

# Dell OpenManage Connection Version 3.0 for IBM Tivoli Netcool/OMNIbus

User's Guide

## Notes, Cautions, and Warnings

 **NOTE:** A NOTE indicates important information that helps you make better use of your computer.

 **CAUTION:** A CAUTION indicates either potential damage to hardware or loss of data and tells you how to avoid the problem.

 **WARNING:** A WARNING indicates a potential for property damage, personal injury, or death.

© 2011 - 2018 Dell Inc. or its subsidiaries. All rights reserved. Dell, EMC, and other trademarks are trademarks of Dell Inc. or its subsidiaries. Other trademarks may be trademarks of their respective owners.

# Contents

<b>1 Overview</b>	<b>5</b>
What is new in this release	5
Key features	6
<b>2 Dell OpenManage Connection Support Matrix</b>	<b>7</b>
Supported operating systems for Managing Systems	7
Supported operating systems for Managed Systems	8
Supported Dell devices and their OMSA and firmware versions	10
Supported Dell platforms	12
Dell Datacenter Scalable Solutions	12
Dell PowerEdge servers	12
Dell Workstations	13
Dell Chassis	13
Dell Compellent storage arrays	13
Dell PowerVault NX storage arrays	13
Dell EqualLogic PS-Series storage arrays	14
Dell PowerVault MD storage arrays	14
Dell network switches	15
<b>3 Using the Dell OpenManage Connection for IBM Tivoli Netcool/OMNibus</b>	<b>16</b>
Event monitoring using SNMP traps	16
Understanding Event Severity	17
Event Auto Correlation	17
Dell OMSA Alert Groups	18
Dell OMSS Alert Groups	19
Dell EqualLogic Alert Groups	20
Dell iDRAC7 and iDRAC8 Alert Groups	21
Dell DRAC5 and iDRAC6 Alert Groups	23
Dell Chassis Alert Groups	23
Dell Compellent Alert Groups	24
Dell PowerVault MD Array Alert Groups	25
Dell Enterprise Switches (S-Series, Z-Series, M-Series, and C-Series) Alert Groups	27
Dell N-Series Switch Alert Groups	28
W-Series Switch Alert Groups	30
<b>4 Dell Devices and their console launch tools</b>	<b>33</b>
Launching Dell consoles from the Web GUI	34
Launching Dell consoles from the Desktop Event List	34
<b>5 Troubleshooting</b>	<b>36</b>
iDRAC7/iDRAC8 SNMPv3 traps are not received in the IBM Tivoli Netcool/OMNibus console	36
Error while launching the OMSA console from iDRAC7/iDRAC8 polled events or SNMP traps	37

Error while launching the Warranty Report Information console from events generated by servers or workstations running ESXi version 5.5 or later.....	37
Dell PowerEdge server, PowerVault NX Storage Arrays, and Workstation events are not received at the Netcool/OMNIbus console.....	37
Dell iDRAC7 And iDRAC8 Server events are not received at the Netcool/OMNIbus console.....	38
Dell FX2 CMC, VRTX CMC, CMC and DRAC events are not received at the Netcool/OMNIbus console.....	38
Dell Compellent Storage Array events are not received at the Netcool/OMNIbus console.....	38
Dell EqualLogic PS-Series Storage Array events are not received at the Netcool/OMNIbus console.....	38
Dell PowerVault Modular Disk Storage Array events are not received at the Netcool/OMNIbus console.....	39
Dell Enterprise switch events are not received at the Netcool/OMNIbus console.....	39
Dell N-Series switch events are not received at the Netcool/OMNIbus console.....	39
Dell W-Series switch events are not received at the Netcool/OMNIbus console.....	40
Dell OpenManage Server Administrator events are not correlated.....	40
iDRAC7/iDRAC8 Events not Correlated.....	40
Dell FX2 CMC or VRTX CMC events are not correlated.....	40
Compellent events are not correlated.....	40
Dell EqualLogic events are not correlated.....	41
Dell Enterprise (S-Series, M-Series, Z-Series, and C-Series) events are not correlated.....	41
Dell N-Series events are not correlated.....	41
Error while importing the Web GUI Integrations.....	41
Error while launching the Dell consoles using Web GUI.....	41
Error while launching the Dell PowerVault MD Storage Array console using Web GUI.....	41
Error in restarting the MTTrapd probe in Windows.....	41
<b>6 Related documents and resources.....</b>	<b>42</b>
Other documents you may need.....	42
Contacting Dell.....	42
Accessing Documents From Dell Support Site.....	42
<b>A Appendix.....</b>	<b>44</b>
Configuring SNMP Trap Destination for 12G or Later Generation of PowerEdge Servers, PowerVault NX Storage Arrays, and Dell Workstations.....	44

# Overview

This guide provides the information required to monitor and troubleshoot the Dell OpenManage Connection Version 3.0 for Tivoli Netcool/OMNIBus.

Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus provides event-monitoring capabilities to monitor Original Equipment Manufacturing (OEM) Servers, Dell Datacenter Scalable Solutions (DSS), Dell PowerEdge Servers, Dell Remote Access Controllers (DRACs), Integrated Dell Remote Access Controllers (iDRACs), Dell Workstations, Dell Chassis, Dell Storage, and Dell Network devices. The Dell OpenManage Connection monitors Dell devices by receiving alerts on the IBM Tivoli Netcool/OMNIBus console. It also supports one-to-one console launches following Dell device alerts and other Dell tools launches from the IBM Tivoli Netcool/OMNIBus console in order to perform troubleshooting, configuration, and management activities.

## NOTE:

This guide is intended for system administrators familiar with IBM Tivoli Netcool/OMNIBus 7.3.1, 7.4, or 8.1

Dell Precision Rack Workstations mentioned throughout this guide refers to Dell Precision R7910 Rack Workstations.

For more information about the supported Dell devices, see [Dell OpenManage Connection support matrix](#). For more information on accessing documents, see [Accessing documents from the Dell support site](#).

Topics:

- [What is new in this release](#)
- [Key features](#)

## What is new in this release

The Dell OpenManage Connection version 3.0 for IBM Tivoli Netcool/OMNIBus has the following new features and support:

- Support for IBM Tivoli Netcool/OMNIBus version 8.1
- Simple Network Management Protocol version 3 (SNMPv3) support for iDRAC7, iDRAC8, Dell Enterprise Switches (M-Series, C-Series, S-Series, and Z-Series), and N-Series switches.
- Monitor alerts from the following Dell devices:
  - Support for Dell Original Equipment Manufacturing (OEM) servers
  - Support for Dell Datacenter Scalable Solutions (DSS)
  - Support for the latest Dell 13th Generation of PowerEdge servers
- Trap correlation support for the following Dell devices:
  - Dell OEM servers
  - Dell DSS
  - Integrated Dell Remote Access Controller 8 (iDRAC8)
  - Dell PowerEdge FX2
  - Dell PowerEdge VRTX
- Support for additional traps for the following Dell devices:
  - Dell OpenManage Server Administrator (OMSA) and Dell OpenManage Storage Management (OMSS) for OpenManage release 8.3, 8.2, and 8.1
  - Dell OEM servers
  - Dell DSS

- Integrated Dell Remote Access Controller 8 (iDRAC8) with firmware versions 2.30.30.30 and 2.20.20.20
- Integrated Dell Remote Access Controller 7 (iDRAC7) with firmware versions 2.30.30.30 and 2.20.20.20
- Dell N-Series switches
- Support to view Dell Warranty information of the Dell devices from the event context.

## Key features

The following table lists the key features of Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus version 3.0

**Table 1. Features and Functionalities**

Feature	Functionality
Event monitoring	Monitors the events from the supported Dell devices on the Netcool/OMNIBus console. For more information, see <a href="#">Event Monitoring Using SNMP Traps</a> .
Event auto correlation	Correlates events for the supported Dell devices automatically to focus on the current outstanding problems. For more information, see <a href="#">Event Auto Correlation</a> .
Launching Dell consoles	<p>Launches the Dell consoles and other Dell tools for the supported Dell devices that you are monitoring to perform troubleshooting, configuration, or management activities. For more information, see <a href="#">Dell Devices and their Console Launch Tools</a>.</p> <p><b>NOTE:</b> For launching Dell one-to-one consoles from the events generated from a supported and SNMP enabled Dell device, the default SNMP port is used.</p>
Launching Warranty report information	Launches the Warranty report informations for the supported Dell devices.
Launching the 12th generation of Dell PowerEdge server or later server Trap Configuration Information	The Dell OpenManage connection enables you to launch the Dell Server Trap Configuration Information tool to get more information about how to configure SNMP trap information on the supported Dell Servers you are monitoring. For more information about the supported Dell devices that facilitate the launching of this tool, see <a href="#">Dell Devices and their Console Launch Tools</a> .

# Dell OpenManage Connection Support Matrix

Dell OpenManage Connection Version 3.0 for IBM Tivoli Netcool/OMNibus supports the Dell devices, firmware versions, OMSA versions, and operating systems as listed in the following sections:

- Supported operating systems for Managing Systems
- Supported operating systems for Managed Systems
- Supported Dell devices and their OMSA and firmware versions
- Supported Dell Platforms

## Supported operating systems for Managing Systems

The following tables lists the operating systems and requirements for integrating the Dell OpenManage Connection on the systems where the Netcool/OMNibus 8.1, 7.4, or 7.3.1 components are installed:

**Table 2. Supported operating systems for Dell OpenManage Connection for IBM Tivoli Netcool/OMNibus 8.1**

VMware vSphere ESXi	Windows Server	SUSE Linux Enterprise Server (SLES)	Red Hat Enterprise Linux Server (RHEL)
ESXi 5.5	Windows Server 2012 R2 64-bit (Standard, Datacenter)	SLES 12 64-bit	RHEL 7.0-1 64-bit (Server)
ESXi 5.0	Windows Server 2012 64-bit (Standard, Datacenter)	SLES 11.0-4 64-bit	RHEL 6.0-7 64-bit (Client, Server, Workstation)
ESXi 4.1			RHEL 5.7-11 64-bit (Advanced, Desktop)
ESXi 4.0			RHEL 5.7-10 64-bit ( Server)
ESXi 3.5			
ESX 3.5			

**Table 3. Supported operating systems for Dell OpenManage Connection for IBM Tivoli Netcool/OMNibus 7.4**

VMware vSphere ESXi	Windows Server	Windows Client	SUSE Linux Enterprise Server (SLES)	Red Hat Enterprise Linux Server (RHEL)	SUSE Linux for Desktop (SLED)
ESXi 5.5	Windows Server 2008 R2 64-bit SP1 (Enterprise, Datacenter, Standard)	Windows 8 64-bit (Enterprise, Professional, Standard)	SLES 11.0-3 64-bit	RHEL 6.0-5 64-bit (Server, Workstation)	SLED 11.0-3 64-bit
ESXi 5.0	Windows Server 2008 R2 32-bit SP2 (Enterprise, Standard)	Windows 7 64-bit SP1 (Enterprise, Professional)	SLES 10.0-4 64-bit	RHEL 6.0-10 64-bit (Advanced, Desktop, Server)	SLED 10.0-3 64-bit
ESXi 4.1	Windows Server 2008 64-bit SP2 (Enterprise, Standard)	Windows 7 32-bit SP1 (Enterprise, Professional)			

<b>VMware vSphere ESXi</b>	<b>Windows Server</b>	<b>Windows Client</b>	<b>SUSE Linux Enterprise Server (SLES)</b>	<b>Red Hat Enterprise Linux Server (RHEL)</b>	<b>SUSE Linux for Desktop (SLED)</b>
ESXi 4.0	Windows Server 2012 R2 64-bit (Datacenter, Essentials, Standard)				
ESXi 3.5	Windows Server 2012 64-bit (Datacenter, Essentials, Standard)				
ESX 3.5					

**Table 4. Supported operating systems for Dell OpenManage Connection for IBM Tivoli Netcool/OMNibus 7.3.1**

<b>VMware vSphere ESXi</b>	<b>Windows Server</b>	<b>Windows Client</b>	<b>SUSE Linux Enterprise Server (SLES)</b>	<b>Red Hat Enterprise Linux Server (RHEL)</b>	<b>SUSE Linux for Desktop (SLED)</b>
ESXi 5.5	Windows Server 2008 R2 64-bit SP1 (Enterprise, Datacenter, Standard)	Windows Vista Enterprise 64-bit SP2	SLES 11.0-3 64-bit	RHEL 6.0-5 64-bit (Client, Server, Workstation)	SLED 11.0-3 64-bit
ESXi 5.0	Windows Server 2008 R2 32-bit SP2 (Enterprise, Standard)	Windows Vista Enterprise 32-bit SP2	SLES 11.0-3 32-bit	RHEL 6.0-5 32-bit (Server, Workstation)	SLED 10.0-4 64-bit
ESXi 4.1	Windows Server 2008 64-bit SP2 (Enterprise, Standard)	Windows Vista Ultimate 64-bit SP2	SLES 10.0-4 64-bit	RHEL 6.0-4 32-bit (Client)	SLED 10.0-4 32-bit
ESXi 4.0	Windows Server 2008 32-bit SP2 (Enterprise, Standard)	Windows Vista Ultimate 32-bit SP2	SLES 10.0-4 32-bit	RHEL 5.0-10 64-bit (Advanced, Desktop, Server)	
ESXi 3.5		Windows XP Professional 32-bit SP3		RHEL 5.0-10 32-bit (Advanced, Desktop, Server)	
ESX 3.5		Windows 7 64-bit SP1 (Professional, Enterprise) Windows 7 32-bit SP1 (Professional, Enterprise)			

## Supported operating systems for Managed Systems

The following table lists the operating systems supported on the supported Dell devices:

**Table 5. Supported operating systems for Dell Workstations**

<b>VMware vSphere ESXi</b>	<b>Windows Server</b>	<b>SUSE Linux Enterprise Server (SLES)</b>	<b>Red Hat Enterprise Linux Server (RHEL)</b>
ESXi 6.0 U1	Windows Server 2012 R2 (Datacenter, Foundation,	SLES 12 64-bit	RHEL 7.2 64-bit

<b>VMware vSphere ESXi</b>	<b>Windows Server</b>	<b>SUSE Linux Enterprise Server (SLES)</b>	<b>Red Hat Enterprise Linux Server (RHEL)</b>
	Essentials, and Standard editions)		
ESXi 5.5 U3	Windows 7 Professional 32-bit and 64-bit	SLES 11 SP4 64-bit	RHEL 7.1 64-bit
ESXi 5.5 U2	Microsoft Windows Server 2008 SP1		RHEL 7.0 64-bit
	Microsoft Windows Server 2008 R2		RHEL 6.7 64-bit

**Table 6. Supported operating systems for Dell Servers**

<b>VMware vSphere ESXi</b>	<b>Windows Server</b>	<b>SUSE Linux Enterprise Server (SLES)</b>	<b>Red Hat Enterprise Linux Server (RHEL)</b>
ESXi 6.0 U1	Windows Server 2012 R2 (Datacenter, Foundation, Essentials, and Standard editions)	SLES 12 64-bit	RHEL 7.2 64-bit
ESXi 6.0	Microsoft Windows Server 2012 Essentials	SLES 11 SP4 64-bit)	RHEL 7.1 64-bit
ESXi 5.5 U3	Windows Essential Business Server 2008 SP1		RHEL 7.0 64-bit
ESXi 5.5 U2	Windows Essential Business Server 2008 SP1		RHEL 6.7 64-bit
ESXi 5.5	Windows Server 2008 SP2 32-bit and 64-bit		RHEL 6.5 64-bit
ESXi 5.1 U3	Windows Server 2008 R2 64-bit		RHEL 6.2 64-bit
ESXi 5.1 U2	Windows Server 2008 R2 SP1 64-bit		RHEL 6.0 64-bit
ESXi 5.1 U1	Windows Server 2008 R1 and R2 (HPC Edition)		RHEL 5.9 64-bit and 32-bit
ESXi 5.1	Windows Storage Server 2008 SP2		RHEL 5.5 64-bit and 32-bit
ESXi 5.0 U3	Windows Small Business Server 2008 SP2		RHEL 5.3 64-bit and 32-bit
ESXi 5.0 U2	Windows Small Business Server 2008 R2		RHEL 5.0 64-bit and 32-bit
ESXi 5.0 U1	Microsoft Windows Small Business Server 2011		
	Microsoft Windows Server 2012		
	Windows Small Business Server 2003 R2 SP2		
	Windows Server 2003 R2 32-bit and 64-bit		

**VMware vSphere ESXi****Windows Server****SUSE Linux Enterprise Server (SLES)****Red Hat Enterprise Linux Server (RHEL)**

Windows Storage Server 2003  
R2

Windows Server 2003 (Compute  
Cluster Edition)

Windows Unified DataStorage  
Server 64-bit

**NOTE:** For any communication with servers running VMware ESXi, certificate check is ignored.

## Supported Dell devices and their OMSA and firmware versions

The following table lists the Dell Devices and their supported firmware versions for Dell OpenManage Connection.

**Table 7. Dell devices and firmware**

Dell Devices	Supported OMSA Versions	Supported Firmware Versions
Dell OEM Servers	<ul style="list-style-type: none"> <li>• 8.3</li> <li>• 8.2</li> <li>• 8.1</li> </ul>	NA
Dell PowerEdge servers	<ul style="list-style-type: none"> <li>• 8.3</li> <li>• 8.2</li> <li>• 8.1</li> </ul>	NA
Dell Workstations	<ul style="list-style-type: none"> <li>• 8.3</li> <li>• 8.2</li> <li>• 8.1</li> </ul>	NA
Dell Datacenter Scalable Solutions (DSS 1500 and DSS 2500)	NA	<ul style="list-style-type: none"> <li>• 2.30.30.30</li> <li>• 2.16.16.12</li> </ul>
Dell Datacenter Scalable Solutions (DSS 1510)	NA	<ul style="list-style-type: none"> <li>• 2.30.30.30</li> <li>• 2.17.17.13</li> </ul>
iDRAC8	NA	<ul style="list-style-type: none"> <li>• 2.30.30.30</li> <li>• 2.20.20.20</li> </ul>
iDRAC7	NA	<ul style="list-style-type: none"> <li>• 2.30.30.30</li> <li>• 2.20.20.20</li> </ul>
iDRAC6 Modular	NA	<ul style="list-style-type: none"> <li>• 3.6</li> <li>• 3.5</li> </ul>
iDRAC6 Monolithic	NA	<ul style="list-style-type: none"> <li>• 1.97</li> </ul>

Dell Devices	Supported OMSA Versions	Supported Firmware Versions
		<ul style="list-style-type: none"> <li>1.96</li> </ul>
DRAC5	NA	<ul style="list-style-type: none"> <li>1.6</li> <li>1.5</li> </ul>
FX2 CMC	NA	<ul style="list-style-type: none"> <li>1.4</li> <li>1.3</li> </ul>
VRTX CMC	NA	<ul style="list-style-type: none"> <li>2.2</li> <li>2.1</li> </ul>
CMC	NA	<ul style="list-style-type: none"> <li>5.2</li> <li>5.1</li> </ul>
Dell PowerVault NX Storage Arrays	<ul style="list-style-type: none"> <li>8.3</li> <li>8.2</li> <li>8.1</li> </ul>	NA
Dell Compellent Storage Arrays	NA	6.6.2
Dell EqualLogic PS-Series Storage Arrays	NA	<ul style="list-style-type: none"> <li>8.1</li> <li>8.0</li> </ul>
Dell PowerVault MD Storage Arrays	NA	<ul style="list-style-type: none"> <li>08.20.09.60</li> <li>08.10.05.60</li> </ul>
Dell Network Switches	NA	<p>S-Series</p> <ul style="list-style-type: none"> <li>S55 (8.3.5.5 and 8.3.5.3)</li> <li>S60 (8.3.3.9 and 8.3.3.8)</li> <li>S4810 (9.6 and 9.5)</li> <li>S4820T (9.5 and 9.4)</li> <li>S5000 (9.1 and 9.0)</li> <li>S6000 (9.5 and 9.4)</li> </ul> <p>M-Series</p> <ul style="list-style-type: none"> <li>MXL (9.6 and 9.5)</li> <li>MIOA (9.5 and 9.4)</li> </ul> <p>Z-Series</p> <ul style="list-style-type: none"> <li>Z9500 (9.2)</li> <li>Z9000 (9.5 and 9.4)</li> </ul> <p>C-Series</p> <ul style="list-style-type: none"> <li>C150 (8.4.6.0)</li> <li>C300 (8.4.5.0)</li> </ul> <p>N-Series</p> <ul style="list-style-type: none"> <li>6.1.2 and 6.1</li> </ul>

W-Series

- W-Series Mobility Controllers (6.4)

**NOTE:** Dell Workstations refers to Dell Precision R7910 Rack Workstations.

## Supported Dell platforms

### Dell Datacenter Scalable Solutions

**Table 8. Supported Dell Datacenter Scalable Solutions**

#### Dell Datacenter Scalable Solutions (DSS)

DSS 1500

DSS 1510

DSS 2500

## Dell PowerEdge servers

**NOTE:** In the PowerEdge server name format yxxx; y denotes alphabets, for example M,R, or T and x denotes numbers.

**Table 9. Supported Dell PowerEdge servers**

yx0x Systems	yx1x Systems	yx2x Systems	yx3x Systems
PowerEdge M605	PowerEdge R210	PowerEdge FM120x4	C4130
PowerEdge M905	PowerEdge R210 II	PowerEdge M420	C6320
PowerEdge R200	PowerEdge R410	PowerEdge M520	FC230
PowerEdge R805	PowerEdge R415	PowerEdge M620	FC430
PowerEdge R905	PowerEdge R510	PowerEdge M820	FC630
PowerEdge T100	PowerEdge R515	PowerEdge R320	FC830
PowerEdge T105	PowerEdge R610	PowerEdge R420	M630
	PowerEdge R710	PowerEdge R520	M830
	PowerEdge R715	PowerEdge R620	R230
	PowerEdge R810	PowerEdge R820	R330
	PowerEdge R815	PowerEdge R920	R430
	PowerEdge R910	PowerEdge S420	R530
	PowerEdge T110	PowerEdge S620	R530xd
	PowerEdge T110 II	PowerEdge T320	R630
	PowerEdge T310	PowerEdge T420	R730
	PowerEdge T410	PowerEdge T620	R730xd

yx0x Systems	yx1x Systems	yx2x Systems	yx3x Systems
	PowerEdge T610		R930
	PowerEdge T710		T130
	PowerEdge M610		T330
	PowerEdge M610x		T430
	PowerEdge M710		T630
	PowerEdge M710HD		
	PowerEdge M910		
	PowerEdge M915		

**NOTE:** The corresponding Dell Remote Access Controllers (DRAC5, iDRAC6, iDRAC7 and iDRAC8) are included as part of their respective generation of Dell PowerEdge servers in the preceding table.

## Dell Workstations

**Table 10. Supported Dell Workstations**

Dell Precision R7910

## Dell Chassis

**Table 11. Supported Dell Chassis**

Dell PowerEdge FX2  
Dell PowerEdge FX2s  
Dell PowerEdge VRTX  
Dell PowerEdge M1000e

## Dell Compellent storage arrays

**Table 12. Supported Dell Compellent storage arrays**

Compellent Series 40  
Compellent SC4020  
Compellent SC8000

## Dell PowerVault NX storage arrays

**Table 13. Supported Dell PowerVault NX storage arrays**

PowerVault NX200  
PowerVault NX300

PowerVault NX400  
 PowerVault NX3000  
 PowerVault NX3100  
 PowerVault NX3200  
 PowerVault NX3300

## Dell EqualLogic PS-Series storage arrays

**Table 14. Supported Dell EqualLogic PS-Series storage arrays**

EqualLogic PS4000	EqualLogic PS5000	EqualLogic PS6000
EqualLogic PS4100	EqualLogic PS5500	EqualLogic PS6010
EqualLogic PS4110		EqualLogic PS6100
EqualLogic PSM4110		EqualLogic PS6110
		EqualLogic PS6210
		EqualLogic PS6500
		EqualLogic PS6510

## Dell PowerVault MD storage arrays

**Table 15. Supported Dell PowerVault MD storage arrays**

PowerVault MD3200	PowerVault MD3400
PowerVault MD3220i	PowerVault MD3420
PowerVault MD3220	PowerVault MD3460
PowerVault MD3200i	PowerVault MD3800f
PowerVault MD3260	PowerVault MD3800i
PowerVault MD3260i	PowerVault MD3820f
PowerVault MD3600f	PowerVault MD3820i
PowerVault MD3600i	PowerVault MD3860f
PowerVault MD3620f	PowerVault MD3860i
PowerVault MD3620i	
PowerVault MD3660f	

# Dell network switches

**Table 16. Supported Dell network switches**

<b>S-Series</b>	<b>M-Series</b>	<b>Z-Series</b>	<b>C-Series</b>	<b>N-Series</b>	<b>W-Series (Mobility Controllers)</b>
S55	MXL	Z9500	C150	N2024	W-3200
S60	MIOA	Z9000	C300	N2024P	W-3400
S4810				N2048	W-3600
S4820T				N2048P	W-620
S5000				N3024	W-650
S6000				N3024F	W-651
				N3024P	W-7200
				N3048	
				N3048P	
				N4032	
				N4032F	
				N4064	
				N4064F	

# Using the Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus

Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus allows event monitoring, automatic event correlation, and launching device consoles on the Netcool/OMNIBus console. These features are supported on different components of Netcool/OMNIBus such as Probe, ObjectServer, Web GUI, and Desktop appropriately.

## Event monitoring using SNMP traps

The Dell OpenManage Connection monitors the supported Dell devices that receive SNMP traps from Dell devices. You can use both Desktop and Web GUI client to monitor the systems.

To distinguish among the various devices on the Netcool/OMNIBus console, a class value is assigned to the Dell devices as listed in the following table.

**Table 17. Dell device class ID**

Dell Device	Class ID
10th generation to 13th generation of Dell PowerEdge servers	2080
Dell OEM servers	2080
Dell Workstation	2080
Dell OEM iDRAC	2088
iDRAC8	2088
iDRAC7	2088
DRAC	2087
Dell Chassis	2086
PowerVault NX Storage Arrays	2080
Compellent Storage Arrays	2090
EqualLogic Storage Arrays	2085
Dell PowerVault MD Storage Arrays	2809
C- Series Switches	2091
M-Series Switches	2091
N-Series Switches	2092
S-Series Switches	2091
W-Series Switches	2093
Z-Series Switches	2091
Dell Connections License Manager (Application)	2081

The event monitoring process is as follows:

- 1 The MTTTrapd probe receives the SNMP traps from the supported Dell devices.
- 2 The MTTTrapd probe converts the trap into an event using the respective rules, which then filters the traps from the Dell devices and populates the event fields with the appropriate value.
- 3 The MTTTrapd probe forwards the events to the ObjectServer.
- 4 The Desktop and Web GUI consoles display the events by communicating with the ObjectServer.

## Understanding Event Severity

The events forwarded to the ObjectServer are displayed on the Netcool/OMNIBus console with one of the following severities:

- Normal—Event with successful operation of a component, such as a power supply turning on, or a sensor reading returning to normal.
- Warning—Event that is not necessarily significant, but may indicate a possible future problem, such as crossing a warning threshold.
- Critical—Event that indicates actual or imminent loss of data or loss of function, such as crossing a failure threshold, or a hardware failure.
- Indeterminate—Event with unknown severity. Also, a resolution event that clears the problem event is initially displayed as indeterminate and then changed to normal, when the alert type of the event is **Resolution**.

## Event Auto Correlation

The Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus supports auto correlation of events on Dell OEM servers, PowerEdge Servers, iDRAC7, iDRAC8, Dell PowerEdge FX2 CMC, Dell PowerEdge VRTX CMC, Compellent Storage Arrays, EqualLogic PS-Series Storage Arrays, Enterprise Series Switches (S-Series, M-Series, Z-Series, and C-Series), and N-Series Switches.

When the ObjectServer receives events, the appropriate triggers are automatically invoked to correlate the events.

The Dell OpenManage Connection automatically correlates the following events:

- Problem event with its corresponding clear event — OMSA, OMSS, iDRAC7, iDRAC8, Dell PowerEdge FX2 CMC, Dell PowerEdge VRTX CMC, Compellent Storage Arrays, EqualLogic Storage Arrays, Enterprise Series Switches, and N-Series Switch events support this event correlation.

The IBM `generic_clear` trigger correlates these problem events with its corresponding clear event when the problem is rectified.

- Problem event with another problem event — OMSA, iDRAC7, iDRAC8, Dell PowerEdge FX2 CMC, Dell PowerEdge VRTX CMC, Compellent Storage Arrays, EqualLogic Storage Arrays, Enterprise Series Switches, and N-Series Switch events support this event correlation.

The `dell_omsa_clear` trigger correlates the OMSA problem event by another problem event.

The `dell_equallogic_clear` trigger correlates the EqualLogic storage array problem events.

The `dell_dclm_clear` trigger correlates the DCLM problem polled events.

**NOTE:** This trigger is applicable only if IBM Tivoli Netcool/Omnibus is integrated with ITNM and the Dell OpenManage Connection for IBM Tivoli Network Manager is installed.

The `dell_mdarray_clear` trigger correlates the PowerVault MD Storage Array problem polled events.

The `dell_idrac_clear` trigger correlates the iDRAC7 or iDRAC8 problem events.

The `dell_compellent_clear` trigger correlates the Compellent problem events.

The `dell_enterprise_switch_clear` trigger correlates the S-Series, M-Series, Z-Series, and C-Series switch problem events.

The `dell_nseries_clear` trigger correlates the N-Series switch problem events.

- Duplicated problem event with another problem event — OMSA, Compellent storage arrays, EqualLogic storage arrays, PowerVault MD storage arrays, Enterprise Series Switches, N-Series Switch, and DCLM events support this event correlation.

The `dell_omsa_deduplicate_clear` trigger correlates the OMSA problem events.

The `dell_equallogic_deduplicate_clear` trigger correlates the EqualLogic storage array problem events.

The `dell_dclm_deduplicate_clear` trigger correlates the DCLM problem polled events.

**NOTE:** This trigger is applicable only if IBM Tivoli Netcool/Omnibus is integrated with ITNM and the Dell OpenManage Connection for IBM Tivoli Network Manager is installed.

The `dell_mdarray_deduplicate_clear` trigger correlates the PowerVault MD Storage Array problem polled events.

The `dell_idrac_deduplicate_clear` trigger correlates the iDRAC7 or iDRAC8 problem events.

The `dell_compellent_deduplicate_clear` trigger correlates the Compellent storage array problem events.

The `dell_enterprise_switch_deduplicate_clear` trigger correlates the S-Series, M-Series, Z-Series, and C-Series switch problem events.

The `dell_nseries_deduplicate_clear` trigger correlates the N-Series switch problem events.

Event auto correlation support is not available between legacy and enhanced event message format traps for in-band Dell servers.

The normal-to-normal event correlation is not supported as Netcool/OMNIBus periodically clears the normal events.

For more information on OMSA and OMSS event correlation, see *Dell OpenManage Server Administrator Messages Reference Guide* at [dell.com/support/home](http://dell.com/support/home).

## Dell OMSA Alert Groups

The OpenManage Server Administrator (OMSA) alerts are the events generated by OMSA and displayed on the Netcool/OMNIBus console. The following table lists the OMSA alerts.

**Table 18. Dell OMSA Alert Groups**

Alert Group	Description
<b>ACPowerCord</b>	Provides status information for power cords of an AC power switch on systems that support AC switching.
<b>AmperageProbe</b>	Provides status information for current sensors in a particular chassis.
<b>Battery</b>	Provides status information for batteries in a particular chassis.
<b>ChassisIntrusion</b>	Provides notification when a chassis is intruded.
<b>CoolingDevice</b>	Provides status information for fans in a particular chassis.
<b>Device</b>	Provides status and error information when some devices, such as memory cards are added or removed.
<b>FanEnclosure</b>	Monitors if foreign objects are present in an enclosure and the duration a fan enclosure is missing from a chassis.
<b>HardwareLog</b>	Provides status and warning information about the non-circular logs that may fill up, resulting in lost status messages.
<b>IDSDModuleMedia</b>	Provides the status information about the Internal Dual SD Module.

Alert Group	Description
<b>MemoryDevice</b>	Provides status and warning information for memory modules present in a particular system.
<b>Miscellaneous-AutomaticSystemRecovery</b>	Provides information when an automatic system recovery action is performed when the operating system stops responding.
<b>Miscellaneous-SystemPeakPowerNewPeak</b>	Provides information when the system peak power sensor detects a new peak value.
<b>Miscellaneous-SystemSoftwareEvent</b>	Provides information when OMSA detects a critical system software generated event in the IPMI System Event Log (SEL), which could have been resolved.
<b>Miscellaneous-SystemUp</b>	Provides information when OMSA completes initialization.
<b>Miscellaneous-ThermalShutdown</b>	Provides information when a system shuts down as the temperature exceeds the maximum threshold.
<b>Miscellaneous-UserHostSystemReset</b>	Provides information when user requests a host system control action to reboot, power off, or power cycle the system.
<b>PowerSupply</b>	Provides status and warning information for power supplies present in a particular chassis.
<b>ProcessorDeviceStatus</b>	Provides status and warning information for processors in a particular chassis.
<b>Redundancy</b>	Provides the redundancy unit information.
<b>SDCardDevice</b>	Provides status and error information for Secure Digital (SD) card devices present in a chassis.
<b>TemperatureProbe</b>	Provides help to protect critical components when temperatures exceed in a chassis.
<b>VoltageProbe</b>	Provides status and warning information for voltage sensors in a particular chassis.

## Dell OMSS Alert Groups

The OpenManage Storage Management (OMSS) alerts are the events generated by OMSS and displayed on the Netcool/OMNIBus console. The following table lists the OMSS alert groups.

**Table 19. Dell OMSS Alert Groups**

Alert Group	Description
<b>Battery</b>	Provides status information of the batteries in the controller. Battery alerts provide information about battery reconditioning, charging, temperature, replacement, learn cycle, learn mode, operation, and so on.
<b>Channel</b>	Provides the addition and removal status, configuration errors, and status for pluggable devices, such as memory cards.
<b>Controller</b>	Provides status of the storage controller tasks. Controller alerts provide information about rebuild rate, alarm status, configuration status, background initialization rate, patrol read rate, check consistency rate, redundant path, foreign configuration, disk status, bad blocks, ECC errors, DKM certificate upload, self-signed certificate creation and upload, and so on.
<b>EMM</b>	Provides status of the Enclosure Management Module (EMM) of the controllers.
<b>Enclosure</b>	Provides status of the components in the enclosures. Enclosure alerts provide the status information of enclosure, alarm, asset tag, service tag, and so on.
<b>Fan</b>	Provides information on how well a fan is functioning. Fan alerts provide status information of fans in a particular enclosure.

Alert Group	Description
<b>FluidCache</b>	Provides the validity information for the fluid cache license. Fluid Cache alerts provide information about the storage device installation with license, license removal, expired/invalid license, memory availability, CFM connection, journal mirrors, cluster ID matching, journal read/write, missing cache device and so on.
<b>FluidCacheDisk</b>	Provides information about the LUN status of the fluid cache disk.
<b>PhysicalDisk</b>	Provides information about the operations on the physical disks such as rebuild, hot spare, blink, clear operation, replace member operation, state change, drive write cache, drive log export, drive prepared for removal, and full initialization.
<b>PowerSupply</b>	Provides status information of the power supplies in an enclosure.
<b>Redundancy</b>	Provides status of the redundancy device.
<b>SystemLevel</b>	Provides status of the controllers in the system.
<b>TemperatureProbe</b>	Provides temperature status of the probes in the enclosure. The temperature probe alerts help protect critical components by alerting when temperatures become too high inside an enclosure.
<b>VirtualDisk</b>	Provides status information of the virtual disk tasks. Virtual disk alerts provide information about initialization, formatting, configuration, rebuild, background initialization, redundancy, and so on.
<b>VirtualDiskPartition</b>	Provides information about the caching status of the virtual disk. Virtual disk partition alerts provide information about inaccessible storage device, transient failure, enabled cache , disabled cache, cache removal and so on.

## Dell EqualLogic Alert Groups

The EqualLogic alerts are the events generated by Dell EqualLogic Storage Arrays and displayed on the Netcool/OMNIbus console. The following table lists the EqualLogic alert groups.

**Table 20. Dell EqualLogic Alert Groups**

Alert Group	Description
<b>BatteryLessThan72Hours</b>	Provides information that the battery has insufficient charge to survive a 72-hour power outage.
<b>BothFanTraysRemoved</b>	Provides information that both fan trays of the member have been removed from the chassis.
<b>ChannelBothFailed</b>	Provides information that both the channel cards have failed.
<b>ChannelBothMissing</b>	Provides information that both the channel cards are missing.
<b>EIPFailureCondition</b>	Provides information that EIP is failed in the channel card.
<b>EmmLinkFailure</b>	Provides information that link to the EMM has failed.
<b>EnclosureOpenPerm</b>	Provides information that enclosure is open for a long time.
<b>FanSpeedThreshold</b>	Provides information that fan speed has exceeded the minimum or maximum threshold.
<b>FanTrayRemoved</b>	Provides information that one of the fan trays has been removed from the chassis.
<b>HighBatteryTemperature</b>	Provides information that battery temperature is high.
<b>HwComponentFailedCrit</b>	Provides information that a critical hardware component of the member has failed.
<b>IncompatControlModule</b>	Provides information that an incompatible control module is inserted into the chassis.
<b>LowAmbientTemp</b>	Provides information that one or more sensors are within the critical temperature range.

Alert Group	Description
<b>MultipleRAIDSets</b>	Provides information that multiple valid RAID sets are found.
<b>NVRAMBatteryFailed</b>	Provides information that NVRAM battery has failed and the battery is not usable.
<b>OpsPanelFailure</b>	Provides information that operations panel is missing or damaged.
<b>PowerSupply</b>	Provides information that power supply module has detected a failure.
<b>PowerSupplyFan</b>	Provides information that power supply module fan has failed.
<b>RAIDLostCache</b>	Provides information that RAID driver is unable to recover the battery-backed cache.
<b>RAIDOrphanCache</b>	Provides information that RAID driver found data in the battery-backed cache and does not have a matching disk array.
<b>RAIDSetDoubleFaulted</b>	Provides information that a double fault is detected in the RAID set.
<b>RAIDSetLostBlkTableFull</b>	Provides information that RAID lost block table is full.
<b>TempSensorThreshold</b>	Provides information that temperature sensor has exceeded the threshold.
<b>DiskStatus</b>	Provides information that status of the EqualLogic disk has changed.
<b>SCSITgtDevice</b>	Provides information that status of the EqualLogic SCSI target device has changed.
<b>SCSILuStatus</b>	Provides information that status of the EqualLogic Logical Unit Number (LUN) has changed.
<b>ISCSITgtLogin</b>	Provides information that the EqualLogic iSCSI target device's login attempt failed.
<b>ISCSIItrLogin</b>	Provides information that the initiator's login attempt failed.
<b>ISCSIIstSession</b>	Provides information that the active session for a target system or an initiator failed.

## Dell iDRAC7 and iDRAC8 Alert Groups

These alerts are the events generated by Integrated Dell Remote Access Controller 7 (iDRAC7) and Integrated Dell Remote Access Controller 8 (iDRAC8) devices and displayed on the Netcool/OMNIBus console. The following table lists the iDRAC7 and iDRAC8 alert groups.

**Table 21. iDRAC7 and iDRAC8 Alert Groups**

Alert Group	Description
<b>AmperageProbe</b>	Provides the amperage details of the system board, disk-drive bay, and the system level.
<b>AutoDiscovery</b>	Provides information about the auto discovery configuration execution status.
<b>AutomaticSystemRecovery</b>	Provides the OS watchdog timer details of the system.
<b>Battery</b>	Provides the details of the system-board battery.
<b>BIOSPOST</b>	Provides information about the memory performance during system BIOS Power-On Self Test (POST).
<b>CPUUsage</b>	Provides information about the CPU usage.
<b>Debug</b>	Provides the debug authorization details of the system.
<b>Fan</b>	Provides the fan details of the system.
<b>FiberChannel</b>	Provides information about the status of the fiber channel port.

<b>Alert Group</b>	<b>Description</b>
<b>HardwareConfiguration</b>	Provides the hardware configuration information for a device, storage adapter, backplane, USB cable, mezzanine card, storage cable, and system-board cable.
<b>IDSDModuleMedia</b>	Provides information about the status and performance of the internal dual SD module.
<b>IDSDModuleAbsent</b>	Indicates that the internal dual SD module is absent.
<b>IDSDModuleRedundancy</b>	Provides information about the internal SD module redundancy.
<b>JOB</b>	Provides information on the schedules jobs in system repository.
<b>Licensing</b>	Provides the licensing details of the system.
<b>MemoryDevice</b>	Provides the memory details of the system.
<b>Network</b>	Provides the information when network link is down.
<b>NICConfiguration</b>	Provides information about the NIC configuration of the system.
<b>OperatingSystem</b>	Provides the details of system halt.
<b>PCIDevice</b>	Provides the PCI device details of the system.
<b>PhysicalDisk</b>	Provides the physical disk details of the system.
<b>PowerSupply</b>	Provides the power supply information of the system.
<b>PowerSupplyAbsent</b>	Indicates the absence of power supply for the system.
<b>PowerUsage</b>	Provides the details of power usage by the system.
<b>ProcessorDevice</b>	Provides the processor details of the system.
<b>ProcessorDeviceAbsent</b>	Provides the information that the processor is absent.
<b>RACSoftware</b>	Provides information about the iDRAC - CMC communication software.
<b>Redundancy</b>	Provides information about fan and power supply redundancy.
<b>SoftwareCompatibility</b>	Provides information on any firmware or software incompatibility.
<b>Security</b>	Provides information about the chassis, operating system, and Intel Trusted Execution Technology (TXT) performance.
<b>StorageBattery</b>	Provides the details of the storage battery on controllers.
<b>StorageController</b>	Provides details of the storage controller.
<b>StorageEnclosure</b>	Provides information about the performance of the storage enclosure.
<b>StorageFan</b>	Provides the fan details of the storage device.
<b>StorageManagementStatus</b>	Indicates that the storage device status is not determined.
<b>StoragePowerSupply</b>	Provides the power supply information of the storage device.
<b>StorageTemperatureProbe</b>	Provides temperature information of an enclosure.
<b>SystemEventLog</b>	Provides information about the event logs of the system.
<b>SystemInfo</b>	Provides the details of the host system.
<b>StoragePhysicalDisk</b>	Provides the physical disk details of the storage device.
<b>StorageVirtualDisk</b>	Provides the details of the storage virtual disk.
<b>TemperatureProbe</b>	Provides temperature information of a system board, memory module, fan failure, and inlet of a system.
<b>TemperatureStatistics</b>	Provides temperature statistics information of the system inlet.

Alert Group	Description
<b>UserActions</b>	Provides information about all user action required for certain events.
<b>vFlash</b>	Provides details of removable flash media and storage device.
<b>vFlashAbsent</b>	Provides information if removable flash media is absent.
<b>VoltageProbe</b>	Provides the voltage details of the processor module and system board.

## Dell DRAC5 and iDRAC6 Alert Groups

The Dell DRAC5 and iDRAC6 alerts are the events generated by Dell DRAC5 or iDRAC6 devices and are displayed on the Netcool/OMNIbus console. The following table lists the Dell DRAC5 and iDRAC6 alert groups.

**Table 22. Dell DRAC5 and iDRAC6 Alert Groups**

Alert Group	Description
<b>Authentication</b>	Provides status of the RAC Authentication failures and the threshold limit.
<b>Battery</b>	Provides status information for batteries.
<b>ESMCOmmunication</b>	Provides the status of the RAC communication with the Baseboard Management Controller.
<b>Power</b>	Provides the information of the system power supply.
<b>SELThreshold</b>	Provides the status information of the System Event Logs capacity.
<b>SystemEventLog</b>	Provides the status of a new event arrival in the System Event Logs.
<b>TemperatureProbe</b>	Provides temperature information of a system board, memory module, fan failure, and inlet of a system.
<b>TestTrap</b>	Test trap.
<b>VoltageProbe</b>	Provides the voltage details of the processor module and the system board.
<b>WatchDog</b>	Provides the status information of the System Watchdog.

## Dell Chassis Alert Groups

The Dell PowerEdge FX2 CMC, PowerEdge VRTX CMC, and M1000e devices generate the Chassis alerts and these alerts are displayed on the Netcool/OMNIbus console. The following table lists the Dell Chassis alert groups.

**Table 23. Dell Chassis Alert Groups**

Alert Group	Description
<b>AmperageProbe</b>	Provides status information for current sensors.
<b>Battery</b>	Provides status information for batteries.
<b>Cable</b>	Indicates if cable is detected.
<b>DellChassis</b> ( M1000e alerts)	Status of various components such as fan, battery, power supply, temperature probe, hardware log, redundancy, presence or absence of server, keyboard/video/ mouse (KVM) switch, input output module (IOM), SD card, mismatch of fabric, and mismatch of firmware version.
<b>CMC</b>	Provides the information about the CMC slot.

Alert Group	Description
<b>CMCAudit</b>	Provides information about the status of data synchronization, extended storage feature activation, and cell battery.
<b>Fan</b>	Provides the fan details of the system.
<b>HardwareConfiguration</b>	Provides the hardware configuration information for a device and its storage adapter.
<b>IOVConfiguration</b>	Provides information about the PCIe card module configuration.
<b>IOVirtualization</b>	Provides information about the PCIe card module.
<b>License</b>	Provides the licensing details of the system.
<b>LinkStatus</b>	Provides information about the Network link status.
<b>PowerSupply</b>	Provides the information of the system power supply.
<b>PowerSupplyAbsent</b>	Indicates the absence of power supply for the system.
<b>PowerUsageAudit</b>	Provides the details of power usage by the system.
<b>Redundancy</b>	Provides information about fan and power supply redundancy.
<b>Security</b>	Provides information about the chassis, operating system, and the Intel Trusted Execution Technology (TXT) performance.
<b>SoftwareConfiguration</b>	Provides information about software incompatibility.
<b>StorageBattery</b>	Provides the details of the storage battery on controllers.
<b>StorageController</b>	Provides details of the storage controller.
<b>StorageEnclosure</b>	Provides information about the performance of the storage enclosure.
<b>StorageFan</b>	Provides the fan details of the storage device.
<b>StorageManagement</b>	Provides information about communication loss with controller, shared storage availability, and RAID Status.
<b>StoragePhysicalDisk</b>	Provides the physical disk details of the storage device.
<b>StoragePowerSupply</b>	Provides the power supply information of the storage device.
<b>StorageTemperatureProbe</b>	Provides temperature information of an enclosure.
<b>StorageVirtualDisk</b>	Provides the details of the storage virtual disk.
<b>SystemEventLog</b>	Provides information about the event logs of the system.
<b>TemperatureProbe</b>	Provides temperature information of a system board, memory module, fan failure, and inlet of a system.
<b>TestTrap</b>	Test Trap.
<b>VoltageProbe</b>	Provides the voltage details of the processor module and the system board.

## Dell Compellent Alert Groups

The Compellent alerts are the events generated by Dell Compellent Storage Arrays and displayed on the Netcool/OMNIbus console. The following table lists the Compellent alert groups.

**Table 24. Dell Compellent Alert Groups**

Alert Group	Description
<b>ControllerStatus</b>	Provides status of the controllers in case of any change in its current status.
<b>ControllerComponentStatus</b>	Provides status of the controller component in case of any change in its current status.
<b>CacheStatus</b>	Provides status of the cache in case of any change in its current status.
<b>DiskFolderStatus</b>	Provides status of the disk folders in case of any change in its current status.
<b>DiskStatus</b>	Provides status of the Compellent disks in case of any change in its current status.
<b>EnclosureComponentStatus</b>	Provides status of the components in the enclosures. Enclosure alerts provide the status information of enclosure, alarm, asset tag, service tag, and so on.
<b>EnclosureStatus</b>	Provides status of the Compellent enclosures in case of any change in its current status.
<b>LocalPortConditionStatus</b>	Provides status of the local front-end Port Condition in case of any change in its current status.
<b>Miscellaneous</b>	This alert group is used for all the Compellent alerts that have no other specific trap definition associated with them.
<b>MonitoredUPSStatus</b>	Provides status of the monitored UPS in case of any change in its current status.
<b>ServerStatus</b>	Provides status of the managed servers in case of any change in its current status.
<b>SIDeviceStatus</b>	Provides status of the SCSI Initiator device in case of any change in its current status.
<b>Test</b>	Test trap.
<b>VolumeStatus</b>	Provides status of the disk volumes in case of any change in its current status.

## Dell PowerVault MD Array Alert Groups

The PowerVault MD Array alerts are the events generated by Dell PowerVault MD Storage Arrays and displayed on the Netcool/OMNIBus console. The following table lists the PowerVault MD Array alert groups.

**Table 25. Dell PowerVault MD Array Alert Groups**

Alert Group	Description
<b>AsyncReplication</b>	Provides repository status information for the async replication group member. Async replication alerts provide information about repository status, security incompatibility, and so on.
<b>Battery</b>	Provides battery status in the MD Array. Battery alerts provide information about battery configuration, backup capacity, temperature, and expiration.
<b>Cache</b>	Provides status information for the cache backup device.
<b>Canister</b>	Provides status information for the interconnect-battery.
<b>Channel</b>	Provides status of the Enclosure Management Module (EMM) of the controllers.
<b>Configuration</b>	Provides status information for the gold key setting configuration.
<b>Controller</b>	Provides diagnostic status information for the RAID controller module.
<b>DataAssurance</b>	Provides information for the data assurance support.
<b>DiscreteLines</b>	Provides status information for Discrete Lines diagnostics.
<b>DiskGroup</b>	Provides status information for disk groups. DiskGroup alerts provide information about the removal or incompleteness of the disk groups.

<b>Alert Group</b>	<b>Description</b>
<b>DiskPool</b>	Provides status information for the disk pool. DiskPool alerts provide information about the incompleteness, failure or removal of the disk pool.
<b>Drawer</b>	Provides status information for the drawer. The alerts provide information if the drawer is open, removed, failed, not supported, or degraded.
<b>EMM</b>	Provides status of the Enclosure Management Module (EMM) of the controllers.
<b>Enclosure</b>	Provides status of the components in the enclosures. Enclosure alerts provide the status information of enclosure, alarm, asset tag, service tag, and so on.
<b>Fan</b>	Provides information on how well a fan is functioning. Fan alerts provide status information of fans in a particular enclosure.
<b>Feature</b>	Provides status information for the premium feature. The alerts provide information if the premium feature is out of compliance or has exceeded the limit.
<b>FibreTrunk</b>	Provides information for the fibre channel trunk. The alerts provide information about the improper cabling configuration for fibre-channel trunking.
<b>HostOS</b>	Provides information for the validity of the host operating system index.
<b>IndividualDrive</b>	Provides status information of the path for the individual drive.
<b>InterfaceCard</b>	Provides status information for the host interface card. The alerts provide information if the host interface input/output card or the host interface card failed.
<b>InterposerFW</b>	Provides information if the Interposer FW version is supported.
<b>LinkSpeed</b>	Provides status information for the Link Speed (data rate) switch position.
<b>OpticalLink</b>	Provides information about the optical link speed. The alerts provide information if the optical link speed has failed.
<b>PhysicalDisk</b>	Provides information about the physical disk read status.
<b>PowerSupply</b>	Provides status information for power supply. The alerts provide information if the power supply is missing or removed, failed or needs attention.
<b>Processor</b>	Provides information about the processor memory for cache.
<b>RedundantCanister</b>	Provides information about the redundant canister. The alerts provide information if the power supply or cooling fan module is missing.
<b>RemoteReplication</b>	Provides status information for the remote replication communication between the storage array and the fabric with which it is connected.
<b>ReservedBlock</b>	Provides status information for the discovery of the reserved blocks on SATA drives.
<b>SAS</b>	Provides status information for the SAS host. SAS alerts provide information for the miswire, degradation, overflow detection, or invalid topology of the SAS host port, degradation or miswire of the SAS-wide port, and so on.
<b>SBB</b>	Provides validation information for the StorageWorks Building Block (SBB). The alerts provide information for SBB validation for enclosure expansion, SIM/ESM canister, power supply, midplane communication.
<b>Security</b>	Provides information about the repository security compatibility.
<b>SFP</b>	Provides information about the status of the GBIC/SFP.
<b>SMARTCommandTransfer</b>	Provides information for the SMART Command Transfer support.

Alert Group	Description
<b>Snapshot</b>	Provides information for the snapshot group. Snapshot alerts provide status information of the snapshot repository capacity, snapshot virtual disk repository, creation of the snapshot image, and rollback of the snapshot.
<b>StorageArray</b>	Provides information of the storage array security key.
<b>SystemConfiguration</b>	Provides validity information of the storage array system configuration.
<b>Temperature</b>	Provides threshold status information of the temperature sensor.
<b>UnreadableSector</b>	Provides information about the unreadable sector database.
<b>VirtualDisk</b>	Provides information about the virtual disk tasks. Virtual disk alerts provide information about the virtual disk capacity, status, reconfiguration, write back caching force status, data/parity status, and path.

## Dell Enterprise Switches (S-Series, Z-Series, M-Series, and C-Series) Alert Groups

The Dell Enterprise Switches alerts are the events generated by Dell S-Series, Z-Series, M-Series, and C-Series and displayed on the Netcool/OMNIBus console. The following table lists the Dell Enterprise Switches alert groups.

**Table 26. Dell S-Series, Z-Series, M-Series, and C-Series Switch Groups**

Alert Group	Description
<b>AccessControlLists</b>	Provides status information arising from problems during installation of the Access Control Lists entries due to a hardware failure or a lack of storage space.
<b>Adjacency</b>	Provides information due to Adjacency related changes.
<b>BGPTask</b>	Provides information about the status of the Border Gateway Protocol.
<b>Card</b>	Provides information about the Card operation status.
<b>Controller</b>	Provides information about the Controller operation status.
<b>CopyConfig</b>	Provides information when a Copy operation is completed.
<b>ETSModule</b>	Provides any change in the ETS Module status.
<b>ETSStatus</b>	Provides the Enhanced Transmission Selection operation status.
<b>Fan</b>	Provides information about how well a fan is functioning.
<b>FanTray</b>	Provides information about the status of the fan tray.
<b>FCOENodes</b>	Provides information about the threshold status of the FCOE Nodes.
<b>FiberChannelForwarders</b>	Provides information about the threshold status of the fiber channel forwarders.
<b>FlowTable</b>	Provides information about the flow table status.
<b>LACPState</b>	Provides a change in the LCAP state for one of the member ports of the aggregation link detected by an agent.
<b>MAC</b>	Provides status information about a MAC address.
<b>Memory</b>	Provides Memory Utilization status.
<b>PFCStatus</b>	Provides information about Priority-based Flow Control operation.
<b>PowerSupply</b>	Provides the power supply information of the system.

Alert Group	Description
<b>Processor</b>	Provides information about the processor details of the system.
<b>RBridge</b>	Provides the RBridge operational status information.
<b>RPM</b>	Provides the RPM operational status information.
<b>Session</b>	Indicates the threshold status of the number of sessions.
<b>SFM</b>	Indicates the Switch Fabric Module operational status.
<b>SNMPAgent</b>	Indicates that an SNMP Agent has denied an SNMP request based on the IP ACL rules and is generated by the agent.
<b>SpanningTree</b>	Indicates the spanning tree status in the CIST or in any MSTI.
<b>SRAM</b>	Provides the Operational status of the SRAM.
<b>StackPort</b>	Indicates the stack port operational status.
<b>StackUnitRole</b>	Indicates the stack unit role change and is generated by the driver or agent.
<b>StackUnitStatus</b>	Indicates the stack unit operational status.
<b>Task</b>	Indicates the system task status.
<b>Temperature</b>	Indicates the chassis's temperature status.
<b>Traffic</b>	Indicates the traffic status of link bundle.
<b>VirtualLinkTrunk</b>	Indicates the virtual link trunk status.
<b>VRRP</b>	Indicates the operational status of the VRRP.

## Dell N-Series Switch Alert Groups

The N-Series Switch alert groups are the events generated by the Dell N-Series Switches and displayed on the Netcool/OMNIbus console. The following table lists the N-Series alert groups.

**Table 27. Dell N-Series Switch Alert Groups**

Alert Group	Description
<b>ACL</b>	Provides status information for the Network access control list.
<b>AgentInventory</b>	Provides status information for the Agent Inventory.
<b>AgentLog</b>	Provides status information for the Agent Log state.
<b>AgentNSF</b>	Provides information about the Agent Network File System status.
<b>AgentPortSecurity</b>	Provides status information for the Agent Port Security state.
<b>AgentSwitchCPU</b>	Provides information about the Agent Switch CPU status.
<b>AgentSwitchIP</b>	Provides information about the Agent Switch IP status.
<b>Authentication</b>	Provides information on Authentication Manager when the client is in the authorized/un-authorized state.
<b>Broadcast</b>	Provides information about the Broadcast stormstatus.
<b>Configuration</b>	Provides information about the switch configuration.
<b>Copy</b>	Provides information about the status of the copy operation with a Success or Failure message.

<b>Alert Group</b>	<b>Description</b>
<b>CPClient</b>	Provides information about the Captive Portal Client state.
<b>DAI</b>	Provides status information about the Dynamic ARP Inspection.
<b>DHCP</b>	Provides status information about the Dynamic Host Configuration Protocol (DHCP) operation state while assigning IP addresses.
<b>DVMRP</b>	This signifies the loss of a 2-way adjacency with a neighbor.
<b>Fan</b>	Provides information on how well a fan is functioning. Fan alerts provide status information of fans.
<b>Ifstate</b>	This signifies that there has been a change in the state of an IPv6 interface.
<b>IGMP</b>	Provides information about the Internet Group Management Protocol (IGMP).
<b>Initialization</b>	Provides information about the initialization phase of the switch.
<b>Link</b>	Provides the link related information.
<b>LLDP</b>	Provides information on controlling the transmission of LLDP notifications.
<b>LockedPort</b>	Provides information about blocked switches.
<b>MAU</b>	Provides information whenever a managed repeater MAU enters the Jabber state.
<b>OSPF</b>	This signifies that an OSPF packet has been received on a non-virtual interface that cannot be parsed.
<b>PacketPolicy</b>	Provides status information when packets have been forwarded or dropped.
<b>PortState</b>	Provides the Port State change information.
<b>PortStatus</b>	Provides status information for the ports with either an <b>Authorised</b> or <b>Unauthorized</b> message.
<b>PowerSupply</b>	Provides status information of the power supplies.
<b>Repeater</b>	Provides information whenever a managed interface MAU enters the Jabber state.
<b>ResourceOverflow</b>	Provides status information for switch hardware or software resource overflow.
<b>Stacking</b>	Provides information about the stack status.
<b>STP</b>	Provides information about any changes in the Spanning Tree Protocol.
<b>SFP</b>	Provides information about any changes in the Small Form Pluggable (SFP) Protocol.
<b>Temperature</b>	Provides temperature statistics information of the switch.
<b>TFTP</b>	Provides information about the status of the Trivial File Transfer Protocol.
<b>Threshold</b>	Provides Information when an alarm entry crosses its rising threshold and generates an event that is configured for sending SNMP Traps. This notification is generated when the value of entLastChangeTime changes. It can be utilized by an NMS to trigger logical/physical entity table maintenance polls.
<b>TrunkPort</b>	Provides status information when a port has been added or deleted.
<b>UserLogin</b>	Provides information about the users logged in.
<b>VLAN</b>	Provides information about the switch Virtual Local Area Network.
<b>VRRP</b>	Provides information about any changes in the Virtual Router Redundancy Protocol entries.
<b>XFP</b>	Provides information about the operational status of the Small Form Factor Pluggable Transceiver.

Alert Group	Description
<b>ZeroHopEdgeRouting</b>	Provides routing related information about the Zero-Hop Edges.

## W-Series Switch Alert Groups

The W-Series Switch alert groups are the events generated by the Dell W-Series Switches and displayed on the Netcool/OMNIbus console. The following table lists the W-Series alert groups.

**Table 28. Dell W-Series Switch Groups**

Alert Group	Description
<b>AccessPoint</b>	Indicates changes in Access point status.
<b>ACL</b>	Indicates that the Access Control List Entries table is full and cannot add any more entries.
<b>AdhocNetwork</b>	Provides the Adhoc Network information.
<b>AM</b>	Provides AM information.
<b>Authentication</b>	Provides user related operation's information.
<b>AuthenticationServer</b>	Indicates Authentication server related information.
<b>BandWidth</b>	Indicates that the controller reached the maximum number of configurable Bandwidth contracts.
<b>CDR</b>	Indicates that the CDR buffer threshold has been reached.
<b>Certificate</b>	Indicates the certificate expiry information.
<b>Channel</b>	It indicates changes in Channel configuration.
<b>ChannelFrame</b>	Indicates data packet information of a channel frame.
<b>ChannelRate</b>	Indicates that an AP/AM at wlsrLocation detected frames of type wlsrFrameType on wlsrCurrentChannel which exceeds the configured IDS rate threshold.
<b>ClockSync</b>	Indicates the total number of clock sync errors between the switch and access points.
<b>Configuration</b>	Indicates configuration information.
<b>Controller</b>	Indicates the controller detected IP Spoofing.
<b>ControllerIP</b>	Indicates that the controller IP information.
<b>CoverageHole</b>	Indicates that a coverage hole information.
<b>CRL</b>	Indicates that the Certificate Revocation List associated with the particular Trustpoint is expired.
<b>DBCommunication</b>	Indicates communication with Database.
<b>ESIServer</b>	Indicates that a ESI server status.
<b>Fan</b>	Indicates fan status.

<b>Alert Group</b>	<b>Description</b>
<b>FanTray</b>	Indicates fan tray information.
<b>FlashMemory</b>	Indicates that the switch is running low on flash space.
<b>Frame</b>	Indicates data packet information of a frame.
<b>FrameTypeThreshold</b>	Indicates the threshold information of a Frame Type.
<b>GBIC</b>	Indicates that a GigaBit Interface Converter is inserted in a line card.
<b>IAPConfig</b>	Indicates that config apply has failed on the Instant Access Point.
<b>Interface</b>	Indicates the change in the state of interface
<b>License</b>	Indicates one or more licenses on the controller expiry information.
<b>LineCard</b>	Indicates line card information.
<b>Loadbalancing</b>	Indicates load balancing status.
<b>Memory</b>	Indicates that the available system memory is low.
<b>Network</b>	Indicates Adhoc network information.
<b>NetworkBridge</b>	Indicates that an AM has detected an Adhoc network that is bridging to a wired network
<b>NodeRate</b>	Indicates that an AP/AM at wlsrLocation detected frames of type wlsrFrameType transmitted by node wlsrNodeMac which exceeds the configured IDS rate threshold.
<b>OUI</b>	Indicates changes in Organizationally Unique Identifier (OUI) configuration.
<b>PhysicalPort</b>	Indicates physical port information.
<b>PowerSupply</b>	Indicates power supply status.
<b>Preamble</b>	Indicates changes in preamble configuration.
<b>Process</b>	Indicates process information.
<b>QueueOverflow</b>	Indicates that an Inform queue overflow condition occurred.
<b>Radio</b>	Indicates changes in the Radio attributes of an access point.
<b>RAP</b>	Indicates the Remote Access Point information.
<b>Resource</b>	Indicates a particular resource under monitoring status.
<b>ShortPreamble</b>	Indicates that an access point has bad Short preamble configuration.
<b>Signature</b>	Indicates that it detected a signature match.
<b>SignStation</b>	Indicates that an AP detected a signature match.
<b>SSID</b>	Indicates changes in Service Set Identifier configuration.

<b>Alert Group</b>	<b>Description</b>
<b>StackElement</b>	Indicates change happens in any topology of the stack element in the stack.
<b>Station</b>	Indicates changes in station status.
<b>SupervisoryCard</b>	Indicates supervisory card information.
<b>SwitchLIC</b>	Indicates license expiry information.
<b>Temperature</b>	Indicates temperature information.
<b>TunnelInterface</b>	Indicates tunnel interface information.
<b>UserAttributes</b>	Indicates user related attribute information.
<b>UserAuthentication</b>	Indicates user related authentication information.
<b>UserEntry</b>	Indicates user related log-in information.
<b>VLAN</b>	Indicates that a Virtual Local Area Network interface status.
<b>VoiceClient</b>	Indicates that the location of voice client has been changed.
<b>Voltage</b>	Indicates voltage information.
<b>VPN</b>	Indicates that the Virtual Private Network session limit is reached.
<b>VRRP</b>	Indicates that Virtual Router Redundancy Protocol State has changed on the switch.
<b>WEP</b>	Indicates changes in Wired Equivalent Privacy configuration.
<b>WirelessBridge</b>	Indicates that an AP/AM detected a station Disconnect attack.
<b>WMS</b>	Indicates that current state in the Wireless Management Suite module shows that the Wireless Management Suite is reaching capacity, and so it is recommended to enable WMS-Offload.
<b>WPA</b>	Indicates changes in Wi-Fi Protected Access configuration.

# Dell Devices and their console launch tools

The Dell OpenManage Connection enables you to launch various Dell one-to-one, one-to-many consoles and other Dell tools to get more information about the Dell devices that you want to monitor, troubleshoot, configure, or manage.

You can launch the consoles from the respective polled events or SNMP alerts from the Desktop Event List or from the Active Event List (AEL) of the Web GUI.

For more information, see [Launching Dell consoles from the Web GUI](#) and [Launching Dell consoles from Desktop Event List](#).

The following table lists the supported Dell devices and the consoles and tools that can be launched from them.

**Table 29. Dell One-to-One console launches**

Dell Device	Console launch tools
Dell Servers/OEM Servers	<p><b>OpenManage Server Administrator Console</b></p> <p><b>OpenManage Server Administrator Web Server Console</b></p> <p><b>Dell Remote Access Controller Console</b></p>
Dell Workstations	<p><b>OpenManage Server Administrator Console</b></p> <p><b>OpenManage Server Administrator Web Server Console</b></p> <p><b>Dell Remote Access Controller Console</b></p>
Dell DRACs	<p><b>Dell Remote Access Controller Console</b></p> <p><b>OpenManage Server Administrator Console</b></p> <p><b>i</b>   <b>NOTE:</b> The OpenManage Server Administrator Console is launched from iDRAC7 or iDRAC8 devices only.</p>
Dell Chassis	<b>CMC Console</b>
Dell PowerVault NX Storage Arrays:	<p><b>OpenManage Server Administrator Console</b></p> <p><b>OpenManage Server Administrator Web Server Console</b></p> <p><b>Dell Remote Access Controller Console</b></p>
Dell Compellent Storage Arrays:	<b>Dell Compellent Storage Manager Console</b>
Dell EqualLogic PS-Series Storage Arrays:	<b>EqualLogic Group Manager Console</b>
Dell N-Series switches	<b>Dell OpenManage Switch Administrator Console</b>
Supported Dell devices (Except W-Series mobility controllers)	<p><b>Warranty Report Information</b></p> <p><b>i</b>   <b>NOTE:</b> An active Internet connection is required to retrieve the warranty report information for a Dell device.</p>

**Table 30. Dell One-to-Many console launches**

Dell Device	Console launch tools
Supported Dell devices	<b>OpenManage Essentials (OME) Console</b>
Dell PowerVault MD Storage Arrays	<b>MD Storage Manager Console</b>
Supported Dell Switches	<b>Dell OpenManage Network Manager Console</b>
Dell W-Series Switches	<b>Dell AirWave Management Platform Console</b>

**Table 31. Dell tools**

Dell Device	Console launch tools
iDRAC 7 and iDRAC 8	<b>Dell Connections License Manager Console Launch Tool</b>
	<b>Dell Server Trap Configuration Information Console</b>

Topics:

- [Launching Dell consoles from the Web GUI](#)
- [Launching Dell consoles from the Desktop Event List](#)

## Launching Dell consoles from the Web GUI

You can launch the supported console launch tools from the respective Dell devices from the events generated by those devices from the Active Event List (AEL) of the Web GUI.


- 1 Log in to the web GUI.
- 2 On the left panel, click **Availability > Events > Active Event List (AEL)**.  
The list of active events is displayed on the right panel.
- 3 Right-click on any event generated by a Dell device on the **Active Event List**.
- 4 From the options, click **Dell Tools > <Dell Console Launch Tool>**.  
The respective **<Dell Console Launch Tool>** is launched in the default browser.  
For Example:

To launch the **Compellent Storage Manager Console** from the Web GUI, Right-click the Dell Compellent event on the **Active Event List**, from the options displayed, click **Dell Tools > Launch Dell Compellent Storage Manager Console**.

The Compellent Storage Manager Console is launched in a default browser.

## Launching Dell consoles from the Desktop Event List

You can launch the supported console launch tools from the respective Dell devices from the **Desktop Event List**.

- 1 Click **Start > Program > NETCOOL Suite > Event List**.  
 **NOTE:** On systems running Linux operating system, run `nco_event`, in the terminal.
- 2 Log in to the **Netcool/OMNibus Event List**.
- 3 On the **Event list** window, double-click **Show Sub-Event List** on the **All Events** tab.  
The **Event list** is displayed in a new window.
- 4 Right-click on any event generated by a supported Dell device on the **Event List**.
- 5 From the options, click **Dell Tools > <Dell Console Launch Tool>**.  
On systems running the Windows operating system, the **<Dell Console Launch Tool>** is launched in the default browser.

On systems running the Linux operating system, the **<Dell Console Launch Tool>** is launched in the browser application set in the **\$OMNIBROWSER** environment variable.

For Example:

To launch the **Compellent Storage Manager Console** from the **Desktop Event List**, right-click the Dell Compellent event on the **Event List**. From the options displayed, click **Dell Tools > Launch Dell Compellent Storage Manager Console**.

The Compellent Storage Manager Console is launched in a default browser.

# Troubleshooting

This section lists the problems that you may encounter while using the Dell OpenManage Connection for IBM Tivoli Netcool/OMNIbus and their solutions or workaround.

Topics:

- [iDRAC7/iDRAC8 SNMPv3 traps are not received in the IBM Tivoli Netcool/OMNIbus console](#)
- [Error while launching the OMSA console from iDRAC7/iDRAC8 polled events or SNMP traps](#)
- [Error while launching the Warranty Report Information console from events generated by servers or workstations running ESXi version 5.5 or later](#)
- [Dell PowerEdge server, PowerVault NX Storage Arrays, and Workstation events are not received at the Netcool/OMNIbus console](#)
- [Dell iDRAC7 And iDRAC8 Server events are not received at the Netcool/OMNIbus console](#)
- [Dell FX2 CMC, VRTX CMC, CMC and DRAC events are not received at the Netcool/OMNIbus console](#)
- [Dell Compellent Storage Array events are not received at the Netcool/OMNIbus console](#)
- [Dell EqualLogic PS-Series Storage Array events are not received at the Netcool/OMNIbus console](#)
- [Dell PowerVault Modular Disk Storage Array events are not received at the Netcool/OMNIbus console](#)
- [Dell Enterprise switch events are not received at the Netcool/OMNIbus console](#)
- [Dell N-Series switch events are not received at the Netcool/OMNIbus console](#)
- [Dell W-Series switch events are not received at the Netcool/OMNIbus console](#)
- [Dell OpenManage Server Administrator events are not correlated](#)
- [iDRAC7/iDRAC8 Events not Correlated](#)
- [Dell FX2 CMC or VRTX CMC events are not correlated](#)
- [Compellent events are not correlated](#)
- [Dell EqualLogic events are not correlated](#)
- [Dell Enterprise \(S-Series, M-Series, Z-Series, and C-Series\) events are not correlated](#)
- [Dell N-Series events are not correlated](#)
- [Error while importing the Web GUI Integrations](#)
- [Error while launching the Dell consoles using Web GUI](#)
- [Error while launching the Dell PowerVault MD Storage Array console using Web GUI](#)
- [Error in restarting the MTTTrapd probe in Windows](#)

## iDRAC7/iDRAC8 SNMPv3 traps are not received in the IBM Tivoli Netcool/OMNIbus console

- 1 [Capture the SNMPv3 trap with a Trap Capture tool such as Wireshark.](#)
- 2 [Retrieve the Engine ID from the captured trap.](#)
- 3 [Configure this Engine ID in your IBM Tivoli Netcool/OMNIbus setup.](#)
- 4 [Restart the MTTTrapd probe service.](#)

You will now be able to receive the SNMPv3 traps successfully.

## Error while launching the OMSA console from iDRAC7/iDRAC8 polled events or SNMP traps

- 1 Ensure that the `$OMNIBROWSER` environment variable has been configured.
- 2 Ensure that the SNMP is responding correctly.
- 3 Verify that the Dell iDRAC7/iDRAC8 device has a valid SYSTEM FQDN (server host name) and is resolvable in both the Desktop and the WEB GUI servers.
- 4 Verify that the server OMSA console is configured with the default port number 1311.

## Error while launching the Warranty Report Information console from events generated by servers or workstations running ESXi version 5.5 or later

You must reconfigure the **LaunchDellWarrantyReport** tool by performing the following steps:

- 1 In the Netcool/OMNIBus Desktop component **Configuration** window, double click **Menu > Tools > LaunchDellWarrantyReport**. The **Edit Tool** window is opened for **LaunchDellWarrantyReport**.
- 2 Click the **Executable** tab and edit the string in the **Executable Commands** field as given in the example.  
For Example:

Systems running Windows:

```
$(NCHOME)\platform\win32\jre_1.6.7\jre\bin\java
```

to

```
<installed custom Java path>\jre1.6.0_18\bin\java
```

For Example:

Systems running Linux:

```
$(NCHOME)/platform/linux2x86/jre_1.6.7/jre/bin/java
```

to

```
<installed custom Java path>/jre1.6.0_18/bin/java
```

- 3 To reconfigure the Netcool/OMNIBus Web GUI component, install Oracle Java version 1.6.0\_18 or later and then configure the **TIPJAVAHOME** variable by providing the complete installed Java path.

## Dell PowerEdge server, PowerVault NX Storage Arrays, and Workstation events are not received at the Netcool/OMNIBus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.master.include.rules"`
  - `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.master.include.lookup"`
- 2 Verify that the following entries are included in the **dell.master.include.lookup** file:
  - `include "$NC_RULES_HOME/include-snmpttrap/dell/dell-MIB-Dell-10892.include.snmpttrap.lookup"`

- include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell-StorageManagement-MIB.include.snmpttrap.lookup"
- 3 Verify that the following entries are included in the **dell.master.include.rules** file:
    - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell-MIB-Dell- 10892.include.snmpttrap.rules"
    - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell-StorageManagement-MIB.include.snmpttrap.rules"

## Dell iDRAC7 And iDRAC8 Server events are not received at the Netcool/OMNibus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.rules"
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.lookup"
- 2 Verify that the following entry is included in the **dell.master.include.lookup** file:
 

```
include "$NC_RULES_HOME/include-snmpttrap/dell/dell-IDRAC-MIB.include.snmpttrap.lookup"
```
- 3 Verify that the following entry is included in the **dell.master.include.rules** file:
 

```
include "$NC_RULES_HOME/include-snmpttrap/dell/dell-IDRAC-MIB.include.snmpttrap.rules"
```

## Dell FX2 CMC, VRTX CMC, CMC and DRAC events are not received at the Netcool/OMNibus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.rules"
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.lookup"
- 2 Verify that the following entry is included in the **dell.master.include.lookup** file:
 

```
include "$NC_RULES_HOME/include-snmpttrap/dell/dell-RAC-MIB.include.snmpttrap.lookup"
```
- 3 Verify that the following entry is included in the **dell.master.include.rules** file:
 

```
include "$NC_RULES_HOME/include-snmpttrap/dell/dell-RAC-MIB.include.snmpttrap.rules"
```

## Dell Compellent Storage Array events are not received at the Netcool/OMNibus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.rules"
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.lookup"
- 2 Verify that the following entry is included in the **dell.master.include.lookup** file:
 

```
include "$NC_RULES_HOME/include-snmpttrap/dell/dell-STORAGE-SC-MIB.include.snmpttrap.lookup"
```
- 3 Verify that the following entry is included in the **dell.master.include.rules** file:
 

```
#include "$NC_RULES_HOME/include-snmpttrap/dell/dell-STORAGE-SC-MIB.include.snmpttrap.rules"
```

## Dell EqualLogic PS-Series Storage Array events are not received at the Netcool/OMNibus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - include "\$NC\_RULES\_HOME/include-snmpttrap/dell/dell.master.include.rules"

- `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.lookup"`
- 2 Verify that the following entries are included in the **dell.master.include.lookup** file:
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-EQLMEMBERMIB.include.snmptrap.lookup"`
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-EQLDISKMIB.include.snmptrap.lookup"`
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-SCSI-MIB.include.snmptrap.lookup"`
  - 3 Verify that the following entries are included in the **dell.master.include.rules** file:
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-EQLMEMBERMIB.include.snmptrap.rules"`
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-EQLDISKMIB.include.snmptrap.rules"`
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-SCSI-MIB.include.snmptrap.rules"`
    - `include "$NC_RULES_HOME/include-snmptrap/dell/equalLogic-ISCSI-MIB.include.snmptrap.rules"`

## Dell PowerVault Modular Disk Storage Array events are not received at the Netcool/OMNIbus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.rules"`
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.lookup"`
- 2 Verify that the following entry is included in the **dell.master.include.lookup** file:
 

```
include "$NC_RULES_HOME/include-snmptrap/dell/dell-MDStorageArray-MIB.include.snmptrap.lookup"
```
- 3 Verify that the following entry is included in the **dell.master.include.rules** file:
 

```
#include "$NC_RULES_HOME/include-snmptrap/dell/dell-MDStorageArray-MIB.include.snmptrap.rules"
```

## Dell Enterprise switch events are not received at the Netcool/OMNIbus console

For S-Series, M-Series, Z-Series, and C-Series Switches

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.rules"`
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.lookup"`
- 2 Verify that the following entries are included in the **dell.master.include.lookup** file:
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.switch.master.include.snmptrap.lookup"`
- 3 Verify that the following entries are included in the **dell.master.include.rules** file:
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.switch.master.include.snmptrap.rules"`

## Dell N-Series switch events are not received at the Netcool/OMNIbus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.rules"`
  - `include "$NC_RULES_HOME/include-snmptrap/dell/dell.master.include.lookup"`
- 2 Verify that the following entries are included in the **dell.master.include.lookup** file:

- `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.Nseriesswitch.master.include.snmpttrap.lookup"`
- 3 Verify that the following entries are included in the **dell.master.include.rules** file:
- `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.Nseriesswitch.master.include.snmpttrap.rules"`

## Dell W-Series switch events are not received at the Netcool/OMNIbus console

- 1 Verify that the following entries are included in the SNMP probe rules file:
- `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.master.include.rules"`
  - `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.master.include.lookup"`
- 2 Verify that the following entries are included in the **dell.master.include.lookup** file:
- `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.Wseriesswitch.master.include.snmpttrap.lookup"`
- 3 Verify that the following entries are included in the **dell.master.include.rules** file:
- `include "$NC_RULES_HOME/include-snmpttrap/dell/dell.Wseriesswitch.master.include.snmpttrap.rules"`

## Dell OpenManage Server Administrator events are not correlated

Verify that the following triggers are enabled in Netcool/OMNIbus ObjectServer:

- `dell_omsa_clear`
- `dell_omsa_deduplicate_clear`

## iDRAC7/iDRAC8 Events not Correlated

Verify that the following triggers are enabled in Netcool/OMNIbus ObjectServer:

- `dell_idrac_clear`
- `dell_idrac_deduplicate_clear`

## Dell FX2 CMC or VRTX CMC events are not correlated

Verify that the following triggers are enabled on Netcool/OMNIbus ObjectServer:

- `dell_cmc_clear`
- `dell_cmc_deduplicate_clear`

## Compellent events are not correlated

Verify that the following triggers are enabled in Netcool/OMNIbus ObjectServer:

- `dell_compellent_clear`
- `dell_compellent_deduplicate_clear`

## Dell EqualLogic events are not correlated

Verify that the following triggers are enabled on Netcool/OMNIBus ObjectServer:

- `dell_equallogic_clear`
- `dell_equallogic_deduplicate_clear`

## Dell Enterprise (S-Series, M-Series, Z-Series, and C-Series) events are not correlated

Verify that the following triggers are enabled on Netcool/OMNIBus ObjectServer:

- `dell_enterprise_switch_clear`
- `dell_enterprise_switch_deduplicate_clear`

## Dell N-Series events are not correlated

Verify that the following triggers are enabled on Netcool/OMNIBus ObjectServer:

- `dell_nseries_clear`
- `dell_nseries_deduplicate_clear`

## Error while importing the Web GUI Integrations

Restart the Web GUI server after importing the Dell OpenManage Connection to the ObjectServer.

## Error while launching the Dell consoles using Web GUI

- Verify that Perl is properly installed on the Web GUI server.
- For the prerequisites for enabling the CGI scripts functionality, see the IBM Tivoli Netcool/OMNIBus CGI script documents.

## Error while launching the Dell PowerVault MD Storage Array console using Web GUI

- Make sure that Dell PowerVault Modular Disk Storage Array is installed.
- Make sure that the path of the Dell PowerVault Modular Disk Storage Array Installer is specified in the Dell PowerVault Modular Disk Storage Array console launch tool.

## Error in restarting the MTTrapd probe in Windows

Ensure that the commented text (if it exists) is not at the end in the following files:

- `dell.master.include.lookup`
- `dell.master.include.rules`

## Related documents and resources

This chapter gives you the details of other documents and resources to help you work with the Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus.

Topics:

- [Other documents you may need](#)
- [Contacting Dell](#)
- [Accessing Documents From Dell Support Site](#)

### Other documents you may need

In addition to this guide, you can access the following guides available at [dell.com/support/manuals](http://dell.com/support/manuals). Under **Do you have your Service Tag or Express Service Code?** click **Choose from a list of all Dell products > Continue > Software & Security > Enterprise Systems Management** Under **General Support**, click the appropriate product category to access the documents.

- *Dell OpenManage With VMware ESX/ESXi Systems Management Guide*. To access this guide at [dell.com/support/manuals](http://dell.com/support/manuals), click **Software > Virtualization Solutions > VMware Software > Dell Systems Management for VMware**.

For information on terms used in this document, see the Glossary at [dell.com/support/manuals](http://dell.com/support/manuals).

Whitepapers, blogs, wiki-articles, product communities, and forums are available at [en.community.dell.com/techcenter/systems-management/w/wiki/4115.dell-openmanage-connections-and-integrations.aspx](http://en.community.dell.com/techcenter/systems-management/w/wiki/4115.dell-openmanage-connections-and-integrations.aspx).

### Contacting Dell

**NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

- 1 Go to [Dell.com/support](http://Dell.com/support).
- 2 Select your support category.
- 3 Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
- 4 Select the appropriate service or support link based on your need.

### Accessing Documents From Dell Support Site

You can access the required documents in one of the following ways:

- Using the following links:
  - For all Enterprise Systems Management documents — [dell.com/softwaresecuritymanuals](http://dell.com/softwaresecuritymanuals)
  - For OpenManage documents — [dell.com/openmanagemanuals](http://dell.com/openmanagemanuals)
  - For Remote Enterprise Systems Management documents — [dell.com/esmmanuals](http://dell.com/esmmanuals)
  - For OpenManage Connections Enterprise Systems Management documents — [dell.com/OMConnectionsEnterpriseSystemsManagement](http://dell.com/OMConnectionsEnterpriseSystemsManagement)

- For Serviceability Tools documents — [dell.com/serviceabilitytools](http://dell.com/serviceabilitytools)
- For OpenManage Connections Client Systems Management documents — [dell.com/dellclientcommandsuitemanuals](http://dell.com/dellclientcommandsuitemanuals)
- From the Dell Support site:
  - a Go to [dell.com/support/home](http://dell.com/support/home).
  - b Under **Select a product** section, click **Software & Security**.
  - c In the **Software & Security** group box, click the required link from the following:
    - **Enterprise Systems Management**
    - **Remote Enterprise Systems Management**
    - **Serviceability Tools**
    - **Client Systems Management**
    - **Connections Client Systems Management**
  - d To view a document, click the required product version.
- Using search engines:
  - Type the name and version of the document in the search box.

## Appendix

# Configuring SNMP Trap Destination for 12G or Later Generation of PowerEdge Servers, PowerVault NX Storage Arrays, and Dell Workstations

You must configure the SNMP Trap destination in the PowerEdge Servers, PowerVault NX Storage Arrays, or Dell Workstations for forwarding the SNMP traps to a particular management station IP (that is, the MTrapd Probe Server IP address). As you can monitor these devices through in-band (using Server Administrator in the server host) or by using iDRAC7/iDRAC8, the administrator must configure the trap destination in the device host or iDRAC7/iDRAC8 devices respectively. The device monitoring status remains same irrespective of the monitoring mode. The administrator must ensure that the trap destination is not configured in both modes, else redundant SNMP traps are sent to the OMNibus console. Therefore, it is recommended that the administrator configures the SNMP trap destination for only one mode – either in-band or out-of-band.

To monitor these devices through in-band mode:

- 1 Administrators must set the SNMP trap destination as the Management Station IP/host in the in-band device host.
- 2 Administrators must ensure that the Management Station IP/host does not exist in the SNMP trap destination list of iDRAC7/iDRAC8 devices.

To monitor these devices through OOB mode:

- 1 Administrators must set the SNMP trap destination as the Management Station IP/host in iDRAC7/iDRAC8 devices.

For information on configuring the trap destinations for in-band and OOB devices, see the section *Configuring Your System To Send Traps To A Management Station* in the *Dell OpenManage Server Administrator Version User's Guide* and the section *Configuring IP Alert Destinations Using RACADM* in the *Integrated Dell Remote Access Controller 7 (iDRAC7) User's Guide*, *Integrated Dell Remote Access Controller (iDRAC) User's Guide* respectively.