are viewing or editing a trap.

> **Note**: If the **Synopsis** field of a trap displays a '?', it denotes that the trap received does not include all the variables as defined by the MIB. If this occurs, please refer to the trap details and the synopsis definition of the trap.



Trap Definitions List 1369/1369

Name	Severity	Synopsis	Definition
alaDoSTrap	Normal	Detected DoS attack. DoS Type: $1, Number...	Default
alaOvCriticalTrapAbsorbed	Critical	Absorbed $1 trap $5 times: $4	Default
alaOvMajorTrapAbsorbed	Major	Absorbed $1 trap $5 times: $4	Default
alaOvMinorTrapAbsorbed	Minor	Absorbed $1 trap $5 times: $4	Default
alaOvNormalTrapAbsorbed	Normal	Absorbed $1 trap $5 times: $4	Default
alaOvWarningTrapAbsorbed	Warning	Absorbed $1 trap $5 times: $4	Default
alaStackMgrBadMixTrap	Normal	The element identified by slot $1 will enter p...	Default

View Trap Definition

Trap Info | Details

Name: alaOvCriticalTrapAbsorbed Oid: .1.3.6.1.4.1.6486.800.1.3.2.19.1.1.2.0.5

Generic Id: 0 Specific Id: 0

Severity: Critical

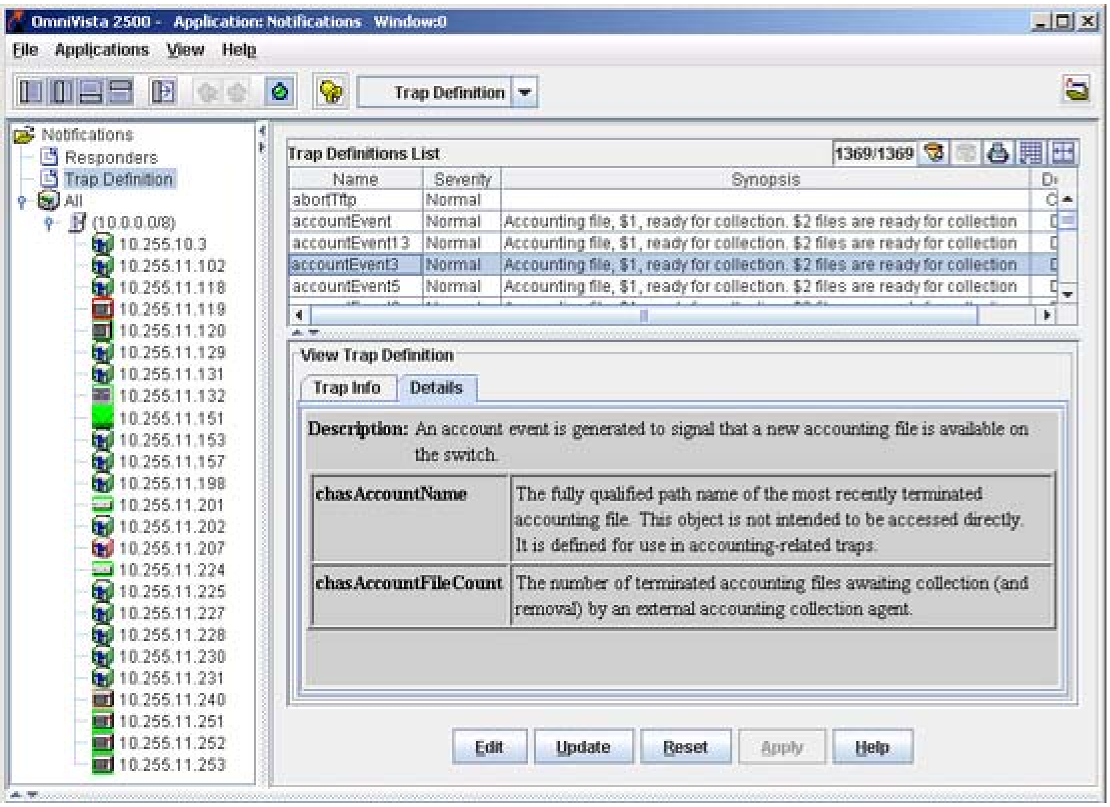
Synopsis: Absorbed $1 trap $5 times: $4

$1 = alaOvTrapAbsorOrigName
$2 = alaOvTrapAbsorOrigOID
$3 = alaOvTrapAbsorOrigStamp
$4 = alaOvTrapAbsorOrigSummary
$5 = alaOvTrapAbsorCounter
$6 = alaOvTrapAbsorTime

Right-click in the Synopsis field to see a list of associated trap variables.

Details Tab

The **Details** tab displays the description of the selected trap as defined in the MIB. It also displays the name and the description of the variables associated with that trap.



Name	Severity	Synopsis	D
abortTftp	Normal		C
accountEvent	Normal	Accounting file, $1, ready for collection. $2 files are ready for collection	D
accountEvent13	Normal	Accounting file, $1, ready for collection. $2 files are ready for collection	D
accountEvent3	Normal	Accounting file, $1, ready for collection. $2 files are ready for collection	D
accountEvent5	Normal	Accounting file, $1, ready for collection. $2 files are ready for collection	D

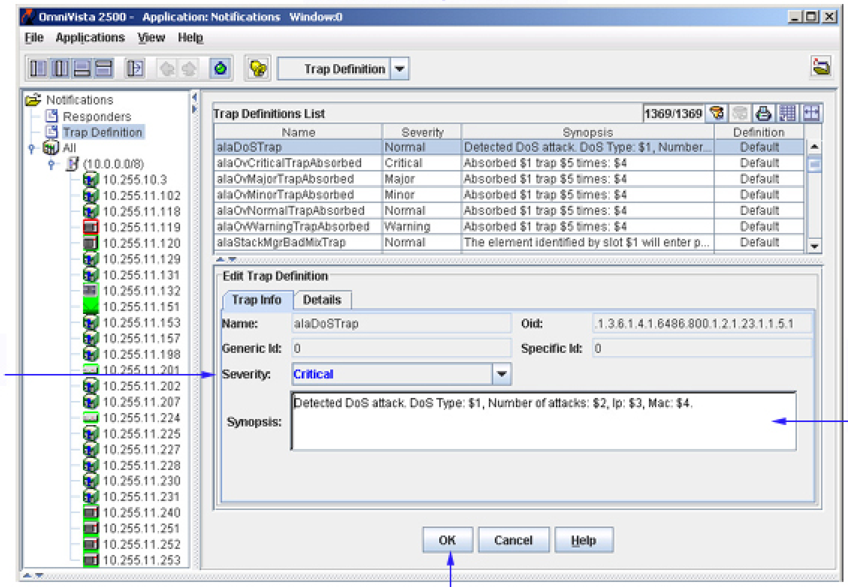
Description: An account event is generated to signal that a new accounting file is available on the switch.

chasAccountName	The fully qualified path name of the most recently terminated accounting file. This object is not intended to be accessed directly. It is defined for use in accounting-related traps.
chasAccountFileCount	The number of terminated accounting files awaiting collection (and removal) by an external accounting collection agent.

Editing a Trap Definition

To edit a trap definition, select the trap in the **Trap Definitions List** table, then click **Edit**. The View/Edit pane changes from "View Trap Definition" to "Edit Trap Definition" and the editable fields become enabled. The only fields that are editable are Synopsis and Severity. To edit these fields you must have Administrative privileges (admin or netadmin).

Editing a Trap Definition



Trap Definitions List

Name	Severity	Synopsis	Definition
alaDoSTrap	Normal	Detected DoS attack. DoS Type: $1, Number...	Default
alaOvCriticalTrapAbsorbed	Critical	Absorbed $1 trap $5 times: $4	Default
alaOvMajorTrapAbsorbed	Major	Absorbed $1 trap $5 times: $4	Default
alaOvMinorTrapAbsorbed	Minor	Absorbed $1 trap $5 times: $4	Default
alaOvNormalTrapAbsorbed	Normal	Absorbed $1 trap $5 times: $4	Default
alaOvWarningTrapAbsorbed	Warning	Absorbed $1 trap $5 times: $4	Default
alaStackMgrBadMixTrap	Normal	The element identified by slot $1 will enter p...	Default

Edit Trap Definition

Name: alaDoSTrap
Oid: .1.3.6.1.4.1.6486.800.1.2.1.23.1.1.5.1
Generic Id: 0
Specific Id: 0
Severity: Critical
Synopsis: Detected DoS attack. DoS Type: $1, Number of attacks: $2, Ip: $3, Mac: $4.

1. Select the Severity Level.

2. Click inside the Synopsis field and edit the field.

3. Click OK, then click Apply.

For more information on editing the Synopsis and Severity fields, see Editing Trap Severity and Editing a Trap Synopsis.

Editing Trap Severity

To change the severity level, select a severity level from the **Severity** drop-down list. Click the **OK** button to save the change, then click the **Apply** button to apply the changes to the server. You must have Administrative privileges to edit this field (admin or netadmin).

Editing a Trap Synopsis

To edit the trap synopsis, click the Synopsis field. The value of SNMP variables contained in the trap can be displayed in the Synopsis. You can even perform simple mathematical calculations on a variable value and display the result in the Synopsis. Click the **OK** button to save the change, then click the **Apply** button to apply the changes to the server. You must have Administrative privileges to edit this field (admin or netadmin).

Displaying SNMP Variable Values in the Synopsis

As previously mentioned, if a trap contains SNMP variables, a list of the variable names is displayed when you right-click the Synopsis field. The variable values for a given trap are always contained in the trap in the same order. This corresponds to the order of the variable names listed when you right-click in the Synopsis field. A variable value is referenced for display in the Synopsis by entering a dollar sign ($) followed by the desired variable's sequence number, where one (1) is the first variable.

For example, assume an instance of the vlanChange trap (which has three SNMP variables) where:

for SNMP Variable Name:	the Sequence Number is:	the Variable Value is:
atVLANGroupId	$1	5
atVLANId	$2	9
atVLANAdminStatus	$3	disabled

where the Synopsis field for this trap is:

VLAN $2 group $1 state changed to $3

the Synopsis displayed for this instance of the trap in the Trap Notifications Table looks like this:

VLAN 9 group 5 state changed to disabled

Performing Computations on SNMP Variable Values in the Synopsis

You can perform simple mathematical calculations on a variable value and display the result in the Synopsis field. The supported operations are:

Operator	Operation
*	multiplication
/	division
%	remainder
+	addition
-	subtraction

In addition, open and close parentheses can be used to change the standard Algebraic order of operations. A mathematical expression is entered in the Synopsis field enclosed by an open and a close curly brace, i.e., "{" and "}".

For example, for some Alcatel object IDs, the linkDown trap's ifIndex SNMP variable value is equal to the slot number times 1000, plus the port number. Assume an instance of this trap where ifIndex is equal to 5009 and the Synopsis field:

Link Down: slot {$1/1000} port {$1%1000}

the Synopsis displayed for this instance of the trap in Notifications List looks like this:

Link Down: slot 5 port 9

When Does an Edited Synopsis Take Effect?

Changes made to Synopsis are effective immediately. Notifications logged on the OmniVista server are stored in raw data format. Each time the Notifications List is displayed, the traps are formatted for display using the current Synopsis. Therefore, if, for example, you edit the vlanChange trap Synopsis after vlanChange traps were logged on the server, they will be displayed using the new Synopsis format.

Resetting a Trap Definition to the Installation Default

If you wish to reset one or more trap definition to the factory-installed defaults, select the trap(s) in the Trap Definitions List and click the **Reset** button. Then, click the **Apply** button to write the changes to the OmniVista server. Changes that you made to other trap definitions will remain in effect.

The Trap Notifications Window

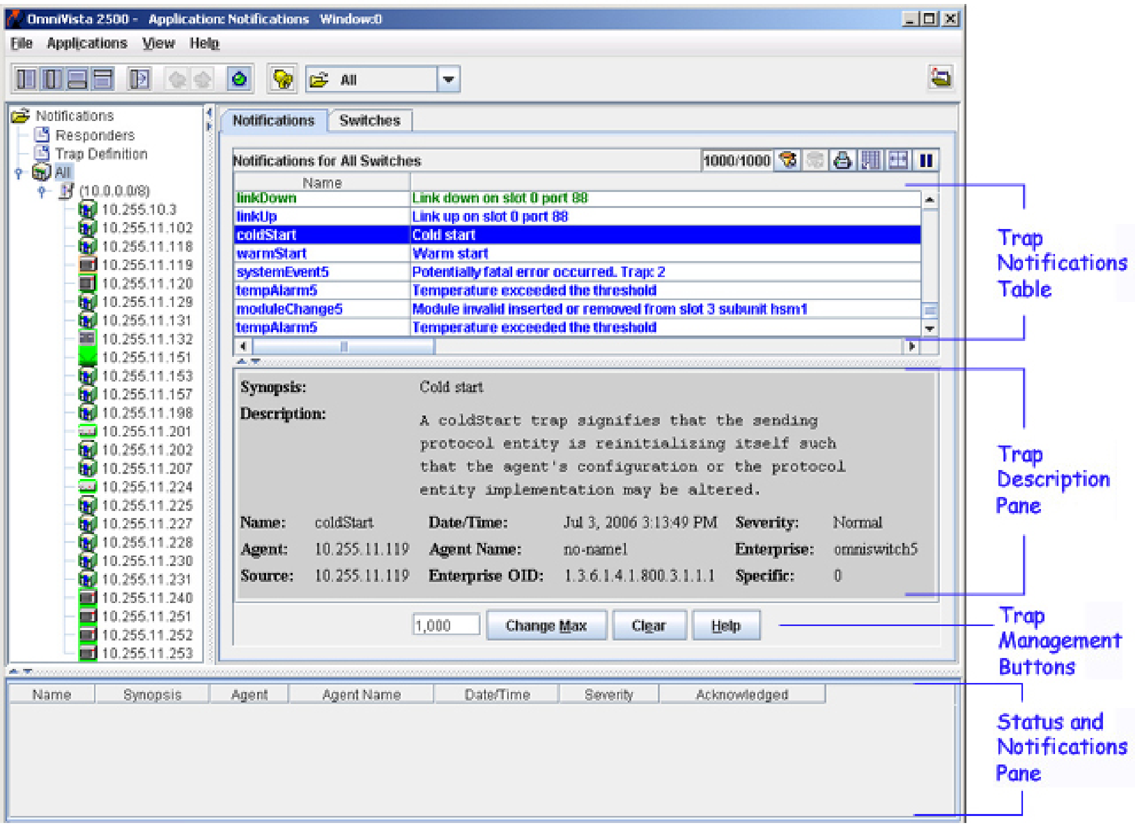
The Trap Notifications window consists of two tabs, **Notifications** and **Switches**. The Notifications tab displays alarms and traps (more generically referred to as "notifications"). The Switches tab displays a list of all the discovered switches with a trap count total for each switch.

The Notifications Tab

In the Notifications tab, you can view notifications for all switches, switches in a subnet, or a single switch by selecting the option in the Notifications tree.

- To display notifications for all known switches, click **All** in the Notifications tree (as shown below).
- To display notifications for all switches in a subnet, click the subnet in the Notifications tree.
- To display notifications for an individual switch, click on the switch in the Notifications tree. OmniVista displays all traps received from any of the switch's valid IP addresses.

The Trap Notifications Tab



Notifications for All Switches

Name	
linkDown	Link down on slot 0 port 88
linkUp	Link up on slot 0 port 88
coldStart	Cold start
warmStart	Warm start
systemEvent5	Potentially fatal error occurred. Trap: 2
tempAlarm5	Temperature exceeded the threshold
moduleChange5	Module invalid inserted or removed from slot 3 subunit hsm1
tempAlarm5	Temperature exceeded the threshold

Synopsis: Cold start

Description: A coldStart trap signifies that the sending protocol entity is reinitializing itself such that the agent's configuration or the protocol entity implementation may be altered.

Name:	coldStart	**Date/Time:**	Jul 3, 2006 3:13:49 PM	**Severity:**	Normal
Agent:	10.255.11.119	**Agent Name:**	no-name1	**Enterprise:**	omniswitch5
Source:	10.255.11.119	**Enterprise OID:**	1.3.6.1.4.1.800.3.1.1.1	**Specific:**	0

1,000

Note: If the Trap Notifications table is not displaying any notifications, it may be that none of your discovered switches have been configured to send traps to the OmniVista server. For information on how to configure switches to send traps to the server, see the Configure Traps Help.

The Trap Notifications window consists of four main areas:

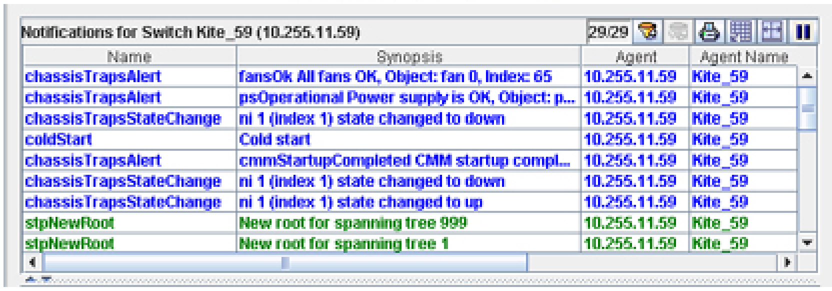
- The **Trap Notifications Table** can display alarms and traps for a single switch, for all the switches in a selected subnet, or for all known switches. For more information, see Trap Notifications Table.
- The **Trap Description Pane** provides details about an individual alarm or trap that is selected in the Trap Notifications Table. For more information, see Trap Description Pane.
- The **Trap Management Buttons** give you access to basic trap management functions, such as changing the maximum number of notifications displayed on the client (**Change Max**), and deleting all entries from the notifications table (**Clear**). For more information, see Trap Management.
- The **Status and Notifications Pane** can be displayed from any OmniVista application, making it possible to view notifications at any time, without having to return to the Notifications application. To view notifications from the Status and Notifications pane, click the **Notifications** tab at the bottom of the OmniVista window. The same information that displays through the Trap Notifications table also displays here. If the Status and Notifications pane is not currently displayed, click the **View** Menu and select **Status Panel**.

Trap Notifications Table

The Trap Notifications table displays a list of the received alarms and traps. Each row in the table displays in the color that represents the trap's severity level. For example, in the illustration below, all rows display in blue, because blue is the color used to represent a trap with severity level "Normal." The columns headings and severity level color coding are described below.

> **Note:** A new “Switch Down” trap was added for Release 3.3. The trap is generated by OmniVista when a switch status is changed to “down” because the switch stops responding to SNMP polling.

Trap Notifications Table



Notifications for Switch Kite_59 (10.255.11.59)

29/29

Name	Synopsis	Agent	Agent Name
chassisTrapsAlert	fansOk All fans OK, Object: fan 0, Index: 65	10.255.11.59	Kite_59
chassisTrapsAlert	psOperational Power supply is OK, Object: p...	10.255.11.59	Kite_59
chassisTrapsStateChange	ni 1 (index 1) state changed to down	10.255.11.59	Kite_59
coldStart	Cold start	10.255.11.59	Kite_59
chassisTrapsAlert	cmmStartupCompleted CMM startup compl...	10.255.11.59	Kite_59
chassisTrapsStateChange	ni 1 (index 1) state changed to down	10.255.11.59	Kite_59
chassisTrapsStateChange	ni 1 (index 1) state changed to up	10.255.11.59	Kite_59
stpNewRoot	New root for spanning tree 999	10.255.11.59	Kite_59
stpNewRoot	New root for spanning tree 1	10.255.11.59	Kite_59

Column Definitions

Name
The name of the trap as defined in the MIB.

Synopsis
A brief description of the trap.

Agent
The IP address of the switch that generated the trap.

Agent Name
The name of the switch that generated the trap.

Date/Time
The date and time the trap was received by the OmniVista server, using the OmniVista server's system clock.

Severity
The severity level assigned to the trap in the Notifications Application's Trap Definitions Window. If desired, you can edit the severity level (see Editing Trap Severity).

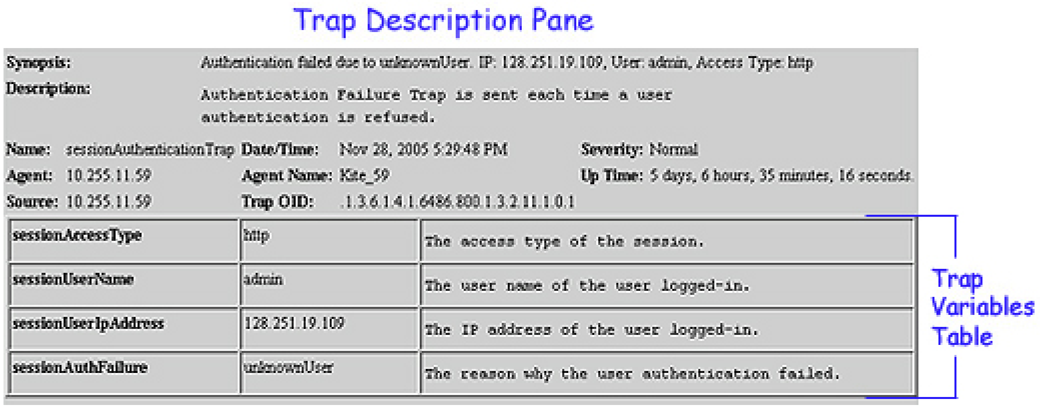
Normal	Blue
Warning	Green
Minor	Magenta
Major	Yellow
Critical	Red

Acknowledged
Indicates whether or not the trap has been acknowledged. Acknowledged traps ("true") display in plain type. Traps that have not yet been acknowledged, or whose acknowledgement has been renounced ("false"), display in bold type.

> **Note:** When new traps arrive at a frequent rate, the horizontal scroll bar in the **Notifications for All Switches** table is reset to provide display updates, which leads to flickering. The flickering can be suspended or stopped by clicking the **Pause** icon at the top right-hand corner of the Trap Notifications table. The display updates can be resumed by clicking the **Play** icon at the top right-hand corner of the Trap Notifications table. Clicking the Play icon will cause the display to revert to a **Pause** icon indicating that you can suspend display updates again.

Trap Description Pane

The Trap Description pane displays a detailed description of the selected trap. Click a row in the Trap Notifications table to view the corresponding information in the Trap Description pane. When a trap has variables associated with it, those variables are presented in a Trap Variables Table located in the bottom half of the Trap Description pane (as shown below).



Synopsis: Authentication failed due to unknownUser. IP: 128.251.19.109, User: admin, Access Type: http
Description: Authentication Failure Trap is sent each time a user authentication is refused.

Name: sessionAuthenticationTrap **Date/Time:** Nov 28, 2005 5:29:48 PM **Severity:** Normal
Agent: 10.255.11.59 **Agent Name:** Kite_59 **Up Time:** 5 days, 6 hours, 35 minutes, 16 seconds.
Source: 10.255.11.59 **Trap OID:** .1.3.6.1.4.1.6486.800.1.3.2.11.1.0.1

sessionAccessType	http	The access type of the session.
sessionUserName	admin	The user name of the user logged-in.
sessionUserIpAddress	128.251.19.109	The IP address of the user logged-in.
sessionAuthFailure	unknownUser	The reason why the user authentication failed.

The information in the Description pane will vary depending on whether it is displaying an SNMPv1 trap, or an SNMPv2/SNMPv3 trap. OmniVista supports receipt of SNMPv1 traps from AOS devices.

Synopsis
A brief description of the trap. When a trap has variables associated with it, the values of some or all of the variables may appear in the synopsis. For example, in the trap synopsis "Link down on slot 6 port 2," the numbers "6" and "2" are trap variable values for the link down trap. The values of all variables in a trap are presented in a Trap Variables Table located in the bottom half of the Description Pane. If desired, the synopsis can be edited to include or exclude trap variable values (see Editing a Trap Synopsis).

Description
A detailed description of the trap as it appears in the MIB.

Name
The name of the trap as defined in the MIB.

Date/Time
The date and time the trap was received by the OmniVista server, using the OmniVista server's system clock. However, for traps received that are "replays" of previously-generated traps, the date/time will be adjusted to the time that the original trap was sent. This is calculated by adjusting the time received by the difference between the current upTime of the source device and the upTime contained within the trap itself. Therefore, it is possible for new traps to be added to the display with old timestamps. So, if the network was down for hours, you may suddenly see traps appear from hours ago.

Severity
The severity level assigned to the trap in the Trap Definitions Window. Possible values are: Normal, Warning, Minor, Major, and Critical. If desired, you can edit the Severity Level (see Editing Trap Severity).

Agent
The IP address of the agent.

Agent Name
The name of the switch that generated the trap.

Up Time
The length of time the switch that sent the trap has been up (or the amount of time since the last reset), specified in days, hours, minutes, and seconds. This only applies to SNMPv2 and SNMPv3 traps.

Source
The IP address of the switch that generated the trap.

Trap OID
The trap object identifier number. This only applies to SNMPv2 and SNMPv3 traps.

Enterprise OID
The enterprise object identifier number. This only applies to SNMPv1 traps.

Enterprise
The enterprise name. This only applies to SNMPv1 traps.

Specific
The enterprise trap number. This only applies to SNMPv1 traps.

Trap Variables Table

When a trap has variables associated with it, those variables are presented in a Trap Variables table (as shown above). For each variable, there is a row in the table.

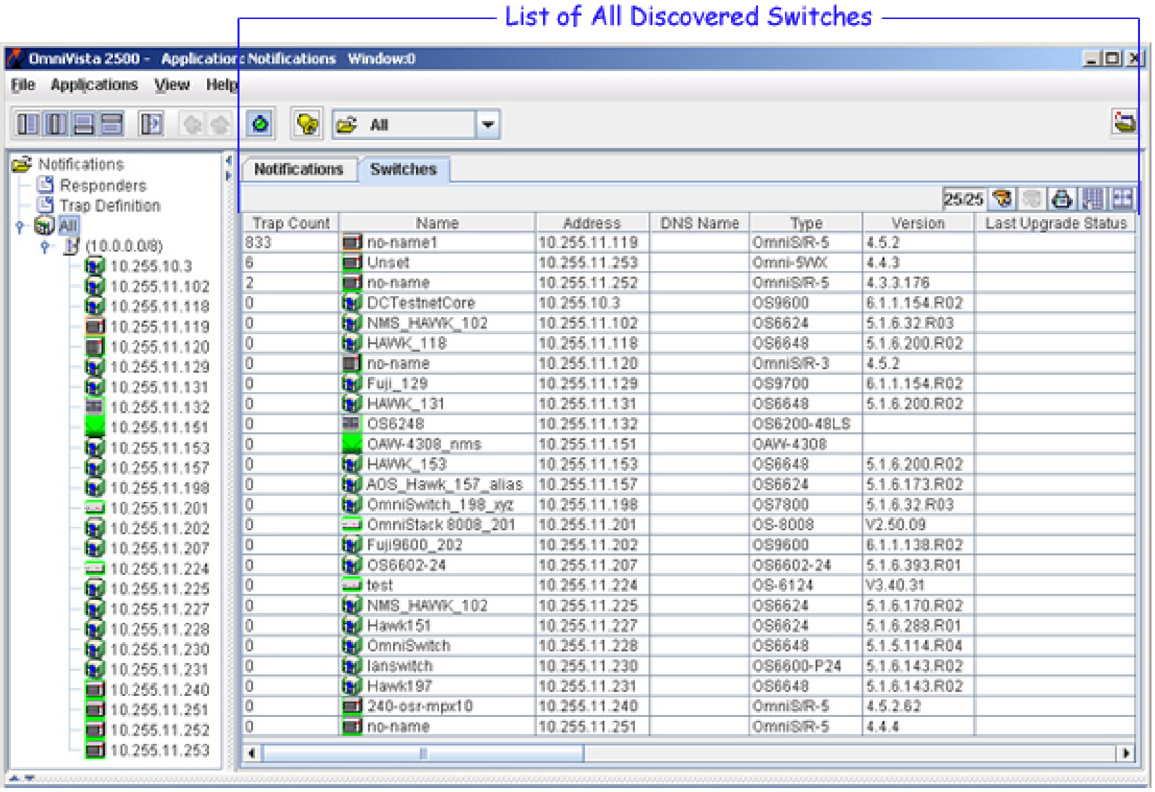
- The first column is the name of the variable as defined in the MIB.
- The second column is the variable value.
- The third column is a description of the variable as it appears in the MIB.

For some traps, a variable may contain multiple data embedded in the variable value in a manner that prohibits separation of the individual values based solely on the MIB definition of the variable. For this type of variable, an additional table appears after the Trap Variables table. This additional table is preceded by the label "Details of: <SNMP variable name>" and has a row for each embedded datum where the first column is the name or brief description of the datum and the second column is the data value.

The Switches Tab

The switches tab displays a list of all discovered switches with an additional **Trap Count** column that displays the total number of traps received on each switch. Like all Lists of Discovered Switches, this list of switches enables you to perform functions on a single switch or multiple switches simultaneously. To do so, select a switch (or multiple switches) in the list and right-click to display a popup menu of the functions available. You can also filter the list, not only by switch, but by trap type.

The Trap Switches Tab



List of All Discovered Switches

Trap Count	Name	Address	DNS Name	Type	Version	Last Upgrade Status
833	no-name1	10.255.11.119		OmniS/R-5	4.5.2	
6	Unset	10.255.11.253		Omni-5WX	4.4.3	
2	no-name	10.255.11.252		OmniS/R-5	4.3.3.176	
0	DCTestnetCore	10.255.10.3		OS9600	6.1.1.154.R02	
0	NMS_HAWK_102	10.255.11.102		OS6624	5.1.6.32.R03	
0	HAWK_118	10.255.11.118		OS6648	5.1.6.200.R02	
0	no-name	10.255.11.120		OmniS/R-3	4.5.2	
0	Fuji_129	10.255.11.129		OS9700	6.1.1.154.R02	
0	HAWK_131	10.255.11.131		OS6648	5.1.6.200.R02	
0	OS6248	10.255.11.132		OS6200-48LS		
0	OAW-4308_nms	10.255.11.151		OAW-4308		
0	HAWK_153	10.255.11.153		OS6648	5.1.6.200.R02	
0	AOS_Hawk_157_alias	10.255.11.157		OS6624	5.1.6.173.R02	
0	OmniSwitch_198_xyz	10.255.11.198		OS7800	5.1.6.32.R03	
0	OmniStack 8008_201	10.255.11.201		OS-8008	V2.50.09	
0	Fuji9600_202	10.255.11.202		OS9600	6.1.1.138.R02	
0	OS6602-24	10.255.11.207		OS6602-24	5.1.6.393.R01	
0	test	10.255.11.224		OS-6124	V3.40.31	
0	NMS_HAWK_102	10.255.11.225		OS6624	5.1.6.170.R02	
0	Hawk151	10.255.11.227		OS6624	5.1.6.288.R01	
0	OmniSwitch	10.255.11.228		OS6648	5.1.5.114.R04	
0	lanswitch	10.255.11.230		OS6600-P24	5.1.6.143.R02	
0	Hawk197	10.255.11.231		OS6648	5.1.6.143.R02	
0	240-osr-mpx10	10.255.11.240		OmniS/R-5	4.5.2.62	
0	no-name	10.255.11.251		OmniS/R-5	4.4.4	

The **All** icon in the Notifications tree lists each known subnet. Click a subnet, and then click the Switches tab, to view the list of all the discovered switches in that subnet. Popup menus available in the tree provide additional functionality. You can only select one switch at a time in the tree.

Information Fields in the List

Trap Count
Displays the number of traps that belong to the switch (corresponding trap names are shown in the Notifications tab). This field is periodically updated as new traps arrive. The **Trap Count** field initially sorts the list of discovered switches in descending order.

Name
The name of the device.

Address
The address of the device.

DNS Name
The DNS name of the device.

Type
The type of the device chassis.

Version
The version number of the device firmware. Version numbers are not displayed for certain non-XOS devices.

Last Upgrade Status
The status of the last firmware upgrade on the switch.

- "Successful" - Successful BMF and Image upgrade performed.
- "Successful (BMF)" - Successful BMF upgrade performed.
- "Successful (Image)" - Successful Image upgrade is performed.
- "Failed (BMF, Image)" - BMF and Image upgrade failed.
- "Failed (BMF)" - BMF upgrade failed.
- "Failed (Image)" - Image upgrade failed.

In all "Failed" cases, "Reload From Working" will be disabled on the switch until a successful upgrade is performed.

Backup Date
The date that the device's configuration and/or image files were last backed-up to the OmniVista server.

Backup Version
The firmware version of the configuration and/or image files that were last backed-up to the OmniVista server

Last Known Up At
The date and time when the last poll was initiated on the device.

Description
A description of the device, usually the vendor name and model.

Status
This field displays the operational status of the device. It displays **Up** if the device is up and responding to polls. (When a device is up, it displays green in both the List of All Discovered Devices and the tree.) It displays **Down** if the device is down and not responding to polls. (When a device is down, it displays red in both the List of All Discovered Devices and the tree.) This field displays **Warning** if the switch has sent at least one warning or critical trap and is thus in the warning state. (When a device is in the warning state, it displays orange in both the List of All Discovered Devices and the tree.)

Traps
This field indicates the status of trap configuration for the device. **On** means that traps are enabled. **Off** means that traps are disabled. **Not Configurable** means that traps for this device are not configurable from OmniVista. (Note that traps may have been configured for such devices outside of OmniVista.) **Unknown** means that OmniVista does not know the status of trap configuration on this switch. OmniVista will read the switch's trap configuration when traps are configured for the switch via the Configure Traps Wizard.

Seen By
This field lists the Security Groups that are allowed to view the device. (The Security Groups that are allowed to view a device can be defined when devices are autodiscovered, added manually, or edited.) The default Security Groups shipped with OmniVista are as follows:

- **Default** group. This group has read-only access to switches in the list of All Discovered Devices that are configured to grant access to this group.
- **Writers** group. This group has both read and write access to switches in the list of All Discovered Devices that are configured to grant access to this group. However, members of this group cannot run autodiscovery nor can they manually add, delete, or modify entries in the list of All Discovered Devices.
- **Network Administrators** group. This group has full administrative access rights to all switches on the network. Members of this group can run autodiscovery and can manually add, delete, and modify entries in the list of All Discovered Devices. Members of this group also have full read and right access to entries in the Audit application and the Control Panel application. Members of this group can do everything EXCEPT make changes to Security Groups.
- **Administrators** group. This group has all administrative access rights granted to the Network Administrators group AND full administrative rights to make changes to Security Groups.

Note that other Security Group names may display in this field if custom Security Groups were created. Refer to help for the Security application *Users and Groups* for further information on Security Groups.

Running From
For AOS devices, this field indicates whether the switch is running from the **certified** directory or from the **working** directory. This field is blank for all other devices. For AOS devices, the directory structure that stores the switch's image and configuration files in flash memory is divided into two parts:

- The certified directory contains files that have been certified by an authorized user as the default configuration files for the switch. When the switch reboots, it will automatically load its configuration files from the certified directory if the switch detects a difference between the certified directory and the working directory. (Note that you can specifically command a switch to reboot from either directory -- click here for information.)
- The working directory contains files that may or may not have been altered from those in the certified directory. The working directory is a holding place for new files to be tested before committing the files to the certified directory. You can save configuration changes to the working directory. You cannot save configuration changes directly to the certified directory.

Note that the files in the certified directory and in the working directory may be different from the running configuration of the switch, which is contained in RAM. The running configuration is the current operating parameters of the switch, which are originally loaded from the certified or working directory but may have been modified through CLI commands, WebView commands, or OmniVista. Modifications made to the running configuration must be saved to the working directory (or lost). The working directory can then be copied to the certified directory if and when desired. Click here for more information.

Changes
For AOS devices, this field indicates the state of changes made to the switch's configuration. This field is blank for all other devices. This field can display the following values:

- **Unsaved**. Changes have been made to the running configuration of the switch that have not been saved to the working directory.
- **Uncertified**. Changes have been saved to the working directory, but the working directory hasn't been copied to the certified directory. The working directory and the certified directory are thus different.
- Blank. When this field is blank for an AOS device, the implication is that OmniVista knows of no unsaved configuration changes and assumes that the working and certified directories in flash memory are identical.

OmniVista is now capable of tracking AOS configuration changes made through CLI commands or WebView, and so will reflect configuration changes made outside of OmniVista through these two interfaces in the Changes field. Information in the Changes field will be accurate as long as OmniVista has polled the switch since the last change was made (through any interface).

Note that it is possible a switch could be in a state where it is both Unsaved and Uncertified. In this situation **Unsaved** displays in the Changes field. Whenever an AOS device is in the Unsaved or Uncertified state, a blue exclamation mark displays on its icon ().

Discovered
This field displays the date and time when OmniVista successfully pings or polls the switch for the first time. This value remains unchanged until the switch entry is deleted. This field will remain blank if OmniVista does not ping or poll the switch at all.

Trap/Switch Filtering

In addition to the standard switch table filter functions, you can use the Notifications Tab and the Switches Tab to filter by trap type and switch. When you create a trap filter using the Notifications Tab, the Switches Tab is automatically filtered to display the switches generating the filtered trap. After applying the filter in the Notifications Tab, click on the Switches Tab. The switches generating that trap will be displayed at the top of the list. If you have previously applied a filter to the Switches Tab, the list will also be filtered by that Switch Filter; or you can apply a different/new filter.

Trap Archiving

When traps are received, OmniVista logs the information about a trap to a trap archive log file (**traps.txt**) located in the installation directory/data/logs folder. The **traps.txt** file will not be listed under **Current Log Files** in the **Audit** application like other log files.

When the **traps.txt** file reaches the configured maximum file size, OmniVista automatically archives a copy of the file under **Archived Log Files** of the **Audit** application. The number of trap archived files cannot exceed the maximum number of audit file copies configured in the **Preferences** application.

> **Note:** You can set the maximum number of archived files and the maximum trap archive file size using the **Preferences** application.

The archived log file of **traps.txt** will have the same filename, but the date and time the file was archived is appended to it (e.g., traps_05-16-2006_043715PM.bak).

Trap Management

The Notifications application is used to handle basic Trap Management tasks. Depending on user privileges, you can perform the tasks listed below.

All Users can perform the following:

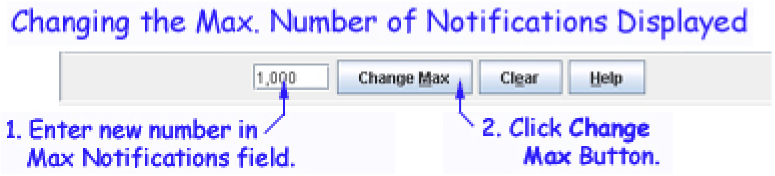
- Change the maximum number of Notifications displayed on the Client
- Change the maximum number of Notifications logged on the Server
- Copy traps to the clipboard
- Export traps to a .csv (comma-separated value) file.

If you have Administrative privileges (admin or netadmin), you can also perform the following:

- Clear all entries from the Trap Notifications table
- Acknowledge a trap
- Delete a trap.

Changing the Maximum Number of Notifications Displayed

On the Client side, the default maximum number of notifications that can be displayed in the Trap Notifications table is 1,000. To change this value, enter a new number in the Max Notifications field, then click the **Change Max** button, as shown below.



Changing the Max. Number of Notifications Displayed

1. Enter new number in Max Notifications field.

2. Click Change Max Button.

There is no restriction on the number that can be entered in the Max Notifications field. However, the default maximum number of notifications that can be logged on the server is 30,000. If a number higher than 30,000 is entered in the Max Notifications field on the client, but the server has not been configured to log more than 30,000 notifications, the client will display no more than 30,000 notifications. (For information on how to change the maximum number of notifications that can be logged on the server (see Changing the Maximum Number of Notifications Logged on the Server.)

As the Trap Notifications table becomes filled, the oldest entries in the table are deleted to make room for the new alarms and traps that are received.

> **Note**: Editing the number in the Max Notifications field on the Client does not result in any permanent change. If you close the Notifications application, then reopen it, the number in the Max Notifications field will return to its default value of 1,000. However, while the Notifications application is open, the maximum number of notifications will remain at the number that was set.

Changing the Maximum Number of Notifications Logged

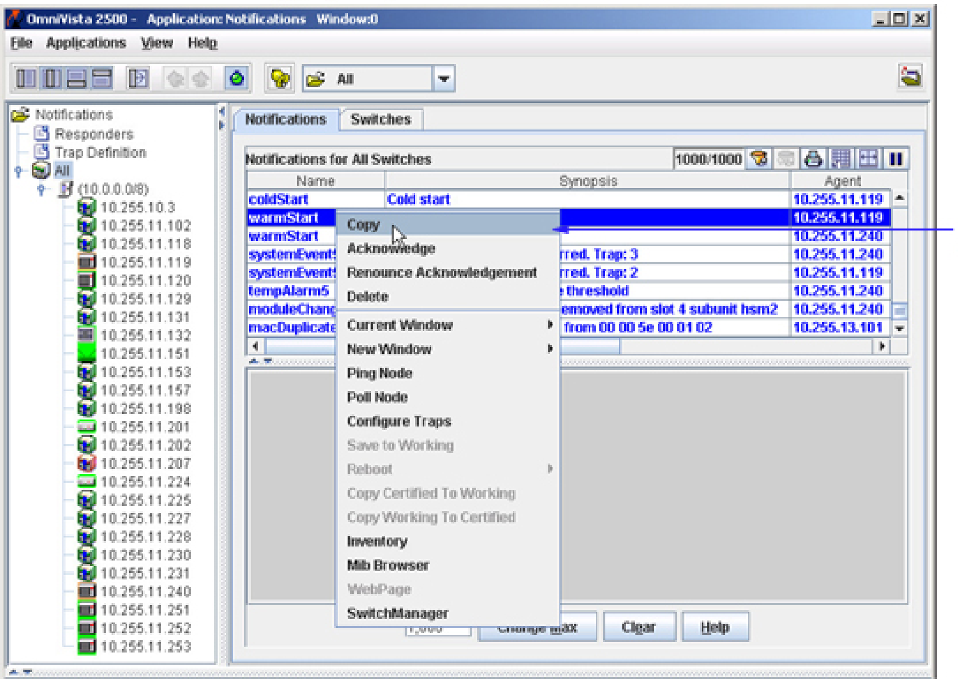
The maximum number of Notifications logged on the server is specified by the **Notifications Preferences** window in the Preferences application. The Preferences application is part of the Administration group of applications and can be opened from the Taskbar or by selecting **Preferences** on the **File** menu.

Copying Traps to the Clipboard

To copy one or more traps to the clipboard, select the corresponding row(s) in the Trap Notifications Table, right-click to bring up the pop-up menu, then click **Copy** (as shown below).

> **Note**: To select multiple rows, click on the rows while holding down the **CTRL** or **SHIFT** keys.

Copying Traps to the Clipboard



Notifications for All Switches 1000/1000

Name	Synopsis	Agent
coldStart	Cold start	10.255.11.119
warmStart		10.255.11.119
warmStart		10.255.11.240
systemEvent!	rred. Trap: 3	10.255.11.240
systemEvent!	rred. Trap: 2	10.255.11.119
tempAlarm5	threshold	10.255.11.240
moduleChang	emoved from slot 4 subunit hsm2	10.255.11.240
macDuplicate	from 00 00 5e 00 01 02	10.255.13.101

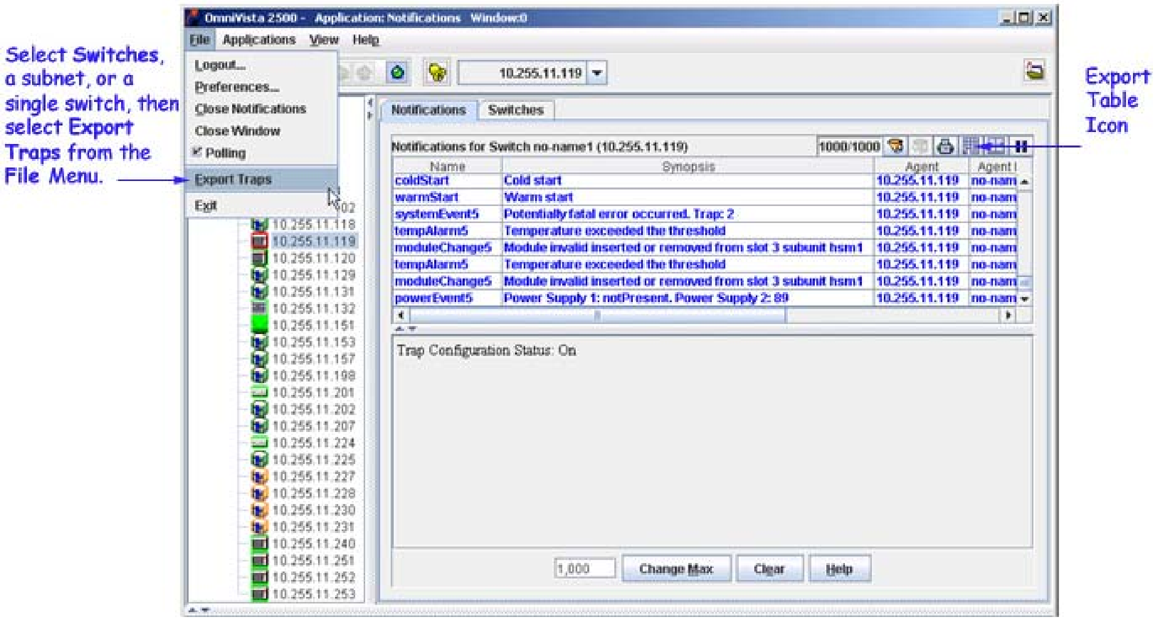
Select the trap(s), right-click, and select Copy.

This feature is useful for copying a single trap into a text editor or pasting it into an e-mail. When copied into a spreadsheet file, the trap information displays in a single field; this is in contrast to exporting traps, where all the field information is retained (see Exporting Traps).

Exporting Traps to a .CSV File

Use the Export function to save trap information to a *.csv (comma-separated value) file, then view it through a text editor, spreadsheet, or database program. Because trap information is eventually written over as the Max Notifications value is reached, the Export function is useful when you want to archive trap information for later use.

You can export traps for all switches, for all switches in a selected subnet, or for a single switch. Display the traps that you want to export by clicking on **All**, a subnet or an individual switch in the Notifications tree; then select **Export Traps** from the **File** menu or click the Export Table icon. In the example below, a subnet was selected, so all of the traps for all of the switches in that subnet are displayed.



Select Switches, a subnet, or a single switch, then select Export Traps from the File Menu.

Export Table Icon

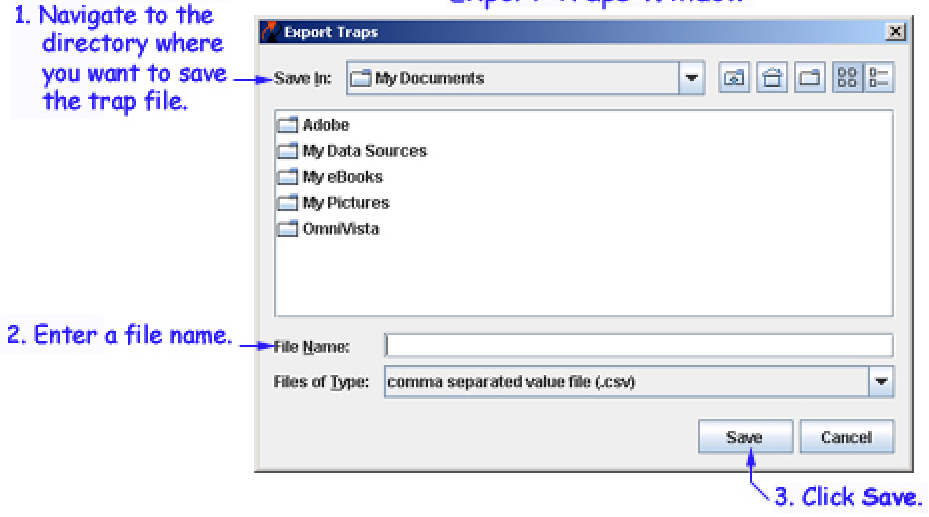
Notifications for Switch no-name1 (10.255.11.119)

Name	Synopsis	Agent	Agent I
coldStart	Cold start	10.255.11.119	no-nam
warmStart	Warm start	10.255.11.119	no-nam
systemEvent5	Potentially fatal error occurred. Trap: 2	10.255.11.119	no-nam
tempAlarm5	Temperature exceeded the threshold	10.255.11.119	no-nam
moduleChange5	Module invalid inserted or removed from slot 3 subunit hsm1	10.255.11.119	no-nam
tempAlarm5	Temperature exceeded the threshold	10.255.11.119	no-nam
moduleChange5	Module invalid inserted or removed from slot 3 subunit hsm1	10.255.11.119	no-nam
powerEvent5	Power Supply 1: notPresent. Power Supply 2: 89	10.255.11.119	no-nam

Trap Configuration Status: On

When you select **Export Traps** or click the Export Table icon, the Export Traps window appears. Navigate to the directory where you want to save the information, enter a file name, then click **Save**.

Export Traps Window



1. Navigate to the directory where you want to save the trap file.

Save In: My Documents

2. Enter a file name.

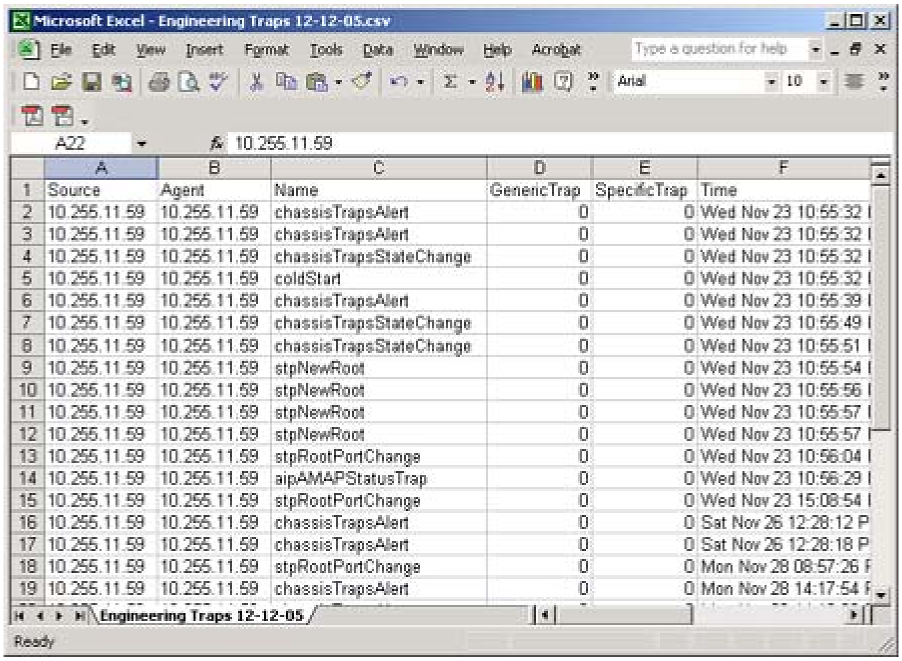
File Name:

Files of Type: comma separated value file (.csv)

3. Click Save.

Note: You do not need to include .csv to the filename; the file extension is automatically added.

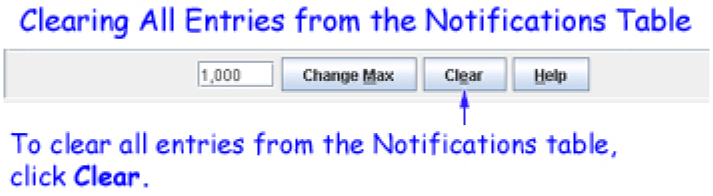
The .csv file can be opened using any text editor, spreadsheet, or database program. The following is an example of what you would see when the file is viewed through a spreadsheet application:


Microsoft Excel - Engineering Traps 12-12-05.csv
File Edit View Insert Format Tools Data Window Help Acrobat
Type a question for help
Arial
10
A22
10.255.11.59
Engineering Traps 12-12-05
Ready

	A	B	C	D	E	F
1	Source	Agent	Name	GenericTrap	SpecificTrap	Time
2	10.255.11.59	10.255.11.59	chassisTrapsAlert	0	0	Wed Nov 23 10:55:32 I
3	10.255.11.59	10.255.11.59	chassisTrapsAlert	0	0	Wed Nov 23 10:55:32 I
4	10.255.11.59	10.255.11.59	chassisTrapsStateChange	0	0	Wed Nov 23 10:55:32 I
5	10.255.11.59	10.255.11.59	coldStart	0	0	Wed Nov 23 10:55:32 I
6	10.255.11.59	10.255.11.59	chassisTrapsAlert	0	0	Wed Nov 23 10:55:39 I
7	10.255.11.59	10.255.11.59	chassisTrapsStateChange	0	0	Wed Nov 23 10:55:49 I
8	10.255.11.59	10.255.11.59	chassisTrapsStateChange	0	0	Wed Nov 23 10:55:51 I
9	10.255.11.59	10.255.11.59	stpNewRoot	0	0	Wed Nov 23 10:55:54 I
10	10.255.11.59	10.255.11.59	stpNewRoot	0	0	Wed Nov 23 10:55:56 I
11	10.255.11.59	10.255.11.59	stpNewRoot	0	0	Wed Nov 23 10:55:57 I
12	10.255.11.59	10.255.11.59	stpNewRoot	0	0	Wed Nov 23 10:55:57 I
13	10.255.11.59	10.255.11.59	stpRootPortChange	0	0	Wed Nov 23 10:56:04 I
14	10.255.11.59	10.255.11.59	aipAMAPStatusTrap	0	0	Wed Nov 23 10:56:29 I
15	10.255.11.59	10.255.11.59	stpRootPortChange	0	0	Wed Nov 23 15:08:54 I
16	10.255.11.59	10.255.11.59	chassisTrapsAlert	0	0	Sat Nov 26 12:28:12 P
17	10.255.11.59	10.255.11.59	chassisTrapsAlert	0	0	Sat Nov 26 12:28:18 P
18	10.255.11.59	10.255.11.59	stpRootPortChange	0	0	Mon Nov 28 08:57:26 F
19	10.255.11.59	10.255.11.59	chassisTrapsAlert	0	0	Mon Nov 28 14:17:54 F

Clearing All Entries from the Trap Notifications Table

To remove all alarms and traps currently displayed in the Trap Notifications table, click the **Clear** button at the bottom of the log. Once you have cleared the entries, they are permanently deleted from the OmniVista server and will no longer be displayed on any OmniVista client.



To clear all entries from the Notifications table, click **Clear**.

Acknowledging a Trap

To acknowledge a trap or renounce a trap acknowledgement, follow the steps below:

1. Select one or more traps from the Trap Notifications table.

2. Right-click to bring up the pop-up menu.

3. Select either **Acknowledge** or **Renounce Acknowledgement**.

Acknowledged traps appear in plain type. Traps that have not yet been acknowledged and traps for which you have renounced acknowledgement are displayed in bold type.

Deleting a Trap

To delete a trap, follow the steps below:

1. Select one or more traps from the Trap Notifications table.

2. Right-click to bring up the pop-up menu.

3. Select **Delete**. No confirmation is requested. The trap is permanently deleted from the OmniVista server and will no longer be displayed on any OmniVista client.

> **Note**: Refer to the Topology Help for information on pop-up menu commands not related to trap management.

The Trap Responders Window

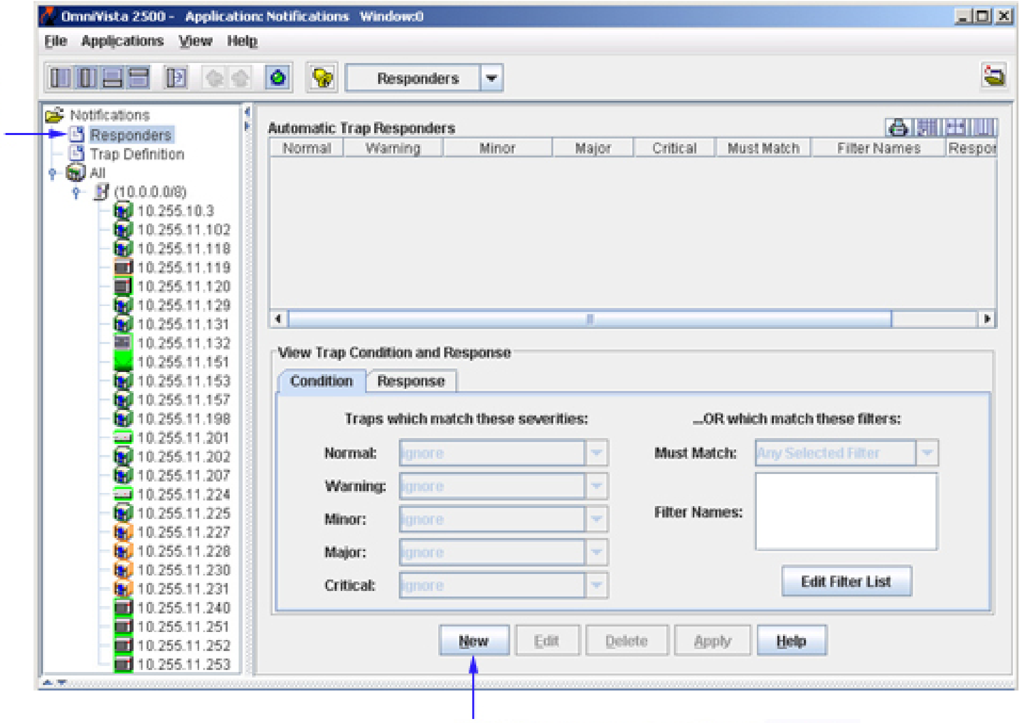
The Trap Responders window enables you to specify the response (if any) that you want OmniVista to make when specified traps are received by OmniVista. You can specify the traps to which OmniVista will respond by severity level; or, you can specify the traps using filters. OmniVista can make the following responses to receipt of a specified trap:

- OmniVista can send an e-mail to any address you specify. You can specify the information you want included in the e-mail through the use of variables. Variables exist for information such as the trap name, synopsis, description, etc.
- OmniVista can execute an external program or script on the OmniVista server
- OmniVista can forward traps to a specific IP address.

To configure an OmniVista trap response, select **Responders** in the Notifications tree. The Trap Responders pane is displayed, as shown below. The Trap Responders pane contains two tabs, the **Condition** tab and the **Response** tab. The Condition Tab is used to specify the traps that will trigger OmniVista's response; and the Response Tab is used to configure the response.

The Trap Responders Window

Click on Responders to bring up the window.



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Respor

View Trap Condition and Response

Traps which match these severities:

Normal: ignore
Warning: ignore
Minor: ignore
Major: ignore
Critical: ignore

...OR which match these filters:

Must Match: Any Selected Filter
Filter Names:

Click New to create a Trap Response.

For example, when a specified trap is received, you could configure the following responses:

- OmniVista could automatically send an e-mail to the MIS director. The body of the e-mail could contain the details of the trap.
- OmniVista could automatically run an audio program that announces out loud: "You have received a trap."

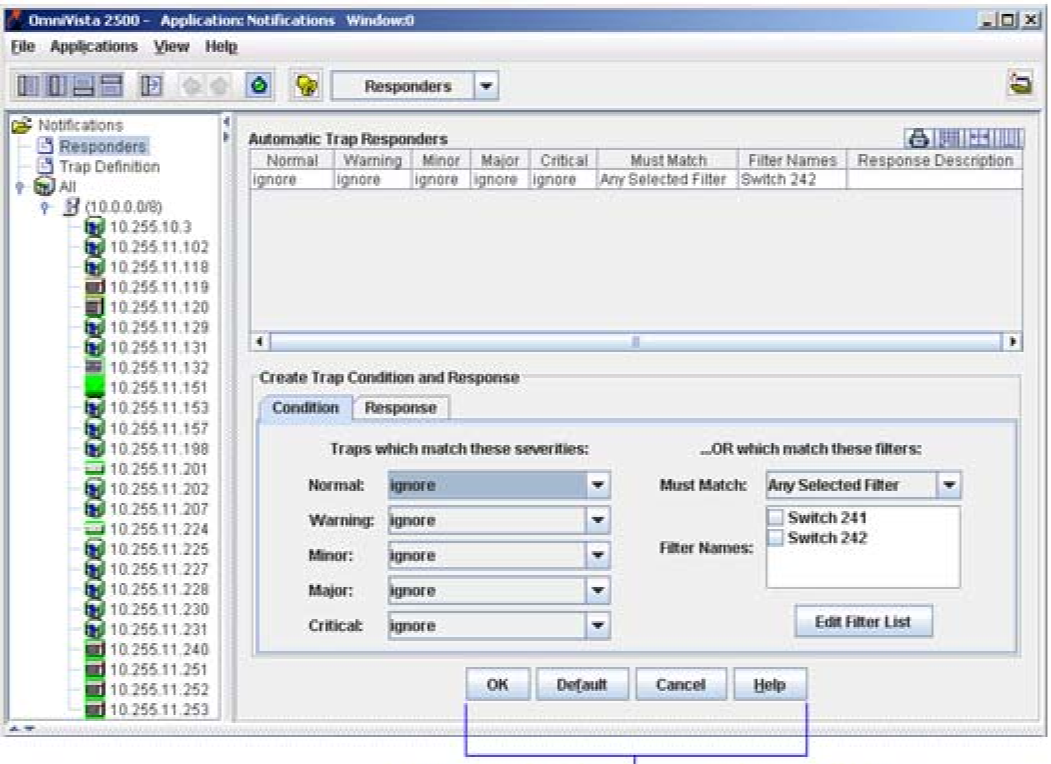
How to Configure a Trap Responder

To configure a new trap responder, click the **New** button at the bottom of the Trap Responders pane and refer to the sections below.

The Condition Tab

You can specify the traps to which OmniVista will respond by severity level; or, you can specify the traps using filters. Note that you can specify traps by severity level or filters, but you cannot specify traps using both severity levels and filters. (In other words, you cannot "AND" specified severity levels and specified filters to create an expression.) If you create a trap responder that specifies both severity level and filters, the trap responder will respond to all traps with the specified severity (even if they do not match the filter), and all traps that match the specified filters (even if they do not have the specified severity).

The Condition Tab



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Create Trap Condition and Response

Traps which match these severities:

Normal: ignore
Warning: ignore
Minor: ignore
Major: ignore
Critical: ignore

...OR which match these filters:

Must Match: Any Selected Filter
Filter Names: □ Switch 241 □ Switch 242

When you click the New button to create a new responder, the Condition fields activate and the buttons change to configure a Condition.

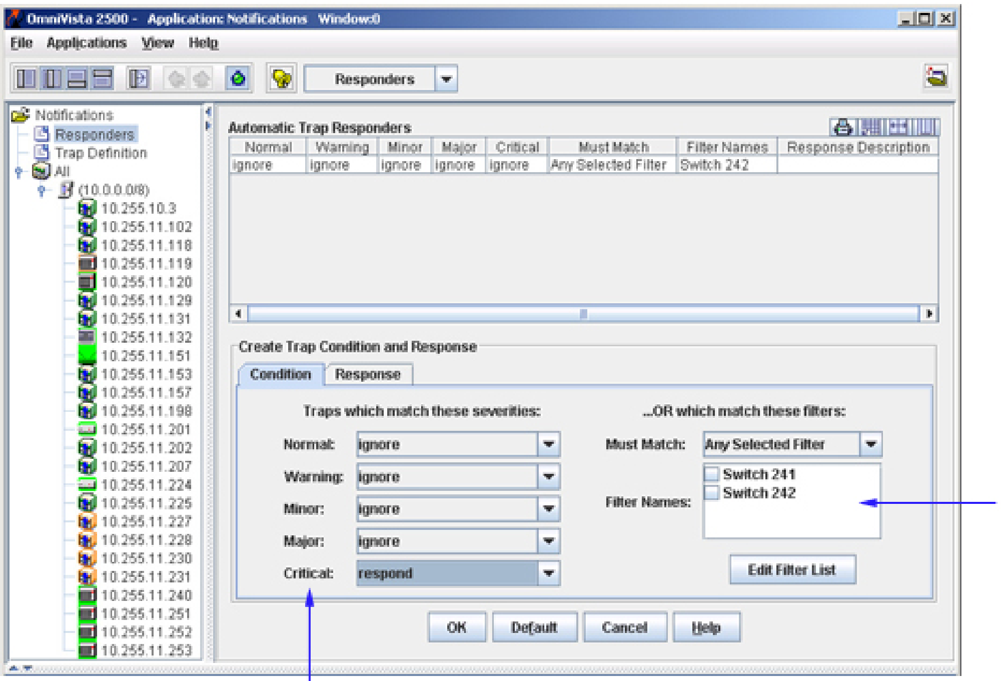
Specifying Traps by Severity

The Condition tab lists each possible trap severity level - Normal, Warning, Minor, Major, and Critical - and provides a drop-down menu for each level. Each level can be set to either **ignore** or **respond**. When a level is set to **respond**, receipt of a trap with that severity level will trigger the response specified in the Response tab. When a drop-down box is set to **ignore**, receipt of a trap with that severity level will not trigger the response specified in the Response Tab.

If you want to specify traps using one or more severity levels, set the desired trap severity levels to **respond**. For example, you might want to set the Major severity level and the Critical severity level to **respond** and leave other severity levels set to **ignore**. In this case, the response specified in the Response Tab will occur when a trap of Major severity or Critical severity is received. If you specify traps using severity levels, ensure that no filters are selected in the **Filter Names** box.

When the filter is specified, click the Response Tab to configure the response.

Specifying Traps by Severity Level



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Traps which match these severities:

Normal: ignore

Warning: ignore

Minor: ignore

Major: ignore

Critical: respond

...OR which match these filters:

Must Match: Any Selected Filter

Filter Names: □ Switch 241 □ Switch 242

Make sure no filters are selected.

To specify traps by severity level, select the response(s) for the severity level(s) from the drop-down menu.

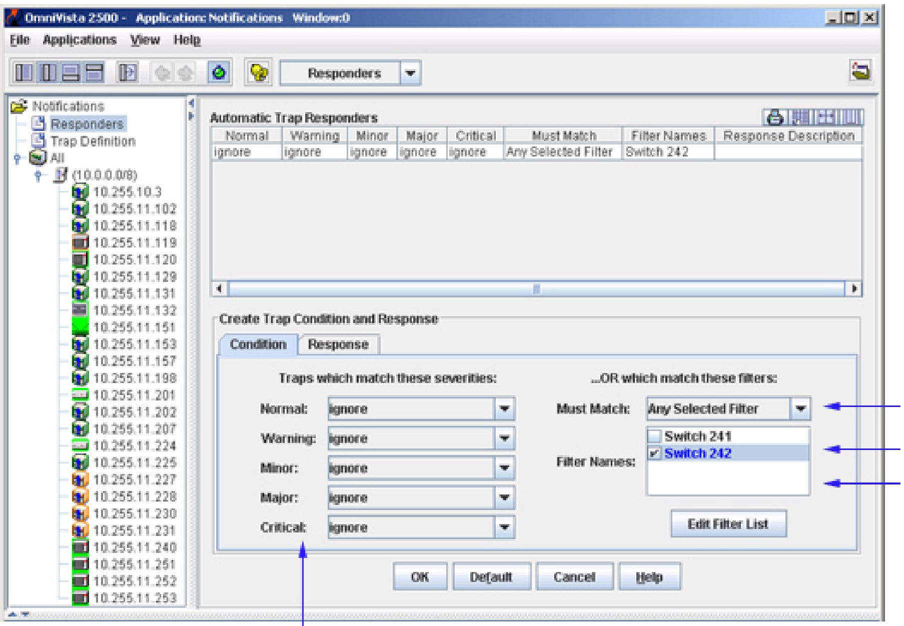
Specifying Traps by Filter

Create filters by clicking the **Edit Filter List** button, which displays the Edit Filters Window. The Edit Filters Window enables you to create, edit, and delete the filters listed in the **Filter Names** field.

To specify traps by one or more filters, set the **Must Match** drop-down menu to **Any Selected Filter** (which will OR the filters that you select) or to **All Selected Filters** (which will AND the filters that you select). Select the desired filters in the **Filter Names** box. A filter is selected when it is checked. Ensure that the severity levels are set to **ignore**.

When the filter is specified, click on the Response Tab to configure the response.

Specifying Traps by Filter



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Create Trap Condition and Response

Traps which match these severities:

Normal: ignore

Warning: ignore

Minor: ignore

Major: ignore

Critical: ignore

...OR which match these filters:

Must Match: Any Selected Filter

Filter Names:
☐ Switch 241
☑ Switch 242

Set this field to Any Selected Filter or All Selected Filters.

Select Filter(s).

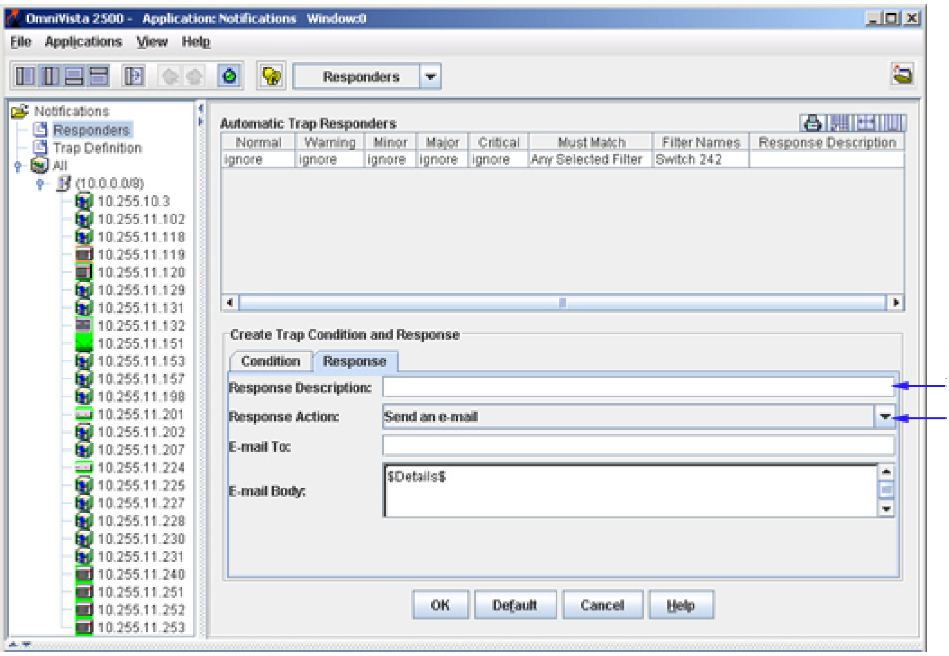
Click Edit Filter List button to create, edit, or delete a filter.

Make sure all severity levels are set to ignore.

The Response Tab

To create the response, first enter a description of the response in the **Response Description** field. Set the **Response Action** field to **Send an e-mail**, **Run an application on the server**, or **Forward traps**. Continue as described in the appropriate section below.

The Response Tab



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Create Trap Condition and Response

Response Description:

Response Action: Send an e-mail

E-mail To:

E-mail Body: $Details$

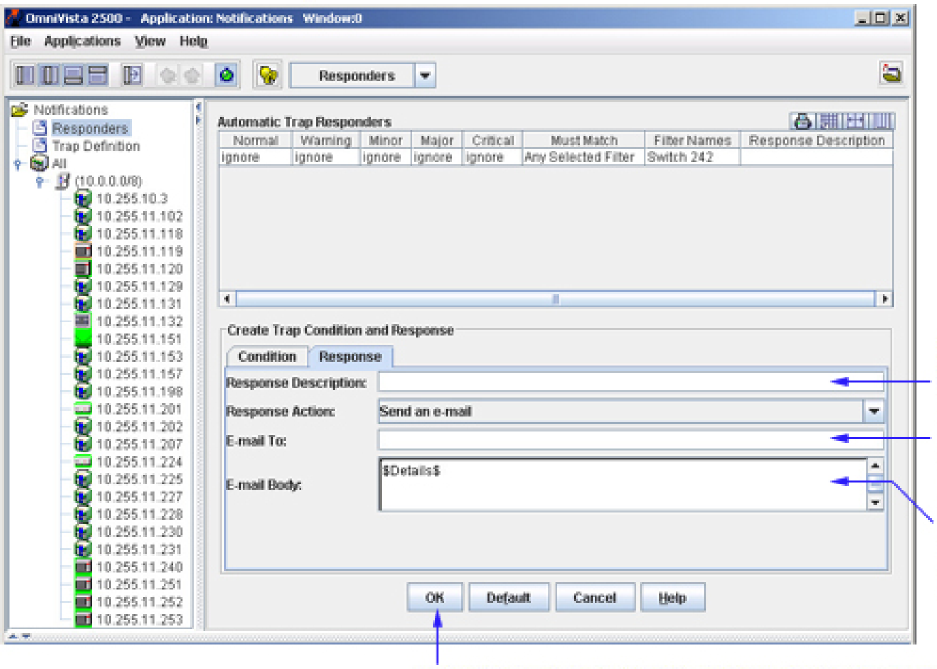
Enter a description for the Response.

Set the Response Action.

To Send an E-Mail

If you set the Response Action to **Send an e-mail**, follow the steps below to define the e-mail to be sent. It is important to note that all fields in the Sending E-Mail Preferences Window in the Preferences Application MUST be completed or the e-mails you define will not be sent. To display the Sending E-Mail Preferences Window, select **Sending E-Mail** in the Preferences Application, which is in the Administration Group of applications.

Response Tab - Send an E-Mail



OmniVista 2500 - Application: Notifications Window:0

Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Create Trap Condition and Response

Response Description:

Response Action: Send an e-mail

E-mail To:

E-mail Body: $Details$

Enter a Response Description.

Enter the address to which the e-mail will be sent.

Enter the text for the body of the e-mail, or enter a variable.

Click OK to save the Responder to session memory.
Then click Apply to save the Responder to the server.

1. Enter a Response description.

2. Enter the address to which the email will be sent in the **Email To** field. (The "From" address on responder e-mails is determined by the entry in the **Use 'From' Address** field in the Sending E-mail pane n the Preferences application.)

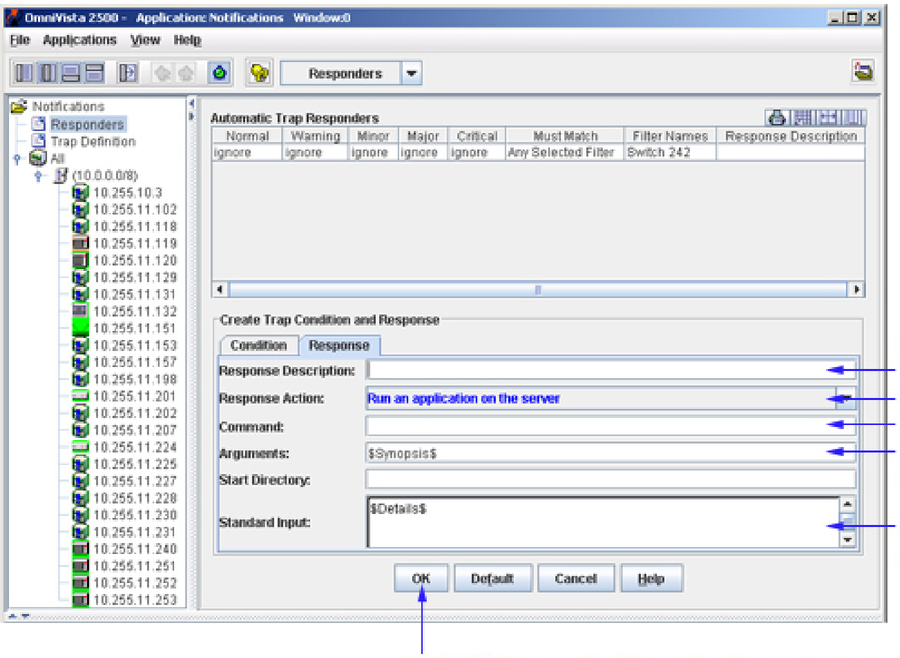
3. Define the body of the email in the **E-mail Body** field by typing the desired text and/or the desired variables. The variables you can use are explained in the Trap Variables section below. You can also accept the default e-mail body, which is the variable $Details$ (explained below).

4. Click the **OK** button. The new automatic trap responder is saved to the session memory and is listed in the **Automatic Trap Responders** table as an unsaved change. Click the **Apply** button to save the new responder to the server.

To Run an Application on the Server

If you set the Response Action to R**un an application on the server**, follow the steps below to define the application to be run.

Response Tab - Run an Application



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Response Description:

Response Action: Run an application on the server

Command:

Arguments: $Synopsis$

Start Directory:

Standard Input: $Details$

Enter a Response Description.

Enter a command.

Enter the Arguments.

Enter directory where command should start.

Enter the Standard Input for the command.

Click OK to save the Responder to session memory.
Then click Apply to save the Responder to the server.

1. Enter a Response description.

2. Enter the command to be executed in the **Command** field.

3. Enter the arguments to the command specified above in the **Arguments** field, or accept the default argument, the variable $Synopsis$ (explained in the Trap Variables section below).

4. Enter the directory in which the command should be executed in the **Start Directory** field.

5. Enter the standard input for the command in the **Standard Input** field, or accept the default standard input, the variable $Details$ (explained in the Trap Variables section below).

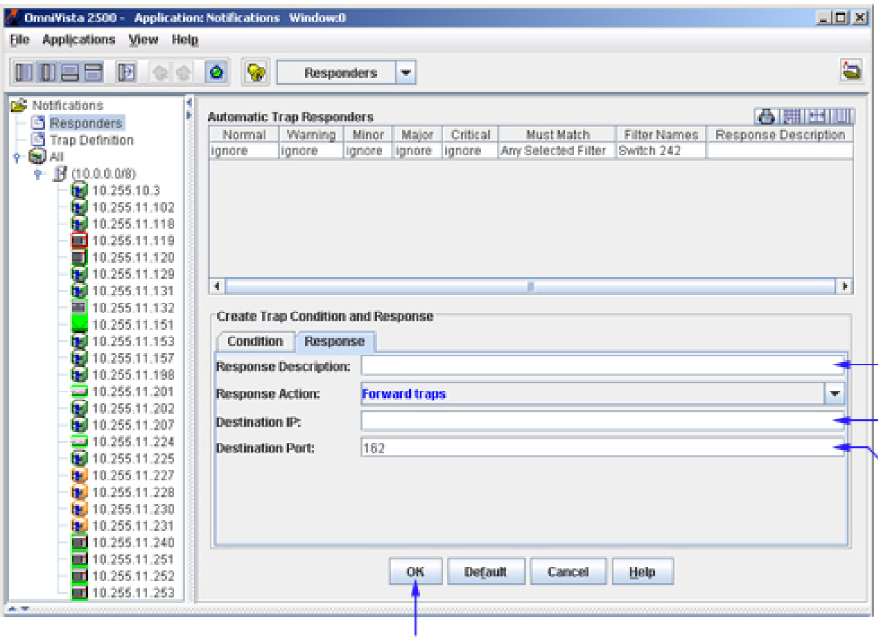
6. Click the **OK** button. The new automatic trap responder is saved to session memory and is listed in the **Automatic Trap Responders** table as an unsaved change. Click the **Apply** button to save the new responder to the server.

To Forward the Traps

If you set the Response action to **Forward traps**, follow the steps below to forward the traps to a specific IP address.

> **Note:** If you have enabled Trap Absoprtion for non-AOS devices through the Preferences application, all traps will still be forwarded for this response option.

Response Tab - Forward Traps



Automatic Trap Responders

Normal	Warning	Minor	Major	Critical	Must Match	Filter Names	Response Description
ignore	ignore	ignore	ignore	ignore	Any Selected Filter	Switch 242	

Create Trap Condition and Response

Response Description:

Response Action: Forward traps

Destination IP:

Destination Port: 162

Enter a Response Description.

Enter the Destination IP address for the traps.

Enter the Destination UDP Port Number (Default = 162).

Click OK to save the Responder to session memory.
Then click Apply to save the Responder to the server.

1. Enter a Response description.

2. Enter the destination IP address in the **Destination** IP field. Only one IP address can be entered per Responder. However, you can create multiple Responders to forward the trap to multiple recipients.

3. Enter the destination UDP port number (Default = 162) in the **Destination Port** field.

4. Click the **OK** button. The new automatic trap responder is saved to the session memory and is listed in the **Automatic Trap Responders** table as an unsaved change. Click the **Apply** button to save the new responder to the server.

> **Note:**You can forward traps between two servers to provide a backup for trap logs. However, forwarding traps between more than two servers is not supported.

Facts About Responder E-Mails

To prevent e-mail storms that would result from receipt of multiple traps, OmniVista does NOT send one e-mail per trap received. Rather, OmniVista "coalesces" (i.e., combines) responder e-mails to prevent storms. OmniVista will send a coalesced responder e-mail when:

- a minute has passed since the first trap was received for which an e-mail was not generated, OR
- a minimum of 100 traps have been received.

> **Note:** These default values can be re-defined using the Trap E-Mail pane of the Preferences application, which is in the Administration group of applications.

The subject of responder e-mails takes the following form:

OmniVista: Traps Received (2 Critical, 2 Major, 5 Minor)

The "From" address in the responder e-mails is determined by the entry in the **Use 'From' Address** field in the Sending E-Mail pane of the Preferences application.

Trap Variables

You can use the following variables when you configure an automatic trap responder. There are two types of variables: generic variables (which currently apply only to traps) and trap-specific variables.

Generic Variables

$Details$
For traps, this variable is equivalent to the following combination of text and trap-specific variables (trap-specific variables are described in the following section):

Trap Received: $TrapName$
Severity: $TrapSeverity$
Synopsis: $TrapSynopsis$
Agent: $TrapAgent$
Variables: $TrapVariables$

Output Example:
Trap Received: portPartitioned
Severity: Minor
Synopsis: Port jabber on slot 7 frtrunking port 1 instance 156 (port state alternated between enabled and disabled more than 50 times in 200 ms)
Agent: 128.251.30.27

$Synopsis$
For traps, this variable is equivalent to the trap-specific variable $TrapSynopsis$, which is a brief description of the trap.

Output Example: Port jabber on slot 7 frtrunking port 1 instance 156 (port state alternated between enabled and disabled more than 50 times in 200 ms)

Trap-Specific Variables

$TrapName$
The name of the trap (as defined in the MIB)

Output Example: portPartitioned

$TrapSynopsis$
A brief description of the trap.

Output Example: Port jabber on slot 7 frtrunking port 1 instance 156 (port state alternated between enabled and disabled more than 50 times in 200 ms)

$TrapDescription$
A detailed description of the trap (as it appears in the MIB)

Output Example: A portPartitioned trap occurs when the physical port has transitioned through enable/disable states faster than 10 times in the past second...indicative of a flaky cable.

$TrapSeverity$
The severity level assigned to the trap in the Notifications application's Trap Definitions pane. The severity level can be Normal, Warning, Minor, Major, or Critical.

Output Example: **Minor**

$TrapSeverityInt$
The severity level assigned to the trap in the Notifications application's Trap Definitions pane, expressed as an integer. The severity level integer can be 1 (Normal), 2 (Warning), 3 (Minor), 4 (Major), or 5 (Critical).

Output Example: **3**

$TrapSnmpVersion$
The version of the trap request, either 1 (version 1) or 2 (version 2).

All traps sent with SNMP version 1 protocol are "version 1" trap requests. All traps sent with SNMP versions 2, 2c, or 3 protocol are "version 2" trap requests. There are actually two different types of trap requests (not three). The message packet in which trap requests are sent can be one of four different versions: 1, 2, 2c, or 3. When you use the AOS CLI to create a version 1 trap station, version 1 traps in version 1 protocol are sent to that station. When you use the AOS CLI to create a version 2 trap station, version 2 traps in version 2c protocol are sent to that station. When you use the AOS CLI to create a version 3 trap station, version 2 traps in version 3 protocol are sent to that station. The version 2 trap request itself is identical whether wrapped in a version 2 or version 3 packet.

Output Example: **1**

$TrapSource$
The IP address of the switch that generated the trap.

Output Example: **127.0.0.1**

$TrapUpTime$
The length of time the switch that sent the trap has been up (or the amount of time since the last reset).

Output Example: **21 hours, 35 minutes, 49 seconds**

$TrapAgent$
The IP address of the SNMP agent.

Output Example: **128.251.30.27**

$TrapV1Enterprise$
The enterprise name. This only applies to SNMP Version 1 traps.

Output Example: **xylanSwitchDevice**

$TrapV1EnterpriseOID$
The enterprise object identifier number. This only applies to SNMP Version 1 traps.

***Output Example:* .1.3.6.1.4.1.800.3.1.1**

$TrapV1GenericID$
The generic trap number. This only applies to SNMP Version 1 traps.

***Output Example:* 6**

$TrapV1SpecificID$
The enterprise trap number. This only applies to SNMP Version 1 traps.

***Output Example:* 10**

$TrapVariables$
Describes all of the variables in the trap.

$TrapVariable[1]$, $TrapVariable[2]$...
Accesses the first (second, etc.) variable in the trap.

$TrapVariable[someVariableName]$
Accesses the trap variable by its name.