Dell OpenManage Essentials v2.0 - Device support

This Dell technical white paper provides complete details about support for the following Dell devices in OpenManage Essentials: EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, and UPS.
Contents
Introduction ...................................................................................................................... 6
Scope .................................................................................................................................. 6
Pre-requisites ................................................................................................................... 6
Protocol Support .............................................................................................................. 6
Device Discovery/Inventory & Classification ................................................................. 7
Classification .................................................................................................................. 8
  Dell EqualLogic Groups ................................................................................................. 8
  Dell PowerVault NX3500 ............................................................................................... 13
  Dell SonicWALL Firewall ............................................................................................... 15
  Dell PowerConnect W-Series ....................................................................................... 16
  Brocade Fibre Channel ................................................................................................. 16
  Dell Compellent ........................................................................................................... 17
  Dell Networking ........................................................................................................... 19
  Dell KVM ..................................................................................................................... 20
  Dell PDU ...................................................................................................................... 21
  Dell UPS ....................................................................................................................... 21
Device Health ................................................................................................................ 22
Warranty Information support ....................................................................................... 22
Application Launch ........................................................................................................ 23
  Configuring Custom URLs ......................................................................................... 24
    Creating a Custom URL ............................................................................................ 24
    Launching the Custom URL ..................................................................................... 24
Alerts (SNMP Traps) ....................................................................................................... 25
  Understanding the Alert types .................................................................................... 25
  Viewing Alerts from a Device ...................................................................................... 26
  Viewing Alert Categories ............................................................................................. 26
  Configuring Alert Actions ........................................................................................... 30
  Configuring Warranty Email Notifications ............................................................... 30
  Configuring Warranty Scoreboard Notifications ....................................................... 31
Troubleshooting ............................................................................................................ 32
  OpenManage Essentials Troubleshooting Tool ........................................................... 32
    Troubleshooting Discovery of a Dell Device ............................................................ 32
  ProSupport with Dell SupportAssist .......................................................................... 34
Learn More ..................................................................................................................... 34
Figures

Figure 1: Discovery Range Configuration .................................................................7
Figure 2: ICMP Configuration ..............................................................................7
Figure 3: SNMP Configuration .............................................................................8
Figure 4: Dell EqualLogic Group Representation ..............................................8
Figure 5: Dell EqualLogic Group Device Inventory I .......................................9
Figure 6: Dell EqualLogic Group Device Inventory II ....................................10
Figure 7: Dell EqualLogic Member Device Inventory I ...................................10
Figure 8: Dell EqualLogic Member Device Inventory II ..................................11
Figure 9: Dell EqualLogic Member Event Association I ..................................12
Figure 10: Dell EqualLogic Member Event Association II ..............................12
Figure 11: Dell PowerVault NX3500 Classification and Inventory ..................13
Figure 12: Dell SonicWALL Firewall Classification and Inventory ..................15
Figure 13: Dell PowerConnect W-Series Classification and Inventory ..........16
Figure 14: Brocade Fibre Channel Classification and Inventory .....................17
Figure 15: Dell Compellent Classification .........................................................17
Figure 16: Dell Compellent Inventory Details .....................................................18
Figure 17: Dell Networking Classification and Inventory .................................19
Figure 18: Dell KVM Classification and Inventory ............................................20
Figure 19: Dell PDU Classification and Inventory .............................................21
Figure 20: Dell UPS Classification and Inventory .............................................22
Figure 21: Warranty Information .......................................................................23
Figure 22: Application Launch for Dell PDU .....................................................23
Figure 23: Creating a Custom URL .....................................................................24
Figure 24: Launching the Custom URL ...............................................................25
Figure 25: SNMP Alert from a Dell PDU ............................................................26
Figure 26: Alert Sources for Dell NAS Appliances ..........................................26
Figure 27: Alert Sources for Dell Compellent ..................................................27
Figure 28: Alert Sources for Dell SonicWALL Firewall ..................................27
Figure 29: Alert Sources for Dell Networking ..................................................28
Figure 30: Alert Sources for Brocade Fibre Channel .......................................28
Figure 31: Alert Sources for Dell KVM ...............................................................29
Figure 32: Alert Sources for Dell PDU ...............................................................29
Figure 33: Alert Sources for Dell UPS ...............................................................29
Figure 34: Configuring Email Alert Action .........................................................30
Figure 35: Warranty Email Notification Settings .............................................31
Figure 36: Warranty Scoreboard Notification Settings ....................................32
Figure 37: Troubleshooting Tool: SNMP Test for Dell UPS ............................33
Dell OpenManage Essentials v2.0 - Device Support

Tables

Table 1: Dell EqualLogic Group - Supported actions ................................................................. 11
Table 2: Minimum firmware version that supports the display of Service Tag of Dell Networking devices 19
Table 3: Device Health Symbols.................................................................................................... 22
Table 4: Alert Types....................................................................................................................... 25
Executive summary

This document describes complete support of Dell devices in OpenManage Essentials. The following topics will be covered in this document:

1. Device Discovery/Inventory & Classification
2. Device Health
3. Application Launch
4. Monitoring these Devices (Alerts)
5. Troubleshooting

Introduction

OpenManage Essentials enables users to manage and monitor the discovered Dell EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, and UPS devices, in addition to the devices supported in the previous version, in a single centralized mode.

Scope

With OpenManage Essentials users can perform discovery and inventory to manage devices present in their network. The scope of this document is limited to complete support of Dell EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, and UPS devices in OpenManage Essentials.

Pre-requisites

OpenManage Essentials can discover and receive alerts from Dell EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, and UPS devices using SNMP protocol. SNMP protocol versions V1 and V2 are supported as of now. User has to configure the SNMP protocol on all the target devices and set the management station IP address to the system where OpenManage Essentials is installed. Also, the same IP address must be mentioned for SNMP trap receiver for that device. Although these settings are not required on all these devices, it is recommended to check for the SNMP configuration before performing discovery/inventory. The “Troubleshooting” section provides guidance on how to make sure that a target device is configured correctly to be managed by OpenManage Essentials.

Protocol Support

OpenManage Essentials uses SNMP protocol for discovering Dell EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, and UPS devices. Receipt of SNMP traps/alerts is also well supported for these devices in OpenManage Essentials.
Device Discovery/Inventory & Classification

The process for discovering a Dell EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, or UPS through OpenManage Essentials is as follows:

1. Launch Open Manage Essentials.
2. Navigate to Manage  Discovery and Inventory.
3. Click “Add Discovery Range” on the left pane.
4. Enter the IP address / Host name and subnet mask and click “Add”.

5. Click “Next”.
6. ICMP Configuration: click “Next”.

Figure 1: Discovery Range Configuration

Figure 2: ICMP Configuration
**Classification**

**Dell EqualLogic Groups**

Dell EqualLogic groups are classified under All Devices → Storage Devices → Dell EqualLogic Groups in the tree on the left side. A discovered Dell EqualLogic Group will be represented as shown in the following figure.

---

**Figure 3: SNMP Configuration**

**Figure 4: Dell EqualLogic Group Representation**
Dell OpenManage Essentials v2.0 - Device Support

Dell EqualLogic storage is no longer represented as a single device, instead, it is represented as a group, where:
- The **Group Device** holds group level data.
- The **Member Device** holds member specific data.

Dell EqualLogic groups are auto generated during the discovery process and get cleaned up automatically when either the Group Device or the corresponding Discovery Range is deleted. Every discovered Dell EqualLogic group will have one Group Device and multiple Member Devices depending on the number of enclosures added to the group.

**Group Device Tables and Data**

The following tables will be shown as part of the inventory details page for the EqualLogic Group device:

- **Device Summary** - Model and Service Tag will be shown as N/A for the EqualLogic Group device.
- **Data Sources** - Shows group-level health status and other details.
- **NIC Information** - Lists only EqualLogic Management and Storage Group IP addresses.
- **Storage Group Information** - Information about the storage group.
- **EqualLogic Volume Information** - Lists the volumes created under the group.

**Member Device Tables and Data**

The following tables will be shown as part of the inventory details page for the EqualLogic Member device:

- **Device Summary** - Shows the member-specific model and Service Tag.
- **Data Sources** - Shows the member-specific health status and other details.
- **NIC Information** - Lists only the member-specific IP addresses.
Controller Information - Lists the controllers associated to the selected member.

Enclosure Information - Lists more details about the selected member.

Physical Disk Information - Lists the disks residing in the selected member enclosure.
Figure 8: Dell EqualLogic Member Device Inventory II

Supported Actions For Dell EqualLogic Group

Below table lists the supported actions and their behavior for Dell EqualLogic Groups.

Table 1: Dell EqualLogic Group - Supported actions

<table>
<thead>
<tr>
<th>Action</th>
<th>Group Device</th>
<th>Member Device</th>
</tr>
</thead>
<tbody>
<tr>
<td>Application Launch</td>
<td>Dell EqualLogic Console</td>
<td>View and renew warranty Dell EqualLogic Console</td>
</tr>
<tr>
<td>Refresh Inventory</td>
<td>Updates inventory for the entire group. Re-creates any deleted members.</td>
<td>Updates inventory for the entire group. Re-creates any deleted members.</td>
</tr>
<tr>
<td>Refresh Status</td>
<td>Updates status for the entire group including all members.</td>
<td>Updates status for the entire group including all members.</td>
</tr>
<tr>
<td>Add to New Group</td>
<td>Supported.</td>
<td>Supported.</td>
</tr>
<tr>
<td>Ignore All Alerts from Device</td>
<td>Ignores all alerts coming from the EqualLogic Group device only.</td>
<td>Ignores all alerts coming from the selected member only.</td>
</tr>
<tr>
<td>Exclude</td>
<td>Supported.</td>
<td>Not Supported.</td>
</tr>
<tr>
<td>Delete</td>
<td>Deletes the entire group including all members.</td>
<td>Deletes only the selected member.</td>
</tr>
</tbody>
</table>
Dell EqualLogic member SNMP alerts are associated at member device level and not at the group device level. Alerts tab for EqualLogic Member device will list all the alerts received from the selected member as shown in the following figures.
The following are highly recommended for proper support of Dell EqualLogic Groups in OpenManage Essentials:

- After upgrade from previous versions of OpenManage Essentials, it is mandatory to perform re-discovery of all the discovered Dell EqualLogic devices to have proper functionality.
- It is recommended to discover Dell EqualLogic storage arrays using the Group Management IP or Storage Group IP only, and not include any of the member IPs in the discovery range configuration.

**Note:** The back-end Dell EqualLogic storage of a FS7500/FS7600/FS7610 NAS setup will be classified as Dell EqualLogic Groups instead of Dell NAS Appliances in OpenManage Essentials.

**Dell PowerVault NX3500**

Dell PowerVault NX3500 devices are classified under All Devices → Storage Devices → Dell NAS Appliances in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

![Dell PowerVault NX3500 Classification and Inventory](image_url)

**Supported Models**

OpenManage Essentials currently supports Dell PowerVault NX3500 device.

**Note:**

For Dell PowerVault NX3500 NAS appliance, discovery/inventory and alerts/traps support is provided only for the solutions with Dell Fluid File System (FluidFS) V1 with OpenManage Server Administrator (OMSA) services running on the nodes. This is the default setting for any node with FluidFS V1. The Appliance Node Information table will list out the applicable details regarding the nodes present in the NAS solution. Rest of the inventory details will match the standard Dell PowerEdge Server inventory in OpenManage Essentials.
Dell SonicWALL Firewall devices are classified under All Devices → Network Devices → Network Appliances in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

**Supported Models**

OpenManage Essentials currently supports Dell SonicWALL NSA 250M Firewall device.

**Note:**

Global health status for SonicWALL Firewall devices will always be shown as ‘Unknown’ in OpenManage Essentials. This is because the SonicWALL SNMP agent does not report device health through its Management Information Base (MIB). SonicWALL SNMP agent runs on SonicOS, which is also available on following platforms:

- NSA 220/220W, NSA 240, and NSA 250M/250MW
- NSA 2400/2400MX, NSA 3500, NSA 4500, and NSA 5000
- E-Class NSA E5500, E6500, E7500, E8500, and E8510

Since the above listed models run the same firmware, they may also be classified in OpenManage Essentials similar to NSA 250M.
Dell PowerConnect W-Series devices are classified under All Devices → Network Devices → Dell Networking Switches in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

**Supported Models**


**Note:**

PowerConnect W-Series devices will report only Normal or Critical (for active or inactive controllers) global health status in OpenManage Essentials. It is recommended to have ArubaOS version 6.3 or later installed on the mobility controllers for proper discovery and classification in OpenManage Essentials.

**Brocade Fibre Channel**

Brocade Fibre Channel devices are classified under All Devices → Network Devices → Fibre Channel Switches in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in Figure 14.
Supported Models

OpenManage Essentials currently supports following Brocade Fibre Channel devices: 200E, 300, 4424, 5100, 5300, 6505, 6520, 8000, 8424-K, M5424, and M6505.

Dell Compellent

Dell Compellent devices are classified under All Devices → Storage Devices → Dell Compellent Arrays in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figures.
OpenManage Essentials currently supports Dell Compellent SC8000 device.

Note:
The “Device summary” and “Enclosure Information” tables will show the service tag in the “Service Tag” column only if the Dell Compellent device is running with firmware version 6.4.1 or later. If the firmware version is earlier than 6.4.1, the “Service Tag” column will show “N/A”. The firmware version can be located under the “Agent Version” column of the “Data Sources” table as highlighted in Figure 16. Users are suggested to update all their target devices with the latest firmware available.
Dell Networking devices are classified under All Devices → Network Devices → Dell Networking Switches in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

Dell Networking devices are classified under All Devices → Network Devices → Dell Networking Switches in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

Supported Models

OpenManage Essentials currently supports following Dell Networking Switches:

Table 2: Minimum firmware version that supports the display of Service Tag of Dell Networking devices

<table>
<thead>
<tr>
<th>Dell Networking Model</th>
<th>Minimum Firmware Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>C-Series</td>
<td>8.4.2.7</td>
</tr>
<tr>
<td>E-Series (ExaScale)</td>
<td>8.4.1.5</td>
</tr>
<tr>
<td>E-Series (TeraScale)</td>
<td>8.4.2.7</td>
</tr>
<tr>
<td>S25, S50</td>
<td>8.4.2.7</td>
</tr>
<tr>
<td>S55</td>
<td>8.3.5.3</td>
</tr>
<tr>
<td>S60</td>
<td>8.3.3.8</td>
</tr>
<tr>
<td>S4810</td>
<td>8.3.12.0</td>
</tr>
<tr>
<td>S4820T</td>
<td>8.3.19.0</td>
</tr>
<tr>
<td>S5000</td>
<td>9.0.1.3</td>
</tr>
<tr>
<td>S6000</td>
<td>9.0.2.0</td>
</tr>
<tr>
<td>M-Series</td>
<td>8.3.16.1</td>
</tr>
<tr>
<td>Z-Series</td>
<td>9.0.0.0</td>
</tr>
</tbody>
</table>
Dell OpenManage Essentials v2.0 - Device Support

Note:
Device type for the entire portfolio of Dell switches will be shown as Dell Networking (this does not include Brocade Fiber Channel switches). This behavior is irrespective of whether the firmware on the switch device has been upgraded to the rebranded one or not.

Note:
The “Device summary” and “Switch Device Information” tables will show the service tag in the “Service Tag” column only if the Dell Networking device is running with the supported firmware versions or later. Refer Table 2 for firmware versions supporting service tag for corresponding Dell Networking models. If the firmware version is earlier than those listed in Table 2, the “Service Tag” column will show “N/A.” The firmware version can be located under the “Version” column of the “Firmware Information” table.

Dell KVM

Dell KVM devices are classified under All Devices → KVM in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

Figure 18: Dell KVM Classification and Inventory

**Supported Models**

OpenManage Essentials currently supports the following Dell KVM devices: 4161DS, 1082DS, 2161DS, 2161DS-2, 2162DS, 2321DS, and 4332DS.

Note:
It is recommended to have latest firmware (version 1.16) installed on the KVM device to properly discover and classify it in OpenManage Essentials.
Dell PDU

Dell PDU devices are classified under All Devices → Power Devices → PDU in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in Figure 19.

![Figure 19: Dell PDU Classification and Inventory](image)

**Supported Models**

OpenManage Essentials currently supports following Dell PDU devices:

- Managed Rack PDU: K538N, G756N, H544N, J523N, and K539N.

Dell UPS

Dell UPS devices are classified under All Devices → Power Devices → UPS in the tree on the left side. User can click the discovered device to see all the inventoried tables as shown in the following figure.

**Supported Models**

Device Health

Health status reflects the overall health of the device contributed by their SNMP agent. The health status can be Critical, Warning, Normal or Unknown. Please refer to the Table 3 for more details:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Critical" /></td>
<td>Indicates that a device is critical and requires attention. This information is rolled up to the parent device type. For example if a PDU is in critical state and requires attention the same symbol is assigned to the parent device type, i.e. Power Devices. Critical health state is given the highest priority. That is, in a group, if different devices are in different states, and if one device is in critical state, then the state of the parent device type is set to critical.</td>
</tr>
<tr>
<td><img src="image" alt="Warning" /></td>
<td>Indicates that there is a deviation from the expected behavior, but the device is still manageable.</td>
</tr>
<tr>
<td><img src="image" alt="Normal" /></td>
<td>Indicates that the device is working as expected.</td>
</tr>
<tr>
<td><img src="image" alt="Unknown" /></td>
<td>Indicates the device does not have proper instrumentation or proper protocol was not used to discover the device.</td>
</tr>
</tbody>
</table>

Warranty Information support

OpenManage Essentials v2.0 supports device warranty information through the Warranty Information report. Users can also view and renew warranty on the Warranty Information report page. This warranty information is collected at run time from Dell Support site by providing corresponding service tag of the hardware.
Dell OpenManage Essentials v2.0 - Device Support

Warranty information is based on the service tag and is available for Dell EqualLogic Groups, Dell PowerVault NX3500, Brocade Fibre Channel, Dell Compellent, and Dell Networking devices. Warranty information is not available for Dell SonicWALL Firewall, PowerConnect W-Series, KVM, PDU, and UPS devices. The warranty report can be viewed by navigating to Reports → Warranty Information as shown in Figure 16.

Figure 21: Warranty Information

Application Launch

Application launch provides a right-click action menu item on the discovered device to launch 1×1 console or application. OpenManage Essentials provides the capability to launch and navigate to the device-specific console for Dell EqualLogic Groups, PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, KVM, PDU, and UPS. Application launch action can be performed as shown in the following figure.

Figure 22: Application Launch for Dell PDU
Configuring Custom URLs

OpenManage Essentials supports creation and launch of custom URLs on all device groups. This feature comes handy when user wants to visit same URL for a group of devices. Once created, any device falling under the group gets added with the custom URL launch.

Creating a Custom URL

Steps to create a custom are as follows:

1. Click Preferences → Custom URL Settings.
2. Click icon on right side.
3. Enter the Name, URL, Description and select the device type from the drop-down list. After entering the URL, you can also test the URL launch by clicking the “Test URL” button.
4. Click “Ok.”

Launching the Custom URL

Procedure for launching the custom URL is as follows:

1. Click Manage → Devices and select the device from the tree.
2. Right-click the device and select “Application Launch.”
Alerts (SNMP Traps)

The SNMP alerts received from discovered Dell devices will be shown under the alerts tab of the respective device. OpenManage Essentials supports SNMP V1/V2 alerts only (as of now). The status of the device is polled every time an SNMP trap is received from that device. For example, if a trap with critical severity is received from a device, status of that device is set to critical.

Understanding the Alert types

The following alert log types are displayed:

<table>
<thead>
<tr>
<th>Icon</th>
<th>Alert</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![green-checkmark]</td>
<td>Normal Alerts</td>
<td>An event from a device that describes the successful operation of a unit, such as a power supply turning on.</td>
</tr>
<tr>
<td>![warning]</td>
<td>Warning Alerts</td>
<td>An event that is not necessarily significant, but may indicate a possible future problem, such as crossing a warning threshold.</td>
</tr>
<tr>
<td>![red-x]</td>
<td>Critical Alerts</td>
<td>A significant event that indicates actual or imminent loss of data or loss of function, such as crossing a failure threshold or a hardware failure.</td>
</tr>
<tr>
<td>![unknown]</td>
<td>Unknown Alerts</td>
<td>An event has occurred but there is insufficient information to classify it.</td>
</tr>
<tr>
<td>![info]</td>
<td>Information Alerts</td>
<td>Provides information only.</td>
</tr>
</tbody>
</table>
Viewing Alerts from a Device

Click on the device in the device tree then navigate to the “Alerts” tab as shown below:

![SNMP Alert from a Dell PDU](image)

**Figure 25: SNMP Alert from a Dell PDU**

Viewing Alert Categories

Predefined alerts for Dell PowerVault NX3500, SonicWALL Firewall, PowerConnect W-Series, Brocade Fibre Channel, Compellent, Dell Networking, KVM, PDU, and UPS devices can be seen under the Alert Categories section in OpenManage Essentials. Navigate to Manage → Alerts → Alert Categories, and then click the appropriate alert category.

![Alert Sources for Dell NAS Appliances](image)

**Figure 26: Alert Sources for Dell NAS Appliances**
Figure 27: Alert Sources for Dell Compellent

Figure 28: Alert Sources for Dell SonicWALL Firewall
### Alert Sources for Network

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Catalog</th>
<th>Severity</th>
<th>Format String</th>
</tr>
</thead>
<tbody>
<tr>
<td>bplLinkUnderrunBalance</td>
<td>SNMP</td>
<td>P10-BPSTATS-MIB</td>
<td>Warning</td>
<td>Trap generated when traffic imbalance observed</td>
</tr>
<tr>
<td>bplLinkUnderrunClear</td>
<td>SNMP</td>
<td>P10-BPSTATS-MIB</td>
<td>Ok</td>
<td>Trap generated when traffic imbalance is no longer a problem</td>
</tr>
<tr>
<td>camAutoBmirror</td>
<td>SNMP</td>
<td>FORCE10-SYSTEM-COMPONENT-MIB</td>
<td>Critical</td>
<td>sysComplAlarmVarString: $1, sysComplAlarmLevel: $2</td>
</tr>
<tr>
<td>camAutoBfull</td>
<td>SNMP</td>
<td>FORCE10-SYSTEM-COMPONENT-MIB</td>
<td>Warning</td>
<td>sysComplAlarmVarString: $1, sysComplAlarmLevel: $2</td>
</tr>
<tr>
<td>camLogosThresholdExceed</td>
<td>SNMP</td>
<td>FORCE10-SYSTEM-COMPONENT-MIB</td>
<td>Critical</td>
<td>sysComplAlarmVarString: $1, sysComplAlarmLevel: $2</td>
</tr>
<tr>
<td>camLinkDxdFixedPowerSupplydetect</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Ok</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdSett</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Ok</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdSett</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Ok</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdSett</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
<tr>
<td>camLinkDxdClear</td>
<td>SNMP</td>
<td>P10-CHASSIS-MIB</td>
<td>Critical</td>
<td>alarmVarString: $1, alarmLevel: $2, alarmSeverity: $3</td>
</tr>
</tbody>
</table>

**Figure 29: Alert Sources for Dell Networking**

### Alert Sources for Brocade-Switch

<table>
<thead>
<tr>
<th>Name</th>
<th>Type</th>
<th>Catalog</th>
<th>Severity</th>
<th>Format String</th>
</tr>
</thead>
<tbody>
<tr>
<td>connUnitDeletedTrap</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Warning</td>
<td>Vibration values are: connUnitId=1</td>
</tr>
<tr>
<td>connUnitEventTrap</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Information</td>
<td>Vibration values are: connUnitEventId=1, connUnitEventObjId=1, connUnitEventObjIndex=1</td>
</tr>
<tr>
<td>connUnitPortStatusChange</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Information</td>
<td>Vibration values are: connUnitPortStatus=1, connUnitPortStatusIndex=1</td>
</tr>
<tr>
<td>connUnitSensorStatusChange</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Information</td>
<td>Vibration values are: connUnitSensorStatus=1, connUnitSensorIndex=1</td>
</tr>
<tr>
<td>connUnitSensorStatusChange</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Information</td>
<td>Vibration values are: connUnitSensorStatus=1, connUnitSensorIndex=1</td>
</tr>
<tr>
<td>fcfpsFallingAlarm</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Warning</td>
<td>The SNMP trap that is generated when an alarm entryCriteria is falling threshold. alarmCriteria: 1, lastEvent: 0, 0</td>
</tr>
<tr>
<td>fcfpsFallingAlarm</td>
<td>SNMP</td>
<td>Brocade MIB</td>
<td>Warning</td>
<td>The SNMP trap that is generated when an alarm entryCriteria is falling threshold. alarmCriteria: 1, lastEvent: 0, 0</td>
</tr>
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<td>Brocade MIB</td>
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<td>Warning</td>
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</tr>
</tbody>
</table>

**Figure 30: Alert Sources for Brocade Fibre Channel**
Figure 31: Alert Sources for Dell KVM

Figure 32: Alert Sources for Dell PDU

Figure 33: Alert Sources for Dell UPS
Configuring Alert Actions

Alert actions occur on all alerts received in the OpenManage Essentials console. The alert is received and processed to take appropriate action depending upon the user configuration for that alert. To configure an alert action, navigate to Manage → Alerts → Alert Actions and then right-click on the appropriate category as shown in Figure 34.

The following alert actions are supported in OpenManage Essentials:

- Application Launch
- E-mail Notification
- Ignoring Alerts
- Forwarding Alerts

![Figure 34: Configuring Email Alert Action](image)

Configuring Warranty Email Notifications

You can configure OpenManage Essentials to send a warranty notification of your devices at periodic intervals through email based on the configuration done by you. The warranty notification email provides a list of devices and appropriate links that you can click to renew the warranty of the devices. Follow these steps to configure Warranty Email Notifications:

1. Click Preferences → Warranty Notification Settings.
2. Under Warranty Email Notifications, select “Enable Warranty Email Notifications.”
3. In the “To” field, type the email addresses of the recipients (semicolon separated).
4. In the “From” field, type the email address from which the warranty notification email is to be sent.
5. Set the criteria for the devices to be included in the warranty notification email.
6. Set the frequency at which you want to receive the warranty notification email.
7. To include devices with expired warranty or no warranty information in the warranty notification email, select “Include Devices with Expired Warranties.”
8. In the “Next Email will Send On” field, select the date and time at which you want to receive the next warranty notification e-mail.
9. If you want to configure the SMTP email server, click “Email Settings.”
10. Click “Apply.”

Figure 35: Warranty Email Notification Settings

Configuring Warranty Scoreboard Notifications

You can configure OpenManage Essentials to display a warranty scoreboard notification icon in the heading banner. If any device meets the set criteria, the OpenManage Essentials heading banner displays the warranty scoreboard notification icon including the number of devices. Follow these steps to configure Warranty Scoreboard Notifications:

1. Click Preferences → Warranty Notification Settings.
2. Under Warranty Scoreboard Notifications, select “Enable Warranty Scoreboard Notifications.”
3. Set the criteria for the devices to be included in the warranty notification scoreboard.
4. To include devices with expired warranty or no warranty information in the warranty notifications scoreboard, select “Include Devices with Expired Warranties.”
5. Click “Apply.”
Troubleshooting

OpenManage Essentials Troubleshooting Tool

The OpenManage Essentials Troubleshooting Tool is a standalone tool that installs along with OpenManage Essentials. You can use this tool for a wide array of protocol related problems that are often at the root of discovery and alert issues.

Troubleshooting Discovery of a Dell Device

1. Ensure that SNMP is enabled and properly configured on the target device by accessing its Web Interface.
2. Launch the Dell Troubleshooting Tool.
3. Navigate to Protocols (Remote Box) tab.
4. Give IP of the target device.
5. Select “SNMP” in the “Select Protocol(s)” pane.
6. Provide correct community name and click “Run Test.”

The “Result” window should show the SNMP test results for that device.

Example (refer Figure 37): For a Dell UPS, following rows should display:

1. MIB-II (System Name)
2. MIB-II (MAC Address)
3. Dell UPS (Family Name)
Figure 37: Troubleshooting Tool: SNMP Test for Dell UPS
ProSupport with Dell SupportAssist

The Dell SupportAssist plug-in proactively identifies hardware failures in your IT environment, and provides you with an efficient and personalized support experience. The Dell SupportAssist plug-in is bundled as part of the OpenManage Essentials installation media and can be installed from there as required.

Dell SupportAssist integrates with OpenManage Essentials to give you the added capabilities of secure remote monitoring so you know how your systems are performing at all times. SupportAssist is designed to help you manage your environment proactively with the following features:

- Detects and analyzes problems using automated data collection and diagnostics
- Helps accelerate resolution by automatically generating notifications and accurate case information with your Dell support team
- Provides parts replacement, as needed, directly from Dell

Dell Networking devices are currently covered under ProSupport with Dell SupportAssist. For more information please visit: www.dell.com/learn/services/support-assist

Learn More

Please Visit: www.delltechcenter.com/ome