

Dell EMC OpenManage Integration Version 7.1.1 for Microsoft System Center for Operations Manager (SCOM)

User's Guide

Notes, cautions, and warnings

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

 **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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Introduction to Dell EMC OpenManage Intergration and Dell EMC Server Management Pack suite version 7.1.1 for Microsoft System Center Operations Manager


This document describes the activities that you can perform with the Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager (SCOM) using **OMIMSSC** and **DSMPS** version 7.1.1 for Operations Manager.


The **Dell EMC OMIMSSC v7.1** is an appliance based solution packaged in a **vhd file** which can be deployed as a Virtual Machine. For more information, see [Overview of OMIMSSC](#).

The **Dell EMC OMIMSSC v7.1.1** is a service pack update.

 **NOTE:** This patch v7.1.1 can be applied on appliance v7.1.

The integration of Dell EMC OpenManage Integration with System Center Operations Manager 2019, System Center Operations Manager 1807, System Center Operations Manager 1801, System Center Operations Manager 2016, System Center Operations Manager 2012 R2, System Center Operations Manager 2012 SP1, environment allows you to manage, monitor, and also ensure the availability of the required Dell EMC devices.

 **CAUTION:** To avoid data corruption, data loss, or both; perform the procedures in this document only if you have proper knowledge and experience in using Microsoft Windows operating system and System Center Operations Manager 2019 or System Center Operations Manager 1807 or System Center Operations Manager 1801 or System Center Operations Manager 2016 or System Center Operations Manager 2012 R2.

 **NOTE:** Read the Dell EMC OpenManage Integration for Microsoft System Center (OMIMSSC) v7.1.1 for Operations Manager (SCOM) release notes, which contains the latest information about software and management server requirements, in addition to information about known issues. The release notes is posted to the **Systems Management documentation** page on Dell.com/OMConnectionsEnterpriseSystemsManagement. The release notes is also packaged in the self-extracting executable `Dell EMC Server Management Pack Suite v7.1.1_Axx.exe` file. (where xx is the Dell EMC Server Management Pack Suite version 7.1.1 release number) file.

Before installing this version of Dell EMC Server Management Pack Suite version 7.1.1 for Microsoft System Center Operations Manager, download the latest documents from Dell.com/omconnectionsEnterpriseSystemsManagement or Dell.com/openmanagemanuals.

Topics:

- [Terms used in this document](#)
- [What's new in this release](#)
- [Key features of Dell EMC OMIMSSC and DSMPS version 7.1.1 for Operations Manager](#)

Terms used in this document

Table 1. Terms used in this document

Term	Refers to
Dell EMC Chassis	Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M), unless otherwise specified.

Table 1. Terms used in this document (continued)

Term	Refers to
OMIMSSC	Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center Operations Manager
DSMPS	Dell EMC Server Management Pack version 7.1.1 for Microsoft System Center Operations Manager
Dell Remote Access Controller (DRAC)	DRAC of Dell EMC PowerEdge Server, Dell branded OEM servers, and Dell OEM Ready servers, unless otherwise specified.
Integrated Dell Remote Access Controllers (iDRAC)	iDRAC of Dell EMC PowerEdge Server, Dell branded OEM servers, and Dell OEM Ready servers, unless otherwise specified.
iDRAC Service Module (iSM)	iDRAC Service Module is a lightweight software that runs on the Server and complements iDRAC with monitoring information from the OS. The Service Module does not expose any new interfaces of its own, rather it complements iDRAC with additional data that users can work with using iDRAC consoles. For more information about iSM and the supported platform, see <i>iDRAC Service Module Installation Guide</i> at Dell.com/support .
Operations Manager	System Center Operations Manager 2019, System Center Operations Manager 1801, System Center Operations Manager 2016, System Center Operations Manager 2012 R2, System Center Operations Manager 2012 SP1, unless otherwise specified.
System Center Operations Manager 2019	System Center Operations Manager 2019, unless otherwise specified.
System Center Operations Manager 1807	System Center Operations Manager 1807, unless otherwise specified.
System Center Operations Manager 1801	System Center Operations Manager 1801, unless otherwise specified.
System Center Operations Manager 2016	System Center Operations Manager 2016, unless otherwise specified.
System Center Operations Manager 2012	System Center Operations Manager 2012 R2, System Center Operations Manager 2012 SP1, unless otherwise specified.
Proxy MS	Proxy Management Server that helps to monitor physical nodes.
Dell EMC PowerEdge Servers	PowerEdge monolithic servers, PowerEdge modular servers, PowerVault servers, supported Rack Workstations, Dell branded OEM servers, PowerEdge Storage Spaces Direct Ready nodes, and Dell OEM Ready servers, unless otherwise specified.
Dell EMC Servers and Rack Workstation monitoring	PowerEdge monolithic servers, PowerEdge modular servers, PowerVault servers, supported Rack Workstations, Dell branded OEM servers, and Dell OEM Ready servers, unless otherwise specified. This is a license-free feature.
Dell EMC Servers and Rack Workstation monitoring (Licensed)	PowerEdge monolithic servers, PowerEdge modular servers, PowerVault servers, supported Rack Workstations, Dell branded OEM servers, PowerEdge Storage Spaces Direct Ready nodes, and Dell OEM Ready servers, unless otherwise specified. This is a license based feature.

What's new in this release

Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center Operations Manager (SCOM) brings the following feature:

- Support for System Center Operations Manager 1801, System Center Operations Manager 1807, and System Center Operations Manager 2019.
- Fixes for the security enhancement for read-only users not to get elevated permissions.

Key features of Dell EMC OMIMSSC and DSMPS version 7.1.1 for Operations Manager

The Dell EMC Server Management Pack 7.1.1 for Microsoft System Center Operations Manager enables you to:

- Discover and classify the following Dell EMC devices:
 - Dell EMC PowerEdge Servers—Using license-free monitoring, and license-based monitoring using iSM.
 - Dell Remote Access Controllers (DRAC)
 - Supported Dell Precision Racks
 - Supported Dell EMC devices through OMSA or iSM based on your requirements.

The Dell EMC OpenManage Integration 7.1.1 for Microsoft System Center Operations Manager enables you to:

- Discover and classify the following Dell EMC devices:
 - Dell EMC PowerEdge Servers—Using license-based monitoring using iDRAC WS-MAN
 - Dell EMC Chassis—PowerEdge FX2/ FX2s, PowerEdge VRTX, PowerEdge M1000e, PowerEdge MX7000 Chassis, and Dell OEM Ready Chassis
 - Dell EMC Network Switches—M-Series, Z-Series, N-Series, and S-Series switches
 - Supports OpenManage Enterprise-Modular
 - Supported Dell Precision Racks
 - Supported Dell EMC devices through iDRAC using WS-MAN
 - Dell EMC Chassis Modular Server Correlation feature
- View, analyze, and resolve alerts using Knowledge Base (KB) articles.
- Perform various tasks on the discovered Dell EMC devices.
- View reports for discovered Dell EMC devices.

Table 2. Features and Descriptions

Feature	Descriptions
License center	Manage OMIMSSC licenses from the Dell EMC OMIMSSC Admin Portal.
Discovery and Monitoring — Dell EMC Servers and Rack Workstation	Supports discovery and monitoring of PowerEdge servers, PowerVault Monolithic and Modular systems, Dell OEM Ready servers, and supported Dell Precision Racks running the supported Windows operating system, using the supported OpenManage Server Administrator (OMSA).
License based Discovery and Monitoring — Dell EMC Servers and Rack Workstation (Licensed)	Supports: <ul style="list-style-type: none">• License based discovery and monitoring of 12th, 13th and 14th generation of PowerEdge servers, PowerVault servers, supported Dell Precision Racks, Dell branded OEM servers, PowerEdge Storage Spaces Direct Ready nodes, and Dell OEM Ready servers through:<ul style="list-style-type: none">◦ iDRAC–WS-MAN◦ iDRAC access via Host OS◦ iSM–Windows Management Instrumentation (WMI)• Discovery and monitoring of 12th, 13th, and 14th generation of PowerEdge servers, PowerVault servers, supported Dell Precision Racks, Dell branded OEM servers, and Dell OEM Ready servers using iDRAC.• Discovery and monitoring of 12th, 13th, and 14th generation of PowerEdge servers using iSM. For the complete list of supported servers, see Supported platforms in the <i>iDRAC Service Module Installation Guide</i> at Dell.com/manuals.• SNMP traps for devices discovered through WS-MAN of Servers and Rack Workstation Monitoring (Licensed) feature.

Table 2. Features and Descriptions (continued)

Feature	Descriptions
Discovery and Monitoring — Dell EMC Chassis Management	Supports: <ul style="list-style-type: none">• Discovery and monitoring of Dell EMC Chassis, and Dell OEM Ready chassis devices.• Discovery of server modules and chassis slot summary for CMC chassis.• SNMP traps for Chassis devices.
Discovery and Monitoring — Dell EMC Network Switch	Supports: <ul style="list-style-type: none">• Discovery and monitoring of Dell EMC Network Switches devices.• SNMP traps for Dell EMC Network Switch devices.
Discovery and Monitoring — Dell Remote Access Controllers (DRAC)	Supports: <ul style="list-style-type: none">• Discovery and monitoring of supported iDRAC devices — 12th and 13th generation only.• SNMP and PET traps for DRAC devices.

Dell EMC OMIMSSC

The topics in this section describes the OMIMSSC components and the Admin portal, various profiles supported in OMIMSSC, and OMIMSSC based discovery and monitoring of the Dell EMC devices.

Topics:

- [Overview of OMIMSSC](#)
- [OMIMSSC components](#)
- [Using Dell EMC OMIMSSC Admin Portal](#)
- [Profiles](#)
- [Discovering Dell EMC devices and synchronizing with Operations Manager](#)
- [Viewing information in Dell EMC OMIMSSC](#)

Overview of OMIMSSC

The OMIMSSC for Operations Manager is packaged as a .vhd file that can be deployed on a virtual machine that is hosted on a Hyper-V. The OMIMSSC enables the discovery, inventory, and health monitoring of servers that are discovered through WS-MAN, Modular systems(Dell EMC PowerEdge MX7000), and Network Switches. It is based on CentOS. This interacts with the Dell EMC devices and can be administered through the Dell EMC OMIMSSC Admin Portal.

When the OMIMSSC is set up and the network is configured, the System Center Operations Manager user can easily perform the enrollment. Ensure that the provided prerequisites are met where configuration Management pack is downloaded and imported into the System Center Operations Manager. All the Management packs are autoimported at the backend.

Integrate OMIMSSC with Microsoft System Center Operations Manager (SCOM) for monitoring Dell EMC devices in data center. When you do the discovery from the OMIMSSC, you can view the discovered Dell EMC devices in the OpenManage Integration Dashboard in Operations Manager console. You can perform configurations for the monitoring levels, monitoring interval and performance metrics for the devices in this Dashboard.

The OMIMSSC is a simplified discovery solution template for monitoring different kind of Dell EMC devices like Dell EMC PowerEdge Servers, Chassis, Network Switches and any future Storage solutions.

OMIMSSC components

The following is the list of the OMIMSSC components and their names that have been used in this guide:

- The OMIMSSC for Operations Manager is a virtual machine hosted on a Hyper-V. It is based on CentOS and performs the following tasks:
 - Interacts with the Dell EMC devices and the supported protocols are:
 - Web Services-Management (WS-MAN)
 - Simple Network Management Protocol (SNMP)
 - RedFish
 - The OMIMSSC can be administered through the Dell EMC OMIMSSC Admin Portal.

Using Dell EMC OMIMSSC Admin Portal

The Admin Portal allows you to log in to Dell EMC OMIMSSC as an administrator to view all jobs started in Dell EMC OMIMSSC by various users, view license details, console details, and to upgrade Dell EMC OMIMSSC. Following are the use cases in admin portal along with licensing.

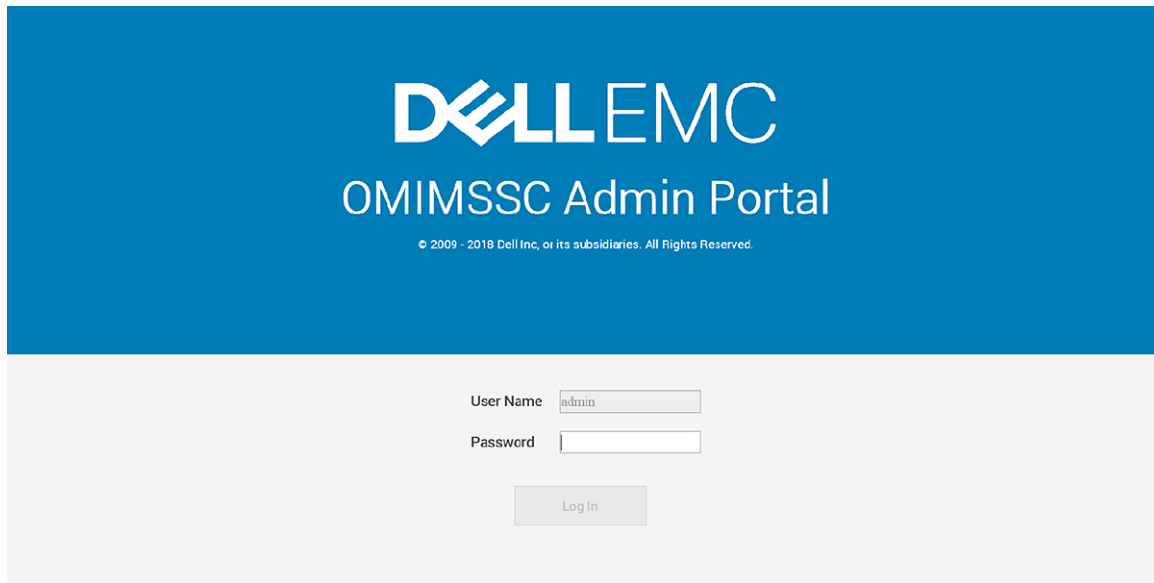


Figure 1. OMIMSSC Admin Portal

Modifying Operations Manager account

By using this option, you can change the passwords of Operations Manager account in Dell EMC OMIMSSC.

You can modify the Operations Manager administrator credentials from the Dell EMC OMIMSSC Admin Portal.

- For Operations Manager account, modify the credentials in active directory, before modifying the account in Dell EMC OMIMSSC.

Modifying credentials used for the enrolled consoles in Dell EMC OMIMSSC Admin portal

To modify the credentials used for the enrolled consoles in Dell EMC OMIMSSC Admin portal:

1. In the Dell EMC OMIMSSC Admin Portal, click **Settings**, and then click **Console Enrollment**. The enrolled consoles are displayed.
2. Select a console to edit, and click **Edit**.
3. Provide the new details and, click **Finish** to save the changes.

Profiles

Profiles allow you to manage your credentials and customize WinPE images for deployment.

About credential profile

Credential profiles simplify the use and management of user credentials by authenticating the role-based capabilities of the user. Each credential profile contains a user name and password for a single user account. A credential profile authenticates a user's role-based capabilities. The OMIMSSC uses credential profiles to connect to the managed systems' iDRAC, CMC/OME-M or Network switches.

You can create the following credential profile:

- Windows Credential Profile—This profile is used for enrollment of the console with the OMIMSSC.
- Device Credential Profile—This profile consists of the credentials, SNMP community string, https port number and SNMP port number fields which are used to access an iDRAC console, or Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) console, or a network switch management console.

NOTE: A device credential profile is used for discovery of a server, or a modular systems, or a network switch.


Creating device credential profile

To create a device credential profile, you can perform the following:

1. Select **OpenManage Integration Dashboard** under **Dell EMC OpenManage Integrations Views**.
2. Log in into the Dell EMC OMIMSSC.
3. In the navigation pane, click **Profiles and Configuration > Credential Profile**, and then click **Create**. The **Credential Profile** page is displayed.
4. In **Credential Profile**, select the credential profile type that you want to use.

You can create the following credential profile:

- **Device Credential Profile**

 **NOTE:** When creating **Device Credential Profile**, select **iDRAC**, to make it as default profile for iDRAC, or **CMC** to make it default profile for Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) or **Network switch** to make it as default profile for Network switch. Select **None** if you choose not to set this profile as a default profile.

The default iDRAC profile is used to access the device when you discover a device or perform synchronization.

- **Windows Credential Profile**

 **NOTE:** When creating **Windows Credential Profile** in Dell EMC OMIMSSC Admin portal, provide the domain name in the **Domain** field.

5. To create the profile, click **Finish**.

Modifying credential profile

To modify the credential profile, perform the following steps:

- Launch the **OpenManage Integration Dashboard** under **Dell EMC OpenManage Integrations Views**.
- Log in into the OMIMSSC by providing the credentials.
- In **User Name**, type the username.
- In **Password**, type the password and Click **Log In**.
- The OpenManage Integration for Microsoft System Center page is displayed.
- Go to **Profiles and Configuration > Credential Profile**. Select the wanted credential profile that you want to modify and Click **Edit**.
- To save the changes made, click **Save**.

Deleting credential profile

Consider the following when you are deleting a credential profile:

- To delete a credential profile that is used in device discovery, delete the discovered device's information and delete the credential profile.
- You cannot delete a credential profile if it is used in an update source.

To delete a credential profile, perform the following:

1. Launch the **OpenManage Integration Dashboard** under **Dell EMC OpenManage Integrations Views**.
2. Log in into the Dell EMC OMIMSSC. Go to **Profiles and Configuration > Credential Profile**.
3. Select the credential profile that you want to delete, and then click **Delete**.

Discovering Dell EMC devices and synchronizing with Operations Manager

Discovery is the process of adding supported Dell EMC devices comprising of Dell EMC PowerEdge servers, Dell EMC chassis, and Dell EMC Network switches in OMIMSSC, and synchronizing with Operations Manager allows you to add devices from Operations Manager into OMIMSSC.

Discovering Dell EMC devices in OMIMSSC

You can manually discover the Dell EMC devices by using an IP address or an IP range. To discover a device, provide the device IP address and the device type credentials of a device that you want to discover. When you are discovering a device by using an IP range, specify an IP (IPv4) range (within a subnet) by including the start and end range.

To discover a device:

1. Select **OpenManage Integration Dashboard** under **Dell EMC OpenManage Integrations Views**.
2. In the OMIMSSC, go to **Monitoring** and select any of the following devices that you want to discover:
 - Server View.
 - Modular Systems View.
 - Network Switch View.
3. In the **Discover** page, select the required option:
 - **Discover Using an IP Address**—to discover a device using an IP address.
 - **Discover Using an IP Range**—to discover all device within an IP range.

You can discover maximum of 250 devices in one job and the successive jobs can be triggered in an interval of one hour.

4. In **Discover Using an IP Address or IP Address Range**, do any of the following:
 - In **IP Address Start Range**, and **IP Address End Range**, provide the IP address range that you want to include, which is the starting and ending range.
 - Select **Enable Exclude Range** if you want to exclude an IP address range and in **IP Address Start Range** and **IP Address End Range**, provide the range that you want to exclude.
5. In **IP address**, provide the IP address of the device that you want to discover.
6. Select the device type credential profile, or click **Create New** to create a device type credential profile. The selected profile is applied to all the devices.
7. To Create a new credential profile, Select **Create New** to create a device type credential profile. Credential profile page is displayed.
8. Select the **Device Credential Profile** in the credential type. The **Credentials** fields get enabled.
9. Provide the Credential details and click **Finish**.
10. (Optional) to track this job select **Go to the Job List** option. The **Jobs and Logs Center** page is displayed. Expand the discovery job to view the progress of the job in the **Running** tab.
11. Provide a unique job name, and click **Finish**.

NOTE: When you are using Proxy MSes for device discovery, perform Sync task. For more details, see [Adding Proxy MS to DellProxyMSGGroup and Synchronizing Dell Proxy MS with OMIMSSC](#), and after the Sync task is triggered, look for **Process to retrieve all Management Server Completed** message in generic logs.


Synchronizing Dell EMC devices with enrolled Operations Manager

Create a credential profile before performing synchronization with the MSSC. Set the default profile to iDRAC, CMC or Network Switch from the drop down list depending on the device type that you are going to synchronize with OMIMSSC.

To synchronize all the Dell EMC devices from the enrolled Operations Manager to OMIMSSC, perform the following:

1. Navigate to the **Monitoring pane** of Operations Manager.
2. Select **Dell EMC > Dell EMC OpenManage Integrations Views > Dell EMC OpenManage Integration Dashboard**.
3. Log in into the Dell EMC OMIMSSC.

4. Go to **Monitoring** and select any of the device and, then click **Synchronize with MSSC** to synchronize all the devices listed in enrolled Operations Manager with the OMIMSSC.

 **NOTE:** The Synchronization will occur periodically for every six hours by default.

Resolving synchronization errors

The Dell EMC devices that are not synchronized with OMIMSSC are listed with their IP addresses. The failure of synchronization of Dell EMC devices discovered in the Operations Manager might have occurred due to invalid credentials, invalid https port number or invalid SNMP port number or due to invalid community string. Due to such errors, the discovery of the devices from the OMIMSSC fails. To resolve the synchronization errors, ensure to provide the relevant credentials.

To resolve the synchronization errors, do the following:

1. In OMIMSSC, click **Monitoring**, click **Resolve Sync Errors**.
The window displays a list of IP addresses of the devices for which synchronization has failed.
2. Select the device, and then select the device credential profile, or to create a new device credential profile click **Create New**.
3. Provide a job name, and if necessary select the **Go to the Job List** option to view the job status automatically once the job is submitted.
4. Click **Finish** to submit the job.


Adding Proxy MS to DellProxyMSGroup and Synchronizing Dell Proxy MS with OMIMSSC

During enrollment, a group that is named **DellProxyMSGroup** is created. Proxy management servers that are discovered in Operations Manager as an Agent Managed Windows computer, are required to be added to the group **DellProxyMSGroup** into the Operations Manager, and perform synchronization of Proxy MS with OMIMSSC.

 **NOTE:** Ensure that you install Operations Manager Agents on all Proxy MS before performing the below steps.

To add the **DellProxyMSGroup**, perform the following steps:

1. Discover the ProxyMS virtual machine as an Agent Managed Windows computer in Operations Manager. For more information, see the Operations Manager documentation at technet.microsoft.com.
2. After enrollment in OMIMSSC admin portal, log in into the OMIMSSC console.
3. Select **Authoring > Groups**. Select the **DellProxyMSGroup** from the group list.
4. Right click **DellProxyMSGroup** and select **Properties** from the drop-down list.
5. Select **Explicit Members** tab and click **Add/Remove Objects**. The **Create Group Wizard-Object Selection** wizard is displayed.
6. Select **Windows Computer** from the drop-down menu of **Search for** list, to be a part of this group and click **Search**.
7. All the Windows computer that is discovered in the Operations Manager is displayed in **Available items**.
8. Select the Proxy MSs and click **Add**, and then click **OK** in the properties wizard.


 **NOTE:** After adding the Proxy MS to DellProxyMSGroup, you need to disable the **iSM** discovery that is run on proxy agent and to suppress the event ID 33333 from getting regenerated.

1. Select **Authoring > Management Pack Objects > Object Discoveries**.
2. In the **Look for** field, search for **iSM**.
3. Select **Discovered type: Dell Sever > Dell Sever Discovery**.
4. Right click **Dell Sever Discovery** and select **Overrides > Override the Object Discovery > For a Group**.
5. The **Select Object** wizard is displayed.
6. Select the **DellProxyMSGroup** and Click **OK**, that will deactivate the iSM discovery on Proxy MS.
 - In the **Monitoring** pane, select **Dell EMC OpenManage Integration Views > OpenManage Integration Dashboard**.
 - Log in to the Dell EMC OMIMSSC in the Operations Manager.
 - Click **Monitoring** and select any of the devices, and then click **Synchronize with MSSC**.
 - Before triggering the device discovery, ensure that the Sync task is completed and look for **Process to retrieve all Management Server Completed** message in generic logs. For more information, see [Viewing Jobs](#).

Deleting Dell EMC devices from OMIMSSC


To delete the Dell EMC devices from OMIMSSC, perform the following steps:

1. Log in into the Operations Manager.
2. In the lower left pane, select **Monitoring > Dell EMC > Dell EMC OpenManage Integration Views > OpenManage Integration Dashboard**.
The **Dell EMC OMIMSSC Log In** page is displayed.
3. Log in into the OMIMSSC and go to **Monitoring**. Select any of the following devices that you want to delete:
 - Server
 - Modular System
 - Network Switch
4. Select the device that you want to delete from the OMIMSSC and click **Delete**.
The selected device is deleted from OMIMSSC.
5. The Dell EMC devices that are triggered for deletion from OMIMSSC take few minutes to complete.

 **NOTE:** If the delete is triggered from Operations Manager, then it takes one discovery cycle to delete the object.

Viewing information in Dell EMC OMIMSSC


You can view all information about the activities initiated in OMIMSSC along with a job's progress status, and its sub task through the **Jobs and Logs** page. Also, you can filter and view jobs for a particular category. You can view the jobs from the OMIMSSC Admin Portal, and OMIMSSC.

- **Running** — displays all the jobs that are currently running, or are in-progress state.
- **History** — displays all the jobs run in the past with its job status.
- **Scheduled** — displays all the jobs scheduled for a future date and time. Also, you can cancel the scheduled jobs.
- **Generic Logs** — displays OMIMSSC Appliance-specific, common log messages that are not specific to a sub task, and other activities for every user specifying the user name and console FQDN.
 - **Appliance Logs** — displays all OMIMSSC Appliance-specific log messages such as restarting OMIMSSC.
 **NOTE:** You can view the Appliance Log messages only from the Admin Portal.
 - **Generic Logs** — displays all log messages that are common across jobs that are listed in the **Running**, **History**, and the **Scheduled** tabs. These logs are specific to a console and a user.
- Dell EMC OMIMSSC Admin portal — displays jobs initiated from all OMIMSSC users.
- OMIMSSC — displays jobs specific to a user, and a console.

Job names are provided by users or are system generated, and the sub tasks are named after the IP address of the managed server. Expand the sub task to view the activity logs for that job. There are four categories of jobs:

The various states of jobs defined in OMIMSSC are:

- **Canceled** — job has been manually canceled by you, or when OMIMSSC restarts.
- **Successful** — job has been successfully completed.
- **Failed** — job is not successful.
- **In Progress** — job is running.
- **Scheduled** — job has been scheduled for a future time.


 **NOTE:** If multiple jobs are submitted at the same time to the same server, the jobs fail. Hence, ensure that you schedule the jobs at different times.

- **Waiting** — job is in a queue to start running.
- **Recurring** — job recurring after a fixed interval of time.

Viewing jobs

You can view all jobs created in Dell EMC OMIMSSC along with their status information.

To view the jobs:

1. In Dell EMC OMIMSSC console, click **Jobs and Log Center**.
2. To view a specific category of jobs, such as **Running**, **Scheduled**, **History**, or **Generic**, click the respective tab. Expand the job to view all the servers included in the job. Expand further to view the log messages for that job.
 **NOTE:** All the job-related generic log messages are listed under the Generic tab and not under the Running or History tab.
3. (Optional) apply filters to view different category of jobs. You can also view its status in **Status** column.

Managing jobs

Ensure that the job is in **Scheduled** state.

To manage jobs:

1. In OMIMSSC, do any of the following:
 - In the navigation pane, click **Maintenance Center**, and then click **Manage Jobs**.
 - In the navigation pane, click **Jobs and Log Center**, and then click **Scheduled** tab.
2. Select jobs that you want to cancel, click **Cancel**, and then to confirm, click **Yes**.

Dell EMC Feature Management Dashboard

The Dell EMC Feature Management Dashboard provides facilities for the configuration of the Dell EMC Server Management Pack Suite monitoring features to monitor the various Dell systems—Dell EMC PowerEdge Servers, Dell Precision Racks, Dell Remote Access Controllers (DRAC), PowerEdge FX2/ FX2s, PowerEdge VRTX, PowerEdge M1000E, Dell EMC Network switches, and integrated DRAC (iDRAC). The Dell EMC Feature Management Dashboard provides the following monitoring features:

- Dell EMC Chassis Modular Server Correlation Feature
- Dell EMC Chassis Monitoring Feature
- Dell EMC Network Switch Feature
- DRAC Monitoring Feature
- Dell EMC Server and Rack Workstation Monitoring Feature
- Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Topics:

- [Discovery by using the Dell EMC Feature Management Pack](#)
- [Dell EMC PowerEdge Server Tasks](#)
- [Dell EMC Servers and Rack Workstation monitoring feature](#)
- [Dell EMC Server and Rack Workstation Monitoring \(Licensed\) Feature](#)
- [Issues and resolutions](#)

Discovery by using the Dell EMC Feature Management Pack

Table 3. Dell EMC Feature Management Pack Discovery

Discovery Object	Description
Dell EMC Feature Management Host Discovery	Populates the dashboard if the management server is the feature management pack host. The management server on which the Dell EMC Server Management Pack Suite is installed first, is selected as the feature management pack host.

NOTE: In OMIMSSC console, the maximum licensed node count is 300. When the monitoring level is set to **detailed mode**, the following alerts are generated in the Dell EMC Feature Management dashboard:

1. When the licensed node count reaches to 70% of the maximum, then a **Warning alert** is generated.
2. When the licensed node count reaches to maximum or beyond the threshold within the OMIMSSC console, the monitoring level is switched to the scalable mode and a **System overloading critical alert** is generated.

NOTE: You need to change the monitoring mode of OMSA explicitly to scalable mode.

Dell EMC PowerEdge Server Tasks

Tasks are available in the **Tasks** pane of the Operations Manager console. When you select a device or a component, the relevant tasks is displayed in the **Tasks** pane.

List of Dell EMC Feature Management tasks

The following table lists the tasks available on the **Dell EMC Feature Management Dashboard**. Some tasks listed in the Feature Management Tasks table appear only after you have imported a particular monitoring feature.

NOTE:

- In the Event log, ignore the errors pertaining to reimporting of existing management packs. These errors occur when **Dell EMC Feature Management Dashboard** reimports all the dependent management packs that were already imported while importing a monitoring feature.
- Wait for a task to complete (view the state update change in the dashboard) before launching another task using the **Dell EMC Feature Management Dashboard**.
- The **Refresh dashboard** task may not update the dashboard immediately; it might take a few minutes to update the dashboard contents.
- To update the discovery monitoring level that is the scalable or detailed configuration done in **Dell EMC Feature Management Dashboard** in OMIMSSC, Click **Synchronize with MSSC** from the OMIMSSC console in respective device view of monitoring features which will synchronize the monitoring level with OMIMSSC.

Table 4. Feature Management Tasks.

Tasks	Description
Dell EMC Chassis Modular Server Correlation	
Import Chassis Modular Server Correlation Feature	Imports the chassis modular server correlation feature.
Refresh Dashboard	Updates the Dell EMC Feature Management Dashboard .
Refresh Node Count	Updates the node count.
Dell EMC Chassis Monitoring	
Refresh Dashboard	Updates the Dell EMC Feature Management Dashboard .
Refresh Node Count	Updates the node count.
Set to Detailed Monitoring	<p>If the Scalable feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Scalable feature to the Detailed feature.</p> <p>On upgrading from a previous version, run this task to use the latest version for this monitoring feature.</p>
Set to Scalable Monitoring	<p>If the Detailed feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Detailed feature to the Scalable feature.</p> <p>On upgrading from the previous version, run this task to use the latest version for this monitoring feature.</p>
Dell EMC Network Switch Monitoring	
Refresh Dashboard	Updates the Dell EMC Feature Management Dashboard .
Refresh Node Count	Updates the node count.
Set to Detailed Monitoring	<p>If the Scalable feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Scalable feature to the Detailed feature.</p> <p>On upgrading from a previous version, run this task to use the latest version for this monitoring feature.</p>
Set to Scalable Monitoring	<p>If the Detailed feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Detailed feature to the Scalable feature. On upgrading</p>

Table 4. Feature Management Tasks. (continued)

Tasks		Description
		from the previous version, run this task to use the latest version for this monitoring feature.
DRAC Monitoring		
	Import DRAC Monitoring Feature	Imports the DRAC monitoring feature.
	Refresh Dashboard	Updates the Dell EMC Feature Management Dashboard .
	Refresh Node Count	Updates the node count.
Dell EMC Server and Rack Workstation Monitoring		
	Enable Agent Proxying	Enables agent proxying for Dell EMC PowerEdge Servers.
	Refresh Dashboard	Updates the Dell EMC Feature Management Dashboard .
	Refresh Node Count	Updates the node count.
	Remove Monitoring Feature	Removes the Dell EMC Server and Rack Workstation Monitoring feature.
	Set as Preferred Monitoring Method	This task enables the Dell EMC Server and Rack Workstation Monitoring feature as the preferred monitoring method for the Servers and Rack Workstations, when the Servers and Rack Workstations in the setup are monitored through both the Dell EMC Server and Rack Workstation Monitoring feature, and the (Licensed) feature.
	Set Informational Alerts Off	Informational alerts are turned off when the Dell EMC Server and Rack Workstation Monitoring Scalable Monitoring is in use.
	Set Informational Alerts On	Informational alerts are turned on when the Dell EMC Server and Rack Workstation Monitoring Scalable Monitoring is in use.
	Set to Detailed Feature	If the Scalable feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Scalable feature to the Detailed feature. On upgrading from the previous version, run this task to use the latest version for this monitoring feature.
	Set to Scalable Feature	If the Detailed feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Detailed feature to the Scalable feature. On upgrading from the previous version, run this task to use the latest version for this monitoring feature.
Dell EMC Server and Rack Workstation Monitoring (Licensed)		
	Associate Run-As Account	This task associates the Run As Account used for SMASH discovery with all Dell EMC PowerEdge Servers objects, required for health monitoring. For more information, see Associate Run-As Account Task .
	Enable Agent Proxying	Enables agent proxying for Dell EMC PowerEdge Servers running the supported iSM version and also triggers discovery of these servers.
	Enable Event Auto-Resolution	Enables the Event Auto-Resolution feature.
	Disable Event Auto-Resolution	Disables the Event Auto-Resolution feature.
	Refresh Dashboard	Updates the Dell EMC Feature Management Dashboard .
	Refresh Node Count	Updates the node count.

Table 4. Feature Management Tasks. (continued)

Tasks	Description
Remove Monitoring Feature (Licensed)	Removes the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.
Set as Preferred Monitoring Method (Licensed)	This task enables the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature as the preferred monitoring method for the Servers and Rack Workstations, when the Servers and Rack Workstations in the setup are monitored through both, Dell EMC Server and Rack Workstation Monitoring feature, and the (Licensed) feature.
Set to Detailed Feature (Licensed)	If the Scalable feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Scalable feature to the Detailed feature. On upgrading from the previous version, run this task to use the latest version for this monitoring feature.
Set to Scalable Feature (Licensed)	If the Detailed feature is running on the system, the Dell EMC Feature Management Dashboard switches from the Detailed feature to the Scalable feature. On upgrading from the previous version, run this task to use the latest version for this monitoring feature.

Dell EMC Servers and Rack Workstation monitoring feature

Dell EMC Servers and Rack Workstation Monitoring feature supports the discovery and monitoring of the following devices that are installed with the supported Windows OS, using the OpenManage Server Administrator (OMSA):

- PowerEdge Modular and Dell EMC PowerEdge Monolithic servers
- PowerVault servers
- Dell OEM Ready servers
- Dell Precision Racks

Inventory and monitoring of these devices could be done through the server's OpenManage Server Administrator (OMSA) which is a license-free monitoring feature.

For information about the supported OMSA versions, see *Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager (SCOM) Release Notes*.

The Dell EMC Server Management Pack suite automatically imports the Dell EMC Servers and Rack Workstation monitoring scalable feature into Operations Manager.

Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Dell EMC Server and Rack Workstation Monitoring (Licensed) feature provides detailed or scalable inventory, based on your method of discovery, and monitoring of the following devices:

- 12th, 13th, and 14th generation of PowerEdge servers
- PowerVault servers
- Dell Precision Racks
- Dell branded OEM servers
- Dell OEM Ready servers
- PowerEdge Storage Spaces Direct Ready nodes

Inventory and monitoring of these devices could be done through iDRAC or iDRAC Service Module (iSM) installed on the managed Dell EMC Server or Rack Workstation through one of the following methods based on your monitoring preference:

- iDRAC–WS-MAN
- iDRAC access via Host OS
- iSM–WMI

This is a licensed feature.

For more information about monitoring servers through iDRAC–WS-MAN or Host OS, see the section Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature in the *Dell EMC OpenManage Integration Version 7.1.1 for Microsoft System Center for Operations Manager User's Guide*.

For the list of Supported Platforms for iSM, see the *iDRAC Service Module Installation Guide* at Dell.com/manuals.

Issues and resolutions

The following table lists the known issues, resolutions, and where the issues are applicable:

Table 5. Issues and resolutions

Issue	Resolution	Applicable To
Discovery through iSM–WMI fails when a managed node is running Windows Server 2008 R2 and the Management server is running Operations Manager 2012 R2 .	<p>Ensure that you have installed Windows Management Framework version 4.0.</p> <p>On the management server, apply the Microsoft Security update for Update Rollup 7 (or later) for System Center 2012 R2 Operations Manager. For more information, see Support.microsoft.com.</p> <p>You can install the following updates from Catalog.update.microsoft.com. Ensure that you install these updates in the order that is listed below:</p> <ol style="list-style-type: none"> 1. Update Rollup for Microsoft System Center 2012 R2 - Operations Manager Server 2. Update Rollup for Microsoft System Center 2012 R2 - Operations Manager Console <p>Discover the server running Windows Server 2008 R2 operating system.</p>	<p>Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature.</p> <p>This issue pertains to discovery through iSM using WMI only.</p>
<p>Set as the Preferred Monitoring Method task fails to remove the duplicate objects in either or both of the following scenarios:</p> <ul style="list-style-type: none"> • Correlation of the Dell EMC Modular servers with chassis slots • Monitoring Dell EMC FM servers 	<p>To remove the duplicate objects, perform the following steps:</p> <ol style="list-style-type: none"> 1. Go to the Dell EMC Feature Management Dashboard, select the Dell EMC Chassis Modular Server Correlation feature, and then click Remove Chassis Modular Server Correlation Feature from the Dell Monitoring Feature Tasks menu in the right pane. Reimport the Dell EMC Chassis Modular Server Correlation. You will now be able to use the Set as Preferred Monitoring Method task functions to remove the duplicate objects. 2. If the task is still failing, then perform the following steps: <ol style="list-style-type: none"> a. Disable the Dell EMC Chassis to the Modular Blade Server 	Dell EMC Chassis Modular Server Correlation Feature

Table 5. Issues and resolutions (continued)



Issue	Resolution	Applicable To
	<p>Correlation Discovery object discovery.</p> <p>b. Disable the object discovery corresponding to the method used for discovering the modular servers. For example: If the duplicate object is discovered through OMSA, then go to Authoring > Object Discoveries and then search for Dell Server Discovery; which is targeted at the Windows Computer and disable the Discovery attribute for that object.</p> <p> NOTE: In case the duplicate object has been created for Dell EMC servers, then disable the following object discoveries for FM servers:</p> <ul style="list-style-type: none"> • Dell EMC FM Server Agent-based Discovery • Dell EMC FM Server Agent-free Discovery • Dell EMC FM Server iSM Discovery <p>3. Run the following command from the Operations Manager Shell:</p> <pre>Remove-SCOMDisabledClassInstance</pre> <p> NOTE: This step may take up to 48 hours to complete.</p>	
<p>The Agent proxy not enabled alerts are displayed in the Active Alerts list for the Dell EMC PowerEdge Servers that are discovered through iSM.</p>	<p>To resolve this issue, perform the following steps:</p> <ol style="list-style-type: none"> 1. Go to the Dell EMC Feature Management Dashboard, and click Dell EMC Server and Rack Workstation Monitoring (Licensed). 2. In the right pane, under Dell Monitoring Feature Tasks, click Enable Agent Proxying. The Run Task - Enable Agent Proxying window is displayed. 3. Click Override, and then click the field under New Value for the AutoResolve Warnings/Errors parameter and set the value as True. 4. Now click Override and then click Run. 5. Close the task status window. Clear the existing alerts from the active alerts list. These alerts will no longer be displayed for future discoveries. 	<p>Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature</p>

Table 5. Issues and resolutions (continued)

Issue	Resolution	Applicable To
In the Dell EMC Diagram View for Dell network devices, the basic attributes are not displayed for the Dell DRAC and Dell EMC chassis objects.	To resolve this issue, you can view the detailed set of attributes by clicking the objects in the State View .	Dell EMC Chassis Monitoring Feature
Server Modules and Chassis Slot Summary Information are not visible under CMC/OME-M.	<ul style="list-style-type: none"> Make sure that OpenManage Server Administrator (OMSA) or DRAC tools are installed on the management server managing the CMC. Make sure that you have configured the Run As Account for CMC devices and associated them with "Dell CMC Login Account". Make sure that Dell CMC Slot Discovery and rules are enabled from the Authoring Pane of the Operations Manager console. 	Dell EMC Chassis Monitoring Feature
Errors while running the Repair option in Dell EMC Server Management Pack Suite from the Add/Remove Programs or Uninstall or change a program window.	Use the Repair option in the installer. For more information, see "Using The Repair Option In The Installer" section of the <i>Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide</i> .	Dell EMC Server Management Pack Suite
If there is a delayed response while discovering a chassis, then the latest information from the device is not updated, the Script Timeout Error is generated or the log files in the Temp folder are not cleared.	Increase the Script Timeout value on the Override Properties screen for the CMC/OME-M device which is experiencing a delayed response. For more information about Overrides , see the Operations Manager documentation at Technet.microsoft.com .	Dell EMC Chassis Monitoring Feature
Feature management host server health service is nonfunctional.	<p>If the selected management server has stopped functioning, the executed Feature Management task fails. In such an instance, where the selected management server is corrupt or the health service cannot be obtained, decommission the management server to remove stale objects. For more information, see Technet.microsoft.com/en-us/library/hh456439.aspx.</p> <p>Select a management server from the remaining management servers, and override the FMPHostFQDN of Feature Management host Discovery.</p>	Dell EMC Server Management Pack Suite
Dell OM: Server and its component health computation failed Alert is displayed under Monitoring > Dell EMC Alerts Views > Dell EMC Server Alerts on the console.	Manually associate the Run As Account for monitoring Dell EMC PowerEdge Server. For more information, see Associating Run As Account for monitoring a Dell Server using the Server and Rack Workstation Monitoring (Licensed) Feature .	Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature
When there are multiple Operations Manager consoles in a Management	<ul style="list-style-type: none"> If the user wants to use the same device credential profile created, 	Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Table 5. Issues and resolutions (continued)



Issue	Resolution	Applicable To
group, the device credential profiles that are created from the OMIMSSC dashboard when launched from one Operations Manager console are not visible when the OMIMSSC dashboard is launched from an alternative Operations Manager console within the Management group.	<p>launch the OMIMSSC dashboard from the Operations Manager console where it was created initially.</p> <ul style="list-style-type: none"> New device credential profile can be created from OMIMSSC dashboard that is launched from an alternative Operations Manager console that can be used for discovery of devices. <p> NOTE: Ensure that the device credential profile names are unique.</p>	<p>Dell EMC Chassis Monitoring Feature Dell EMC Network Switch</p> <p>This issue pertains to the usage of the same device credential profile in the OMIMSSC dashboard across multiple Operations Manager consoles within a management group.</p>
In Operations Manager 2012 R2, the import of Dell EMC OpenManage Integration Dashboard View Management pack fails.	<p>To import the Management pack, user has to perform the following steps:</p> <ul style="list-style-type: none"> Install update rollup 11 or above for Operations Manager 2012 R2. For more information, see https://blogs.technet.microsoft.com/allthat/2016/08/31/update-rollup-11-for-system-center-2012-r2-operations-manager/ and follow the steps that are given in the link. After updating, download and import the management pack under OMIMSSC Configuration Management Pack from the OMIMSSC Admin portal and import into the Operations Manager. For more information, see Download the Configuration Management Pack in <i>Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide</i>. Perform the enrollment of the Operations Manager console from the OMIMSSC Admin portal after importing the Configuration Management pack. For more information about enrollment, see Enrolling of Operations Manager console in <i>Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide</i>. 	Operations Manager 2012 R2
Post upgrade from Dell EMC Server Management Pack Suite version 7.0 to Dell EMC OMIMSSC version 7.1, the performance metrics for servers that are discovered using licensed method and for chassis are not seen.	Post upgrade, to view the performance metrics for servers discovered in detailed mode from the Dell EMC OpenManage Integration Dashboard, enable the Metrics option in Configuration page.	<p>Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature Dell EMC Chassis Monitoring Feature</p>
When you enroll the Dell EMC OMIMSSC appliance in the Operations Manager or if there is any change in OMIMSSC appliance IP, you may face difficulties to launch the Dell EMC OpenManage	<p>To update the Appliance IP in Unit monitors:</p> <ol style="list-style-type: none"> Log in into the Operations Manager console. Click Authoring on the lower left of the pane. 	Dell EMC OMIMSSC

Table 5. Issues and resolutions (continued)

Issue	Resolution	Applicable To
<p>Integration Dashboard in the Operations Manager console.</p>	<ol style="list-style-type: none"> 3. Select Authoring > Management Pack Objects > Monitors. 4. In the Look for field, search for Dell EMC SDK Override Appliance IP under Management Sever. 5. Right click Dell EMC SDK Override Appliance IP and select Override > Override the Monitor > For all objects of class. 6. Select Dell EMC Appliance IP under parameter name. Update the Override value and click OK. <p> NOTE: Ensure that you do not select any other override parameters.</p>	

Dell EMC Server Management pack suite version 7.1.1 supported Monitoring features

The topics in this section describe the monitoring features that are supported by DSMPS version 7.1.1 for Operations Manager.

Topics:

- [Dell EMC Servers and Rack Workstation monitoring feature](#)
- [Dell EMC Server and Rack Workstation Monitoring \(Licensed\) Feature](#)
- [DRAC Monitoring Feature for Operations Manager](#)

Dell EMC Servers and Rack Workstation monitoring feature

Dell EMC Servers and Rack Workstation Monitoring feature supports the discovery and monitoring of the following devices that are installed with the supported Windows OS, using the OpenManage Server Administrator (OMSA):

- PowerEdge Modular and Dell EMC PowerEdge Monolithic servers
- PowerVault servers
- Dell OEM Ready servers
- Dell Precision Racks

Inventory and monitoring of these devices could be done through the server's OpenManage Server Administrator (OMSA) which is a license-free monitoring feature.

For information about the supported OMSA versions, see *Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager (SCOM) Release Notes*.

The Dell EMC Server Management Pack suite automatically imports the Dell EMC Servers and Rack Workstation monitoring scalable feature into Operations Manager.

Compare Scalable and Detailed Editions of Dell EMC Servers and Rack Workstation Monitoring

The following table helps you understand the environment in which you can use the Scalable and Detailed Edition features:

Table 6. Scalable management pack versus the Detailed management pack

Features	Scalable Edition	Detailed Edition
Dell EMC Servers and Rack Workstation Monitoring Feature	<ul style="list-style-type: none"> • Inventory and monitoring of component groups. Also, display the presence of iDRAC. • Reports—Only OpenManage Windows Event log report is available. 	<ul style="list-style-type: none"> • Detailed inventory and health monitoring of individual components • View metrics of memory, processors, network interfaces, sensors, storage controllers, disks, and virtual disks. Also, displays BIOS information. • Reports—Availability of BIOS configuration, firmware and driver version, and RAID configuration reports

Discover and classify Dell EMC PowerEdge Servers by using DSMPS version 7.1.1 for Operations Manager

The Dell EMC Server Management Pack 7.1.1 for Microsoft System center Operations Manager enables you to discover and classify Dell EMC PowerEdge Servers—Monolithic, Modular, Sleds, and supported Dell Precision Racks. The following table lists the details of the hardware discovery and grouping:

Table 7. Dell hardware discovery and grouping

Group	Diagram View	Hardware Type
Dell EMC PowerEdge Servers	Dell EMC Monolithic Servers Dell EMC Modular Servers Dell EMC Sled Servers	PowerEdge systems PowerVault servers
Dell EMC Rack Workstations	Dell EMC Rack Workstation Diagram	Dell Precision Racks

Discovering Dell EMC PowerEdge Servers by using Dell EMC OMIMSSC Operations Manager


You can discover the Dell EMC PowerEdge Servers in OMIMSSC for Operations Manager by using an IP address or an IP range. To discover servers, provide the iDRAC IP address and the device type credentials of a server. When you are discovering servers by using an IP range, specify an IP (IPv4) range within a subnet by including the start and end range.

To discover servers:

1. In Dell EMC OMIMSSC, click **Monitoring > Server View**, and then click **Discover**.
2. In the **Discover** page, select the required option:
 - **Discover Using an IP Address**—to discover a server using an IP address.
 - **Discover Using an IP Range**—to discover all server within an IP range.
3. In **Discover Using an IP Address or IP Address Range**, do any of the following:
 - In **IP Address Start Range**, and **IP Address End Range**, provide the IP address range you want to include, which is the starting and ending range.
 - Select **Enable Exclude Range** if you want to exclude an IP address range and in **IP Address Start Range** and **IP Address End Range**, provide the range that you want to exclude.
4. In **Apply this Credential Profile**, select the device type credential profile.
The selected profile is applied to all the servers.
5. To Create a new credential profile, Select **Create New** to create a device type credential profile
Credential profile page is displayed.
6. Select the **Device Credential Profile** in the credential type.
The **Credentials** fields get enabled.
7. Provide the Credential details and click **Finish**.
8. In **iDRAC IP Address**, provide the IP address of the server that you want to discover.
9. Provide a unique job name, and click **Finish**.
10. (Optional) To track this job, select **Go to the Job List** option.
The **Jobs and Logs Center** page is displayed. Expand the discovery job to view the progress of the job in the **Running** tab.

Discovering Dell EMC PowerEdge Servers in Operations Manager

Dell EMC PowerEdge Servers are discovered by using the Operations Manager Agent Management infrastructure.

 **NOTE:** Discover a Dell server in the **Agent Managed** view under the **Administration** section of the Operations Manager console.

1. Log in to the Management Server as an Operations Manager administrator.
2. On the Operations Manager console, click **Administration**.
3. At the bottom of the navigation pane, click **Discovery Wizard**.

4. Run the **Discovery Wizard**, select **Windows computers**, and then follow the instructions on the screen.

For more information, see the Operations Manager documentation at technet.microsoft.com.

NOTE: The installer automatically imports the license-free monitoring feature management packs into the Operations Manager. If the installer fails to install the management packs, import the management packs by using the Operations Manager **Import Management Packs** wizard or the **Feature Management Dashboard**.

NOTE: Perform the Sync with Microsoft System Center from OMIMSSC console to complete the discovery of the Dell EMC PowerEdge Servers that are discovered in the Operations Manager.

NOTE: Dell EMC PowerEdge Servers that do not have Dell OpenManage Server Administrator (OMSA) installed or are running an unsupported OMSA version are grouped as **Dell Unmanaged Devices**.

Discoveries by Dell EMC Servers and Rack Workstation Monitoring Feature by using DSMPS version 7.1.1 for Microsoft System Center Operations Manager

Table 8. Dell EMC Servers and Rack Workstation Monitoring Feature Discoveries

Discovery	Description
Dell EMC PowerEdge Servers discovery	Classifies the Dell EMC PowerEdge Servers and populates the attributes.
Dell EMC PowerEdge Server Network Interface discovery	Discovers the network interface at group level of the Dell EMC PowerEdge Server.
Dell EMC PowerEdge Server Hardware Components discovery	Discovers hardware components at a group level (such as sensors, processor, memory, and power supply).
Dell EMC OpenManage Software Services discovery	Discovers the objects for OMSA Windows services.
Dell EMC PowerEdge Server Detailed BIOS discovery	Discovers BIOS objects for each Dell EMC PowerEdge Server (Detailed edition only).
Dell EMC PowerEdge Server Detailed Memory discovery	Discovers memory instances for the Dell EMC PowerEdge Server (Detailed edition only).
Dell EMC PowerEdge Server Detailed Power Supply discovery	Discovers power supply instances for the Dell EMC PowerEdge Server (Detailed edition only).
Dell EMC PowerEdge Server Detailed Processor discovery	Discovers processor instances for the Dell EMC PowerEdge Server (Detailed edition only).
Dell EMC PowerEdge Server Detailed Storage discovery	Discovers the complete storage hierarchy for the Dell EMC PowerEdge Server (Detailed edition only).
Dell Windows Server Detailed Sensor discovery	Discovers sensor instances for Dell EMC PowerEdge Server (Detailed edition only).
Dell Windows Server Detailed Network Interfaces discovery module	Discovers the physical and teamed network interface instances of the Dell EMC PowerEdge Server (Detailed edition only).
Dell Windows Server Network Interfaces Group discovery module	Discovers the Network Interfaces group.
Dell EMC Rack Workstation Group discovery	Discovers the Dell EMC Rack Workstation group.

Table 8. Dell EMC Servers and Rack Workstation Monitoring Feature Discoveries (continued)

Discovery	Description
Dell Unmanaged Server Group discovery	Discovers Dell EMC PowerEdge Servers that are not being monitored either due to the absence of Dell instrumentation, an unsupported OMSA version, or has an instrumentation version lower than the required version.

Monitoring Dell EMC PowerEdge Servers in Operations Manager

The **Monitoring** pane of the Operations Manager is used to select views that provide complete health information about the discovered Dell EMC PowerEdge Servers. The [Severity Level Indicators](#) helps you to indicate the health of the Dell EMC PowerEdge Servers on the network.

It includes monitoring the health of monolithic and modular servers, and supported Dell Precision Racks and their components, both at regular intervals and on occurrence of events.

Monitored hardware components

The following table provides information about the monitored hardware components supported in the Scalable and Detailed editions of Dell EMC Servers and Rack Workstation Monitoring:

Table 9. Monitored hardware components—Scalable and Detailed feature

Hardware components	Scalable	Detailed
iDRAC	Yes	Yes
Memory	Yes	Yes
Network Interfaces Group	Yes	Yes
OpenManage Software Services	Yes	Yes
Power Supplies	Yes	Yes
Processors	Yes	Yes
Storage	Yes	Yes
Storage Controller	Yes	Yes
Sensors	Yes	Yes
Physical Network interface Instance	No	Yes
BIOS Config Unit	No	No
Battery Sensor	No	Yes
Battery Sensor Group	No	Yes
Current Sensor	No	Yes
Current Sensor Group	No	Yes
Chassis Intrusion Sensor	No	Yes
Fan Sensor	No	Yes

Table 9. Monitored hardware components—Scalable and Detailed feature (continued)

Hardware components	Scalable	Detailed
Fan Sensor Group	No	Yes
Memory Unit	No	Yes
Network Interfaces Physical Group	No	Yes
Network Interfaces Teamed Group	No	Yes
Processor Unit	No	Yes
Power supplies Unit	No	Yes
Storage Controller Physical Disk Unit	No	Yes
Storage Connector Physical Disk Group	No	Yes
Storage Controller Connector Unit	No	Yes
Storage Controller Enclosure Unit	No	Yes
Storage Controller Sensors	No	Yes
Storage Controller Virtual Disk Group	No	Yes
Storage Enclosure EMM Unit	No	Yes
Storage Enclosure Physical Disk Group	No	Yes
Storage Enclosure Power Supply Group	No	Yes
Storage Enclosure Sensors	No	Yes
Teamed Network interface Unit	No	Yes
Voltage Sensor	No	Yes
Voltage Sensor Group	No	Yes

Dell EMC Server Management Pack 7.1.1—View options for Dell EMC Server and Rack workstation on the Operations Manager console

Dell EMC Server Management Pack Suite provides the following types of views for monitoring by clicking **Monitoring > Dell EMC** on the Operations Manager console:

- [Dell EMC Alerts Views](#)
- [Dell EMC Diagram Views](#)
- [Dell EMC Performance and Power Monitoring Views](#)
- [Dell EMC State Views](#)

Dell EMC Alerts Views

This view is available for managing hardware and storage events from the Dell EMC Servers and Rack Workstations. The following alerts are displayed:

- Alerts for events received from OpenManage Server Administrator for the Dell EMC Server and Rack Workstations.



NOTE: Informational alerts are turned off by default. To enable informational alerts, run the **Set Informational Alerts On** task for the Server and Rack Monitoring feature on the **Dell EMC Feature Management Dashboard**.

- Link-up and Link-down alerts for events received from the Broadcom and Intel network interface cards (NICs).

Viewing Alerts for Dell EMC Server and Rack Monitoring feature on the Operations Manager Console

To view alerts on the Operations Manager console:

1. Start the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC Alerts Views**.
The following alerts are displayed:
 - **Dell EMC Network Interface Alerts Views**—Link-up and Link-down alerts from the discovered NICs.
 - **Dell EMC Server and Rack Workstation Alerts Views**—OMSA alerts from the Dell Server and Rack Workstations.
 - **Dell EMC Rack Workstation Alert Views**
 - **Dell EMC Network Interface Alerts**—Alerts—Link-up and Link-down alerts from the discovered NICs.
 - **Dell EMC Rack Workstation Alerts**—OMSA alerts from Rack Workstations.
2. Select any of the Alert Views.
In the right pane of every Alert View, alerts that meet the criteria you specify—such as alert severity, resolution state, or alerts that are assigned to you—are displayed.
3. Select an alert to view the details in the **Alert Details** pane.

Diagram views of Dell EMC PowerEdge Servers for Dell EMC Server and Rack Monitoring feature on the Operations Manager console

The **Dell EMC Diagram Views** offers a hierarchical and graphical representation of all Dell EMC PowerEdge Servers and supported Rack Workstations on the network.

Viewing Dell EMC Diagram Views for Dell EMC Server and Rack Workstation feature on the Operations Manager console

To view the Dell EMC Diagram views on the Operations Manager console:

1. Start the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC Diagram Views**.
2. Go to the **Dell EMC Diagram Views** folder to view following:
 - [Dell EMC Complete Diagram View](#)
 - **Dell EMC Rack Workstation Diagram Views**
 - [Dell EMC Rack Workstation Diagram Views](#)
 - **Dell EMC Server Diagram Views**
 - [Dell EMC Modular Systems Diagram View](#)
 - [Dell EMC Monolithic Servers Diagram View](#)
 - [Dell EMC Sled Servers Diagram View](#)
3. Select a **Dell EMC Diagram View**.
In the right pane, the hierarchical and graphical representation of the selected Dell EMC Server or Rack Workstation is displayed.
4. Select a component in the diagram to view its details in the **Detail View** pane.

Dell EMC Complete Diagram View

The Dell EMC Complete Diagram View displays a graphical representation of all Dell EMC devices that the Operations Manager monitors. You can expand and verify the status of individual devices and their components in the diagram. You can view the details for the following:

- Dell EMC Modular and Monolithic servers
- Dell EMC Sled Group
- Dell EMC Rack Workstations Group
- Chassis Management Controllers
- Remote Access Controllers
- Dell EMC unmanaged systems

Dell EMC Rack Workstation Diagram Views

The **Dell EMC Rack Workstation Diagram Views** offers a graphical representation of all supported Dell EMC Rack Workstations and allows you to expand and verify the status of individual devices and their components in the diagram. Select a Rack Workstation in the diagram to view its details in the **Detail View** pane.

Dell EMC Modular and Dell EMC Monolithic Systems

The **Dell EMC Modular Systems Diagram View** and **Dell EMC Monolithic Servers Diagram View** offers the following details:

- Physical and teamed network interfaces
- Memory
- Power supply
- Sensors
- Processors
- Dell OpenManage software services
- Storage components
- BIOS (inventory only)
- iDRAC

Dell EMC Modular Systems Diagram View

The **Modular Systems Diagram View** offers a graphical representation of all Dell EMC modular systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell EMC Monolithic Servers Diagram View

The **Dell EMC Monolithic Servers Diagram View** offers a graphical representation of all Monolithic systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell EMC Sled Servers Diagram View

The **Dell EMC Sled Servers Diagram View** offers a graphical representation of all Sled servers and allows you to expand and verify the status of individual devices and their components in the diagram. Select a Sled server in the diagram to view its details in the **Detail View** pane.

Dell EMC PowerEdge Server unit diagram view by Dell EMC Server and Rack Workstation Monitoring feature on the Operations Manager console

Select a Dell EMC PowerEdge Server from the **Dell EMC Modular System View** or **Dell EMC Monolithic Servers Diagram Views**, to view the diagram specific to that particular system.

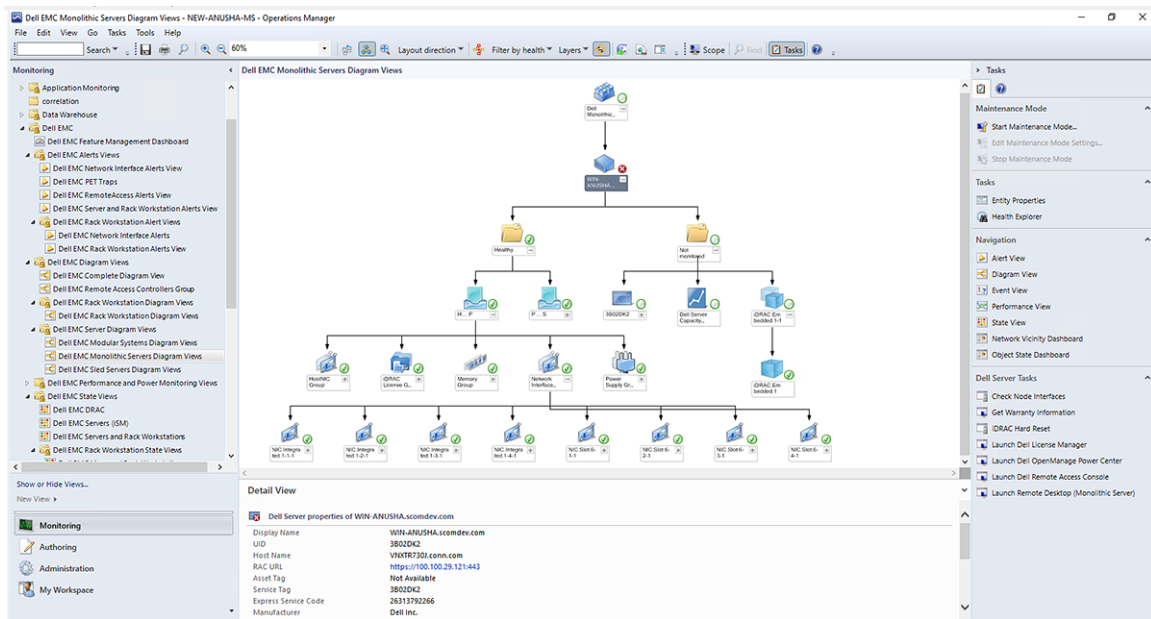


Figure 2. Dell EMC PowerEdge Server Unit Diagram

System-specific diagrams illustrate and indicate the status of the following components:

- Physical and teamed network interfaces
- Memory
- Power supply
- Sensors
- Processors
- Dell OpenManage software services
- Storage components
- BIOS (inventory only)

The memory, processors, network, sensors, storage, and power supply components are displayed in detail by the Detailed edition of the Dell EMC Server and Rack Workstation Monitoring feature.

Storage Controller Component Hierarchy

To view the status and health of components such as physical disks, connectors, virtual drives, controllers, sensors, and enclosures, expand the **Storage** component in any Dell EMC system instance Diagram View.

Dell EMC Network Interfaces Component Hierarchy

The Dell EMC Network Interfaces group is created only when an Intel or Broadcom network interface card is present and enabled on the Dell EMC PowerEdge Server. Network interfaces are grouped under **Physical Interfaces** and **Teamed Interfaces**. If you disable a network interface, the network interfaces group will be removed from management in the next discovery cycle.

A reference relationship is created between a Teamed network interface and its associated Physical network interfaces. You can view the reference relationship only when you enable the **Enable Correlation** attribute of **Dell EMC Windows Server Physical and Teamed Relationship Discovery**. For more information, see [Enabling Correlation](#).

Enabling Correlation

To enable the Enable Correlation attribute:

1. Start the Operations Manager console.
2. In the navigation pane, click **Authoring**.
3. On the **Authoring** tab, click **Management Pack Objects > Object Discoveries**.

- Search for **Dell Windows Server Physical and Teamed Relationship Discovery Rule** in the **Look for** field.
- Right-click **Dell Windows Server Physical and Teamed Relationship Discovery Rule > Overrides > Override the Object Discovery > For all objects of class: Teamed Network Interface instance (Enriched)**.
The **Override Properties** page is displayed.
- Select **Enable Correlation** and set the **Override Value** to **True** and click **OK**.

The status roll-up of network interfaces on the diagram view is displayed only up to the **Network Interfaces** group level. For example, if the remaining components of the Dell server are normal and only one or more of the network interfaces are critical or noncritical, the Dell system displays the health state normal icon, and the **Network Interfaces** group displays the Critical or Warning icon.

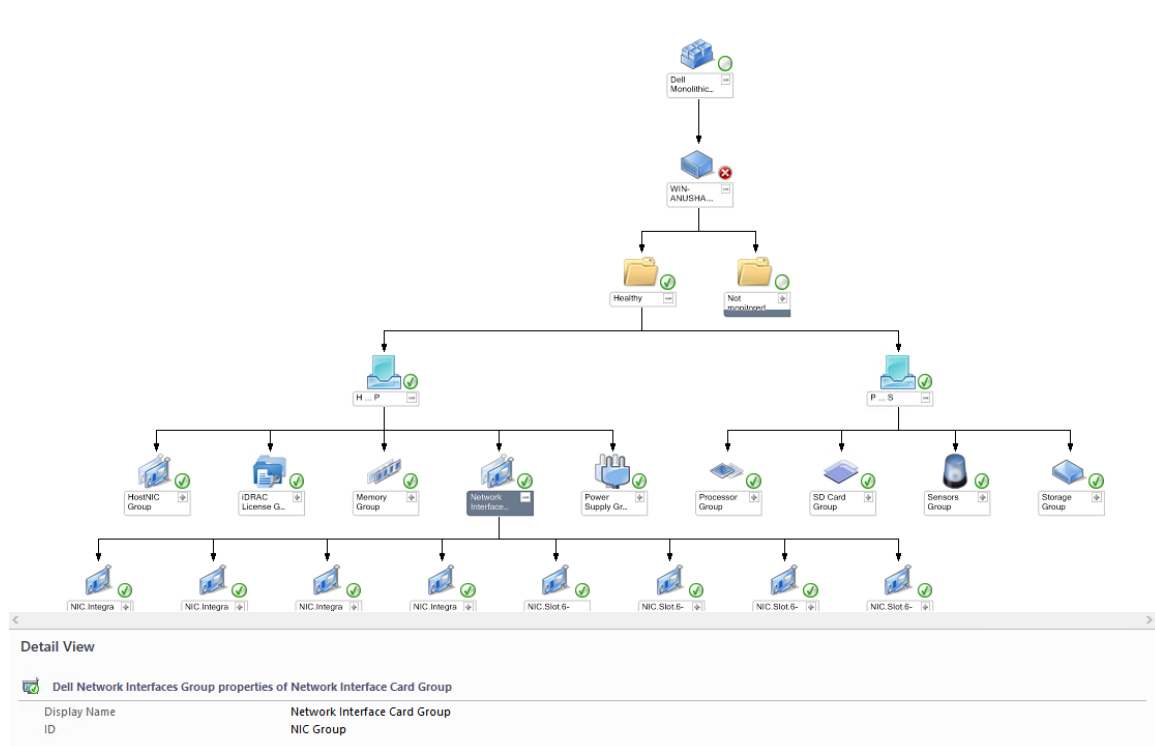


Figure 3. Network Interfaces Diagram View

Enabling Network Interfaces Group to Dell Server Health Roll Up

For the status roll-up to be displayed at the server level, enable the **Network Interfaces Group to Dell Server Health Roll up** dependency monitor.

- Start the Operations Manager console.
- In the navigation pane, click **Authoring**.
- In the left pane, Click **Monitors**. Enter **Network Interfaces Group** as the phrase to search for the server you want to enable the functionality on. For example, Dell Windows Server.
- Click **Entity Health > Availability**.
- Right-click **Network Interfaces Group to Dell Server Health Roll up** and select **Overrides > Override the Monitor > For all objects of class: Dell Windows Server**.
The **Override Properties** screen is displayed.
- Select **Enabled** and set the **Override Value** to **True**.
- Under **Management Pack**, either select a management pack created from the **Select destination management pack** drop-down menu or create a management pack by clicking **New**.
To create a management pack:
 - Click **New**.
The **Create a Management Pack** screen is displayed.
 - Enter a name for the management pack in the **Name** box and click **Next**.

For information about creating a management pack, see the Operations Manager related information at <https://technet.microsoft.com/en-us/>

- c. Click **Create**.

The management pack you created is selected from the **Select destination management pack** drop-down menu.

8. Click **Apply**.

Dell EMC Performance and Power Monitoring Views

To view the Dell EMC performance and power monitoring on the Operations Manager console:

1. Start the Operations Manager console and click **Monitoring**.
2. In the **Monitoring** pane, click **Dell EMC > Dell EMC Performance and Power Monitoring Views** for the following views:

- **Ambient Temperature (Centigrade)**
- **Amperage (Amps)**
- **Dell EMC Chassis Performance View**
- **Dell EMC Performance View**
- **Dell EMC Performance View (iSM)**
- **Dell EMC Server Performance View**
- **Disk Performance - iSM (%)**
- **Energy Consumption (kWh)**
- **Peak Amperage (Amps)**
- **Peak Power (Watts)**
- **Power Consumption (BTU/hr)**
- **Power Consumption (Watts)**

NOTE: Power monitoring is applicable only for Dell EMC PowerEdge Servers with power monitoring capability for a particular attribute. It is enabled only when the detailed edition of Dell EMC Server and Rack Workstation Monitoring feature is present.

NOTE: Disk Performance View - iSM (%), is disabled by default and appears only when the detailed edition of the Dell EMC Server and Rack Workstation Monitoring feature is installed and imported.

3. Select the counters from the individual performance views and select the time range for which the values are required.
The data collected is represented in a graphical format for each system.

A unit monitor monitors the performance counter over two successive cycles to check if it exceeds a threshold value. When the threshold value is exceeded, the Dell EMC PowerEdge Server changes state and generates an alert. This unit monitor is disabled by default. You can override (enable) the threshold values in the **Authoring** pane of the Operations Manager console. Unit monitors are available under **Dell Windows Server** objects for the Dell EMC Server and Rack Workstation Monitoring feature. To enable the threshold values of unit monitors, see [Enabling Performance and Power Monitoring Unit Monitors](#).

For more information on performance information collection, see [Performance Collection Rules](#).

Enabling Performance and Power Monitoring Unit Monitors

1. Launch Operations Manager console and click **Authoring**.
2. Click **Management Pack Objects > Monitors**, and then search for **Performance** in the **Look for:** field.
3. Click **Dell Windows Server > Performance**.
4. Right-click the unit monitor you want to enable.
5. Select **Overrides > Override the Monitor** and select an option based on your requirement.
For example, to override the unit monitors for all objects of class: Dell Windows Server, select **For all objects of class: Dell Windows Server**.
The **Override Properties** screen is displayed.
6. Select **Enabled** and set the **Override Value** to **True**.
7. Under **Management Pack**, either select a management pack created from the **Select destination management pack:** drop-down menu or create a management pack by clicking **New**.
To create a management pack:
 - a. Click **New**.
The **Create a Management Pack** screen is displayed.

- b. Enter a name for the management pack in the **Name** field and click **Next**.

For information about creating a management pack, see the Operations Manager documentation at technet.microsoft.com.

- c. Click **Create**.

The management pack you created is selected in the **Select destination management pack** drop-down menu.

8. Click **Apply**.

Dell EMC State Views

This view is available for viewing the health of all Dell servers and Rack Workstations. To view the status of each Dell Server or Rack Workstation managed by the Operations Manager on the network, click **Monitoring > Dell EMC > Dell EMC State Views** in the Operations Manager console.

You can view the status of the Dell EMC Servers and Rack Workstations in the following views:

- **Dell EMC Servers and Rack Workstations State View**
- **Dell EMC Rack Workstation State Views**
 - **Dell EMC Managed Rack Workstation State View**
- **Dell EMC Server State Views**
 - **Dell EMC FM Servers State View**
 - **Dell EMC Sled Servers State View**

The health of a component is derived by reviewing the unresolved alerts associated with the component.

Dell Unit monitors for Dell EMC Servers and Rack workstation feature

Dell Unit monitors assess the various conditions that can occur in monitored objects. The result of this assessment determines the health state of a target.

The Dell unit monitors are:

- **Event Monitor**—triggered by the event that the Dell instrumentation logs in the Windows event log indicating the health of the corresponding object.
- **Periodic Monitor**—triggered by a periodic poll configured as Interval Seconds.

The following tables illustrate the various Dell monitors and the applicable parameters.

Dell Unit Monitors — Scalable Edition

Monitors to assess various conditions that can occur in the license-free monitoring feature — Scalable Edition monitored objects.

Table 10. Dell Unit Monitors — Scalable Edition

Object		Unit Monitor
Memory		
	Dell EMC Server Memory Status	Periodic
	Dell EMC Server Memory Redundancy Status	Periodic
OpenManage Software Services		
	Dell EMC Server Management (DSM) Connection Service Availability Status	Periodic
	DSM Data Manager Availability Status	Periodic
	DSM Event Manager Availability Status	Periodic
	DSM Shared Service Availability Status	Periodic

Table 10. Dell Unit Monitors — Scalable Edition (continued)

Object		Unit Monitor
	DSM Storage Service Availability Status	Periodic
	Windows Management Instrumentation (WMI) Service Availability Status	Periodic
Power Supplies		
	Dell EMC Server Power Supplies Status	Periodic
Processors		
	Dell EMC Server Processors Status	Periodic
Sensors		
	Dell EMC Server Battery Status	Periodic
	Dell EMC Server Current Status	Periodic
	Dell EMC Server Fans Status	Periodic
	Dell EMC Server Intrusion Sensor Status	Periodic
	Dell EMC Server Temperature Sensor Status	Periodic
	Dell EMC Server Voltage Sensor Status	Periodic
Storage Controller		
	Storage Controller Status	Periodic
Network Interfaces Group (Basic)		
	Global Network Interfaces (Basic) Connection Status	Periodic
Network Interfaces Group (Enriched)		
	Global Enriched Network Interfaces Status	Periodic
	Global Network Interfaces (Basic) Connection Status	Periodic
iDRAC		
	Dell Server iDRAC Network Interface Monitor	Periodic
Dell OM Performance		
	Ambient Temperature Average Threshold AlertMonitor	Periodic
	Amperage Average Threshold AlertMonitor	Periodic
	EnergyConsumption Average Threshold AlertMonitor	Periodic
	PowerConsumption (BTU/hr) Average Threshold	Periodic
	PowerConsumption (Watts) Average Threshold AlertMonitor	Periodic

Table 10. Dell Unit Monitors — Scalable Edition (continued)

Object		Unit Monitor
	Dell OM Server Unsupported Unit Monitor	Periodic

Dell Unit Monitors — Detailed Edition

Table 11. Dell Unit Monitors — Detailed Edition

Object		Unit Monitor
Memory Unit		
	Detailed Memory Event Monitor	Periodic
	Detailed Memory Unit Monitor	Periodic
Power Supplies Unit		
	Detailed Power Supply	Periodic
Processor Unit		
	Detailed Processor	Periodic
Storage Controller Connector Unit		
	Controller Connector Event Monitor	Periodic
	Controller Connector Unit Monitor	Periodic
Storage Controller EMM Unit		
	Enclosure EMM Event Monitor	Periodic
	Enclosure EMM Unit Monitor	Periodic
Storage Controller Enclosure Unit		
	Controller Enclosure Event Monitor	Periodic
	Controller Enclosure Unit Monitor	Periodic
Storage Controller Physical Disk Unit		
	Controller Physical Disk Event Monitor	Periodic
	Controller Physical Disk Unit Monitor	Periodic
	Enclosure Physical Disk Event Monitor	Periodic
	Enclosure Physical Disk Unit Monitor	Periodic
Storage Controller Power Supply Unit		
	Enclosure Power Supply Event Monitor	Periodic
	Enclosure Power Supply Unit Monitor	Periodic

Table 11. Dell Unit Monitors — Detailed Edition (continued)

Object		Unit Monitor
Storage Controller Sensors		
	Controller Sensor Event Unit Monitor	Periodic
	Controller Sensor Unit Monitor	Periodic
Storage Controller Virtual Disk Group		Periodic
Storage Controller Virtual Disk Unit		Periodic
	Controller Virtual Disk Event Monitor	Periodic
	Controller Virtual Disk Unit Monitor	Periodic
Storage Enclosure Physical Disk Group		Periodic
Storage Enclosure Sensors		
	Enclosure Fan Event Unit Monitor	Periodic
	Enclosure Fan Unit Monitor	Periodic
	Enclosure Temperature Event Monitor	Periodic
	Enclosure Temperature Unit Monitor	Periodic
Physical Network Interface Unit (Basic)		
	Connection Status	Periodic
Physical Network Interface Unit (Enriched)		
	Administrative Status	Periodic
	Connection Status	Periodic
	Link Status	Periodic
	Operational Status	Periodic
Teamed Network Interface Unit (Basic)		
	Teamed Network Interface (Basic) Availability Status	Periodic
Teamed Network Interface Unit (Enriched)		
	Teamed Network Interface Unit (Enriched) Administrative Status	Periodic
	Teamed Network Interface Unit (Enriched) Connection Status	Periodic
	Teamed Network Interface Unit (Enriched) Link Status	Periodic
	Teamed Network Interface Unit (Enriched) Operational Status	Periodic

Table 11. Dell Unit Monitors — Detailed Edition (continued)

Object		Unit Monitor
	Teamed Network Interface Unit (Enriched) Redundancy Status	Periodic
Fan Sensor		
	Fan Sensor Unit Monitor	Periodic
Current Sensor		
	Current Sensor Unit Monitor	Periodic
Voltage Sensor		
	Voltage Sensor Unit Monitor	Periodic
Battery Sensor		
	Battery Sensor Unit Monitor	Periodic
Chassis Intrusion Sensor		
	Chassis Intrusion Sensor Unit Monitor	Periodic

Rules

The following section lists the rules specific to the Dell EMC Server and Rack Workstation Monitoring feature.

Dell Systems Event Processing Rules

The Dell EMC Server Management Pack Suite processes rules from OMSA and OMSA Storage Management events.

Server Administrator

All informational, warning, and critical events of OMSA have corresponding event processing rule.

Each of these rules are processed based on the following criteria:

- Source Name = "Server Administrator"
- Event ID = Actual event ID of the Server Administrator instrumentation event
- Data Provider = Windows System Event Log

Storage Management

All informational, warning, and critical events for the Server Administrator Storage Management Service have a corresponding event processing rule.

Each of these rules are processed based on the following criteria:

- Source Name = "Server Administrator"
- Event ID = Actual event ID of the Server Administrator Storage Management Service event
- Data Provider = Windows system event log

View Dell EMC servers performance collection rules set on Operations Manager

In the Operations Manager console, click **Monitoring > Dell EMC > Dell EMC Performance and Power Monitoring Views** to view the performance information that is collected from Dell EMC PowerEdge Servers. By default, this feature is disabled. To enable the feature, see [Enabling Performance Collection Rules](#).

The performance collection rules collect information on the following parameters:

- **Disk Performance (%)**
- **Ambient Temperature (Centigrade)**
- **Amperage (Amps)**
- **Energy Consumption (kWh)**
- **Peak Amperage (Amps)**
- **Peak Power (Watts)**
- **Physical Network Interface**
- **Power Consumption (BTU/hr)**
- **Power Consumption (Watts)**
- **Teamed Network Interface**

NOTE:

- When the Detailed edition of the Server and Rack Workstation Monitoring feature is imported, the disabled Performance (excluding Network Performance) and license-free Disk Performance (%) collection rules are enabled by default.
- **Disk Performance (%)** — This view displays the **Remaining Rated Write Endurance** of Solid-State Drives (SSDs) of a Dell server. Search for the object **SSD** to view the data.

NOTE: Network Statistics are defined in Detailed edition of the Dell EMC Server and Rack Workstation Monitoring feature only and are disabled by default. To enable the feature, see [Enabling Performance Collection Rules](#).

Enable Dell EMC PowerEdge Server performance collection rules set on Operations Manager console

To enable this feature:

1. Start Operations Manager console and click **Authoring**.
2. Click **Rules** and search for **Enriched** in **Look for**.
3. Right-click the rule you want to enable.
For example, to collect information on Network Interface of all Dell systems, perform step 4–5 for the rules listed below:
 - Total Transmitted Packets
 - Received Bytes
 - Total Received Packets
 - Transmitted Bytes
4. Select **Overrides > Override the Rule > For all objects of class**.
5. Select **Enabled** and set the **Override Value** to **True**.
6. Under **Management Pack**, either select a management pack created from the **Select destination management pack** drop-down menu or create a new management pack by clicking **New**.
To create a new management pack:
 - a. Click **New**.
The **Create a Management Pack** screen is displayed.
 - b. Enter a name for the management pack in **Name** and click **Next**.
For information on creating a management pack, see the Operations Manager related information at <https://technet.microsoft.com/en-us/>.
 - c. Click **Create**.
The management pack you created is selected in the **Select destination management pack** drop-down menu.
7. Click **Apply**.

Dell EMC PowerEdge Server Tasks

Tasks are available in the **Tasks** pane of the Operations Manager console. When you select a device or a component, the relevant tasks is displayed in the **Tasks** pane.


Summary of managed Tasks

You can view the Tasks in the **Authoring** pane under **Management Pack Objects** in the Operations Manager console.

Performing tasks using Dell EMC Server and Rack Workstation Monitoring Feature

Following table provides a summary of the Dell tasks that you can perform on the Operations Manager:

Table 12. Dell Windows Server tasks

Task	Description
Check Node Interfaces	Checks if the selected Dell EMC PowerEdge Server and its corresponding interface WMI is reachable or non-reachable.
Check Power Status	Check the overall power status of the system.
Clear ESM Logs	Backs up the content of the Embedded System Management (ESM) log and clears the ESM log file for a selected system.
Force Power Off	Turns off the system power without shutting down the operating system.
Get Warranty Information	Retrieves the warranty information for the selected system.  NOTE: An active internet connection is required to retrieve the warranty information.
Launch Dell License Manager on X64 bit Management Server	Start the Dell license manager on management systems running 64-bit operating system.
Launch Dell OpenManage Power Center	Start the Dell OpenManage Power Center console on the Management Server.
Launch Dell Remote Access Console	Start the DRAC console for the Dell EMC PowerEdge Servers discovered using the Server and Rack Workstation Monitoring feature.
Launch OpenManage Server Administrator	Start the OpenManage Server Administrator.
Launch Remote Desktop	Start the remote desktop for the selected system.
Power Cycle	Turns off the power, and after a delay, turns it on again.
Power Off Gracefully	Shuts down the operating system first, and then turns off the system power.
Power On	Turns on the system power. This option is available only if the system is turned off.
Power Reset	Turns off the system power and turns it on again.
Turn LED Identification On	Turns on the identify LED for 255 seconds on the selected system.
Turn LED Identification Off	Turns off the identify LED on the selected system.

Tasks performed on Dell Windows server by using Operations Manager console

Check Node Interfaces

The Check Node Interfaces task checks if the selected Dell server and its corresponding interface; WMI is reachable or non-reachable.


To check the node interfaces:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the necessary Dell EMC PowerEdge Server in any of the Diagram Views, State Views, or alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Check Node Interfaces**.

The task provides a summary of the reachability check, and interface check after the successful completion of the task.

Check power status

You can check the power status and allow power control tasks through the IPMI shell.

 **NOTE:** To enable Advanced Power Control, install Baseboard Management Controller Management Utility (BMU) in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To check the power status of a system:

1. In the Operations Manager console, go to a Dell EMC Diagram View, Dell EMC State View, or Dell EMC Alert View.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram View** or **State View** or an alert in the **Dell EMC Alerts View**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Check Power Status**.

Clear ESM logs

The Server Administrator Embedded Server Management (ESM) log, also referred to as the hardware log, maintains a list of all system events generated by the hardware, such as error-correcting code (ECC), system reset and boot, and probe threshold changes. You can refer to this log when hardware errors appear or when the system is not functioning properly.


To run the **Clear ESM Logs** task:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell system in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Clear ESM Logs**.
The **Run Tasks** window is displayed.
4. Click **Run** to clear the ESM logs of the device that you selected.

When you run the **Clear ESM Logs** task, on the task execution screen only the result of the task initiating is displayed. For example, the task execution screen may show a success result even if the ESM logs are not cleared. This means that the **Clear ESM Logs** task initiation was successful.

Force Power Off

The **Force Power Off** task allows you to turn off the Dell EMC PowerEdge server without shutting down the operating system.

 **NOTE:** To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).


To power off the system:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alert Views.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.

3. In the **Tasks** pane, select **Dell Windows Server Tasks > Force Power Off**.

Get Warranty Information

The **Get Warranty Information** task allows you to view the warranty status of the selected Dell EMC PowerEdge server.


 **NOTE:** An active Internet connection is required to retrieve the warranty information.

To get warranty information:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Get Warranty Information**.

Launch Dell License Manager on X64 Bit Management Server

The **Launch Dell License Manager on X64 bit Management Server** task allows you to launch the Dell License Manager on management systems running 64-bit operating system. Dell License Manager is a one-to-many license deployment and reporting tool for Dell iDRAC licenses.

 **NOTE:** If the Dell License Manager is not installed in the default path, create a new task to start Dell License Manager. For more information, see [Creating A Launch License Manager Task](#).

To start Dell License Manager:

1. In the Operations Manager console, go to Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the necessary Dell server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Launch Dell License Manager on X64 bit Management Server**.

Launch Dell OpenManage Power Center

You can use this task to launch the OpenManage Power Center console.

To launch OpenManage Power Center:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Launch Dell OpenManage Power Center**.

Launch Dell Remote Access Console


To launch Dell Remote Access console:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Launch Dell Remote Access Console**.

Launch OpenManage Server Administrator

To launch OpenManage Server Administrator:


1. In the Operations Manager console, go to Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Launch Server Administrator**.

 **NOTE:** The Dell EMC Server Management Pack Suite tasks launch the remote console in the Internet Explorer.

Launch Remote Desktop


To launch remote desktop:

1. In the Operations Manager console, navigate to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Launch Remote Desktop**.

 **NOTE:** Launching remote desktop is possible only if the remote desktop is enabled manually in the managed node.

Power cycle

The **Power Cycle** task allows you to turn off the Dell EMC PowerEdge Server and turn it on again after a delay.


 **NOTE:** To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To run the power cycle:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alert Views.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Power Cycle**.

Power Off Gracefully

The **Power Off Gracefully** task allows you to shut down the operating system and turn off the Dell EMC PowerEdge Server.


 **NOTE:** To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To power off the system gracefully:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alert Views.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Power Off Gracefully**.

Power On

The **Power On** task allows you to turn on the server. This option is available even if the system power is off.


 **NOTE:** To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To power on a system:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Power On**.

Power Reset

The **Power Reset** task allows you to power off and then power on the Dell EMC PowerEdge Server.

 **NOTE:** To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To reset the power of the system:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Power Reset**.

Enable LED identification on Dell EMC PowerEdge Servers on Operations Manager console

The **Turn LED Identification On** task allows you to turn on the LED identification on the selected Dell EMC PowerEdge Server.

NOTE: To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To turn on LED identification:

1. In the Operations Manager console, navigate to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Turn LED Identification On**.

Disable LED identification on Dell EMC PowerEdge Server by using Operations Manager console

The **Turn LED Identification Off** task allows you to turn off the LED identification on the selected Dell EMC PowerEdge Server.

NOTE: To enable **Advanced Power Control**, install BMU in the default path. If BMU is not installed in the default path, create a new console task. For more information on creating a new console task, see [Creating Advanced Power Control And LED Identification Tasks](#).

To turn off LED identification:

1. In the Operations Manager console, go to a Dell EMC Diagram Views, Dell EMC State Views, or Dell EMC Alerts Views.
2. Select the desired Dell EMC PowerEdge Server in any of the **Diagram Views** or **State Views** or an alert in the **Alerts Views**.
3. In the **Tasks** pane, select **Dell Windows Server Tasks > Turn LED Identification Off**.

Reports about Dell EMC PowerEdge Server on the Operations Manager

The reporting feature allows you to create reports for Dell EMC OpenManage Windows Event Log, Dell server BIOS, firmware, and RAID configuration.

NOTE:

- Dell EMC Server and Rack Workstation Monitoring feature supports Reports only for object-level.
- Dell server BIOS, firmware, and RAID configuration reports are available only in the Detailed Edition.

View reports about Dell EMC PowerEdge Server on the Operations Manager

To access reports:

1. Click **Reporting** on the Operations Manager console.
2. Click **Dell Windows Server (Scalable Edition)** for the **OpenManage Windows Event Log** and click **Dell Windows Server (Detail Edition)** for **BIOS Configuration**, **Firmware and Driver Versions**, and **RAID Configuration** reports.

NOTE: You can also access **Reporting** from the **Diagram View** or **State View** by clicking on the server instance. The option for **Dell Reports** is located in the **Tasks** pane under the Dell System instance reports along with the default Microsoft reports.

Generate OpenManage Windows Event Log report on the Operations Manager

To create a report for OpenManage Windows Event Logs:

1. On the Operations Manager console, click **Reporting**.
2. Click **Dell Windows Server (Scalable Edition)**.
3. Click **OpenManage Windows Event Log** then click **Open** in the **Tasks** pane.
4. Select a time period for which you want the report generated.
5. Click **Add Object**.
6. Search for objects of class `Dell Windows Server` and click **Add**.
You will find the object in the **Selected object** pane.
7. Choose the **Severity** of the events whose report you want to generate.
8. Click **Run**.
The **OpenManage Windows Event Log** report is generated.

Generate BIOS configuration report on the Operations Manager

To create a report for the BIOS configuration:

1. On the Operations Manager console, click **Reporting**.
2. Click **Dell Windows Server (Detail Edition)**.
3. Click **BIOS Configuration**, then click **Open** in the **Tasks** pane.
4. Select a time period for which you want the report generated.
5. Click **Add Object**.
6. Search for objects of class `Dell Windows Server` and click **Add**.
You will find the object in the **Selected object** pane.
7. Choose the required **Properties**.
8. Click **Run**.
The **BIOS Configuration** report is generated.

Generate firmware and driver report on the Operations Manager

To create a report for firmware and driver versions:

1. On the Operations Manager console, click **Reporting**.
2. Click **Dell Windows Server (Detail Edition)**.
3. Click **Firmware and Driver Versions**, then click **Open** on the **Task** pane.
4. Select a time period for which you want the report generated.
5. Click **Add Object**.
6. Search for objects of class `Dell Windows Server` and click **Add**.
You will find the object in the **Selected object** pane.
7. Click **Run**.
The **Firmware and Driver Versions** report is generated.

Generate RAID configuration report on the Operations Manager

To create a report for RAID configuration:

1. On the Operations Manager console, click **Reporting**.
2. Click **Dell Windows Server (Detailed Edition)**.

3. Click **RAID Configuration**, then click **Open** on the **Task** pane.
4. Select a time period for which you want the report generated.
5. Click **Add Object**.
6. Search for objects of class `Dell Windows Server` and click **Add**.
You will find the object in the **Selected object** pane.
7. Choose the required **Properties**.
8. Click **Run**.
The **RAID Configuration** report is generated.

Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Dell EMC Server and Rack Workstation Monitoring (Licensed) feature provides detailed or scalable inventory, based on your method of discovery, and monitoring of the following devices:

- 12th, 13th, and 14th generation of PowerEdge servers
- PowerVault servers
- Dell Precision Racks
- Dell branded OEM servers
- Dell OEM Ready servers
- PowerEdge Storage Spaces Direct Ready nodes

Inventory and monitoring of these devices could be done through iDRAC or iDRAC Service Module (iSM) installed on the managed Dell EMC Server or Rack Workstation through one of the following methods based on your monitoring preference:

- iDRAC–WS–MAN
- iDRAC access via Host OS
- iSM–WMI

This is a licensed feature.

For more information about monitoring servers through iDRAC–WS–MAN or Host OS, see the section Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature in the *Dell EMC OpenManage Integration Version 7.1.1 for Microsoft System Center for Operations Manager User's Guide*.

For the list of Supported Platforms for iSM, see the *iDRAC Service Module Installation Guide* at Dell.com/manuals.

iSM–WMI using Dell EMC Server Management Pack suite version 7.1.1 Operations Manager

This section describes how you can monitor Dell EMC devices through iSM–Windows Management Instrumentation (WMI) to retrieve details from the supported Dell EMC devices.

This option provides scalable inventory and monitoring of the 12th, 13th, and 14th generation of PowerEdge servers, and supported Dell EMC Precision Rack Workstations. For more information about the supported platforms, see the *iDRAC Service Module Installation Guide* at Dell.com/manuals. This is a licensed feature.

Dell EMC Server Management Pack Suite installer and OMIMSSC automatically imports the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature if the prerequisites are met.

Compare Scalable and Detailed Edition Features—iSM-WMI

The following table helps you understand the environment in which you can use the Scalable and Detailed edition features for devices discovered through iSM-WMI. These devices are classified as **Servers (iSM-WMI)** in the Operations Manager console.

Table 13. Scalable Management Pack versus Detailed Management Pack

Features	Scalable Edition	Detailed Edition
Dell EMC PowerEdge Servers (iSM)	<ul style="list-style-type: none"> • Inventory up to individual components. 	<ul style="list-style-type: none"> • Inventory and health monitoring of individual components.

Table 13. Scalable Management Pack versus Detailed Management Pack

Features	Scalable Edition	Detailed Edition
	<ul style="list-style-type: none"> Health monitoring at server, Dell EMC Rack Workstation, and component group level. 	<ul style="list-style-type: none"> View metrics for power, temperature, energy, network interface cards, processor, memory, Compute Usage per Second (CUPS), the PCIe SSD wear percentage, and IO performance metrics.

Discover and classify Dell EMC PowerEdge Servers by using DSMPS version 7.1.1 through iSM–WMI

The Dell EMC Server Management Pack Suite enables you to discover and classify Dell EMC PowerEdge Servers.

The following table lists the details of the hardware discovery and grouping by the Dell EMC Server and Rack Monitoring (Licensed) feature through iSM–WMI.

Table 14. Dell Hardware discovery and grouping

Group	Diagram View	Hardware Type
Dell EMC PowerEdge Servers	Dell EMC Monolithic Servers Dell EMC Modular Servers Dell EMC Sled Group	PowerEdge servers.
Dell EMC Rack Workstation	Dell EMC Rack Workstation Diagram	Dell Precision Rack Workstations.

Discovering Dell EMC Power Edge Servers through iSM–WMI

Ensure that the following prerequisites are met before you discover the Dell devices through iSM–WMI:

- Required version of iSM is installed on the managed node.
 - NOTE:** If you are monitoring devices through iSM–WMI feature on systems running Microsoft Nano server, see the section **Installing iDRAC Service Module on Nano operating system** in the *iDRAC Service Module Installation Guide* at Dell.com/support.
- Windows Management Instrumentation (WMI) feature is enabled on the host.

For more information, see the section **Windows Management Instrumentation providers** in the *Integrated Dell Remote Access Controller 7/8/9 with Lifecycle Controller User's Guide* at Dell.com/idracmanuals.
- In the Dell EMC Feature Management Dashboard, the **Enable Agent Proxying** task is run for the Dell EMC Server and Rack Workstation (Licensed) monitoring feature.

Dell EMC PowerEdge Servers are discovered through the Operations Manager Agent Management infrastructure.

- NOTE:** Discover the Dell EMC PowerEdge Servers in the **Agent Managed** view under the **Administration** section of the Operations Manager console.

To discover a Dell EMC PowerEdge server:

- Log on to the management server as an Operations Manager administrator.
- On the Operations Manager console, click **Administration**.
- At the bottom of the navigation pane, click **Discovery Wizard**.
- Run the **Discovery Wizard**, select the **Windows computers**, and follow the instructions on the screen.

For more information, see the Operations Manager documentation at Technet.microsoft.com.

- NOTE:** The installer automatically imports the Dell EMC Server and Rack Workstation Monitoring (Licensed) management packs into the Operations Manager. If the installer fails to install the management packs, then, import the management packs using the Operations Manager **Import Management Packs** wizard or the **Dell EMC Feature Management Dashboard**.

The discovered devices are displayed under **Dell EMC Servers (iSM) State View** under **Dell EMC State Views** as shown in the following figure:

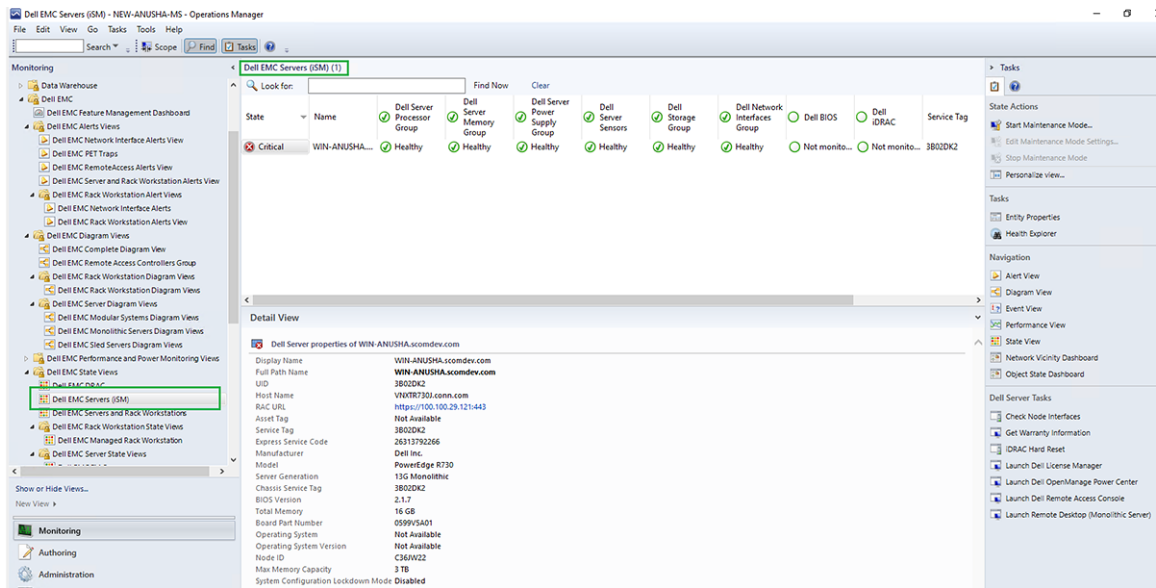


Figure 4. Dell EMC Servers (iSM)

A Dell Server (iSM) informational alert is generated when a Dell EMC PowerEdge Server is discovered through iDRAC Service Module (iSM) for the first time. This informational alert is a one-time alert.

Object discoveries through iSM–WMI

Table 15. Objects discovered through iSM–WMI.

Discovery Object	Description
Dell EMC PowerEdge Server Discovery	Classifies the Dell EMC PowerEdge Servers and populates the key attributes and components.

Monitoring

The **Monitoring** pane of the Operations Manager is used to select views that provide health information of the discovered Dell EMC PowerEdge Servers. The **Severity Level Indicators** helps you to indicate the health of the Dell EMC PowerEdge Servers on the network.

It includes monitoring the health of Dell EMC Modular and Dell EMC Monolithic servers, and Dell Precision Rack Workstations at their group level, both at regular intervals and on occurrence of events.

Monitored Hardware components

The following table provides information about the monitored hardware components supported in the Scalable and Detailed feature for Dell EMC PowerEdge servers discovered with Dell EMC Server Management Pack Suite through iSM:

Table 16. Monitored hardware components—Scalable and Detailed Feature

Hardware components	Scalable	Detailed
Battery Sensor Group	Yes	Yes
Battery Sensor	No	Yes

Table 16. Monitored hardware components—Scalable and Detailed Feature (continued)

Hardware components	Scalable	Detailed
BIOS Unit	No	No
Current Sensor Group	No	No
Current Sensor	No	No
Fan Sensor Group	Yes	Yes
Fan Sensor	No	Yes
iDRAC	No	No
Host NIC Group	Yes	Yes
Host NIC	No	Yes
iDRAC License Group	Yes	Yes
iDRAC License	No	Yes
iDRAC Network Interface	Yes	Yes
Intrusion Sensor Group	Yes	Yes
Intrusion Sensor	No	Yes
Memory Group	Yes	Yes
Memory Unit	No	Yes
Network Interfaces Group	Yes	Yes
Network Interfaces	No	Yes
PCIeSSD Backplane	No	Yes
PCIeSSD Physical Disk	No	Yes
PCIeSSD Extender	No	Yes
Processor Group	Yes	Yes
Processor Unit	No	Yes
Power Supply Group	Yes	Yes
Power Supply Unit	No	Yes
SD Card Group	Yes	Yes
SD Card	No	Yes
Storage Group	Yes	Yes
Storage Controller	No	Yes
Storage Controller Battery Group	No	Yes

Table 16. Monitored hardware components—Scalable and Detailed Feature (continued)

Hardware components	Scalable	Detailed
Storage Controller Battery	No	Yes
Storage Connector internal/external/direct attached Physical Disk Group	No	Yes
Storage Controller internal/external/direct attached Physical Disk Instance	No	Yes
Storage Controller Enclosure Fan Sensor Group	No	Yes
Storage Controller Enclosure Fan Sensor	No	Yes
Storage Controller Enclosure Instance	No	Yes
Storage Controller Sensors	No	Yes
Storage Controller Virtual Disk Group	No	Yes
Storage Controller Virtual Disk	No	Yes
Storage Enclosure EMM Unit	No	Yes
Storage Enclosure Power Supply Group	No	Yes
Storage Enclosure Power Supply	No	Yes
Storage Enclosure Sensors	No	Yes
Storage Enclosure Temperature Sensor	No	Yes
Storage Enclosure Temperature Sensor Group	No	Yes
Teamed Network Interface Unit	No	No
Sensors Group	Yes	Yes
Temperature Sensor Group	Yes	Yes
Temperature Sensor	No	Yes
Voltage Sensor Group	Yes	Yes
Voltage Sensor	No	Yes

View options for Dell EMC PowerEdge Servers through iSM–WMI on the Operations Manager console

Dell EMC Server Management Pack Suite and OMIMSSC provides the following types of views for monitoring, under **Monitoring > Dell EMC** on the Operations Manager console:

- [Dell EMC Alert Views](#)
- [Dell EMC Diagram Views](#)
- [Dell EMC Performance and Power Monitoring Views](#)
- [Dell EMC State Views](#)

Dell EMC Alerts Views

This view is available for managing hardware and storage events from Dell EMC Servers and Rack Workstations (Licensed). The following alerts are displayed:

- Link-up or Link-down alerts for events received from Broadcom and Intel network interface cards.

Viewing Alerts for Dell EMC Server and Rack Workstation (Licensed) feature on the Operations Manager Console—through iSM–WMI

To view the alerts on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring**.
2. Click **Dell EMC > Dell EMC Alerts Views**.
The following alerts are displayed:
 - **Dell EMC Network Interface Alerts** — Link-up and Link-down alerts from the discovered NICs are displayed.
 - **Dell EMC Server and Rack Workstation Alerts** — SNMP traps for 12th, 13th, and 14th generation of PowerEdge servers, PowerVault servers and Dell Precision Racks with iDRAC7, iDRAC8 or iDRAC9 are displayed.
 - **Dell EMC Rack Workstation Alert Views**
 - **Dell EMC Network Interface Alerts**— Link-up and Link-down alerts from the discovered NICs are displayed.
 - **Dell EMC Rack Workstation Alerts**
3. Select any of the **Alerts Views**.
On the right pane of each of the individual **Alerts Views**, alerts that meet the criteria you specify, (such as alert severity, resolution state, or alerts that are assigned to you) are displayed.
4. Select an alert to view its details in the **Alert Details** pane.

Diagram views of Dell EMC PowerEdge Servers for Dell EMC Servers and Rack Workstation (Licensed) feature on the Operations Manager console

The **Dell EMC Diagram Views** offers a hierarchical and graphical representation of all Dell EMC PowerEdge Servers and supported Dell EMC Rack Workstations on the network.

Viewing Dell EMC Diagram Views for Dell EMC Server and Rack Workstation (Licensed) feature on the Operations Manager console—iSM–WMI

To view the diagram views on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC Diagram Views**.
2. Go to the **Dell EMC Diagram Views** folder for the following views:
 - [Dell EMC Complete Diagram View](#)
 - **Dell Rack Workstation Diagram Views**
 - [Dell EMC Rack Workstation Diagram Views](#)
 - **Dell Server Diagram Views**
 - [Dell EMC Modular Systems Diagram View](#)
 - [Dell EMC Monolithic Servers Diagram View](#)
 - [Dell EMC Sled Servers Diagram View](#)
3. Select any of the **Dell EMC Diagram Views**.
On the right pane the hierarchical and graphical representation of the selected Dell EMC Server or Rack Workstation is displayed.
4. Select a component in the diagram to view its details in the **Detail View** pane.

The following figure represents the servers discovered through iSM using WMI in the Diagram View:

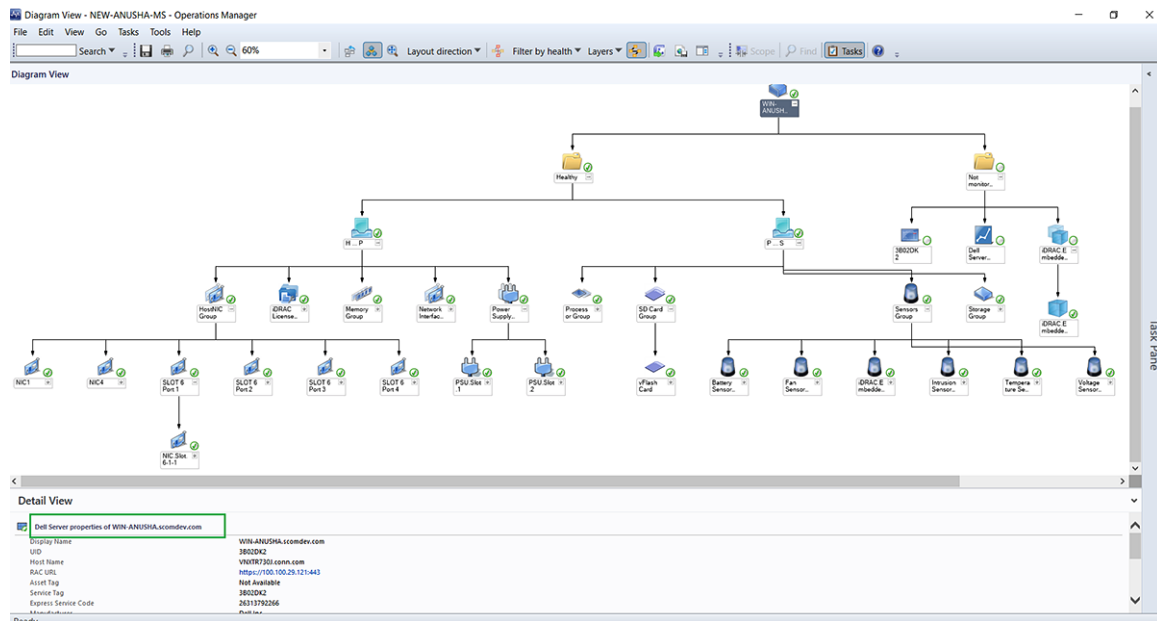


Figure 5. Dell EMC Servers (iSM) Diagram View

Dell EMC Complete Diagram View

The **Dell EMC Complete Diagram View** offers a graphical representation of all the supported Dell EMC devices discovered and monitored in the Operations Manager. You can expand and verify the status of individual devices and their components in the **Operations Manager**. You can view the details for the following:

- Dell EMC Modular and Monolithic servers
- Dell EMC Sled Group
- Dell EMC Rack Workstations
- Chassis Management Controllers
- Remote Access Controllers
- Dell Unmanaged systems

Dell EMC Rack Workstation Diagram View

The **Dell EMC Rack Workstation Diagram Views** offers a graphical representation of all supported Dell EMC Rack Workstations and allows you to expand and verify the status of individual devices and their components in the diagram. Select a Rack Workstation in the diagram to view its details in the **Detail View** pane.

Dell EMC Modular and Dell EMC Monolithic Systems

The **Dell EMC Modular Systems Diagram View** and **Dell EMC Monolithic Servers Diagram View** offers the following details:

- Network Interfaces Group
- Memory Group
- Power Supply Group
- Sensors Group
- Processor Group
- Storage Components Group
- BIOS
- iDRAC
- Host NIC Group
- SD Card Group
- iDRAC License Group

Dell EMC Modular Systems Diagram View

The **Dell EMC Modular Systems Diagram View** offers a graphical representation of all Modular systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell EMC Monolithic Servers Diagram View

The **Dell EMC Monolithic Servers Diagram View** offers a graphical representation of all Monolithic systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell EMC Sled Servers Diagram View

The **Dell EMC Sled Servers Diagram View** offers a graphical representation of all Sled servers and allows you to expand and verify the status of individual devices and their components in the diagram. Select a Sled server in the diagram to view its details in the **Detail View** pane.

Dell EMC PowerEdge Server Unit Diagram view by Dell EMC Server and Rack workstation (Licensed) feature on the Operations Manager console

Select a Dell EMC PowerEdge server, from the **Dell EMC Modular System** or **Dell EMC Monolithic Server** diagram views, to view the diagram specific to that particular system.

System-specific diagrams illustrate and indicate the status of the following components:

- Network Interfaces Group
- Memory Group
- Power Supply Group
- Sensors Group
- Processor Group
- Storage Components Group
- Host NIC Group
- iDRAC License Group
- PCIe/ SSD Group
- SD Card Group
- BIOS (inventory only)
- iDRAC


Dell EMC Performance and Power Monitoring Views through iSM-WMI

NOTE:

- System Board Usage metrics are supported only on some of the 13th generation of the PowerEdge servers. For more information on performance information collection, see [View Dell EMC servers performance collection rules set on Operations Manager](#). By default, the Dell Server Performance rule is set to Disabled.
- The **Dell EMC Performance View** displays the performance index of CPU, Memory and I/O utilization index, and system level CUPS index in a graphical format.

To view the performance and power monitoring on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring**.
2. In the **Monitoring** pane, click **Dell EMC > Dell EMC Performance and Power Monitoring** for the following views:
 - **Dell Performance View (iSM)**
 - **Disk Performance - iSM (%)**

 **NOTE:** All performance metric rules are disabled by default for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

3. To view the **System Board Usage** metrics, click **Dell EMC Performance and Power Monitoring > Dell EMC System Board Usage** for the following views:

- **CPU Usage - iSM (%)**
- **IO Usage - iSM (%)**
- **Memory Usage - iSM (%)**
- **Overall System Usage - iSM (%)**

4. Select the counters from the individual performance views and select the time range for which the values are required. The data collected is represented in a graphical format for each system.

A unit monitor, monitors the performance counter over two successive cycles to check if it exceeds the configured critical threshold value. When the critical threshold value is exceeded, the server changes state and generates a critical alert. This unit monitor is disabled by default. You can override (enable) the threshold values from the **Authoring** pane of the Operations Manager console. Unit monitors are available under the **Dell Server** objects for the Licensed monitoring feature. To enable the unit monitors and set threshold values of unit monitors, see [Enabling Performance and Power Monitoring Unit Monitors](#).

For more information on performance information collection, see [View Dell EMC servers performance collection rules set on Operations Manager](#).

Enabling Performance and Power Monitoring Unit Monitors

To enable the unit monitors for Performance and Power Monitoring Views:

1. Launch Operations Manager console and click **Authoring**.
2. Click **Management Pack Objects > Monitors**, and then search for **Performance** in the **Look for:** field.
3. Click **Dell Server > Performance**.
4. Right-click the unit monitor you want to enable.
5. Select **Overrides > Override the Monitor** and select an option based on your requirement.
For example, to override the unit monitors for all objects of class: Dell Server, select **For all objects of class: Dell Server**. The **Override Properties** screen is displayed.
6. Select **Enabled** and set the **Override Value** to **True**.
7. Under **Management Pack**, either select a management pack created from the **Select destination management pack:** drop-down menu or create a management pack.
To create a management pack:
 - a. Right click **Management Pack** and select **Create Management Pack**.
The **Create a Management Pack** screen is displayed.
 - b. Provide a name for the management pack in the **Name** field and click **Next**.
For information on creating a management pack, see the Operations Manager documentation at technet.microsoft.com.
 - c. Click **Create**.
The management pack you created is selected in the **Select destination management pack:** drop-down menu.
8. Click **Apply**.

Dell EMC State Views

This view is available for viewing the health of all Dell EMC PowerEdge Servers and supported Dell EMC Rack Workstations. In the Operations Manager console, click **Monitoring > Dell EMC > Dell EMC State Views**, the status of each Dell EMC server and Rack Workstation managed by Operations Manager on the network is displayed.

You can view the status for the following groups:

- **Dell EMC State Views**
 - **Dell EMC Servers (iSM) State View**
- **Dell EMC Server State Views**
 - **Dell EMC Sled Servers (iSM) State View**

The health of a component is derived by reviewing the unresolved alerts associated with the component. [Severity Level Indicators](#) explains the various state components that the Dell EMC Server Management Pack Suite uses with their corresponding severity levels.

Key features of Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

This section lists the key features for servers discovered through Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

- [System Configuration Lockdown Mode](#)
- [iDRAC Group Manager](#)
- [Capacity Planning](#)
- [iDRAC detection of failed CMC/MM](#)
- [Server Port Connection Information](#)

System Configuration Lockdown Mode

System Configuration Lockdown mode feature is available in iDRAC for 14th generation of the PowerEdge servers which locks the system's configuration including firmware updates. This feature is intended to protect the system from unintentional changes. Using iDRAC console, you can enable or disable the System Configuration Lockdown mode. Once, the System Configuration Lockdown Mode is enabled, you cannot change the system's configuration.

You can view the details of the System Configuration Lockdown mode in the **Detail View** pane of the **Dell EMC Diagram View**. For more information about this feature, see *Integrated Dell Remote Access Controller 9 Version 3.00.00.00 User's Guide*.

This feature is available for servers discovered through both, the iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

iDRAC Group Manager

iDRAC Group Manager feature is available for 14th generation of the PowerEdge servers to offer simplified basic management of iDRAC, and associated servers on the same local network. Group Manager feature allows one-to-many console experience without involving a separate application. Using iDRAC Group Manager, you can view the details of a set of servers by permitting more powerful management than by inspecting servers visually for faults and other manual methods.

You can view the details of the iDRAC Group Manager; iDRAC Group Manager Status, and iDRAC Group Name under the **iDRAC** object in the **Detail View** pane of the **Diagram View**. For more information about this feature, see *Integrated Dell Remote Access Controller 9 Version 3.00.00.00 User's Guide*.

This feature is available for servers discovered through both, iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

Capacity planning

You can monitor if the server's utilization has exceeded the configured capacity threshold values using the unit monitor; `Dell Server Capacity Check`. The unit monitor `Dell Server Capacity Check` monitors the average system or CUPS usage for the last one day of each server against the configured capacity threshold value. By default, this unit monitor is set to **Disabled**. To enable the `Dell Server Capacity Check` unit monitor, see the [Enabling Dell Server Capacity Check unit monitor](#).

The minimum threshold value is 1, and the maximum threshold value is 99. The default threshold value is 60. You can configure the threshold values within the specified range i.e 1–99. In case, you provide a threshold value other than the specified ranges, the default threshold value is considered.

A warning event per server is generated when the average system or CUPS usage for the last one day exceeds the configured threshold value. The warning event is auto resolved when the average system or CUPS usage for the last one day returns within the configured threshold value.

You can view the details of the warning alert in the **Alert Details** pane under **Monitoring > Dell EMC > Dell EMC Alerts Views > Dell EMC Server and Rack Workstation Alerts View**.

You can view the health state obtained from the unit monitor; `Dell Server Capacity Check` under **Monitoring > Dell EMC > Dell EMC State Views > Dell EMC Servers (iSM) State View > Dell Server Capacity Threshold Check**. You can also view the component; **Dell Server Capacity Threshold Capacity Check** under the **Dell Server Capacity** object in **Diagram Views**.

Capacity Planning feature also provides a performance graph to show the trend for the Average SYS Usage/Day.

To view the performance graph for the capacity planning feature:

1. Click **Monitoring > Dell EMC > Dell EMC Performance and Power Monitoring Views > Dell EMC System Board Usage > Overall System Usage - iSM (%)**.
2. Select **Capacity Check System Board Average Sys Usage(last day)** under the **Counter** column for the desired Dell EMC device and select the time range for the values required

The data collected is represented in a graphical format for the selected Dell EMC device.

This feature is available for Dell EMC PowerEdge servers discovered through both, the iDRAC and iSM methods of Server and Rack Workstation Monitoring (Licensed) feature.

iDRAC detection of failed CMC/OME-M

Using the feature; iDRAC detection of a failed Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) , the iDRAC of a Rack Style Management (RSM) enabled modular server detects a failed or an unavailable chassis controller. By using this feature, you can take immediate remedial action to bring the failed Dell EMC CMC/OME-M to a normal state.

The **Dell Chassis Controller Sensor** indicates the presence or failure of a Dell EMC CMC/OME-M.

You can view the health state obtained from the unit monitor; **Dell Chassis Controller Sensor** under **Sensors** in **Dell EMC Diagram Views**.

NOTE:


- The **Dell Chassis Controller Sensor** is available in both; Scalable and Detailed Management Pack.
- iDRAC detection of failed Dell EMC CMC/OME-M is supported for 14th generation of the PowerEdge FX2 Chassis only.

Server port connection information

Server port connection information feature provides details of the physical mapping of switch ports to server ports, and iDRAC dedicated port connections. This feature helps you to reduce cabling error debugging by identifying which switch ports are connected to a server's network ports, and iDRAC dedicated port.

You can view the details of the Server port connection information under **iDRAC NIC** and **NIC** objects in the **Detail View** pane of the **Dell EMC Diagram View**. Along with the inventory information of each NIC; chassis ID information of the switch and the port ID information is populated.

This feature is available for Dell EMC PowerEdge servers discovered through both, the iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

 **NOTE:** This feature is supported for 14th generation of the PowerEdge Servers only.

Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature—iSM-WMI

Monitors to assess various conditions that can occur in the monitored objects.

Table 17. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (iSM-WMI) feature

Object		Unit Monitor	
Dell EMC PowerEdge Server			
	Dell Server Run As Account Association	Periodic	
	Dell Server Unit Monitor	Periodic	
Dell Server Power Supply			
	Dell Server Power Supply Unit	Periodic	

Table 17. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (iSM-WMI) feature (continued)

Object		Unit Monitor
Dell Server Processor Group		
	Dell Server Processor Group	Periodic
Dell Server Chassis Controller Sensor		
	Dell Server Chassis Controller Sensor	Periodic
Dell Storage Controller		
	Dell Server Storage Controller	Periodic
Dell Server Controller Battery		
	Dell Server Controller Battery Unit	Periodic
Dell Battery Sensor		
	Dell Server Battery Sensor Health	Periodic
Dell Battery Sensor Group		
	Dell Server Battery Group Sensor Health	Periodic
Dell Current Sensor		
	Dell Server Current Sensor Health	Periodic
Dell Fan Sensor		
	Dell Server Fan Sensor Health	Periodic
Dell Fan Sensor Group		
	Dell Server Fan Group Sensor Health	Periodic
Dell Intrusion Sensor		
	Dell Server Intrusion Sensor Health	Periodic
Dell Modular Blade Server With Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Modular Blade Server Without Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Monolithic Server With Operating System		
	Dell Server Run As Account Association	Periodic

Table 17. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (iSM-WMI) feature (continued)

Object		Unit Monitor
	Dell Server Unit Monitor	Periodic
Dell Monolithic Server Without Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Network Interfaces Group		
	Dell Server Network Interface Group	Periodic
Dell iDRAC Network Interface		
	Dell Server iDRAC Network Interface Unit	Periodic
Dell Server Capacity Threshold Check		
	Dell Server Capacity Threshold Check	Periodic
Dell Server Host NIC		
	Dell Server Host NIC	Periodic
Dell Server License		
	Dell Server License	Periodic
Dell Server License Group		
	Dell Server License Group	Periodic
Physical Network Interface		
	Dell Server Network Interface Unit	Periodic
PCIe SSD Backplane		
	Dell Server PCIeSSD Backplane	Periodic
PCIe SSD Extender		
	Dell Server PCIeSSD Extender	Periodic
PCIe SSD Physical Disk		
	Dell Server PCIeSSD Physical Disk Predictive Failure Disk	Periodic
	Dell Server PCIeSSD Physical Disk Primary Status	Periodic
Dell Server SD Card		
	Dell Server SD Card	Periodic

Table 17. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (iSM-WMI) feature (continued)

Object		Unit Monitor
	Dell Server SD Card Group	Periodic
Dell Server Connector Enclosure		
	Dell Server Connector Enclosure	Periodic
Dell Storage Controller Enclosure EMM		
	Dell Server Enclosure EMM	Periodic
Dell Storage Controller Enclosure Fan Sensor		
	Dell Server Enclosure Fan Sensor	Periodic
Dell Storage Controller Enclosure Physical Disk		
	Dell Server Enclosure External Physical Disk	Periodic
Dell Storage Controller Enclosure Power Supply		
	Dell Server Enclosure Power Supply	Periodic
Dell Storage Controller Enclosure Temperature Sensor		
	Dell Server Temperature Sensor	Periodic
Dell Storage Controller Internal Physical Disk		
	Dell Server Internal Physical Disk Unit	Periodic
Dell Storage Controller Physical Disk		
	Dell Server Controller Direct Attached Physical Disk	Periodic
Dell Storage Group		
	Dell Server Storage	Periodic
Dell Storage Virtual Disk		
	Dell Server Controller Virtual Disk Unit	Periodic
Dell Temperature Sensor		
	Dell Server Temperature Sensor Health	Periodic
Dell Temperature Sensor Group		
	Dell Server Temperature Sensor Group Health	Periodic
Dell Voltage Sensor		
	Dell Server Voltage Sensor Health	Periodic

Table 17. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (iSM-WMI) feature (continued)

Object		Unit Monitor
Dell Voltage Sensor Group		
	Dell Server Sensors Voltage Group	Periodic

Rules

The following section lists the rules specific to the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

Dell Systems Event Processing Rules

The Dell EMC Server Management Pack Suite processes rules from Dell EMC PowerEdge Servers.

Dell EMC PowerEdge Servers through iSM-WMI

All informational, warning, and critical events for Dell EMC PowerEdge Servers discovered using Dell EMC Server and Rack Monitoring (Licensed) feature, have a corresponding event rule.

Each of these rules are processed based on the following criteria:

- Source Name = "Lifecycle controller Log"
- Event no= Actual event ID of the event
- Data Provider = Windows System Event Log

Dell EMC PowerEdge Server Tasks

Tasks are available in the **Tasks** pane of the Operations Manager console. When you select a device or a component, the relevant tasks is displayed in the **Tasks** pane.

Summary of managed Tasks

You can view the Tasks in the **Authoring** pane under **Management Pack Objects** in the Operations Manager console.

Performing tasks using Dell EMC Server and Rack Workstation Monitoring (Licensed) feature—iSM-WMI

Following table provides a summary of the tasks that you can perform using Dell EMC Server and Rack Workstation Monitoring (Licensed) feature:

Table 18. Summary of the tasks discovered through iSM-WMI method of Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature






Task	Description
Check Node Interfaces	Checks if the selected Dell server and its corresponding interface; WMI is reachable or non-reachable.
Get Warranty Information	Retrieves the warranty information for the selected system.  NOTE: An active Internet connection is required to retrieve the warranty information.
iDRAC Hard Reset	Performs a remote iDRAC reset operation without having to shut down the server.

Table 18. Summary of the tasks discovered through iSM–WMI method of Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature (continued)

Task	Description
	 NOTE: This task is available only for servers discovered through iSM.
Launch Dell License Manager	Launches the Dell License Manager on the management system.  NOTE: Launching Dell License Manager is possible only if a Windows or Linux operating system is installed and Dell License Manager is also installed.
Launch Dell OpenManage Power Center	Launches the Dell OpenManage Power Center console for the selected system.  NOTE: Launching OpenManage Power Center is possible only if the Windows or Linux operating system, OpenManage Server Administrator, and Dell OpenManage Power Center are installed on the managed node.
Launch Dell Remote Access Console	Launches the iDRAC console for the discovered Dell EMC servers and Rack Workstations that are License based.
Launch Remote Desktop (Monolithic Server)	Launches the remote desktop for the selected system.  NOTE: Launching remote desktop is possible only if the Windows operating system is installed and remote desktop is manually enabled in the managed node.

Check Node Interfaces

The **Check Node Interfaces** task checks if the selected Dell EMC PowerEdge server and its corresponding interfaces; WMI is reachable or non-reachable.

To check the node interfaces:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views**, **State Views**, or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Check Node Interfaces**.

The task provides a summary of the reachability check, and interface check after the successful completion of the task.

Get Warranty Information

You can use this task to see the warranty status of the selected Dell EMC PowerEdge server.

To get warranty information:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Get Warranty Information**.

Remote iDRAC hard reset

This feature allows the administrator to perform a remote iDRAC reset operation without having to shut down the server.

Using iDRAC, you can monitor the supported servers for critical system hardware, firmware, or software issues. Sometimes, the iDRAC may become unresponsive due to various reasons. During such scenarios, you may have to turn off the server by unplugging it from the socket, after which the iDRAC will be reset.

Using the Remote iDRAC hard reset feature, whenever iDRAC becomes unresponsive, you can perform a remote iDRAC reset operation without the need to power off (iDRAC hard reset) the server. By default, the remote iDRAC hard reset feature is enabled.

This feature is available for Dell EMC PowerEdge servers discovered through **iSM using WMI**. For more information about this feature, see the *iDRAC Service Module Installation Guide* and the section **Remote iDRAC Hard Reset** in the *iDRAC 8/7 v2.30.30.30 User's Guide* at support.dell.com.

Performing a remote iDRAC hard reset

This section explains the steps to perform a remote iDRAC hard reset for a device discovered through iSM using WMI.

To reset the iDRAC remotely, you must first ensure that you have administrative privileges on the host OS.


To reset the iDRAC remotely, perform the following steps:

1. Launch the Operations Manager console and click **Monitoring**.
2. Click **Dell > State Views > Servers (iSM)**.
The state details are displayed and the servers discovered through iSM using WMI are listed in the right pane.
3. Select a server for which you want to reset the iDRAC remotely.
4. From the list of **Dell Server Tasks** displayed in the right pane, click **iDRAC Hard Reset**.
The Run Task - iDRAC Hard Reset window is displayed.
5. Click **Run** to confirm.
The **Task Status - iDRAC Hard Reset** window is displayed with the status of the reset.
6. Click **Close**.

The iDRAC has been remotely reset successfully.

Launch Dell License Manager


The **Launch Dell License Manager** task allows you to launch the Dell License Manager on management systems. Dell License Manager is a one-to-many license deployment and reporting tool for Dell iDRAC licenses.

 **NOTE:** If the Dell License Manager has not been installed in the default path create a new task to launch Dell License Manager. For more information, see [Creating A Launch License Manager Task](#).

To launch Dell License Manager:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Task** pane, select **Dell Server Tasks > Launch Dell License Manager**.

Launch Dell OpenManage Power Center

 **NOTE:** Launching OpenManage Power Center is possible only if Windows or Linux operating system and OpenManage Server Administrator are installed on the managed node.

The **Launch Dell OpenManage Power Center** task allows you to launch the OpenManage Power Center console.

To launch the OpenManage Power Center:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Launch Dell OpenManage Power Center**.

Launch Dell Remote Access Console

To launch the Dell Remote Access Console:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Task** pane, select **Dell Server Tasks > Launch Dell Remote Access Console**.

Launch Remote Desktop (Monolithic Server)

NOTE: Launching remote desktop is possible only if the Windows operating system is installed and remote desktop is manually enabled on the managed system.

NOTE: Remote Desktop task uses hostname to connect to the management server of a system. If the management server cannot resolve the hostname then, add the hostname and the IP address to a route to the server using its hostname that is configured on the management server.

To launch Remote Desktop from the Operations Manager console:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Launch Remote Desktop (Monolithic Server)**.

DRAC Monitoring Feature for Operations Manager

DRAC monitoring feature supports discovery, and monitoring for the various generations of iDRAC—iDRAC6, iDRAC7, and iDRAC8 systems using SNMP.

Discover and classify Dell Remote Access Controllers by using DSMPS 7.1.1 for Microsoft System Center Operations Manager

The Dell EMC Server Management Pack Suite enables you to discover and classify Dell Remote Access Controllers (DRAC), and integrated DRAC (iDRAC).

The following table lists the details of the hardware discovery and grouping by the Dell DRAC monitoring feature.

Table 19. Dell Hardware discovery and grouping.

Group	Diagram View	Hardware Type
Dell Remote Access Controllers	Remote Access Controller Group	iDRAC modular, and iDRAC monolithic instances. NOTE: DRAC monitoring feature does not support the discovery of 14G PowerEdge servers. You can manage these devices using the Scalable Edition of the Server and Rack Workstation Monitoring feature.

Discovering DRAC Devices

The DRAC devices must be discovered as network devices under the **Administration** section of the Operations Manager console.

To discover DRAC devices:

1. Log on to the management server as an Operations Manager administrator.
2. On the Operations Manager console, click **Administration**.
3. At the bottom of the navigation pane, click **Discovery Wizard**.
4. Run the **Discovery Wizard**, select **Network devices** and follow the instructions on the screen.
For more information, see the Operations Manager documentation at technet.microsoft.com.
5. On the **Add a Device console** screen in Operations Manager, type the IP address that you want to scan, select the appropriate **Run As account** from the SNMP V1 or V2 **Run As account** drop-down box.
6. Enable the DRAC monitoring feature using **Dell EMC Feature Management Dashboard**.

Scalability recommendation for Operations Manager

When managing large number of network devices in a distributed setup, use dedicated resource pools of Management Servers for each device type. For more information about the number of devices that are supported in a Management Group, see [Sizing Guide](#).

Discoveries by DRAC Monitoring feature by using DSMPS version 7.1.1 for Microsoft System Center Operations Manager

Table 20. DRAC Monitoring Feature Discoveries.

Discovery Object	Description
iDRAC Discovery	Discovers all supported Integrated Dell Remote Access Controllers.
Dell Integrated Remote Access Modular Discovery	Discovers the Chassis Name and Chassis Service Tag of Dell Integrated Remote Access Controllers for Modular systems.
iDRAC6 Modular Discovery	Discovers the iDRAC6 (Modular) group.
iDRAC6 Monolithic Discovery	Discovers the iDRAC6 (Monolithic) group.
iDRAC7 Modular Discovery	Discovers the iDRAC7 (Modular) group.
iDRAC7 Monolithic Discovery	Discovers the iDRAC7 (Monolithic) group.
iDRAC8 Modular Discovery	Discovers the iDRAC8 (Modular) group.
iDRAC8 Monolithic Discovery	Discovers the iDRAC8 (Monolithic) group.
Dell Remote Access Group Discovery	Discovers the Dell Remote Access group and populates iDRAC.
Dell Integrated Remote Access Monolithic Group Discovery	Discovers the Dell Integrated Remote Access Monolithic group and iDRAC (Monolithic).
Dell Integrated Remote Access Modular Group Discovery	Discovers and populates the iDRAC (Modular) group.

Monitoring DRAC devices in Operations Manager

After you install the Dell EMC Server Management Pack Suite, you can use the **Monitoring** pane of the Operations Manager to select views that provide complete health information of the discovered Dell DRAC devices. The DRAC monitoring feature discovers and monitors the health of the Dell DRAC devices. It includes monitoring health of the Dell DRAC devices, both at regular intervals and on occurrence of events. The [Severity Level Indicators](#) indicates the health of the Dell DRAC devices on the network.

NOTE: To monitor the health of DRAC devices, associate the community string Run As account with the SNMP Monitoring Account with the target as the Dell Remote Access Controller class or respective DRAC object (if you have different Run As accounts for different DRAC devices).

Dell EMC Server Management Pack 7.1.1-View options for DRAC Monitoring feature on the Operations Manager console

Dell EMC Server Management Pack Suite provides the following types of views for monitoring by clicking **Monitoring > Dell EMC** on the Operations Manager console:

- [Dell EMC Alert Views](#)
- [Dell EMC Diagram Views](#)
- [Dell EMC State Views](#)

Dell EMC Alerts Views

This view is available for managing hardware and storage events from Dell DRAC devices. SNMP traps and Platform Event Traps (PET) sent by DRAC devices are displayed by the DRAC monitoring feature.

Viewing Alerts for DRAC Monitoring feature on the Operations Manager Console

To view DRAC alerts on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring**.
2. Click **Dell EMC > Dell EMC Alerts Views**.
The following **Alerts Views** are displayed.
 - **PET Traps** — These alerts contain information on PET traps from iDRAC6, iDRAC7, and iDRAC8 devices.
 - **Remote Access Alerts** — These alerts contains information on SNMP traps from iDRAC6, iDRAC7 and iDRAC8 devices.
3. Select an alert to view the details in the **Alert Details** pane.
On the right pane of each of the individual **Alerts Views**, alerts that meet the criteria you specify, such as alert severity, resolution state, or alerts that are assigned to you is displayed.

Diagram Views of Remote access controllers for DRAC monitoring feature on the Operations Manager console

The **Dell EMC Diagram Views** offers a hierarchical and graphical representation of all Dell DRAC devices on the network.

Viewing Dell EMC Diagrams Views for DRAC feature on the Operations Manager console

To view the diagrams for DRAC monitoring feature on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC Diagram Views**.
2. In the **Monitoring** pane on the left side, go to the **Dell EMC Diagram Views** folder for the following views:
 - [Dell EMC Complete Diagram View](#)
 - [Remote Access Controllers Group](#)

3. Select any of the **Diagram Views**.
On the right pane the hierarchical and graphical representation of the selected Dell device is displayed.
4. Select a component in the diagram to view its details in the **Detail View** pane.

Remote Access Controllers Group

The **Remote Access Controllers Group** diagram view offers a graphical representation of all iDRAC6, iDRAC7, and iDRAC8 devices. Select a component in the diagram to view its details in the **Detail View** pane.

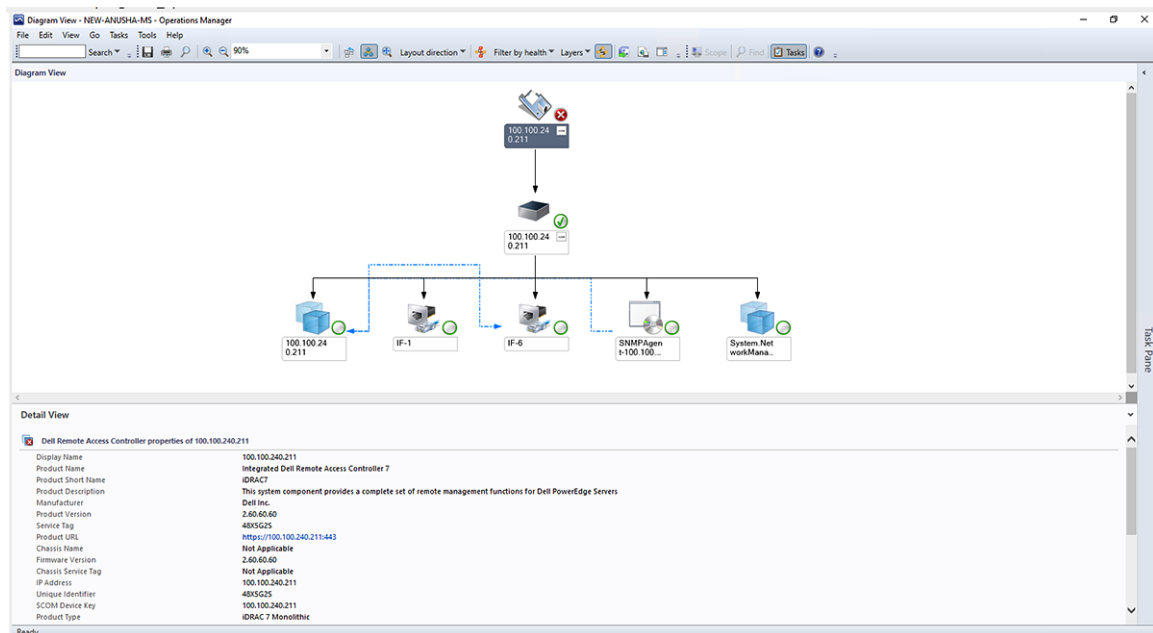


Figure 6. Remote Access Controllers Group Diagram

Dell EMC State Views

This view is available for viewing the health of the DRAC devices. In the Operations Manager console, click **Monitoring > Dell EMC > Dell EMC State Views > DRAC**, the status of each Dell DRAC device managed by Operations Manager on the network is displayed.

The health of a component is derived by reviewing the unresolved alerts associated with the component. [Severity Level Indicators](#) explains the various state components that the Dell EMC Server Management Pack Suite uses with their corresponding severity levels.



Dell Unit Monitors for DRAC Monitoring Feature

Monitors to assess various conditions that can occur in DRAC monitored objects.

Table 21. Dell Unit Monitors for DRAC Monitoring Feature

Object		Unit Monitor
iDRAC6 Modular		
	Dell Remote Access Status	Periodic
iDRAC6 Monolithic		
	Dell Remote Access Status	Periodic
iDRAC7 Modular		

Table 21. Dell Unit Monitors for DRAC Monitoring Feature (continued)

Object		Unit Monitor
 NOTE: For iDRAC7 modular and monolithic servers, the Dell RAC periodic-based and Dell RAC triggered-based unit monitors are disabled.		
	Dell Remote Access Status	Periodic
	Controller Global Status	Periodic
	Controller Global Storage Status	Periodic
iDRAC7 Monolithic		
	Dell Remote Access Status	Periodic
	Controller Global Status	Periodic
	Controller Global Storage Status	Periodic
iDRAC8 Modular		
 NOTE: For iDRAC8 modular and monolithic servers, the Dell RAC periodic-based and Dell RAC triggered-based unit monitors are disabled.		
	Dell Remote Access Status	Periodic
	Controller Global Status	Periodic
	Controller Global Storage Status	Periodic
iDRAC8 Monolithic		
	Dell Remote Access Status	Periodic
	Controller Global Status	Periodic
	Controller Global Storage Status	Periodic

Rules

The following section lists the rules specific to the Dell DRAC monitoring feature.

Dell Systems Event Processing Rules


The Dell EMC Server Management Pack Suite processes rules from DRAC traps.

DRAC Devices

All informational, warning, and critical SNMP traps for the DRAC devices have a corresponding SNMP trap rule.

Each of these rules are processed based on the following criteria:

- Source Name = "DRAC/CMC name or ip"
- OID = Actual trap ID of the DRAC /CMC SNMP trap event
- Data Provider = SNMP trap

 **NOTE:** Informational alerts are turned off by default. To receive these alerts, import informational alerts management pack.

Dell EMC PowerEdge Server Tasks

Tasks are available in the **Tasks** pane of the Operations Manager console. When you select a device or a component, the relevant tasks is displayed in the **Tasks** pane.

Summary of managed Tasks

You can view the Tasks in the **Authoring** pane under **Management Pack Objects** in the Operations Manager console.

Performing tasks using DRAC

Following table provides a summary of the tasks that are performed using the DRAC:

Table 22. Tasks using DRAC

Task	Description
Check Node Interfaces	Checks if the selected Dell DRAC/iDRAC device and its corresponding interface; SNMP is reachable or non-reachable.
Launch Dell License Manager	Launches the Dell License manager on the management system.
Launch Dell Remote Access Console	Launches the DRAC console for the discovered DRAC.
Launch Remote Desktop	Launches the remote desktop for the selected system. i NOTE: This feature is available only on systems with iDRAC7, and iDRAC8.
Launch Server Administrator	Launches the Server Administrator. i NOTE: <ul style="list-style-type: none">• Server Administrator console is launched only if the Server Administrator is configured on the default port.• This feature is available only on systems with iDRAC7, and iDRAC8.

Dell Remote Access Controller (DRAC) tasks

Check Node Interfaces

The **Check Node Interfaces** task checks if the selected Dell DRAC/iDRAC device and its corresponding interface; SNMP is reachable or non-reachable.

To check the node interfaces:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell DRAC/iDRAC in any of the **Diagram Views**, **State Views**, or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Remote Access Controller Tasks > Check Node Interfaces**.

The task provides a summary of the reachability check, and interface check after the successful completion of the task.

Launch Dell License Manager

The **Launch Dell License Manager** task allows you to launch the Dell License Manager on management systems. Dell License Manager is a one-to-many license deployment and reporting tool for Dell iDRAC licenses.

NOTE: If the Dell License Manager has not been installed in the default path, create a new task to launch Dell License Manager. For more information, see [Creating a Launch License Manager Task](#).

To launch Dell License Manager:

1. In the Operations Manager console, go to **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell DRAC /iDRAC device in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Remote Access Controller Tasks** > **Launch Dell License Manager**.

Launch Remote Desktop

NOTE:

- The remote desktop feature is available only on systems with iDRAC7, and iDRAC8.
- Launching remote desktop is possible only if remote desktop is enabled manually in the managed node.

To launch remote desktop:

1. In the Operations Manager console, go to **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell DRAC/ iDRAC device in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Remote Access Controller Tasks** > **Launch Remote Desktop**.

Launch OpenManage Server Administrator

NOTE:

- OpenManage Server Administrator (OMSA) console is launched only if the Server Administrator is configured on the default port.
- Server Administrator feature is available only on systems with iDRAC7, and iDRAC8.

To launch Server Administrator:

1. In the Operations Manager console, navigate to **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell DRAC/ iDRAC device in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Remote Access Controller Tasks** > **Launch Server Administrator**.

Launch Dell Remote Access Console

You can use this task to launch the Dell Remote Access Console, if the DRAC is installed on the Dell system.

To launch Dell Remote Access console:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired DRAC/iDRAC device in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Remote Access Controller Tasks** > **Launch Dell Remote Access Console**.

Dell EMC OMIMSSC supported monitoring features

The topics in this section describe the monitoring features that are supported by OMIMSSC for Operations Manager.

Topics:

- [Dell EMC Server and Rack Workstation Monitoring \(Licensed\) Feature](#)
- [Dell EMC Chassis Monitoring feature](#)
- [Dell EMC Chassis Modular Server Correlation Feature](#)
- [Dell EMC Network Switch Monitoring feature](#)

Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Dell EMC Server and Rack Workstation Monitoring (Licensed) feature provides detailed or scalable inventory, based on your method of discovery, and monitoring of the following devices:

- 12th, 13th, and 14th generation of PowerEdge servers
- PowerVault servers
- Dell Precision Racks
- Dell branded OEM servers
- Dell OEM Ready servers
- PowerEdge Storage Spaces Direct Ready nodes

Inventory and monitoring of these devices could be done through iDRAC or iDRAC Service Module (iSM) installed on the managed Dell EMC Server or Rack Workstation through one of the following methods based on your monitoring preference:

- iDRAC–WS–MAN
- iDRAC access via Host OS
- iSM–WMI

This is a licensed feature.

For more information about monitoring servers through iDRAC–WS–MAN or Host OS, see the section Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature in the *Dell EMC OpenManage Integration Version 7.1.1 for Microsoft System Center for Operations Manager User's Guide*.


For the list of Supported Platforms for iSM, see the *iDRAC Service Module Installation Guide* at Dell.com/manuals.

iDRAC–WS–MAN or iDRAC access via Host OS using OMIMSSC

This section describes how you can monitor Dell EMC devices in the Dell EMC OMIMSSC console through the servers's iDRAC–WS–MAN (iDRAC IP) or iDRAC access via Host OS (Host IP). The latter is an experimental feature.

This option provides detailed inventory and monitoring of the following Dell EMC devices:

- 12th, 13th, and 14th generation of PowerEdge servers
- PowerVault servers
- Dell Precision Racks
- Dell branded OEM servers
- Dell OEM Ready servers

 **NOTE:** PowerVault servers are not supported for iDRAC Service Module (iSM).

For more information about discovering Dell EMC devices, see [Discovering a Dell EMC PowerEdge Server](#)

For more information about using the iDRAC access via Host OS (Experimental Feature), see the Integrated Dell Remote Access Controller 7/8/9 with Lifecycle Controller User's Guide at Dell.com/idracmanuals.

Compare Scalable and Detailed Editions of Dell EMC Server and Rack Workstation Monitoring (Licensed)

The following table helps you understand the environment in which you can use Scalable and Detailed Edition features.

Table 23. Scalable Management Pack Versus Detailed Management Pack

Features	Scalable Edition	Detailed Edition
Dell EMC Server and Rack Workstation Monitoring (Licensed)	<ul style="list-style-type: none">• Inventory up to individual components.• Health monitoring at server, Rack Workstation and component group level.	<ul style="list-style-type: none">• Inventory and health monitoring of individual components.• View metrics for power, temperature, and network interface cards, processor, memory, Compute Usage per Second (CUPS), PCIe SSD wear percentage and IO performance metrics.

Discover and classify Dell EMC PowerEdge Servers through iDRAC-WS-MAN

The Dell EMC OMIMSSC enables you to discover and classify Dell EMC PowerEdge Server.

The following table lists the details of the hardware discovery and grouping by the Dell EMC Server and Rack Monitoring (Licensed) feature through iDRAC-WS-MAN.

Table 24. Dell Hardware discovery and grouping

Group	Diagram View	Hardware Type
Dell EMC PowerEdge Server	Dell EMC Monolithic Servers Dell EMC Modular Servers Dell EMC Sled Group	PowerEdge systems. PowerVault servers.
Dell EMC Rack Workstation	Dell EMC Rack Workstation Diagram	Dell Precision Racks

Discovering a Dell EMC PowerEdge Server through iDRAC-WS-MAN

Prerequisites:


- Common prerequisites:
 - Install Microsoft SMASH Library (MPB) file before discovering a Dell EMC PowerEdge Server using Dell EMC Server and Rack Monitoring (Licensed) feature.

For more information about installing the Microsoft SMASH Library (MPB) file, see the "Installing the WS-Management and SMASH Device Template" section in the *Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide* at dell.com/OMConnectionsEnterpriseSystemsManagement.

- For iDRAC access via Host OS:
 - Required iSM version is installed on the managed node.
 - iDRAC access via Host OS is enabled.

This is an experimental feature. For more information, see the **iDRAC access via Host OS (Experimental Feature)** section in the *Integrated Dell Remote Access Controller 7/8 with Lifecycle Controller User's Guide* at Dell.com/idracmanuals.

To discover a Dell EMC PowerEdge Server through iDRAC-WS-MAN or iDRAC access via Host OS:


1. Log on to Operations Manager as an administrator for the Operations Manager Management Group.
 2. On the Operations Manager console, click **Authoring**.
 3. At the bottom of the navigation pane, click **Add Monitoring Wizard**.
The **Add Monitoring Wizard** screen is displayed.
 4. On the **Select Monitoring Type** screen, select **WS-Management and SMASH Device Discovery** and click **Next**.
 5. On the **General Properties** screen, in the **Name** field provide a name for the wizard.
 6. Under **Management pack**, click **New**.
The **Create a Management Pack** screen is displayed.
 7. Provide a name for the management pack in the **Name** field and click **Next**.
For information on creating a management pack, see the Operations Manager documentation at technet.microsoft.com.
 8. Click **Create**.
The management pack you created is selected in the **Management pack** drop-down box.
 9. Click **Next**.
 10. On the **Specify the target** drop-down menu, select a resource pool for monitoring these devices and click **Next**.
 11. On the **Specify the account to be used to run discovery** screen, click **New** and create a Simple Authentication Run As Account.
For more information on creating a Simple Authentication type Run As Account, see [Creating a Simple Authentication Run As Account](#).
-  **NOTE:** If you are using AD domain credentials for iDRAC, then, enter the credentials in the following format:
`username@domainname.com`.
12. Select the Run As Account you created from the **Run As Account** drop-down menu and click **Next**.
 13. Click **Add**.
 14. On the **Add Devices** screen specify the **iDRAC IP** (if your preferred discovery method is iDRAC–WS-MAN) or the **Host IP** (if your preferred discovery method is iDRAC access via Host OS) address of the systems you want to discover, based on your monitoring preference. You can specify the preferred IP address of the systems by:
 - Scanning the **IP Subnet** that you provided.
 - Scanning a specified **IP Range**.
 - Importing a text file containing the list of iDRAC IP/ Host IP addresses.
 For more information, see **Configuration by using iSM PowerShell script** in the *Integrated Dell Remote Access Controller 7/9 with Lifecycle Controller User's Guide* at Dell.com/idracmanuals.
 15. Click **Advanced Options**, select the **Skip CA Check** and **Skip CN Check** option and click **OK**.
 16. Click **Scan for Devices** to search Dell EMC PowerEdge Servers on your network.
The IP addresses are listed under **Available Devices**.
 17. Click **Add** to add the list of IP addresses you want to monitor and click **OK**.
 18. On the **Specify the devices you want to monitor** screen, click **Create**.
 19. Click **Close**.
The scanned Dell EMC PowerEdge Servers initially appear in **Monitoring > WS-Management and SMASH Monitoring > WS-Management Device State** screen. After the automatically triggered SMASH discovery is completed by the Operations Manager, the Dell EMC PowerEdge Servers appear in **Monitoring > WS-Management and SMASH Monitoring > SMASH Device State** screen.
 20. Enable the Dell EMC Server and Rack Monitoring (Licensed) feature through Dell EMC Feature Management Dashboard.

Object discoveries through iDRAC–WS-MAN on the Operations Manager

Table 25. Objects discovered through iDRAC–WS-MAN


Discovery Object	Description
Dell EMC PowerEdge Server Discovery	Classifies the Dell EMC PowerEdge Servers and populates the key attributes and components.
Dell Device Helper Discovery	Discovers the DellDeviceHelper as an object.
Dell Host NIC Correlation Discovery	Correlates the Host NIC interfaces with Physical interfaces.

Table 25. Objects discovered through iDRAC-WS-MAN (continued)

Discovery Object	Description
	 NOTE: Teamed network interfaces will show only one of the NICs in the team.

Monitoring

After you install the Dell EMC Server Management Pack Suite and Configuration Management pack for Dell EMC OMIMSSC, you can use the **Monitoring** pane of the Operations Manager to select views that provide health information of the discovered Dell EMC PowerEdge Servers. The **Dell EMC Server and Rack Workstation Monitoring (Licensed)** feature discovers and monitors the health of the Dell EMC PowerEdge Servers.

 **NOTE:** To receive SNMP alerts from devices discovered through the iDRAC access via Host OS feature, you must install SNMP services on the Managed Node and set the Management Server IP address as the trap destination in the **SNMP Services**.

To install SNMP services on the Managed Node, perform the following steps:

1. Navigate to **Server Manager > Roles and Features > Features** for the managed node.
2. Install **SNMP Services**.
3. From the list of available services, right-click **SNMP Services** and select **Properties**.
4. In the **SNMP Services Properties (Local Computer)** window, select the **Traps** tab.
5. Set a Community string in the **Community name** field and provide the Management Server IP address in the **Trap Destinations** field and then click OK.

You will now be able to receive SNMP traps for the node discovered through iSM using the iDRAC access via Host OS (Experimental) method.

The **Severity Level Indicators** indicates the health of the Dell EMC PowerEdge Servers on the network. It includes monitoring health of Modular, Monolithic systems and supported Dell Precision Racks and their components at regular intervals.

As the system components monitored through **Dell EMC Server and Rack Workstation Monitoring**, which is a license free monitoring feature, and the **Dell EMC Server and Rack Workstation Monitoring (Licensed)** feature are not exactly the same, it is possible that the overall server health that is shown through license-free (OMSA) and licensed (iDRAC-WS-MAN, iDRAC access via Host OS, or iSM-WMI) methods could be different. Drill-down to the specific component status when you observe such discrepancies to resolve specific problem conditions in the system component to bring the overall health of the server to **OK** state.

Monitored hardware components

The following table provides information about the monitored hardware components supported in Scalable and Detailed feature for Dell EMC devices discovered through iDRAC-WS-MAN in Dell EMC OMIMSSC Operations Manager.

Table 26. Monitored hardware components — Scalable and Detailed feature (iDRAC-WS-MAN)

Hardware components	Scalable	Detailed
BIOS	No	No
Battery Sensor Group	No	Yes
Battery Sensor	No	Yes
Current Sensor Group	No	Yes
Current Sensor	No	Yes
Fan Sensor Group	No	Yes
Fan Sensor	No	Yes

Table 26. Monitored hardware components — Scalable and Detailed feature (iDRAC-WS-MAN) (continued)

Hardware components	Scalable	Detailed
Host NIC Group	No	Yes
Host NIC	No	Yes
iDRAC Network Interface	Yes	Yes
iDRAC	No	No
Intrusion Sensor Group	No	Yes
Intrusion Sensor	No	Yes
License Group	Yes	No
License	No	Yes
Memory	Yes	No
Memory Instance	Yes	Yes
Physical Network Interface	No	Yes
Physical Network Interface Group	Yes	Yes
Processors Group	Yes	No
Processor	Yes	No
Power Supply Group	Yes	Yes
Power Supply	No	Yes
PCleSSD Extender	No	Yes
PCleSSD Backplane	No	Yes
PCleSSD Physical Disk	No	Yes
Server Sensors	No	Yes
Server Storage	Yes	Yes
Storage Controller Connector	No	Yes
Storage Controller	No	Yes
Storage Controller Sensor	No	Yes
Storage Controller Battery Group	No	Yes
Storage Controller Battery	No	Yes
Storage Virtual Disk Group	No	Yes
Storage Virtual Disk	No	Yes
Storage Controller Physical Disk Group	No	Yes

Table 26. Monitored hardware components — Scalable and Detailed feature (iDRAC–WS–MAN) (continued)

Hardware components	Scalable	Detailed
Storage Controller Physical Disk	No	Yes
Storage Controller Enclosure	No	Yes
Storage Controller Enclosure EMM	No	Yes
Storage Controller Enclosure Fan Sensor Group	No	Yes
Storage Controller Enclosure Fan Sensor	No	Yes
Storage Controller Enclosure Power Supply Group	No	Yes
Storage Controller Enclosure Power Supply	No	Yes
Storage Controller Enclosure Temperature Sensor Group	No	Yes
Storage Controller Enclosure Temperature Sensor	No	Yes
Storage Controller Enclosure Sensor	No	Yes
SD Card Group	No	Yes
SD Card	No	Yes
Temperature Sensor Group	No	Yes
Temperature Sensor	No	Yes
Voltage Sensor Group	No	Yes
Voltage Sensor	No	Yes

View options for Dell EMC PowerEdge Servers through iDRAC–WS–MAN on the Operations Manager console

Dell EMC Server Management Pack suite and OMIMSSC Operations Manager provides the following types of views for monitoring, under the **Dell EMC** folder on the Operations Manager console:

- [Dell EMC Alerts Views](#)
- [Dell EMC Diagram Views](#)
- [Dell EMC Performance and Power Monitoring Views](#)
- [Dell EMC State Views](#)

Alerts Views

This view is available for managing hardware and storage events from Dell EMC Servers and Rack Workstations. The following alerts are displayed by the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature:

- Link-up and Link-down alerts for events received from Broadcom and Intel network interface cards for PowerEdge servers, PowerVault servers and supported Dell Precision Racks.

Viewing Alerts for Dell EMC Server and Rack Monitoring (Licensed) feature on the Operations Manager Console

To view the Dell EMC Server and Rack Monitoring (Licensed) feature alerts on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring**.
2. Click **Dell EMC > Dell EMC Alerts Views**.
The following **Dell EMC Alerts Views** are displayed:
 - **Dell EMC Network Interface Alerts View** — Link-up and Link-down alerts from the discovered NICs are displayed.
 - **Dell EMC Server and Rack Workstation Alerts View** — SNMP traps for 12th, 13th, and 14th generation of PowerEdge servers, PowerVault servers and Dell Precision Racks with iDRAC7, iDRAC8 or iDRAC9 are displayed.
 - **Dell EMC Rack Workstation Alert Views**
 - **Dell EMC Network Interface Alerts**
 - **Dell EMC Rack Workstation Alerts**
3. Select **Dell EMC Server and Rack Workstation Alerts View** or **Dell EMC Rack Workstation Alerts**.
On the right pane of each of the individual **Dell EMC Alerts Views**, alerts that meet the criteria you specify, such as alert severity, resolution state, or alerts that are assigned to you is displayed.
4. Select an alert to view the details in the **Alert Details** pane.

Diagram views of Dell EMC PowerEdge Server for Dell EMC Server and Rack Monitoring (Licensed) feature on Operations Manager console

The **Dell EMC Diagram Views** offers a hierarchical and graphical representation of all Dell EMC PowerEdge Servers and supported Precision Rack Workstations on the network.

Viewing Dell EMC Diagram Views for Dell EMC Server and Rack Workstation (Licensed) feature on the Operations Manager console

To view the Dell EMC Diagram views on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC Diagram Views**.
2. Go to the **Dell EMC Diagram Views** folder for the following views:
 - Dell EMC Server Diagram Views
 - a. [Dell EMC Complete Diagram View](#)
 - b. [Dell EMC Modular Systems Diagram View](#)
 - c. [Dell EMC Monolithic Servers Diagram View](#)
3. Select any of the **Dell EMC Diagram Views**.
On the right pane the hierarchical and graphical representation of the selected Dell EMC device is displayed.
4. Select a component in the diagram to view its details in the **Detail View** pane.

Dell EMC Rack Workstation Diagram Views

The **Dell EMC Rack Workstation Diagram Views** offers a graphical representation of all supported Dell EMC Rack Workstations and allows you to expand and verify the status of individual devices and their components in the diagram. Select a Rack Workstation in the diagram to view its details in the **Detail View** pane.

Dell EMC Modular and Dell EMC Monolithic Systems

The **Dell EMC Modular Systems Diagram View** and **Dell EMC Monolithic Servers Diagram View** offers the following details:

- Physical network interfaces
- Memory
- Power supply
- Sensors
- Processors
- Storage components

- BIOS (inventory only)
- iDRAC NIC
- Host NIC
- SD Card
- License

Dell EMC Modular Systems Diagram View

The **Dell EMC Modular Systems Diagram View** offers a graphical representation of all Modular systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell EMC Monolithic Servers Diagram View

The **Dell EMC Monolithic Systems Diagram View** offers a graphical representation of all Monolithic systems and allows you to expand and verify the status of individual devices and their components in the diagram.

Dell EMC Sled Servers Diagram View

The **Dell EMC Sled Servers Diagram View** offers a graphical representation of all Sled servers and allows you to expand and verify the status of individual devices and their components in the diagram. Select a Sled server in the diagram to view its details in the **Detail View** pane.

Dell EMC PowerEdge Server Unit diagram view by Dell EMC Server and Rack workstation (Licensed) feature on the Operations Manager console

Select a Dell EMC PowerEdge server, from the **Dell EMC Modular System View** or **Dell EMC Monolithic Servers Diagram View**, to view the diagram specific to that particular system.

System-specific diagrams illustrate and indicate the status of the following components:

- Physical interfaces
- Memory
- Power supply
- Sensors
- Processors
- Storage components
- Host NIC
- License
- PCIe/ SSD
- SD Card
- BIOS (inventory only)
- iDRAC NIC

Storage Controller Component Hierarchy

To view the status and health of components such as physical disks, connectors, virtual drives, controllers, sensors, and enclosures, expand the **Storage** component in any Dell EMC system instance Diagram View.

Dell EMC Performance and Power Monitoring Views through iDRAC-WS-MAN

NOTE:


- System Board Usage metrics are supported only on some of the 13th generation of the PowerEdge servers. For more information on performance information collection, see [View Dell EMC servers performance collection rules set on Operations Manager](#). Also, enable the Dell EMC Server Performance rule.

- **Dell EMC Performance View** displays the performance index of CPU, memory, I/O utilization, and system level CUPS index in a graphical format.

To view the performance and power monitoring on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring**.
2. In the **Monitoring** pane, click **Dell EMC > Dell EMC Performance and Power Monitoring Views** for the following views:

- **Dell EMC Performance View**
- **Disk Performance - Licensed (%)**

 **NOTE:** All performance metric rules are disabled by default for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

3. To view the **System Board Usage** metrics, click **Dell EMC Performance and Power Monitoring Views > Dell EMC System Board Usage** for the following views:

- **CPU Usage (%)**
- **IO Usage (%)**
- **Memory Usage (%)**
- **Overall System Usage (%)**

4. Select the counters from the individual performance views and select the time range for the values required. The data collected is represented in a graphical format for each system.

A unit monitor, monitors the performance counter over two successive cycles to check if it exceeds a threshold value. When the threshold value is exceeded, the server changes state and generates an alert. This unit monitor is disabled by default. You can override (enable) the threshold values from the **Authoring** pane of the Operations Manager console. Unit monitors are available under the **Dell Server** objects for the Licensed monitoring feature. To enable the threshold values of unit monitors, see [Enabling Performance and Power Monitoring Unit Monitors](#).

For more information on performance information collection, see [View Dell EMC servers performance collection rules set on Operations Manager](#).

Enabling Performance and Power Monitoring Unit Monitors

To enable the unit monitors for Performance and Power Monitoring Views:

1. Launch Operations Manager console and click **Authoring**.
2. Click **Management Pack Objects > Monitors**, and then search for **Performance** in the **Look for:** field.
3. Click **Dell Server > Performance**.
4. Right-click the unit monitor you want to enable.
5. Select **Overrides > Override the Monitor** and select an option based on your requirement.
For example, to override the unit monitors for all objects of class: Dell Server, select **For all objects of class: Dell Server**. The **Override Properties** screen is displayed.
6. Select **Enabled** and set the **Override Value** to **True**.
7. Under **Management Pack**, either select a management pack created from the **Select destination management pack:** drop-down menu or create a management pack.
To create a management pack:
 - a. Right click **Management Pack** and select **Create Management Pack**.
The **Create a Management Pack** screen is displayed.
 - b. Provide a name for the management pack in the **Name** field and click **Next**.
For information on creating a management pack, see the Operations Manager documentation at technet.microsoft.com.
 - c. Click **Create**.
The management pack you created is selected in the **Select destination management pack:** drop-down menu.
8. Click **Apply**.

Dell EMC State Views

This view is available for viewing the health of all Dell EMC PowerEdge Servers and supported Dell EMC Rack Workstations. In the Operations Manager console, click **Monitoring > Dell EMC > Dell EMC State Views**, the status of each Dell EMC server and Rack Workstation managed by Operations Manager on the network is displayed.

You can view the status for the following groups:

- **Dell EMC Servers and Rack Workstations (Licensed) State View**
- **Dell EMC Rack Workstation State Views**
 - **Dell EMC Managed Rack Workstation (Licensed) State View**
- **Dell EMC Server State Views**
 - **Dell EMC FM Servers State View**
 - **Dell EMC Sled Servers (Licensed) State View**
 - **Dell EMC Unmanaged Servers (Licensed) State View**

The health of a component is derived by reviewing the unresolved alerts associated with the component. [Severity Level Indicators](#) explains the various state components that the Dell EMC Server Management Pack Suite uses with their corresponding severity levels.

Key features of Dell EMC PowerEdge Server through iDRAC–WS-MAN for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature


This section lists the key features for servers discovered through Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

- [System Configuration Lockdown Mode](#)
- [iDRAC Group Manager](#)
- [Event Auto Resolution](#)
- [Capacity Planning](#)
- [iDRAC detection of failed CMC](#)
- [Server Port Connection Information](#)

System Configuration Lockdown Mode

System Configuration Lockdown mode feature is available in iDRAC for 14th generation of the PowerEdge servers which locks the system's configuration including firmware updates. Once, the System Configuration Lockdown Mode is enabled, you cannot change the system's configuration. This feature is intended to protect the system from unintentional changes. Using iDRAC console, you can enable or disable the System Configuration Lockdown mode.

When the System Configuration Lockdown mode is enabled, you cannot configure the trap destination information in the servers. Hence, alerts are not generated for monitoring. In such a case, you are notified with a critical alert conveying that System Configuration Lockdown mode is enabled, and trap destination information for alerts is not configured.

 **NOTE:** It is recommended to update the *Dell OM : System configuration lockdown* alert rule interval, immediately after the server discovery interval is updated or modified. This recommendation ensures that the System Lockdown mode alert is generated after the completion of server discovery with a certain interval.

You can view the details of the System Configuration Lockdown mode in the **Detail View** pane of the **Dell EMC Diagram View**. For more information about this feature, see *Integrated Dell Remote Access Controller 9 Version 3.00.00.00 User's Guide*.

This feature is available for servers discovered through both, iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

iDRAC Group Manager

iDRAC Group Manager feature is available for 14th generation of the PowerEdge servers to offer simplified basic management of iDRAC, and associated servers on the same local network. Group Manager feature allows one-to-many console experience without involving a separate application. Using iDRAC Group Manager, you can view the details of a set of servers by permitting more powerful management than by inspecting servers visually for faults and other manual methods.

You can view the details of the iDRAC Group Manager; iDRAC Group Manager Status, and iDRAC Group Name under the **iDRAC** object in the **Detail View** pane of the **Diagram View**. For more information about this feature, see *Integrated Dell Remote Access Controller 9 Version 3.00.00.00 User's Guide*.

This feature is available for servers discovered through both, iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

Event Auto Resolution

This section describes the automatic resolution or acknowledgement of the Dell device events using the Event Auto Resolution feature.

Dell EMC Server Management Pack Suite receives, and processes the events from the Dell devices. These events can be broadly classified as problem, information, and resolution events. All these events remain on the console until they are manually closed. Even after the problem gets resolved at the node, the problem event, and the corresponding resolution event remains in the console until they are manually acknowledged. Event Auto Resolution feature automatically resolves or acknowledges such Dell device events.

The auto resolution of events can be classified as:

- Problem to problem— One problem event resolves another problem event. For example, a temperature sensor sends a warning event when it crosses the warning threshold. If there is no action, after certain time, the same sensor sends critical event when it crosses the critical event. In this case, there is no importance of the warning event, as it does not exist. Hence, the warning event is acknowledged, and only critical event is shown on the console.
- Problem to resolution— One resolution or a normal event resolves a problem event. For example, a temperature sensor sends a warning event when it crosses the warning threshold. When the administrator takes appropriate action; the same sensor sends the resolution event or normal event after certain amount of time. In this case, there is no importance of the warning event, as it does not exist. Hence, the warning event is acknowledged, and only normal event is shown on the console.

This feature is available only for servers discovered through iDRAC-WS-MAN. By default, the **Event Auto Resolution** is set to **Disabled**. Enable this feature using the **Enable Event Auto Resolution** task. The tasks; **Enable Event Auto Resolution**, and **Disable Event Resolution** are available under **Dell EMC > Dell EMC Feature Management Dashboard > Dell EMC Server and Rack Workstation Monitoring (Licensed) > Dell EMC Monitoring Feature Tasks**.

Capacity planning

You can monitor if the server's utilization has exceeded the configured capacity threshold value using the unit monitor; Dell Server Capacity Check. The unit monitor Dell Server Capacity Check monitors the average system or CUPS usage for the last one day of each server against the configured capacity threshold value. By default, this unit monitor is set to **Disabled**. To enable the Dell Server Capacity Check unit monitor, see the [Enabling Dell Server Capacity Check unit monitor](#).

The minimum threshold value is 1, and the maximum threshold value is 99. The default threshold value is 60. You can configure the threshold values within the specified range i.e 1–99. In case, you provide a threshold value other than the specified ranges, that threshold is reset to its default value.

A warning event per server is generated when the average system or CUPS usage for the last one day exceeds the configured threshold value. The warning event is auto resolved when the average system or CUPS usage for the last one day returns within the configured threshold value.

You can view the details of the warning alert in the **Alert Details** pane under **Monitoring > Dell EMC > Dell EMC Alerts Views > Dell EMC Server and Rack Workstation Alerts Views**.

You can view the health state obtained from the unit monitor; Dell Server Capacity Check under **Monitoring > Dell > Dell EMC State Views > Dell EMC Server and Rack Workstation Alerts (Licensed) > Dell Server Capacity Threshold Check**. You can also view the component **Dell Server Capacity Threshold Check** under the **Dell Server** object in **Diagram Views**.

 **NOTE:** By default, the **Dell Server Capacity Threshold Check** column under **State Views** is disabled.

Capacity Planning feature also provides a performance graph to show the trend for the Average SYS Usage/Day.

To view the performance graph for the capacity planning feature:

1. Click **Monitoring > Dell EMC > Dell EMC Performance and Power Monitoring Views > Dell EMC System Board Usage View > Overall System Usage (%)**.

2. Select **Capacity Check System Board Average Sys Usage(last day)** under the **Counter** column for the desired Dell EMC device and select the time range for the values required

The data collected is represented in a graphical format for the selected Dell EMC device.

This feature is available for servers discovered through both, the iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

Enabling Dell Server Capacity Check unit monitor

This section explains how to enable the Dell Server Capacity Check unit monitor.

To enable the Dell server capacity check unit monitor:

1. Launch Operations Manager console, and click **Authoring**.
2. Click **Management Pack Objects > Monitors**, and then search for **Dell Server Capacity Check** in the **Look for:** field.
3. Click **Entity Health > Availability**.
4. Right-click **Dell Server Capacity Check** and select **Overrides > Override the Monitor > For all objects of class: Dell Server Capacity Threshold Check**.
The **Override Properties** screen is displayed.
5. Select **Enabled** and set the **Override Value** to **True**.
6. Under **Management Pack**, either select a management pack created from the **Select destination management pack:** drop-down menu or create a management pack.
To create a management pack:
 - a. Right click the **Management Packs** and select **Create Management Pack**.
The **Create a Management Pack** page is displayed.
 - b. Provide a name for the management pack in the **Name** field and click **Next**.
For information on creating a management pack, see the Operations Manager documentation at Technet.microsoft.com.
 - c. Click **Create**.
The management pack you created is selected in the **Select destination management pack:** drop-down menu.
7. Click **Apply**.

iDRAC detection of failed Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M)

Using the feature; iDRAC detection of a failed Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) , the iDRAC of a Rack Style Management (RSM) enabled modular server detects a failed or an unavailable chassis controller. By using this feature, you can take immediate remedial action to bring the failed Dell EMC CMC/OME-M to a normal state.

The **Dell Chassis Controller Sensor** indicates the presence or failure of a Dell EMC CMC/OME-M.

You can view the health state obtained from the unit monitor; **Dell Chassis Controller Sensor** under **Sensors** in **Dell EMC Diagram Views**.

NOTE:


- The **Dell Chassis Controller Sensor** is available in both; Scalable and Detailed Management Pack.
- iDRAC detection of failed Dell EMC CMC/OME-M is supported for 13th and 14th generation of the Dell EMC PowerEdge FX2 Chassis.

Server port connection information

Server port connection information feature provides details of the physical mapping of switch ports to server ports, and iDRAC dedicated port connections. This feature helps you to reduce cabling error debugging by identifying which switch ports are connected to a server's network ports, and iDRAC dedicated port.

You can view the details of the Server port connection information under **iDRAC NIC** and **NIC** objects in the **Detail View** pane of the **Dell EMC Diagram View**. Along with the inventory information of each NIC; chassis ID information of the switch and the port ID information is populated.

This feature is available for Dell EMC PowerEdge servers discovered through both, the iDRAC and iSM methods of Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

 **NOTE:** This feature is supported for 14th generation of the PowerEdge Servers only.

Unit monitors for Dell EMC Servers and Rack workstations (Licensed) feature—iDRAC-WS-MAN

Monitors to assess various conditions that can occur in the monitored objects.

Table 27. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature

Object		Unit Monitor
Dell EMC PowerEdge Server		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Server Power Supply		
	Dell Server Power Supply Unit	Periodic
Dell Server Processor Group		
	Dell Server Processor Group	Periodic
Dell Server Chassis Controller Sensor		
	Dell Server Chassis Controller Sensor	Periodic
Dell Storage Controller		
	Dell Server Storage Controller	Periodic
Dell Server Controller Battery		
	Dell Server Controller Battery Unit	Periodic
Dell Battery Sensor		
	Dell Server Battery Sensor Health	Periodic
Dell Battery Sensor Group		
	Dell Server Battery Group Sensor Health	Periodic
Dell Current Sensor		
	Dell Server Current Sensor Health	Periodic
Dell Fan Sensor		
	Dell Server Fan Sensor Health	Periodic
Dell Fan Sensor Group		

Table 27. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature (continued)

Object		Unit Monitor
	Dell Server Fan Group Sensor Health	Periodic
Dell Intrusion Sensor		
	Dell Server Intrusion Sensor Health	Periodic
Dell Modular Blade Server With Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Modular Blade Server Without Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Monolithic Server With Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Monolithic Server Without Operating System		
	Dell Server Run As Account Association	Periodic
	Dell Server Unit Monitor	Periodic
Dell Network Interfaces Group		
	Dell Server Network Interface Group	Periodic
Dell iDRAC Network Interface		
	Dell Server iDRAC Network Interface Unit	Periodic
Dell Server Capacity Threshold Check		
	Dell Server Capacity Threshold Check	Periodic
Dell Server Host NIC		
	Dell Server Host NIC	Periodic
Dell Server License		
	Dell Server License	Periodic
Dell Server License Group		
	Dell Server License Group	Periodic
Physical Network Interface		

Table 27. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature (continued)

Object		Unit Monitor
	Dell Server Network Interface Unit	Periodic
PCIe SSD Backplane		
	Dell Server PCIeSSD Backplane	Periodic
PCIe SSD Extender		
	Dell Server PCIeSSD Extender	Periodic
PCIe SSD Physical Disk		
	Dell Server PCIeSSD Physical Disk Predictive Failure Disk	Periodic
	Dell Server PCIeSSD Physical Disk Primary Status	Periodic
Dell Server SD Card		
	Dell Server SD Card	Periodic
	Dell Server SD Card Group	Periodic
Dell Server Connector Enclosure		
	Dell Server Connector Enclosure	Periodic
Dell Storage Controller Enclosure EMM		
	Dell Server Enclosure EMM	Periodic
Dell Storage Controller Enclosure Fan Sensor		
	Dell Server Enclosure Fan Sensor	Periodic
Dell Storage Controller Enclosure Physical Disk		
	Dell Server Enclosure External Physical Disk	Periodic
Dell Storage Controller Enclosure Power Supply		
	Dell Server Enclosure Power Supply	Periodic
Dell Storage Controller Enclosure Temperature Sensor		
	Dell Server Temperature Sensor	Periodic
Dell Storage Controller Internal Physical Disk		
	Dell Server Internal Physical Disk Unit	Periodic
Dell Storage Controller Physical Disk		
	Dell Server Controller Direct Attached Physical Disk	Periodic

Table 27. Dell Unit Monitors for Dell EMC Server and Rack Workstation Monitoring (Licensed) feature (continued)

Object		Unit Monitor
Dell Storage Group		
	Dell Server Storage	Periodic
Dell Storage Virtual Disk		
	Dell Server Controller Virtual Disk Unit	Periodic
Dell Temperature Sensor		
	Dell Server Temperature Sensor Health	Periodic
Dell Temperature Sensor Group		
	Dell Server Temperature Sensor Group Health	Periodic
Dell Voltage Sensor		
	Dell Server Voltage Sensor Health	Periodic
Dell Voltage Sensor Group		
	Dell Server Sensors Voltage Group	Periodic

Rules

The following section lists the rules specific to the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.

Dell Systems Event Processing Rules

The Dell EMC Server Management Pack Suite and OMIMSSC processes rules from Dell EMC PowerEdge Servers.

Dell EMC PowerEdge Servers through iDRAC-WS-MAN

All informational, warning, and critical SNMP traps for Dell EMC PowerEdge Servers discovered using Dell EMC Server and Rack Monitoring (Licensed) feature, have a corresponding SNMP trap rule.

Each of these rules are processed based on the following criteria:

- Source Name = "Dell Server IP"
- OID = Actual trap ID of the trap event
- Data Provider = SNMP trap event provider

Dell EMC PowerEdge Server Tasks

Tasks are available in the **Tasks** pane of the Operations Manager console. When you select a device or a component, the relevant tasks is displayed in the **Tasks** pane.

Summary of managed Tasks

You can view the Tasks in the **Authoring** pane under **Management Pack Objects** in the Operations Manager console.

Performing tasks using Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature—iDRAC–WS–MAN

Following table provides a summary of the tasks that you can perform using Dell EMC Server and Rack Workstation Monitoring (Licensed) feature:

Table 28. Summary of the Dell tasks discovered using Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Task	Description
Check Node Interfaces	Checks if the selected Dell EMC PowerEdge server and its corresponding interfaces; WS-MAN or SNMP is reachable or non-reachable.
Get Warranty Information	Retrieves the warranty information for the selected system. i NOTE: An active Internet connection is required to retrieve the warranty information.
Launch Dell License Manager	Launches the Dell License Manager on the management system. i NOTE: Launching Dell License Manager is possible only if a Windows or Linux operating system is installed and Dell License Manager is also installed.
Launch Dell OpenManage Power Center	Launches the OpenManage Power Center console for the selected system. i NOTE: Launching OpenManage Power Center is possible only if the Windows or Linux operating system, OpenManage Server Administrator, and OpenManage Power Center are installed on the managed node.
Launch Dell OpenManage Server Administrator (Monolithic Server)	Launches the OpenManage Server Administrator console for the selected system. i NOTE: Launching OpenManage Server Administrator is possible only if a Windows or Linux operating system and OpenManage Server Administrator are installed on the managed node.
Launch Dell Remote Access Console	Launches the iDRAC console for the discovered Dell EMC Servers and Rack Workstations that are license based.
Launch Remote Desktop (Monolithic Server)	Launches the remote desktop for the selected system. i NOTE: Launching remote desktop is possible only if the Windows operating system is installed and remote desktop is manually enabled in the managed node.

Dell EMC PowerEdge Server Tasks

Check Node Interfaces

The **Check Node Interfaces** task checks if the selected Dell EMC PowerEdge server and its corresponding interfaces; WS-MAN or SNMP is reachable or non-reachable.

To check the node interfaces:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views**, **State Views**, or an alert in the **Dell EMC Alerts Views**.

3. In the **Tasks** pane, select **Dell Server Tasks > Check Node Interfaces**.

The task provides a summary of the reachability check, and interface check after the successful completion of the task.

Get Warranty Information


You can use this task to see the warranty status of the selected Dell EMC PowerEdge server.

To get warranty information:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Get Warranty Information**.

Launch Dell License Manager


The **Launch Dell License Manager** task allows you to launch the Dell License Manager on management systems. Dell License Manager is a one-to-many license deployment and reporting tool for Dell iDRAC licenses.

 **NOTE:** If the Dell License Manager has not been installed in the default path create a new task to launch Dell License Manager. For more information, see [Creating A Launch License Manager Task](#).

To launch Dell License Manager:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Task** pane, select **Dell Server Tasks > Launch Dell License Manager**.

Launch Dell OpenManage Power Center


 **NOTE:** Launching OpenManage Power Center is possible only if Windows or Linux operating system and OpenManage Server Administrator are installed on the managed node.

The **Launch Dell OpenManage Power Center** task allows you to launch the OpenManage Power Center console.

To launch the OpenManage Power Center:


1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Launch Dell OpenManage Power Center**.

Launch Dell OpenManage Server Administrator (Monolithic Server)

 **NOTE:** Launching OpenManage Server Administrator (OMSA) is possible only if Windows or Linux operating system and OpenManage Server Administrator is installed on the managed node.

To launch OMSA from the Operations Manager console:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Launch Dell OpenManage Server Administrator (Monolithic Server)**.

 **NOTE:** The Dell EMC Server Management Pack Suite tasks launches the remote console in the Internet Explorer.

Launch Dell Remote Access Console

To launch the Dell Remote Access Console:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Task** pane, select **Dell Server Tasks > Launch Dell Remote Access Console**.

Launch Remote Desktop (Monolithic Server)

- NOTE:** Launching remote desktop is possible only if the Windows operating system is installed and remote desktop is manually enabled on the managed system.
- NOTE:** Remote Desktop task uses hostname to connect to the management server of a system. If the management server cannot resolve the hostname then, add the hostname and the IP address to a route to the server using its hostname that is configured on the management server.

To launch Remote Desktop from the Operations Manager console:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC PowerEdge server in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell Server Tasks > Launch Remote Desktop (Monolithic Server)**.

Dell EMC Chassis Monitoring feature

The Dell EMC chassis monitoring feature supports discovery and monitoring of Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) on PowerEdge MX7000, PowerEdge FX2/ FX2s chassis, PowerEdge VRTX chassis, PowerEdge M1000E chassis, and Dell OEM Ready chassis using:

- SNMP and/or WS-MAN protocol
- RedFish

Dell EMC Chassis monitoring feature also supports Detailed monitoring of individual chassis components in the supported Operations Manager.

Discover and classify Dell EMC Chassis using Dell EMC OMIMSSC Operations Manager

The Dell EMC OpenManage Integration for Microsoft System Center Operations Manager enables you to discover and classify Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M): PowerEdge MX7000, PowerEdge FX2/ FX2s, PowerEdge M1000e, and PowerEdge VRTX.

The following table lists the details of the hardware discovery and grouping by the Dell EMC Chassis monitoring feature:

Table 29. Dell hardware discovery and grouping

Group	Diagram View	Hardware type
Dell EMC CMC/OME-M	Dell Chassis Diagram Views	CMC/OME-M instances on the network, chassis and its components, and server modules slots occupied in the chassis.
Dell EMC PowerEdge M1000e	Dell EMC M1000e Chassis Diagram View	PowerEdge M1000e
Dell EMC PowerEdge VRTX	Dell EMC VRTX Chassis Diagram View	PowerEdge VRTX
Dell EMC FX2	Dell EMC FX2 Chassis Diagram View	PowerEdge FX2
Dell EMC PowerEdge MX7000	Dell EMC MX7000 Chassis Diagram View	PowerEdge MX7000

Discovering Dell EMC Chassis devices in Dell EMC OMIMSSC Operations Manager

You can discover Dell EMC chassis devices in OMIMSSC for Operations Manager by using an IP address or an IP range. To discover a chassis, provide a chassis IP address and the device type credentials of the chassis. When you are discovering chassis by using an IP range, specify an IP (IPv4) range within a subnet by including the start and end range.

To discover chassis:

1. In Dell EMC OMIMSSC, click **Monitoring > Modular Systems View**, and then click **Discover**.
2. In the **Discover** page, select the required option:
 - **Discover Using an IP Address**—to discover a chassis using an IP address.
 - **Discover Using an IP Range**—to discover all chassis within an IP range.
3. In **Discover Using an IP Address or IP Address Range**, do any of the following:
 - In **IP Address Start Range**, and **IP Address End Range**, provide the IP address range you want to include, which is the starting and ending range.
 - Select **Enable Exclude Range** if you want to exclude an IP address range and in **IP Address Start Range** and **IP Address End Range**, provide the range that you want to exclude.
4. In **Apply this Credential Profile**, select the device type credential profile.
The selected profile is applied to all the chassis.
5. To Create a new credential profile, Select **Create New** to create a device type credential profile
Credential profile page is displayed.
6. Select the **Device Credential Profile** in the credential type.
The **Credentials** fields get enabled.
7. Provide the Credential details and click **Finish**.
8. In **Modular System IP address**, provide the IP address of the chassis that you want to discover.
9. Provide a unique job name, and click **Finish**.
10. (Optional) To track this job, select **Go to the Job List** option.
The **Jobs and Logs Center** page is displayed. Expand the discovery job to view the progress of the job in the **Running** tab.

Discovering Dell EMC Chassis in the Operations Manager

The Chassis devices should be discovered as network devices under the **Administration** section of the Operations Manager console.

To discover Chassis devices in Operations Manager:

1. Log in into the management server as an Operations Manager administrator.
2. On the Operations Manager console, click **Administration**.
3. At the bottom of the navigation pane, click **Discovery Wizard**.
4. Run the **Discovery Wizard**, select **Network devices** and follow the instructions on the screen.

For more information, see the Operations Manager documentation at technet.microsoft.com.

NOTE: Select the **Run As Account** created for discovering the chassis devices. For more information, see the "Configuring Dell Chassis Management Controller feature for correlating Server modules with Chassis slot summary" section of the *Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide* at dell.com/OMConnectionsEnterpriseSystemsManagement.


5. On the **Add a Device console** screen in Operations Manager, type the IP address that you want to scan, select the appropriate Run As Account from the SNMP V1 or V2 **Run As Account** drop-down box.
6. Enable the Chassis monitoring feature using the **Dell EMC Feature Management Dashboard**.

NOTE: Perform the Sync with Microsoft System Center from OMIMSSC console to complete the discovery of the chassis devices that are discovered in the Operations Manager.

Overriding Dell EMC Chassis discovery parameters, performance, and health metrics

You can customize the discovery of Dell EMC chassis by overriding their discovery parameters, performance, and health metrics.


To override discovery parameters, performance and health metrics:

1. Log in into the Operations Manager console.
 2. On the left hand pane, Click **Monitoring > Dell EMC > Dell EMC OpenManage Integration Views > OpenManage Integration Dashboard** .
The **Dell EMC OMIMSSC** console login page is displayed.
 3. In **Username**, type the username. Type the username in the format: domain\username.
 4. In **Password**, type the password, and click **Login**.
The **Overview** page is displayed.
 5. Select **Profiles and Configuration > Configuration Configuration**.
The **Discovery, Monitoring and Performance Overrides** page is displayed.
 6. Click **Edit**.
The **Override discovery, monitoring and performance intervals** wizard is displayed.
 7. In the **Override discovery, monitoring and performance intervals** page, you can perform following actions:
 - a. Under the **Device Type** list, select the **Chassis** check box.
 - b. In the **Discovery Type** drop-down list, select the discovery mode.
 - c. Under the **Discovery Interval (Seconds)**, enter the discovery interval in seconds.
 - d. Under the **Health Interval (Seconds)**, enter the health interval in seconds.
 - e. In the **Metrics Monitoring** drop-down list, select **Yes** to use metrics monitoring, and **No** if you do not want to use metrics monitoring.
-  **NOTE:** Metrics Monitoring is enabled only when you discover the Chassis devices in **Detailed** discovery mode.
- f. Under the **Metrics Interval (Seconds)**, enter the metrics interval in seconds.
8. To save your settings, click **Apply**, or to cancel, click **Cancel**.

Monitoring

You can use the **Monitoring** pane of the Operations Manager to select views that provide complete health information of the discovered Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) devices. The Dell EMC Chassis monitoring feature discovers and monitors the health of the Dell CMC/OME-M devices. The [Severity Level Indicators](#) indicates the health of the Dell CMC/OME-M devices on the network.

Chassis Monitoring includes monitoring the health of the Dell chassis devices, both at regular intervals and on occurrence of events.

-  **NOTE:** To perform the Dell EMC Chassis Detailed monitoring, associate the WS-MAN credentials Run As account required for accessing the Dell CMCs with the target as Dell Modular Chassis class or respective CMC object (if you have different Run As accounts for different CMC/OME-M devices) to the profile—Dell CMC Login Account Run As Profile

Monitored hardware components

The following table provides information on the monitored hardware components supported in Scalable and Detailed feature.

Table 30. Monitored hardware components — Scalable and Detailed feature.

Hardware Components	PowerEdge MX7000		PowerEdge M1000e		PowerEdge FX2		PowerEdge VRTX	
	Scalable	Detailed	Scalable	Detailed	Scalable	Detailed	Scalable	Detailed
CMC/OME-M Slot Information	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
CMC/OME-M Slot	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 30. Monitored hardware components — Scalable and Detailed feature. (continued)

Hardware Components	PowerEdge MX7000		PowerEdge M1000e		PowerEdge FX2		PowerEdge VRTX	
	Scalable	Detailed	Scalable	Detailed	Scalable	Detailed	Scalable	Detailed
Fan Group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Fan	No	Yes	No	Yes	No	Yes	No	Yes
IO Module Group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
IO Module	No	Yes	No	Yes	No	Yes	No	Yes
PCIe Device Group	No	No	Yes	Yes	Yes	Yes	Yes	Yes
PCIe Device	No	No	No	No	No	Yes	No	No
Power Supply Group	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Power Supply	No	Yes	No	Yes	No	Yes	No	Yes
Storage	No	No	No	No	No	No	Yes	Yes
Storage Controller	No	No	No	No	No	No	No	Yes
Storage Controller Virtual Disk Group	No	No	No	No	No	No	No	Yes
Storage Controller Virtual Disk	No	No	No	No	No	No	No	Yes
Storage Controller Physical Disk Group	No	No	No	No	No	No	No	Yes
Storage Controller Physical Disk	No	No	No	No	No	No	No	Yes
Storage Enclosure	No	No	No	No	No	No	No	Yes

Views options for Dell EMC Chassis on the Operations Manager console

Dell EMC OMIMSSC for Operations Manager provides the following types of views for monitoring, under **Monitoring > Dell EMC** on the Operations Manager console:

- [Dell EMC Alert Views](#)
- [Dell EMC Diagram Views](#)
- [Dell EMC Performance and Power Monitoring Views](#)
- [Dell EMC State Views](#)

Dell EMC Alerts Views

This view is available for managing hardware and storage events from Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) devices. SNMP traps sent by Chassis devices are displayed by the Dell EMC Chassis monitoring feature.

Viewing Alerts for Dell EMC Chassis Monitoring feature on the Operations Manager console

To view the Chassis monitoring alerts on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring**.

2. Click **Dell EMC > Dell EMC Alerts Views**.

The following individual **Alerts Views** are displayed:

- **Dell EMC Chassis Alerts** —SNMP traps from the discovered Chassis devices are displayed.
- **Dell EMC Chassis Alert Views**
 - **Dell EMC FX2 Chassis Alert View** —SNMP traps from the discovered PowerEdge FX2 chassis devices are displayed.
 - **Dell EMC M1000E Chassis Alert View** —SNMP traps from the discovered PowerEdge M1000E chassis devices are displayed.
 - **Dell EMC MX7000 Chassis Alert View** —SNMP traps from the discovered PowerEdge MX7000 chassis devices are displayed.
 - **Dell EMC VRTX Chassis Alert View** —SNMP traps from the discovered PowerEdge VRTX chassis devices are displayed.

3. Select any of the **Alerts Views**.

On the right pane of each of the individual **Alerts Views**, alerts that meet the criteria you specify, such as alert severity, resolution state, or alerts that are assigned to you is displayed.

4. Select an alert to view the details in the **Alert Details** pane.

Diagram views of Dell EMC Chassis monitoring feature on the Operations Manager console

The **Dell EMC Diagram Views** offers a hierarchical and graphical representation of all Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) devices; PowerEdge MX7000, PowerEdge FX2, PowerEdge M1000e, and PowerEdge VRTX on the network.

Viewing Diagrams on the Operations Manager console

To view the diagrams for chassis monitoring feature on the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC Diagram Views**.

2. Go to the **Dell EMC Diagram Views** folder for the following views:

- [Dell EMC Chassis Management Controllers Group](#)
- [Dell EMC Chassis Diagram Views](#)
 - **Dell EMC FX2 Chassis Diagram View**
 - **Dell EMC M1000E Chassis Diagram View**
 - **Dell EMC MX7000 Chassis Diagram View**
 - **Dell EMC VRTX Chassis Diagram View**

3. Select any of the **Diagram Views**.

On the right pane the hierarchical and graphical representation of the selected Dell EMC device is displayed.

4. Select a component in the diagram to view its details in the **Detail View** pane.

Dell EMC Chassis Management Controllers Group

The **Dell EMC Chassis Management Controllers Group** diagram view offers a graphical representation of all Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M); PowerEdge MX7000, PowerEdge FX2, PowerEdge M1000E, and PowerEdge VRTX, and their inventory. For the Chassis discovery, see the [Dell EMC Chassis in the Operations Manager](#).

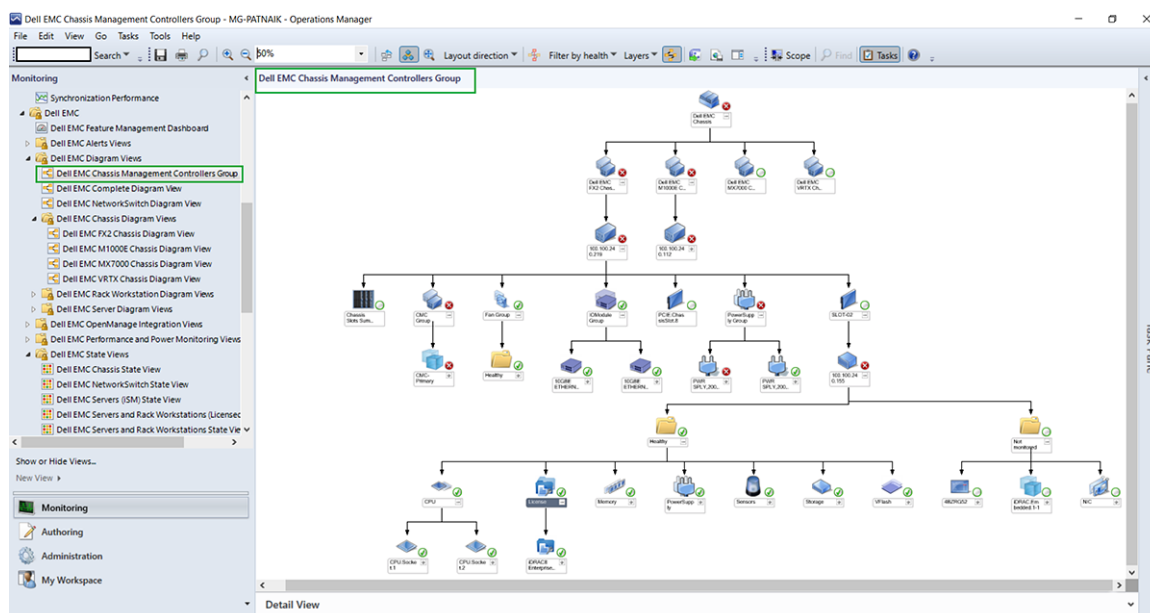


Figure 7. Dell EMC Chassis Management Controllers Group diagram

For discovered Dell EMC CMC chassis, enable slot discovery which is disabled by default to view:

- The occupied and free slot summary in the **Chassis Slots Summary**
- The slot-inventory details modified on CMC chassis that are reflected in the **Diagram View**.
- The correlation of discovered Dell EMC PowerEdge Servers using Licensed or license-free monitoring feature with the slots of CMC chassis that are displayed in the **Dell EMC Chassis Management Controllers Group** diagram. The Dell EMC PowerEdge server is visible under the slot in the diagram.

NOTE: Create **Run As Account** for CMC/OME-M slot discovery with simple, basic, or digest authentication only. For more information, see "Configuring the Dell Chassis Management Controller Feature for Correlating Server Modules with Chassis Slot Summary" section of the *Dell EMC OpenManage Integration Version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide* at Dell.com/support/home.

NOTE: The iDRAC firmware of the modular systems should be compatible with the CMC firmware, failing which, the Service Tag is displayed as **Not Available** and the Chassis Blade correlation may not be possible.

Dell EMC Chassis Diagram views

The Dell EMC Chassis diagram view offers a graphical representation of PowerEdge MX7000, PowerEdge FX2, PowerEdge M1000E chassis, and PowerEdge VRTX chassis devices. Select a component in the diagram to view its details in the **Detail View** pane.

Dell EMC Performance and Power Monitoring Views

NOTE: **Dell EMC Chassis Performance View** is available only when the detailed feature of the Dell EMC Chassis Monitoring feature is installed, and you have selected **Metrics Monitoring** as **Yes** while overriding the metrics parameters. For more information on overriding the metrics parameters, see [Overriding Dell EMC Chassis discovery parameters, performance, and health metrics](#).

To view the performance and power monitoring on the Operations Manager console:

1. Launch the Operations Manager console, and click **Monitoring**.
2. In the Monitoring pane, click **Dell EMC > Dell EMC Performance and Power Monitoring Views** to view:
 - **Dell EMC Chassis Performance View**
3. Select the counters from the individual performance views and select the time range for which the values are required. The data collected is represented in a graphical format for each system.

Dell EMC State views

This view is available for viewing the health of the Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) devices. In the Operations Manager console, click **Monitoring > Dell EMC > Dell EMC State Views**, the status of each Dell EMC device managed by Operations Manager on the network is displayed.

Select the Dell CMC group for which you want to see the State view. You can view the status for the following:

- **Dell EMC State Views**
- **Dell EMC Chassis State Views**
 - **Dell EMC FX2 Chassis State View**
 - **Dell EMC M1000E Chassis State View**
 - **Dell EMC MX7000 Chassis State View**
 - **Dell EMC VRTX Chassis State View**

The health of a component is derived by reviewing the unresolved alerts associated with the component. [Severity Level Indicators](#) explains the various state components that the Dell EMC OMIMSSC for Operations Manager uses with their corresponding severity levels.

Dell Unit Monitors for Dell EMC Chassis Monitoring feature

Monitors to assess various conditions that can occur in chassis monitored objects.

Table 31. Dell Unit Monitors for Dell EMC Chassis Monitoring feature.

Object		Unit Monitor
Dell EMC CMC/OME-M		
	Dell Chassis Run as Account Association	Periodic
	Dell CMC Status	Periodic
Dell Chassis Overall Health		
	Dell Chassis Overall Health Unit Monitor	Periodic
Dell Chassis IO Module		
	Dell Chassis IO Module Health Poll Based Unit Monitor	Periodic
Dell Modular Chassis Fan		
	Dell Chassis Fan Health Poll Based Unit Monitor	Periodic
Dell Chassis Modular Controller		
	Dell Chassis CMC Health Poll Based Unit Monitor	Periodic
Dell Chassis Modular Controller Group		
	Dell Chassis CMC Group Health Poll Based Unit Monitor	Periodic
Dell Chassis Modular Power Supply		
	Dell Chassis Power Supply Health Poll Based Unit Monitor	Periodic
Dell Chassis Modular Power Supply Group		

Table 31. Dell Unit Monitors for Dell EMC Chassis Monitoring feature. (continued)

Object		Unit Monitor
	Dell Chassis Power Supply Group Health Poll Based Unit Monitor	Periodic
Dell Chassis Modular PCIe Device		
	Dell Chassis PCIe Device Health Poll Based Unit Monitor	Periodic
Dell Chassis Storage Enclosure		
	Dell Chassis Storage Enclosure Health Poll Based Unit Monitor	Periodic
Dell Chassis Storage Controller		
	Dell Chassis Storage Controller Health Poll Based Unit Monitor	Periodic
	Dell Chassis Storage Controller Battery Health Poll Based Unit Monitor	Periodic
Dell Chassis Storage Controller Virtual Disk		
	Dell Chassis Storage Virtual Disk Health Poll Based Unit Monitor	Periodic
Dell Chassis Storage Controller Enclosure Internal Physical Disk		
	Dell Chassis Storage Internal Physical Disk Primary Health Status Poll Based Unit Monitor	Periodic
	Dell Chassis Storage Internal Physical Disk Predictive Failure Health Status Poll Based Unit Monitor	Periodic
Dell Chassis Storage Controller Enclosure External Physical Disk		
	Dell Chassis Storage External Physical Disk Primary Health Status Poll Based Unit Monitor	Periodic
	Dell Chassis Storage External Physical Disk Predictive Failure Health Status Poll Based Unit Monitor	Periodic

Rules

The following section lists the rules specific to the Dell EMC Chassis monitoring feature.

Dell Systems Event Processing Rules


The Dell EMC Server Management Pack Suite processes rules from Chassis traps.

Dell EMC Chassis devices

All informational, warning, and critical SNMP traps for the chassis devices have a corresponding SNMP trap rule.

Each of these rules are processed based on the following criteria:

- Source Name = "DRAC/CMC name or IP"
- OID = Actual trap ID of the DRAC/CMC SNMP trap event
- Data Provider = SNMP trap

 **NOTE:** Informational alerts are turned off by default. To receive these alerts, import informational alerts management pack.

Performance Collection Rules

In the Operations Manager console, click **Monitoring > Dell EMC > Dell EMC Performance and Power Monitoring Views > Dell EMC Chassis Performance View** to view the performance information that is collected from Dell EMC Chassis. This feature is enabled by default when you choose to use or select **Metrics Monitoring** while overriding the performance metrics. For more information on how to use **Metrics Monitoring**, see [Overriding Dell EMC Chassis discovery parameters, performance, and health metrics](#).

Dell EMC PowerEdge Server Tasks

Tasks are available in the **Tasks** pane of the Operations Manager console. When you select a device or a component, the relevant tasks is displayed in the **Tasks** pane.

Summary of managed Tasks

You can view the Tasks in the **Authoring** pane under **Management Pack Objects** in the Operations Manager console.

Dell EMC Chassis tasks performed on the Operations Manager

Following table provides a summary of the tasks that you can perform using the Dell EMC chassis:

Table 32. Tasks using Dell EMC Chassis

Task	Description
Check Node Interfaces	Checks if the selected Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) device and its corresponding interface; WS-MAN or SNMP is reachable or non-reachable.
Launch Dell CMC Console	Launches the CMC/OME-M console.

Dell EMC Chassis tasks

Check Node Interfaces

The **Check Node Interfaces** task checks if the selected Dell CMC/OME-M device and its corresponding interface are reachable or non-reachable.

To check the node interfaces:

1. In the Operations Manager console, go to a **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the desired Dell EMC CMC in any of the **Diagram Views**, **State Views**, or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell CMC Tasks > Check Node Interfaces**.



Launch Dell CMC console

To launch the CMC console.

1. In the Operations Manager console, go to **Dell EMC Diagram Views**, **Dell EMC State Views**, or **Dell EMC Alerts Views**.
2. Select the CMC/OME-M device in any of the **Diagram Views** or **State Views** or an alert in the **Dell EMC Alerts Views**.
3. In the **Tasks** pane, select **Dell CMC Tasks > Launch Dell CMC Console**.

Dell EMC Chassis Modular Server Correlation Feature

Chassis Modular Server Correlation feature supports:

- Correlation of discovered Modular Servers using the licensed or license-free monitoring feature with Chassis slots.
 **NOTE:** Dell EMC Chassis Management Controller/OpenManage Enterprise Modular (CMC/OME-M) slot discovery is disabled by default. Hence, enable CMC/OME-M slot discovery for the correlation feature to work.
- Correlation of Chassis Shared Storage components with Dell EMC PowerEdge Servers.
 **NOTE:** Imports Dell EMC Chassis detailed monitoring for the correlation of chassis shared components with Dell EMC PowerEdge Servers.

List of objects discovered by using the Dell EMC Chassis modular server correlation feature

Table 33. Dell EMC Chassis modular server correlation feature discoveries.

Discovery Object	Description
Dell Dell EMC chassis to modular server correlation discovery	Discovers the correlation between the Dell EMC chassis and the Dell modular systems.
Dell EMC chassis storage to blade server correlation discovery	Discovers the correlation between chassis shared components with Dell EMC PowerEdge Servers discovered through the Dell EMC Server and Rack Workstation Monitoring.

Dell EMC Network Switch Monitoring feature


The Dell EMC Network Switch monitoring feature supports discovery and monitoring of the network switches such as M-Series, Z-Series, N-Series, and S-Series switches. In the Dell EMC network switch monitoring feature, the SNMP based communication is performed.


The Dell EMC Network Switch monitoring feature also supports detailed level of monitoring of individual switch components in the supported Operations Manager.

Importing Dell EMC Network Switch Management packs for discovery from the OMIMSSC Admin portal

To import the Dell EMC Network switch Management packs for discovery from the OMIMSSC Admin portal, perform the following steps:

- Log in into the OMIMSSC portal as a default admin and by providing the password in the password field.
The OMIMSSC Admin portal page is displayed.
- On the lower left pane, click **Settings**, and then click **Console Enrollment**.
The enrolled consoles are displayed.
- Select the enrolled console.
The **Import MPs** option gets enabled.
- Click **Import MPs**.
The **Import MPs for Devices** page is displayed.
- Select **Network Switches > Install > Run**.
The Dell EMC Network Switch Management packs are imported.

 **NOTE:** In case you want to Reinstall or repair the existing Management packs, follow the above steps for importing.

 **NOTE:** To delete the imported Management packs, select **Network Switches > Uninstall > Run**. All the imported Management packs for the Dell network switches are deleted.

Discover and classify Dell EMC Network Switch using Dell EMC OMIMSSC Operations Manager

The Dell EMC OpenManage Integration for Microsoft System Center Operations Manager enables you to discover and classify Dell EMC Network switches such as M-Series, Z-Series, N-Series, and S-Series switches.

The following table lists the details of the hardware discovery and grouping by the Network switch monitoring feature:

Table 34. Dell hardware discovery and grouping

Group	Diagram View	Hardware type
Dell EMC Network Switch	Dell EMC Network Switch Diagram Views	Switch instances on the network, switch, and its components.

Discovering Dell EMC Network switches using Dell EMC OMIMSSC

Import the Dell EMC Network Switch Management Pack into the Operations Manager from OMIMSSC.

You can discover the switches by using an IP address or an IP range. To discover switches, provide the switch IP address and the device credential profile of the switch. When you are discovering switches by using an IP range, specify an IP (IPv4) range (within a subnet) by including the start and end IP in the range.

To discover a switch:

1. In OMIMSSC, perform the following steps:
 - On the navigation pane, click **Monitoring > Network Switch View > Discover**.
2. In the **Discover** page, select the required option:
 - **Discover Using an IP Address**—to discover a switch using an IP address.
 - **Discover Using an IP Range**—to discover multiple switches using an IP range.
3. In **Discover Using an IP Address or IP Address Range**, do the following:
 - In **IP Address Start Range**, and **IP Address End Range**, provide the IP address range of the switches you want to discover, which includes the start and end IP range.
 - (Optional) Select **Enable Exclude Range** if you want to exclude an IP address range.
In **IP Address Start Range** and **IP Address End Range**, provide the range that you want to exclude.
4. In **Apply this Credential Profile**, select the device type credential profile.
The selected profile is applied to all the switches.
5. Select the device credential profile, or click **Create New** to create a device credential profile.
The selected credential profile is applied to discover the switch or switches.
6. Select the **Device Credential Profile** in the credential type.
The **Credentials** fields get enabled.
7. Provide the Credential details and click **Finish**.
8. In **Network Switch IP address**, provide the IP address of the switch that you want to discover.
9. Provide a unique job name, and click **Finish**.
10. (Optional) to track the job, select **Go to the Job List** option.
The **Jobs and Logs Center** page is displayed. Expand the discovery job to view the progress of the job in the **Running** tab.

Discovering Dell EMC Network Switches in Operations Manager

The Dell EMC Network switches can be discovered as network devices in the Operations Manager console. The Dell EMC Network switch Management Pack can be imported into the Operations Manager from OMIMSSC.

To discover Network switch in Operations Manager:

1. Log in to the management server as an Operations Manager administrator.
2. On the Operations Manager console, click **Administration**.
3. At the bottom of the navigation pane, click **Discovery Wizard**.

4. Run the **Discovery Wizard**, select **Network devices** and follow the instructions on the screen. For more information, see the Operations Manager documentation at technet.microsoft.com.
5. On the **Add a Device console** in Operations Manager, type the IP address that you want to discover.
6. Select the appropriate Run As Account from the SNMP V1 or V2 **Run As Account** drop-down box.
7. The Switch monitoring feature is enabled when imported from OMIMSSC Admin portal.

NOTE: Perform the Sync with Microsoft System Center from OMIMSSC console to complete the discovery of the network switches that are discovered in the Operations Manager.

Overriding Dell EMC Network Switch discovery parameters, and health metrics

You can customize the discovery of Network switch by overriding the discovery parameters, performance, and health metrics.

To override discovery parameters, and health metrics:

1. Log in into the Operations Manager console.
2. In the lower left pane, Click **Monitoring > Dell EMC > Dell EMC OpenManage Integration Views > OpenManage Integration Dashboard**.
The **Dell EMC OMIMSSC** console login page is displayed.
3. In the **Username** box, type the username. Type the username in the format: domain\username.
4. In the **Password** box, type the password, and click **Login**.
The **Overview** page is displayed.
5. Select **Profiles and Configuration > Configuration Configuration**.
The **Discovery, Monitoring and Performance Overrides** page is displayed.
6. Click **Edit**.
The **Override discovery, monitoring and performance intervals page** is displayed.
7. On the **Override discovery, monitoring and performance intervals** page, you can perform following actions:
 - a. To edit the switch parameters, select the **Network Switches** check box.
 - b. From the **Discovery Type** drop-down menu, select the discovery mode.
 - c. To edit the discovery intervals, under the **Discovery Interval (Seconds)**, enter the discovery interval in seconds.
 - d. To edit the health intervals, under the **Health Interval (Seconds)**, enter the health interval in seconds.

NOTE: Metrics Monitoring Is not supported for Dell EMC Network switches.

8. Click **Apply** to save the settings or to cancel, click **Cancel**.

Monitoring

The Dell EMC Network Switch monitoring feature discovers and monitors the health of the Dell EMC Network Switches. You can use the **Monitoring** pane of the Operations Manager to select views that provide complete health information of the discovered Dell EMC Network switches. The [Severity Level Indicators](#) indicates the health of the Dell EMC Network Switches on the network.

Dell EMC Network switch Monitoring includes monitoring the health of the Dell EMC Network Switches, both at regular intervals and on occurrence of health periodically.

NOTE: When you are monitoring the health of Network switch devices, associate the community string Run As Account with the SNMP Monitoring Account that is targeted at the Dell EMC Network switch class or respective switch object (if you have different Run As Accounts for different Network switch devices).

Monitored hardware components

The following table provides information about the monitored hardware components that are supported in Scalable and Detailed feature:

Table 35. Monitored hardware components—Scalable and Detailed feature

Hardware Components	Discovery mode	
	Scalable	Detailed
Switch	Yes	Yes
Fan Group	Yes	Yes
Fan unit	No	Yes
Power supply Group	Yes	Yes
Power supply Unit	No	Yes
Interfaces	Yes	No
User Port Group	Yes	No
User Port instances	No	Yes

View options for Dell EMC Network Switch on the Operations Manager console

The Dell EMC OMIMSSC for Operations Manager provides the following types of views for monitoring, under **Monitoring > Dell EMC** on the Operations Manager console:

- [Dell EMC Alert Views](#)
- [Dell EMC Diagram Views](#)
- [Dell EMC State Views](#)

Dell EMC Alerts Views

This view is available for managing hardware from the Dell EMC Network switches. SNMP traps that have been send through the discovered network device or switch are displayed in the Dell EMC Network switch Alerts view.

Viewing Alerts on the Operations Manager

To view the network switch monitoring alerts on the Operations Manager console:

1. Launch the Operations Manager console.
2. Click **Monitoring > Dell EMC > Dell EMC Alerts Views**.
3. Select **Dell EMC Network Switch Alerts View**.
Alerts that meet the predefined criteria, and are assigned to the switches are displayed.
4. Select an alert in Dell EMC Network switch Alert view to display its details in the **Alert Details** pane.

Dell EMC Diagram Views

The Dell EMC Diagram view offers a hierarchical and graphical representation of all Dell EMC Network switch devices.

Viewing Diagrams on the Operations Manager console

To View the diagrams for network switch monitoring feature on the Operations Manager console:

1. Launch the Operations Manager console.
2. Click **Monitoring > Dell EMC > Dell EMC Diagram Views**.
3. Go to the **Diagram Views** folder to view the following: .

- [Complete Diagram View](#)
- **Dell EMC Network Switch Diagram View**

4. Select any of the Diagram Views.
The hierarchical and graphical representation of the network switch device is displayed.
5. Expand the network switches group to view the supported and unsupported switches discovered.
6. The switch component in the Diagram view can be further expanded to view the underlying components.
Select any component to view the details in the **Detail View** pane.

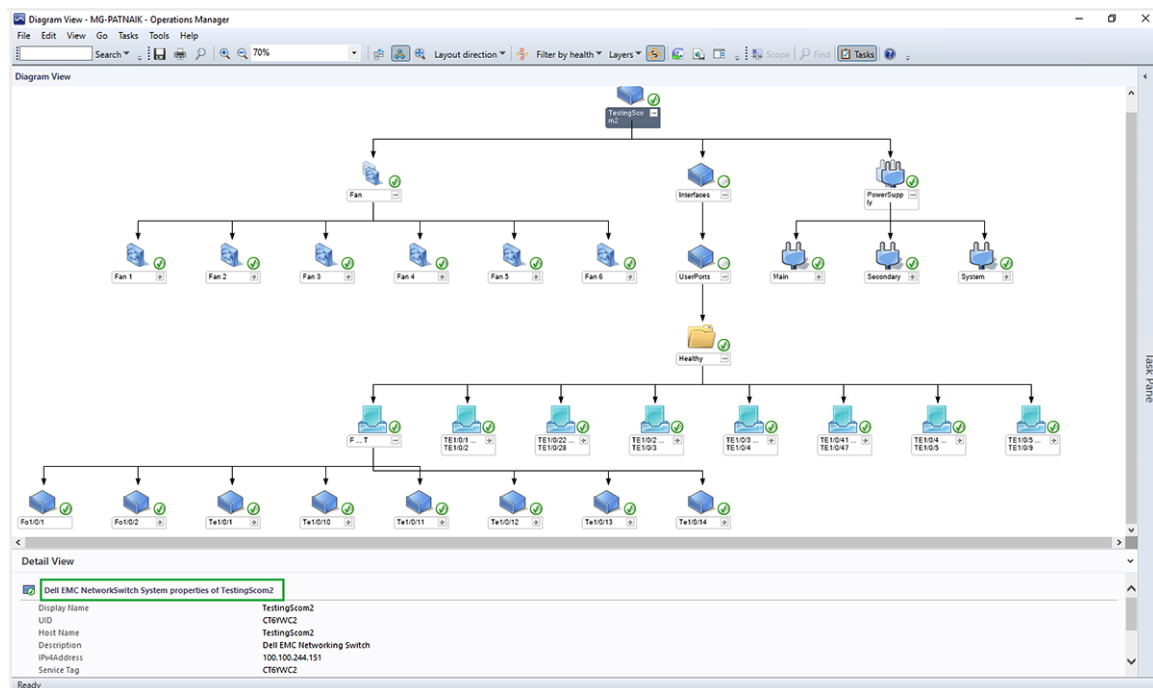


Figure 8. Dell EMC Network Switch Diagram View

Dell EMC State Views

To view health states of the discovered Dell EMC network switches in the Operations Manager console:

1. Launch the Operations Manager console and click **Monitoring > Dell EMC > Dell EMC State Views**.
2. Select **Dell EMC Network Switch State View**.

The health states of all the discovered network switches are displayed.

NOTE: The health of a component is derived by reviewing the unresolved alerts that are associated with the component. [Severity Level Indicators](#) explains the various state components that the Dell EMC OMIMSSC for Operations Manager uses with their corresponding severity levels.

3. Select a component in the Dell EMC Network Switch State View to see the details in the **Detail View** pane.

Dell Unit Monitors for Dell EMC Network Switch Monitoring feature

Monitors to assess various conditions that can occur in Dell EMC Network switch monitored objects.

Table 36. Dell Unit Monitors for Dell EMC Network Switch Monitoring feature.

Object		Unit Monitor
Dell EMC Network Switch		
	Dell EMC Network Switch Status	Periodic

Table 36. Dell Unit Monitors for Dell EMC Network Switch Monitoring feature. (continued)

Object		Unit Monitor
Dell EMC Network Switch Fan Group		
	Dell EMC Network Switch Fan group Overall Health Unit Monitor	Periodic
Dell EMC Network Switch Fan units		
	Dell EMC Network Switch Fan Health Poll Based Unit Monitor	Periodic
Dell EMC Network Switch User port group		
	Dell EMC Network Switch user port group Health Poll Based Unit Monitor	Periodic
Dell EMC Network Switch User port units		
	Dell EMC Network Switch user port Health Poll Based Unit Monitor	Periodic
Dell EMC Network Switch Power Supply units		
	Dell EMC Network Switch power supply Health Poll Based Unit Monitor	Periodic
Dell EMC Network Switch Power Supply Group		
	Dell EMC Network Switch power supply Group Health Poll Based Unit Monitor	Periodic
Dell EMC Network Switch Interfaces		
	Dell EMC Network Switch Interfaces overall Health Unit Monitor	Periodic

Appendix A—Issues and resolutions

Topics:

- [Issues and resolutions](#)
- [Known Limitations](#)

Issues and resolutions

The following table lists the known issues, resolutions, and where the issues are applicable:

Table 37. Issues and resolutions

Issue	Resolution	Applicable To
Discovery through iSM–WMI fails when a managed node is running Windows Server 2008 R2 and the Management server is running Operations Manager 2012 R2.	<p>Ensure that you have installed Windows Management Framework version 4.0.</p> <p>On the management server, apply the Microsoft Security update for Update Rollup 7 (or later) for System Center 2012 R2 Operations Manager. For more information, see Support.microsoft.com.</p> <p>You can install the following updates from Catalog.update.microsoft.com. Ensure that you install these updates in the order that is listed below:</p> <ol style="list-style-type: none"> 1. Update Rollup for Microsoft System Center 2012 R2 - Operations Manager Server 2. Update Rollup for Microsoft System Center 2012 R2 - Operations Manager Console <p>Discover the server running Windows Server 2008 R2 operating system.</p>	<p>Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature.</p> <p>This issue pertains to discovery through iSM using WMI only.</p>
<p>Set as the Preferred Monitoring Method task fails to remove the duplicate objects in either or both of the following scenarios:</p> <ul style="list-style-type: none"> • Correlation of the Dell EMC Modular servers with chassis slots • Monitoring Dell EMC FM servers 	<p>To remove the duplicate objects, perform the following steps:</p> <ol style="list-style-type: none"> 1. Go to the Dell EMC Feature Management Dashboard, select the Dell EMC Chassis Modular Server Correlation feature, and then click Remove Chassis Modular Server Correlation Feature from the Dell Monitoring Feature Tasks menu in the right pane. Reimport the Dell EMC Chassis Modular Server Correlation. You will now be able to use the Set as Preferred Monitoring Method task functions to remove the duplicate objects. 2. If the task is still failing, then perform the following steps: 	Dell EMC Chassis Modular Server Correlation Feature

Table 37. Issues and resolutions (continued)

Issue	Resolution	Applicable To
	<ol style="list-style-type: none"> a. Disable the Dell EMC Chassis to the Modular Blade Server Correlation Discovery object discovery. b. Disable the object discovery corresponding to the method used for discovering the modular servers. For example: If the duplicate object is discovered through OMSA, then go to Authoring > Object Discoveries and then search for Dell Server Discovery; which is targeted at the Windows Computer and disable the Discovery attribute for that object. <p>i NOTE: In case the duplicate object has been created for Dell EMC servers, then disable the following object discoveries for FM servers:</p> <ul style="list-style-type: none"> • Dell EMC FM Server Agent-based Discovery • Dell EMC FM Server Agent-free Discovery • Dell EMC FM Server iSM Discovery <ol style="list-style-type: none"> 3. Run the following command from the Operations Manager Shell: <pre>Remove-SCOMDisabledClassInstance</pre> <p>i NOTE: This step may take up to 48 hours to complete.</p> 	
<p>The Agent proxy not enabled alerts are displayed in the Active Alerts list for the Dell EMC PowerEdge Servers that are discovered through iSM.</p>	<p>To resolve this issue, perform the following steps:</p> <ol style="list-style-type: none"> 1. Go to the Dell EMC Feature Management Dashboard, and click Dell EMC Server and Rack Workstation Monitoring (Licensed). 2. In the right pane, under Dell Monitoring Feature Tasks, click Enable Agent Proxying. The Run Task - Enable Agent Proxying window is displayed. 3. Click Override, and then click the field under New Value for the AutoResolve Warnings/Errors parameter and set the value as True. 4. Now click Override and then click Run. 5. Close the task status window. <p>Clear the existing alerts from the active alerts list. These alerts will no longer be displayed for future discoveries.</p>	<p>Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature</p>

Table 37. Issues and resolutions (continued)

Issue	Resolution	Applicable To
In the Dell EMC Diagram View for Dell network devices, the basic attributes are not displayed for the Dell DRAC and Dell EMC chassis objects.	To resolve this issue, you can view the detailed set of attributes by clicking the objects in the State View .	Dell EMC Chassis Monitoring Feature
Server Modules and Chassis Slot Summary Information are not visible under CMC/OME-M.	<ul style="list-style-type: none"> Make sure that OpenManage Server Administrator (OMSA) or DRAC tools are installed on the management server managing the CMC. Make sure that you have configured the Run As Account for CMC devices and associated them with "Dell CMC Login Account". Make sure that Dell CMC Slot Discovery and rules are enabled from the Authoring Pane of the Operations Manager console. 	Dell EMC Chassis Monitoring Feature
Errors while running the Repair option in Dell EMC Server Management Pack Suite from the Add/Remove Programs or Uninstall or change a program window.	Use the Repair option in the installer. For more information, see "Using The Repair Option In The Installer" section of the <i>Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide</i> .	Dell EMC Server Management Pack Suite
If there is a delayed response while discovering a chassis, then the latest information from the device is not updated, the Script Timeout Error is generated or the log files in the Temp folder are not cleared.	Increase the Script Timeout value on the Override Properties screen for the CMC/OME-M device which is experiencing a delayed response. For more information about Overrides , see the Operations Manager documentation at Technet.microsoft.com .	Dell EMC Chassis Monitoring Feature
Feature management host server health service is nonfunctional.	<p>If the selected management server has stopped functioning, the executed Feature Management task fails. In such an instance, where the selected management server is corrupt or the health service cannot be obtained, decommission the management server to remove stale objects. For more information, see Technet.microsoft.com/en-us/library/hh456439.aspx.</p> <p>Select a management server from the remaining management servers, and override the FMPHostFQDN of Feature Management host Discovery.</p>	Dell EMC Server Management Pack Suite
Dell OM: Server and its component health computation failed Alert is displayed under Monitoring > Dell EMC Alerts Views > Dell EMC Server Alerts on the console.	Manually associate the Run As Account for monitoring Dell EMC PowerEdge Server. For more information, see Associating Run As Account for monitoring a Dell Server using the Server and Rack Workstation Monitoring (Licensed) Feature .	Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature
When there are multiple Operations Manager consoles in a Management	<ul style="list-style-type: none"> If the user wants to use the same device credential profile created, 	Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature

Table 37. Issues and resolutions (continued)



Issue	Resolution	Applicable To
group, the device credential profiles that are created from the OMIMSSC dashboard when launched from one Operations Manager console are not visible when the OMIMSSC dashboard is launched from an alternative Operations Manager console within the Management group.	<p>launch the OMIMSSC dashboard from the Operations Manager console where it was created initially.</p> <ul style="list-style-type: none"> New device credential profile can be created from OMIMSSC dashboard that is launched from an alternative Operations Manager console that can be used for discovery of devices. <p> NOTE: Ensure that the device credential profile names are unique.</p>	<p>Dell EMC Chassis Monitoring Feature Dell EMC Network Switch</p> <p>This issue pertains to the usage of the same device credential profile in the OMIMSSC dashboard across multiple Operations Manager consoles within a management group.</p>
In Operations Manager 2012 R2, the import of Dell EMC OpenManage Integration Dashboard View Management pack fails.	<p>To import the Management pack, user has to perform the following steps:</p> <ul style="list-style-type: none"> Install update rollup 11 or above for Operations Manager 2012 R2. For more information, see https://blogs.technet.microsoft.com/allthat/2016/08/31/update-rollup-11-for-system-center-2012-r2-operations-manager/ and follow the steps that are given in the link. After updating, download and import the management pack under OMIMSSC Configuration Management Pack from the OMIMSSC Admin portal and import into the Operations Manager. For more information, see Download the Configuration Management Pack in <i>Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide</i>. Perform the enrollment of the Operations Manager console from the OMIMSSC Admin portal after importing the Configuration Management pack. For more information about enrollment, see Enrolling of Operations Manager console in <i>Dell EMC OpenManage Integration version 7.1.1 for Microsoft System Center for Operations Manager Installation Guide</i>. 	Operations Manager 2012 R2
Post upgrade from Dell EMC Server Management Pack Suite version 7.0 to Dell EMC OMIMSSC version 7.1, the performance metrics for servers that are discovered using licensed method and for chassis are not seen.	Post upgrade, to view the performance metrics for servers discovered in detailed mode from the Dell EMC OpenManage Integration Dashboard, enable the Metrics option in Configuration page.	<p>Dell EMC Server and Rack Workstation Monitoring (Licensed) Feature Dell EMC Chassis Monitoring Feature</p>
When you enroll the Dell EMC OMIMSSC appliance in the Operations Manager or if there is any change in OMIMSSC appliance IP, you may face difficulties to launch the Dell EMC OpenManage	<p>To update the Appliance IP in Unit monitors:</p> <ol style="list-style-type: none"> Log in into the Operations Manager console. Click Authoring on the lower left of the pane. 	Dell EMC OMIMSSC

Table 37. Issues and resolutions (continued)

Issue	Resolution	Applicable To
Integration Dashboard in the Operations Manager console.	<ol style="list-style-type: none"> 3. Select Authoring > Management Pack Objects > Monitors. 4. In the Look for field, search for Dell EMC SDK Override Appliance IP under Management Sever. 5. Right click Dell EMC SDK Override Appliance IP and select Override > Override the Monitor > For all objects of class. 6. Select Dell EMC Appliance IP under parameter name. Update the Override value and click OK. <p> NOTE: Ensure that you do not select any other override parameters.</p>	

Known Limitations

Table 38. Known limitations.


Limitation	Applicable to
Dell EMC MP, Power Control, and LED tasks use only the default credentials. When you create a new task in the Authoring pane and view it, you can see the username and the password that you specified. The credentials are not hidden when you view the task.	Dell EMC Server Management Pack Suite
While using health explorer, some unit monitors in Dell EMC Server Management Pack Suite (under Sensors and OpenManage Services instances) may display a green status though the sub-instance does not exist. This is because unit monitors cannot have an <i>unavailable</i> state when the target class is present and the unit monitor has been executed.	Dell EMC Server Management Pack Suite
Intrusion unit monitor status under sensors is only for chassis and does not include health of bezel intrusion.	Dell EMC Server Management Pack Suite
The multiple Sync tasks triggered at the same time are failing to sync the devices. Sync tasks can be triggered one after the other.	Dell EMC OMIMSSC
When the licensed node count reaches to the maximum within the Dell EMC OMIMSSC console, you need to change the monitoring level of OMSA explicitly to Scalable mode .	Dell EMC OMIMSSC
Event auto resolution feature has a periodic rule for Proxy MS that will run after every 6 hours by default for the resolution of alerts generated by Dell EMC PowerEdge Servers discovered from OMIMSSC.	Dell EMC OMIMSSC

Appendix B

Topics:

- Create a simple authentication run-as account
- Associating a Run As Account for monitoring a Dell EMC PowerEdge Server using the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature
- Severity levels used in Dell EMC Server Management Pack suite and OMIMSSC Operations Manager
- Associate Run As Account task—Dell EMC Server and Rack Workstation Monitoring (Licensed) feature

Create a simple authentication run-as account

1. Log in into Operations Manager as an administrator for the Operations Manager Management Group.
 2. On the Operations Manager console, click **Administration**.
 3. Click **Run As Configuration > Accounts**.
 4. Right-click **Accounts**, and then click **Create Run As Account**.
The **Create Run As Account Wizard** screen is displayed.
 5. Click **Next**.
 6. From the **Run As account type**: drop-down menu, select **Simple Authentication**.
 7. Provide a display name in the **Display name**: text box.
 8. Provide a brief description in the **Description (optional)**: text box and click **Next**.
 9. On the **Credentials** screen provide the iDRAC login credentials for the systems you want to discover using the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature.
 10. Click **Next**.
 11. Select the **Less secure** or **More secure** option as appropriate.
For more information, see the Operations Manager documentation at technet.microsoft.com/en-us/library/hh321655.aspx.
-  **NOTE:** If the iDRAC login credentials are different for each of the systems, create a separate **Run As Account** for each of them.
12. Click **Create**.
 13. After the **Run As Account** has been created, click **Close**.

Associating a Run As Account for monitoring a Dell EMC PowerEdge Server using the Dell EMC Server and Rack Workstation Monitoring (Licensed) feature

For monitoring the Dell EMC PowerEdge Server, the **Run As account** used to discover it must be associated with the **Dell EMC PowerEdge server in the SMASH Device Monitoring Profile**. The management pack performs the association automatically. But sometimes, you have to manually associate the Run As account.

To manually associate the Run As account in the SMASH Device Monitoring Profile:

1. Launch Operations Manager, and click **Administration**.
2. In the **Administration** pane, browse to **Run As Configuration > Profiles**.
3. From the list of available profiles, right-click **SMASH Device Monitoring Profile** and click **Properties**.
The **Introduction** screen is displayed.
4. Click **Next**.

The **Specify the Run As profile's general properties** screen is displayed.


5. Click **Next**.

The **Run As Accounts** screen is displayed.

6. Click **Add**.

The **Add a Run As Account** screen is displayed.

7. Select the run as account used to discover the Dell server from the **Run As Account:** drop-down list.


 **NOTE:** If you are using multiple Run As Account to discover devices, associate each device with its associated Run As account.

8. Click. **A selected class, group, or object** and add the association for the server in the SMASH Monitoring Profile.

- Click **Select** > **Class** option, use **Dell server** as the selection.
- Click **Select** > **Group** option, use the group containing the Dell server objects as the selection.
- Click **Select** > **Object** option, use the individual Dell server object as the selection.

9. Click **OK**.






10. Click **Save** and **Close**.

 **NOTE:** If the Run As Account association is not successful, the alert **Dell OM: Server and its component health computation failed** is displayed under **Monitoring** > **Dell EMC Alerts View** > **Dell EMC Server Alerts** on the console.

Severity levels used in Dell EMC Server Management Pack suite and OMIMSSC Operations Manager


The following table lists the icons that indicate the severity levels of the discovered Dell EMC devices on the Operations Manager console.

Table 39. Severity Level Indicators.

Icon	Severity Level
	Normal/OK — The component is working as expected.
	Warning/Noncritical — A probe or other monitoring device has detected a reading for the component that is above or below the acceptable level. The component may still be functioning, but it could fail. The component may also be functioning in an impaired state.
	Critical/Failure/Error — The component has either failed or failure is imminent. The component requires immediate attention and may need to be replaced. Data loss may have occurred.
	The health status is not applicable for the specific component.
	The service is unavailable.

Associate Run As Account task—Dell EMC Server and Rack Workstation Monitoring (Licensed) feature

Associate Run As Account task associates the Run As Account used for SMASH discovery with all Dell Server objects, required for health monitoring. This task is available as an option for performing object-level association.

 **WARNING:** Perform the Associate Run As Account task only if necessary. This task affects the configuration of all Dell Server objects. Dell Server Run As Account Association unit monitor automatically performs the object-level association.

Appendix C - Enabling External Program Tasks

For tasks provided by the Dell EMC Server Management Pack Suite that launch external programs have to be installed in the default location. Create new tasks to launch the application if the program is not installed in the default location.


Topics:

- [Creating Advanced Power Control and LED Identification Tasks](#)
- [Creating a Launch License Manager task](#)

Creating Advanced Power Control and LED Identification Tasks

Advanced power control and LED identification tasks use the default BMC credentials and install path (C:\Program Files\Dell\SysMgt\bmc).

If the systems deviate from the default BMC credentials and install path, install BMU 2.0 or later on the management server and create new console tasks.

 **CAUTION:** For the following steps, create a task and set the password in plaintext. If BMC is not installed on management server, the Operations Manager Console may display an error with the entire command in a dialog box, and reveal the password. If you export the created override management pack containing this task to a disk, you can open the exported management pack in a common text editor or Operations Manager Authoring Console and view the password in plain text. Create a task only if necessary and consider the security aspects before you proceed.

To create a task:

1. Launch the Operations Manager console and click **Authoring**.
2. In the **Authoring** pane, right-click **Tasks** under **Management Pack Objects**, and select **Create new task**. **Create Task Wizard** screen is displayed.
3. In the **Select a Task Type** screen, select **Command line** under **Console Tasks**.
4. Select the destination management pack and click **Next**.
5. Enter **Task name**, **Description**, and select **Dell Windows Server** as the **Task target** and click **Next**. The **Command-Line** screen is displayed.
6. Enter the path of the application **ipmitool.exe** (the path where BMU was installed on the management server) in the **Application** field.
For example, C:\Program Files\Dell\SysMgt\bmc\ipmitool.exe. For the two LED identification tasks, the application path is C:\Program Files\Dell\SysMgt\bmc\ipmish.exe (default BMU path may differ based on the operating system language).
7. For power control tasks, in the **Parameters** field, enter the command-line parameters in the following format:
 - Enter **-I lanplus -H** and then choose the **Remote Access IP with IPMI capability** from the drop-down menu.
 - Enter **-U <username> -P <password> -k <kgkey> <IPMI Task String>**
 - Replace **<IPMI Task String>** with one of the following options:
 - **power status** (for **Check Power Status** task)
 - **power on** (for **Power On** task)
 - **power soft** (for **Power Off Gracefully** task)
 - **power off** (for **Force Power Off** task)
 - **power cycle** (for **Power Cycle** task)
 - **power reset** (for **Power Reset** task)

- identify on (for **LED Identification On** task)
- identify off (for **LED Identification Off** task)

Example:

```
-I lanplus -H $Target/Property[Type="Dell.WindowsServer.Server"]/RemoteAccessIP$ -U root
-P <password> -k <kgkey> power status
```

- For LED on or off tasks, enter the command-line parameters in the following format:
 - Enter `-ip` and choose the **Remote Access IP with IPMI capability** from drop-down menu.
 - Enter `-u <username> -p <password> -k <kgkey> <IPMI task string>`.
- Click **Create** to create the task and repeat this procedure for each new BMC task.

Creating a Launch License Manager task

Launch the License Manager task uses the default Dell License Manager (DLM)

install path (%PROGRAMFILES (X86) %\Dell\SysMgt\LicenseManager\Dell.DlmUI.exe or %PROGRAMFILES%\Dell\SysMgt\LicenseManager\Dell.DlmUI.exe), that cannot be modified.

If the systems deviate from this, install DLM on the management server and create new console tasks in the **Authoring** pane targeted on **DLM for Dell Server**.

To create a task:

- Launch Operations Manager console, and click **Authoring**.
- In the **Authoring** pane, right-click **Tasks** under **Management Pack Objects**, and select **Create a New Task**.
- In the **Task Type** screen, select the **Command line** under **Console Tasks**.
- Select the destination management pack, and click **Next**.
- Enter **Task name**, **Description**, and set the **Task Target** with one of the following:
 - Dell Windows Server—for Server and Rack Workstation Monitoring feature
 - Dell Server—for Server and Rack Workstation Monitoring (Licensed) feature)
 - Dell iDRAC7 or iDRAC8 for DRAC Monitoring
- Click **Next**.
The **Command Line** screen is displayed.
- Enter the path of the application *Dell.DlmUI.exe* (the path where DLM was installed on the management server) in the **Application** field.
For example, `C:\Program Files\Dell\SysMgt\LicenseManager\Dell.DlmUI.exe` —default DLM path may differ based on the operating system language.
- Click **Create** to create the task, and repeat this procedure for each new DLM task.

Accessing documents from the Dell EMC support site

You can access the required documents using the following links:

- For Dell EMC Enterprise Systems Management documents — www.dell.com/esmmanuals
- For Dell EMC OpenManage documents — www.dell.com/openmanagemanuals
- For Dell EMC Remote Enterprise Systems Management documents — www.dell.com/esmmanuals
- For iDRAC and Dell Lifecycle Controller documents — www.dell.com/idracmanuals
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — www.dell.com/esmmanuals
- For Dell EMC Serviceability Tools documents — www.dell.com/serviceabilitytools
- 1. Go to www.dell.com/support.
- 2. Click **Browse all products**.
- 3. From **All products** page, click **Software**, and then click the required link from the following:
 - **Analytics**
 - **Client Systems Management**
 - **Enterprise Applications**
 - **Enterprise Systems Management**
 - **Public Sector Solutions**
 - **Utilities**
 - **Mainframe**
 - **Serviceability Tools**
 - **Virtualization Solutions**
 - **Operating Systems**
 - **Support**
- 4. To view a document, click the required product and then click the required version.
- Using search engines:
 - Type the name and version of the document in the search box.

Related documentation and resources

This chapter gives the details of documents and references to help you work with Dell EMC Server Management Pack Suite.


Topics:

- [Microsoft guidelines for performance and scalability for Operations Manager](#)
- [Other documents you may need](#)
- [Contacting Dell EMC](#)

Microsoft guidelines for performance and scalability for Operations Manager

For optimal performance, deploy device-specific Server Management Pack Suite on different management servers.

For information on Microsoft's recommendations for scalability, see the Microsoft website at technet.microsoft.com.

 **NOTE:** Make sure that the **Autogrow** option is enabled in Operations Manager Data Warehouse and/or Database for improved performance.


Other documents you may need

Besides this *User's Guide*, you may need to see the following guides available at dell.com/support/home.

- *Integrated Dell Remote Access Controller with Life Cycle Controller User's Guide*
- *iDRAC Service Module Installation Guide*
- *Dell OpenManage Installation and Security User's Guide*
- *Dell OpenManage Server Administrator Installation Guide*
- *Dell OpenManage Server Administrator Compatibility Guide*
- *Dell OpenManage Server Administrator CIM Reference Guide*
- *Dell OpenManage Server Administrator Messages Reference Guide*
- *Dell OpenManage Server Administrator Command Line Interface User's Guide*
- *Dell OpenManage Baseboard Management Controller Utilities User's Guide*
- *Dell OpenManage Port Information Guide*
- *Dell Lifecycle Controller User's Guide*
- *Dell Chassis Management Controller User's Guide*
- *Dell Chassis Management Controller for Dell PowerEdge VRTX User's Guide*
- *Dell Chassis Management Controller for Dell PowerEdge FX2 User's Guide*

The *Dell Systems Management Tools and Documentation DVD* contains a release notes file for Server Administrator and additional release notes files for other systems management software applications found on the DVD.

Contacting Dell EMC

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

Dell EMC 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 EMC 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.