Dell OpenManage Essentials Version 1.2 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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Contents

About OpenManage Essentials

OpenManage Essentials is a hardware management application that provides a comprehensive view of Dell systems, devices, and components in the enterprise's network. With OpenManage Essentials, a web-based and one-to-many systems management application for Dell systems and other devices, you can:

- Discover and inventory the systems.
- Monitor the health of the system.
- View and manage system alerts.
- Perform system updates.
- View hardware inventory and compliance reports.

What is New in This Release

- **Map View** for Dell PowerEdge VRTX devices. See Using Map View.
- Addition of Microsoft Windows Server 2012 as a supported operating system for the management station.
- Search functionality. See Search Bar.
- Ability to configure OpenManage Essentials to send the warranty status of your devices through email at periodic intervals. See Configuring Warranty Email Notifications.
- Ability to configure OpenManage Essentials to generate a warranty scoreboard based on your preference and display a notification icon in the heading banner when the warranty scoreboard is available. See Configuring Warranty Scoreboard Notifications.
- Enhanced support for Dell Compellent, Dell Force10 E-Series and C-Series, Dell PowerConnect 8100 series, Dell PowerVault FS7500, and PowerVault NX3500 devices.
- Support for installing OpenManage Essentials on the domain controller.
- Ability to log on as a different user. See Logging On as a Different User.
- **Device Group Permissions** portal. See Managing Device Group Permissions.
- Addition of the **OmeSiteAdministrators** role. See Using Security Roles and Permissions.
- Availability of the following reports: **Asset Acquisition Information**, **Asset Maintenance Information**, **Asset Support Information**, and **Licensing Information**. See Reports – Reference.
- Addition of a device group for Citrix XenServers and Dell PowerEdge C servers in the device tree. See Device Summary Page.
- Availability of storage and controller information in the device inventory for the following client systems: Dell OptiPlex, Dell Latitude, and Dell Precision.
- CLI support for discovery, inventory, status polling, and removal of devices from the device tree. See Running Discovery, Inventory, and Status Polling Tasks and Removing a Device.
- CLI command for modifying and adding ranges to an existing Discovery Range Group. See Editing a Discovery Range Group.
- Availability of sample command line remote tasks for uninstalling OpenManage Server Administrator and applying a server configuration on multiple managed nodes. See Command Line.
- Display of a notification icon in the heading banner to indicate the availability of a newer version of OpenManage Essentials. See OpenManage Essentials Heading Banner.
- Support for enabling or disabling rebooting after system update for out-of band (iDRAC) system updates.

- Support for re-running system update and OpenManage Server Administrator (OMSA) deployment tasks.
- Support for Single Sign-On (SSO) for iDRAC and CMC devices. See Single Sign-On.
- Multiple defect fixes and performance improvements.

Other Information You May Need

In addition to this guide, you may require the following documents:

Document	Description	Availability
Dell OpenManage Essentials Support Matrix	Lists the devices supported by OpenManage Essentials.	**dell.com/OpenManageManuals**
Dell OpenManage Essentials Readme	Provides information about known issues and workarounds in OpenManage Essentials.	
Dell License Manager User's Guide	Provides information about managing licenses and troubleshooting the License Manager.	
Dell Repository Manager User's Guide	Provides information about using the Repository Manager to manage system updates.	
Dell SupportAssist User's Guide	Provides information about installing, configuring, using, and troubleshooting SupportAssist.	**dell.com/ServiceabilityTools**
Troubleshooting Tool online help	Provides information about using the tool, related protocols, devices, and so on.	Integrated with the Troubleshooting Tool. To launch the online help from the Troubleshooting Tool, click the ? icon.
Dell OpenManage Essentials MIB Import Utility online help	Provides information about the tool, importing and removing MIBs, troubleshooting procedures, and so on.	Integrated with the MIB Import Utility. To launch the online help from the MIB Import Utility, click the ? icon.

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 **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.

2

Installing OpenManage Essentials

Related Links

- Downloading OpenManage Essentials
- Installing OpenManage Essentials
- Migrating IT Assistant to OpenManage Essentials
- Installation Prerequisites and Minimum Requirements

Installation Prerequisites and Minimum Requirements

For a list of supported platforms, operating systems, and browsers, see the *Dell OpenManage Essentials Support Matrix* at **dell.com/OpenManageManuals**.

To install OpenManage Essentials, you require local system administrator privileges and the system you are using must meet the criteria mentioned in Minimum Recommended Hardware and Minimum Requirements.

Minimum Recommended Hardware

Minimum Recommended Hardware	Large Deployments	Medium Deployments [a]	Small Deployments [a]
Number of Devices	Up to 2000	Up to 500	Up to 100
Type of System	Physical machines / Virtual machines	Physical machines / Virtual machines	Physical machines / Virtual machines
RAM	8 GB	6 GB	4 GB
Processors	8 cores total	4 cores total	2 cores total
Database	SQL Standard	SQL Express	SQL Express
Database Location	Remote **[b]**	Local	Local
Hard Drive	10 GB	6 GB	6 GB

[a] If you are not using SQL Express, limit the maximum memory to 2 GB less than the total system memory and disable SQL analysis and report services.

[b] Install the remote database on a system that supports an 8 core processor and an 8 GB RAM.

NOTE: If Dell SupportAssist is installed along with OpenManage Essentials, you require 2 GB RAM and 2 cores in addition to the minimum requirements described in the above table. If you are using SQL Server Standard or Enterprise Editions, the maximum SQL Server memory must be configured within SQL Server to prevent it from using the entire system memory. It is recommended that you use a maximum of 4 GB for a 6 GB RAM.

Minimum Requirements

Particulars	Minimum Requirement
Operating systems	• Microsoft Windows Server 2008 SP2 Standard Edition (x86 and x64) • Windows Server 2008 SP2 Enterprise Edition (x86 and x64) • Windows Server 2008 R2 SP1 Standard Edition • Windows Server 2008 R2 SP1 Enterprise Edition • Windows Server 2012 Standard Edition • Windows Server 2012 Datacenter Edition
Network	100 Mbps or higher
Web browser	• Microsoft Internet Explorer 8, 9, and 10 • Mozilla Firefox 22 and 23 • Google Chrome 27 and 28
Database	Microsoft SQL Server 2008 or later
User interface	Microsoft Silverlight version 5.1
.NET	4.5
Microsoft Visual C++ 2010	Runtime 10.0

Downloading OpenManage Essentials

To download OpenManage Essentials, go to **support.dell.com** or the Dell TechCenter website.

Terms and Conditions for Using Relational Database Management Systems

The relational database management system (RDBMS) used for installing OpenManage Essentials is Microsoft SQL server. SQL server has configuration settings separate from the OpenManage Essentials database. The server has logins (SQL or Windows) that may or may not have access to the OpenManage Essentials database.

When OpenManage Essentials is installed, Internet security is modified by adding registry entries to the ZoneMaps for HKLM and HKCU. This ensures that Internet Explorer identifies the fully qualified domain name as an intranet site.

A self-signed certificate is created and this certificate is installed in the root Certificate Authorities (CA) and My certificates.

To prevent certificate errors, remote clients must either install OpenManage Essentials certificate in both CA and Root Certificate Stores or have a custom certificate published to client systems by the domain administrator.

For a typical installation of OpenManage Essentials:

- Use the local instance of SQL Server that has all supported components.
- The RDBMS is altered to support both SQL and Windows authentication.
- An SQL Server login user is generated for OpenManage Essentials’ services. This login is added as a RDBMS SQL login with the dbcreator role and given the db_owner role over the ITAssist and OMEssentials databases.

NOTE: The password for the typical install, auto generated SQL Server login account, is controlled by the application and different on every system.

For the highest level of security, it is recommended that you use a domain service account that is specified during custom installation for SQL Server.

At runtime, when the OpenManage Essentials website determines that it has an invalid certificate or certificate binding; the self-signed certificate is regenerated.

Related Links

Minimum Login Roles for Microsoft SQL Server

Database Size, Network Bandwidth, and Scalability

The following table provides information about the changes to the database size in an environment with 2000 devices based on alerts, tasks, and alert actions.

Events	Database Size
Initial database size	47.5 MB
After discovery and inventory of 2000 devices	48.5 MB
After 2000 alerts are generated	53.5 MB
After tasks (status polling, OpenManage Server Administrator deployment tasks, remote tasks, and system update tasks) against these alerts are executed	54.5 MB
After deleting all the alerts and sending 20000 alerts with all the alert actions configured	97.2 MB

During the daily maintenance, OpenManage Essentials compresses and optimizes the database. OpenManage Essentials also downloads updates for managed servers. These updates are saved in the local file system (not in the database) where OpenManage Essentials is installed.

The minimal network bandwidth required for OpenManage Essentials to work in a WAN environment is 40 Mbps.

NOTE: For more information, see the *OpenManage Essentials Scalability and Performance* technical white paper at **DellTechCenter.com/OME**.

Minimum Login Roles for Microsoft SQL Server

The following table provides information about the minimum permissions for SQL Server based on different installation and upgrade use cases.

Number	Use Case	Minimum Login Roles for SQL Server
1	Installing OpenManage Essentials for the first time and you select the **Typical** option during the installation process.	sysadmin access on the installed instance.
2	Installing OpenManage Essentials for the first time, you select the **Custom** option during the installation process and an empty OpenManage Essentials database is present (locally or remotely).	db_owner access on the OpenManage Essentials database.

Number	Use Case	Minimum Login Roles for SQL Server
	NOTE: If you select the **Custom** install option and do not enter any credentials then the installation is considered as a **Typical** installation and sysadmin rights are required.	
3	You are installing OpenManage Essentials for the first time, you select the **Custom** option during the installation process, and an empty OpenManage Essentials database is not present.	dbcreator access on the server.
4	Upgrading OpenManage Essentials from version 1.1 to version 1.2 and an OpenManage Essentials database is present (locally or remotely).	db_owner access on the OpenManage Essentials database.

Installing OpenManage Essentials

1. Double-click the OpenManage Essentials executable file.

   The **Dell OpenManage Install** screen is displayed. The following options are available:

   - **Dell OpenManage Essentials** — Select this option to install Dell OpenManage Essentials, Troubleshooting Tool, and Dell OpenManage Essentials MIB Import Utility.
   - **Dell SupportAssist** — Select to install Dell SupportAssist. SupportAssist provides proactive support capabilities for supported Dell server, storage, and networking solutions.
   - **Dell Repository Manager** — Select to install Dell Repository Manager. Using Repository Manager, you can create customized bundles and repositories of Dell Update Packages, software utilities such as update drivers, firmware, BIOS, and other applications.
   - **Dell License Manager** — Select to install the Dell license manager. Dell License Manager is a one-to-many license deployment and reporting tool for managing the Dell iDRAC 7 licenses.
   - **Documentation** — Click to view the online help.
   - **View Readme** — Click to view the readme file. To view the latest readme, go to **DellTechCenter.com/OME**.

2. In **Dell OpenManage Install**, select **Dell OpenManage Essentials** and click **Install**.

   The Dell OpenManage Essentials Prerequisites window, displays the following requirement types:

   - **Critical** — This error condition prevents the installation of a feature.
   - **Warning** — This warning condition may disable the **Typical** installation but not an **Upgrade** of the feature later during installation. Also, later during installation, use the **Custom** installation setup type to select the feature.
   - **Information** — This informational condition does not affect the **Typical** selection of a feature.

   There are two options for resolving critical dependencies:

   - Click **Install All Critical Prerequisites** to immediately begin installing all critical prerequisites without further interaction. **Install All Critical Prerequisites** may require a reboot depending on the configuration and the prerequisites installation will resume automatically after restart.
   - Install each prerequisite individually by clicking the associated link with the required software.

   NOTE: To configure remote database, you do not require an SQL Express installation on the local system. See Setting Up OpenManage Essentials Database on a Remote SQL Server. If you are not configuring a remote database, then install SQL Express by clicking the warning prerequisite link. Selecting **Install All Critical Prerequisites** does not install SQL Express.

NOTE: Installation of OpenManage Essentials on a local database using SQL Server 2008, 2008 R2, or 2012 Express editions is supported only when an OpenManage Essentials-specific instance named SQLEXPRESSOME is available.

3. Click **Install Essentials**.

   NOTE: If you are installing OpenManage Essentials for the first time, a dialog box is displayed prompting you to select if you want to install OpenManage Essentials on a local or remote database. If you choose to install OpenManage Essentials on a local database, SQL Server 2012 Express is installed on the system. If you choose to install OpenManage Essentials on a remote database, the installation follows the Custom Setup Installation steps.

4. In the install wizard for OpenManage Essentials, click **Next**.
5. In the **License Agreement** page, read the license agreement, select **I accept the terms in the license agreement**, and then click **Next**.
6. In **Setup type** select either **Typical** or **Custom** installation.

   If you selected **Typical**, click **Next**.

   NOTE: If the default ports assigned to OpenManage Essentials services are either blocked or used by another application, a message is displayed prompting you to either unblock the ports or select **Custom** installation where you can specify another port.

   Verify the installation settings in the **Ready to Install the Program** page and the click **Install**.

   If you selected **Custom**, in **Custom Setup**, click **Next** and follow the instructions in Custom Setup Installation.
7. After the installation is complete, click **Finish**.

Custom Setup Installation

1. In **Custom Setup**, click **Change** to change the installation location, and then click **Next**.
2. In custom settings for port numbers, if required, change default values for **Network Monitoring Service port number**, **Task Manager Service port number**, **Package Server Port**, and **Console Launch port** and then click **Next**.
3. In **Database Server**, do any of the following and then click **Next**:

   – Local database—If you have many SQL server versions available on the management system and you want to select an SQL server on which you want to set up the OpenManage Essentials database, then select the SQL server from the **Database Server** list, the type of authentication, and provide the authentication details.

   – Remote database— Complete the prerequisites. For more information, see Setting Up OpenManage Essentials Database on a Remote SQL Server. After the prerequisites are complete, click **Browse** and select the remote system and then provide the authentication details. You can also set up the OpenManage Essentials database on a remote system by providing the IP address or host name and the database instance name of the remote system in **Database Server.**

   NOTE: If you select the Custom install option and do not enter any credentials, the installation is considered as a typical installation and sysadmin rights are required.

   NOTE: If you have multiple database instances running on a selected database server, you can specify the required database instance name to configure the Essentials database with it. For example, using (local)\MyInstance, you are configuring Essentials database on a local server and MyInstance named database instance.
4. Verify the installation settings in the **Ready to Install the Program** page and the click **Install**.

Considerations When Installing OpenManage Essentials on a Domain Controller

When installing OpenManage Essentials on a domain controller:

- You must install Microsoft SQL Server manually.
- If SQL Server is installed locally, the SQL Server service must be configured to run using a domain user account.

  NOTE: The SQL Server service will not start if you are using the default NETWORK SERVICE or LOCAL SYSTEM accounts.

After OpenManage Essentials is installed on a domain controller:

- By default, the **Domain Admins** group is added as a member of the **OmeAdministrators** and **OmePowerUsers** roles.
- Local Windows user groups are not included in the OpenManage Essentials roles. **OmeAdministrators**, **OmePowerUsers**, or **OmeUsers** privileges can be granted to users or user groups by adding them to the OpenManage Essentials Windows groups. **OmeSiteAdministrators** privileges can be granted by **OmeAdministrators** through the **Device Group Permissions** portal.

Setting Up OpenManage Essentials Database on a Remote SQL Server

You can configure OpenManage Essentials to use an SQL Server present on a remote system. Before setting up the OpenManage Essentials database on the remote system, check for the following prerequisites:

- Network communication between the OpenManage Essentials system and the remote system is functioning.
- SQL connection works between the OpenManage Essentials system and the remote system for the specific database instance. You can use the **Microsoft SQL Server Express 2012 Management Studio** tool to verify the connection. On the remote database server, enable TCP/IP protocol and if you are using SQL Authentication, enable mixed mode on the remote SQL Server.

You can retarget the database for the following:

- SQL credentials to the SQL Server fails.
- Windows credentials to the SQL Server fails.
- Login credentials have expired.
- Database is moved.

Installing Repository Manager

1. In **Dell OpenManageInstall**, select **Dell Repository Manager**, and then click **Install**.
2. In **Dell Repository Manager - InstallShield Wizard**, click **Next**.
3. In **License Agreement**, select **I accept the terms in the license agreement**, and click **Next**.
4. In **Customer Information**, do the following and click **Next**.
   a) Provide user name and organization information.
   b) Select either **Anyone who uses this computer (all users)** to make this application available to everyone or **Only for me (Windows User)** to retain access.
5. In **Destination Folder**, use the default location or click **Change** to specify another location, and then click **Next**.
6. In **Setup Type**, do any of the following and then click **Next**.
   - Select **Complete** to install all the Repository Manager features.
   - Select **Custom** to choose program features you want to install.
7. In **Ready to Install the Program**, click **Install**.
8. After the installation is complete, click **Finish**.

Uninstalling OpenManage Essentials

NOTE: Before uninstalling OpenManage Essentials, you must uninstall **Dell OpenManage Essentials MIB Import Utility** and **Dell SupportAssist** (if installed).

1. Click **Start → Control Panel → Programs and Features.**
2. In **Uninstall or change a program**, select **Dell OpenManage Essentials** and click **Uninstall**.
3. In the message `Are you sure you want to uninstall OpenManage Essentials?`, click **Yes**.
4. In the message `Uninstalling OpenManage Essentials removes the OpenManage Essentials database. Do you want to retain the database?`, click **Yes** to retain the database or click **No** to remove it.

Upgrading to OpenManage Essentials Version 1.2

You can upgrade to OpenManage Essentials version 1.2 from any of the following OpenManage Essentials versions: 1.0.1, 1.1, or 1.1.1.

To upgrade:

1. Double-click the OpenManage Essentials executable file.

   The **Dell OpenManage Install** screen is displayed. The following options are available:

   - **Dell OpenManage Essentials** — Select this option to install Dell OpenManage Essentials, Troubleshooting Tool, and Dell OpenManage Essentials MIB Import Utility.
   - **Dell SupportAssist** — Select to install Dell SupportAssist. SupportAssist provides proactive support capabilities for supported Dell server, storage, and networking solutions.
   - **Dell Repository Manager** — Select to install Dell Repository Manager. Using Repository Manager, you can create customized bundles and repositories of Dell Update Packages, software utilities such as update drivers, firmware, BIOS, and other applications.
   - **Dell License Manager** — Select to install the Dell license manager. Dell License Manager is a one-to-many license deployment and reporting tool for managing the Dell iDRAC7 licenses.
   - **Documentation** — Click to view the online help.
   - **View Readme** — Click to view the readme file. To view the latest readme, go to **dell.com/OpenManageManuals**.
2. In **Dell OpenManage Install**, select **Dell OpenManage Essentials** and click **Install**.

   The Dell OpenManage Essentials Prerequisites window, displays the following requirement types:

   - **Critical** — This error condition prevents the installation of a feature.
   - **Warning** — This warning condition may disable the **Typical** installation but not an **Upgrade** of the feature later during installation.
   - **Information** — This informational condition does not affect the **Typical** installation of a feature.

   NOTE: If OpenManage Essentials version 1.1 is installed on the system on a local database using SQL Server 2008 Express edition, and an OpenManage Essentials-specific named instance SQLEXPRESSOME is not available, the SQL Server prerequisites displays a Critical icon. To proceed with the installation, you must install SQL Server Express 2012 SP1 with the SQLEXPRESSOME instance. Data from the earlier version of SQL Server is migrated automatically.
3. Click **Install Essentials**.
4. In the install wizard for OpenManage Essentials, click **Next**.
5. In the **License Agreement** page, read the license agreement, select **I accept the terms in the license agreement**, and then click **Next**.

6. If applicable, provide the **Package Server Port** and the **Task Manager Service Port.** If either the package server port or task manager service port is blocked during an upgrade, provide a new port. Click **Next**.

   NOTE: For information about the supported ports and protocols, see Supported Protocols and Ports on Managed Nodes and Supported Protocols and Ports on Management Stations.

   The message `Please backup OMEssentials database before upgrading to the latest version of OpenManage Essentials` is displayed.

7. Click **Ok**.
8. Click **Install**.
9. After the installation is complete, click **Finish**.

Setting Up and Configuring VMware ESXi 5

Before setting up and configuring VMware ESXi 5, ensure that you have ESXi 5 build 474610 or later. If you do not have the required build, download the latest build from **vmware.com**.

1. Download the latest version (7.3) of Dell OpenManage offline bundle for ESXi from **support.dell.com**.
2. If you have enabled SSH, copy the file using WinSCP or a similar application to the **/tmp** folder on the ESXi 5 host.
3. Using Putty, change permissions on the Dell OpenManage offline bundle for ESXi file using the command `chmod u+x <Dell OpenManage version 7.3 offline bundle for ESXi file name>.zip`.

   NOTE: You can also change permissions using WinSCP.

4. Run the following commands using:

   – Putty — `esxcli software vib install -d /tmp/<Dell OpenManage version 7.3 VIB for ESXi file name>.zip`

   – VMware CLI — `esxcli -server <IP Address of ESXi 5 Host> software vib install -d /tmp/<Dell OpenManage version 7.3 VIB for ESXi file name>.zip`

   The message `VIBs Installed: Dell_bootbank_OpenManage_7.3-0000` is displayed.

5. Reboot the host system.
6. After rebooting, verify if OpenManage is installed by running the following commands using:

   – Putty — `esxcli software vib list`

   – VMware CLI — `esxcli -server <IP Address of ESXi 5 Host> software vib list`

7. Configure SNMP, for hardware alerts on the ESXi 5 host, to send SNMP traps to OpenManage Essentials. SNMP is not used for discovery. WS-Man is required for discovery and inventory of an ESXi 5 host. To group the VMs with the ESXi host in the OpenManage Essentials device tree after you discover the VM, SNMP must be enabled on the ESXi host and the VM.
8. Create a discovery range and configure WS-Man.

   For more information on setting up and configuring ESXi 5, see the *How to setup and configure ESXi 5 for use in OME* whitepaper at **DellTechCenter.com**.

Migrating IT Assistant to OpenManage Essentials

Direct migration from IT Assistant to OpenManage Essentials version 1.2 is not supported. However, you can migrate IT Assistant to an earlier version of OpenManage Essentials, and then upgrade to OpenManage Essentials version 1.2. For information about migrating IT Assistant to an earlier version of OpenManage Essentials, see the appropriate *Dell OpenManage Essentials User's Guide* at **dell.com/OpenManageManuals**.

Related Links

Installing OpenManage Essentials
Installation Prerequisites and Minimum Requirements

3

Getting Started With OpenManage Essentials

Logging On to OpenManage Essentials

To log on to OpenManage Essentials:

NOTE: Before you launch OpenManage Essentials, ensure that Javascript is enabled on your web browser.

- From the management station desktop, click the **Essentials** icon.
- From the management station desktop, click **Start** → **All Programs** → **Dell OpenManage Applications** → **Essentials** → **Essentials**.
- From a local or remote system, launch a supported browser. In the address field, type any of the following:
  - **https://< Fully Qualified Domain Name (FQDN) >:**
  - **https://<IP address, host name, or Fully Qualified Domain Name (FQDN) >:<Port Number>/web/default.aspx**
  - **https://<IP address>:<Port Number>/**

NOTE: FQDN is required to show a valid certificate. The certificate shows an error if an IP address or local host is used.

The console launch port number (default port number 2607) is required to launch OpenManage Essentials from a browser on a remote system. While installing OpenManage Essentials, if you changed the port using the **Custom Install** option, use the selected console launch port in the preceding URL.

The **First Time Setup** page is displayed.

NOTE: You can log on to OpenManage Essentials as a different user at any time by using the **Sign in as Different User** option. For more information, see Logging On As a Different User.

Related Links

Using the OpenManage Essentials Home Portal

Configuring OpenManage Essentials

If you are logging on to OpenManage Essentials for the first time, the **First Time Setup** tutorial is displayed. The tutorial provides step-by-step instructions for setting up an environment of servers and devices to communicate with OpenManage Essentials. The steps include:

- Configuring the SNMP protocol on each target server.
- Installing Dell OpenManage Server Administrator on each target server.
- Enabling network discovery (For Windows Server 2008-based servers) on each target server.
- Discovering devices on your network.

After you have completed the **First Time Setup** wizard, the **Discovery Range Configuration** is displayed. See Configuring a Discovery and Inventory Task.

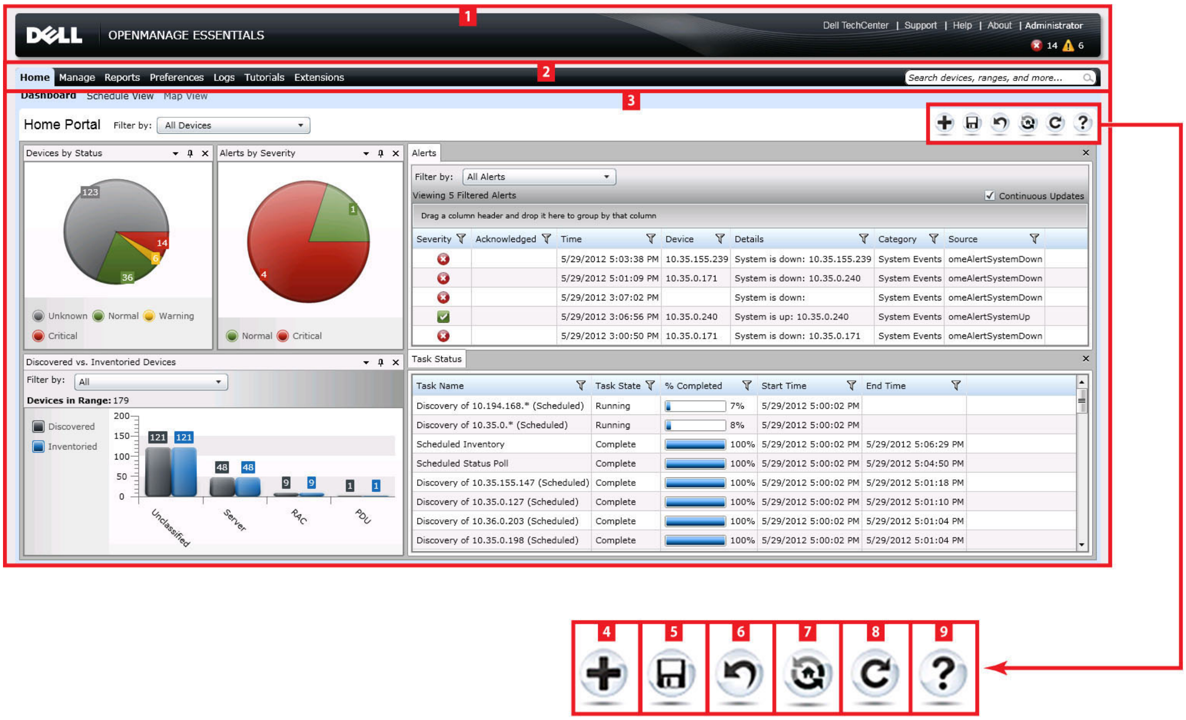
The date and time displayed in the console is in a format that is selected in the browser settings and used in the region. When a time zone change or daylight savings change occurs, the time is updated accordingly in the console. Changing time zones or daylight savings, changes the time in the console, but does not change the time in the database.

Related Links

Using the OpenManage Essentials Home Portal

Using the OpenManage Essentials Home Portal

OpenManage Essentials user interface contains these components:



1
2
3
4
5
6
7
8
9
DELL OPENMANAGE ESSENTIALS
Dell TechCenter | Support | Help | About | Administrator
14 6
Home Manage Reports Preferences Logs Tutorials Extensions
Search devices, ranges, and more...
Dashboard Schedule View Map View
Home Portal Filter by: All Devices
Devices by Status
123
14
6
36
Unknown Normal Warning Critical
Alerts by Severity
1
4
Normal Critical
Discovered vs. Inventoried Devices
Filter by: All
Devices in Range: 179
Discovered
Inventoried
200
150
100
50
0
121 121
48 48
9 9
1 1
Unclassified
Server
RAC
PDU
Alerts
Task Status

Filter by: All Alerts

Viewing 5 Filtered Alerts ☑ Continuous Updates

Drag a column header and drop it here to group by that column

Severity	Acknowledged	Time	Device	Details	Category	Source
☒		5/29/2012 5:03:38 PM	10.35.155.239	System is down: 10.35.155.239	System Events	omeAlertSystemDown
☒		5/29/2012 5:01:09 PM	10.35.0.171	System is down: 10.35.0.240	System Events	omeAlertSystemDown
☒		5/29/2012 3:07:02 PM		System is down:	System Events	omeAlertSystemDown
✓		5/29/2012 3:06:56 PM	10.35.0.240	System is up: 10.35.0.240	System Events	omeAlertSystemUp
☒		5/29/2012 3:00:50 PM	10.35.0.171	System is down: 10.35.0.171	System Events	omeAlertSystemDown

Task Name	Task State	% Completed	Start Time	End Time
Discovery of 10.194.168.* (Scheduled)	Running	7%	5/29/2012 5:00:02 PM	
Discovery of 10.35.0.* (Scheduled)	Running	8%	5/29/2012 5:00:02 PM	
Scheduled Inventory	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:06:29 PM
Scheduled Status Poll	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:04:50 PM
Discovery of 10.35.155.147 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:18 PM
Discovery of 10.35.0.127 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:10 PM
Discovery of 10.36.0.203 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:04 PM
Discovery of 10.35.0.198 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:04 PM

Figure 1. OpenManage Essentials Home Portal

1. Heading banner
2. Menu items and search bar
3. Console area
4. Add a report to the home portal
5. Save the current home portal layout
6. Load the last saved home portal layout
7. Load the default home portal layout
8. Refresh the home portal page
9. Launch the online help

Related Links

Map View (Home) Portal

Dashboard

Search Bar

OpenManage Essentials Heading Banner

The banner may display the following icons:

- Critical icon ✖ and Warning icon ⚠ including the number of devices. You can click the icon or the number to view the devices in either state.
- OpenManage Essentials service not running icon (blinking down arrow) ⬇. You can click the icon to view the details and to restart the service.
- Update available notification icon ℹ indicates if a newer version of OpenManage Essentials is available. You can click the icon to open a website from where you can download the new version of OpenManage Essentials.
- Warranty scoreboard notification icon 🏅 including the number of devices with *x* days or less of warranty. You can click the icon or number to view the **Device Warranty Report** that lists the device with certain days or less of warranty. The warranty scoreboard notification icon is displayed only if you have selected **Enable Warranty Scoreboard Notifications** in **Preferences** → **Warranty Notification Settings**.

In addition to the icons, the banner also contains links to the following:

- **Dell TechCenter** — Click to view the information on various technologies, best practices, knowledge sharing, and information on Dell products.
- **Support** — Click to open **support.dell.com**.
- **Help** — Click to open the online help.
- **About** — Click to view general OpenManage Essentials product information.
- *User name* — Displays the user name of the currently logged in user. Move the mouse pointer over the user name to display the following options:
  - **User Info** — Click to view the OpenManage Essentials roles associated with the current user.
  - **Sign in as Different User** — Click to log in to OpenManage Essentials as a different user.

    NOTE: The **Sign in as Different User** option is not supported on Google Chrome.

NOTE: The banner is available in all the pages.

Related Links

Viewing the User Information
Logging On As a Different User
Using the Update Available Notification Icon
Using the Warranty Scoreboard Notification Icon

Customizing Portals

You can change the layout of the portal page to accomplish the following:

- Display additional available reports.

  NOTE: This option is only available in the Home portal.
- Hide graphs and reports.
- Rearrange or resize graphs and reports by dragging and dropping.

If a pop-up window on any screen is bigger than the screen and if scrolling is not possible, set the zoom value of the browser to 75% or less.

From the various reports that are available, you can select specific reports and set them to display on the Dashboard. You can click on these reports to get more details. For the list of available reports, see Home Portal Reports.

For more information on the:

- Home portal, see OpenManage Essentials Home Portal Reference.
- Device portal, see Devices Reference.
- Discovery and inventory portal, see Discovery And Inventory Reference.
- Reports portal, see Reports Reference.

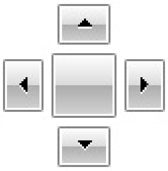
.

Displaying Additional Available Reports and Graphs

Charts have drill-down feature. To view additional reports and graphs, click the ➕ icon on the top right corner. The following list of available reports and graphs is displayed:

- Alerts by Severity
- Devices by Status
- Discovered vs. Inventoried Devices
- Alerts
- Asset Acquisition Information
- Asset Maintenance Information
- Asset Support Information
- ESX Information
- FRU Information
- Hard Drive Information
- HyperV Information
- License Information
- Memory Information
- Modular Enclosure Information
- NIC Information
- PCI Device Information
- Server Components and Versions
- Server Overview
- Storage Controller Information
- Task Status

After selecting the desired report or graph, dock the report or graph using the following control to the desired location.



Drilling Down Charts and Reports for More Information

To drill-down for further details, perform one of the following:

- In report charts, click the charts.
- In report tables, use the drag and drop option or funnel options to filter the required data and right-click the table rows to perform various tasks.

Saving and Loading the Portal Layout

To save and load the portal layout, click the

💾

icon.

All the current layout settings and visible reports on the portal are saved on the portal page.

To load the previous portal layout, click the

↶

icon.

Updating the Portal Data

To refresh the portal page manually, click the

↻

icon.

To load the default portal layout, click the

🔄

icon.

Hiding Graphs and Reports Components

To hide graphs and reports (components), click the

▾

icon on the report or graph and select the **Hide** option to remove the component from the portal page or select the **Auto Hide** option to move the component to the side bar.

To remove a component from the portal page, click the **X** icon in the report or graph.

To move the report to the side bar, click the

📌

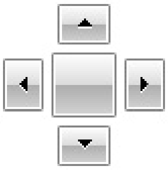
icon.

Rearranging or Resizing Graphs and Reports (Components)

Click the ▾ icon and select from the following options:

- **Floating**—To move the component freely in the portal page.
- **Dockable**—To dock the component in the portal page. If the component is floating, right-click the title to dock or tab the component.
- **Tabbed Document**—To move the component into a tab in the portal page.

Select the



control to dock a floating component. You can create a tabbed view by docking a pane within other panes or dock a pane at the top, bottom, left, or right side of the main window.

You can resize panes and all panes will fill the selected area when docked.

To move the component to the side bar, click the

📌

icon and to restore it, select the component and click the

⊸

icon.

To create filters in a report grid, click the

▽

icon. This is not specific to the portal page layout and the settings related to these associations are not saved.

Filtering Data

You can filter the results by dragging and dropping column headers to the top of reports. You can choose one or more attributes when revising the view to meet your specific needs.

For example, in **Devices by Status** pie chart, click a status such as **Critical**. In the **Device Summary** page, drag the **Device Type** and **Service Tag** to the top of the report. The view immediately changes to a nested information based on your preference. In this example, the information is grouped first by **Device Type**, and second by **Service Tag**. Drill-down through these filtered groups to view the remaining information for the devices.

For more information, see Viewing Device Summary.

Search Bar

The search bar is displayed at the top-right of the dashboard below the heading banner. The search bar is accessible from all portal pages, except when a pop-up or wizard is displayed. As you type text in the search bar, matching or similar item are displayed in the drop-down list.

Related Links

Search Items

Search Drop-Down List

Selection Actions

Search Items

You can search for the following using the search bar:

- Devices
- Device groups
- Discovery ranges
- Discovery range groups
- Exclude ranges
- Portals
- Wizards
- Remote tasks
- Preferences and settings

When a range, task, device, and so on is changed or created in the console, it is added to the searchable items within 20 seconds.

Related Links

Search Bar

Search Drop-Down List

The search bar displays a list as you type text in the search box. The items that contain the characters that you type are populated in the search drop-down list. Each item in the drop-down list includes two icons and the name of the item. The first icon indicates the item category (such as **Device**, **Launch Wizard**, and so on). The second icon indicates the state of the item (such as **Normal**, **Critical**, or **Warning**). Immediately after the two icons, the name of the item is displayed. Moving the mouse pointer over an item in the drop-down list, displays a tool tip. The information displayed in the tool tip varies based on the item. For example, moving the mouse pointer over a device displays the following: **Name**, **Type**, **Health Status**, **Power Status**, **IP Address**, **Service Tag**, and **MAC Address**. Selecting an item displayed in the tool tip performs the default action.

Related Links

Search Bar

Selection Actions

Selecting or clicking an item displayed in the search bar results in the following default actions:

Item Selected	Action
Devices	Displays the device details.
Device Groups	Displays the device group summary.
Discovery Ranges	Displays the discovery range.
Discovery Range Group	Displays the discovery range group summary.
Portals	Navigates to the appropriate portal.
Wizards	Launches the appropriate wizard.
Exclude Range	Displays the range summary.

Item Selected	Action
Remote Tasks	Selects a task in the task tree.

Related Links

Search Bar

Map View (Home) Portal

NOTE: The **Map View** feature is available only if you have discovered any Dell PowerEdge VRTX devices with an Enterprise license, using the WS-Man protocol. If the PowerEdge VRTX device with an Enterprise license is discovered using the SNMP protocol, the **Map View** feature is not available. In this case, you must rediscover the PowerEdge VRTX device using the WS-Man protocol.

The **Map View** (home) portal can be accessed by clicking the **Map View** link in the **Home** portal.

NOTE: You can also access another implementation of the map (**Map View** tab) that is accessible through the **Devices** portal.

The following are the features of the **Map View** (home) portal:

- The **Map View** (home) portal is not integrated with the device tree.
- You can select a device group to display on the map by using the **Filter by** drop-down box at the top of the map.
- Clicking a pin (device) on the **Map View** (home) portal opens the **Devices** portal that displays details about the device.
- Any change to the devices or settings on the **Map View** (home) portal is synchronized with the **Map View** tab accessible through the **Devices** portal.
- Zoom level and the visible portion of the **Map View** (home) portal are not synchronized with the **Map View** tab accessible through the **Devices** portal.

NOTE: For information about using the features available in **Map View**, see Using Map View.

Related Links

Using the OpenManage Essentials Home Portal

Map View (Home) Portal Interface

Viewing the User Information

To view the user information such as the OpenManage Essentials roles associated with the current user:

1. Move the mouse pointer over the user name in the heading banner.
2. In the menu that is displayed, click **User Info**.

   The **User Information for <user name>** dialog box with the user information is displayed.

Related Links

OpenManage Essentials Heading Banner

Logging On As a Different User

NOTE: The **Sign in as Different User** option is not displayed on Google Chrome and Mozilla Firefox browsers. To log on as a different user when using Chrome or Firefox, close and reopen the browser, provide the new user credentials when prompted, and click **OK**.

NOTE: When using the **Sign in as Different User** option in Internet Explorer, you may be prompted to provide the credentials multiple times

To log on to OpenManage Essentials as a different user:

1. Move the mouse pointer over the user name in the heading banner.
2. In the menu that is displayed, click **Sign in as Different User**.

   The **Windows Security** dialog box is displayed, prompting for the user name and password.
3. Type the **User name** and **Password** and click **OK**.

Related Links

Using the OpenManage Essentials Home Portal
OpenManage Essentials Heading Banner

Using the Update Available Notification Icon

NOTE: The update available notification icon may be displayed in the OpenManage Essentials heading banner only after you refresh the web browser.

The update available notification icon ⓘ is displayed in the OpenManage Essentials heading banner when a new version of OpenManage Essentials is available. Move the mouse pointer over the icon to display a tool tip that provides information about the newer version available. Click the ⓘ icon to open the Dell TechCenter OpenManage Essentials web page from where you can download a newer version of OpenManage Essentials.

Related Links

OpenManage Essentials Heading Banner

Using the Warranty Scoreboard Notification Icon

The warranty scoreboard notification icon 🏅 is displayed in the OpenManage Essentials heading banner based on the criteria you have configured in **Preferences** → **Warranty Notification Settings**. The warranty scoreboard notification also displays the number of devices that meet the criteria you have configured. Click the 🏅 icon to display the **Device Warranty Report** that provides the warranty information of devices based on your **Warranty Scoreboard Notifications** settings.

Related Links

OpenManage Essentials Heading Banner
Configuring Warranty Scoreboard Notifications
Device Warranty Report

OpenManage Essentials Home Portal — Reference

Related Links

OpenManage Essentials Heading Banner
Dashboard
Schedule View
Search Bar
Map View (Home) Portal Interface

Dashboard

The dashboard page provides a snapshot of the managed devices that include servers, storage, switches, and so on. You can filter the view based on the devices by clicking the **Filter by:** drop-down list. You can also add a new group of devices from the dashboard by clicking **Add New Group** from the **Filter by:** drop-down list.

Related Links

Search Bar
Discovered Versus Inventoried Devices
Task Status
Home Portal Reports
Device by Status
Alerts by Severity

Home Portal Reports

From the Home Portal Dashboard page, you can monitor the following:

- Alerts by Severity
- Devices by Status
- Discovered vs. Inventoried Devices
- Alerts
- Asset Acquisition Information
- Asset Maintenance Information
- Asset Support Information
- ESX Information
- FRU Information
- Hard Drive Information
- HyperV Information
- License Information
- Memory Information
- Modular Enclosure Information

- NIC Information
- PCI Device Information
- Server Components and Versions
- Server Overview
- Storage Controller Information
- Task Status

Device by Status

Device by Status provides device status information in a pie chart format. Click a segment of the pie chart to view the device summary.

Field	Description
Unknown	Health status of these devices are not known.
Normal	Devices are working as expected.
Warning	These devices display behaviors that are not normal and further investigation is required.
Critical	These devices display behaviors that suggest an occurrence of a failure of a very important aspect.

Alerts by Severity

Alerts by severity provides alert information of devices in a pie chart format. Click a segment of the pie chart to view the devices.

Field	Description
Normal	Alerts from these devices conform to the expected behavior for the devices.
Critical	Alerts from these devices suggest that a failure of a very important aspect has occurred.
Unknown	Health status of these devices are not known.
Warning	These devices display behaviors that are not normal and further investigation is required.

Discovered Versus Inventoried Devices

Provides a graphical report of number of devices and Dell servers discovered or inventoried. You can use this report to ascertain the discovered devices and Dell servers that are unclassified. For more information on the filter options for the summary information, see Viewing Device Summary.

Click any section of the graph to view the **Device Summary** for the selected region. In the device summary, double-click a row to view the details (inventory view for that device). Alternatively, right-click and select details for the inventory view or right-click and select alerts for the alerts specific to that device.

Field	Description
Filter by	Select to filter the search results using the following options: • All

Field	Description
	• **Ranges** — Select to filter based on the selected range.

Related Links

- Configuring a Discovery and Inventory Task
- Viewing Configured Discovery and Inventory Ranges
- Excluding Ranges
- Scheduling Discovery
- Scheduling Inventory
- Configuring Status Polling Frequency
- Discovery and Inventory Portal

Task Status

Provides a list of currently executing and previously run tasks and their status. The **Task Status** grid on this page shows the status of just discovery, inventory, and tasks. However, the main portal shows all types of task statuses.

Related Links

- Configuring a Discovery and Inventory Task
- Viewing Configured Discovery and Inventory Ranges
- Excluding Ranges
- Scheduling Discovery
- Scheduling Inventory
- Configuring Status Polling Frequency
- Discovery and Inventory Portal

Schedule View

From **Schedule View** you can:

- View tasks that are scheduled to occur and tasks that are completed.
- Filter the view based on the type of task (such as database maintenance tasks, server power options, and so on), active tasks, and task execution history.

  NOTE: The options displayed in the **Filter by** drop-down list vary depending on the tasks that are created. For example, if a **Server Options Task** is not created, then the option is not displayed in the **Filter by** drop-down list.
- View tasks for a particular day, week, or month. You can also view the tasks for a particular day by clicking the calendar icon.
- Drag and drop tasks to a time slot in the calendar.
- Set the zoom value by changing the zoom slider bar.
- Export the schedules to a **.ics** file and import the file into Microsoft Outlook.
- Change the schedule view settings by clicking the settings icon ⚙ .

For more information, see Schedule View Settings.

Related Links

- Schedule View Settings

Schedule View Settings

Field	Description
Orientation	Allows you change the orientation of the schedule view page and the tasks displayed. You can select either the **Vertical** or **Horizontal** orientation.
Schedule Item Size	Allows you to modify the size of the tasks displayed.
Color Categorize by Task Type	Selecting this option categorizes each task type using a different color.
Show Task Execution History	Select this option to display the tasks that are already complete.
Show Database Maintenance	Select this option to view the time at which database maintenance occurs.

Device Warranty Report

The **Device Warranty Report** is displayed when you click the warranty scoreboard notification icon on the OpenManage Essentials heading banner. The following are the fields displayed in the **Device Warranty Report**.

Field	Description
All Devices with x days or less of warranty	Determines which devices to include in the **Device Warranty Report**. Devices with warranty less than or equal to the specified days are included in the warranty report.
Include Devices with Expired Warranties	Specifies if devices with expired warranty (0 days) or no warranty information should be included in the warranty email notification.
Preview	Click to view the warranty report based on the criteria set in **All Devices with x days or less of warranty**.
OK	Click to close and save any changes made to the **Device Warranty Report**.
View and Renew Warranty	Click to open the Dell website from where you can view and renew the device warranty.
System Name	Displays the system name that is unique and identifies the system on the network.
Device Model Type	Displays the model information of the system.
Device Type	Displays the type of device. For example, server or Remote Access Controller.
Days Remaining	Displays the number of days the warranty is available for the device.
Shipped Date	Displays the date on which the device was shipped from the factory.
Service Tag	A Dell specific unique bar code label identifier for a system.

Field	Description
Service Level Code	Displays the service level code such as parts only warranty (POW), next business day onsite (NBD), and so on for a particular system.
Service Provider	The name of the organization that will provide the warranty service support for the device.
Start Date	The date from which the warranty is available.
End Date	The date on which the warranty will expire.
Warranty Description	The warranty details applicable for the device.

Related Links

Using the Warranty Scoreboard Notification Icon
Configuring Warranty Scoreboard Notifications

Map View (Home) Portal Interface

The **Map View** (home) portal accessible through the **Home** portal has a **Filter by** drop-down list which you can use to filter the device group displayed on the map. The menus and options available in the **Map View** (home) portal are the same as those found in the **Map View** tab in the **Devices** portal. For information about the menus and options in the **Map View**, see Map View (Devices) Tab Interface.

Related Links

Map View (Home) Portal

5

Discovering and Inventorying Devices

Perform Discovery and Inventory in order to manage your network devices.

Related Links

- Configuring a Discovery and Inventory Task
- Viewing Configured Discovery and Inventory Ranges
- Scheduling Discovery
- Scheduling Inventory
- Excluding Ranges
- Supported Devices, Protocols, and Features Matrix

Supported Devices, Protocols, and Features Matrix

Protocol / Mechanism		Simple Network Management Protocol (SNMP)	Windows Management Instrumentation (WMI)	Web Services-Management (WS-Man)
Dell servers with OpenManage Server Administrator installed	Windows / Hyper-V	Discovery Correlation Classification Hardware inventory Software inventory monitoring Traps/alerts application launch • OpenManage Server Administrator console • Remote desktop • Warranty	Discovery Correlation Classification Hardware inventory Software inventory monitoring Application launch • OpenManage Server Administrator console • Remote desktop • Warranty	NS
	Linux/ VMware ESX	Discovery Correlation Classification Hardware inventory Software inventory Monitoring Traps/alerts	NS	NS
	VMware ESXi	Traps/Alerts	NS	Discovery Correlation Classification Hardware inventory

Protocol / Mechanism		Simple Network Management Protocol (SNMP)	Windows Management Instrumentation (WMI)	Web Services-Management (WS-Man)
				Software inventory Virtual machine information Virtual host product information Monitoring (OpenManage Server Administrator health only) Application launch: Warranty
Dell servers without OpenManage Server Administrator installed	Windows/ Hyper-V	Discovery (Unknown)	Discovery Correlation Classification Hardware inventory Application launch • Remote desktop • Warranty	NS
	Linux/VMware ESX	Discovery (Unknown)	NS	NS
	VMware ESXi	NS	NS	Discovery Correlation Classification Hardware inventory (no storage inventory)
iDRAC / DRAC / BMC		Discovery Correlation Classification Monitoring Traps/ Platform Event Traps (PET) Application launch • RAC • Console • Warranty	NS	Discovery Inventory System Update **NOTE:** Applicable to only iDRAC6 version 1.3 and later. Discovery and inventory is not supported for iDRAC6 version 1.25 and below.
Modular enclosure (PowerEdge M1000e)		Discovery Correlation Classification Enclosure health Traps Application launch • CMC	NS	NS

Protocol / Mechanism	Simple Network Management Protocol (SNMP)	Windows Management Instrumentation (WMI)	Web Services-Management (WS-Man)
	• Console • Warranty		
Dell PowerEdge VRTX	Discovery Correlation Classification Enclosure health Traps Application launch • CMC • Console • Warranty	NS	Discovery Correlation Classification Hardware inventory System Update Enclosure health Traps Application launch • CMC • Console • Warranty Map View

Supported Operating Systems (Servers), Protocols, and Features Matrix

Protocol / Mechanism		**Intelligent Platform Management Interface (IPMI)**	**Command Line Interface (CLI)a**
Dell servers with OpenManage Server Administrator installed	Windows /Hyper-V	NS	OpenManage Server Administrator CLI Deploy OpenManage Server Administrator Server Updates • BIOS • Firmware • Driver
	Linux/ VMware ESX	NS	OpenManage Server Administrator CLI Deploy OpenManage Server Administrator Server Updates • BIOS • Firmware • Driver
	VMware ESXi	NS	NS
	XenServer	NS	RACADM CLI

Protocol / Mechanism		Intelligent Platform Management Interface (IPMI)	Command Line Interface (CLI)a
			IPMI CLI OpenManage Server Administrator CLI Power Task
Dell servers without OpenManage Server Administrator installed	Windows/Hyper-V	NS	Deploy OpenManage Server Administrator
	Linux/VMware ESX	NS	Deploy OpenManage Server Administrator
	VMware ESXi	NS	NS
	PowerEdge C	Discovery Classification Application launch Warranty	RACADM CLI IPMI CLI
iDRAC / DRAC / BMC		Discovery Classification Correlation iDRAC health Application launch RAC console Warranty	RACADM CLI IPMI CLI
Modular Enclosure (M1000e) / PowerEdge VRTX		NS	RACADM CLI IPMI CLI

a)You cannot perform this task if the device is not discovered, inventoried, or both.

b)Requires internet connection (support.dell.com) to view warranty information.

Supported Storage Devices, Protocols, and Features Matrix

Protocol / Mechanism		Simple Network Management Protocol (SNMP)	Symbol	EMC NaviSphere CLI
Storage Devices	Dell EqualLogic	Discovery Correlation Classification Hardware inventory Monitoring Traps/alerts Application launch — EqualLogic console	NS	NS
	Dell|EMC	Discovery Correlation Classification	NS	Hardware inventory Monitoring

Protocol / Mechanism		Simple Network Management Protocol (SNMP)	Symbol	EMC NaviSphere CLI
	NOTE: Both SNMP and Navisphere are required for complete management of Dell|EMC devices.	Traps/Alerts		Application launch — EMC Navisphere Manager
	PowerVault	Traps/Alerts	Discovery Correlation Classification Hardware inventory Monitoring Application launch— Modular Disk Storage Manager (a)	NS
	Compellent	Discovery Classification Hardware inventory Monitoring Traps/alerts Application launch — Compellent console	NS	NS
	Tape	Discovery Correlation Classification Hardware inventory Monitoring Traps/alerts Application launch Tape console Warranty (b)	NS	NS

a) Requires Modular Disk Storage Manager Controller software installed on the OpenManage Essentials system.

b) Requires internet connection (support.dell.com) to view warranty information.

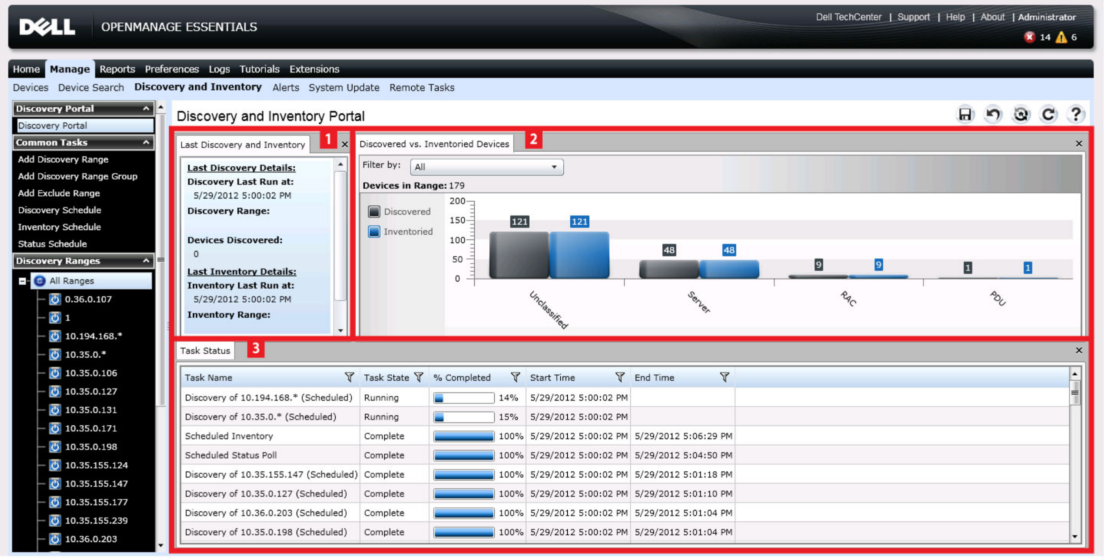
Legend and Definitions

- **NS**: Not Supported
- **Discovery**: Capability to discover the device on the network.
- **Correlation**: Capability to correlate:
  - Discovered server and DRAC, iDRAC, or BMC devices.
  - Discovered modular systems or switches.

  - ESX, ESXi, or Hyper-V host and guest virtual machines.
- **Classification**: Capability to classify the devices by type. For example, servers, network switches, storage, and so on.
- **Hardware Inventory**: Capability to obtain detailed hardware inventory of the device.
- **Monitoring or Health**: Capability to obtain health status and connection status of the device.
- **Traps, alerts, or PETs**: Capability to receive SNMP traps from the device.
- **Application Launch**: Provides a right-click action menu item on the discovered device to launch 1x1 console or application.
- **OpenManage Server Administrator CLI**:Capability to run OpenManage Server Administrator supported commands on the remote (discovered) servers.
- **Deploy OpenManage Server Administrator**: Capability to deploy OpenManage Server Administrator to the remote (discovered) servers.
- **Server Updates**: Capability to deploy BIOS, firmware, and driver updates to the remote (discovered) servers.
- **RACADM CLI**: Capability to run RACADM tool supported commands on the remote (discovered) devices.
- **IPMI CLI**: Capability to run IPMITool supported commands on the remote (discovered) devices.
- **Warranty**: Requires internet connection (**support.dell.com**) to view warranty information.

Using the Discovery and Inventory Portal

To access the discovery and inventory portal, click **Manage** → **Discovery and Inventory.**



Last Discovery Details:
Discovery Last Run at:
5/29/2012 5:00:02 PM
Discovery Range:

Devices Discovered:
0

Last Inventory Details:
Inventory Last Run at:
5/29/2012 5:00:02 PM
Inventory Range:

Devices in Range: 179

Task Name	Task State	% Completed	Start Time	End Time
Discovery of 10.194.168.* (Scheduled)	Running	14%	5/29/2012 5:00:02 PM	
Discovery of 10.35.0.* (Scheduled)	Running	15%	5/29/2012 5:00:02 PM	
Scheduled Inventory	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:06:29 PM
Scheduled Status Poll	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:04:50 PM
Discovery of 10.35.155.147 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:18 PM
Discovery of 10.35.0.127 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:10 PM
Discovery of 10.36.0.203 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:04 PM
Discovery of 10.35.0.198 (Scheduled)	Complete	100%	5/29/2012 5:00:02 PM	5/29/2012 5:01:04 PM

Figure 2. Discovery and Inventory Portal

1. Details from the last discovery and inventory task run.
2. Details of previously discovered and inventoried devices.
3. Details of tasks and their status.

Protocol Support Matrix for Discovery

The following table provides information about the supported protocols for discovering devices. The recommended protocol is indicated by the text in *italics*.

Device/Operating System	Protocols				
	Simple Network Management Protocol (SNMP)	Web Services-Management (WS-Man)	Windows Management Instrumentation (WMI)	Intelligent Platform Management Interface (IPMI)	Secure Shell (SSH)
iDRAC6 or iDRAC7	Supported	*Supported*	N/A	Supported	Not supported
Linux	*Supported with OpenManage Server Administrator (OMSA) installed*	N/A	N/A	N/A	Supported
Windows	*Supported with OMSA installed*	N/A	Supported with OMSA installed; no health information without OMSA	N/A	N/A
ESXi	Supported with OMSA installed	*Supported with or without OMSA installed*	N/A	N/A	Not supported
Citrix XenServer	*Supported with OMSA installed*	N/A	N/A	N/A	Supported with OMSA installed; no health information without OMSA
PowerEdge M1000e (CMC)	*Supported*	N/A	N/A	N/A	Not supported
PowerEdge VRTX (CMC)	Supported	*Supported*	N/A	N/A	Not supported
PowerEdge-C	N/A	N/A	N/A	*Supported*	Not supported
Clients	Supported with minimum discovery information; no health information	N/A	*Supported with OpenManage Client Instrumentation (OMCI) installed; no health information without OMCI*	N/A	N/A
Storage devices	Supported	N/A	N/A	N/A	N/A
Ethernet switches	Supported	N/A	N/A	N/A	N/A

Protocol Support Matrix for System Update

The following table provides information about the supported protocols for system update tasks. The recommended protocol is indicated by the text in *italics*.

Device/Operating System	Protocols				
	Simple Network Management Protocol (SNMP)	Web Services-Management (WS-Man)	Windows Management Instrumentation (WMI)	Intelligent Platform Management Interface (IPMI)	Secure Shell (SSH)
iDRAC6 or iDRAC7	Not supported	*Supported*	N/A	N/A	N/A
Linux	*Supported with OpenManage Server Administrator (OMSA) installed*	N/A	N/A	N/A	Not supported
Windows	*Supported with OMSA installed*	N/A	Supported with OMSA installed	N/A	N/A
ESXi	Not supported	*Supported with iDRAC6/7*	N/A	N/A	N/A
Citrix XenServer	Not supported	N/A	N/A	N/A	N/A
PowerEdge M1000e (CMC)	*Supported; requires the RACADM tool*	N/A	N/A	N/A	N/A
PowerEdge VRTX (CMC)	Not supported	*Supported; requires the RACADM tool*	N/A	N/A	N/A

Configuring a Discovery and Inventory Task

1. From OpenManage Essentials, either click **Manage** → **Discovery and Inventory** → **Common Tasks** → **Add Discovery Range** or click **Manage** → **Discovery and Inventory** → **Common Tasks** → **Add Discovery Range Group.**
2. In **Discovery Range Configuration**:
   a) Provide the group name if you selected **Add Discovery Range Group**.
   b) Provide the IP address/range or the host name and subnet mask. Click **Add**.

      NOTE: You can add multiple IP addresses, ranges, or host names. You can add multiple host names separated by a comma delimiter. For example, hostname1, hostname2, hostname3, and so on.

   c) To import host names and IP addresses, click **Import**. You can import host names and IP addresses included as line items in a file that is in CSV format. Using Microsoft Excel, you can create a .CSV file containing host names or IP addresses.
   d) Click **Next**.
3. After you have provided at least one IP address, IP range, host name, or a combination thereof, continue to customize the discovery and inventory options or complete the configuration using the default options. Clicking **Finish** without setting any further configurations immediately runs the discovery and inventory tasks using the

default SNMP and ICMP protocols. It is recommended that you review and revise your protocol configurations prior to clicking **Finish**.

For more information about each protocol listed below, click - (Why do I need this?) help in the appropriate protocol configuration screen.

NOTE: When discovering ESXi-based servers, to view the guest virtual machines grouped with the host, enable and configure the WS-Man protocol.

NOTE: By default, SNMP is enabled and values are assigned ICMP parameters.

NOTE: After completing any of the following steps, click either **Next** to continue or click **Finish** to complete the **Discovery Range Configuration**.

- In **ICMP Configuration**, to detect devices on the network, edit the ICMP parameters.
- In **SNMP Configuration**, to discover servers, provide the SNMP parameters. Ensure that the SNMP community string specified in **Get Community** matches the SNMP community string of the device or devices you wish to discover.

  NOTE: iDRAC only supports only the default SNMP port 161. If the default SNMP port is changed, iDRAC may not get discovered.
- In **WMI Configuration**, to authenticate and connect to remote devices, provide the WMI parameters. The format for entering credentials for WMI must be *domain\user name* for domain-based networks or *localhost\user name* for non-domain based networks.
- In **Storage Configuration**, to discover PowerVault modular disk array or EMC devices, edit parameters.
- In **WS-Man Configuration**, to enable discovery of Dell PowerEdge VRTX, iDRAC 6, iDRAC 7, and ESXi installed servers, provide WS-Man parameters.
- In **SSH Configuration**, to enable discovery of Linux-based servers, provide the SSH parameters.
- In **IPMI Configuration**, to enable server discovery, provide the IPMI parameters. IPMI is typically used to discover BMC or iDRACs on Dell servers. You can include the optional KG key when discovering RAC devices.
- In **Discovery Range Action**, choose to discover, inventory, or perform both tasks. The default option is to perform both discovery and inventory.
- Select **Perform only discovery** or **Perform both discovery and inventory** to run the task immediately.
- To schedule the task to run at a later time, select **Do not perform discovery or inventory**, and follow the instructions in Scheduling Discovery and Scheduling Inventory.
- Review your selections in the Summary screen and click **Finish**. To change any of the parameters in previous configuration screens, click **Back**. When complete, click **Finish**.

Related Links

Discovery and Inventory Portal

Last Discovery and Inventory

Discovered Versus Inventoried Devices

Task Status

Changing the Default SNMP Port

SNMP uses the default UDP port 161 for general SNMP messages and UDP port 162 for SNMP trap messages. If these ports are being used by another protocol or service, you can change the settings by modifying the local services file on the system. To configure the managed node and OpenManage Essentials to use a non-default SNMP port:

1. In both the management station and managed node, go to **C:\Windows\System32\drivers\etc**.
2. Open the Windows SNMP **services** file using notepad and edit the following:

   - Incoming SNMP trap port (receiving alerts in OpenManage Essentials) — Modify the port number in the line, `snmptrap 162/udp snmp-trap #SNMP trap`. Restart the SNMP trap service and SNMP service after making the change. On the management station, restart the DSM Essentials Network Monitor service.

– Outgoing SNMP requests (Discovery/inventory in OpenManage Essentials) — Modify the port number in the line `snmp 161/udp #SNMP`. Restart the SNMP service after making the change. On the management station, restart the DSM Essentials Network Monitor service.

Outgoing trap port — In OpenManage Essentials trap forwarding alert action, specify the *<<trap destination address: port number>>* in the **Destination** field.

NOTE: If you have previously configured IP security to encrypt SNMP messages on the default ports, update the IP security policy with the new port settings.

Discovering and Inventorying Dell Devices Using WS-Man Protocol With a Root Certificate

Before you begin, ensure that the root CA server, OpenManage Essentials management server, and WS-Man target(s) are able to ping each other by hostname.

To discover and inventory Dell devices using the WS-Man protocol with a root certificate:

1. Open the web console of the target device (iDRAC or CMC).
2. Generate a new certificate signing request file:
   a) Click **Network** and then click **SSL**.
      The **SSL Main Menu** page is displayed.
   b) Select **Generate a New Certificate Signing Request (CSR)** and click **Next**.
      The **Generate Certificate Signing Request (CSR)** page is displayed.
   c) If applicable, type the appropriate information in the required fields. Ensure that the **Common Name** is the same as the host name used to access the web console of the device, and then click **Generate**.
   d) When prompted, save the **request.csr** file.
3. Open the **Microsoft Active Directory Certificate Services – root CA** web server: **http://signingserver/certsrv**.
4. Under **Select a task**, click **Request a certificate**.
   The **Request a Certificate** page is displayed.
5. Click **advanced certificate request**.
   The **Advanced Certificate Request** page is displayed.
6. Click **Submit a certificate request by using a base-64-encoded CMC or PKCS #10 file, or submit a renewal request by using a base-64-encoded PKCS #7 file**.
7. Using a text editor, open the certificate signing request (.csr or .txt) file you saved in step 2 d.
8. Copy the contents from the certificate signing request file and paste it in the **Saved Request** field.
9. In the **Certificate Template** list, select **Web Server**, and click **Submit >**.
   The **Certificate Issued** page is displayed.
10. Click **Base 64 encoded**, and then click **Download certificate**.
11. When prompted, save the **certnew.cer** file.
12. Open the web console of the target device (iDRAC or CMC).
13. Click **Network** and then click **SSL**.
    The **SSL Main Menu** page is displayed.
14. Select **Upload Server Certificate Based on Generated CSR** and click **Next**.
    The **Certificate Upload** page is displayed.
15. Click **Browse**, select the **certnew.cer** file you saved in step 11, and then click **Apply**.

16. Install the RootCA signed certificate (**newcert.cer**) as **Trusted Root Certificate Authorities** in the OpenManage Essentials management server:

    NOTE: Ensure that the certificate file you want to install is a Base64 encoded certificate file issued by root CA.

    a) Right-click the **certnew.cer** file, and click **Install Certificate**.

       The **Certificate Import Wizard** is displayed.

    b) Click **Next**.

    c) Select **Place all certificates in the following store** and click **Browse**.

       The **Select Certificate Store** dialog box is displayed.

    d) Select **Trusted Root Certification Authorities**, and click **OK**.

    e) Click **Next**.

    f) Click **Finish**.

       The **Security Warning** dialog box is displayed.

    g) Click **Yes**.

17. Close the web browser and open the web console of the target device (iDRAC or CMC) in a new browser window.

18. Discover and inventory the WS-Man target(s), in OpenManage Essentials using the **newcert.cer** RootCA signed certificate file.

Excluding Ranges

Configure exclude ranges to prevent servers from being discovered/rediscovered or limit the number of devices displayed in the device tree. To exclude a range from discovery task:

1. From OpenManage Essentials, select **Manage** → **Discovery and Inventory** → **Common Tasks** → **Add Exclude Range** .
2. In **Exclude Range Configuration**, provide IP address/range, discovery range name or host name and click **Add**.
3. Click **Finish**.

Related Links

Discovery and Inventory Portal
Last Discovery and Inventory
Discovered Versus Inventoried Devices
Task Status

Viewing Configured Discovery and Inventory Ranges

From OpenManage Essentials, click **Manage** → **Discovery and Inventory** → **Discovery Ranges** → **All Ranges**.

Related Links

Discovery and Inventory Portal
Last Discovery and Inventory
Discovered Versus Inventoried Devices
Task Status

Scheduling Discovery

NOTE: It is recommended not to schedule the discovery task at the same time as the **Database Maintenance Execution Schedule**, as the console is less responsive during database maintenance.

1. Click **Manage** → **Discovery and Inventory** → **Common Tasks** → **Discovery Schedule**.
2. In **Discovery Schedule Settings**:
   a) Select the desired schedule parameters.
   b) (Optional) You may adjust the task speed slider for faster task execution; however, more system resources are consumed if the speed is increased.
   c) Discover all instrumented devices.

Related Links

Discovery and Inventory Portal
Last Discovery and Inventory
Discovered Versus Inventoried Devices
Task Status

Discovery Speed Slider Bar

This control, also known as the discovery throttle, controls how fast discovery occurs and how much network and system resources are consumed for discovery by controlling the:

- Number of discovery threads that are allowed to run at any point of time.
- Delay in between the communicating devices during a network ping sweep, in milliseconds.

NOTE: Each tick on the throttle control equals 10% and the range is from 10% to 100%. By default, in OpenManage Essentials, the discovery throttle is set at 60%. After an upgrade from IT Assistant, the throttle control remains at its previously set value.

Multithreading

Dell OpenManage Essentials improves upon the optimized parallel threading implementation in the Network Monitoring Service introduced in IT Assistant.

As the discovery process is I/O intensive, you can optimize the process by making it a parallel operation, where threads running in parallel (known as multi-threading) send requests and handle responses to several devices simultaneously.

The more threads that run in parallel, each communicating to a different device, the faster is the discovery; barring overall high network congestion or latency. The discovery process, by default, allows a maximum of 32 threads to run in parallel (or concurrently) at any one time for discovery.

To control the number of parallel threads executing, move the discovery throttle control either left or right. When set at the maximum, 32 parallel threads are allowed to run. If the throttle is at 50%, only 16 threads are allowed to run at any one time.

As the discovery service is optimized for parallel threading operations, the system can utilize more system resources even at the same throttle setting. It is recommended that you monitor the system resources so that a satisfactory trade-off is made between discovery speed versus system resources available for OpenManage Essentials. Lowering or increasing the throttle depends on the system it is running on and the available resources. Note that the discovery service may take up to several minutes to adjust to a new throttle setting.

NOTE: For minimal discovery times on medium to large size networks (several hundred to several thousand devices), it is recommended that you install OpenManage Essentials services on a multi-processor system.

Scheduling Inventory

NOTE: It is recommended not to schedule the inventory task at the same time as the **Database Maintenance Execution Schedule**, as the console is less responsive during database maintenance.

1. Click **Manage** → **Discovery and Inventory** → **Common Tasks** → **Inventory Schedule**.
2. In **Inventory Polling Configuration Settings**, perform the following:
   a) Select **Enable Inventory**.
   b) Select the desired schedule parameters.
   c) (Optional) You may adjust the **Inventory Polling Speed** slider for faster task execution; however, more system resources are consumed.

Related Links

Discovery and Inventory Portal
Last Discovery and Inventory
Discovered Versus Inventoried Devices
Task Status

Configuring Status Polling Frequency

NOTE: It is recommended not to schedule status polling at the same time as the **Database Maintenance Execution Schedule**, as the console is less responsive during database maintenance.

You can configure OpenManage Essentials to check the health status of all discovered devices that have a means of health instrumentation such as OpenManage Server Administrator. The status can be scheduled at a given interval using Status Polling so that health status is always current. To configure status polling:

1. Click **Manage** → **Discovery and Inventory** → **Common Tasks** → **Status Schedule**.
2. In **Status Polling Schedule Settings**, select **Enable Status Polling** and provide the polling parameters including time and performance.
3. Click **OK**.

Related Links

Discovery and Inventory Portal
Last Discovery and Inventory
Discovered Versus Inventoried Devices
Task Status

6

Discovery And Inventory — Reference

From the Discovery and Inventory Portal page, you can:

- View graphical reports on devices and Dell servers discovered and inventoried.
- Manage discovery ranges for devices and Dell servers.
- Configure discovery, inventory, and status polling for devices and Dell servers.

Discovery and Inventory Portal Page Options

- Discovery Portal
- Common Tasks
  - Add Discovery Range
  - Add Discovery Range Group
  - Add Exclude Range
  - Discovery Schedule
  - Inventory Schedule
  - Status Schedule
- Discovery Ranges
- Exclude Ranges

Discovery and Inventory Portal

The Discovery and Inventory Portal provides information about the:

- Last discovery and inventory details
- Discovered versus inventoried devices
- Task status

Related Links

Configuring a Discovery and Inventory Task
Viewing Configured Discovery and Inventory Ranges
Excluding Ranges
Scheduling Discovery
Scheduling Inventory
Configuring Status Polling Frequency
Last Discovery and Inventory
Discovered Versus Inventoried Devices
Task Status

Last Discovery and Inventory

Field	Description
Last Discovery Details	
Discovery Last Run at	Displays the time and date information for the last run discovery.
Discovery Range	Displays the IP Address range or host name.
Devices Discovered	Displays information on number of devices discovered.
Last Inventory Details	
Inventory Last Run at	Displays the time and date information for the last run inventory.
Inventory Range	Displays the IP Address range or host name.
Devices Inventoried	Displays information on number of devices inventoried.

Related Links

- Configuring a Discovery and Inventory Task
- Viewing Configured Discovery and Inventory Ranges
- Excluding Ranges
- Scheduling Discovery
- Scheduling Inventory
- Configuring Status Polling Frequency
- Discovery and Inventory Portal

Discovered Versus Inventoried Devices

Provides a graphical report of number of devices and Dell servers discovered or inventoried. You can use this report to ascertain the discovered devices and Dell servers that are unclassified. For more information on the filter options for the summary information, see Viewing Device Summary.

Click any section of the graph to view the **Device Summary** for the selected region. In the device summary, double-click a row to view the details (inventory view for that device). Alternatively, right-click and select details for the inventory view or right-click and select alerts for the alerts specific to that device.

Field	Description
Filter by	Select to filter the search results using the following options: • **All** • **Ranges** — Select to filter based on the selected range.

Related Links

- Configuring a Discovery and Inventory Task
- Viewing Configured Discovery and Inventory Ranges
- Excluding Ranges
- Scheduling Discovery
- Scheduling Inventory
- Configuring Status Polling Frequency

Discovery and Inventory Portal

Task Status

Provides a list of currently executing and previously run tasks and their status. The **Task Status** grid on this page shows the status of just discovery, inventory, and tasks. However, the main portal shows all types of task statuses.

Related Links

Configuring a Discovery and Inventory Task
Viewing Configured Discovery and Inventory Ranges
Excluding Ranges
Scheduling Discovery
Scheduling Inventory
Configuring Status Polling Frequency
Discovery and Inventory Portal

Viewing Device Summary

1. In **OpenManage Essentials**, click **Manage** → **Discovery and Inventory** → **Discovery Portal** → **Discovery Portal**.
2. In **Discovered vs. Inventoried Devices** graphical report, click the bar representing the discovered or inventoried device to open the **Device Summary** page that displays the selected graph details.
3. (Optional) Click the funnel icon to filter the summary information.

   The filter options are displayed. See Viewing Device Summary Filter Options.
4. (Optional) Click **Filter** to view the filtered summary information.
5. (Optional) Click **Clear Filter** to remove the filtered summary information.
6. Right-click a device summary and select from the available options. See Device Status.

Viewing Device Summary Filter Options

Field	Description
Select All	Select to filter per line item.
Select options, devices, or Dell servers.	Select to filter based on options, devices, or Dell servers.
Filter options	Create filter with these options: • **Is equal to**— Select to create the *same as* logic. • **Is not equal to** — Select to create the *different from* logic. • **Is Less than**— Select to find a value that is less than the value you provide. • **Is less than or equal to**— Select to find a value that is less than or equal to the value you provide. • **Is greater than or equal to**— Select to find a value that is greater than or equal to the value you provide. • **Is greater than**— Select to find a value that is greater than the value you provide. **Health Status** options: • **Unknown**

Field	Description
	- Normal - Warning - Critical **Connection Status** options: - On - Off

Add Discovery Range / Add Discovery Range Group

1. Click **Manage** → **Discovery and Inventory** → **Common Tasks.**
2. Click either **Add Discovery Range** or **Add Discovery Range Group**. For more information, see Configuring a Discovery and Inventory Task.
3. Provide information for the following protocols for discovery, inventory, or both:

   – Discovery Configuration
   – ICMP Configuration
   – SNMP Configuration
   – WMI Configuration
   – Storage Configuration
   – WS-Man Configuration
   – SSH Configuration
   – IPMI Configuration
   – Discovery Range Action
   – Summary

Discovery Configuration

A discovery range is a network segment registered in OpenManage Essentials for the purpose of discovering devices. OpenManage Essentials attempts to discover devices on all registered discovery ranges that are enabled. A discovery range includes subnet, a range of IP addresses on a subnet, an individual IP address, or an individual host name. Specify the IP address, IP address range, or host name for the discovery process. For more information, see Discovery Configuration Options.

Discovery Configuration Options

Field	Description
Group Name	Specifies the group name for a set of devices.
IP address / range	Specifies the IP address or IP address range. The following are examples of valid discovery range type address specifications (* is the wildcard character, meaning all possible addresses in the specified range): - 193.109.112.* - 193.104.20-40.*

Field	Description
	• 192.168.*.* • 192.168.2-51.3-91 • 193.109.112.45-99 • System IP address—193.109.112.99 **NOTE:** Click Add to add multiple ranges of IP addresses. IPV6 addresses are not supported.
Discovery Range Name	Specifies the discovery range name for the IP address/ range.
Host name	Specifies the host name, for example, **mynode.mycompany.com**. Click Add to add multiple host names. **NOTE:** You can add multiple host names by separating them using commas. **NOTE:** Invalid characters in the host name are not checked. If the host name you provide contains invalid characters, the name is accepted. However, the device is not found during the discovery cycle.
Subnet mask	Specifies the subnet mask for the IP address range. The subnet mask is used to determine the broadcast addresses for the subnet(s) part of the range. The OpenManage Essentials Network Monitoring Service does not use the broadcast address when discovering devices in an IP address range. The following are examples of valid subnet mask specifications: • 255.255.255.0 (The default subnet mask for a Class C network.) • 255.255.0.0 (The default subnet mask for a Class B network.) • 255.255.242.0 (A custom subnet mask specification.) By default, the subnet mask is set to 255.255.255.0.
Import	Select this option to import host names and IP addresses from a file that is in CSV format. However, you can import only 500 line items per task. You can import different discovery ranges with different subnet masks. For example, 192.168.10.10, 255.255.255.128, 10.10.1.1, 255.255.0.0, and 172.16.21.1, 255.255.128.0. You can use an Active Directory export file in a.CSV format as input. You can also create a .CSV file in a spreadsheet editor using the header *Name* and filling in system IP addresses or host names in the rows below the header (one per cell). Save the file in a .CSV format and use it as the input with the import feature. If there are any invalid entries in the file, a message is displayed when the data is imported by OpenManage Essentials. For an example of a CSV file, see Specifying IPs, Ranges, or Host Names.

ICMP Configuration

Use ICMP during discovery to ping devices on the network. See ICMP Configuration Options to configure the ICMP parameters.

For more information, click

?

- (Why do I need this?) help.

ICMP Configuration Options

Field	Description
Timeout	Set time in milliseconds.
Retries	Set number of attempts.

SNMP Configuration

SNMP provides an interface to manage devices on the network such as servers, storage, switches, and so on. The SNMP agent on the device allows OpenManage Essentials to query the health and inventory data of the device. See SNMP Configuration Options to discover and inventory servers, storage devices, and other network devices.

For more information, click

?

- (Why do I need this?) help.

SNMP Configuration Options

Field	Description
Enable SNMP discovery	Enables or disables the SNMP protocol for discovery range (subnet).
Get community	Specifies or edits the community name for SNMP **get** calls from the OpenManage Essentials user interface. The **Get Community** is a read-only password that SNMP agents installed on managed devices use for authentication. The **Get Community** allows OpenManage Essentials to browse and retrieve SNMP data. This field is case-sensitive. OpenManage Essentials uses the first successful community name to communicate with the device. You can enter multiple SNMP community strings separated with commas.
Set community	Specifies or edits the community name for SNMP **set** calls from the OpenManage Essentials UI. The **Set community** is a read-write password that SNMP agents installed on managed devices use for authentication. The **Set community** allows OpenManage Essentials to perform tasks that require the SNMP protocol, such as shutting down a system. This field is case-sensitive. OpenManage Essentials uses the first successful community name to

Field	Description
	communicate with the device. You can enter multiple SNMP community strings separated with commas. **NOTE:** In addition to the **Set community** name, an instrumentation password is required to perform an SNMP task on a device.
Timeout (seconds)	Specifies or edits the amount of time that OpenManage Essentials waits after issuing a **get** or **set** call before it considers the call failed. A valid range is from 1 to 15 seconds. The default is 4 seconds.
Retries (attempts)	Specifies or edits the number of times that OpenManage Essentials reissues a **get** or **set** call after the first call times out. A valid range is from 1 to 10 retries. The default is 2.

WMI Configuration

Use the WMI protocol for gathering discovery, inventory, and health information about servers running Windows. This protocol provides less information about devices than SNMP but is useful if SNMP is disabled on the network. See WMI Configuration Options to configure WMI parameters for Windows servers only.

WMI Configuration Options

Field	Description
Enable WMI discovery	Select to enable WMI discovery.
Domain \ User name	Provide the domain and user name.
Password	Provide the password.

Storage Configuration

Enabling discovery of Dell PowerVault MD or Dell|EMC arrays allows OpenManage Essentials to gather inventory and health information about the arrays. See Storage Configuration Options to discover PowerVault MD arrays or Dell|EMC devices.

Storage Configuration Options

Field	Description
Enable PowerVault MD array discovery	Select to discover PowerVault MD array. This discovery configuration does not require credentials.
Enable Dell/EMC array discovery	Select to discover Dell/EMC array.
Dell/EMC user name	Provide the user name.
Dell/EMC password	Provide the password.
Dell/EMC port	Increment or decrement the port number. Enter a TCP/IP port number ranging 1 to 65535. Default value is 443.

WS-Man Configuration

Use the WS-Man protocol to discover and gather inventory and health status for the iDRAC, ESXi based servers, and Dell PowerEdge VRTX devices. For more information, see WS-Man Configuration Options.

NOTE: You can only discover and inventory servers with iDRAC6 version 1.3 and above. Discovery and inventory of servers is not supported for iDRAC6 version 1.25 and below.

WS-Man Configuration Options

Field	Description
Enable WS-Man Discovery	Select to discover Dell PowerEdge VRTX, iDRAC6, iDRAC7, and ESXi installed devices.
User ID	Provide authenticated user ID.
Password	Provide password.
Timeout	Provide the time after which the discovery attempts must stop.
Retries	Provide the number of attempts to discover the devices.
Port	Provide the port information.
Secure Mode	Select to securely discover devices and components.
Skip Common name check	Select to skip common name check.
Trusted Site	Select if the devices you are discovering is a trusted device.
Certificate file	Click **Browse** to navigate to the file location.

SSH Configuration

Use the SSH protocol to discover and inventory servers running Linux. See SSH Configuration Options to configure the SSH configuration parameters.

SSH Configuration Options

Field	Description
Enable SSH discovery	Enables or disables the SSH protocol by discovery range.
User name	Provide the user name.
Password	Provide the password.
Port	Provide the port information. The default port number is 22.
Retries	Provide the number of attempts to discover the devices. The default value is 3.
Timeout	Provide the time after which the discovery attempts must stop. The default value is 3 seconds.

IPMI Configuration

Use the IPMI protocol for out of band discovery of RACs, DRACs, and iDRACs. This option is for Lifecycle controller enabled discovery and inventory. Ensure that the IP address of the DRAC and iDRAC is selected. See IPMI Configuration Options to configure the IPMI version 2.0 parameters. This configuration is required for discovery.

IPMI Configuration Options

Field	Description
Enable IPMI Discovery	Enables or disables the IPMI protocol by discovery range.
User name	Enter the Baseboard Management Controller (BMC) or DRAC user name. **NOTE:** The default user name is **root**. It is recommended that you change it for security.
Password	Enter the BMC or DRAC password. **NOTE:** The default password is **calvin**. It is recommended that you change it for security.
KG Key	Enter the KG key value. DRAC also supports IPMI KG key value. Each BMC or DRAC is configured to require an access key in addition to user credentials. **NOTE:** The KG key is a public key that is used to generate an encryption key for use between the firmware and the application. The KG key value is an even number of hexadecimal characters.
Timeout	Specifies or edits the amount of time that OpenManage Essentials waits after issuing a **get** or **set** call before it considers the call failed. A valid range is from 1 to 60 seconds. The default is 5 seconds.
Retries	Specifies or edits the number of times that OpenManage Essentials reissues a **get** or **set** call after the first call times out. A valid range is from 0 to 10 retries. The default is 1.

NOTE: The retries and time-out parameters are used for both the Remote Management Control Protocol (RMCP) ping and the IPMI connection.

Discovery Range Action

Select these options to discover or inventory devices, components, and servers.

Field	Description
Do not perform discovery or inventory	Select this option to set up a schedule to perform discovery and inventory (at a later time).
Perform only discovery	Select this option to perform discovery.

Field	Description
Perform both discovery and inventory	Select this option to perform both discovery and inventory.

Summary

View the configuration selections. To change configurations, click **Back.**

Add Exclude Range

From OpenManage Essentials, select **Manage** → **Discovery and Inventory** → **Common Tasks** → **Add Exclude Range**. Register new ranges to exclude from discovery or to remove a previously set exclude range.

You can also right-click **Exclude Ranges** and select **Add Exclude Range.**

Add Exclude Range Options

Field	Description
IP Address / range	Register a device to exclude from the discovery process by specifying the IP address or IP address range of the device. The following are examples of valid discovery range type address specifications (* is the wildcard character, which includes all possible addresses in the specified range): • Exclude range — 193.109.112.* • 193.104.20-40.* • 192.168.*.* • 192.168.2-51.3-91 • Exclude range — 193.109.112.45-99 • System IP address — 193.109.112.99
Exclude Range Name	Add the exclude range name for the IP address / range.
Host name	Register to exclude from the discovery process by specifying the host name of the device, for example, **mynode.mycompany.com**. **NOTE:** OpenManage Essentials does not check for invalid characters in the host name. If the host name you specify contains invalid characters, the name is accepted. However, the device with that name is not found during the discovery cycle.

Configuration

The Configuration page contains the following information:

- Discovery Schedule
- Inventory Schedule
- Status Schedule

Discovery Schedule

You can configure OpenManage Essentials to discover devices and display them in the **Device** tree.

- Enable device discovery.
- Initiate device discovery.
- Set the discovery speed.
- Specify how devices are discovered.
- For failed discovery attempts, use the Troubleshooting Tool.

Related Links

Discovery Schedule Settings

Viewing Discovery Configuration

To view discovery configuration, click **Manage** → **Discovery and Inventory** → **Discovery Schedule**.

Discovery Schedule Settings

Configure OpenManage Essentials to discover new devices on a network. The settings apply to all discovery ranges. OpenManage Essentials records all agents, IP addresses, and the health of the devices.

Field	Description
Enable Discovery	Select to schedule device discovery.
Configure Global Device Discovery interval	Set the frequency of discovery in weekly or daily intervals. • **Every Week On**—Specify the day or days to schedule discovery and the time for the discovery to begin. • **Every <n> Days <n> Hours interval**—Specify the intervals between discovery cycles. The maximum discovery interval is 365 days and 23 hours.
Discovery Speed	Specify the amount of resources (system and network) available for accelerating the discovery speed. The faster the speed, more resources are required to perform discovery, but less time is required.
Discover	Specify how the devices are discovered. • **All Devices**—Select to discover all devices that respond to an Internet Control Message Protocol (ICMP) ping. • **Instrumented Devices**—Select to discover only devices that have instrumentation (such as Dell OpenManage Server Administrator, Dell OpenManage Array Manager, and Dell PowerConnect) for Simple Network Management Protocol (SNMP), Windows management Instrumentation WMI), Intelligent Platform Management Interface (IPMI) management, or WS-Management (WS-Man). See agents supported for more information about systems management instrumentation agents.

Field	Description
Name Resolution	Specify how the device names are resolved. If you are managing a cluster, use the NetBIOS name resolution to discern each independent system. If you are not managing a cluster, a DNS name resolution is recommended. - **DNS**—Select to resolve names using the Domain Naming Service. - **NetBIOS**—Select to resolve names using system names.

Related Links

Discovery Schedule

Inventory Schedule

Use **Inventory Polling** to specify the default inventory settings for OpenManage Essentials. OpenManage Essentials collects inventory information such as software and firmware versions, as well as device-related information about memory, processor, power supply, Peripheral Component Interconnect (PCI) cards, and embedded devices, and storage.

Related Links

Inventory Schedule Settings

Inventory Schedule Settings

Field	Description
Enable Inventory	Select to schedule inventory.
Configure Global Inventory Polling Interval	Set the frequency of the inventory in weekly or daily intervals. **NOTE:** OpenManage Essentials performs inventory only on devices that have already been discovered. - **Every Week On**—Specify the day or days of the week that you want to schedule the inventory and the time that you want it to begin. - **Every <n> Days <n> Hours interval**—Specify the intervals between inventory cycles. The maximum discovery interval is 365 days and 23 hours.
Inventory Polling Speed	Set the amount of resources available for accelerating the inventory poll speed. The faster you set the inventory poll speed, the more resources are required, but less time is required to perform the inventory. After changing the speed, OpenManage Essentials may take several minutes to adjust to the new speed.

Related Links

Inventory Schedule

Status Schedule

Use this window to specify the default status polling settings for OpenManage Essentials. Status polling performs a health and power check for all discovered devices. For example, this poll determines if discovered devices are healthy or powered down.

Related Links

[Status Configuration Settings]

Status Configuration Settings

Field	Description
Enable OnDemand Poll	Select to query the global status of the device when an alert is received from the device. **NOTE:** If a large number of alerts are received, multiple OnDemand polls are queued up and it may affect the system performance. In this scenario, it is recommended to turn off OnDemand poll and enable the regular status poll interval to retrieve the health status of managed devices. If OnDemand poll is disabled, the device status only updates on the normal status poll.
Enable Status Polling	Select to schedule device status polling.
Device Status Interval	Set frequency of the device status poll in intervals of days, hours, and minutes. The status polling does not begin until the previous polling has completed. **Days**—Specify the number of days between device status polling. **Hours**—Specify the number of hours between device status polling cycles. **Minutes**—Specify the number of minutes between device status polling cycles. The maximum discovery interval is 365 days, 23 hours, and 59 minutes.
Status Polling Speed	Set the amount of resources available for accelerating the device status polling speed. The faster you set the status speed, the more resources are required, but less time is required to perform the status polling.

Related Links

[Status Schedule]

Managing Devices

OpenManage Essentials lists devices based on their types. For example, Dell PowerEdge servers are listed under the device type **Servers**. OpenManage Essentials contains a defined list of device types. The devices you discover and inventory are included under these device types. Unclassified devices are listed under the device type **Unknown**. You can create device groups with combinations of the defined device types. However, you cannot create a new device types.

In the **Devices** page, you can:

- View devices types that are discovered on the network.
- View the inventory information for the devices.
- View all the alerts that were generated for a device.
- View the hardware logs for a device.
- Create device groups and include devices to that group based on your grouping preference. For example, you can create a group and include all devices present at a geographical location.
- Display and manage Dell PowerEdge VRTX devices using **Map View**.

Related Links

Viewing Devices
Viewing Device Inventory
Viewing Alerts Summary
Viewing System Event Logs
Searching for Devices
Creating a New Group
Adding Devices to a New Group
Adding Devices to an Existing Group
Hiding a Group
Deleting a Group
Creating a Custom URL
Using Map View

Viewing Devices

You can view a device that is discovered. For more information on discovering and inventorying a device, see Discovering and Inventorying Devices.

To view devices, click **Manage** → **Devices**.

Related Links

Managing Devices

Device Summary Page

In the device summary page, expand the device types to view the devices. The following device types are displayed:

- Citrix XenServers
- Clients
- High Availability (HA) clusters
- KVM
- Microsoft Virtualization
  - Virtual machines
- Modular systems
  - PowerEdge M1000e
  - PowerEdge VRTX
- Network devices
  - Switches
- OOB unclassified devices
  - IPMI unclassified devices
- Power Devices
  - PDU
  - UPS
- PowerEdge C Servers
- Printers
- RAC

  NOTE: If a DRAC or iDRAC is discovered, it is displayed under the **RAC** group and not under the **Servers** group. If both DRAC/iDRAC and corresponding server are discovered, they are correlated into a single device. The device is displayed in both the **RAC** and **Servers** group.

  NOTE: If the RAC on a Dell PowerEdge C server is discovered using IPMI, it is displayed under **OOB Unclassified devices**.
- Servers
- Storage Devices
  - Dell|EMC Arrays
  - EqualLogic arrays
  - PowerVault MD Arrays
  - Tape Devices
- Unknown
- VMware ESX servers
  - Virtual machines

Use the refresh button to update the device tree with the current data. To update the device tree, right-click **All Devices** and select **Refresh**.

NOTE: The device tree auto-updates when changes are made. Some changes to the tree may appear after a brief delay depending on the performance of the managed servers because the information propagates from the SQL database to the user interface.

Nodes and Symbols Description

Table 1. Nodes and Symbols Description

Node Symbol	Description
✖	Denotes that a device is critical and requires attention. This information is rolled up to the parent device type. For example if a server is in critical state and requires attention the same symbol is assigned to the parent device type. Among server states, critical state is given the highest priority. That is, in a group, if different devices are in different states, and if one device is in critical state, then the state of the parent device type is set to critical.
⊘	Denotes that a device of this type is not discovered on the network or classified in the device tree.
⚠	Denotes that there is a deviation from the expected behavior, but the device is still manageable.
✓	Denotes that the device is working as expected.
?	Denotes either the device type is unknown and it is classified as an unknown device or that the health status cannot be determined, because the device does not have proper instrumentation or the proper protocol was not used to discover the device.

Device Details

The device details, depending on the device type, may contain the following information:

- Device Summary
- OS Information
- Software Agent Information
- NIC Information
- Virtual Machine Host Product Information
- RAC Device Information
- Processor Information
- Memory Device Information
- Firmware Information
- Power Supply Information
- Embedded Device Information
- Device Card Information
- Controller Information
- Controller Battery Information
- Enclosure Information
- Physical Disk Information
- Virtual Disk Information
- Contact Information

- Software Inventory Information
- Trusted Platform Module Information
- Slot Information
- Virtual Flash Information
- FRU Information
- Acquisition Information
- Depreciation Information
- Extended Warranty Information
- Ownership Information
- Outsource Information
- Maser Information

NOTE: Hardware inventory can be retrieved from iDRAC6/7 and ESXi if OpenManage Server Administrator VIB is installed using WS-Man protocol.

Viewing Device Inventory

To view inventory, click **Manage** → **Devices**, expand the device type and click the device.

Related Links

Managing Devices

Viewing Alerts Summary

You can view all the alerts generated for a device. To view the alert summary:

1. Click **Manage** → **Devices**.
2. Expand the device type and click the device.
3. In the details page, select **Alerts**.

Related Links

Managing Devices

Viewing System Event Logs

1. Click **Manage** → **Devices**.
2. Expand the device type and select **Hardware Logs**.

Related Links

Managing Devices

Searching for Devices

Right-click **All Devices** at the top of the device tree and click **Search Devices**. You can also search for devices using logical arguments and save the queries for later.

For example, to create a query to search for a server in critical state with an IP address containing values 10.35, and the power status as Power Up:

1. Click **Manage** → **Device Search**, then select **Create New Query**, in the adjacent text field enter a query name.
2. From the first line after **Where**, select **Device Type**, **Is**, and then **Server**.
3. In the next line select the check box, then select **AND**, **Device Health**, **Is**, and then select **Critical**.
4. In the next line select the check box, then select **AND, IP Address, Contains**, and then in the adjacent field enter **10.35**.
5. In the next line select the check box, then select **AND, Power Status, Is**, and then select **Power Up**.
6. Click **Save Query**.

   NOTE: You can click **Run Query** to run the query immediately.

To run an existing query, select the query from the drop-down list and click **Run Query**. You can filter the results and export it to an HTML, TXT, or CSV file.

Related Links

Managing Devices

Creating a New Group

1. Click **Manage** → **Devices.**
2. Right-click **All Devices** and select **New Group.**
3. Enter the name and description for the group and click **Next.**
4. In **Device Selection**, select any of the following:
   - **Select a query** to create a dynamic group. Click **New** to create a new query or select an existing query from the drop-down list.
   - **Select the device(s) /group(s) from the tree below** to create a static group.
5. Click **Next.**
6. Review the summary and click **Finish.**

You can right-click devices in the **Details** tab and add them either to a new group or an existing group. You can also create a new group from either the Home or Reports portal. Click **Filter by** and click **Add New Group** to launch the **New Group** wizard. To know whether a group is static or dynamic, place the cursor on the group. For example, if you place the cursor on **Servers**, the group type is displayed as **Servers (Dynamic | System).**

Related Links

Managing Devices

Adding Devices to a New Group

1. Click **Manage** → **Devices.**
2. Right-click the device(s) and select **Add to New Group.**
3. In **Group Configuration**, enter the name and description. Click **Next**.
4. In Device Selection, the selected devices are displayed. If required, add or remove additional devices. Click **Next**.
5. Review the summary and click **Finish**.

Related Links

Managing Devices

Adding Devices to an Existing Group

1. Click **Manage** → **Devices.**
2. Right-click the device(s) and select **Add to Existing Group.**

   NOTE: If you are manually adding a device to a dynamic group, a message is displayed on the screen. Manually adding a device to a dynamic group changes the group from dynamic to static, thereby removing the original dynamic query. If you want the group to remain dynamic, modify the query defining the group. Click **Ok** to continue or **Cancel** to stop the procedure.

3. Click **Ok.**

Related Links

Managing Devices

Hiding a Group

To hide a group, right-click the group and select **Hide**.

After a group is hidden, it is not displayed in any of the device group controls in the console. The devices in the hidden groups are not displayed in the reports and charts on the Home and Reports portals. Alerts for devices in hidden groups are also not displayed in the alerts portal.

If a parent group (along with child groups) is hidden, the child groups are also hidden in the device tree. However, the child groups are still present in the database and are displayed in other instances in the console.

Related Links

Managing Devices

Deleting a Group

1. Right-click the group and select **Delete**.
2. In the **Delete** screen, click **Yes**.

   NOTE: Deleting a parent group, removes the group from the device tree. The child groups and devices listed under the parent group are also removed from the device tree. However, the child groups and devices still remain in the database and appear in other instances in the console.

Related Links

Managing Devices

Single Sign-On

If iDRAC or CMC devices are configured for Single Sign-On and you are logged on to OpenManage Essentials as a domain user, you can use open the iDRAC or CMC console through the **Application Launch** option or the agent link. For information on configuring iDRAC or CMC for Single Sign-On, see the:

- *Configuring CMC For Single Sign-On Or Smart Card Login* section in the *Dell Chassis Management Controller User's Guide* at **dell.com/support/manuals**.
- *Configuring iDRAC7 for Single Sign-On or Smart Card Login* section in the *Integrated Dell Remote Access Controller 7 User's Guide* at **dell.com/support/manuals**.
- *Integrating iDRAC7 With Microsoft Active Directory* white paper at **DellTechCenter.com**.
- *IDRAC6 Integrated Dell Remote Access Controller 6 Security* white paper at **DellTechCenter.com**.

Creating a Custom URL

NOTE: Custom URL cannot be assigned to parent device groups that create a child sub group in the device tree at the time of discovery. Examples of parent device groups are: **HA Clusters**, **Microsoft Virtualization Servers**, **PowerEdge M1000e**, **PowerEdge VRTX** , or **VMware ESX Servers**. To assign a custom URL to a device in these parent device groups, add the device to a custom device group, and then assign a custom URL.

1. Click **Preferences** → **Custom URL Settings**.
2. Click the ➕ icon.

   The **Custom URL Launch** screen is displayed.
3. Type the name, URL, description, and select the device group from the drop-down list.

   NOTE: You can click **Test URL** to verify if the URL specified is active.
4. Click **Ok**.

   The custom URL is created.

Related Links

Managing Devices
Custom URL Settings

Launching the Custom URL

1. Click **Manage** → **Devices** and select the device from the tree.
2. Right-click the device and select **Application Launch**.
3. Click the URL name to access the site.

Related Links

Custom URL Settings

Configuring Warranty Email Notifications

You can configure OpenManage Essentials to send a warranty notification of your devices at periodic intervals through email. For information about the options you can configure, see Warranty Notification Settings.

To configure **Warranty Email Notifications**:

1. Click **Preferences** → **Warranty Notification Settings**.

   The **Warranty Notification Settings** page is displayed.
2. Under **Warranty Email Notifications**, select **Enable Warranty Email Notifications**.
3. In the **To** field, type the email addresses of the recipients.

   NOTE: Multiple email addresses must be separated by using a semicolon.
4. In the **From** field, type the email address from which the warranty notification email is to be sent.

   NOTE: Only one email address must be provided in the **From** field.
5. To set the criteria for the devices to be included in the warranty notification email, in the **All Devices with x Days or less of warranty** field, select the number of days.

6. To set the frequency at which you want to receive the warranty notification email, in the **Send email every x Days** field, select the number of days.
7. To include devices with expired warranty or no warranty information in the warranty notification email, select **Include Devices with Expired Warranties**.
8. In the **Next Email will Send On** field, select the date and time at which you want to receive the next warranty notification e-mail.
9. If you want to configure the SMTP email server, click **Email Settings**.

   The **Email Settings** page is displayed. For more information about **Email Settings**, see Email Settings.
10. Click **Apply**.

OpenManage Essentials sends warranty notification emails based on your configuration. The warranty notification email provides a list of devices and appropriate links that you can click to renew the warranty of the devices.

Related Links

Warranty Notification Settings

Configuring Warranty Scoreboard Notifications

You can configure OpenManage Essentials to display a warranty scoreboard notification icon in the heading banner. For information about the options you can configure, see Warranty Notification Settings.

To configure **Warranty Scoreboard Notifications**:

1. Click **Preferences** → **Warranty Notification Settings**.

   The **Warranty Notification Settings** page is displayed.
2. Under **Warranty Scoreboard Notifications**, select **Enable Warranty Scoreboard Notifications**.
3. To set the criteria for the devices to be included in the warranty notification scoreboard, in the **All Devices with x Days or less of warranty** field, select the number of days.
4. To include devices with expired warranty or no warranty information in the warranty notifications scoreboard, select **Include Devices with Expired Warranties**.
5. Click **Apply**.

If any device meets the set criteria, the OpenManage Essentials heading banner displays the warranty scoreboard notification icon including the number of devices.

Related Links

Using the Warranty Scoreboard Notification Icon

Device Warranty Report

Warranty Notification Settings

Using Map View

NOTE: The **Map View** feature is available only if you have discovered any Dell PowerEdge VRTX devices with an Enterprise license, using the WS-Man protocol. If the PowerEdge VRTX device with an Enterprise license is discovered using the SNMP protocol, the **Map View** feature is not available. In this case, you must rediscover the PowerEdge VRTX device using the WS-Man protocol.

NOTE: The map displayed in **Map View** should be considered *as is* from the map service provider. OpenManage Essentials does not have any control over the accuracy of the map or address information.

NOTE: An Internet connection is required to perform some of the map functions such as zoom, address search, and so on. If you are not connected to the Internet, the following message is displayed on the map: `Warning — Unable to connect to the Internet!`.

The **Map View** feature allows the display and management of licensed PowerEdge VRTX devices on an interactive geographic map. Licensed PowerEdge VRTX devices are represented as pins on the map. The health and connectivity status can be viewed for all licensed PowerEdge VRTX devices at a glance.

You can access **Map View** from the **Home Portal** or **Manage** → **Devices** portal page.

The **Overlays** menu at the top-right of the map allows you to overlay the health and connectivity status of the device on the pin. The **Actions** menu at the top-right of the map allows you to perform various functions on the map. The following is the list of available actions:

Action	Description
Show All Map Locations	Displays all map locations.
Go to Home View	Displays the home view, if saved earlier.
Save Current View as Home View	Saves the current view as the home view.
Add Licensed Device	Allows adding a licensed PowerEdge VRTX device.
Import Licensed Devices	Allows importing licensed PowerEdge VRTX devices
Remove All Map Locations	Allows removing all map locations.
Export	Allows exporting all map locations to a **.csv** file.
Settings	Opens the **Map Settings** dialog box.
Edit Location Details	Opens the **Edit Location Details** dialog box, that displays the device name, address, and contact information.
Remove Location	Allows removal of the selected device from the map.
Zoom to Street Level **NOTE:** This option is displayed only when a device is selected on the map.	Allows zooming to the street level on the currently selected device location.

NOTE: The **Edit Location Details**, **Remove Location**, and **Zoom to Street Level** options in the **Actions** menu are device-specific. These options must be used after selecting a device on the map.

The **Search for address** box at the top-left of the map allows you to search for addresses.

The navigation toolbar displayed at the bottom of the map enables you to:

- Zoom in and out of the map
- Move the map up, down, right, or left
- Select the map provider type

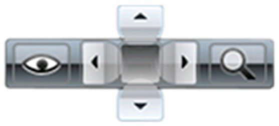


Figure 3. Navigation Toolbar

The zoom level of the map can be identified by the scale that is displayed at the bottom-right of the map.

Related Links

Devices — Reference
Map View (Home) Portal

- Map View (Home) Portal Interface
- General Navigation and Zooming
- Home View
- Tool Tip
- Search Pin
- Map Providers
- Map View (Devices) Tab Interface
- Configuring Map Settings
- Selecting a Device on Map View
- Health and Connection Status
- Multiple Devices at the Same Location
- Setting a Home View
- Viewing All Map Locations
- Adding a Device to the Map
- Moving a Device Location Using the Edit Location Details Option
- Importing Licensed Devices
- Using the Map View Search Bar
- Adding a Device Using the Search Pin
- Moving a Device Location Using the Search Pin
- Removing All Map Locations
- Editing a Map Location
- Removing a Map Location
- Exporting All Device Locations
- Managing Devices

Map Providers

You can select between MapQuest and Bing map providers using the 👁 icon in the navigation toolbar. By default, the map is displayed using the MapQuest provider. The following table provides information about the supported map providers.

MapQuest	Bing
Free	Requires a valid Bing maps key that must be purchased. To get a valid Bing maps key, go to **microsoft.com/maps/**. **NOTE:** For instructions on getting a Bing maps key, see “Getting a Bing Maps Key” at **microsoft.com**. After getting a valid Bing maps key, you must provide the key in the **Map Settings** dialog box.
Accessing the first few zoom levels on the map does not require an Internet connection. Additional zoom levels and search functionality require an Internet connection.	Internet connection is mandatory to access any zoom level and to use the search functionality.
If your system connects to the Internet through a proxy server, the **Proxy Settings** configured in the OpenManage Essentials **Preferences** → **Console Settings** page is used.	If your system connects to the Internet through a proxy server, the proxy settings configured in your web browser is used.
	Two types of maps are available:

MapQuest	Bing
	• Roads map — A simple, fast loading map with minimal details. • Satellite map — Provides detailed satellite views of the world.

NOTE: The Bing map provider requires an Internet connection at all times to render the map. If the system connects to the Internet through a proxy server, the proxy settings configured in your web browser is used by the Bing provider.

Related Links

Using Map View

Configuring Map Settings

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to configure **Map Settings**.

The **Map Settings** dialog box allows you to enable or disable the Internet connection status notification and to provide a valid Bing key required by the Bing map provider.

To configure the map settings:

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. On the **Map View**:
   - Right-click anywhere on the map, and then click **Settings**.
   - Move the mouse pointer over the **Actions** menu, and click **Settings**.

   The **Map Settings** dialog box is displayed.
3. Select **Update map view on any device or device group selection** if you want the map to display only the pin or pins that correspond to the device or device group selected in the device tree.
4. Select **Show internet connection warning when unable to connect to the internet** if you want to display a warning on the map if an Internet connection is not available.
5. In the **Bing Key** field, type a valid Bing key.
6. Click **Apply**.

Related Links

Using Map View

General Navigation and Zooming

To move the map, click and drag the map in the desired direction or use the navigation arrows in the Navigation toolbar.

You can zoom in or zoom out of the map using any of the following methods:

- Double-click a pin to zoom in to street level around that pin. You can also zoom in to street level by:
  - Right-clicking a pin, and then clicking **Zoom to Street Level**
  - Moving the mouse pointer over the **Actions** menu, and then clicking **Zoom to Street Level**
- If a pin is displayed at street level, double-click the pin to zoom out to the world-level view

- Double-click a location on the map to zoom-in one level at that location
- Move the mouse wheel up or down to quickly zoom out or in on the map
- Click the magnifying glass icon 🔍 in the navigation toolbar to display a slider that you can use to zoom in or zoom out of the map

NOTE: Zoom level and the visible portion of the **Map View** (home) portal are not synchronized with the **Map View** tab accessible through the **Devices** portal.

Related Links

Using Map View

Home View

If you have saved a particular region of the map as your home view, by default, the map displays the home view when you open the **Map View**. For instructions to set a region on the map as your home view, see Setting a Home View.

Related Links

Using Map View

Tool Tip

Moving the mouse pointer over the pin displays a tool tip that contains the following information:

- Device name
- Description
- Address
- Contact
- Model
- Service Tag
- Asset Tag
- Global status
- Connection status

Related Links

Using Map View

Selecting a Device on Map View

To select a device on the map, click the appropriate pin. The corresponding device is highlighted in the device tree and all the other pins are hidden. When a device is selected in the device tree, it is also reflected on the map. If the **Modular Systems** or **PowerEdge VRTX** group is selected in the device tree, then all the pins placed for those groups are displayed on the map.

NOTE: Hiding a device group in the device tree does not hide the corresponding pins on the map. For example, hiding the **Modular Systems** group in the device tree does not hide pins on the map that represent devices in the **Modular Systems** group.

NOTE: Clicking a pin on the **Map View** (home) portal opens the **Devices** portal that displays details about the device.

Related Links

Using Map View

Health and Connection Status

The health and connection status of a device can also be displayed on the map. To overlay the pin with the health or connection status of the device, move the mouse pointer over the **Overlays** menu at the top-right of the map, and click **Health** or **Connectivity**. The health or connection status is indicated by the color and the icon displayed within the pin. The following table provides information about the health status and pin overlay:

Pin Color	Icon	Health Status
Red	❌	Critical
Yellow	⚠	Warning
Green	✅	Normal
Gray	❓	Unknown

The following table provides information about the connection status and pin overlay:

Pin Color	Icon	Connection Status
Blue	⏻	On
Grey	⏻	Off

Related Links

Using Map View

Multiple Devices at the Same Location

It is possible for two or more licensed devices to be placed at an identical location. These devices are displayed as a multi-pin group on the map. If the devices are in a very close proximity on the map and the map is zoomed out, the pins are displayed together as a multi-pin group. To view the count and the name of the devices in a multi-pin group, move the mouse pointer over the multi-pin group. Double-click or right-click a multi-pin group and then select **Details**, to open the **Devices at this location** window that lists the devices available at the location. On the **Devices at this location** window, you can:

- Double-click a device to display only that device on the map.
- Right-click a device to view standard options for the devices, such as **Referesh Inventory**, **Application Launch**, and so on, and other map-specific options such as **Edit Location Details**, and so on.

NOTE: Only licensed devices can be placed on the map. Device groups cannot be placed on the map.

Related Links

Using Map View

Setting a Home View

If you typically manage devices in a certain geographic region, you can set that region as your home view. Each OpenManage Essentials user can save a different view of the map as their home view. By default, the home view is displayed when you open **Map View** or when you select the **Go to Home View** option.

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. On the **Map View**, navigate and zoom until the current view is as desired.
3. Perform one of the following:
   - Right-click on the map, and then click **Save Current View as Home View**.
   - Move the mouse pointer over the **Actions** menu, and then click **Save Current View as Home View**.

Related Links

Using Map View

Viewing All Map Locations

If a single device is selected, only that device is displayed on the map. To view all map locations that have been placed on the **Map View**:

- Right-click the map, and click **Show All Map Locations**.
- Move the mouser pointer over the **Actions** menu, and click **Show All Map Locations**.

Related Links

Using Map View

Adding a Device to the Map

NOTE: Only licensed Dell PowerEdge VRTX devices that are not already placed on the map can be added to the map.

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to add a device to the map.

To add a device on the map:

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. On the **Map View**:
   - Right-click the map, and click **Add Licensed Device**.
   - Move the mouser pointer over the **Actions** menu, and click **Add Licensed Device**.

   The **Device Location Details** dialog box is displayed.
3. From the **Devices** list, select the device you want to add.
4. If required, in the **Description** field, type an appropriate description for the device.
5. If you want to add the device at a location different from where you right-clicked on the map, in the **Address** field, type the address of the location. For example, Chicago.

NOTE: Using the **Address** field to add a device on the map requires an Internet lookup through the map provider to resolve the provided address. The device is added to the most appropriate location available from the Internet lookup. If the map provider is not able to resolve the address, a message is displayed.

6. If required, in the **Contact** field, type the contact information.
7. Click **Save**.

Related Links

Using Map View
Adding a Device Using the Search Pin

Moving a Device Location Using the Edit Location Details Option

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to edit a map location.

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. Right-click a pin on the map, and select **Edit Location Details**.

   The **Device Location Details** dialog box is displayed.
3. In the **Address** field, type the location name or airport code. For example, New York.

   NOTE: Using the **Address** field to move a device location requires an Internet lookup through the map provider to resolve the provided address. The device is moved to the most appropriate location available from the Internet lookup. If the map provider is not able to resolve the address, a message is displayed, and the device remains at the current location.
4. Click **Save**.

   If the map provider is able to resolve the address or airport code, the pin is moved to the specified location on the map.

Related Links

Using Map View
Moving a Device Location Using the Search Pin

Importing Licensed Devices

NOTE: Only licensed Dell PowerEdge VRTX devices that are not already placed on the map can be imported to the map.

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to import licensed devices.

NOTE: You can only import a maximum of up to 500 devices at a time.

You can bulk import licensed devices on the map through a **.csv** file. An **Export Template** function is available, which creates a **.csv** file that is already populated with the names of the licensed PowerEdge VRTX devices that are currently discovered.

To import licensed devices:

1. Perform one of the following:
   - Click **Home** → **Map View** .

   - Click **Manage** → **Devices** → **Map View**.

2. On the **Map View**:

   - Right-click the map, and click **Import Licensed Devices**.
   - Move the mouse pointer over the **Actions** menu, and click **Import Licensed Devices**.

   The **Import Licensed Devices** dialog box is displayed.

3. Click **Export Template** to download a **.csv** template that you can use for importing licensed PowerEdge VRTX devices.

   NOTE: For more information about the template, see Template for Importing Devices.

   The **Save As** dialog box is displayed.

4. Browse to the location where you want to save the **.csv** file, type an appropriate file name, and click **Save**.
5. Open the .csv file, and perform one of the following:

   - In the **Latitude** and **Longitude** columns, type the latitude and longitude coordinates for each device.
   - In the **Address** column, type the address for each device. For example, 1 dell way, round rock, TX.

     NOTE: Before you import devices using the address, ensure that the system is connected to the Internet. If the system connects to the Internet through a proxy server, verify if the proxy settings are configured in the **Preferences** → **Console Settings** page. Also, the Internet search provider may reject the address search request if you are attempting to import too many devices at a time. If this occurs, wait for some time and try importing again.

6. Click **Import**.

   The **Open** dialog box is displayed.

7. Select the location where the updated **.csv** file is located, and click **Open**.

   The **Import Summary** dialog box is displayed.

8. Click **Ok**.

   NOTE: Any errors that may occur during the import process are displayed in **Logs** → **UI Logs**.

Related Links

Using Map View
Template for Importing Devices

Template for Importing Devices

The template for importing licensed PowerEdge VRTX devices is a **.csv** file that you can use to provide details about devices that you want to import to the map. The following are the fields available in the template:

Field	Description
Name	The name of a licensed PowerEdge VRTX device. This field is already populated with the currently discovered licensed PowerEdge VRTX devices that are not already placed on the map.
Latitude	The latitude coordinate of the device location.
Longitude	The longitude coordinate of the device location.
Address	The address of the device location. If both latitude and longitude coordinates are specified, the address need not be specified.

Field	Description
Description (Optional)	Any information that you want to include about the device.
Contact (Optional)	Any contact information that you want to include for the device..

To import the licensed PowerEdge VRTX devices to the map, you must update the **.csv** file with one of the following:

- Latitude and Longitude
- Address

Related Links

Importing Licensed Devices

Using the Map View Search Bar

NOTE: The map providers may not be able to resolve all addresses or airport codes correctly.

The search bar on **Map View** enables you to search for locations on the map using an address or airport code. To search for a location, type the location name or airport code (for example, New York or JFK) in the search bar, and either press <Enter> or click the arrow icon. If the map provider is able to resolve the address or airport code, a search pin is displayed at the specified location on the map.

Related Links

Using Map View

Search Pin

The search pin is a larger pin that represents the search result on the map. The following are the characteristics of the search pin:

- At any instance, only one search pin can be located on the map. The search pin is displayed on the map at a location until you remove it or perform a new search. To remove the search pin, right-click the search pin and click **Remove**.
- Unlike the device pin, the search pin does not overlay any status.
- Double-clicking the search pin allows you to zoom in and zoom out of the location.
- Move the mouse pointer over the search pin to display a tool tip that includes the address of the location.
- You can add or move a licensed PowerEdge VRTX device at the search pin location.

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Related Links

Using Map View

Adding a Device Using the Search Pin

NOTE: Only licensed Dell PowerEdge VRTX devices that are not already placed on the map can be added to the map.

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to add a device to the map.

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. Type the address or airport code (for example, New York or JFK) in the search bar, and either press <Enter> or click the arrow icon.

If the map provider is able to resolve the address or airport code, a search pin is displayed at the location on the map.

3. Right-click the search pin and click **Add Licensed Device Here**.

   The **Device Location Details** dialog box is displayed.
4. From the **Devices** list, select the device you want to add.
5. Click **Save**.

Related Links

Using Map View

Adding a Device to the Map

Moving a Device Location Using the Search Pin

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to add a device to the map.

To move a device location:

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. Select the pin for a licensed PowerEdge VRTX device on the map.
3. Type the address or airport code (for example, New York or JFK) in the search bar, and either press <Enter> or click the arrow icon.

   If the map provider is able to resolve the address or airport code, a search pin is displayed at the location on the map.
4. Right-click the search pin and click **Move Selected Device Here**.
5. On the **Move Device** confirmation dialog box, click **Yes**.

   The selected device is moved to the location of the search pin.

Related Links

Using Map View

Moving a Device Location Using the Edit Location Details Option

Removing All Map Locations

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to remove all map locations.

To remove all map locations:

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. On the **Map View**:
   - Right-click the map, and click **Remove All Map Locations**.
   - Move the mouser pointer over the **Actions** menu, and click **Remove All Map Locations**.

   The **Remove All Map Items** dialog box is displayed prompting for your confirmation.
3. Click **Yes**.

Related Links

Using Map View

Editing a Map Location

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to edit a map location.

To edit a map location:

1. Right-click a pin on the map, and select **Edit Location Details**.
   The **Device Location Details** dialog box is displayed.
2. In the **Description** field, edit the description as required.
3. If you want to move the device to a new location, in the **Address** field, type the location name.
4. In the **Contact** field, edit the contact information as required.
5. Click **Save**.

Related Links

Using Map View

Removing a Map Location

NOTE: Only OpenManage Essentials Administrators and Power Users are permitted to remove a map location.

To remove a location on the map:

1. Perform one of the following:
   - Click **Home** → **Map View** .
   - Click **Manage** → **Devices** → **Map View**.
2. On the **Map View**, right-click the location you want to remove and select **Remove Location**.
   The **Delete Location** dialog box is displayed prompting for your confirmation.
3. Click **Yes**.

Related Links

Using Map View

Exporting All Device Locations

Exporting all device locations allows you to save the information about the devices and their latitude and longitude coordinates as a **.csv** file. If the address is known for a pin, it is included in the **Description** field of the `.csv` file. Using this file, you can import the device locations at any time.

NOTE: By default, the latitude and longitude coordinates of each device is saved to the `.csv` file, even if the latitude and longitude coordinates were not provided previously.

To export all device locations currently placed on the map:

1. On the **Map View**, move the mouse pointer over the **Actions** menu, and then click **Export**.
   The **Save As** dialog box is displayed.
2. Browse to the location where you want to save the **.csv** file, type an appropriate file name, and click **Save**.

Related Links

Using Map View

8 Devices — Reference

This page provides the following information:

- List of devices based on the device type, for example, HA clusters, servers, and so on.
- Summary of devices and alerts.
- Alerts generated for a particular device.
- Health of devices based on the Normal, Critical, Unknown, and Warning types.

  NOTE: For Dell 12 Generation PowerEdge servers [denoted as *yx*2 *x*, where *y* denotes alphabets, for example M (modular), R (rack), or T (tower) and *x* denotes numbers] discovered using WMI and SNMP protocols, the DRAC health status is displayed (under Servers) even if OpenManage Server Administrator is not installed on the server.

  NOTE: Based on the severity of the agents of a discovered device, the overall health is the most critical of the severity. For example, in the device tree, for server types, if there are two servers with status **Warning** and **Critical**, then the parent Server's status is set to **Critical**.

- Connection status of devices — When both server (in-band) and DRAC/iDRAC (out-of-band) are discovered and correlated, the **Connection Status** under **Device Summary** displays the connection status of the server. The **RAC Connection Status** under **RAC Device Information** displays the DRAC/iDRAC connection status. When only DRAC/iDRAC (out-of-band) is discovered (server is not discovered), the **Connection Status** and the **RAC Connection Status** display the same information. When only server (in-band) is discovered (DRAC/iDRAC is not discovered), the **Connection Status** displays the connection status of the server. The **RAC Connection Status** is set to **Off**.
- Inventory information for devices.
- View hardware logs for servers.
- Filtering capabilities of the grid:
  - The grouping bar
  - Filter icon options
  - Sorting by clicking on the column
  - Re-ordering the columns

  NOTE: None of these are saved if the console is closed and restarted.

Related Links

Viewing Devices
Viewing Device Inventory
Creating a New Group
Adding Devices to an Existing Group
Hiding a Group
Using Map View

Viewing Inventory

To view inventory, from **All Devices**, traverse to the device and click the device.

The device details and the alerts link are displayed.

Viewing Alerts

To view alerts, from the inventory details page, click **Alerts**.

Alert Details

Field	Description
Severity	Alert severity based on Normal, Critical, Warning, and Unknown.
Acknowledged	Flagged status for an alert.
Time	Time at which the alert was generated in date and time format.
Device	IP address of the device.
Details	Lists the alert information. For example, System is down:<IP Address of the device>
Category	Lists the alert category type, for example System Events.
Source	Lists the alert source name.

Viewing Hardware Logs

You can view hardware logs for servers. To view hardware logs, from the inventory details page, click **Hardware Logs**.

Hardware Log Details

Field	Description
Severity	Alert severity based on Normal, Critical, Warning, and Unknown.
Time	The system time at which this alert was generated in date and time format on the managed node.
Details	Lists the details of the hardware log. For example, power supply redundancy is lost.

Alert Filters

You can apply these filters to Alerts. Select **Continuous Updates** to enable the user interface to update automatically when new alerts are received.

Field	Description
Severity	Select from these alerts: **All, Normal, Critical, Warning,** and **Unknown**.
Acknowledged	Flagged status for an alert.
Time	Time at which this alert was generated in date and time format.

Field	Description
Device	The IP address or host name of this device.
Details	The alert information. For example, System is down: <IP address of the device>.
Category	The alert category type, for example System Events.
Source	The Alert Source.

Viewing Non-Compliant Systems

To view non-compliant systems, click the **Non-Compliant Systems** tab.

NOTE: Non-compliant systems are only available for device groups such as servers, RAC, and custom groups. It is not available for individual devices.

Non-Compliant Systems

The Non-Compliant Systems tab provides this information:

Field	Description
System Name	System's domain name.
Model Type	The systems model name. For example, Dell PowerEdge.
Operating System	The operating system that is installed on the system.
Service Tag	A unique identifier, that provides the service lifecycle information.
Update Method	Displays the update methods such as OpenManage Server Administrator and iDRAC.
Discovered Time	Time and date of discovery.
Inventory Time	Time and date of inventory.

Select non-compliant systems to select updates to apply and click **Apply Selected Updates**.

Field	Description
System Name	System's domain name.
Importance	The requirement of this software update for the system.
Update Method	Displays the update methods such as OpenManage Server Administrator and iDRAC.
Component	The software information.
Type	The type of software update.
Installed Version	The installed version number.
Upgrade/Downgrade	A green arrow indicates and upgrade.
Available Version	The available version number.
Package Name	The name of the software update.

Related Links

System Update

Device Search

The search options available are:

- Run an existing query
- Create a new query
- Delete a query

Field	Description
Run Existing Query	Select this option and then select a query from the drop-down list.
Delete Query	Select to delete a query after you complete the following action. Select the **Run Existing Query** option, then from the drop down list select the query that you want to delete.
Create New Query	Select this option to create a query and then enter a name for the query in the adjoining field.
Query logic	Select from the query logic options to create multiple query options. Select the check box to enable and include an argument.
Run Query	Runs the selected query.
Save Query	Saves the selected query.

Related Links

Query Results

Query Results

The device search lists these options:

Field	Description
Health Status	Displays the health status of the device. The status options are **Normal, Warning, Critical,** and **Unknown**.
Connection Status	Displays the connection status of the device. The connection status are **On** or **Off**.
Name	Displays the name of the device.
OS Name	Displays the operating system installed on the device.
OS Revision	Displays the version of the operating system installed on the device.
Service Tag	Displays a unique identifier, that provides the service lifecycle information.
Asset Tag	Displays the defined asset tag for the device.
Device Model	Displays the system's model name. For example, PowerEdge R710.

Field	Description
Device type	Displays the type of device. For example, for the Device Model PowerEdge R710, the Device Type value is Server.
System Revision Number	Displays the revision history of the device.

Creating Device Group

Device Group Configuration

Field	Description
Name	Provide name of the new group.
Parent	The device under which this group is created.
Description	Provide description for the device group.

Device Selection

You can select predefined groups (device types), custom groups, specific devices, or a device query.

To use device query, select a query from the list.

Click **New** to create a new device query to search and assign the devices to the alert action.

Click **Edit** to change the query logic.

Select groups or devices from the tree, you can use the query option to create very specific criteria for the selection.

Device Selection Options

Field	Description
All Devices	Select to include all the devices that are managed in OpenManage Essentials.
Clients	Select to include client devices, such as desktops, portables, and workstations.
HA Clusters	Select to include High Availability server clusters.
KVM	Select to include keyboard video mouse devices.
Microsoft Virtualization Servers	Select to include Microsoft virtualization servers.
Modular Systems	Select to include modular systems.
Network Devices	Select to include network devices.
OOB Unclassified Devices	Select to include out of band Unclassified Devices like Lifecycle controller enabled devices.
Power Devices	Select to include PDUs and UPS.
Printers	Select to include printers.
RAC	Select to include devices with remote access controllers.
Servers	Select to include Dell servers.
Storage Devices	Select to include storage devices.

Field	Description
Unknown	Select to include unknown devices.
VMware ESX Servers	Select to include VMware ESX servers.

Summary — Group Configuration

View and edit selections.

Map View (Devices) Tab Interface

The following are the items displayed in the **Map View** and their descriptions.

Item	Description
Search bar	Enables you to search for locations on the map.
Internet connection warning **NOTE:** The Internet connection warning is displayed only if the **Show internet connection warning when unable to connect to the internet** option is selected in **Map Settings**.	Indicates if the system is not connected to the Internet.
Overlays menu	Enables you to overlay the health or connection status of the device on the pin. The options available are: • **Health** • **Connectivity** A tick mark is displayed beside the option that is selected.
Actions menu	Enables you to select a list of actions that can be performed. The available actions are: • **Show All Map Locations** • **Go to Home View** • **Save Current View as Home View** • **Add Licensed Device** • **Import Licensed Devices** • **Remove All Map Locations** • **Export** • **Settings** • **Edit Location Details** • **Remove Location** • **Zoom to Street Level** **NOTE:** The **Zoom to Street Level** option is displayed only when a device is selected on the map.

Item	Description
	NOTE: The **Edit Location Details**, **Remove Location**, and **Zoom to Street Level** options in the **Actions** menu are device-specific. These options must be used after selecting a device on the map.
Navigation toolbar	Enables you to move the map, zoom in or zoom out, and select a map service provider. The options available map providers are: • **MapQuest Provider (Free)** • **Bing Road Provider (Licensed)** • **Bing Satellite Provider (Licensed)**
Scale	Displays the current zoom level of the map in meters or kilometers.

Devices at this location

The **Device at this location** window is displayed when you double-click or right-click a multi-pin group and then select **Details**. The following are the fields displayed in the **Devices at this location** window:

Field	Description
Health Status	Displays the health status of the device. The status options are **Normal, Warning, Critical,** and **Unknown**.
Connection Status	Displays the connection status of the device. The connection statuses are **On** or **Off**.
Device Name	Displays the name of the device.
Service Tag	Displays a unique identifier, that provides the service lifecycle information.
Asset Tag	Displays the defined asset tag for the device.
Model	Displays the model name of the system. For example, PowerEdge R710.
Description	Displays the description of the device.
Address	Displays the location information of the device.
Contact	Displays the contact information of the device.

Map Settings

The following table provides information about the fields displayed in the **Map Settings** dialog box.

Field	Description
Update map view on any device or device group selection	Select to configure the map to display only the pin or pins that correspond to the device or device group selected in the device tree.
Show internet connection warning when unable to connect to the internet	Select to display a message on the map when an Internet connection is not available.
Bing Key	Allows you to provide a valid Bing key required by the Bing map provider.
Cancel	Click to close the **Map Settings** dialog box.
Apply	Click to save the updates in the **Map Settings** dialog box.

Related Links

Using Map View

9

Viewing Inventory Reports

OpenManage Essentials provides pre-defined reports for all discovered and inventoried devices. With these reports, you can:

- Consolidate information about devices in your environment.
- Filter report data based on the devices by clicking the **Filter by:** drop-down list. You can also add a new group of devices from the dashboard by clicking **Add New Group** from the **Filter by:** drop-down list.
- Export data for use in another application in the **XML** file format.

  NOTE: You cannot create new reports.

Choosing Predefined Reports

To view predefined reports, click **Reports**.

The **Managed Systems Reports** displays the predefined reports. Select from the available reports to view particular information about the devices in your environment. You can filter the reports based on the devices by clicking the **Filter by:** drop-down list. You can also add a new group of devices by clicking **Add New Group** from the **Filter by:** drop-down list.

Predefined Reports

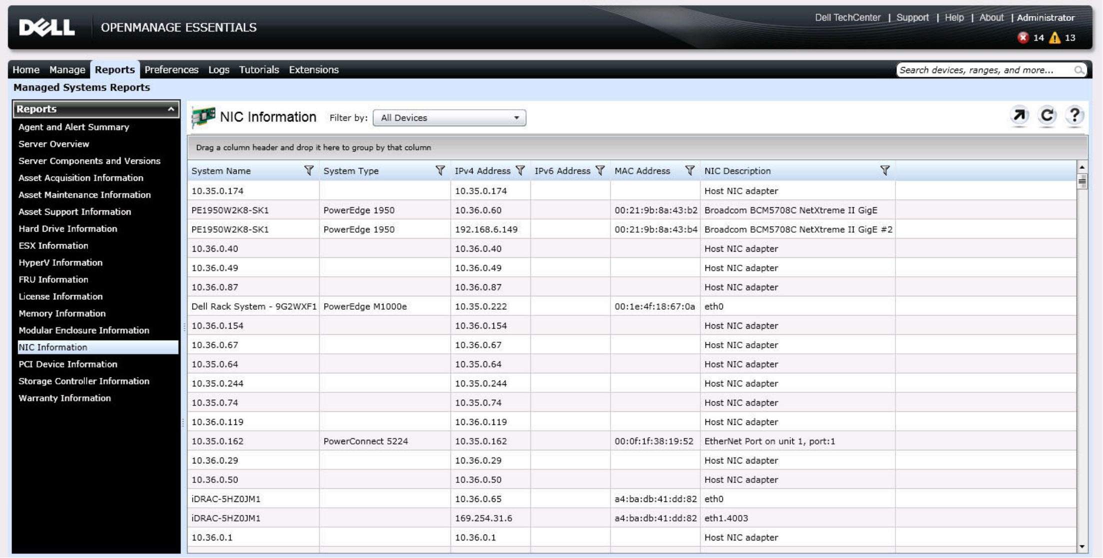
Report	Description
Agent and Alert Summary	Identifies the OpenManage Server Administrator versions installed on devices in the environment and allows you to identify the devices generating the most alerts. If the Server Administrator is not installed on a server, it is displayed as **None**. • The upper left web part identifies the OpenManage Server Administrator versions in your environment. • Clicking the OpenManage Server Administrator version in the OpenManage Server Administrator pie chart in the top right web part shows you the list of servers with that version installed. • The lower left web part lists in descending order the devices generating the most alerts since initial discovery and inventory. • The top five event generating devices are identified in the lower right web part. Click on a specific device to view the events associated with it.
Server Overview	Provides information about the servers such as the system name, operating system installed on the server, processors, and memory.

Report	Description
Server Components and Versions	Identifies BIOS, driver, and firmware versions on all discovered and inventoried servers.
Asset Acquisition Information	Provides acquisition information about the devices.
Asset Maintenance Information	Provides the maintenance information about the devices.
Asset Support Information	Provides the support information about the devices.
Hard Drive Information	Identifies serial number, revision, manufacturer, and bus type for hard drives.
ESX Information	Identifies ESX and ESXi virtual machine hosts and associated virtual machines.
HyperV Information	Identifies the HyperV virtual machine hosts and associated virtual machines.
FRU Information	Provides details on replaceable server components.
License Information	Provides the licensing information for the device.
Memory Information	Provides details on DIMMs and identifies the slot a particular DIMM occupies within a server.
Modular Enclosure Information	Provides information about the enclosure type, firmware version, enclosure Service Tag, and so on.
NIC Information	Identifies the NIC model-IP address, MAC address, manufacturer and part and serial numbers for NICs.
PCI Device Information	Identifies model, manufacturer, and slot for PCI and PCIe controllers in each server.
Storage Controller Information	Identifies the storage controllers on the server and provides the controller name, vendor, controller type, and controller state: • **Ready:** The storage controller is ready for use. • **Degraded:** There is a potential problem with the controller. Investigation is required.
Warranty Information	See Viewing Warranty Reports for details on how to run the warranty report and the information it provides.

Filtering Report Data

You can filter the results by dragging and dropping column headers to the top of reports. You can choose one or more attributes when revising the view to meet your specific needs.

For example, in the NIC Information report, drag the **System Type** and **System Name** to the top of the report. The view immediately changes to a nesting of information based on your preference. In this example, you can view nested data for NICs; NIC IP Address, MAC Address, and NIC description.



System Name	System Type	IPv4 Address	IPv6 Address	MAC Address	NIC Description
10.35.0.174		10.35.0.174			Host NIC adapter
PE1950W2K8-SK1	PowerEdge 1950	10.36.0.60		00:21:9b:8a:43:b2	Broadcom BCM5708C NetXtreme II GigE
PE1950W2K8-SK1	PowerEdge 1950	192.168.6.149		00:21:9b:8a:43:b4	Broadcom BCM5708C NetXtreme II GigE #2
10.36.0.40		10.36.0.40			Host NIC adapter
10.36.0.49		10.36.0.49			Host NIC adapter
10.36.0.87		10.36.0.87			Host NIC adapter
Dell Rack System - 9G2WXF1	PowerEdge M1000e	10.35.0.222		00:1e:4f:18:67:0a	eth0
10.36.0.154		10.36.0.154			Host NIC adapter
10.36.0.67		10.36.0.67			Host NIC adapter
10.35.0.64		10.35.0.64			Host NIC adapter
10.35.0.244		10.35.0.244			Host NIC adapter
10.35.0.74		10.35.0.74			Host NIC adapter
10.36.0.119		10.36.0.119			Host NIC adapter
10.35.0.162	PowerConnect 5224	10.35.0.162		00:0f:1f:38:19:52	EtherNet Port on unit 1, port:1
10.36.0.29		10.36.0.29			Host NIC adapter
10.36.0.50		10.36.0.50			Host NIC adapter
iDRAC-5HZ0JM1		10.36.0.65		a4:ba:db:41:dd:82	eth0
iDRAC-5HZ0JM1		169.254.31.6		a4:ba:db:41:dd:82	eth1.4003
10.36.0.1		10.36.0.1			Host NIC adapter

Figure 4. NIC Information Report

Exporting Reports

Exporting a report enables you to manipulate and reformat the data. To export a report:

1. In the Reports list, right-click on any report to display the **Export** option.
2. Scroll over the **Export** option to display supported formats.
3. Choose your preferred format (CSV, HTML, or XML) and provide a file name for the exported report.

10

Reports — Reference

From Reports you can view the following:

- Agent and Alert Summary
- Server Overview
- Server Components and Versions
- Asset Acquisition Information
- Asset Maintenance Information
- Asset Support Information
- Hard Drive Information
- ESX Information
- HyperV Information
- FRU Information
- License Information
- Memory Information
- Modular Enclosure Information
- NIC Information
- PCI Device Information
- Storage Controller Information
- Warranty Information

You can also filter the information based on a device or group by clicking **Filter by** and then selecting the device or group.

Related Links

Agent and Alert Summary
Server Overview
Server Components and Versions
Asset Acquisition Information
Asset Maintenance Information
Asset Support Information
Hard Drive Information
ESX Information
HyperV Information
Field Replaceable Unit (FRU) Information
License Information
Memory Information
Modular Enclosure Information
NIC Information
PCI Device Information
Storage Controllers Information

Warranty Information

Agent and Alert Summary

The **Agent and Alert Summary** displays the following:

- Agent Summary
- Alerts per Device
- Top Alert Generators

Agent Summary

Field	Description
Number of systems using specific server administrator agent	
Agent Details	Displays the name and version of the agent.
Number of systems utilizing this agent	Displays the number of systems utilizing a specific version of the agent.

The **Agent Summary** pane displays the agent summary as a graph.

Alerts per Device

Field	Description
Most active discovered systems based on alert occurrence	
Device Name	Displays the name of the device
Number of Associated Events	Displays the number of alerts from the device.
Last Discovered On	Displays the IP Address range or host name.
Inventory Time	Displays the time and date information for the last run inventory.

Top Alert Generators

The **Top Alert Generators** pane displays the top five systems with the maximum alerts.

Server Overview

Field	Description
System Name	The unique system’s name that identifies it on the network.
System Type	The system’s model information.
Operating System	The operating system installed on the system.
Processor Count	The number of processors installed on the system.
Processor Family	The type of processor installed on the system.

Field	Description
Processor Cores	The number of processor cores.
Processor Speed	The speed of the processor.
Total Cores	The total number of cores present in the system.
Total Memory	The total memory installed on the system

Server Components and Versions

Field	Description
System Name	Host name of the system.
Service Tag	Unique identification number assigned to the system.
Model Type	The system's model name. For example PowerEdge R710.
Description	The software information.
Software Type	The type of software that is available on the system. For example, firmware.
Software Version	The version number of the software that is available on the system.

Asset Acquisition Information

Field	Description
System Name	Displays the unique name of the system that identifies it on the network.
System Type	Displays the model information of the system.
Service Tag	Displays the unique identification number assigned to the system.
Purchase Cost	Displays the price the owner paid for the system.
Purchase Date	Displays the date the owner purchased the system.
Way Bill Number	Displays the receipt from the carrier for the goods received.
Purchase Order Number	Displays the number of the document that authorized payment for the system.
Installation Date	Displays the date the system was put to service.
Expensed	Displays whether the system is charged to a specific purpose or department such as research and development or sales.
Cost Center	Displays the name or code for the business entity that acquired the system.

Field	Description
Signing Authority Name	Displays the name of the person who approved the purchase or the service call on the system.
Vendor	Displays the business entity that offers service on the system.
Depreciation Duration	Displays the number of years or months over which a system is depreciated.
Depreciation Duration Unit Type	Displays the unit in months or years.
Depreciation Percentage	Displays the portion of 100 that an asset is devalued or depreciated.
Depreciation Method	Displays the steps and assumptions used to compute the system's depreciation.
Ownership Code	Defines the ownership code for this system.
Corporate Owner Name	Displays the business entity that owns the system.
Insurance Company	Displays the name of the company that insures the system.

Asset Maintenance Information

Field	Description
System Name	Displays the unique name of the system that identifies it on the network.
System Type	Displays the model information of the system.
Service Tag	Displays the unique identification number assigned to the system.
Multiple Schedules	Displays whether there are multiple schedules for the lease.
Buyout Amount	Displays the balance purchase price for the system.
Lease Rate Factor	Displays the rate factor for the lease on the system.
Lease End Date	Displays the end date for the lease on the system.
Fair Market Value	Displays the fair market value of the system.
Lessor	Displays the name of the lessor of the system.
Maintenance Provider	Displays the maintenance provider's name.
Maintenance Restrictions	Displays the maintenance agreement restrictions.
Maintenance Start Date	Displays the start date for maintenance on this system.
Maintenance End Date	Displays the end date for maintenance on this system.

Field	Description
Outsourcing Problem Description	Displays the the problem encountered with the outsourcing service provider.
Outsourcing Service Fee	Displays the amount that the outsourcing vendor charges for service.
Outsourcing Provider Fee	Displays any additional outsourcing charge for service.
Outsourcing Provider Service Level	Displays the service level agreement for the system.
Outsourcing Signing Authority	Displays the name of the person who can sign the authorization for service.

Asset Support Information

Field	Description
System Name	Displays the unique name of the system that identifies it on the network.
System Type	Displays the model information of the system.
Service Tag	Displays the unique identification number assigned to the system.
Warranty Cost	Displays the extended warranty cost date for the system.
Warranty Duration	Displays the duration of the warranty.
Warranty Duration Type	Displays the warranty duration type for the system.
Warranty End Date	Displays the warranty end date for the system.
Extended Warranty Cost	Displays the cost of the warranty for the system.
Extended Warranty Start Date	Displays the extended warranty start date for the system.
Extended Warranty End Date	Displays the extended warranty end date for the system.
Extended Warranty Provider Name	Displays the name of the extended warranty provider for the system.
Contract Renewed	Displays whether the service contract for the system was renewed.
Contract Type	Displays the name of the service contract type for the system.
Contract Vendor	Displays the name of the service contract provider for the system.
Outsourced	Displays whether the support for the system is outsourced or not.
Support Type	Displays the type of component, system, or network problem that occurred.

Field	Description
Help Desk	Displays the help desk information provided
Automatic Fix	Displays the method used to fix the problem.

Hard Drive Information

Field	Description
System Name	The unique system's name that identifies it on the network.
System Type	The system's model information.
Service Tag	A Dell specific unique bar code label identifier on the system.
Enclosure ID	The enclosure ID is assigned to the enclosure by Storage Management. Storage Management numbers the enclosures attached to the controller starting with zero.
Channel	The number of channels.
Target ID	The SCSI ID of the backplane (internal to the server) or the enclosure to which the controller connector is attached. The value is usually 6.
LUN ID	In computer storage, a logical unit number or LUN number used to identify a logical unit, which is a device addressed by the SCSI protocol or similar protocols such as Fibre Channel or iSCSI.
Size (GB)	The size of the hard drive in GB.
Bus Type	The type of bus connection used. Buses are information pathways between components of a system.
Serial Number	The roll number assigned to the device by the manufacturer.
Revision	The hard disk's revision history.
Media Type	The type of media. For example, HDD.
Vendor	The organization that supplies the hard drive.

ESX Information

Field	Description
Host Name	The unique system's name that identifies it on the network and the system in which embedded bare metal product is installed.
System Type	The system's model information.
VM Type	The type of embedded bare-metal product installed on the system. For example, VMware ESX.
Version	The version of the embedded bare-metal that is installed on the system.

Field	Description
Guest Name	The name of the guest virtual machine.
Guest OS Type	The operating system that is installed on the virtual machine.
Guest Memory Size (MB)	The size of the virtual machine’s RAM.
Guest State	The state of the virtual machine, if the machine is powered off or powered on.

HyperV Information

Field	Description
Host Name	The unique system’s name that identifies it on the network. and the system in which the HyperV is installed.
System Type	The system’s model information.
Guest Name	The name of the guest virtual machine.
Guest Memory Size (MB)	The size of the virtual machine’s RAM.
Guest State	The state of the virtual machine, if the machine is powered off or powered on.

Field Replaceable Unit (FRU) Information

Field	Description
System Name	The user provided name of the system.
Model Type	The system’s model name. For example PowerEdge R710.
Service Tag	Unique identification number assigned to the system.
FRU Device Name	The standard FRU name assigned to the device.
FRU Manufacturer	The name of the FRU manufacturer.
FRU Serial Number	The manufacturer specified FRU’s identification number.
FRU Part Number	The industry specific number that differentiates the type of FRU.

License Information

Field	Description
System Name	Displays the unique name of the system that identifies it on the network.
Model Type	Displays the model name of the system. For example, PowerEdge R710.
License Description	Displays the level of features enabled in the license.
License Duration	Displays the duration of the license.

Field	Description
Entitlement ID	Displays the unique identifier for the license.
Time Remaining	Displays the days remaining until the license expires.

Memory Information

Field	Description
System Name	Provide a name for this server power options task.
Service Tag	Unique identification number assigned to the system.
System Type	The system’s model name. For example PowerEdge R710.
Memory Device Name	The device’s named assigned by the manufacturer. For example, DIMMI_A.
Memory Device Size (MB)	The size of the memory device in GB.
Memory Device Manufacturer	The name of the device’s manufacturer.
Memory Device Part Number	The industry specific number assigned to the device.
Memory Device Serial Number	The roll number assigned to the device by the manufacturer.

Modular Enclosure Information

Field	Description
Enclosure Model Type	The enclosure’s model name. For example, PowerEdge M1000e.
Slot Number	The slot number on the enclosure.
Slot Name	The slot name of the enclosure.
Slot Availability	Displays if the slot is available or occupied in the modular enclosure.
Firmware Version	The firmware version installed on the enclosure.
Enclosure Service Tag	A Dell specific unique bar code label identifier for the enclosure.
Enclosure Name	The unique enclosure name that identifies it on the network.
Blade Model Type	The blade’s model information.
Blade Service Tag	A Dell specific unique bar code label identifier for the blade.
Blade Host Name	The blade’s model name. For example, PowerEdge M710.
Blade OS	The operating system installed on the blade.

NIC Information

Field	Description
System Name	The name of the system.
System Type	The system’s model name. For example, PowerEdge R710.
IPv4 Address	The unique IPv4 address assigned to the NIC device.
IPv6 Address	The unique IPv6 address assigned to the NIC device.
MAC Address	A unique Media Access Control address (MAC address) identifier assigned to network interfaces for communications on the physical network segment.
NIC Description	Information on the NIC device.

PCI Device Information

Field	Description
System Name	The unique system’s name that identifies it on the network.
System Type	The system’s model information.
Service Tag	A Dell specific unique bar code label identifier for a system.
Device Card Description	The type of Peripheral Component Interconnect card used. For example, 82546GB Gigabit Ethernet Controller.
Device Card Manufacturer	The manufacturer’s information.
Device Card Slot Type	The type of slot on the mother board into which the card is inserted.

Storage Controllers Information

Field	Description
System Name	The unique system’s name that identifies it on the network. The storage controller is present on this system.
System Type	The system’s model information.
Controller Name	The name of the storage controller. For example, SAS 6/iR Integrated.
Vendor	The supplier’s information. For example, SAS 6/iR Integrated is supplied by Dell.
Controller Type	The type of controller. For example, SAS 6/iR Integrated is of type SAS.
Controller State	The state of the controller. For example, ready to use.

Warranty Information

Field	Description
View and Renew Warranty	Click to open the Dell website from where you can view and renew the device warranty.
System Name	The unique system's name that identifies it on the network. Enable the proxy setting for the warranty to Warranty data from **support.dell.com**.
Device Model Type	The system's model information.
Device Type	The type of device, for example, server, Remote Access Controller.
Shipped Date	The date on which the device was sent from the factory.
Service Tag	A Dell specific unique bar code label identifier for a system.
Service Level Code	Displays the service level code such as parts only warranty (POW), next business day onsite (NBD), and so on for a particular system.
Service Provider	The name of the organization that will provide the warranty service support for the device.
Start Date	The date from which the warranty is available.
End Date	The date on which the warranty will expire.
Days Remaining	The number of days the warranty is available for the device.
Warranty Description	The warranty details applicable for the device.

11

Viewing Warranty Reports

Warranty information is available for devices with valid Service Tags, including clients, servers, switches, storage, and so on. Warranty information is automatically retrieved at the time devices are discovered.

The Warranty Information report is unique among OpenManage Essentials reports as it requires Internet access to pull warranty information from the Dell warranty database. If you do not have internet access, no warranty information is populated. It is downloaded the next time you connect to the internet and open the Warranty Report.

Extending Warranty

To extend support for the devices, right-click a device and click **View and Renew Warranty**. This option opens **support.dell.com** with the device selected. Alternately you can click the **View and Renew Warranty** button to open the warranty site. If you log in to the warranty site with the company account you will see all their devices with warranty information.

12

Managing Alerts

With OpenManage Essentials you can:

- View alerts and alert categories
- Manage alert actions
- Configure alert log settings

Viewing Alerts and Alert Categories

To view the alerts page, from OpenManage Essentials, click **Manage** → **Alerts**.

NOTE: Alerts for deleted devices are not displayed in the console. However, these alerts are not deleted from the database until the purge limits are reached.

Viewing Alert Logs

To view alert logs, click **Manage** → **Alerts** → **Alert Logs**.

Understanding the Alert Types

The following alert log types are displayed.

Table 2. Alert Types

Icon	Alert	Description
✓	Normal Alerts	An event from a server or a device that describes the successful operation of a unit, such as a power supply turning on or a sensor reading returning to normal.
⚠	Warning Alerts	An event that is not necessarily significant, but may indicate a possible future problem, such as crossing a warning threshold.
✖	Critical Alerts	A significant event that indicates actual or imminent loss of data or loss of function, such as crossing a failure threshold or a hardware failure.
?	Unknown Alerts	An event has occurred but there is insufficient information to classify it.
ℹ	Information Alerts	Provides information only.

Viewing Internal Alerts

Before viewing internal alerts, ensure that you enable internal health alerts in the **Alert Settings** of the **Preferences** tab. See Alert Settings.

To view internal alerts, click **Manage** → **Alerts** → **Alert Logs** → **All Internal Alerts.**

All Internal Alerts is a reference to the internal alerts that OpenManage Essentials generates such as health status, system up or down, and so on.

Viewing Alert Categories

To view alert categories, click **Manage** → **Alerts** → **Alert Categories**.

The predefined alert categories are listed in alphabetical order.

Viewing Alert Source Details

To view an alert category, in the alert categories list, expand an alert category, and then select an alert source.

NOTE: You cannot create a new event source.

For example, expand **Environmental** alert category and then select the **alertCoolingDeviceFailure** alert source.

Alert Source Values and Descriptions for alertCoolingDeviceFailure

Field Name	Value	Description
Name	alertCoolingDeviceFailure	
Type	SNMP	An SNMP alert based source.
Catalog	MIB - 10892	
Severity	Critical	If this alert is received then the system is in critical state and immediate action is required.
Format String	$3	
SNMP Enterprise OID	.1.3.6.1.4.1.674.10892.1	
SNMP Generic Trap OID	6	
SNMP Specific Trap OID	1104	

Viewing Previously Configured Alert Actions

Viewing Application Launch Alert Action

To view the application launch alert action:

1. Select **Manage** → **Alerts** → **Alert Actions**.
2. In Alert Actions, select **Application Launch**.

Viewing E-Mail Alert Action

To view the e-mail alert action:

1. Select **Manage** → **Alerts** → **Alert Actions**.
2. In **Alert Actions**, select **Email**.

Viewing Alert Ignore Action

To view the alert ignore action:

1. Select **Manage** → **Alerts** → **Alert Actions**.
2. In **Alert Actions**, select **Ignore**.

Viewing Alert Trap Forward Action

To view the alert trap forward action:

1. Select **Manage** → **Alerts** → **Alert Actions**.
2. In **Alert Actions**, select **Trap Forwarding**.

Handling Alerts

Flagging an Alert

After you have completed action on an alert, flag the alert as acknowledged. Acknowledging an alert indicates it is resolved or does not require further action as a reminder to yourself. To acknowledge alerts:

1. Select **Manage** → **Alerts** → **Alert Logs**.
2. Click the alert you want to acknowledge.

   NOTE: You can acknowledge multiple alerts simultaneously. Use <Ctrl> or <Shift> to select multiple alerts.
3. Right-click and click **Acknowledge** → **Set** → **Selected Alerts or Filtered Alerts** .

   If you choose **Selected Alerts**, the highlighted alerts are acknowledged.

   If you choose **Filtered Alerts**, all alerts in the current filter/view are acknowledged.

Creating and Editing a New View

To personalize the way you view alerts, create a new view or modify an existing view. To create a new view:

1. Select **Manage** → **Alerts** → **Common Tasks** → **New Alert View Filter**.
2. In **Name and Severity Association**, enter a name for the new filter, and then check one or more severities. Click **Next**.
3. In **Categories and Sources Association**, assign the alert category or source to which you want to associate with this view filter and click **Next**.
4. In **Device Association**, create query for searching devices or assign the device or device groups, which you want to associate to this view filter and then click **Next**.
5. (Optional) By default the alert view filter is always active. To limit activity, in **Date Time Association**, enter a date range, time range, or days, and then click **Next**.

6. (Optional) In **Acknowledged Association**, set duration when this alert action is active, and then click **Next**. The default is always active.
7. In **Summary**, review inputs and click **Finish**.

Configuring Alert Actions

Alert actions occur on all alerts received by the OpenManage Essentials console. The alert is received and processed by the OpenManage Essentials console whether or not OpenManage Essentials has discovered the device so long as OpenManage Essentials is listed in the device's SNMP trap forward destinations list. To prevent this, remove OpenManage Essentials from the SNMP trap forward destinations list on the device.

Setting Up E-mail Notification

You can create e-mail notifications when an alert is received. For example, an e-mail is sent if a critical temperature alert is received from a server.

To configure an e-mail notification when an alert(s) is received:

1. Select **Manage → Alerts → Common Tasks → New Alert Email Action**.
2. In **Name and Description**, provide e-mail alert action name and description and then click **Next**.
3. In **E-mail Configuration**, do the following and then click **Next**.
   a) Provide e-mail information for the **To:** and **From:** recipients and provide the substitution information. Separate each recipient or distribution list with a semi-colon.
   b) Customize the e-mail message format with any of the following substitution parameters:
      - $n = Device
      - $ip = Device IP
      - $m = Message
      - $d = Date
      - $t = Time
      - $sev = Severity
      - $st = Service Tag
      - $e = Enterprise OID
      - $sp = Specific Trap OID
      - $g = Generic Trap OID
      - $cn = Alert Category Name
      - $sn = Alert Source Name
      - $pkn = Package Name
      - $at = Asset Tag

   c) Click **Email Settings** and provide SMTP server name or IP Address, to test e-mail settings and click **OK**.
   d) Click **Test Action** to send test e-mail.
4. In **Severity Association**, assign the alert severity to which you want to associate this e-mail alert and then click **Next**.
5. In **Categories and Sources Association**, assign the alert categories or alert sources to which you want to associate this e-mail alert and then click **Next**.
6. In **Device Association**, assign the device or device groups to which you want to associate this e-mail alert and then click **Next**.
7. By default the Email Notification is always active. To limit activity, in **Date Time Association**, enter a date range, time range, or days, and then click **Next**.

8. In **Summary**, review the inputs and click **Finish**.

Related Links

- Alert Logs
- Alert Logs Fields
- Alert Log Settings
- Severity

Ignoring Alerts

Sometimes you will receive alerts you might want to ignore. For example, you may want to ignore multiple alerts generated when **Send authentication trap** is selected within the SNMP service on the managed node. To ignore an alert:

1. From OpenManage Essentials, select **Manage** → **Alerts** → **Common Tasks** → **New Alert Ignore Action.**
2. In **Name and severity Association**, provide a name, assign the alert severity to which you want to associate this ignore alert action, and then click **Next**.
3. In **Categories and Sources Association**, assign the alert categories source to which you want to associate this alert ignore action and then click **Next**.
4. In **Device Association**, assign the device or device groups to which you want to associate this alert ignore action and then click **Next**.
5. By default the Ignore Alert is always active. To limit activity, in **Date Time Association**, enter a date range, time range, or days, and then click **Next**.
6. In **Duplicate Alert Correlation**, select **yes** to exclude duplicate alerts received within the set time limit, and then click **Next**.
7. In **Summary**, review inputs and click **Finish**.

Running a Custom Script

In response to a specific alert received, you can run custom scripts or launch a specific application. This file must be present on the OpenManage Essentials service tier system (where OpenManage Essentials is installed) and not on the client browser system. For example:

- If you received a temperature warning, you can use a custom script to create an incident ticket for your internal Help Desk.
- If you received an MD Array storage alert, you can launch the Modular Disk Storage Manager (MDSM) application to view the status of the array.

Creating a Custom Script

1. Select **Manage** → **Alerts** → **Alert Actions**.
2. In **Alert Actions**, right-click **Application Launch** and select **New Alert Application Launch Action**.
3. In **Name and Description**, provide an application launch name and description and then click **Next**.
4. In **Application Launch Configuration**, provide an executable name (provide an absolute file path, for example, **C:\ProgramFiles\Dell\Application.exe**) and provide the substitution information, and then click **Next**.
5. In **Severity Association**, assign the alert severity to which you want to associate this alert application launch and then click **Next**.
6. In **Categories and Sources Association**, assign the alert categories or alert sources to which you want to associate this alert application launch and then click **Next**.
7. In **Device Association**, assign the device or device groups to which you want to associate this alert application launch and then click **Next**.
8. By default the Application Launch Action is always active. To limit activity, in **Date Time Association**, enter a date range, time range, or days, and then click **Next**.

9. In **Summary**, review inputs and click **Finish**.

Related Links

Alert Logs
Alert Logs Fields
Alert Log Settings
Severity

Forwarding Alerts

You may want to consolidate alerts from multiple management stations to one management station. For example, you have management stations in multiple locations and you want to view status and take action from one central location. For information about the behavior of forwarded alerts, see Forwarding Alerts Use Case. To create alert forwards:

1. Select **Manage** → **Alerts** → **Common Tasks** → **New Alert Trap Forward Action.**
2. In **Name and Description**, provide Trap Forward name and description and then click **Next**.
3. In **Trap Forwarding Configuration**, provide destination host name or IP address, provide community information, to send a test trap to the destination management station, click **Test Action**. To forward the trap in the same format to the configured destination, click **Forward Trap in Original Format** and click **Next**.
4. In **Severity Association**, assign the alert severity to which you want to associate this trap forwarding alert and then click **Next**.
5. In **Categories and Sources Association**, assign the alert categories source to which you want to associate this trap forwarding alert and then click **Next**.
6. In **Device Association**, assign the device or device groups to which you want to associate this trap forwarding alert and then click **Next**.
7. By default the Trap Forward Action is always active. To limit activity, in **Date Time Association**, enter a date range, time range, or days, and then click **Next**.
8. In **Summary**, review inputs and click **Finish**.

   The severity status for any trap is set to normal and for a successful alert action, combination of severity, category, and device has to confer with the selections in the preceding steps.

Forwarding Alerts Use Case Scenarios

This section describes scenarios about forwarding alerts using the SNMP v1 and SNMP v2 protocols. The scenarios consists of the following components:

- Managed node with an SNMP v1 agent, referred to as MNv1
- Managed node with an SNMP v2/v2c agent, referred to as MNv2
- Managed station 1 with OpenManage Essentials, referred to as MS1
- Managed station 2 with OpenManage Essentials, referred to as MS2
- Managed station 3 with a third-party software, referred to as MS3

Scenario 1 — Forwarding Alerts in the Original Format Using SNMP v1 Protocol

In this scenario, SNMP v1 alerts are sent from MNv1 to MS1 and then forwarded from MS1 to MS2. If you try to retrieve the remote host of the forwarded alert, it displays the name of MNv1 as the alert originates from MNv1. MNv1 is displayed because the SNMP v1 alert standards allow you to set the agent name in the SNMP v1 alert.

Scenario 2 — Forwarding Alerts in the Original Format Using SNMP v2/v2c Protocol

In this scenario, SNMP v2 alerts are sent from MNv2 to MS1 and then forwarded from MS1 to MS3. If you try to retrieve the remote host of the forwarded alert from MS3, it is displayed as MS1

Since there are no fields in an SNMP v2 alert to specify the agent name, the host which sends the alert is assumed as the agent. When an SNMP v2 alert is forwarded from MS1 to MS3, MS1 is considered as the source of problem. To resolve this issue, while forwarding SNMP v2 or v2c alerts, a varbind is added with OID as .1.3.6.1.6.3.18.1.3.0 with the variable value as **Agent Address**. This has been set based on the standard OID specified in RFC2576-MIB. When you try to retrieve the **Agent Address** from MS3, it is displayed as MNv2

NOTE: If the SNMP v2 alert is forwarded from MS1 to MS2, the remote host is displayed as MNv2 because MS1 parses the extra OID along with the forwarded trap.

Scenario 3 — Forwarding Alerts in the OMEssentials Format Using Either SNMP v1/v2 Protocol

In this scenario, SNMP v1 alerts are sent from MNv1 to MS1 and then forwarded to MS2. If you try to retrieve the remote host of the forwarded alert, it is displayed as MS1. The severity and the message of the alert is also defined by MS1 and does not display the original severity and message defined by MNv1.

NOTE: The same behavior applies for SNMPv2 traps.

Working With Sample Alert Action Use Cases

Sample alert actions are available for the **Application Launch, E-mail, Ignore,** and **Trap Forwarding** alert actions. Sample alert action use cases are disabled by default. Click the sample alert actions to enable the sample alert action.

To enable a sample use case, right-click the use case and select **Enable**.

Use Cases in Alert Actions

Application Launch

Sample - Run Script on Server Critical Alert—Enable this use case to run a custom script when a critical alert is received.

Email

- **Sample - Email Alerts to Service Desk**—Enable this use case to send an e-mail to the service desk account from the OpenManage Essentials server when an alert criteria is matched.
- **Sample - Email Critical Server Alerts to Admin**—Enable this use case to send an e-mail to an administrator from the OpenManage Essentials server when an alert criteria is matched.

Ignore

- **Sample - Ignore Alerts During Maintenance Window**—Enable this use case to ignore alerts during a specified time interval.
- **Sample - Ignore Duplicate Alerts with 15s**—Enable this use case to ignore duplicate alerts from the same system.
- **Sample - Ignore Non-Critical Alerts from Printers**—Enable this use case to ignore non-critical alerts related to printers.

Trap Forwarding

Sample - Forward Critical Server Alerts to Other Monitoring Console—Enable this use case to forward SNMP alerts another monitoring console.

Configuring Alert Log Settings

You can configure alert log settings to set the maximum size of alert logs; to generate a warning alert when the alert log reaches a set threshold, and to purge the alert logs. To modify the default settings:

1. Select **Manage** → **Alerts** → **Common Tasks** → **Alert Log Settings.**
2. Enter a value or use the increment/decrement arrow buttons to increase or decrease the value.

   NOTE: The default maximum size of alert logs is 20,000 alerts. Once that value is reached, the older alerts are purged.

Renaming Alert Categories and Alert Sources

1. Click **Manage** → **Alerts** → **Alert Categories**.
2. In **Alert Categories**, right-click any of the alert categories (under the Alert Category heading in the left pane) and select **Rename**.
3. Provide a name for the alert category and click **OK**.

13

Alerts — Reference

This page provides the following information:

- Common Tasks
  - Alert Log Settings
  - New Alert View Filter
  - New Alert Application Launch Action
  - New Alert Email Action
  - New Alert Ignore Action
  - New Alert Trap Forward Action
- Alert Logs
  - Alert View Filters
    - All Alerts
    - All Internal Alerts
    - Critical Alerts
    - Normal Alerts
    - Unknown Alerts
    - Warning Alerts
- Alert Actions
  - Application Launch
  - E-mail
  - Ignore
  - Trap Forwarding
- Alert Categories

Alert Logs

You can view alerts from **Alerts Logs**. The Alert Logs allow you to view all alerts filtered by the active view filter. The criteria for matching the alerts in the view filter include:

- Alert severity. See Severity.
- Alert category or source. See Category and Sources Association.
- Alert device or device group source. See Device Association.
- Alert date, time, or day of week. See Date and Time Range.
- Alert acknowledged flag. See Acknowledgement.

Related Links

Configuring Alert Log Settings
Configuring Alert Actions

[Setting Up E-mail Notification](#)
[Creating a Custom Script](#)
[Alert Logs Fields](#)
[Alert Log Settings](#)
[Severity](#)

Predefined Alert View Filters

The following table lists the predefined alert view filters.

Field	Description
All Alerts	Select to view all the alerts.
Critical Alerts	Select to view all the systems that are critical.
Normal Alerts	Select to view normal alerts.
Unknown Alerts	Select to view alerts that OpenManage Essentials cannot categorize.
Warning Alerts	Select to view all the warnings.

Select **Continuous Updates** to enable the user interface to update automatically when new alerts are received.

Alert Logs Fields

Field	Description
Severity	The alert severity
Acknowledged	Whether the alert has been acknowledged or not by the user.
Time	The date and time the alert was generated.
Device	The device which generated the alert.
Details	The message contained in the alert.
Category	The categorization of the alert.
Source	The name of the alert source definition.

Group By Column

To group by in **All Alerts**, drag the All Alert column that you want to group by and drop it in **Drag a column header and drop it here to group by that column**.

For example, In **All Alerts**, if you want to group by severity, select **Severity** and drag and drop it in the **Drag a column header and drop it here to group by that column** bar.

The alerts are displayed by severity.

Alert Details

Field	Description
Severity	The alert severity.
Acknowledged	Whether the alert has been acknowledged or not by the user.
Device	The device which generated the alert.
Time	The date and time the alert was generated.
Category	The categorization of the alert.
Source	The name of the alert source definition.
Description	The message contained in the alert.
SNMP Enterprise OID	Provides the enterprise OID (SNMP OID prefix) of the management information base (MIB) file that defines the event source that you want to monitor.
SNMP Generic Trap OID	Provides the generic trap ID of the SNMP trap that you want to monitor from the desired event source. See the *Dell OpenManage Server Administrator SNMP Reference Guide* at **support.dell.com/manuals** for more information on SNMP traps.
SNMP Specific Trap OID	Provides the specific trap ID of the SNMP trap that you want to monitor from the desired event source. See the *Dell OpenManage Server Administrator SNMP Reference Guide* at **support.dell.com/manuals** for more information on SNMP traps.

Alert Log Settings

Configure settings which control the size, messaging, and purge settings of the Alert Logs.

Field	Description
Maximum size of Alert Logs	Determines the maximum number of alerts the alert logs can have before purging occurs.
Log a warning when the Alert Log size reaches	A warning alert is sent to the application log when this size is reached.
When the Alert Logs reach the Maximum size, purge	Purges the specified number of alerts when the maximum size is reached.

Alert View Filters

Alert Filter Name

In OpenManage Essentials, you use alert filters that are associated with alert actions to implement alerting capabilities. For example:

- You can create alert action associations to trigger actions, such as sending e-mails, when an alert condition is met.

- You can create ignore, exclude, or both associations to ignore SNMP traps and CIM indications when they are received. You use these associations to suppress alert floods.
- You can create alert view filters to customize the **Alert Logs** view.

For more information about creating alert action associations, see Managing Alerts.

Use this window to perform the following tasks:

- Create new alert action associations, ignore/exclude filters, and alert view associations.
- View summary information for alert action associations, ignore/exclude associations, and alert view filters.
- Edit, delete, rename, and copy alert action associations, ignore/exclude associations, and alert view filters.

Severity

This page provides a list of alert severity.

Field	Description
Name	Name of the item (applicable only for ignore action and view filter).
Enabled	Select to enable the alert action (applicable only for ignore action).
Severity	The alert types available.
All	Select to include all types of alerts.
Unknown	Select to include unknown alerts.
Normal	Select to include normal alerts.
Warning	Select to include warning alerts.
Critical	Select to include critical alerts.

Acknowledgement

Field	Description
Limit alerts based on the acknowledge flag	Associations alerts by whether they have been acknowledged or not. This option is disabled by default.
Match only acknowledged alerts	Select to track acknowledged alerts only.
Match only unacknowledged alerts	Select to track unacknowledged alerts only.

Summary — Alert View Filter

The view filter summary screen is shown on the final page of the alert view filter wizard or when clicking on the view summary right-click option in the tree.

Field	Description
Name	The name of the alert action.
Type	The alert action type - App Launch, Email, Ignore, Trap, and Forward.
Description	The description of the alert action.

Field	Description
Associated Severity	The alert severity criteria used when matching alerts.
Associated Alert Categories	The alert category criteria used when matching alerts.
Associated Alert Sources	The alert source criteria used when matching alerts.
Associated Device Groups	The alert source device group criteria used when matching alerts.
Associated Devices	The alert source device criteria used when matching alerts.
Associated Date Range	The alert date range criteria used when matching alerts.
Associated Time Range	The alert time range criteria used when matching alerts.
Associated Days	The alert days criteria used when matching alerts.
Associate Acknowledge	If enabled, uses the alert acknowledged flag when matching alerts.

Alert Actions

Alert actions are triggered when an incoming alert matches the specific criteria defined in the alert action. The criteria for matching the alert include:

- Alert severity. See Severity Association.
- Alert category or source. See Category and Sources Association.
- Alert device or device group source. See Device Association.
- Alert date, time, or day of week. See Date and Time Range.

There are four types of alert actions:

- **Alert Application Launch Action**—Launch a script or batch file when the alert action criteria is matched.
- **Alert Email Action**—Send an e-mail when the alert action criteria is matched.
- **Alert Ignore Action**—Ignore the alert when the alert action criteria is matched.
- **Alert Trap Forward Action**—Forward the SNMP Trap to another management console when the alert action criteria is matched.

By default, new alert actions are enabled. If you wish to turn off the alert action without deleting it, you can disable it either through the right-click menu or the edit wizard for the alert action.

Several common alert action use cases are pre-installed in the disabled state to illustrate common usage. When using these pre-installed actions, it is recommended to clone the example to a new action specific to your needs. Make sure to enable and test the new action during this process.

Name and Description

Field	Description
Name	The name of the alert action.
Description	The description of the e-mail action.
Enabled	Select to activate the alert action.

Severity Association

Field	Description
Severity	The alert types available.
All	Select to include all types of alerts.
Unknown	Select to include unknown alerts.
Normal	Select to include normal alerts.
Warning	Select to include warning alerts.
Critical	Select to include critical alerts.

Application Launch Configuration

Use this window to configure the application that you want to launch and to test the launch.

NOTE: Alert actions are run when a matching alert is received so the alert application launch action is a script or batch file that does not require user interaction.

Field	Description
Executable Name	Specifies the fully qualified path name and file name of the executable file that launches the application program.
Arguments	Specifies or edits any required or desired command line parameters to be used in launching the application program. You can use the following variable substitutions to specify information in the Arguments field: • $n = system name • $ip = IP address • $m = message • $d = date • $t = time • $sev = severity • $st = Service Tag • $e = enterprise OID • $sp = specific trap ID • $g = generic trap ID • $cn = alert category name • $sn = alert source name • $pkn = package name • $at = asset tag **Executable file**: If you have an executable file (for example, createTroubleTicket.exe), to create a trouble ticket with parameters –arg1, -arg2, and so on; configure the alert application launch as follows: • Executable Name (with the full path): C:\temp \createTroubleTicket.exe • Argument: -arg1 –arg2

Field	Description
	When the alert action is triggered, it runs the command C:\temp\createTroubleTicket.exe –arg1 -arg2 to perform the associated application launch alert action. **Batch file**: If you have a batch file (for example, createTroubleTicket.bat), to create a trouble ticket with parameters –arg1, -arg2, and so on, configure the alert application launch as follows: • Executable Name (with the full path): C:\temp\createTroubleTicket.bat • Argument: -arg1 –arg2 When the alert action is triggered, it runs the command C:\temp\createTroubleTicket.bat –arg1 -arg2 to perform the associated application launch alert action. **VB script**: When configuring vb script files as an alert action, provide the executable and arguments as follows. For example, if you have a script (createTroubleTicket.vbs), to create a trouble ticket that contains one parameter arg1, configure the application launch as follows: • Executable Name: cscript.exe or C:\Windows\System32\cscript.exe (full path) • Argument: C:\temp\createTroubleTicket.vbs arg1 When the alert action is triggered, it runs the command cscript.exe C:\temp\ createTroubleTicket.vbs arg1 to perform the associated application launch alert action. **NOTE:** If an alert action is not working, ensure that you have entered complete command from the command prompt. See the sample alert action under Application Launch alert action for more information.
Test Action	Allows you to test the application launch. **NOTE:** Alert actions are run when a matching alert is received; so the alert application launch action is a script or batch file that does not require user interaction.

E-Mail Configuration

You can configure Essentials so that you receive e-mail each time the alert associations for your devices meet specific alert criteria. For example, you may want to receive an e-mail message for all warning and critical alerts.

Use this window to specify the parameters for configuring the e-mail alert action.

Field	Description
To	Specifies a valid e-mail address served by the company's SMTP server of the person who is to receive the e-mail.
From	Specifies the originating e-mail address.

Field	Description
Subject	Specify the e-mail subject using text or the available alert tokens.
Message	Specify the e-mail message using text or the available alert tokens.
Email Settings	Select to provide the SMTP server name or IP address.
Test Action	Allows you to test the e-mail action. **NOTE:** After sending the test e-mail, verify that the e-mail was received successfully and has the expected content.

NOTE: Alert tokens are substituted at the time the alert action occurs. They are not substituted for a test action.

NOTE: Certain paging vendors support alphanumeric paging through e-mail. OpenManage Essentials supports paging through the e-mail option.

Trap Forwarding

Simple Network Management Protocol (SNMP) traps are generated in response to changes in the status of sensors and other monitored parameters on a managed device. In order to correctly forward these traps, you must configure an SNMP trap destination, defined either by IP address or host name. For information about forwarding SNMPv1 and SNMP v2 traps in both the original format and OMEssentials format, see Forwarding Alerts Use Case Scenarios.

For example, you may want to use trap forwarding if you are in a multi tiered enterprise environment using OpenManage Essentials to create associations and forward traps to the enterprise manager.

If the trap is being processed locally and then forwarded to the destination or it is just forwarded to the destination.

Use this window to specify the parameters for configuring trap forwarding.

Field	Description
Destination	Provide the IP address or host name for the system that is hosting the enterprise management application.
Community	Provide the SNMP community to which the destination IP address or host name belongs.
Forward Trap in Original Format	Click this check box to forward the trap in the same format received by OpenManage Essentials..
Test Action	Forwards a test trap to the specified destination using the specified community string.

Category and Sources Association

OpenManage Essentials has many alert categories and sources that are predefined and prepopulated for Dell management agents. Select any of the predefined alert categories or sources to associate it with the alert action or filter. For more information and the complete list of categories and alert sources, see Alert Categories.

Device Association

You can select predefined groups (device types), custom groups, specific devices, or a device query. Device association currently only covers predefined groups.

For custom groups, create a custom group using the **New Custom Group Wizard**. The custom group shows up in the tree.

To use device query, select a query from the list.

Click **New** to create a new device query to search and assign the devices to the alert action.

Click **Edit** to change the query logic.

Select groups or devices from the tree, you can use the query option to create a specific criteria for the selection.

Device Query Options

Field	Description
Select a query	Select a query from the drop-down list.
New	Add a new query.
Edit	Edit an existing query.
All Devices	Select to include all the Devices that is managed in OpenManage Essentials.
Clients	Select to include client devices, such as desktops, portables, and workstations.
HA Clusters	Select to include High Availability server clusters.
KVM	Select to include keyboard video mouse devices.
Microsoft Virtualization Servers	Select to include Microsoft Virtualization Servers.
Modular Systems	Select to include Modular Systems.
Network Devices	Select to include Network Devices.
OOB Unclassified Devices	Select to include out of band Unclassified Devices like Lifecycle controller enabled devices.
Power Devices	Select to include PDUs and UPS..
Printers	Select to include Printers.
RAC	Select to include devices with Remote Access controllers.
Servers	Select to include Dell servers.
Storage Devices	Select to include storage devices.
Unknown	Select to include unknown devices.
VMware ESX Servers	Select to include VMware ESX servers.

Date and Time Range

Field	Description
Limit Date Range	Specifies a specific date range to match alerts.
Limit Time Range	Specifies a specific time range to match alerts.
Limit Days	Select to specify the days on which to enable the alert association. If you do not enable this option, the association is applied continuously within the time frame that you specify. Each of these fields are exclusive of the other, so selecting date 8/1/11- 10/1/11, 1am to 4 AM, Friday, will

Field	Description
	match alerts on only Fridays from 1-4 AM only within that date range. **NOTE:** It is possible to input a date range and days selection that will never produce a result. For example, 9/1/11 and Monday - since 9/1/11 was a Thursday, it will never match. If none of these are checked, it means the alert selection will have no date/time filter.

Alert Action - Duplicate Alert Correlation

Field	Description
Yes. Only duplicate alerts that match this filter will be executed.	Enabling this option deletes duplicate alerts (with the same ID and from the same device) received within the specified interval. Use this option to prevent a device from sending an overabundance of alerts to the console.
Ignore duplicate alerts that are received during the interval (1-600 seconds)	Select to set time.
No	Select this option if you do not want duplicate alerts to run at increased duration.

Summary- Alert Action Details

View and edit selections.

The alert action details screen is shown on the final page of the alert action wizards or when clicking on any alert action in the tree.

The alert action will have a subset of the following properties, depending on alert action type and filter criteria chosen (this probably should be a table):

Field	Description
Name	The name of the alert action.
Action Enabled	Specifies if the alert action is enabled or disabled.
Type	The alert action type - App Launch, Email, Ignore, and Trap Forward.
Description	The description of the alert action.
To	The e-mail address(es) to whom the e-mail is sent.
From	The e-mail address from whom the e-mail originates.
Subject	The subject of the e-mail which may include alert tokens.
Message	The message of the e-mail which may include alert tokens.
Destination	The destination name or IP address used for trap forwarding.
Community	The community string used for trap forwarding.

Field	Description
Executable Name	The name of the executable, script, or batch file to be used by the alert action.
Arguments	The command line arguments used when invoking the alert action.
Associated Severity	The alert severity criteria used when matching alerts.
Associated Alert Categories	The alert category criteria used when matching alerts.
Associated Alert Sources	The alert source criteria used when matching alerts.
Associated Device Groups	The alert source device group criteria used when matching alerts.
Associated Devices	The alert source device criteria used when matching alerts.
Associated Date Range	The alert date range criteria used when matching alerts.
Associated Time Range	The alert time range criteria used when matching alerts.
Associated Days	The alert days criteria used when matching alerts.
Minimum Repeat Time	If enabled, specifies the minimum time in seconds between two of the same alerts from the same device.

Alert Categories

OpenManage Essentials has many alert categories and sources that are predefined and pre populated for Dell management agents.

Alert categories are organizational levels of the **Alert Categories** tree. Alert sources specify the low level details of each alert. To monitor the alert categories and sources, apply an alert action association to the alert source or to its parent category.

This page provides a list of categories and the alerts sources within that category. Use this page to configure alerts based on categories.

Alert Categories Options

Field	Description
Brocade-Switch	Select this category to include alerts for Brocade-Switch.
Compellent	Select this category to include alerts for Compellent storage devices.
Dell Advanced Infrastructure Management	Select this category to include alerts for Advanced Infrastructure Management.
Environmental	Select this category to include alerts for temperature, fan enclosure, fan speed, thermal, and cooling.
EqualLogic Storage	Select this category to include alerts for EqualLogic storage.
FC-Switch	Select this category to include alerts for Fibre Channel switches.

Field	Description
Force10-Switch	Select this category to include alerts for Dell Force10 switches.
General Redundancy	Select this category to include alerts for General Redundancy.
HyperV Server	Select this category to include alerts for HyperV Server.
iDRAC	Select this category to include alerts for iDRAC.
Juniper-Switch	Select this category to include alerts for Juniper switches.
Keyboard-Video-Mouse (KVM)	Select this category to include alerts for KVMs.
Memory	Select this category to include alerts for memory.
Network	Select this category to include alerts related to network.
Other	Select this category to include alerts for other devices.
PDU	Select this category to include alerts for PDUs.
Physical Disk	Select this category to include alerts for physical disks.
Power	Select this category to include alerts for power.
Power Center	Select this category to include alerts for power center.
Printers	Select this category to include alerts for printers.
Processor	Select this category to include alerts for processor.
Removable Flash Media	Select this category to include alerts for removable flash media.
Security	Select this category to include alerts for security.
Storage Enclosure	Select this category to include alerts for storage enclosures.
Storage Peripheral	Select this category to include alerts for storage peripherals.
Storage Software	Select this category to include alerts for storage software.
System Events	Select this category to include alerts for system events.
Tape	Select this category to include alerts for tape drives.
Test Events	Select this category to include alerts for test events.
Unknown	Select this category to include unknown alerts related statuses.
UPS	Select this category to include alerts for UPS.
Virtual Disk	Select this category to include alerts for virtual disks.
VMware ESX Server	Select this category to include alerts for VMware ESX servers.

Alert Source

Each Alert Category contains alert sources. Click an alert category to view alert sources. Expand a category to view the list of alert sources, and select an alert source.

Field	Description
Name	The name of the new alert source, for example, myFanAlert.
Type	The protocol information.
Catalog	Provides the catalog information.
Severity	Specifies the severity assigned to the alert that is triggered if the alert source generates the specified SNMP trap.
Format string	Provides the message string that appears in the Alert Logs if the alert source generates an alert of sufficient severity to trigger the alert. You can use formatting commands to specify parts of the message string. For SNMP, the valid formatting commands are: $n = system name $d = date $t = time $s = severity $e = enterprise object identifier (OID) $sp = specific trap OID $g = generic trap OID $1 - $# = varbind values
SNMP Enterprise OID	Provides the enterprise OID (SNMP OID prefix) of the management information base (MIB) file that defines the event source that you want to monitor.
SNMP Generic Trap OID	Provides the generic trap ID of the SNMP trap that you want to monitor from the desired event source. See the *Dell OpenManage Server Administrator SNMP Reference Guide* at **support.dell.com/manuals** for more information on SNMP traps.
SNMP Specific Trap OID	Provides the specific trap ID of the SNMP trap that you want to monitor from the desired event source. See the *Dell OpenManage Server Administrator SNMP Reference Guide* at **support.dell.com/manuals** for more information on SNMP traps.

14

Updating Server BIOS, Firmware, Drivers, and Applications

With the System Update feature in OpenManage Essentials, you can:

- Upgrade and downgrade firmware, drivers, BIOS, application, and OpenManage Server Administrator.
- Compare the drivers and firmware on the inventoried servers and modular blade enclosures with a source catalog and update them if needed.

  NOTE: System updates are only supported on a LAN and not over a WAN. To apply system updates to devices outside the datacenter, install another instance of OpenManage Essentials that is local to that area. Inventory automatically starts after the updates are applied to a target server.

  NOTE: OpenManage Essentials supports system updates on 11th generation and 12th generation of PowerEdge servers using iDRAC with Lifecycle Controller.
- Filter devices by clicking the **Filtered by** option. You can either select a query or select the devices/groups from the device tree.

Check for these prerequisites before you update systems:

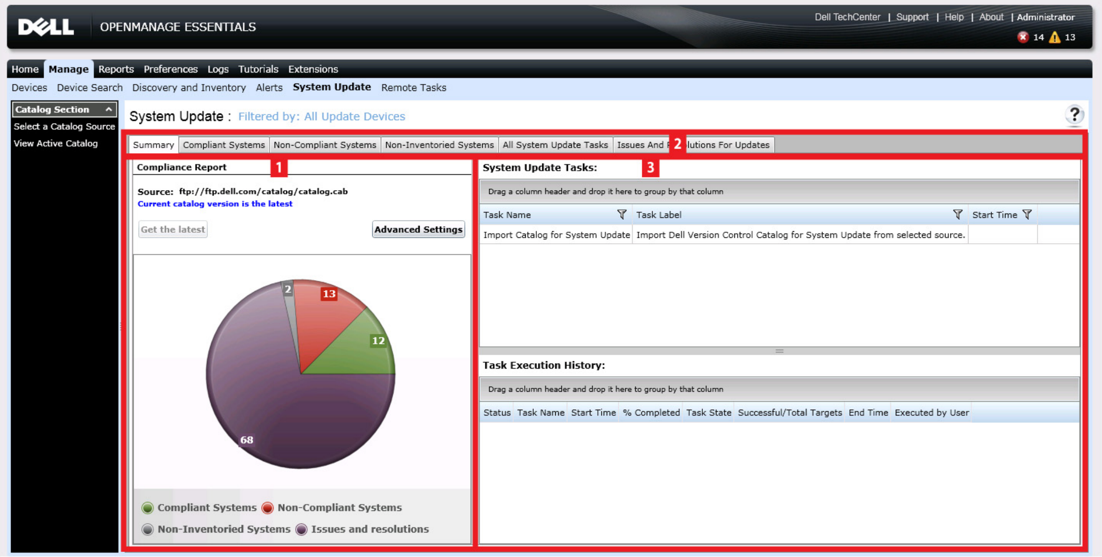
- Internet is accessible and you can access **dell.com** (port 80) and **ftp.dell.com** (port 21) if you are using online catalog source.
- DNS is resolved.

NOTE: When providing system credentials, if the username has spaces or periods, the username must be provided within quotation marks. For example, "localhost\johnny marr" or "us-domain\tim verlaine". Spaces and periods can be used in usernames for OpenMange System Administrator Tasks, Generic Command Line Tasks (local system), OpenManage Systems Administrator Deployment Tasks. System Updates (In Band, through OpenManage System Administrator) also support spaces and periods. Out of Band patching (through RAC device) or commands such as RACADM do not support space or period in the username.

Viewing the System Update Page

To view the System Update page, click **Manage** → **System Update**.

By default, the system update page displays all the discovered servers. You can filter the devices by clicking the **Filter by:** link to display select devices or device groups.


OPENMANAGE ESSENTIALS
Dell TechCenter | Support | Help | About | Administrator
14 13
Home Manage Reports Preferences Logs Tutorials Extensions
Devices Device Search Discovery and Inventory Alerts System Update Remote Tasks
Catalog Section
Select a Catalog Source
View Active Catalog
Summary Compliant Systems Non-Compliant Systems Non-Inventoried Systems All System Update Tasks Issues And lutions For Updates
1
2
3
Get the latest
Advanced Settings
2
13
12
68
Compliant Systems Non-Compliant Systems
Non-Inventoried Systems Issues and resolutions

System Update : Filtered by: All Update Devices

Compliance Report

Source: ftp://ftp.dell.com/catalog/catalog.cab
Current catalog version is the latest

System Update Tasks:

Drag a column header and drop it here to group by that column

Task Name	Task Label	Start Time
Import Catalog for System Update	Import Dell Version Control Catalog for System Update from selected source.	

Task Execution History:

Drag a column header and drop it here to group by that column

Status	Task Name	Start Time	% Completed	Task State	Successful/Total Targets	End Time	Executed by User

Figure 5. System Update Page

1. Compliance report. See Compliance Report
2. Tabbed systems information. See Compliant Systems, Non Compliant Systems, Non Inventoried Systems, and Issues and Resolutions.
3. System update tasks. See All System Update Tasks

Understanding Server BIOS Firmware and Drivers Sources

There are multiple sources for obtaining firmware and drivers for the servers.

- **Online source**—Default option which obtains latest driver and firmware versions from **ftp.dell.com**.

  NOTE: OpenManage Essentials automatically checks for updates and displays a message if a newer version is available.
- **File system source**—Drivers and firmware from the Dell OpenManage Server Update Utility (SUU) media.
- **Repository Manager file**—Customized selection of specific drivers and firmware generated from the Dell Repository Manager tool.

Choosing the Right Source for Updates

- **Recommended Option**—Use the online source to ensure that you consistently have the latest drivers and firmware available from Dell or use the Dell Server Update Utility (SUU) option for a qualified set of drivers and firmware.
- **Create Custom Catalog**—Using this option gives you maximum control over driver and firmware revisions in your environment because you select them individually from either the SUU media or online source using the Dell Repository Manager. You can install Repository Manager, a separate tool, from the OpenManage Essentials installation package.

Selecting an Update Catalog Source

1. From OpenManage Essentials, click **Manage** → **System Update** → **Select a Catalog Source**.
2. In **Select a Catalog Source**, select an option, and click **Import now**.

Viewing Comparison Results

Viewing Compliant Servers

To view compliant servers:

1. Click **Manage** → **System Update**.
2. In **System Update**, select the **Compliant Systems** tab.

Viewing Non-Compliant Servers

To view non-compliant servers:

1. Click **Manage** → **System Update**.
2. In **System Update**, select the **Non-Compliant Systems** tab.
   The servers with drivers and firmware versions that are different from the catalog are displayed.

Viewing Non-Inventoried Servers

To view non-inventoried servers:

1. Click **Manage** → **System Update**.
2. In **System Update**, select the **Non-Inventoried Systems** tab.
   The servers that are not inventoried are displayed.

   NOTE: CMC firmware updates (CMC active controller only) are also displayed in these results.

Viewing Servers With Issues and Resolutions

To view servers with issues and resolutions:

1. Click **Manage** → **System Update**.
2. In **System Update**, select the **Issues and Resolutions For Updates** tab.
   The servers with issues and the resolutions are displayed. For more information, see Issues and Resolutions Use Case Scenarios.

System Update Use Case Scenarios

The table below provides use case scenarios about how system updates occur based on different protocols and the update modes.

Protocol Used for Server IP Discovery and Inventory	Protocol Used for iDRAC IP Discovery and Inventory	Preferred System Update Mode Selected in Advanced Settings	Credentials for System Update	Actual Update Mode
SNMP	SNMP	OpenManage Server Administrator	Server	All components are updated using OpenManage Server Administrator.
SNMP	SNMP	iDRAC	Server	

Protocol Used for Server IP Discovery and Inventory	Protocol Used for iDRAC IP Discovery and Inventory	Preferred System Update Mode Selected in Advanced Settings	Credentials for System Update	Actual Update Mode
				NOTE: When an iDRAC IP is discovered using SNMP, iDRAC software inventory is not retrieved and all components are updated are using Server Administrator irrespective of the preferred system update mode selected.
WMI	SNMP	OpenManage Server Administrator	Server	All components are updated using OpenManage Server Administrator.
WMI	SNMP	iDRAC	Server	All components are updated using Server Administrator because the protocol used for iDRAC discovery and inventory was SNMP.
SNMP	WS-MAN	OpenManage Server Administrator	Server	All components are updated using OpenManage Server Administrator.
SNMP	WS-MAN	iDRAC	iDRAC	BIOS, firmware, and applications are updated using iDRAC. **NOTE:** When an iDRAC IP is discovered using WS-MAN, the iDRAC software inventory is retrieved and the components are updated using iDRAC. However, if drivers are present in addition to BIOS, firmware, and applications, then all the components are updated using Server Administrator and not iDRAC.
WMI	WS-MAN	OpenManage Server Administrator	Server	All components are updated using OpenManage Server Administrator.
WMI	WS-MAN	iDRAC	iDRAC	BIOS, firmware, and applications are updated using iDRAC.

Protocol Used for Server IP Discovery and Inventory	Protocol Used for iDRAC IP Discovery and Inventory	Preferred System Update Mode Selected in Advanced Settings	Credentials for System Update	Actual Update Mode
				NOTE: When an iDRAC IP is discovered using WS-MAN, the iDRAC software inventory is retrieved and the components are updated using iDRAC. However, if drivers are present in addition to BIOS, firmware, and applications, then all the components are updated using Server Administrator and not iDRAC.
WS-MAN (ESXi-based server)	WS-MAN (ESXi-based server)	OpenManage Server Administrator	iDRAC	All components are updated using iDRAC. For ESXi-based servers, all components are updated using iDRAC , irrespective of preferred system update mode selected.
WS-MAN (ESXi-based server)	WS-MAN (ESXi-based server)	iDRAC	iDRAC	
Not applicable. The server IP is not discovered.	WS-MAN	OpenManage Server Administrator	iDRAC	All components are updated using iDRAC.
Not applicable. The server IP is not discovered.	WS-MAN	iDRAC	iDRAC	

Applying System Updates

NOTE: You can only update systems using iDRAC6 and above if they are discovered using the WS-Man protocol.

NOTE: Applying system updates out-of-band (iDRAC) is supported only for 32-bit Dell Update Packages (DUPs). If you select a catalog that has no 32-bit DUPs for applying an out-of-band system update, OpenManage Essentials does not display any updates under **Select Updates to Apply**.

NOTE: Applying system updates (in-band) requires that the **Windows Management Instrumentation** service is running on the selected targets.

NOTE: Applying system updates requires the availability of the default **Temp** folder (**C:\Users\<username>\AppData\Local\Temp**). Ensure that the **Temp** folder is not deleted or moved.

To apply system updates:

1. Click **Manage** → **System Update**.
2. In **System Update**, select the **Non-Compliant Systems** tab.

   NOTE: You can also filter systems either based on the groups or the devices by clicking the **Filtered by:**link. Select the devices in the **Select System Update Target Devices and Device Groups** window and click **Apply**.

3. In **Non-Compliant systems**, select the systems you want to update.

   NOTE: You can update multiple systems at the same time.

4. Click **Apply Selected Updates**.

   A window is displayed to schedule updates

   NOTE: Chassis and blades are not associated for updates. They are treated as individual components and you must manually select them.

   NOTE: Chassis, blade server BIOS, and iDRAC version interdependency management is not available.

5. Provide a task name.
6. Review the selected updates.
7. Set the task schedule to **Run Now** or set a specific date and time.
8. If you do not want to apply the changes immediately, clear **After update, if required, reboot the device**. Changes are not activated until the next time you reboot.
9. If you want to skip the signature and hash check on the system update package, select **Skip Signature and Hash Check**.
10. Enter the operating system administrative or iDRAC credentials for the managed server.

    Examples: In a Windows domain environment, enter <Domain\Administrator> and password. In a Windows workgroup environment, enter <LocalHost\Administrator> and the password

    In a Linux environment, enter root and password. If you want to apply system updates using sudo, select **Enable Sudo** and update the **SSH port number**.

    NOTE: Before you apply system updates using sudo, create a new user account, edit the **sudoers** file using the `visudo` command, and add the following:

    - For target systems running a 32-bit operating systems: `Cmnd_Alias OMEUPDATE = /bin/tar, /opt/dell/srvadmin/bin/omexec,/tmp/LinuxPreInstallPackage/runbada,/tmp/LinuxPreInstallPackage/omexec` *`<sudo_username>`* `ALL=OMEUPDATE, NOPASSWD:OMEUPDATE`.
    - For target systems running a 64-bit operating systems: `Cmnd_Alias OMEUPDATE = /bin/tar, /opt/dell/srvadmin/bin/omexec,/tmp/LinuxPreInstallPackage64/runbada,/tmp/LinuxPreInstallPackage64/omexec` *`<sudo_username>`* `ALL=OMEUPDATE, NOPASSWD:OMEUPDATE`.

    NOTE: Applying system updates using sudo is not supported for SUSE Linux Enterprise Server targets.

11. Click **Finish**.

    NOTE: You cannot schedule Windows and Linux updates to occur using the same task. Create a separate task for each.

Viewing Updated Status

To view and confirm that updates were applied successfully, click **Manage** → **System Update** → **Summary**. The **Task Execution History** pane displays if the updates were applied successfully.

View Active Catalog

Select to view the catalog file that is currently in use for doing software updates.

Field	Description
Source	Displays the source. The source is either Server Update Utility, FTP, or Repository Manager.
Source Type	The type for source from which the catalog file is taken. For example Dell ftp site.

Field	Description
Release ID	The unique identification number assigned to the released catalog file.
Release Date	The date on which the catalog file was released.
Newer version available	Displays if a newer version is available.

Issues and Resolutions Use Case Scenarios

The following table provides information about the issues that are displayed in the **Issues and Resolutions for Updates** tab.

Issue	Resolution
PowerEdge VRTX was inventoried using either SNMP or IPMI.	Perform discovery and inventory of PowerEdge VRTX using WS-Man.
iDRAC was inventoried using either SNMP or IPMI.	Perform discovery and inventory of iDRAC using WS-Man.
iDRAC does not meet the minimum version requirements.	Minimum supported iDRAC version for modular servers is 2.20 and for monolithic servers is 1.4. Manually install the required iDRAC versions to proceed.
iDRAC does not have the required license.	iDRAC requires license to perform system updates which can be obtained using Dell License Manager.
The server does not have Server Administrator installed on it or is discovered using SSH. This issue occurs if: • A Windows-based server without Server Administrator is discovered using WMI. • A Linux-based server with or without Server Administrator is discovered using SSH.	Deploy Server Administrator on this server. Discover and run inventory using either SNMP or WMI protocol.

15

System Update — Reference

You can access the following:

- System Update page
  - Summary
    - Compliance Report
    - System Update Tasks
    - Tasks Execution History
  - Compliant Systems
  - Non Compliant Systems
  - Non-Inventoried Systems
  - All System Update Tasks
  - Issues and resolutions for updates
- Catalog Section
  - Select a Catalog Source
  - View Active Catalog

Related Links

Updating Server BIOS, Firmware, Drivers, and Applications
Viewing the System Update Page
Compliance Report
Non-Compliant Systems
System Update Task
Non-Inventoried Systems
All System Update Tasks
Issues and Resolutions

Filter Options

Filter Option	Description
Is equal to	Select to create the *same as* logic.
Is not equal to	Select to create the different from logic.
Starts with	Select to filter search based on a text chunk's initial alphanumeric character(s). Provide the starting alphanumeric character(s) in the field.
Ends with	Select to filter search based on a text chunk's final alphanumeric character(s). Provide the ending alphanumeric character(s) in the field.

Filter Option	Description
Contains	Select to filter search based on alphanumeric characters present in a text chunk. Provide the alphanumeric character(s) in the field.
Does not contain	Select to include the *not present* logic in search based on alphanumeric characters present in a text chunk.
Is contained in	Select to include the *is present* logic in an alphanumeric character string.
Is not contained in	Select to include the *not present* logic in an alphanumeric character string.
Is less than	Select to find a value that *is less than* the value you provide.
Is less than or equal to	Select to find a value that *is less than or equal to* the value you provide.
Is greater than	Select to find a value that *is greater than* the value you provide.
Is greater than or equal to	Select to find a value that *is greater than or equal to* the value you provide

System Update

This page provides the following information:

- Summary
- Compliant Systems
- Non Compliant Systems
- Non-Inventoried System
- All System Update Tasks
- Issues and Resolutions For Updates

Related Links

Compliance Report
Non-Compliant Systems
Non-Inventoried Systems
All System Update Tasks

Compliance Report

The compliance report provides a pie chart distribution of software update tasks. Click a pie chart portion to view more information on the systems.

Related Links

System Update

Compliance Report Options

Field	Description
Source	Report source
Get the latest	This option is disabled if the catalog version is the latest. Else, it is active. Click this option to get the latest catalog version.
Advanced Settings	Using these options you can set preferences for upgrading and downgrade firmware, BIOS, driver, and application versions: • **Enable Downgrades**—Select this option to install versions of firmware, BIOS, drivers, and applications that are earlier than the versions installed on the systems. • **Disable Downgrades**—This option is set by default, selecting this option enables you to install versions of firmware, BIOS, drivers, and applications that are later than the versions installed on the systems. You can also set one of the following update modes as the default: • OpenManage Server Administrator—Allows you to update all components on the systems. • iDRAC—Allows you to update only the BIOS, firmware, and applications. **NOTE:** You can set one of the update modes as the default mode but the actual update mode depends on the protocol used and the components that are being updated. For more information, see System Update Use Case Scenarios.
Systems information - pie chart format	The pie chart lists the systems status compared with the existing catalog file. The systems listed are as follows: • Compliant Systems • Non-Compliant Systems • Non-Inventoried Systems • Issues and Resolutions
Compliant Systems	Systems with software that is up to date when compared with versions available in the software updates active catalog. Click compliant systems portion to view more information in the **Compliant Systems** tab.
Non-Compliant Systems	Systems with software that requires updates when compared with versions available in the software updates active catalog. Click the non-compliant systems portion to view more information in the **Non-Compliant Systems** tab.
Non-Inventoried Systems	Discovered systems pending inventory when compared with available software in the active catalog. Click non-inventoried portion to view more information in the **Non-Inventoried Systems** tab.

Compliant Systems

The **Compliant Systems** tab provides this information:

Field	Description
System Name	System’s domain name.
Model Type	Devices model information.
Operating System	The operating system that is running on the server.
Service Tag	A unique identifier, that provides the service lifecycle.
Discovered Time	Time and date of discovery.
Inventory Time	Time and date of inventory.
Server Subnet Location	IP address range information.

Non-Compliant Systems

The Non-Compliant Systems tab provides this information:

Field	Description
System Name	System’s domain name.
Model Type	The systems model name. For example, Dell PowerEdge.
Operating System	The operating system that is installed on the system.
Service Tag	A unique identifier, that provides the service lifecycle information.
Update Method	Displays the update methods such as OpenManage Server Administrator and iDRAC.
Discovered Time	Time and date of discovery.
Inventory Time	Time and date of inventory.

Select non-compliant systems to select updates to apply and click **Apply Selected Updates**.

Field	Description
System Name	System’s domain name.
Importance	The requirement of this software update for the system.
Update Method	Displays the update methods such as OpenManage Server Administrator and iDRAC.
Component	The software information.
Type	The type of software update.
Installed Version	The installed version number.
Upgrade/Downgrade	A green arrow indicates and upgrade.
Available Version	The available version number.
Package Name	The name of the software update.

Related Links

System Update

System Update Task

Field	Description
Task Name	Provide a name for the software update task.
Select System to Update	Select the system that you want to update.
System Name	System's domain name.
Importance	The requirement of this software update for the system.
Delivery Mode	Displays the delivery methods such as OpenManage Server Administrator and iDRAC.
Component	The software information.
Type	The type of software update.
Installed Version	The installed version number.
Upgrade/Downgrade	A green arrow indicates an upgrade.
Available Version	The available version number.
Package Name	The name of the software update.
Set the Task Schedule	
Run Now	Select this option if you want to run the task when you click **Finish**.
After update if required, reboot the device.	Select to reboot after the software update task is complete.
Set Schedule	Select to schedule a task at a required date and time. Click the icon to set date and time.
Skip Signature and Hash Check	Select this option to skip the signature and hash check on the system update package.
Enter Credentials for the task execution	
Enable Sudo	Select this option to update the system using sudo.
SSH Port Number	Provide the SSH port number.
Server User name	Provide the server user name for the selected target.
Server Password	Provide the server password for the selected target.
iDRAC User name	Provide the iDRAC user name for the selected target.
iDRAC Password	Provide the iDRAC password for the selected target.

Non-Inventoried Systems

The **Non-Inventoried Systems** tab provides a list of systems that require inventory, select the systems you want to inventory and click **Inventory**.

Field	Description
System Name	System's domain name.
Discovered Time	Time and date of discovery.
Inventory Time	Time and date of inventory.
Server Subnet Location	IP address range information.

Related Links

- Updating Server BIOS, Firmware, Drivers, and Applications
- Viewing the System Update Page
- System Update — Reference
- System Update

Inventory Systems

To inventory systems, select **Systems To Inventory** and click **Run Inventory**.

All System Update Tasks

This page provides more information on the software update tasks.

Field	Description
Task Name	The name of the task.
Task Label	Provides information on what the task does.
Start Time	Time and date of inventory.

Related Links

- System Update

Issues and Resolutions

Field	Description
System Name	Displays the system's domain name.
Reason	Displays the issue associated with the server.
Recommendation	Displays the resolution to resolve the issue.

Related Links

- Updating Server BIOS, Firmware, Drivers, and Applications
- Viewing the System Update Page
- System Update — Reference

Task Execution History

Lists the details of the system update tasks.

Field	Description
Status	Information on the task if enabled or disabled.
Task Name	The name of the task.
Start Time	Time and date at which the system update task started.
% Completed	The task's progress information.
Task State	Provides these task states: • Running • Stopped • Completed • Warning **NOTE:** The task status displays warning if the **After update if required, reboot the device** option was not selected for the system update task.
Success / Total Targets	The number of target systems on which the task is successfully executed.
End Time	Time and date at which the system update task ends.
Executed by User	The user information.

Select a Catalog Source

For updating software, select from these options to use a default catalog file present on the Dell FTP site or provide an alternate software update package file.

Field	Description
Use file system source (SUU)	Select to update software using Server Update Utility. Click **Browse** to traverse to the file location. The **catalog.cab** file is located in the repository folder.
Use repository manager file	Select to update software using repository manager file. Click **Browse** to traverse to file location. The **catalog.cab** file is located in the repository folder.
Use an online source	Select to update software using the software update package present on the Dell FTP site.

NOTE: The path to the catalog file may be displayed on the screen while importing the catalog using either SUU or repository manager. However, it is recommended that you manually select the catalog file, by clicking **Browse**.

Dell Update Package

A Dell Update Package (DUP) is a self-contained executable in a standard package format that updates a single software element on the system. DUPs are software utilities provided by Dell to update specific software components on Dell PowerEdge systems, Dell desktops, and Dell laptops. The customized bundles and repositories are made up of DUPs based on operating systems supported, update types, form factor, and line of business.

Dell OpenManage Server Update Utility

Dell OpenManage Server Update Utility (SUU) is a DVD-based application for identifying and applying updates to the system. SUU displays a comparison report of the versions and provides various options for updating the components.

Repository Manager

Repository Manager is an application that allows you to create repositories of customized bundles and updates, and groups of related updates for systems running supported Microsoft Windows or Linux operating systems. This facilitates generating comparison reports and establishing update baselines of repositories. By using Repository Manager, you can ensure that the Dell PowerEdge system, Dell desktop or Dell laptop is equipped with the latest BIOS, driver, firmware, and software updates.

View Active Catalog

Select to view the catalog file that is currently in use for doing software updates.

Field	Description
Source	Displays the source. The source is either Server Update Utility, FTP, or Repository Manager.
Source Type	The type for source from which the catalog file is taken. For example Dell ftp site.
Release ID	The unique identification number assigned to the released catalog file.
Release Date	The date on which the catalog file was released.
Newer version available	Displays if a newer version is available.

16

Managing Remote Tasks

About Remote Tasks

With the Remote Tasks feature in OpenManage Essentials, you can:

- Run commands on local and remote systems, run batch files and executable files on the local systems, and schedule local and remote tasks.

  NOTE: The files must be located on the system with OpenManage Essentials installed and not on the remote system.
- Change power status for a system.
- Deploy OpenManage Server Administrator on systems.
- View the remote tasks.
- Make changes to any task by right-clicking it.

NOTE: If you stop a running task, it may take 3-4 minutes for the task to stop gracefully and the updated task status to get reflected in the console.

NOTE: The **Task Execution History** reflects the remote tasks that you created or deleted only after a few seconds.

NOTE: When providing system credentials, if the username has spaces or periods, the username must be provided within quotation marks. For example, "localhost\johnny marr" or "us-domain\tim verlaine". Spaces and periods can be used in usernames for OpenMange System Administrator Tasks, Generic Command Line Tasks (local system), OpenManage Systems Administrator Deployment Tasks. System Updates (In Band, through OpenManage System Administrator) also support spaces and periods. Out of Band patching (through RAC device) or commands such as RACADM do not support space or period in the username.

Managing Command Line Task

You can create custom command line tasks to run CLI commands on local and remote systems, and run batch files and executables on local systems.

For example, you can create a custom command line task to run a security audit and gather information on the systems' security status.

NOTE: The **Remote Server Administrator Command** task requires that the **Windows Management Instrumentation** service is running on the selected targets.

To create command line tasks:

1. From OpenManage Essentials, click **Manage** → **Remote Tasks** → **Common Tasks** → **Create Command Line Task.** .
2. On **General**, provide a task name.
3. Select one of the following options:

   – **Remote Server Administrator Command**— Select to run the server administrator command on remote servers.

   – **Generic Command**— Select to run the command, executable file, or batch file.

- **IPMI Command**— Select to run the IPMI commands on the remote system.
- **RACADM Command Line**— Select to run the RACADM commands on the remote system.

4. Based on your selection in the preceding step, provide the following:

   - If you selected **Remote Server Administrator Command**, then provide command, SSH port number, and select **Generate Trusted Key for Linux** if you want to generate a trusted key.
   - If you selected **Generic Command, RACADM Command Line,** or **IPMI Command** then provide command and append output information. Providing the append output information is optional.

5. On **Task Target,** do one of the following:

   - Select a query from the drop-down list or create a new query by clicking the **New** button.
   - Select server targets for running the commands. Only applicable targets are displayed by default. For more information, see the Device Capability Matrix.

6. On **Schedule and Credentials**, provide user credentials, and set schedule for the tasks from available options, and then click **Finish**.

   For information about the fields in the **Create a Command Line Task** wizard, see Command Line Task.

Related Links

Remote Tasks
Remote Tasks — Reference
Remote Tasks Home
Command Line Task
All Tasks
Device Capability Matrix

Managing RACADM Command Line Tasks

RACADM command line tasks are used to run commands on remote DRACs and iDRACs. For example, run a RACADM task to configure iDRAC through out of band (OOB) channel. To manage RACADM Command line tasks:

1. From OpenManage Essentials, click **Manage** → **Remote Tasks** → **Common Tasks** → **Create Command Line Task** .
2. On **General**, choose **RACADM Command Line** and enter a name for the task.
3. Enter the RACADM sub-command (for example, **getsysinfo.**) For a list of RACADM commands, go to **support.dell.com**.
4. (Optional) Choose **Output to file** to capture task output from multiple targets. Enter path and file name.

   - To log the information from all selected targets, select **Append**.
   - To write all the detected errors to the log file, select **Include errors**.

5. On **Task Target,** do one of the following:

   - Select a query from the drop-down list or create a new query by clicking the **New** button.
   - Choose target servers or DRACs/iDRACs. Only applicable targets are displayed by default. For more information, see the Device Capability Matrix.

6. On **Schedule and Credentials**, set the schedule parameters, provide target credentials and then click **Finish**.

Related Links

Remote Tasks
Remote Tasks — Reference
Remote Tasks Home
Command Line Task
All Tasks

Device Capability Matrix

Managing Generic Command Line Task

Using Generic command line task, you can run different types of tasks such as, a batch file, a script file such as a Powershell or VBS script, an executable, or a command, on the local OpenManage Essentials system. While the task always runs on the local OpenManage Essentials system, you can structure the local task to interact with or act upon a variety of remote devices or servers.

You can enter tokens (substitution parameters) in the command line task to be passed to the script file, executable, command, or batch file and execute local scripts on devices that are discovered in OpenManage Essentials.

To manage Generic command line tasks:

1. From OpenManage Essentials, click **Manage** → **Remote Tasks** → **Common Tasks** → **Create Command Line Task.**
2. In the **General** tab, choose **Generic Command**.
3. If required, update the task name.
4. Enter the path and command (batch, script, or executable) to run on the local system.
5. (Optional) Enter any arguments for the command. If $USERNAME and $PASSWORD are used in **Arguments**, you can pass the credentials to the command by the entering the credentials under **Script Credentials**. If $IP or $RAC_IP are used in **Arguments**, you can run the command against the selected target(s) by passing the IP address of each target to the command.

   NOTE: The tokens provided in the **Arguments** field must entirely be in either uppercase or lowercase. For example, $HOSTNAME or $hostname.

   NOTE: If you are running a command that does not require any tokens or arguments, the **Script Credentials** section and the **Task Target** tab are not displayed.
6. (Optional) Choose **Ping Device** if you want to ping the device first.
7. (Optional) Choose **Output to file** to capture task output from multiple targets. Enter path and file name.
   - To log the information from all selected targets, select **Append**.
   - To write all the detected errors to the log file, select **Include errors**.
8. On **Task Target,** do one of the following:
   - Select a query from the drop-down list or create a new query by clicking the **New** button.
   - Select targets for running the commands.
9. On **Schedule and Credentials**, enter the local administrator credentials with privileges to run commands on the OpenManage Essentials system. Set schedule for the task(s) and then click **Finish**.

For more information, see About Tokens and Generic Command.

About Tokens

The following tokens can be used to pass values to the batch, script, or executable file:

- **$IP** and **$RAC_IP** — If these arguments are used, the **Task Target** tab appears in the **Create a Command Link Task** screen. The **Task Target** tab allows you to select the targets to pass the arguments. $IP is used for a server IP and $RAC_IP is used for a RAC (iDRAC) IP. From the **Task Target** tab, you can select either groups, a device or use dynamic queries.
- **$USERNAME** and **$PASSWORD** — In some instances, you must provide credentials for a remote system in your batch or script file. If $USERNAME or $PASSWORD are used in arguments, the **Script Credentials** section appears for these values. The credentials entered in the **Script Credentials** section is passed to the command line. You can pass either of these values or both.

> **NOTE:** You must enter both values in the **Script Credentials** section. If you do not need to use one value, enter any text in the field and it is ignored if the token is not in use.

- $NAME — This token passes the name of the system found in the OpenManage Essentials **Device Tree**. The name is most often the host name of the system, but in some instances it might be either an IP address or a string such as `Dell Rack System – SVCTAG1`.

Passing Tokens to a Script

If you are using a batch file or a script, use %1, %2, %3 , and so on to receive the values passed from OpenManage Essentials. The values are passed in the order they are entered from left to right in the **Arguments** field.

For example, if you use $USERNAME $PASSWORD $IP $RAC_IP $NAME as arguments, a batch file with the following Echo %1 %2 %3 %4 %5 displays the following result:

C:\Windows\system32>echo scriptuser scriptpw 10.36.1.180 10.35.155.111 M60505-W2K8x64 scriptuser scriptpw 10.36.1.180 10.35.155.111 M60505-W2K8x64

> **NOTE:** The credentials are passed in plain text to the command line. If you schedule a task to run later, the credentials are encrypted and stored in the database. The credentials are decrypted when the task runs at the scheduled time. However, if you use the **RUN** option on a previously created task, enter both administrator credentials for the system and the script credentials.

Managing Server Power Options

You can create tasks to manage power on servers.

> **NOTE:** The power task requires that the **Windows Management Instrumentation** service is running on the selected targets.

To create a remote task:

1. From OpenManage Essentials, click **Manage** → **Remote Tasks** → **Common Tasks** → **Create Power Task.**
2. In **Create a Power Task**, on **General**, do the following:
   - Provide task name.
   - Select power options. If required, select **Shutdown OS first** to shut the operating system down before starting the power tasks.
3. On **Task Target,** do one of the following:
   - Select a query from the drop-down list or create a new query by clicking the **New** button.
   - Select server targets for running the commands.
4. On **Schedule and Credentials**, set the schedule parameters, provide target credentials, and then click **Finish**.

For information about the fields in the **Create a Power Task** wizard, see Server Power Options.
Related Links

Remote Tasks
Remote Tasks — Reference
Remote Tasks Home
Command Line Task
All Tasks
Device Capability Matrix

Deploying Server Administrator

The deploy OpenManage Server Administrator task requires the following on the selected targets:

- **Windows Management Instrumentation** service must be running.
- The default **Temp** folder (**C:\Users\<username>\AppData\Local\Temp**) must be available. Ensure that the **Temp** folder is not deleted or moved.

You can create tasks to deploy OpenManage Server Administrator on servers installed with Windows or Linux operating systems. You can also plan a date and time to schedule the OpenManage Server Administrator deploy task.

To create an OpenManage Server Administrator deployment task:

1. Click **Manage** → **Remote Tasks** → **Common Tasks** → **Create Deployment Task.**
2. On **General**, provide task name. If you want to deploy OpenManage Server Administrator on Windows-based servers, then select **Windows**, provide installer path and, if required, provide arguments. If you want to deploy OpenManage Server Administrator on Linux-based servers, select **Linux** and provide the installer path and, if required, provide arguments. For the list of supported packages and arguments (for Window-based servers), see Supported Windows and Linux Packages and Arguments. Select **Generate Trusted Key** and select **Allow reboot**.

   NOTE: Install Server Administrator prerequisites before deploying Server Administrator on Linux.

3. On **Task Target,** do one of the following:
   - Select a query from the drop-down list or create a new query by clicking the **New** button.
   - Select servers on which you want to run this task and click Next.
4. On **Schedule and Credentials**, set the schedule parameters, provide user credentials to enable the task.
5. If you want to deploy Server Administrator using sudo, select **Enable Sudo** and update the **SSH port** number.

   NOTE: Before you deploy OpenManage Server Administrator using sudo, create a new user account, edit the **sudoers** file using the `visudo` command, and add the following:

   - For target systems running a 32-bit operating systems: `Cmnd_Alias OMEUPDATE = /bin/tar,/bin/cat,/opt/dell/srvadmin/bin/omexec,/tmp/LinuxPreInstallPackage/runbada,/tmp/LinuxPreInstallPackage/omexec <sudo_username> ALL=OMEUPDATE, NOPASSWD:OMEUPDATE`.
   - For target systems running a 64-bit operating systems: `Cmnd_Alias OMEUPDATE = /bin/tar,/bin/cat,/opt/dell/srvadmin/bin/omexec,/tmp/LinuxPreInstallPackage64/runbada,/tmp/LinuxPreInstallPackage64/omexec <sudo_username> ALL=OMEUPDATE, NOPASSWD:OMEUPDATE`.

   NOTE: Deploying OpenManage Server Administrator using sudo is not supported for SUSE Linux Enterprise Server and ESX targets.

6. Click **Finish**.

For information about the fields in the **Create a Deployment Task** wizard, see Deploy Server Administrator Task.

Related Links

Remote Tasks

Remote Tasks — Reference

Remote Tasks Home

Command Line Task

All Tasks

Device Capability Matrix

Supported Windows and Linux Packages

Windows Packages

Package Type	Clean installation	Major Version Upgrade (5.x to 6.x to 7.x)	Minor Version Upgrade (6.x to 6.y)
.msi	Supported	Supported	Supported
.msp	Not supported	Not supported	Supported
.exe	Not supported	Supported	Supported

Linux Packages

Operating System	Package
SUSE Linux Enterprise Server 10	OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.SLES10.x86_64_A01.6.tar.gz OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.SLES10.x86_64_A01.6.tar.gz.sign
SUSE Linux Enterprise Server 11	OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.SLES11.i386_A01.14.tar.gz OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.SLES11.i386_A01.14.tar.gz.sign
VMware ESX 4	OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.ESX41.i386_A01.tar.gz OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.ESX41.i386_A01.tar.gz.sign
Red Hat Enterprise Linux 5	OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.RHEL5.x86_64_A01.4.tar.gz OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.RHEL5.x86_64_A01.4.tar.gz.sign
Red Hat Enterprise Linux 6	OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.RHEL6.x86_64_A01.5.tar.gz OM-SrvAdmin-Dell-Web-LX-6.5.0-2247.RHEL6.x86_64_A01.5.tar.gz.sign

Arguments

Clean Installation

Component Installation	Linux Attribute	Windows Attribute
Server Administrator Web Server only	-w	ADDLOCAL=IWS
Server Administrator Instrumentation only	-d	ADDLOCAL=SA
Server Administrator Web Server and Server Instrumentation	-w –d	ADDLOCAL=ALL

Upgrade

- REINSTALL=ALL REINSTALLMODE=VOMUS — This is a required argument for Server Administrator minor version upgrade using .msi packages.
- /qn — This is an optional argument that is used for silent and unattended installation.

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Working With Sample Remote Tasks Use Cases

Sample remote tasks are available for Server Power Options, Deploy Server Administrator, and Command Line. Sample remote tasks use cases are disabled by default. To enable a sample use case:

1. Right-click the use case and select **Clone**.
2. Enter the **Cloned Task Name** and click **Ok**.
3. Right-click the cloned task and select **Edit**.
4. Enter the required information and assign targets to the tasks. For information about the options, see Remote Tasks Reference.

Related Links

Remote Tasks
Remote Tasks — Reference
Remote Tasks Home
Command Line Task
All Tasks
Device Capability Matrix

Use Cases in Remote Tasks

Server Power Options

Sample-Power On Device—Enable this use case to turn on the server. The system must have RAC/DRAC configured.

Deploy Server Administrator

Sample-OMSA Upgrade Windows—Enable this use case to upgrade OpenManage Server Administrator on a Windows-based system.

Command Line

- **Sample - Windows OMSA Uninstall** — Enable this use case to uninstall OMSA on a system running the Windows Server operating system.
- **Sample - Linux OMSA Uninstall** — Enable this use case to uninstall OMSA on a system running the Linux operating system.
- **Sample - Server XML Configuration** — Enable this use case to apply a specific server configuration to multiple managed nodes. For more information, see Using the Sample - Server XML Configuration Command Line Task.
- **Sample-Generic Command Remote** — Enable this use case to use tokens to receive the IP address or name of inventories systems.

  NOTE: To use this command, you must enter the local system credentials.

- **Sample - Generic Command Local** — Enable this use case to run a command or script on system with OpenManage Essentials.

  NOTE: To use this command, you must enter the local system credentials.

- **Sample - IPMI Command** — Enable this use case to receive information about the power status of a server.
- **Sample - Remote Command** — Enable this use case to view the system summary through Server Administrator.
- **Sample - RACADM - Clear SEL Log** — Enable this use case to clear the SEL log of RAC.
- **Sample - RACADM-Reset** — Enable this use case to reset the RAC.

Using the Sample - Server XML Configuration Command Line Task

The following are the prerequisites for using the **Sample - Server XML Configuration** command line task:

- Dell Lifecycle Controller 2 version 1.2 or later
- RACADM version 7.2 or later
- Firmware version 1.30.30 or later
- Express or Enterprise license
- iDRAC7

The **Sample - Server XML Configuration** command line task allows you to apply a specific server configuration to multiple managed nodes. Using Dell Lifecycle Controller 2 version 1.2 or later, a server configuration summary can be exported from an iDRAC in XML format through the "Export Server Configuration" operation.

NOTE: For information on exporting the server configuration summary using Lifecycle Controller 2, see the *Configuration XML Workflows* white paper at **DellTechCenter.com/LC**.

The server configuration summary XML file can be applied to another iDRAC using the **Sample - Server XML Configuration** command line task.

NOTE: To apply the server configuration summary from one iDRAC to another iDRAC, both the iDRACs must be of the same generation, same license state, and so on. For more information on the requirements, see the *Lifecycle Controller (LC) XML Schema Guide*, *Server Configuration XML File*, and *Configuration XML Workflows* white papers at **DellTechCenter.com/LC**.

To use the **Sample - Server XML Configuration** command line task:

1. In the OpenManage Essentials **Remote Tasks** portal, right-click the **Sample - Server XML Configuration**, and click **Clone**.

   The **Input information for the newly cloned task** dialog box is displayed.
2. Provide the **Cloned Task Name** and click **OK**.
3. Right-click the created cloned task and click **Edit**.

   The **Create a Command Line Task** dialog box is displayed.
4. Edit the **Command** field, and provide the location of the server configuration summary xml file in the OpenManage Essentials management station. For example, `set –f c:\user1\server1.xml–t xml`, where `c:\user1\server1.xml` is the location of the server configuration summary xml file.
5. In the **Targets** tab, select the appropriate targets for applying the server configuration.
6. In the **Schedule and Credentials** tab, select to run or schedule the task, and provide the required credentials.
7. Click **Finish**.

Device Capability Matrix

The device capability matrix below provides information about the type of remote tasks supported on devices that are displayed in the **Task Target** tab.

Remote Task Type	All Servers (except ESXi) With Server Administrator and Discovered Using SNMP/WMI	Windows-based Servers without Server Administrator and discovered using WMI	Linux-based Servers without Server Administrator and discovered using SSH	DRAC/iDRAC discovered using IPMI	DRAC/iDRAC discovered using SNMP/WS-Man
	DRAC/iDRAC is not discovered			Server operating system is not discovered	
Reboot/power cycle operation	Supported	Supported	Not supported	Not supported	Not supported
Power off operation	Supported	Supported	Not supported	Not supported	Not supported
Power on operation	Not supported	Not supported	Not supported	Supported	Not supported
Remote Server Administrator command task	Supported	Not supported	Not supported	Not supported	Not supported
IPMI command task	Not supported	Not supported	Not supported	Not supported	Not supported
RACADM command line task	Not supported	Not supported	Not supported	Not supported	Supported

Device capabilities for a server or DRAC/iDRAC device are populated during discovery and is leveraged by remote tasks to determine applicable targets for each task type. The capability is populated based on the following parameters:

- Protocol used to discover the server and DRAC/iDRAC. For example, IPMI, SNMP, and so on.
- If Server Administrator is installed on the server.
- Settings enabled on the DRAC/iDRAC.

Selecting the **Enable All** check box allows you to override device capability and allows all the available devices for selection as task targets.

The device capability matrix below provides information about the type of remote tasks supported on devices when the device capabilities are overridden.

Remote Task Type	All Servers (except ESXi) With Server Administrator and Discovered Using SNMP/WMI	Windows-based Servers without Server Administrator and discovered using WMI	Linux-based Servers without Server Administrator and discovered using SSH	DRAC/iDRAC discovered using IPMI	DRAC/iDRAC discovered using SNMP/ WS-Man
	DRAC/iDRAC is not discovered			Server operating system is not discovered	
Reboot/power cycle operation	Supported	Supported	Not supported	Not supported	Not supported
Power off operation	Supported	Supported	Not supported	Not supported	Not supported

Remote Task Type	All Servers (except ESXi) With Server Administrator and Discovered Using SNMP/WMI	Windows-based Servers without Server Administrator and discovered using WMI	Linux-based Servers without Server Administrator and discovered using SSH	DRAC/iDRAC discovered using IPMI	DRAC/iDRAC discovered using SNMP/ WS-Man
	DRAC/iDRAC is not discovered			**Server operating system is not discovered**	
Power on operation	Supported if: DRAC/iDRAC information is retrieved and displayed in the inventory page. IPMI over LAN is enabled on the DRAC/iDRAC device. You select **Enable All** in the **Tasks Target** tab.	Not supported	Not supported	Supported	Supported if: IPMI over LAN is enabled on the DRAC/iDRAC device. You select **Enable All** in the **Tasks Target** tab.
Remote Server Administrator command task		Not supported	Not supported	Not supported	
IPMI command task	Not supported	Not supported	Not supported	Not supported	Not supported
RACADM command line task	Supported if: DRAC/iDRAC information is retrieved and displayed in the inventory page. You select **Enable All** in the **Tasks Target** tab.	Not supported	Not supported	Not supported	Supported

Related Links

- Managing Command Line Task
- Managing RACADM Command Line Tasks
- Managing Server Power Options
- Deploying Server Administrator
- Working With Sample Remote Tasks Use Cases
- Using the Sample - Server XML Configuration Command Line Task
- Remote Tasks
- Remote Tasks — Reference

17

Remote Tasks — Reference

From Remote Tasks you can:

- Run commands on local and remote systems, batch files and executable files on the local systems, and schedule local and remote tasks.
- Change power status for a system.
- Deploy OpenManage Server Administrator on systems.
- View the remote tasks.

Remote Tasks:

- Common Tasks
  - Create Command Line Task
  - Create Deployment Task
  - Create Power Task
- Remote Tasks
  - Server Power Options
  - Deploy Server Administrator
  - Command Line

Related Links

Managing Command Line Task
Managing RACADM Command Line Tasks
Managing Server Power Options
Deploying Server Administrator
Working With Sample Remote Tasks Use Cases
Using the Sample - Server XML Configuration Command Line Task
Remote Tasks Home
Command Line Task
All Tasks
Device Capability Matrix

Remote Tasks Home

To view Remote Tasks page, in OpenManage Essentials, click **Manage** → **Remote Tasks**.

Related Links

Managing Command Line Task
Managing RACADM Command Line Tasks
Managing Server Power Options
Deploying Server Administrator
Working With Sample Remote Tasks Use Cases
Using the Sample - Server XML Configuration Command Line Task

Remote Tasks
Remote Tasks — Reference

Remote Tasks

Remote Tasks page lists this information:

- All Tasks
- Server Power Options
- Server Administrator Deployment
- Command Line

Related Links

Managing Command Line Task
Managing RACADM Command Line Tasks
Managing Server Power Options
Deploying Server Administrator
Working With Sample Remote Tasks Use Cases
Using the Sample - Server XML Configuration Command Line Task
Remote Tasks Home
Command Line Task
All Tasks
Device Capability Matrix

All Tasks

Field	Description
Scheduled State	Displays if the task is enabled.
Task Name	Names of the task.
Task Label	Type of task that is run, for example; for a command line task the options displayed are Remote Server Administrator Command, Generic Command, IPMI Command, and RACADM Command Line.
Last Run	The last time and date information when the task was run.
Created On	The time and date on which the task was created.
Updated On	The time and date information when the task was run.
Updated By	The name of the user.

Related Links

Managing Command Line Task
Managing RACADM Command Line Tasks
Managing Server Power Options
Deploying Server Administrator
Working With Sample Remote Tasks Use Cases
Using the Sample - Server XML Configuration Command Line Task
Remote Tasks
Remote Tasks — Reference

Task Execution History

Lists the details of the system update tasks.

Field	Description
Status	Information on the task if enabled or disabled.
Task Name	The name of the task.
Start Time	Time and date at which the system update task started.
% Completed	The task's progress information.
Task State	Provides these task states: • Running • Stopped • Completed • Warning **NOTE:** The task status displays warning if the **After update if required, reboot the device** option was not selected for the system update task.
Success / Total Targets	The number of target systems on which the task is successfully executed.
End Time	Time and date at which the system update task ends.
Executed by User	The user information.

Server Power Options

Select this option to change the power state or reboot systems.

Field	Description
General	
Task Name	Provide a name for this server power options task.
Select the type	Select from the following options: • Reboot—Reboots the system without powering off. • Power Cycle—Powers off and then reboots the system. **NOTE:** Make sure that the shutdown option is configured for the operating system before you perform a graceful shutdown using this option. If you use this option without configuring it on the operating system, it reboots the managed system instead of performing a shutdown operation . • Power Off—Powers off the system. • Power On—Powers on the system. This option works only on target systems that contain RAC.

Field	Description
Shutdown OS first	Select to shut down the operating system before executing the server power options task.
Task Target	
Select a query	Select a query from the drop-down list. To create a new query, click **New**.
Select the device(s) for this task to target	Select the devices to which you want to assign this task.
Enable All	Select to override the device capability and allow all the available devices for selection as task targets.
Schedule and Credentials	
Set schedule	Select from these options: • **Activate Schedule**—Select this option to activate a schedule for the task. • **Run now**—Select this option to run the task immediately. • **Set schedule**—Select this option to set a date and time for the task to run. • **Run Once**—Select this option tot run the task on the planned schedule only once. • **Periodic**—Select this option to run the task frequently at specified intervals: – **Hourly**—Select this option to run the task once every hour. – **Daily**—To run the task once every day. – **Weekly**—To run the task once every week. – **Monthly**—To run the task once every month. **Range of Recurrence**: • **Start**—To specify the date and time at which the task should begin. • **No End Date**—To continuously run this task based on the selected frequency. For example, if you selected Hourly, then this task continuously runs every hour from the start time. • **End By**—To stop the task at the specified date and time.
Enter User Name and Password	**User Name**—Provide in the format domain\user name or local host\user name. **Password**—Provide the password. **Power On** works only on target systems with iDRAC; use the IPMI credentials to perform **Power On** task. If you selected **Power On**, then provide the KG key. **KG Key**—Enter the KG Key. DRAC also supports IPMI KG Key. Each BMC is configured to require an access key in addition to user credentials. The KG key is prompted only for power-on task and not other power tasks because it is an IPMI task.

Field	Description
	NOTE: The KG key is a public key that is used to generate an encryption key for use between the firmware and the application; and is available only on Dell PowerEdge *y9xx* and later systems. The KG key value is an even number of hexadecimal characters. In the format, *yxxx*, *y* denotes alphanumeric characters and x denotes numbers.

Related Links

Managing Server Power Options

Device Capability Matrix

Deploy Server Administrator Task

Select this option to create tasks to deploy Server Administrator on selected servers.

Field	Description
General	
Task Name	Provide a name for the task.
Select the type	Select from the target type from the following options: • Windows • Linux
Installer Path	The location where the Server Administrator installer is available. For Windows, packages with **.dup, .msi,** and **.msp**. file extensions are available. Msi packages enable Server Administrator installation and upgrades while dup and msp packages enable only Server Administrator upgrades. For Linux, packages with the tar.gz file extensions are available. For Linux, the**.sign** file is required for verification. The .sign file must reside in the same folder as the tar.gz file.
Install Arguments	(Optional) Provide arguments. For example, in Windows, the parameters are as follows: • `ADDLOCAL` = IWS—Server Administrator web server only • `ADDLOCAL` = SSA—Server instrumentation only For example, in Linux, the parameters are as follows: • `-w` - Server administrator web server only • `-d` - Server instrumentation only See the *Dell OpenManage Installation and Security User's Guide* at **support.dell.com/manuals** for a complete list of arguments.

Field	Description
Generate Trusted Key	This option is available if you selected Linux. Select this option to generate a trusted key.
64-bit System	Select this option if you are deploying the 64-bit version of Server Administrator on a managed node.
Allow reboot (if required)	Select this option to reboot the server once you deploy Server Administrator on the server.
Task Target	
Select a query	Select a query from the drop-down list. To create a new query, click **New**.
Select the server(s) for this task to target	Select the severs to which you want to assign this task.
Schedule and Credentials	
Set schedule	Select from these options: • **Activate Schedule**—Select this option to activate a schedule for the task. • **Run now**—Select this option to run the task immediately. • **Set schedule**—Select this option to set a date and time for the task to run.
Enter credentials of remote target(s)	
User Name	Provide in the format domain\user name or local host\user name.
Password	Provide the password.
Enable Sudo	Select this option to deploy Server Administrator using Sudo.
SSH Port	Provide the SSH port number.

Related Links

- Deploying Server Administrator
- Device Capability Matrix

Command Line Task

Select this option to create command line tasks.

Field	Description
Task Name	Provide name of the task.
Remote Server Administrator Command	Select this option to run Remote Server Administrator Command on selected servers.
Generic Command	Select this option to run executable and commands on the system with OpenManage Essentials.
IPMI Command	Select this option to run IPMI commands on selected servers.

Field	Description
RACADM Command Line	Select this option to run RACADM commands on selected servers.

Related Links

- Managing Command Line Task
- Managing RACADM Command Line Tasks
- Managing Server Power Options
- Deploying Server Administrator
- Working With Sample Remote Tasks Use Cases
- Using the Sample - Server XML Configuration Command Line Task
- Remote Tasks
- Remote Tasks — Reference
- Remote Server Administrator Command
- Generic Command
- IPMI Command
- RACADM Command Line

Remote Server Administrator Command

Field	Description
Command	Provide command, for example, `omereport system summary`.
Ping Device	This option performs a ping test to verify if a device is reachable before it runs a task against it. This option can be used when using $IP or $RAC_IP and it decreases the time it takes to run the task(s) as it skips unreachable devices.
Output to file	Select to enable output to a log file. This option captures standard output and writes it to the log file. If you select this option, enter the path name and file name of the log file. This option is disabled by default.
Append	Select to append output from the completed command to the specified file. If the file does not exist, it is created.
Include errors	Select to write all OpenManage Essentials-detected errors to the log file. For example, if no response is received to a ping request before the execution of the command, an error is written to the log file.
SSH Port number	Provide the Secure Shell (SSH) port number on the managed Linux system. The default value for the port number is 22.
Generate Trusted Key for Linux	Select this option to generate a trusted device key for communicating with devices. This option is disabled by default.

Field	Description
	NOTE: The first time that OpenManage Essentials communicates with a managed device with Linux operating system, a key is generated and stored on both the devices. This key is generated per device and enables a trust relationship with the managed device.
Task Target	
Select a query	Select a query from the drop-down list. To create a new query, click **New**.
Select the server(s) for this task target	Select the severs to which you want to assign this task.
Enable All	Select to override the device capability and allow all the available devices for selection as task targets.
Schedule and Credentials	
Set schedule	Select from these options: • **Activate Schedule**—Select this option to activate a schedule for the task. • **Run now**—Select this option to run the task immediately. • **Set schedule**—Select this option to set a date and time for the task to run. • **Run Once**—Select this option to run the task on the planned schedule only once. • **Periodic**—Select this option to run the task frequently at specified intervals. – **Hourly**—Select this option to run the task once every hour. – **Daily**—To run the task once every day. – **Weekly**—To run the task once every week. – **Monthly**—To run the task once every month. **Range of Recurrence**: • **Start**—To specify the date and time at which the task should begin. • **No End Date**—To continuously run this task based on the selected frequency. For example, if you selected Hourly, then this task continuously runs every hour from the start time. • **End By**—To stop the task at the specified date and time.
Enter credentials of the remote target(s)	**User Name**—Provide in the format domain\user name or local host\user name. **Password**—Provide the password.

Related Links

Command Line Task

Managing Command Line Task
Using the Sample - Server XML Configuration Command Line Task

Generic Command

Field	Description
Task Name	Enter a name for the task. By default, the task name is populated in the format: `<task name>-<date and time>`.
Command	Provide the fully qualified path name and file name of the executable, command, or script file that launches the application program. For example: • Tracert • **C:\scripts\trace.bat** • **D:\exe\recite.exe**
Arguments	Enter command line switches to a command or executable or pass values to a script or batch file. For example, -4 $IP. If this argument is passed to tracert command, it executes IPV4 only Traceroute against the IPs of servers selected in **Task Target** tab. The command run would be `tracert -4 10.35.0.55`. For more information, see About Tokens.
Ping Device	This option performs a ping test to verify if a device is reachable before it runs a task against it. This option can be used when using $IP or $RAC_IP and it decreases the time it takes to run the task(s) as it skips unreachable devices.
Output to file	Select to enable output to a log file. This option captures standard output from the running application and writes it to the log file. If you select this option, you must enter the path name and file name of the log file. This option is disabled by default.
Append	Select this option to continue writing to the same file if you run a task multiple times.
Include errors	Select to write all OpenManage Essentials-detected errors to the log file. For example, if no response is received to a ping request before the execution of the command, an error is written to the log file.
Schedule and Credentials	
Set schedule	Select from these options: • **Activate Schedule**—Select this option to activate a schedule for the task. • **Run now**—Select this option to run the task immediately. • **Set schedule**—Select this option to set a date and time for the task to run. • **Run Once**—Select this option to run the task on the planned schedule only once.

Field	Description
	- **Periodic**—Select this option to run the task frequently at specified intervals. – **Hourly**—Select this option to run the task once every hour. – **Daily**—To run the task once every day. – **Weekly**—To run the task once every week. – **Monthly**—To run the task once every month. **Range of Recurrence**: - **Start**—To specify the date and time at which the task should begin. - **No End Date**—To continuously run this task based on the selected frequency. For example, if you selected Hourly, then this task continuously runs every hour from the start time. - **End By**—To stop the task at the specified date and time.
Enter the credentials with appropriate privileges to run this task on this system	**User Name**—Provide OpenManage Essentials user credentials in the format domain\user name or local host \user name. **Password**—Provide the password.

Related Links

Command Line Task

Managing Command Line Task

Using the Sample - Server XML Configuration Command Line Task

IPMI Command

Field	Description
Command	Provide the IPMI command you want to run on selected targets.
Ping Device	This option performs a ping test to verify if a device is reachable before it runs a task against it. This option can be used when using $IP or $RAC_IP and it decreases the time it takes to run the task(s) as it skips unreachable devices.
Output to file	Select to enable output to a log file. This option captures standard output from the running application and writes it to the log file. If you select this option, enter the path name and file name of the log file. This option is disabled by default.
Append	Select to append output from the completed command to the specified file. If the file does not exist, it is created.

Field	Description
Include errors	Select to write all OpenManage Essentials-detected errors to the log file. For example, if no response is received to a ping request before the execution of the command, an error is written to the log file.
Task Target	
Select a query	Select a query from the drop-down list. To create a new query, click **New**.
Select server(s) for this task to target	Select the severs to which you want to assign this task.
Enable All	Select to override the device capability and allow all the available devices for selection as task targets.
Schedule and Credentials	
Set schedule	Select from these options: • **Activate Schedule**—Select this option to activate a schedule for the task. • **Run now**—Select this option to run the task immediately. • **Set schedule**—Select this option to set a date and time for the task to run. • **Run Once**—Select this option to run the task on the planned schedule only once. • **Periodic**—Select this option to run the task frequently at specified intervals. – **Hourly**—Select this option to run the task once every hour. – **Daily**—To run the task once every day. **Weekly**—To run the task once every week. – **Monthly**—To run the task once every month. **Range of Recurrence**: • **Start**—To specify the date and time at which the task should begin. • **No End Date**—To continuously run this task based on the selected frequency. For example, if you selected Hourly, then this task continuously runs every hour from the start time. • **End By**—To stop the task at the specified date and time.
Enter Remote Access Controller credentials for target(s)	
User Name	The RACADM task requires IPMI credentials. Provide IPMI credentials to run the task.
Password	Provide the password.
KG key	Enter the KG key value. DRAC also supports IPMI KG key value. Each BMC or DRAC is configured to require an access key in addition to user credentials.

Field	Description
	NOTE: The KG key is a public key that is used to generate an encryption key for use between the firmware and the application. The KG key value is an even number of hexadecimal characters.

Related Links

- Command Line Task
- Managing Command Line Task
- Using the Sample - Server XML Configuration Command Line Task

RACADM Command Line

Field	Description
Command	Provide the RACADM command you want to run on the servers.
Ping Device	This option performs a ping test to verify if a device is reachable before it runs a task against it. This option can be used when using $IP or $RAC_IP and it decreases the time it takes to run the task(s) as it skips unreachable devices.
Output to file	Select to enable output to a log file. This option captures standard output from the running application and writes it to the log file. If you select this option, you must enter the path name and file name of the log file. This option is disabled by default.
Append	Select to append output from the completed command to the specified file. If the file does not exist, it is created.
Include errors	Select to write all OpenManage Essentials-detected errors to the log file. For example, if no response is received to a ping request before the execution of the command, an error is written to the log file.
Task Target	
Select a query	Select a query from the drop-down list. To create a new query, click **New**.
Select the server(s) for this task to target	Select the severs to which you want to assign this task.
Enable All	Select to override the device capability and allow all the available devices for selection as task targets.
Schedule and Credentials	
Set schedule	Select from these options: • **Activate Schedule**—Select this option to activate a schedule for the task. • **Run now**—Select this option to run the task immediately. • **Set schedule**—Select this option to set a date and time for the task to run.

Field	Description
	- **Run Once**—Select this option to run the task on the planned schedule only once. - **Periodic**—Select this option to run the task frequently at specified intervals. – **Hourly**—Select this option to run the task once every hour. – **Daily**—To run the task once every day. – **Weekly**—To run the task once every week. – **Monthly**—To run the task once every month. **Range of Recurrence**: - **Start**—To specify the date and time at which the task should begin. - **No End Date**—To continuously run this task based on the selected frequency. For example, if you selected Hourly, then this task continuously runs every hour from the start time. - **End By**—To stop the task at the specified date and time.
Enter Remote Access Controller credentials for target(s)	**User Name**—The RACADM task requires IPMI credentials. Provide IPMI credentials to run the task. **Password**—Provide the password.

Related Links

- Command Line Task
- Managing Command Line Task
- Using the Sample - Server XML Configuration Command Line Task

18

Managing Security Settings

Using Security Roles and Permissions

OpenManage Essentials provides security through role-based access control (RBAC), authentication, and encryption. RBAC manages security by determining the operations run by persons in particular roles. Each user is assigned one or more roles, and each role is assigned one or more user privileges that are permitted to users in that role. With RBAC, security administration corresponds closely to an organization's structure.

OpenManage Essentials roles and associated permissions are as follows:

- **OmeUsers** have limited access and privileges and can perform read-only operations in OpenManage Essentials. They can log in to the console, run discovery and inventory tasks, view settings, and acknowledge events. The Windows Users group is a member of this group.
- **OmeAdministrators** have full access to all the operations within OpenManage Essentials. Windows Administrators group is member of this group.
- **OmeSiteAdministrators** have full access to all the operations within OpenManage Essentials with the following privileges and restrictions:
  - Can only create custom device groups under **All Devices** in the device tree. They can create remote or system update tasks on the custom device groups only after the custom device groups are assigned to them by the **OmeAdministrators**.
    - Cannot edit custom device groups.
    - Can delete custom device groups.
  - Can create remote and system update tasks on only the device groups assigned to them by the **OmeAdministrators**.
  - Can only run and delete remote and system update tasks that they have created.
    - Cannot edit remote tasks, including activating or deactivating the task schedule.
    - Cannot clone remote or system update tasks.
    - Can delete tasks they have created.
  - Can delete devices.
  - Cannot edit or target device queries.
  - Cannot edit or access the **Device Group Permissions** portal.
  - Cannot create remote and system update tasks based on a device query.

  NOTE: Any changes made to the role or device group permissions of a user are effective only after the user logs out and logs in again.
- **OmePowerUsers** have the same privileges as **OmeAdministraors** except that they cannot edit preferences.

Microsoft Windows Authentication

For supported Windows operating systems, OpenManage Essentials authentication is based on the operating system's user authentication system using Windows NT LAN Manager (NTLM) modules to authenticate. For the network, this underlying authentication system allows you to incorporate OpenManage Essentials security in an overall security scheme.

Assigning User Privileges

You do not have to assign user privileges to OpenManage Essentials users before installing OpenManage Essentials. The following procedures provide step-by-step instructions for creating OpenManage Essentials users and assigning user privileges for Windows operating system.

NOTE: Log in with administrator privileges to perform these procedures.

NOTE: For questions about creating users and assigning user group privileges or for more detailed instructions, see the operating system documentation.

1. From Windows desktop, click **Start** → **All Programs** → **Administrative Tools** → **Computer Management**.
2. In the console tree, expand **Local Users and Groups**, and click **Groups**.
3. Double-click either the **OmeAdministrators**, **OMEPowerUsers**, or **OmeUsers** group to add the new user.
4. Click **Add** and type the user name that you are adding. Click **Check Names to validate** and then click **OK**.

   New users can log on to OpenManage Essentials with the user privileges for their assigned group.

Using Custom SSL Certificates (Optional)

OpenManage Essentials default settings ensure that a secure communication is established within your environment. However, some users may prefer to utilize their own SSL certificate for encryption.

To create a new domain certificate:

1. Open Internet Information Services (IIS) Manager by clicking **Start** → **All Programs** → **Administrative Tools** → **Internet Information Services (IIS) Manager**.
2. Expand the <server name> and click **Server Certificates** → **Sites.**
3. Click **Create Domain Certificate** and enter the required information.

   NOTE: All systems display a certificate error until the domain administrator has published the certificate to the clients.

Configuring IIS Services

To use a custom SSL certificate, you must configure IIS Services on the system where OpenManage Essentials is installed.

1. Open Internet Information Services (IIS) Manager by clicking **Start** → **All Programs** → **Administrative Tools** → **Internet Information Services (IIS) Manager**.
2. Expand the <server name> → **Sites.**
3. Right-click **DellSystemEssentials** and select **Edit Bindings**.
4. In **Site Bindings**, select the **https binding** and click **Edit**.
5. In **Edit Site Binding**, from the **SSL certificate** drop-down list select your custom SSL certificate and click **OK**.

Supported Protocols and Ports in OpenManage Essentials

Supported Protocols and Ports on Management Stations

Port Number	Protocol	Port Type	Maximum Encryption Level	Direction	Usage
21	FTP	TCP	None	In/Out	Access **ftp.dell.com**.
25	SMTP	TCP	None	In/Out	Optional e-mail alert action.
162	SNMP	UDP	None	In	Event reception through SNMP.
1278	HTTP	TCP	None	In/Out	Web GUI; downloading packages to Dell Lifecycle Controller.
1279	Proprietary	TCP	None	In/Out	Scheduling tasks.
1433	Proprietary	TCP	None	In/Out	Optional remote SQL server access.
2606	Proprietary	TCP	None	In/Out	Network monitoring.
2607	HTTPS	TCP	128-bit SSL	In/Out	Web GUI.

Supported Protocols and Ports on Managed Nodes

Port Number	Protocol	Port Type	Maximum Encryption Level	Direction	Usage
22	SSH	TCP	128 bit	In/Out	Contextual application launch—SSH client Remote software updates to Server Administrator—for systems supporting Linux operating systems Performance monitoring in Linux systems.
80	HTTP	TCP	None	In/Out	Contextual application launch— PowerConnect console.
135	RPC	TCP	None	In/Out	Event reception through CIM from Server Administrator— for systems supporting Windows operating systems. Remote software update transfer to Server Administrator—for systems supporting Windows operating systems Remote Command Line— for systems supporting Windows operating systems.
161	SNMP	UDP	None	In/Out	SNMP query management.
623	RMCP	UDP	None	In/Out	IPMI access through LAN.
143	Proprietary	TCP	None	In/Out	Optional remote SQL server access.
443	Proprietary/ WSMAN	TCP	None	In/Out	EMC storage, iDRAC6, and iDRAC7 discovery and inventory.
3389	RDP	TCP	128-bit SSL	In/Out	Contextual application launch—Remote desktop to Windows terminal services.

Port Number	Protocol	Port Type	Maximum Encryption Level	Directi on	Usage
6389	Proprietary	TCP	None	In/out	Enables communication between a host system (through NaviCLI/NaviSec CLI or Navisphere host agent) and a Navisphere Array Agent on a Storage system.

19

Troubleshooting

OpenManage Essentials Troubleshooting Tool

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

This tool provides the following protocol-specific diagnostics to identify the problem with the remote node:

- Database—Fetches all the user defined databases present on the remote box.
- Dell|EMC—Verifies the connection to the Dell|EMC storage devices.
- ICMP—Verifies whether you can ping the remote device from the local box.
- IPMI—Verifies the IPMI protocol to connect to BMC/iDRAC.
- Name Resolution—Verifies whether you can get the resolved name from the local box.
- OpenManage Server Administrator Remote Enablement—This test helps you to verify that Dell OpenManage Server Administrator's remote enablement feature is working on the managed node (Dell OpenManage Server administrator installed with the remote enablement component). This tool behaves like a Server Administrator Distributed Web server (DWS) and connects to Server Administrator managed node instrumentation agent using the WSMAN protocol.

  To connect successfully, the Managed Node must have OpenManage Server Administrator installed with the Remote Enablement feature working.
- Port—Verifies whether managed node is listening to the specified port. You can specify 1-65,535 port numbers.
- PowerVault Modular Disk Arrays—Verifies that PowerVault modular disk storage array protocol is used to connect to PowerVault Storage devices.
- Services—Uses SNMP protocol to fetch the running services on the managed node.
- SNMP—Verifies SNMP connection to the remote node, using the required SNMP community string, retries, and time out. First it tries to connect to MIB-II agent and then various other agents to find out the type of device. Troubleshooting Tool also gathers other agent specific information from that device.
- SSH—Verifies that the SSH protocol is used to connect to managed node.
- WMI—Verifies WMI/CIM connection to the remote node. Default retries and time out values are used internally.
- WSMAN—Attempts to connect to WSMAN client on the remote node. Use this test to verify connectivity problems with iDRAC, ESX, and other devices, which support WSMAN specification. This test will connect to such devices and will also list the exposed WSMAN profiles enabled on the remote device.

Troubleshooting Procedures

Troubleshooting Inventory

Inventoried Linux servers are listed under Non-Inventoried systems, numerous retries does not resolve this.

To resolve this issue for the Red Hat Enterprise Linux 5.5, SUSE Linux Enterprise Server version 10 and version 11 installed servers:

1. Mount the *Dell Systems Management Tools and Documentation DVD* (version 6.5 or later) on the Linux server.
2. Install **srvadmin-cm** rpm.
3. Restart OpenManage Server Administrator 6.5.
4. Make sure the OpenManage Server Administrator inventory collector is working from the location **/opt/dell/srvadmin/sbin/invcol**, run **/invcol -outc=/home/inv.xml**.
5. Perform server inventory.

Troubleshooting Device Discovery

If a device discovery is not successful, perform the following steps to troubleshoot and fix the problem:

1. If the device assigned for discovery is a Dell PowerEdge system, ensure that Dell OpenManage Server Administrator is installed on it.
2. To discover Windows devices successfully, configure the SNMP services appropriately. For detailed information on configuring SNMP services on Windows, see Configuring SNMP Services on Windows.
3. To discover Linux devices successfully, configure the SNMP services appropriately. For detailed information on configuring SNMP services on Linux, see Configuring SNMP Services on Linux.
4. After configuring the SNMP services, verify whether the SNMP services are responding correctly.
5. If the device assigned for discovery is Microsoft Windows and you want to use WMI, ensure that the user name and password used in the WMI credentials has the local administrator permissions on the machine that you want to discover. You can use the Microsoft **wbemtest** utility to ensure that WMI connectivity to the Windows Server is correct.
6. If the device assigned for discovery is a non-server network device, such as a printer, Dell PowerConnect switch, and so on, ensure that SNMP is enabled on the device. You can do this by accessing the Web interface for a device.

Configuring SNMP Services on Windows

1. Open a command run prompt and type **services.msc** to open the Services MMC.
2. Right-click **SNMP Service** and select **Properties**. If you cannot locate SNMP Service, you need to install it using **Add/Remove Windows Components**.
3. Click **Security** and ensure that **Accept SNMP packets from any host** is selected.
4. Under **Accepted Community Names**, ensure that **public** (or a community string of your choice) is set. If not set by default, click **Add**, and type a community string in **Community Name**. Also select community rights as **READ ONLY** or **READ WRITE**.
5. Click **Traps** and ensure that the community string field has a valid name.
6. In **Trap destination**, click **Add** and enter the Open Manage Essential Console IP address.
7. Start the service.

Configuring SNMP Services on Linux

1. Run the command `rpm -qa | grep snmp`, and ensure that the **net-snmp** package is installed.
2. Run `cd /etc/snmp` to navigate to the snmp directory.
3. Open **snmpd.conf** in the VI editor (**vi snmpd.conf**).
4. Search snmpd.conf for **# group context sec.model sec.level prefix read write notif** and ensure that the values for fields read, write, and notif are set to **all**.

5. At the end of the **snmpd.conf** file, just before Further Information, enter the Open Manage Essentials Console IP address in the following format:`trapsink <OPEN MANAGE ESSENTIALS CONSOLE IP> <community string>` For example, trapsink 10.94.174.190 public.

6. Start the SNMP services (service snmpd restart).

Troubleshooting Receiving SNMP Traps

If you encounter a problem receiving SNMP traps, perform the following steps to troubleshoot and fix the problem:

1. Check for network connectivity between the two systems. You can do this by pinging one system from another using the ping <IP address> command.

2. Check the SNMP configuration on the managed node. Ensure that you have specified the OpenManage Essential console IP address and the community string name in the SNMP services of the managed node.

   For information on setting SNMP on a Windows system, see Configuring SNMP Services on Windows.

   For information on setting SNMP on a Linux system, see Configuring SNMP Services on Linux.

3. Ensure that the SNMP Trap service services are running in the Open Manage Essentials system.

4. Check firewall settings to allow UDP 161, 162 ports.

Troubleshooting Discovery of Windows Server 2008–Based Servers

You also have to allow the server discovery. By default, the option is disabled in Windows Server 2008.

1. Click **Start** → **Control Panel** → **Network and Internet** → **Network and Sharing Center** → **Advanced Sharing Setting**.

2. Choose the drop-down arrow for the applicable network profile (Home or Work / Public) and under **Network Discovery**, select **Turn on network discovery**.

Troubleshooting SNMP Traps for ESX or ESXi Versions 3.5, 4.x, or 5.0

Details: To generate virtual machine and environmental traps from ESX or ESXi 3.5 or 4.*x* hosts, configure and enable the embedded SNMP agent. You cannot use the Net-SNMP-based agent to generate these traps, although it can receive GET transactions and generate other types of traps.

This represents a change in behavior from ESX 3.0.x, in which the configuration file for the Net-SNMP-based agent controlled the generation of virtual machine traps

Solution: Use the `vicfg-snmp` command from the Remote CLI or vSphere CLI to enable the SNMP agent and configure trap destinations. Each time you specify a target with the vicfg-snmp command, the settings you specify overwrite all previously specified settings. To specify multiple targets, specify them in a single command, separated by commas.

Troubleshooting Problems With Microsoft Internet Explorer

Follow the instructions in this section if you are experiencing any of the following:

- Unable to open OpenManage Essentials using Internet Explorer.
- Internet Explorer displays certificate errors.
- Internet Explorer displays a message to approve the certificate.
- Unable to browse the file system to deploy Server Administrator and system update.
- Unable to display the Device tree for devices.

- Unable to install active components.

1. Open OpenManage Essentials on the client server using Internet Explorer.
2. Click **Tools** → **Internet Options** → **Security** .
3. Select **Local intranet** and click **Sites**.
4. Click **Advanced**.
5. Type the fully qualified name of the server where OpenManage Essentials is installed.
6. Click **Add**.

   If the issue persists, there may be an issue with the DNS server resolving the name of the OpenManage Essentials server. See Resolving DNS Server Issues.

   If a certificate error is displayed:

   - Contact your system administrator to add the OpenManage Essentials certificate published to the 'Trusted Root Certificate Authorities' and Trusted Publishers' on domain systems.
   - Add the OpenManage Essentials certificate to your 'Trusted Root Certificate Authorities' and 'Trusted Publishers' certificate stores using Internet Explorer.

Resolving DNS Server Issues

To resolve DNS server issues:

1. Contact your system administrator and add the name of the system running OpenManage Essentials to the DNS server.
2. Edit your host file to resolve the IP of the system running OpenManage Essentials. The host file is located at **%windir%\System32\drivers\etc\hosts**.
3. Add the IP of the system running OpenManage Essentials to the Local intranet sites in Internet Explorer.

   NOTE: You cannot remove the certificate errors unless you use the fully qualified name of the server running OpenManage Essentials.

Troubleshooting Map View

Question: Why is the **Map View** feature not available?

Answer: The **Map View** feature is available only if you have discovered any Dell PowerEdge VRTX CMC with an Enterprise license, using the WS-Man protocol. If the PowerEdge VRTX CMC with an Enterprise license is discovered using the SNMP protocol, the **Map View** feature is not available. Rediscovering the PowerEdge VRTX CMC using the WS-Man protocol is required, if the **Map View** tab is not displayed in the device details portal of a Dell PowerEdge VRTX CMC with an Enterprise license.

Question: Why am I unable to add a particular device on the map?

Answer: Only PowerEdge VRTX devices with an Enterprise license can be added to the map.

Question: The map does not load with the MapQuest or Bing map provider. What should I do?

Answer: This indicates a problem with the Internet connectivity.

- Verify if you are able to connect to the Internet through the browser.
- If the system connects to the Internet through the proxy:
  - For MapQuest map provider — Configure the proxy settings in the OpenManage Essentials **Preferences** → **Console Settings** page.
  - For Bing map provider — Verify if you configured the proxy server settings in Internet Explorer.
- Verify if you are able to access the MapQuest website.

Question: Why is the map loading slowly?

Answer: The map may load slowly as it requires more network bandwidth and graphic processing capability compared to normal browsing. Constant zooming and panning on the map may also slow the loading of the map.

Question: Why I am unable to locate an address using the search bar or **Edit Device Locations** dialog box?

Answer: There may be a problem with your Internet connection or the map provider may not be able to resolve the address.

- Verify if you are able to connect to the Internet through the browser.
- If the system connects to the Internet through the proxy:
  - For MapQuest map provider — Configure the proxy settings in the OpenManage Essentials **Preferences** → **Console Settings** page.
  - For Bing map provider — Verify if you configured the proxy server settings in Internet Explorer.
- Try to provide a variation of the address you provided. You can try providing a complete address. Abbreviations such as state, country, airport code, may have an unexpected result.

Question: Why cannot I use one map provider on the **Home** portal and another on the **Devices** portal?

Answer: The **Map View** available through the **Home** portal and the **Devices** portal are synchronized. Changes to the **Settings** or device locations on the **Map View** are affected on both the portals.

Question: How can I enhance the **Map View** experience?

Answer: Improving the network bandwidth accelerates the loading of the map. A more powerful graphic card enables faster zooming and panning capability. When using the MapQuest provider, the map is rendered better if OpenManage Essentials is launched on the management server.

20

Frequently Asked Questions

Installation

Question: How do I install OpenManage Essentials using a remote SQL database named instance?

Answer: To connect remotely, the SQL Server with named instances requires a running **SQL Server Browser** service.

Question: Will OpenManage Essentials support Microsoft SQL Server Evaluation edition?

Answer: No, SQL Server Evaluation edition is not supported.

Question: What are the minimum login roles for SQL Server?

Answer: See Minimum Login Roles for Microsoft SQL Server and Terms and Conditions for Using Relational Database Management Systems.

Question: When launching the OpenManage Essentials installer, an error message is displayed, stating a failure to load a specific library (for example, `failed to load OMIL32.DLL`), a denial of access, or an initialization error. What do I do?

Answer: This issue is most likely due to insufficient Component Object Model (COM) permissions on the system. To remedy this situation, see **support.installshield.com/kb/view.asp?articleid=Q104986**. The OpenManage Essentials installer may also fail if a previous installation of systems management software or some other software product was unsuccessful. Delete the following temporary windows installer registry, if present: **HKLM\Software\Microsoft\Windows \CurrentVersion\Installer\InProgress**.

Upgrade

Question: What troubleshooting can I do for the following error message:

`Https error 503. The service is unavailable`?

Answer: To resolve this issue, perform an IIS reset and launch OpenManage Essentials. To perform an IIS reset, launch the command prompt and type `iisreset`. When an iisreset is done, all connections to the web server are reset. It also resets any website hosted on the same OpenManage Essentials server.

Question: Why does an upgrade from OpenManage Essentials version 1.0.1 to 1.1 fail in a large deployment scenario?

Answer: To resolve this issue, ensure that the system meets the minimum hardware requirements. For more information, see Minimum Recommended Hardware.

Question: How do I upgrade to OpenManage Essentials version 1.2, when OpenManage Essentials version 1.0.1 or 1.1 is installed on a remote database with SQL Server 2005?

Answer: Installation or upgrade of OpenManage Essentials version 1.2 is not supported on Microsoft SQL Server 2005 (all editions) either on a local or remote database. While upgrading from OpenManage Essentials version 1.0.1 or 1.1 installed with remote SQL Server 2005 to OpenManage Essentials version 1.2, the following message is displayed:

```
Dell OpenManage Essentials cannot be installed or upgraded on SQL Server
versions prior to SQL Server 2008. Refer to the FAQ for information on possible
migration and additional details.
```

In this case, you can manually migrate the data from SQL Server 2005 and then upgrade to OpenManage Essentials version 1.2 as follows:

1. Create a backup of the OpenManage Essentials version 1.0.1 or 1.1 database.
2. Migrate the OpenManage Essentials version 1.0.1 or 1.1 data from SQL Server 2005 to SQL Server 2008, 2008 R2, or 2012. For more information, see the *OpenManage Essentials Database re-target process* instructions at **http://en.community.dell.com/techcenter/systems-management/f/4494/t/19440364.aspx**.
3. Ensure that OpenManage Essentials version 1.0.1 or 1.1 can connect to migrated database and works as expected.
4. Launch the OpenManage Essentials version 1.2 installer to complete the upgrade.

NOTE: After upgrading to OpenManage Essentials version 1.2 with SQL Server 2012, the SQLEXPRESSOME instance is created and data from OpenManage Essentials version 1.0.1 or 1.1 is migrated to OpenManage Essentials Version 1.2.

Tasks

Question: What troubleshooting can I do if a software update task or remote task fails to create or run?

Answer: Ensure that the DSM Essentials Task Manager service is running in Windows services.

Question: How do I use command line features while deploying OpenManage Server Administrator?

Answer: Unattended installation provides the following features:

- A set of optional command line settings to customize an unattended installation.
- Customization parameters to designate specific software features for installation.

Optional Command Line Settings

The table below shows the optional settings available for the **msiexec.exe** MSI installer. Type the optional settings on the command line after **msiexec.exe** with a space between each setting.

NOTE: See **support.microsoft.com** for full details about all the command line switches for the Windows Installer Tool.

Table 3. Command Line Settings for MSI Installer

Setting	Result
/i <Package|Product Code>	This command installs or configures a product. **/i SysMgmt.msi** – Installs the Server Administrator software.
/i SysMgmt.msi /qn	This command carries out a fresh installation of version 6.1.
/x <Package|Product Code>	This command uninstalls a product. **/x SysMgmt.msi** – Uninstalls the Server Administrator software.
/q[n|b|r|f]	This command sets the user interface (UI) level. **/q** or **/qn** – no UI. This option is used for silent and unattended installation. **/qb** – basic UI. This option is used for unattended but not silent installation. **/qr** – reduced UI. This option is used for unattended installation while displaying a modal dialog box showing install progress. **/qf** – full UI. This option is used for standard attended installation.
/f[p|o|e|d|c|a|u|m|s|v]<Package|ProductCode>	This command repairs a product.

Setting	Result
	/fp – This option reinstalls a product only if a file is missing. **/fo** – This option reinstalls a product if a file is missing or if an older version of a file is installed. **/fe** – This option reinstalls a product if a file is missing or an equal or older version of a file is installed. **/fd** – This option reinstalls a product if a file is missing or a different version of a file is installed. **/fc** – This option reinstalls a product if a file is missing or the stored checksum value does not match the calculated value. **/fa** – This option forces all files to reinstall. **/fu** – This option rewrites all required user-specific registry entries. **/fm** – This option rewrites all required system-specific registry entries. **/fs** – This option overwrites all existing shortcuts. **/fv** – This option runs from the source and re-caches the local package. Do not use the **/fv** reinstall option for the first installation of an application or feature.
INSTALLDIR=<path>	This command installs a product to a specific location. If you specify an install directory with this switch, it must be created manually prior to executing the CLI install commands or they fail with no error or message. **/i SysMgmt.msi INSTALLDIR=c:\OpenManage /qn** – installs a product to a specific location using **c:\OpenManage** as the install location.

For example, running **msiexec.exe /i SysMgmt.msi /qn** installs Server Administrator features on each remote system based on the system's hardware configuration. This installation is done silently and unattended.

Customization Parameters

REINSTALL and **REMOVE** customization CLI parameters provide a way to customize the exact software features to install, reinstall, or uninstall when running silently or unattended. With the customization parameters, you can selectively install, reinstall, or uninstall software features for different systems using the same unattended installation package.
For example, you can choose to install Server Administrator, but not Remote Access Controller service on a specific group of servers, and choose to install Server Administrator, but not Storage Management Service, on another group of servers. You can also choose to uninstall one or multiple features on a specific group of servers.

NOTE: Type the REINSTALL, and REMOVE CLI parameters in upper case, as they are case-sensitive.

NOTE: The software feature IDs mentioned in the table below are case-sensitive.

Table 4. Software Feature IDs

Feature ID	Description
ALL	All features
BRCM	Broadcom NIC Agent
INTEL	Intel NIC Agent

Feature ID	Description
IWS	Dell OpenManage Server Administrator Web Server
OMSM	Server Administrator Storage Management Service
RmtMgmt	Remote Enablement
RAC4	Remote Access Controller (DRAC 4)
RAC5	Remote Access Controller (DRAC 5)
iDRAC	Integrated Dell Remote Access Controller
SA	Server Administrator

NOTE: Only iDRAC6 is supported on xx1x systems.

You can include the **REINSTALL** customization parameter on the command line and assign the feature ID (or IDs) of the software feature that you would like to reinstall. An example is:

```
msiexec.exe /i SysMgmt.msi REINSTALL=BRCM /qb.
```

This command runs the installation for Dell OpenManage Systems Management and reinstall only the Broadcom agent, in an unattended but not silent mode.

You can include the **REMOVE** customization parameter on the command line and assign the feature ID (or IDs) of the software feature that you would like to uninstall. For example:

```
msiexec.exe /i SysMgmt.msi REMOVE=BRCM /qb.
```

This command runs the installation for Dell OpenManage Systems Management and uninstalls only the Broadcom agent, in an unattended but not silent mode.

You can also choose to install, reinstall, and uninstall features with one execution of the **msiexec.exe** program. For example:

```
msiexec.exe /i SysMgmt.msi REMOVE=BRCM /qb
```

This command runs the installation for managed system software, and uninstalls the Broadcom agent. This execution is in an unattended but not silent mode.

NOTE: A Globally Unique Identifier (GUID) is 128 bits long, and the algorithm used to generate a GUID guarantees each GUID to be unique. The product GUID uniquely identifies the application. In this case, the product GUID for Server Administrator is {54C04D53-C3C3-46EA-A75F-7AFF4BEB727C}.

MSI Return Code

An application event log entry is recorded in the **SysMgmt.log** file. Table 3 shows some of the error codes returned by the **msiexec.exe** Windows Installer Engine.

Table 5. Windows Installer Return Codes

Error Code	Value	Description
`ERROR_SUCCESS`	`0`	The action is completed successfully.
`ERROR_INVALID_PARAMETER`	`87`	One of the parameters was invalid.
`ERROR_INSTALL_USEREXIT`	`1602`	The user canceled the installation.

Error Code	Value	Description
ERROR_SUCCESS_REBOOT_REQUIRED	3010	A restart is required to complete the installation. This message is indicative of a successful installation.

NOTE: See **support.microsoft.com** for full details on all the error codes returned by the **msiexec.exe** and **InstMsi.exe** Windows installer functions.

E-mail Alert Action

Question: Why am I not receiving e-mails after setting up e-mail alert action?

Answer: If you have an Antivirus Client installed on the system, then configure it to allow e-mails.

Discovery

Question: Why are SUSE Linux Enterprise and Red Hat Enterprise Linux based-servers not displayed in the **Server** category after I have discovered it using SSH protocol?

Answer: The OpenManage Essentials SSH plugin uses sshlib2. sshlib2 fails to authenticate Linux servers which have disabled the **Authentication by password** option. To enable the option:

1. Open the file **/etc/ssh/sshd_config** in edit mode and search for the key **PasswordAuthentication**.
2. Set the value to yes and save the file.
3. Restart the sshd service **/etc/init.d/sshd restart**.

The servers are now displayed under the **Server** category in the **Device** tree.

Question: What troubleshooting can I do if a discovery task fails to create or run?

Answer: Ensure that the DSM Essentials Task Manager service is running in Windows services.

Question: Why are my ESX virtual machines not correlated with their ESX host server?

Answer: You must discover the ESXi host server using SNMP and WSMan or the guest virtual machine will not correlate correctly when discovered using SNMP.

Question: Why are devices discovered with WMI getting classified as Unknown?

Answer: WMI discovery classifies a device as unknown when the credentials for a user account in the Administrators group (not Administrator) is supplied for the discovery range in some cases.

If you are seeing this issue, read the KB article at **support.microsoft.com/?scid=kb;en-us;951016** and apply the registry work as described. This resolution applies to managed nodes with Windows Server 2008 R2.

Question: Why are Dell devices discovered using WS-Man with root CA certificate getting classified as Unknown?

Answer: There may be a problem with the root certificate you are using to discover the WS-Man target(s). For instructions to discover and inventory WS-Man target(s) using a root CA certificate, see Discovering and Inventorying Dell Devices Using WS-Man Protocol With a Root Certificate.

Question: What are SNMP authentication traps?

Answer: An authentication trap is sent when an SNMP agent is hit with an enquiry that contains a community name it does not recognize. The community names are case-sensitive.

The traps are useful to find if someone is probing a system, although its better nowadays to just sniff packets and find out the community name.

If you use multiple community names on the network, and some management might overlap, users may want to turn these off as they become false positives (annoyances).

For more information, see **technet.microsoft.com/en-us/library/cc959663.aspx**.

When an SNMP agent receives a request that does not contain a valid community name or the host that is sending the message is not on the list of acceptable hosts, the agent can send an authentication trap message to one or more trap destinations (management systems). The trap message indicates that the SNMP request failed authentication. This is a default setting.

Question: Why does OpenManage Essentials not support entering host names with underscore in the discovery wizard?

Answer: Per RFC 952, underscores are not valid in DNS names. A *name* (net, host, gateway, or domain name) is a text string up to 24 characters drawn from the alphabet (A-Z), digits (0-9), minus sign (-), and period (.). Periods are only allowed when they serve to delimit components of domain style names.

For more information see,**ietf.org/rfc/rfc952.txt and zytrax.com/books/dns/apa/names.html** .

Question: What is On-demand?

Answer: On-demand is an operation where a managed system is checked for status/health by OpenManage Essentials when an SNMP trap is received. There are no settings to be changed to enable the on-demand feature. However, the IP address of the management system must be available in the trap destination of SNMP service. An SNMP trap is received from the managed system when there is an issue or failure of a server component. These traps can be viewed under the alert logs.

Question: I am unable to see alerts from an EqualLogic member under the EqualLogic server. How should I discover the EqualLogic storage array?

Answer: EqualLogic arrays must be discovered using the SNMP version 2 protocol. In the OpenManage Essentials **Discovery Range Configuration** wizard, select **SNMP Configuration** and provide an appropriate community string. You must also include the IP addresses of the EqualLogic group and all members in the discovery range.

Inventory

Question: What troubleshooting can I do if an inventory task fails to create or run?

Answer: Ensure that DSM Essentials Task Manager service is running in Windows services.

System Update

Question: As an OpenManage Essentials administrator (OMEAdmin), what do I do if I am unable to perform system updates on devices?

Answer: To resolve this issue, perform one of the following steps:

- Add the OMEAdmin to the server administrator group.
- Reduce the user control settings by clicking **Start** → **Control Panel** → **User Accounts** → **Change User Account Control Settings.**

Question: What do I do if iDRAC does not download packages?

Answer: To resolve this issue, ensure that:

- The default website is enabled in IIS.
- The virtual folder (**install_packages**) is present and is pointing to the **SystemUpdate** folder.

the default website is enabled in IIS

Question: What order are packages installed on a system?

Answer: Packages are applied in the following order:

1. Driver
2. Firmware

3. Firmware ES
4. BIOS

Question: How do I configure Internet Explorer with Enhanced Security Configuration to ensure that OpenManage Essentials can utilize all features that use resources from Dell online?

Answer: To ensure that these features work in the Dell Open Manage Essentials console on an environment with Internet Explorer Enhanced Security Configuration enabled. The user needs to add ***.dell.com** to the **Trusted sites** zone.

Import Catalog and *System Update* require internet access when the user selects Dell Online as the source.

The warranty report also uses Dell online resources to retrieve information and also will not return data without it.

Question: What if IPMI is disabled after installing BMC Utility?

Answer: Try restarting DSM Essentials Network Monitor Service, DSM Essentials Task Manager service and restart IIS.

Question: What is Omremote?

Answer: Omremote enables you to execute remote Server Administrator command line tasks (inband) and also helps you to deploy Server Administrator on remote Dell servers. Omremote is an executable file that is located at C:\Program Files\Dell\SystMgt\Essentials\bin folder. It uses WMI connection for the Windows-based devices and SSH for the Linux-based devices. Ensure that the required ports are opened. Omremote commands require a Server Administrator supported operating system with Server administrator installed. To install/update Server administrator on the remote system, you must use an operating system preinstall package.

Question : How do I load a Dell catalog for software update? or What do I do when I get errors when trying to run software update tasks?

Answer:

1. Download the catalog to the OpenManage Essentials system directly or use an System Update Utility DVD in the local system drive.
2. Browse for **catalog.xml** file on the local system or DVD (not on a file share, it is possible to use a file share, but for troubleshooting, do not use file share.)
3. Now, create software update tasks. If tasks fail, more information is found in the task details.
4. Try setting all internet explorer security settings to LOW if tasks do not run.

Device Group Permissions

Device Group Permissions Portal

Question: Can I add a user group to the **OmeSiteAdministrators** role?

Answer: No, adding a user group to the **OmeSiteAdministrators** role is not supported in OpenManage Essentials version 1.2.

Question: Can I add an OmeAdministrator to the **OmeSiteAdministrators** role?

Answer: Yes, you can add an OmeAdministrator to the **OmeSiteAdministrators** role. The user will have all the privileges of the OmeAdministrator. However, to effectively manage device group permissions, it is recommended that a member of the OmeSiteAdministrators role is removed from the OmeAdministrators and OmePowerUsers roles.

Question: Can I add a user who has not logged on to OpenManage Essentials to the **OmeSiteAdministrators** role?

Answer: Yes, you can use the **Edit Members of OmeSiteAdministrators** wizard to add a user who has not logged on to OpenManage Essentials to the **OmeSiteAdministrators** role.

Question: What happens if a OmePowerUser is added to the **OmeSiteAdministrators** role?

Answer: Roles and permissions are additive. The user will not have all of (but retain some of) the restrictions of a OmeSiteAdministrator. The user will be able to perform edit actions that the OmeSiteAdministrator was not able to perform. Target security cannot be guaranteed for this type of user (they can edit device groups assigned to them).

Question: Can I promote an OmeSiteAdministrator to an OmeAdministrator?

Answer: Yes, the user will have all privileges and will be able to target all devices. It is suggested, but not required, to remove the user from the **OmeSiteAdministrators** role before adding the user to the **OmeAdministrators** role.

Question: How do I add a current OmeAdministrator to the **OmeSiteAdministrators** role?

Answer:

1. Remove the user from the **OmeAdministrators** Windows user group.
2. In the **Device Group Permissions** portal, use the **Edit Members of OmeSiteAdministrators** option to select and add the user to the **OmeSiteAdministrators** role.
3. When the user logs in again, the user will be an OmeSiteAdministrator.

Question: A user is removed from the **OmeAdministrators** role and then added to the **OmeSiteAdministrators** role. What happens to the tasks that were created while the user was an OmeAdministrator?

Answer: The task created when the user was an OmeAdministrator can still be executed on the targets selected at the time of task creation.

Remote and System Update Tasks

Question: What happens to the task target for a remote task if the **OmeSiteAdministrators** device group permissions change?

Answer: The task targets of a remote task are not affected by changes to device group permissions. Remote tasks that were created earlier may have task targets that the OmeSiteAdministrator is not assigned to.

Question: What must an OmeSiteAdministrator do to edit a task?

Answer: If the OmeSiteAdministrator is the owner of the task, the OmeSiteAdministrator must delete the existing task and create a new task.

Question: Can an OmeSiteAdministrator re-run a task?

Answer: Yes, A task can be re-run if the task was created earlier by the OmeSiteAdministrator.

Question: Can an OmeSiteAdministrator re-run a task after the user name of the OmeSiteAdministrator is changed?

Answer: No, the OmeSiteAdministrator must re-create the tasks if the user name is changed.

Question: Can two **OmeSiteAdministrators** assigned to the same custom device group, use the tasks created by each other?

Answer: No, the **OmeSiteAdministrators** can only use the tasks they have created.

Custom Device Groups

Question: Can an OmeSiteAdministrator delete devices in any group?

Answer: Yes, the OmeSiteAdministrator can delete devices in any group, similar to the OmePowerUser or OmeAdministrator.

Question: Can **OmeSiteAdministrators** edit the device groups they created?

Answer: No, the **OmeSiteAdministrators** cannot edit device groups or queries.

Question: Can **OmeSiteAdministrators** delete queries and custom groups?

Answer: Yes, the **OmeSiteAdministrators** can delete queries and custom groups.

Question: Can **OmeSiteAdministrators** add devices to a custom device group?

Answer: No, the **OmeSiteAdministrators** cannot edit a custom device group.

Logs

Question: How do I enable logging in OpenManage Essentials?

Answer: To enable logging:

1. Go to **C:\Program Files (x86)\Dell\SysMgt\Essentials\configuration** or the path where OpenManage Essentials is installed.
2. Open the **dconfig.ini** file using notepad.
3. In the [Logging] section, modify the following:

   – Set LOG_ENABLED=true to enable logging.

   – Set LOG_TO_FILE=true to write logs to a file.

   – Type a path for LOG_FILE_PREFIX. For example, LOG_FILE_PREFIX=**C:\windows\temp**.

   – If required, change the suffix of the file for LOG_FILE_SUFFIX=ome_log.txt.

   – Set the log level for LOG_LEVEL_MIN. For example, LOG_LEVEL_MIN=debug.

     NOTE: Setting the minimum log level (LOG_LEVEL_MIN) to debug or trace reduces the performance of OpenManage Essentials.

   – Set the log level for LOG_LEVEL_MAX. For example, LOG_LEVEL_MAX=output.

     NOTE: The maximum log level (LOG_LEVEL_MAX) must always be set to output.

   NOTE: For more information about log severity levels, see the “Log Levels” section.
4. Close the file and restart all DSM services in the **Services** Microsoft Management Console.

Log Levels

Setting the log levels determines the range of message severity type you want to log. The following table describes the log message severity levels that you can assign to LOG_LEVEL_MIN and LOG_LEVEL_MAX.

Severity Level	Description
Trace	Detailed information related to code flow. **NOTE:** It is not recommended to set the minimum log level to trace unless instructed to do so by technical support.
Debug	Detailed information that may be useful when diagnosing problems.
Info	Information related to operational events.
Warning	An indicator that something unexpected happened or an indication of some problem in the near future. The software is still working as expected. Typically, related to configuration or network issues (time outs, retries, and so on).
Error	A problem resulting in the software being unable to perform some function.

Severity Level	Description
Fatal	A serious error, indicating that the software may not be able to continue running.
Output	Information that needs to be output in situations where the logging system is not initialized.

By default, the minimum and maximum log message severity level are set to:

- LOG_LEVEL_MIN=info
- LOG_LEVEL_MAX=output

The default settings ensure that all messages with a severity of at least 'info' and at most 'output' are logged.

Troubleshooting

Question: What do I need to do if all SNMP traps from an ESXi 5 host show up in OpenManage Essentials as unknown?

Answer: You must change the hardware event source in the SNMP config on the ESXi 5 host from CIM to IPMI. Run the following commands:

```
vicfg-snmp.pl --username root --password <yourpassword> --server <yourserver> --
hwsrc sensors
```

The output of the --show command would display the following:

Current SNMP agent settings:

Enabled : 1

UDP port : 161

Communities : public

Notification targets :

<myOMEservername>@162/public

Options :

EnvEventSource=sensors

21

Managing Device Group Permissions

The **Device Group Permissions** portal allows **OmeAdministrators** to grant users the permission to perform system updates and run remote tasks on select device groups.

Using the **Device Group Permissions** portal, **OmeAdministrators** can:

- Add users to the **OmeSiteAdministrators** role.
- Assign device groups to each user in the **OmeSiteAdministrators** role, allowing the user to perform system updates and run remote tasks on only the assigned device groups.

NOTE: To effectively manage device group permissions, it is recommended that a member of the **OmeSiteAdministrators** role is removed from the **OmeAdministrators** and **OmePowerUsers** roles.

NOTE: If a device group is not assigned to a user, it only restricts the user from performing system updates or running remote tasks on that device group. It does not hide or remove that device group from the device tree in the **Devices** portal.

The **Common Tasks** pane displays the **Edit Members of OmeSiteAdministrators** option that can be used to add or remove users from the **OmeSiteAdministrators** role.

The **Manage Device Group Permissions** pane displays the **OmeSiteAdministrators** in a tree-view format. If you select **OmeSiteAdministrators** at the root of the tree-view, the **User Overviews** are displayed in the right-side pane. If you select a user in the **OmeSiteAdministrators** tree-view, the right-side pane displays the *user name* and the **Device Groups for Tasks and Patch Targeting** section.

NOTE: An **OmeSiteAdministrators** task target remains 'as is' when the task was created. If the **OmeAdministrators** change the **OmeSiteAdministrators** device group permissions, the task targets are not modified. Changing an **OmeSiteAdministrators** device group permissions does not change tasks the **OmeSiteAdministrators** created earlier.

NOTE: Only Server, RAC, or custom device groups that are assigned to **OmeSiteAdministrators** are available to **OmeSiteAdministrators** for remote or system update tasks. To make any other device groups available to the **OmeSiteAdministrators** for remote or system update tasks, you must create a custom device group which includes other device groups and assign it to the **OmeSiteAdministrators**.

NOTE: If a user in the **OmeSiteAdministrators** role is removed from the Windows user groups, the user is not removed from the **OmeSiteAdministrators** role automatically. You must remove the user from the **OmeSiteAdministrators** role manually through the **Edit Members of OmeSiteAdministrators** option.

Related Links

Device Group Permissions

Adding Users to the OmeSiteAdministrators Role

NOTE: Only **OmeAdministrators** are allowed to add users to the **OmeSiteAdministrators** role.

NOTE: To effectively manage device group permissions, it is recommended that a member of the **OmeSiteAdministrators** role is removed from the **OmeAdministrators** and **OmePowerUsers** roles.

To add users to the **OmeSiteAdministrators** role:

1. Click **Preferences** → **Device Group Permissions**.

   The **Device Group Permissions** portal is displayed.

2. Perform one of the following:

   – In the **Common Tasks** pane, click **Edit Members of OmeAdministrators**.
   – In the **Manage Device Group Permissions** pane, right-click **OmeAdministrators**, and click **Edit Members of OmeAdministrators**.

   The **Edit Members of OmeAdministrators** dialog box is displayed.

3. Type or select the domain name and user name in the appropriate fields, and click **Add**.
4. Select the user from the list and click **OK**.

   The user is displayed in the **OmeSiteAdministrators** tree view in the **Manage Device Group Permissions** pane.

   NOTE: Once a user is added to the **OmeSiteAdministrators** role, by default, all the devices groups are available to the user. To restrict the user to perform system updates and remote tasks on specific device groups, you must assign the device groups to the user. See Assigning Device Groups to a User.

Related Links

Device Group Permissions

Assigning Device Groups to a User

NOTE: Only **OmeAdministrators** are allowed to assign device groups to a user. Device groups can only be assigned to users who are members of the **OmeSiteAdministrators** role.

NOTE: If a device group is not assigned to a user, it only restricts the user from performing system updates or running remote tasks on that device group. It does not hide or remove that device group from the device tree in the **Devices** portal.

To assign device groups to a user:

1. Click **Preferences** → **Device Group Permissions**.

   The **Device Group Permissions** portal page is displayed.

2. In the **Manage Device Group Permissions** pane, select the user to whom you want to assign device groups.

   The **Device Groups for Tasks and Patch Targeting** section is displayed in the right-side panel.

3. In the device groups tree-view, select the check boxes appropriate to the device group(s) you want to assign to the selected user. If you want to remove a device group assignment that you made previously, clear the check boxes of the appropriate device groups.
4. Click **Apply**.

   NOTE: An **OmeSiteAdministrators** task target remains ‘as is’ when the task was created. If the **OmeAdministrators** change the **OmeSiteAdministrators** device group permissions, the task targets are not modified. Changing an **OmeSiteAdministrators** device group permissions does not change tasks the **OmeSiteAdministrators** created earlier.

   NOTE: Only Server, RAC, or custom device groups that are assigned to **OmeSiteAdministrators** are available to **OmeSiteAdministrators** for remote or system update tasks. To make any other device groups available to the **OmeSiteAdministrators** for remote or system update tasks, you must create a custom device group which includes other device groups and assign it to the **OmeSiteAdministrators**.

Related Links

Device Group Permissions

Removing Users From the OmeSiteAdministrators Role

NOTE: Only **OmeAdministrators** are allowed to remove users from the **OmeSiteAdministrators** role.

To remove users from the **OmeSiteAdministrators** role:

1. Click **Preferences** → **Device Group Permissions**.

   The **Device Group Permissions** portal is displayed.

2. Perform one of the following:

   – In the **Common Tasks** pane , click **Edit Members of OmeAdministrators**.
   – In the **Manage Device Group Permissions** pane, right-click **OmeAdministrators**, and click **Edit Members of OmeAdministrators**.

   The **Edit Members of OmeAdministrators** dialog box is displayed.

3. Clear the check box beside the user who you want to remove from the **OmeSiteAdministrators** role.
4. Click **OK**.

   The user is removed from the **OmeSiteAdministrators** tree view in the **Manage Device Group Permissions** pane.

Related Links

Device Group Permissions

22

Preferences — Reference

In the Preferences page, you can configure the OpenManage Essentials console. You can set the SMTP and proxy server information, adjust session timeout, database maintenance schedules, restart services, create custom URL menu items, enable or disable internal alerts, observe daylight savings time, and enable or disable the ActiveX features.

NOTE: After modifying the console settings, click **Apply** to save the changes. Navigating to another portion of the console without clicking **Apply** resets the settings to the previously saved preferences.

Related Links

- Console Settings
- Email Settings
- Alert Settings
- Custom URL Settings
- Warranty Notification Settings
- Device Group Permissions

Console Settings

Field	Description
Console Session Timeout	Amount of user-inactive time that passes before the console automatically logs the user out.
Database Maintenance Execution Schedule	The date and time when the database maintenance activity will begin. **NOTE:** It is recommended not to run or schedule any task (discovery, inventory, status polling, and so on) during database maintenance, as the console is less responsive during database maintenance.
Restart All OpenManage Essentials Services	Restarts the services associated with OpenManage Essentials.
Security Settings (ActiveX)	
Allow MIB Import Utility Launch	Installs and runs an ActiveX component on the client machine to launch the MIB Import Utility.
Allow Remote Desktop Launch	Installs and runs an ActiveX component on the client machine to launch remote desktop sessions.
Allow Troubleshooting Tool Launch	Installs and runs an ActiveX component on the client machine to launch the Dell Troubleshooting Tool.
ActiveX Status	Displays the ActiveX status. Click **Refresh Status** to refresh the ActiveX status.
Time Zone Settings	

Field	Description
Observe Daylight Savings Time for Server Selected Region	Click this check box to enable adjusting the scheduled date and time values based on the server's time zone. Adjusting the server's time zone setting changes the settings in OpenManage Essentials. Enabling this option adjusts the date and time values of scheduled items when daylight savings begins or ends.
Server Time Zone	Displays the time zone and UTC offset of the server's time zone.
Daylight Savings Status	Displays the current daylight savings time status of the server's time zone and offset of daylight savings time. It also displays whether the server's time zone is observing daylight savings or is in standard time zone time.
Proxy Settings (used for System Update and Warranty)	
Use Proxy Settings	Enable the use of proxy settings for internet access for System Update and Warranty.
Domain \ User name	The domain and user name of the proxy user.
Password	User's proxy password.
Proxy Server Address or Name	The IP address or server name of the proxy server. Check the browser's proxy LAN settings or ask your network administrator if unsure.
Proxy Port Number	The port number to access the proxy server. Check the browser's proxy LAN settings or ask your network administrator if unsure.
Test Connection	Click to test connection to the internet with the proxy credentials.

Email Settings

Field	Description
SMTP Server Name or IP Address	Enter the SMTP server name or IP address.
Use Credentials	Enable the user credentials.
Domain \ User name	Enter the domain and user name.
Password	Enter the user password.
Port	Check **Use Default** to use the default port number or manually add the port number.
Use SSL	Enable this check box to use SSL.

Alert Settings

Field	Description
Enable Internal Health Alerts	Click the check box to enable internal health alerts. When enabled, OpenManage Essentials generates internal alerts when the global health status of the device changes.

Custom URL Settings

Field	Description
Name	Displays the name assigned to the URL.
Device Group	Displays the device group associated with the URL.
Custom URL	Displays the URL.
Date Created	Displays the date the URL was created.
Date Updated	Displays the date the URL was updated.

Related Links

- Creating a Custom URL
- Launching the Custom URL

Warranty Notification Settings

The following table provides information about the fields displayed in the **Preferences** → **Warranty Notification Settings** page.

Field	Description
Warranty Email Notifications	
Enable Warranty Email Notifications	Enables or disables the sending of warranty e-mail notifications.
To	The e-mail addresses of the recipients of the warranty notification e-mail. Each e-mail address must be a valid e-mail address. Multiple e-mail addresses must be separated using a semicolon.
From	The e-mail address from which the warranty notification e-mail is to be sent. Only one e-mail address must be provided. The e-mail address must be a valid e-mail address.
All Devices with x days or less of warranty	Determines which devices to include in the warranty notification e-mail. Devices with warranty less than or equal to the specified days are included in the warranty notification e-mail.

Field	Description
Send email every *x* days	The duration between successive warranty e-mail notifications. An update to this field takes effect only after the next warranty e-mail notification is sent.
Include Devices with Expired Warranties	Specifies if devices with expired warranty (0 days) or no warranty information should be included in the warranty e-mail notification.
Next Email Will Send On	The date and time at which the next warranty notification e-mail is to be sent. You can configure this field to set when the next warranty notification e-mail is to be sent. After an e-mail notification is successfully sent, this field is updated automatically based on the setting in the **Send email every *x* days** field.
Email Settings	Opens the **E-mail Settings** page where you can configure the SMTP e-mail server.
Warranty Scoreboard Notifications	
Enable Warranty Scoreboard Notifications	Enables or disables the display of the warranty notifications icon in the OpenManage Essentials heading banner. The warranty notification icon is displayed only if a device has warranty less than or equal to the days specified in **All Devices with x Days or less of warranty** .
All Devices with x Days or less of warranty	Determines which devices to include in the warranty notification email. Devices with warranty less than or equal to the specified days are included in the warranty notification email.
Include Devices with Expired Warranties	Specifies if devices with expired warranty (0 days) or no warranty information should be included in the **Device Warranty Report**.

Related Links

Configuring Warranty Email Notifications

Configuring Warranty Scoreboard Notifications

Device Group Permissions

The following is a description of the panels and fields displayed in the **Device Group Permissions** portal.

Common Tasks

The **Common Tasks** pane displays the **Edit Members of OmeSiteAdministrators** option that you can use to add or remove a user from the **OmeSiteAdministrators** role.

Manage Device Group Permissions

The **Manage Device Group Permissions** pane displays the **OmeSiteAdministrators** in a tree-view format. The **User Overviews** are displayed in the right-side pane when you click **OmeSiteAdministrators** in the **Manage Device Group Permissions** pane. The following are the fields in **User Overviews** :

Field	Description
User Type	Displays if the member is a user or user group.
Domain	Displays the domain of the user.
Name	Displays the name of the user.

Device Groups for Tasks and Patch Targeting

The **Device Groups for Tasks and Patch Targeting** section is displayed in the right-side pane when you click a *user name* in the **Manage Device Group Permissions** pane. This section displays the device groups in a tree-view format.

Related Links

- Managing Device Group Permissions
- Adding Users to the OmeSiteAdministrators Role
- Assigning Device Groups to a User
- Removing Users From the OmeSiteAdministrators Role

23

Logs — Reference

From tools you can:

- View User Interface Logs
- View Application Logs
- ↗

  Export Discovery Logs to File System—Export the logs that were generated while discovering devices.

User Interface Logs

Field	Description
Enabled	Enable or disable logging of User Interface. Disable to increase performance.
Log Asynchronous Calls	Enable or disable logging for threading and asynchronous update method calls. Turn on both **Log Asynchronous Calls** and **Informational** to view update calls.
Informational	Enable or disable logging of behaviors that are marked with a severity of **General Information**.
Warning	Enable or disable logging of behaviors that are marked with a severity of **Warning**.
Critical	Enable or disable logging of behaviors that are marked with a severity of **Critical**.
Clear	Clear the user interface log grid.
Export	Export the user interface log to file (.CSV, .HTML, .TXT, and .XML supported).
Severity	The severity of the recorded deviation in user interface behavior.
Start Time	The time at which this behavior occurred.
Source	The source of the behavior.
Description	More information on the behavior.

Application Logs

Field	Description
Severity	The severity of the recorded deviation in application’s behavior.
Time	The time at which this behavior occurred.
Message	Information on the behavior.

24

Extensions

The Extensions page provides a list of links to partner products. This page provides information about the product, detects if the product is installed, and allows you to launch the product if it is installed.

NOTE: You may require ActiveX to detect some extensions. To enable ActiveX, see Console Settings in the **Preferences** page.

Field	Description
Name	Displays the name of the tool.
Description	Displays the description of the tool.
Launch	Displays the link if the product is installed.
Additional Information	Click the ? icon to see more information about the product.

25

Right-Click Actions

The following tables lists all the right-click actions that are available in OpenManage Essentials.

NOTE: The right-click options displayed in OpenManage Essentials are dependent on your access privilege. You must have administrator access to see all the options.

Schedule View

Field	Description
Create New Task	Displays the following options: • Server Power Options • Deploy Server Administrator Task • Command Line Task
Export Calendar	Allows you to export the calendar in a .ics file format. You can import the ics file into Microsoft Outlook.

After you create a task, you can right-click the task to display the following options:

Field	Description
Edit	Allows you to edit the task.
Delete	Allows you to delete the task.
Run Now	Allows you to run the task immediately.
View	Allows you to view the details of the task.
Deactivate Task Schedule	Deactivates a task's schedule. This flag determines if the task runs or not in the future. **NOTE:** If you right-click a deactivated task, an **Activate Task Schedule** option is displayed.
Clone	Allows you to clone the task with the same details.
Export Calendar	Allows you to export the calendar in an ics file format. You can import the ics file into Microsoft Outlook.

Device Status

Field	Description
IP Address or iDRAC name	Displays the IP address or the iDRAC name.
Application Launch	Select to launch an application.

Field	Description
Troubleshoot	If the Troubleshooting Tool is installed, then select this option to launch the Troubleshooting Tool. The Troubleshooting Tool is disabled by default. To enable the Troubleshooting Tool, see Preferences Reference.
Refresh Inventory	Select to run inventory on the device.
Refresh Status	Select to run a status check on the device.
Add to New Group	Select to add the device to a group.
Add to Existing Group	Select to add the device to an existing group.
Exclude Range	Select to remove the device from the discovery and inventory range.
Remove	Select to remove the device information.

Discovery Range Summary

Managing Include Ranges

Right-click the IP address or group to view the following options:

Field	Description
Edit	Select to edit discovery range configuration.
Rename	Select to rename the range. **NOTE:** This option is only displayed if you right-click an IP address.
Add Discovery Ranges to <Group Name>	Select this option to add additional ranges to an existing group. **NOTE:** This option is only displayed if you right-click a group.
Delete	Select to delete a range.
Disable	Select to disable a range.
Perform Discovery Now	Select to do the discovery.
Perform Discovery and Inventory Now	Select to do the discovery and inventory.
Perform Status Polling Now	Select to start the status polling task for the discovered server or device.
Perform Inventory Now	Select to perform the inventory.

View Filters

Field	Description
Edit	Select to edit the alert action or alert filter.
View Summary	Select to view all the systems that are critical.
Rename	Select to rename action or alert filter.

Field	Description
Clone	Select to create a copy of an action or alert filter.
Delete	Select the alert to delete the alerts.

Alerts

Field	Description
Details	Select to view the details of alerts.
Acknowledge	Select to set or clear alerts.
Delete	Select to delete alerts.
Ignore	Select to ignore alert filter action on the selected devices.
Export	Select to export alert information in CSV or HTML formats.

Remote Tasks

Field	Description
Edit	Select to edit the task.
Delete	Select to delete the task.
Run	Select to run the task immediately.
View	Select to view the task.
Activate Task Schedule	Select to activate the task schedule.
Clone	Select to create a copy of a task.

Custom URL

Field	Description
Edit	Select this option to edit the URL.
Delete	Select this option to delete the URL.
Export	Select this option to export the information about the URL

System Update Tasks

Field	Description
Delete	Select this option to delete the task.
Run	Select this option to re-run a task that is already complete, but did not update some of the components.
View	Select this option to view the task.
Export	Select this option to export the system update task information.

Field	Description
Stop	Select this option to stop the task.

26 Tutorials

You can use the tutorials for the setup options you need to complete when configuring OpenManage Essentials for the first time.

In Tutorials click **First Time Setup** to view the configuration information for the following:

- SNMP Configuration
- SNMP - Open Services Console
- SNMP - Open SNMP Properties
- SNMP Security Settings
- SNMP Trap Settings
- Install OpenManage Server Administrator
- Windows Server 2008 Configuration
- Firewall Configuration
- Protocol Support Matrix
- Discover Devices

You can view tutorials for the following:

- Upgrade to OpenManage Essentials 1.2
- Discover and Monitor 12G Servers without OpenManage Server Administrator
- Linux Configuration for SNMP and OpenManage Server Administrator
- SNMP Configuration using Group Policies
- Configuring ESX 4.*x* for Discovery and Inventory
- Configuring ESXi 4.*x* and 5.0 for Discovery and Inventory
- Device Group Permissions Tutorial

27

Using OpenManage Essentials Command Line Interface

Launching the OpenManage Essentials Command Line Interface

Click **Start** → **All Programs** → **OpenManage Applications** → **Essentials** → **Essentials Command Line Interface.**

Creating a Discovery Profile Input File

CLI commands that create discovery ranges or discovery groups require an XML-based file that defines the parameters for discovery protocols such as SNMP, WMI, Storage, WS-Man, SSH, and IPMI. This file defines which protocols are used and the parameters for each of the protocols. The file can be modified using an XML editor or a text editor. A sample XML file (**DiscoveryProfile.xml**) is included in the**samples** folder at **C:\Program Files (x86)\Dell\SysMgt\Essentials\Tools\CLI\Samples**. Edit the xml file and rename it to create multiple discovery profiles. You cannot store passwords for WMI, IPMI, WS-Man, EMC and SSH protocols in the XML file. Specify passwords in the command line arguments using the following commands:

- `-wmiPassword<wmi password>`
- `-ipmiPassword<ipmi password>`
- `-wsmanPassword<wsman password>`
- `-emcPassword<emc password>`
- `-sshPassword<ssh password>`

An example of the profile.xml file is outlined below:

```
<?xml version="1.0" encoding="utf-8" ?>
<DiscoveryConfiguration>
    <NetMask>
        255.255.255.240
    </NetMask>
    <ICMPConfiguration>
        <Timeout>400</Timeout>
        <Retries>1</Retries>
    </ICMPConfiguration>
    <SNMPConfig Enable="True">
        <GetCommunity>public</GetCommunity>
        <SetCommunity></SetCommunity>
        <Timeout>400</Timeout>
        <Retries>2</Retries>
    </SNMPConfig>
    <WMIConfig Enable="False">
        <UserName>Administrator</UserName>
    </WMIConfig>
    <StoragePowerVaultConfig Enable="False"></StoragePowerVaultConfig>
    <StorageEMCConfig Enable="False">
        <UserName>Administrator</UserName>
        <Port>443</Port>
    </StorageEMCConfig>
    <WSManConfig Enable="False">
```

```
        <Userid></Userid>
        <Timeout>2</Timeout>
        <Retries>4</Retries>
        <Port>623</Port>
        <SecureMode Enable="False" SkipNameCheck="False" TrustedSite="False">
            <CertificateFile>Certificate.crt</CertificateFile>
        </SecureMode>
    </WSManConfig>
    <IPMIConfig Enable="False">
        <UserName></UserName>
        <KGkey></KGkey>
        <Timeout>5</Timeout>
        <Retries>2</Retries>
    </IPMIConfig>
    <SSHConfig Enabled="True">
        <UserName>Administrator</UserName>
        <Timeout>5</Timeout>
        <Retries>2</Retries>
        <Port>400</Port>
    </SSHConfig>
</DiscoveryConfiguration>
```

NOTE: If you discovered iDRAC using WS-Man and if you are using secure mode where a certificate file is required to be on the local system, specify the entire path to the certificate file. For example, **c:\192.168.1.5.cer**.

Specifying IPs, Ranges, or Host names Using XML or CSV Files

You must specify ranges during discovery, inventory, and status tasks. A range in this instance is defined either as an individual IP address, a host name, or an actual range of IPs such as 192.168.7.1-50 or 10.35.0.*. Add ranges, IPs, or host names either to an xml or csv-based input file and then read the file by specifying it on the command line using the –RangeList or –RangeListCSV argument. A sample XML file (**RangeList.xml**) and CSV file (**RangeList.csv**) are included in the **samples** folder at **C:\Program Files (x86)\Dell\SysMgt\Essentials\Tools\CLI\Samples**. To create multiple input files, edit and rename either the xml or csv file.

NOTE: If you are creating discovery range groups, then each group can only have one corresponding subnet. The subnet for a group is read from the **DiscoveryProfile.xml** file and not from the **RangeList.xml** or **RangeList.csv** file. If required, you can create multiple groups for each subnet.

An example of the**RangeList.xml** file is outlined as follows:

```
<?xml version="1.0" encoding="utf-8" ?>
<DiscoveryConfigurationRanges>
    <Range Name="10.35.0.*"/>
    <Range Name="10.36.1.238"/>
    <Range Name="PE2850-WebServer1A"/>
</DiscoveryConfigurationRanges>
```

An example of the **RangeList.csv** is outlined as follows:

Name	SubnetMask
192.168.10.*	255.255.255.0
192.168.10.1-255	255.255.255.0
192.168.1-2.*	255.255.255.0
10.35.*.1-2	255.255.255.0
192.168.2.1	255.255.224.0

Name	SubnetMask
192.168.2.2	255.255.254.0
192.168.3.3	255.255.128.0
192.168.3.4	255.255.128.0

Specifying Input Files in PowerShell

To use input files in PowerShell, specify the location of the file in the command line. By default, OpenManage Essentials CLI starts at the following directory:

```
PS C:\Program Files (x86)\Dell\SysMgt\Essentials\Tools\CLI>
```

If you are running commands from the default CLI directory, with commands located in the directory one level from it (\samples), you can use either of the following methods of specifying the path to the input files:

- Type the entire path name in quotes. For example, `Add-DiscoveryRange –Profile "C:\Program Files (x86)\Dell\SysMgt\Essentials\Tools\CLI\Samples\DiscoveryProfile.xml"`.
- Use a period (.) to retrieve the file located in the current directory, or .\directory to retrieve the file located one level from the current directory. For example, `Add-DiscoveryRange –Profile .\samples\DiscoveryProfile.xml`.

Command Line Interface Commands

Access to CLI commands in the OpenManage Essentials is dependent on your access privilege. If your user id belongs to the **OMEAdministrators** group, you can access all the CLI commands. If your user id belongs to the **OMEUsers** group, then you cannot delete or modify any data using the CLI and a warning message is displayed.

Creating a Discovery Range

Description: The `Add-DiscoveryRange` command allows you to create a new discovery range. The command references an xml file (**DiscoveryProfile.xml**) which is a protocol definition associated with the discovery range. Enter the ranges either using an xml file, csv file, or by specifying the range. For more information about **DiscoveryProfile.xml**, **RangeList.xml**, and **RangeList.csv** files, see Creating a Discovery Profile Input File and Specifying IPs, Ranges, or Host Names Using XML or CSV Files.

Commands:

- `PS> Add-DiscoveryRange -Profile <DiscoveryProfile.xml> -Range <range>`
- `PS> Add-DiscoveryRange -Profile <DiscoveryProfile.xml> -RangeList <RangeList.xml>`
- `PS> Add-DiscoveryRange -Profile <DiscoveryProfile.xml> -RangeListCSV <RangeList.csv>`

Examples:

- `PS> Add-DiscoveryRange -Profile .\Samples\DiscoveryProfile.xml -Range 10.35.0.124`
- `PS> Add-DiscoveryRange -Profile .\Samples\DiscoveryProfile.xml -RangeList .\Samples\RangeList.xml`
- `PS> Add-DiscoveryRange -Profile .\Samples\DiscoveryProfile.xml -RangeListCSV .\Samples\RangeList.csv`

Removing a Discovery Range

Description: The `Remove-DiscoveryRange` command allows you to remove a discovery range. Enter the ranges either using an xml file or by specifying the range. For more information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host Names Using XML or CSV Files.

Commands:

- `PS> Remove-DiscoveryRange -Range <range>`
- `PS> Remove-DiscoveryRange -RangeList <rangelist.xml>`

Examples:

- `PS> Remove-DiscoveryRange-Range 10.35.0.1, 10.120.1.2`
- `PS> Remove-DiscoveryRange -RangeList .\Samples\RangeList.xml`

Creating a Discovery Range Group

Description: The `Add-DiscoveryRangeGroup` command allows you to create a discovery range group. A discovery range group can either contain a range of IPs, individual IPs, or host names under it. This enables you to modify protocols settings for the group and all the ranges it contains. You can maintain different sets of protocols for different types of devices in your network. With ranges not in a group, you have to edit each range individually to change the protocols which are active, the time out or retry values, or credentials used with each protocol. Each discovery range group can only have one corresponding subnet. The subnet for a group is read from the **DiscoveryProfile.xml** file and not from the **Rangelist.xml** or **RangeList.csv** file. If required, create multiple groups for each subnet. For more information about **DiscoveryProfile.xml**, **Rangelist.xml**, and **RangeList.csv** files, see Creating a Discovery Profile Input File and Specifying IPs, Ranges, or Host names Using XML or CSV Files.

Command:

-
  ```
  PS> Add-DiscoveryRangeGroup -Profile <DiscoveryProfile.xml> -GroupName
  <group name> -RangeList <Rangelist.xml>
  ```

-
  ```
  PS> Add-DiscoveryRangeGroup -Profile <DiscoveryProfile.xml> -GroupName
  <group name> -RangeListCSV <Rangelist.csv>
  ```

Examples:

-
  ```
  PS> Add-DiscoveryRangeGroup -Profile .\Samples\DiscoveryProfile.xml -
  GroupName Group1 -RangeList .\Samples\rangelist.xml
  ```

-
  ```
  PS> Add-DiscoveryRangeGroup -Profile .\Samples\DiscoveryProfile.xml -
  GroupName Group1 -RangeListCSV .\Samples\rangelist.csv
  ```

Removing a Discovery Range Group

Description: The `Remove-DiscoveryRangeGroup` command allows to you to remove a discovery range group.

Command:

```
PS>Remove-DiscoveryRangeGroup -GroupName <groupname>
```

Example:

```
PS>Remove-DiscoveryRangeGroup -GroupName Group1
```

Editing a Discovery Range

Description: The `Set-ModifyDiscoveryRange` command allows to edit existing discovery ranges. This command targets the existing specified discovery range(s) and replaces the protocol information with the information specified in the **DiscoveryProfile.xml** file. For more information about the **DiscoveryProfile.xml** and **RangeList.xml** files, see Creating a Discovery Profile Input File and Specifying IPs, Ranges, or Host names Using XML or CSV Files.

Commands:

- `PS> Set-ModifyDiscoveryRange  -Profile <DiscoveryProfile.xml> -Range <range>`
- `PS> Set-ModifyDiscoveryRange  -Profile <DiscoveryProfile.xml> -RangeList <RangeList.xml>`

Examples:

- `PS>Set-ModifyDiscoveryRange  -Profile .\Samples\DiscoveryProfile.xml -Range 10.35.1.23`
- `PS> Set-ModifyDiscoveryRange  -Profile .\Samples\DiscoveryProfile.xml -RangeList .\Samples\RangeList.xml`

Editing a Discovery Range Group

Description: The `Set-ModifyDiscoveryRangeGroup` command allows you to edit an existing discovery range group. You can change the protocols for the discovery range group by specifying a **DiscoveryProfile.xml** file which changes the current protocol settings for the specified group. For information about the **DiscoveryProfile.xml** file, see Creating a Discovery Profile Input File.

Command:

```
PS> Set-ModifyDiscoveryRangeGroup -GroupName <groupname> -Profile
<DiscoveryProfile.xml> -AddRangeList <rangelist .xml or .csv file>
```

Example:

- Change a discovery range group's discovery profile and add new ranges to the discovery range group using a .xml file:

  ```
  PS> Set-ModifyDiscoveryRangeGroup -GroupName WebServers-TX -Profile .
  \samples\snmp_only.xml -AddRangeList .\samples\new_ranges.xml
  ```
- Change a discovery range group's discovery profile and add new ranges to the discovery range group using a .csv file:

  ```
  PS> Set-ModifyDiscoveryRangeGroup -GroupName WebServers-TX -Profile .
  \samples\snmp_only.xml -AddRangeListCSV .\samples\new_ranges.csv
  ```
- Add new ranges to a discovery range group using a .xml file (retaining the previously discovered profile):

  ```
  PS> Set-ModifyDiscoveryRangeGroup -GroupName WebServers-TX -AddRangeList .
  \samples\new_ranges.xml
  ```
- Add new ranges to a discovery range group using .csv (retaining the previously discovered profile):

  ```
  PS> Set-ModifyDiscoveryRangeGroup -GroupName WebServers-TX -
  AddRangeListCSV .\samples\new_ranges.csv
  ```

Enabling a Discovery Range or Discovery Range Group

Description: The `Set-EnableDiscoveryRange` command allows you to enable a discovery range or a discovery range group. Enter the ranges either using an xml file or by specifying the range. For information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host names Using XML or CSV Files.

Commands:

- `PS> Set-EnableDiscoveryRange -Range <range>`
- `PS> Set-EnableDiscoveryRange -RangeList <RangeList.xml>`

- `PS> Set-EnableDiscoveryRangeGroup -GroupName <groupname>`

Examples:

- `PS> Set-EnableDiscoveryRange -Range 10.35.1.3, 10.2.3.1`
- `PS> Set-EnableDiscoveryRange -RangeList .\Samples\RangeList.xml`
- `PS> Set-EnableDiscoveryRangeGroup -GroupName Group1`

Disabling a Discovery Range or Discovery Range Group

Description: The `Set-DisableDiscoveryRange` command allows you to disable a discovery range or a discovery range group. Enter the ranges either using an xml file or by specifying the range. For information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host names Using XML or CSV Files.

Commands:

- `PS> Set-DisableDiscoveryRange -Range <range>`
- `PS> Set-DisableDiscoveryRange -RangeList <RangeList.xml>`
- `PS> Set-DisableDiscoveryRangeGroup -GroupName <groupname>`

Examples:

- `PS> Set-DisableDiscoveryRange -Range 10.35.1.3`
- `PS> Set-DisableDiscoveryRange -RangeList .\Samples\RangeList.xml`
- `PS> Set-DisableDiscoveryRangeGroup -GroupName Group1`

Creating a Discovery Exclude Range

Description: The `Add-DiscoveryExcludeRange` command allows you to add an exclude range. Enter the ranges either using an xml file or by specifying the range. For information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host Names Using XML or CSV Files.

Commands:

- `PS> Add-DiscoveryExcludeRange -Range <range>`
- `PS> Add-DiscoveryExcludeRange -RangeList <RangeList.xml>`

Examples:

- `PS> Add-DiscoveryExcludeRange -Range 10.35.12.1`
- `PS> Add-DiscoveryExcludeRange -RangeList .\Samples\RangeList.xml`

Removing a Discovery Exclude Range

Description: The `Remove-DiscoveryExcludeRange` command allows you to remove an exclude range. Enter the ranges either using an xml file or by specifying the range. For information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host Names Using XML or CSV Files.

Commands:

- `PS> Remove-DiscoveryExcludeRange -Range <range>`
- `PS> Remove-DiscoveryExcludeRange -RangeList <RangeList.xml>`

Examples:

- `PS> Remove-DiscoveryExcludeRange -Range 10.35.12.1`
- `PS> Remove-DiscoveryExcludeRange -RangeList .\Samples\RangeList.xml`

Running Discovery, Inventory, and Status Polling Tasks

Description: The `Set-RunDiscovery`, `Set-RunInventory`, `Set-RunDiscoveryInventory`, and `Set-RunStatusPoll` commands allows you to perform discovery, inventory, and status polling on a discovery range, discovery range group, or devices. For range and range groups, enter the ranges either using an xml file or by specifying the range. For more information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host Names Using XML or CSV Files. For devices, enter the name of the device as displayed in the device tree. Multiple device names must be separated by a comma.

Commands:

- `PS> Set-RunDiscovery -DeviceName <device 1>,<device 2>,...,<device N>`
- `PS> Set-RunDiscovery -Range <rangename>`
- `PS> Set-RunDiscovery -GroupName <rangeGroupName>`
- `PS> Set-RunDiscovery -RangeList <rangelist.xml>`
- `PS> Set-RunInventory -DeviceName <device 1>,<device 2>,...,<device N>`
- `PS> Set-RunInventory -Range <rangename>`
- `PS> Set-RunInventory -GroupName <rangeGroupName>`
- `PS> Set-RunInventory -RangeList <rangelist.xml>`
- `PS> Set-RunDiscoveryInventory -DeviceName <device 1>,<device 2>,...,<device N>`
- `PS> Set-RunDiscoveryInventory -Range <rangename>`
- `PS> Set-RunDiscoveryInventory -GroupName <rangeGroupName>`
- `PS> Set-RunDiscoveryInventory -RangeList <rangelist.xml>`
- `Set-RunStatusPoll -DeviceName <device 1>,<device 2>,...,<device N>`
- `PS> Set-RunStatusPoll -Range <rangename>`
- `PS> Set-RunStatusPoll -GroupName <rangeGroupName>`
- `PS> Set-RunStatusPoll -RangeList <rangelist.xml>`

Examples:

- `PS> Set-RunDiscovery -Range 10.23.23.1`
- `PS> Set-RunInventory -GroupName MyServers`
- `PS> Set-RunDiscoveryInventory -RangeList .\Samples\RangeList.xml`
- `PS> Set-RunStatusPoll -DeviceName MyZen`

Removing a Device

Description: The `Remove-Device` command allows you to remove devices from the device tree.

Command:

- `PS> Remove-Device -DeviceName <device 1>,<device 2>,...,<device N>`

Example:

- `PS> Remove-Device -DeviceName Server1,RAC1`

Retrieving the Status Execution Progress of a Discovery Range

Description: The `Get-DiscoveryStatus` command allows you to get the progress of a discovery range. Enter the ranges either using an xml file or by specifying the range. For information about the **RangeList.xml** file, see Specifying IPs, Ranges, or Host Names Using XML or CSV Files.

Commands:

- `PS> Get-DiscoveryStatus —Range <rangeName>`
- `PS> Get-Discovery -RangeList <RangeList.xml>`
- `PS> Get-Discovery -GroupName <group name>`

Examples:

- `PS> Get-DiscoveryStatus —Range 10.35.2.1`
- `PS> Get-Discovery -RangeList .\Samples\RangeList.xml`
- `PS> Get-Discovery -GroupName Group1`

Stopping a Running Discovery Range or Group

Description: For any range, only one type of task, such as discovery, discovery and inventory, or status polling, can run at a given time. The `Set-StopTask` command allows you to stop a task associated with a discovery range or the tasks associated with the ranges belonging to a discovery range group.

Commands:

- `PS> Set-StopTask -Range <rangename>`
- `PS> Set-StopTask -GroupName <groupname>`

Examples:

- `PS> Set-StopTask -Range 10.35.1.12`
- `PS> Set-StopTask -GroupName Group1`

Creating a Custom Device Group

Description: The `Add-CustomGroup` command allows you to create a custom device group in the device tree. If required, you can add devices to the group after it is created.

NOTE: Using OpenManage Essentials CLI, you can only create static groups which contain a finite list of servers. You can create dynamic groups based on queries using the OpenManage Essentials console. For more information, see Creating a New Group.

Commands:

- `PS> Add-CustomGroup -GroupName <groupName>`
- `PS> Add-CustomGroup -GroupName <groupName> -DeviceList <DeviceList.xml>`
- `PS> Add-CustomGroup -GroupName <groupName> -Devices <comma separated list of devices>`

Examples:

- `PS> Add-CustomGroup -GroupName MyServers -DeviceList .\Samples\devicelist.xml`

-
  ```
  PS> Add-CustomGroup –GroupName MyServers –Devices PE2900-WK28-ZMD, PWR-
  CODE.US.DELL.COM, HYPERVISOR, M80504-W2K8
  ```

Example of a DeviceList.xml file:

```
<DeviceList>
 <Device Name="PE2900-WK28-ZMD"/>
 <Device Name="PWR-CODE.US.DELL.COM"/>
 <Device Name="HYPERVISOR"/>
 <Device Name="M80504-W2K8"/>
</DeviceList>
```

Adding Devices to a Custom Group

Description: The `Add-DevicesToCustomGroup` command allows you to add devices to an existing group. To add the devices to the group, either use an xml file or list the devices and separate them using a comma.

Commands:

-
  ```
  PS> Add-DevicesToCustomGroup –GroupName <groupName> -DeviceList
  <devicelist.xml>
  ```

-
  ```
  PS> Add-DevicesToCustomGroup –GroupName <groupName> -Devices <comma
  separated list of devices>
  ```

Examples:

```
PS> Add-DevicesToCustomGroup –GroupName MyServers –DeviceList .\Samples
\DeviceList.xml
```

or

```
PS> Add-DevicesToCustomGroup –GroupName MyServers –Devices PE2900-WK28-ZMD, PWR-
CODE.US.DELL.COM, HYPERVISOR, M80504-W2K8
```

Example of a DeviceList.xml file:

```
<DeviceList>
 <Device Name="PE2900-WK28-ZMD"/>
 <Device Name="PWR-CODE.US.DELL.COM"/>
 <Device Name="HYPERVISOR"/>
 <Device Name="M80504-W2K8"/>
</DeviceList>
```

Deleting a Group

Description: The `Remove-CustomGroup` command allows you to remove a group from the root node.

Command:

```
PS> Remove-CustomGroup –GroupName <groupName>
```

Example:

```
PS> Remove-CustomGroup –GroupName MyServers
```