

**Dell OpenManage Connection Version 2.0 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.

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# Overview

Dell OpenManage Connection for IBM Tivoli Netcool/OMNIbus provides event monitoring capabilities for:

- Dell PowerEdge and PowerVault systems from 9th generation (9G) to 12th generation (12G) . All the existing generation systems support an agent-based, in-band mode using Dell OpenManage Server Administrator (OMSA). The 12G systems also support an agent-free, out-of-band mode, using Integrated Dell Remote Access Controller 7 (iDRAC7).
- Dell EqualLogic systems
- Dell Chassis Management Controller (CMC)

 **NOTE:** This guide is intended for system administrators who are familiar with IBM Tivoli Netcool/OMNIbus 7.3.1. The Dell OpenManage Connection monitors Dell devices by receiving alerts on the Netcool/OMNIbus console.

 **NOTE:** Dell Out-of-Band (OOB) 12G servers and Integrated Dell Remote Access Controller 7 (iDRAC7) are used interchangeably in the document.

## What Is New In This Release

- Added traps for the iDRAC7 alert groups. For more information, see [OOB 12G Server Alert Groups](#).
- Added trap support for Dell Chassis Management Controller (CMC) alert groups. For more information, see [Chassis Management Controller Alert Groups](#).
- Added new traps for the Dell OpenManage Storage Systems (OMSS) alert groups. For more information, see [OMSS Alert Groups](#).
- Added SCSI and iSCSI traps for the Dell EqualLogic alert groups. For more information, see [EqualLogic Alert Groups](#).
- Added support for iDRAC console launch.
- Added support for Dell OpenManage Essentials console launch.
- Added support for CMC console launch.

## Key Features

The following table lists the key features of Dell OpenManage Connection.

**Table 1. Features and Functionalities**

Feature	Functionality
Event monitoring	Monitors the events from Dell servers, EqualLogic systems, OOB 12G servers, and CMC on the Netcool/OMNIbus console. For more information, see <a href="#">Event Monitoring Using SNMP Traps</a> .
Event auto correlation	Correlates events in servers and EqualLogic systems automatically. For more information, see <a href="#">Event Auto Correlation</a> .

Feature	Functionality
Launching OpenManage Server Administrator (OMSA) console	Launches the OMSA console for the Dell system you are monitoring. For more information, see <a href="#">Dell OpenManage Server Administrator Console</a> .
Launching OMSA web server console	Launches the OMSA web server console for the Dell system you are monitoring. For more information, see <a href="#">Open Manage Server Administrator Web Server Console</a> .
Launching EqualLogic Group Manager console	Launches the EqualLogic Group Manager console for the Dell EqualLogic system you are monitoring. For more information, see <a href="#">EqualLogic Group Manager Console</a> .
Launching iDRAC console	Launches the iDRAC console for the iDRAC system you are monitoring. For more information, see <a href="#">iDRAC Console</a> .
Launching CMC console	Launches the CMC console for the CMC system you are monitoring. For more information, see <a href="#">Chassis Management Controller Console</a> .
Launching OpenManage Essentials console	Launches the OpenManage Essentials console for all supported Dell devices. For more information, see <a href="#">OpenManage Essentials Console</a> .

## Support Matrix For Netcool/OMNIBus

The following table lists the operating systems that support Netcool/OMNIBus components:

**Table 2. Supporting Operating Systems for Netcool/OMNIBus Components**

Virtualization Environment	Windows Server	SuSE Linux Server	Red Hat Enterprise Linux Server	Windows Client	SuSE Linux for Desktop (SLED)	Red Hat Enterprise Linux for Desktop (RHED)
ESXi 3.5	Windows 2008 Standard and Enterprise (32-bit)	SLES 10.0-4 (32-bit)	RHEL 5.0-8 (32-bit) Server and Advanced Platform	Windows 7 Enterprise (32-bit)	SLED 10.0-4 (32-bit)	RHEL 5.0-8 (32-bit) Desktop
ESXi 4.0	Windows 2008 Standard and Enterprise (64-bit)	SLES 10.0-4 (64-bit)	RHEL 5.0-8 (64-bit) Server and Advanced Platform	Windows 7 Enterprise (64-bit)	SLED 10.0-4 (64-bit)	RHEL 5.0-8 (64-bit) Desktop
ESXi 4.1	Windows 2008 R2 Standard, Enterprise and Domain Controller (64-bit)	SLES 11.0-2 (32-bit)	RHEL 6.0-3 (32-bit) Server and Client	Windows Vista Enterprise and Ultimate (32-bit)	SLED 11.0-2 (64-bit)	RHEL 6.0-3 (32-bit) Work Station
ESXi 5.0	Windows 2008 R2 SP1 Standard, Enterprise, and	SLES 11.0-2 (64-bit)	RHEL 6.0-3 (64-bit) Server and Client	Windows Vista Enterprise		RHEL 6.0-3 (64-bit) Work Station

Virtualization Environment	Windows Server	SuSE Linux Server	Red Hat Enterprise Linux Server	Windows Client	SuSE Linux for Desktop (SLED)	Red Hat Enterprise Linux for Desktop (RHED)
	Domain Controller (64-bit)			and Ultimate (64-bit)		

## Dell Devices Support Matrix

The following table lists the supported Dell devices, OMSA versions, firmware versions for EqualLogic and CMC systems, and the operating systems on the monitored devices.

**Table 3. Dell Devices Support Matrix**

Supported Dell Devices	Supported OMSA Versions	Supported Firmware Versions	Supported Operating Systems
Dell PowerEdge and Dell PowerVault 9th Generation (9G) to 12th Generation (12G) systems (Windows)	6.5 – 7.1	NA	<ul style="list-style-type: none"> <li>• Windows Unified DataStorage Server (64-bit)</li> <li>• Windows Server 2003 (Computer Cluster Edition)</li> <li>• Windows Storage Server 2003 R2</li> <li>• Windows Server 2003 R2 (32-bit and 64-bit)</li> <li>• Windows Small Business Server 2003 R2 SP2</li> <li>• Windows Essential Business Server 2008 SP1</li> <li>• Windows Server 2008 SP1 (32-bit and 64-bit)</li> <li>• Windows Server 2008 SP2 (32-bit and 64-bit)</li> <li>• Windows Server 2008 R2 (64-bit)</li> <li>• Windows Server 2008 R2 SP1 (64-bit)</li> <li>• Windows Server 2008 R1 and R2 (HPC Edition)</li> <li>• Windows Storage Server 2008 SP2</li> <li>• Windows Small Business Server 2008 SP2</li> <li>• Windows Small Business Server 2008 R2</li> </ul>

Supported Dell Devices	Supported OMSA Versions	Supported Firmware Versions	Supported Operating Systems
PowerEdge 9G to 12G systems (Linux)	6.5 – 7.1	NA	<ul style="list-style-type: none"> <li>• Microsoft Windows Small Business Server 2011</li> <li>• SUSE Linux Enterprise Server 10 SP4 (64-bit)</li> <li>• SUSE Linux Enterprise Server 11 SP2 (64-bit)</li> <li>• Red Hat Enterprise Linux 4.7 (64-bit and 32-bit)</li> <li>• Red Hat Enterprise Linux 4.8 (64-bit and 32-bit)</li> <li>• Red Hat Enterprise Linux 5.0 (64-bit and 32-bit)</li> <li>• Red Hat Enterprise Linux 5.3 (64-bit and 32-bit)</li> <li>• Red Hat Enterprise Linux 5.5 (64-bit and 32-bit)</li> <li>• Red Hat Enterprise Linux 5.8 (64-bit and 32-bit)</li> <li>• Red Hat Enterprise Linux 6.0 (64-bit)</li> <li>• Red Hat Enterprise Linux 6.2 (64-bit)</li> </ul>
PowerEdge 9G to 12G systems (ESXi)	6.5 – 7.1	NA	<ul style="list-style-type: none"> <li>• ESXi 4.0 U1 (HDD and Flash)</li> <li>• ESXi 4.0 U2 (HDD and Flash)</li> <li>• ESXi 4.0 U3 (HDD and Flash)</li> <li>• ESXi 4.1 U1 (HDD and Flash)</li> <li>• ESXi 5.0</li> <li>• ESXi 5.1</li> </ul>
EqualLogic storage arrays	NA	5.0 – 6.0	NA
OOB 12G servers	NA	1 and 1.23.23	NA
CMC	NA	4.11 and 4.2	NA




# 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 Dell PowerEdge and PowerVault servers in-band (from 9G-12G) and out-of-band (12G only), Dell Chassis Management Controller (CMC), and Dell EqualLogic systems receiving SNMP traps from the Dell devices. You can use both desktop and GUI client to monitor the systems.

 **NOTE:** To distinguish among the various devices on the Netcool/OMNIBus console, a class value is assigned to the Dell devices. The class value of servers, EqualLogic systems, OOB 12G servers (iDRAC7), and CMC, are 2080, 2085, 2088, and 2086 respectively.

The event monitoring process is as follows:

1. The SNMP probe receives the SNMP traps from the servers, EqualLogic systems, OOB 12G servers (iDRAC7), or CMC.
2. The SNMP probe converts the trap into event using the respective rules, which filters the traps from the Dell devices and populates the event fields with the appropriate value.
3. The SNMP probe forwards the events to the ObjectServer.
4. The desktop and web GUI consoles display the events by communicating with the ObjectServer.

## 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 alert groups of OMSA alerts.

**Table 4. 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>Alert Group</b>	<b>Description</b>
<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 noncircular logs that may fill up, resulting in lost status messages.
<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 become too high in a chassis.
<b>VoltageProbe</b>	Provides status and warning information for voltage sensors in a particular chassis.

## OMSS Alert Groups

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

**Table 5. OMSS Alert Groups**

<b>Alert Group</b>	<b>Description</b>
<b>Battery</b>	Provides battery status 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.
<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, full initialization, and so on.
<b>PowerSupply</b>	Provides status information on the power supplies in an enclosure on the system.
<b>Redundancy</b>	Provides status of the redundancy device.
<b>SystemLevel</b>	Provides status of the controllers of 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.

## EqualLogic Alert Groups

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

**Table 6. EqualLogic Alert Groups**

<b>Alert Group</b>	<b>Description</b>
<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>Alert Group</b>	<b>Description</b>
<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.
<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>RAIDSetLostBIKTableFull</b>	Provides information that RAID lost block table is full.
<b>TempSensorThreshold</b>	Provides information that temperature sensor has exceeded the threshold.

<b>Alert Group</b>	<b>Description</b>
<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>ISCSIIintrLogin</b>	Provides information that the initiator's login attempt failed.
<b>ISCSIIInstSession</b>	Provides information that the active session for a target system or an initiator failed.

## Dell OOB 12G Server Alert Groups

The Out-of-Band (OOB) 12G server alerts are the events generated by Integrated Dell Remote Access Controller 7 (iDRAC7) and displayed on the Netcool/OMNIbus console. The following table lists the alert groups of OOB 12G server alerts.

**Table 7. OOB 12G Server Alert Groups**

<b>Alert Group</b>	<b>Description</b>
<b>AmperageProbe</b>	Provides the amperage details of the system board, disk-drive bay, and the system level.
<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>Debug</b>	Provides the debug authorization details of the system.
<b>Fan</b>	Provides the fan details of the system.
<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>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>OperatingSystem</b>	Provides the details of system halt.
<b>PCIDevice</b>	Provides the PCI device details of the system.

<b>Alert Group</b>	<b>Description</b>
<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>Redundancy</b>	Provides information about fan and power supply redundancy.
<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.
<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.

## **Chassis Management Controller Alert Groups**

The CMC systems generate the CMC alerts and these alerts are displayed on the Netcool/OMNibus console. The DellChassis alert group provides the following information:

- Status of various components such as fan, battery, power supply, temperature probe, hardware log, redundancy, and so on.
- Presence or absence of server, keyboard/video/ mouse (KVM) switch, input output module (IOM), and SD card.
- Mismatch of fabric, firmware version, and so on.

# 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 supports auto correlation of events on Dell servers and EqualLogic systems. When the ObjectServer receives OMSA, OMSS, or EqualLogic events, 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, and EqualLogic events support this event correlation. The `IBM_generic_clear` trigger correlates the OMSA, OMSS, and EqualLogic problem events with its corresponding clear event when the problem is rectified.
- Problem event with another problem event — OMSA and EqualLogic 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 problem events.
- Duplicated problem event with another problem event — OMSA and EqualLogic 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 problem events.

 **NOTE:** 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/manuals](http://dell.com/support/manuals). For more information on EqualLogic event correlation, see [EqualLogic Alert Correlation](#).

## Dell OpenManage Server Administrator Console

The Dell OpenManage Connection enables you to launch the OMSA console to get more information about the Dell system you are monitoring. You can launch the OMSA console from the desktop event list or from the Active Event List of the web GUI.

 **NOTE:** Practical Extraction and Report Language (Perl) is required for the execution of Common Gateway Interface (CGI) scripts in web GUI. If Perl is installed in a nonstandard location, then the CGI scripts do not function properly. Always ensure that the paths to the resources in the CGI scripts are correct. The standard installation location of Perl on systems running the Windows and Linux operating system is `C:\Perl\bin\perl.exe` and `/usr/bin/perl` respectively. For more information, see the *IBM Tivoli Netcool/OMNIBus Administration Guide*.

Related Links:

- [Launching Dell OpenManage Server Administrator Console From Desktop Event List](#)
- [Launching Dell OpenManage Server Administrator Console From Web GUI](#)

## Launching Dell OpenManage Server Administrator Console From Desktop Event List

1. Access the desktop event list. For more information, see [Accessing The Desktop Event List](#).
2. Right-click the Dell server event on the **Event List**.
3. From the options, click **Dell Tools** → **Launch Dell Server Administrator Console**.  
On systems running the Windows operating system, the OMSA console is launched in the default browser. On systems running the Linux operating system, the OMSA console is launched in the browser application set in the **\$OMNIBROWSER** environment variable.

## Launching Dell OpenManage Server Administrator Console From Web GUI

1. Access the **Active Event List**. For more information, see [Accessing The Active Event List](#).
2. Right-click the Dell server event on the **Active Event List**.
3. From the options, click **Dell Tools** → **Launch Dell Server Administrator Console**.  
The OMSA console is launched in the default browser.

## OpenManage Server Administrator Web Server Console

The Dell OpenManage connection enables you to launch the OMSA web server console to get more information about the Dell system you are monitoring. You can launch the OMSA web server console from the desktop event list or from the **Active Event List** of the web GUI of a system running the Windows, Linux, or ESXi operating system.

 **NOTE:** You can launch the OMSA web server console on systems running the Windows or Linux operating system only if you enable **Remote Enablement** during OMSA installation on Dell systems.

Related Links:

- [Launching OpenManage Web Server Console From Desktop Event List](#)
- [Launching OpenManage Server Administrator Web Server Console From Web GUI](#)

## Launching OMSA Web Server Console From Desktop Event List

1. Access the desktop event list. For more information, see [Accessing The Desktop Event List](#).
2. Right-click the Dell server event on the **Event List**.
3. From the options, click **Dell Tools** → **Launch Dell Server Administrator Web Server Console**.  
On systems running the Windows operating system, the OMSA web server console is launched in the default browser. On systems running the Linux operating system, the OMSA web server console is launched in the browser application set in the **\$OMNIBROWSER** environment variable.

## Launching OpenManage Server Administrator Web Server Console From Web GUI

1. Access the **Active Event List**. For more information, see [Accessing The Active Event List](#).
2. Right-click the Dell server event on the **Active Event List**.
3. From the options, click **Dell Tools** → **Launch Dell Server Administrator Web Server Console**.  
The OMSA web server console is launched in the default browser.



# EqualLogic Group Manager Console

The Dell OpenManage connection enables you to launch the EqualLogic Group Manager console to get more information about the EqualLogic systems you are monitoring. You can launch the EqualLogic Group Manager console from the desktop event list or from the **Active Event List** of the web GUI.

Related Links:

- [Launching EqualLogic Group Manager Console From Desktop Event List](#)
- [Launching EqualLogic Group Manager Console From Web GUI](#)

## Launching EqualLogic Group Manager Console From Desktop Event List

1. Access the desktop event list. For more information, see [Accessing The Desktop Event List](#).
2. Right-click the Dell EqualLogic event on the **Event List**.
3. From the options, click **Dell Tools** → **Launch Dell EqualLogic Group Manager Console**.

On systems running the Windows operating system, the EqualLogic Group Manager console is launched in the default browser. On systems running the Linux operating system, the **EqualLogic Group Manager** console is launched in the browser application set in the **\$OMNIBROWSER** environment variable.

## Launching EqualLogic Group Manager Console From Web GUI

1. Access the **Active Event List**. For more information, see [Accessing The Active Event List](#).
2. Right-click the Dell EqualLogic event on the **Active Event List**.
3. From the options, click **Dell Tools** → **Launch Dell EqualLogic Group Manager Console**.  
The **EqualLogic Group Manager** console is launched in the default browser.

# Integrated Dell Remote Access Controller Console

The Dell OpenManage connection enables you to launch the iDRAC console to get more information about the iDRAC systems you are monitoring. You can launch the iDRAC console from the desktop event list or from the Active Event List of the web GUI.



**NOTE:** Perl is required for the execution of Common Gateway Interface (CGI) scripts in web GUI. If Perl is installed in a nonstandard location, then the CGI scripts do not function properly. Always ensure that the paths to the resources in the CGI scripts are correct. The standard installation location of Perl on systems running the Windows and Linux operating system is C:\Perl\bin\perl.exe and /usr/bin/perl respectively. For more information, see *IBM Tivoli Netcool/OMNIBus Administration Guide*.

Related Links:

- [Launching iDRAC Console From Desktop Event List](#)
- [Launching iDRAC Console From Web GUI](#)

## Launching iDRAC Console From Desktop Event List

1. Access the desktop event list. For more information, see [Accessing The Desktop Event List](#).
2. Right-click the Dell iDRAC event on the **Event List**.
3. From the options, click **Dell Tools** → **Launch iDRAC Console**.


On systems running the Windows operating system, the iDRAC console is launched in the default browser. On systems running the Linux operating system, the iDRAC console is launched in the browser application set in the **\$OMNIBROWSER** environment variable.

## Launching iDRAC Console From Web GUI

1. Access the **Active Event List**. For more information, see [Accessing The Active Event List](#).
2. Right-click the Dell iDRAC event on the **Active Event List**.
3. From the options, click **Dell Tools** → **Launch iDRAC Console**.  
The iDRAC console is launched in the default browser.

## Chassis Management Controller Console

The Dell OpenManage connection enables you to launch the CMC console to get more information about the CMC systems you are monitoring. You can launch the CMC console from the desktop event list or from the **Active Event List** of the web GUI.

 **NOTE:** Perl is required for the execution of Common Gateway Interface (CGI) scripts in web GUI. If Perl is installed in a nonstandard location, then the CGI scripts do not function properly. Always ensure that the paths to the resources in the CGI scripts are correct. The standard installation location of Perl on systems running the Windows and Linux operating system is C:\Perl\bin\perl.exe and /usr/bin/perl respectively. For more information, see *IBM Tivoli Netcool/OMNIbus Administration Guide* at [t-voli.com](http://t-voli.com).

Related Links:

- [Launching Chassis Management Controller Console From Desktop Event List](#)
- [Launching Chassis Management Controller Console From Web GUI](#)

## Launching Chassis Management Controller Console From Desktop Event List


1. Access the desktop event list. For more information, see [Accessing The Desktop Event List](#).
2. Right-click the Dell Chassis Management Controller event on the **Event List**.
3. From the options, click **Dell Tools** → **Launch Dell Chassis Management Controller Console**.  
On systems running the Windows operating system, the **Chassis Management Controller** console is launched in the default browser. On systems running the Linux operating system, the **Chassis Management Controller** console is launched in the browser application set in the **\$OMNIBROWSER** environment variable.


## Launching Chassis Management Controller Console From Web GUI

1. Access the **Active Event List**.  
For more information, see [Accessing The Active Event List](#).
2. Right-click the Dell Chassis Management Controller event on the **Active Event List**.
3. From the options, click **Dell Tools** → **Launch Dell Chassis Management Controller Console**.  
The **Chassis Management Controller** console is launched in the default browser.

# OpenManage Essentials Console

The Dell OpenManage connection enables you to launch the Dell OpenManage Essentials console to get more information about the systems you are monitoring. You can launch the OpenManage Essentials console from the desktop event list or from the Active Event List of the web GUI.

 **NOTE:** OpenManage Essentials launch is supported only on browsers with Microsoft Silverlight.

 **NOTE:** OpenManage Essentials is not supported on systems running Linux.

Related Links:

- [Launching OpenManage Essentials Console From Desktop Event List](#)
- [Launching OpenManage Essentials Console From Web GUI](#)

## Launching OpenManage Essentials Console From Desktop Event List

To launch the OpenManage Essentials console from desktop event list:


1. Access the desktop event list. For more information, see [Accessing the Desktop Event List](#).
2. Right-click a Dell device event on the **Event List**.
3. From the options, click **Dell Tools** → **Launch OpenManage Essentials Console** .  
On systems running the Windows operating system, the OpenManage Essentials console is launched in the default browser. On systems running the Linux operating system, the OpenManage Essentials console is launched in the browser application set in the `$OMNIBROWSER` environment variable.

## Launching OpenManage Essentials Console From Web GUI

To launch OpenManage Essentials console from web GUI:

1. Access the **Active Event List**. For more information, see [Accessing the Active Event List](#).
2. Right-click a Dell device event on the **Active Event List**.
3. From the options, click **Dell Tools** → **Launch OpenManage Essentials Console** .  
The OpenManage Essentials console is launched in the default browser.

## Accessing 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.

## Accessing The Active Event List

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.

## Troubleshooting

This section lists the problems that you may encounter while using the Dell OpenManage Connection for IBM Tivoli Netcool/OMNIBus.

### Dell Server Events 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 EqualLogic Events 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/equalLogic-EQLMEMBERMIB.include.snmpttrap.lookup"
- include "\$NC\_RULES\_HOME/include-snmpttrap/dell/equalLogic-EQLDISKMIB.include.snmpttrap.lookup"
- include "\$NC\_RULES\_HOME/include-snmpttrap/dell/equalLogic-SCSI-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/equalLogic-EQLMEMBERMIB.include.snmpttrap.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 OOB 12G Server Events 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-IDRAC-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-IDRAC-MIB.include.snmptrap.rules"
```

## Dell CMC Events 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-RAC-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-RAC-MIB.include.snmptrap.rules"
```

## Dell OpenManage Server Administrator Events Not Correlated

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

- dell\_omsa\_clear
- dell\_omsa\_deduplicate\_clear

## Dell EqualLogic Events Not Correlated

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

- dell\_equallogic\_clear
- dell\_equallogic\_deduplicate\_clear

## Error While Importing The Web GUI Integrations

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

## Issues In Launching The OMSA, iDRAC, And CMC 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 OMNibus CGI script documents.

## Problem In Restarting The MTTTrapd 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.

### 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). On the **Manuals** page, click **Software** → **Systems Management**. Click the appropriate product link on the right side to access the documents:


- *Dell Event Message Reference Guide*
- *Dell OpenManage Installation and Security User's Guide*
- *Dell OpenManage Server Administrator User's Guide*
- *Dell OpenManage Server Administrator Compatibility Guide*
- *Dell OpenManage Server Administrator Messages Reference Guide*
- *Dell OpenManage Server Administrator Command Line Interface User's Guide*
- *Dell Chassis Management Controller Firmware User's Guide*
- *Integrated Dell Remote Access Controller User's Guide*
- *Dell OpenManage Essentials User's Guide*
- *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**.

To access the Dell EqualLogic documentation at [dell.com/support/](http://dell.com/support/), click **Systems** → **Dell EqualLogic**.

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. Visit [www.dell.com/support](http://www.dell.com/support).
2. Select your support category.
3. Verify your country or region in the Choose a Country/Region drop-down menu at the top of page.
4. Select the appropriate service or support link based on your need.

# Appendix

## EqualLogic Alert Correlation

The following EqualLogic alerts support alert correlation:

- DiskStatus
- TempSensorThreshold
- FanSpeedThreshold
- PowerSupplyFan
- PowerSupply
- SCSIgtDevice
- SCSILuStatus

The alerts are correlated using the Dell automation triggers on IBM Tivoli Netcool/OMNIBus. The alerts are displayed on the Netcool/OMNIBus console with the latest status. For example, `DiskStatus` alert is displayed with the latest status and all the previous `DiskStatus` alerts are cleared on the Netcool/OMNIBus console.