



**Hewlett Packard  
Enterprise**

# **HPE OneView SCOM Integration Kit (v 3.3) User Guide**

## **Abstract**

This guide provides information on using the HPE OneView SCOM Integration Kit for an integrated view of HPE OneView managed infrastructure via Microsoft System Center. The integration with HPE OneView enhances HPE's Converged Infrastructure value within the Microsoft System Center environment to ensure optimal management of a datacenter platform. This guide is intended for system administrators who have standardized on Microsoft System Center as their primary management platform or who use Hyper-V or VMware, and have adopted HPE OneView.

Part Number: 778708-401  
Published: July 2017  
Edition: 1

## Notices

The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Confidential computer software. Valid license from Hewlett Packard Enterprise required for possession, use, or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Links to third-party websites take you outside the Hewlett Packard Enterprise website. Hewlett Packard Enterprise has no control over and is not responsible for information outside the Hewlett Packard Enterprise website.

## Acknowledgments

Microsoft® and Windows® are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

# Contents

- Overview..... 8**
  - Licensing..... 8
  - Introduction..... 8
  - Features..... 8
  - Benefits..... 9
  - Architecture..... 9
  - Components..... 9
  
- Support matrix..... 11**
  - HPE OneView Virtual Connect Management Pack (v 3.3) for System Center..... 11
  - HPE OneView Enclosure Management Pack (v 3.3) for System Center..... 12
  - HPE OneView Storage System Management Pack (v 3.3) for System Center..... 13
  - HPE OneView Server Management Pack (v 3.3) for System Center..... 14
  - HPE OneView Event Manager..... 14
  - Supported HPE OneView for Microsoft System Center and HPE OneView versions..... 15
  - HPE OneView for Microsoft System Center and HPE OneView Upgrade Compatibility..... 16
  
- Installing the HPE OneView SCOM Integration Kit..... 17**
  - Upgrading HPE OneView Management Pack (OVMP)..... 17
  - Installing..... 17
  - Uninstalling..... 19
  - Modifying..... 19
  
- Using HPE OneView SCOM Integration Kit..... 20**
  - Classes..... 20
    - HPE OneView ApplianceInfo class..... 20
    - HPE OneView Appliance Class..... 20
    - HPE OneView Health Collection class..... 21
    - HPE OneView Health Component class..... 21
  - Views..... 21
    - Active Alert View..... 22
      - Analyzing Hewlett Packard Enterprise alerts..... 23
      - Alert processing for supported resources..... 23
    - Appliance State View..... 24
      - Health Explorer..... 25
    - Configuration Dashboard view..... 25
    - Health Dashboard Information..... 26
    - Event Manager Service view..... 27
    - Group Diagram view..... 28
    - Task Status view..... 28
  - Discovering HPE OneView Appliances..... 29
    - Adding HPE OneView appliances..... 29
    - Removing HPE OneView appliances..... 30
  - Tasks..... 30
    - Security settings..... 30
    - Launching the HPE OneView web console task..... 31

Launching the Get Management Server task.....	31
Monitors.....	31
Health Monitoring.....	33
Run As Profiles.....	34
Firewall Setting on System Center Operation Manager for HPE SCOM Integration Kit.....	34

## **Using HPE OneView Enclosure Management Pack..... 36**

Classes.....	36
HPE OneView Managed Enclosure class.....	37
HPE OneView Monitored Enclosure Class.....	40
HPE OneView Monitored Enclosure Device Bay Class.....	42
HPE OneView Monitored Enclosure Onboard Administrator Class.....	43
HPE OneView Monitored Enclosure Power Supply.....	43
HPE OneView Monitored Enclosure Fan Class.....	44
HPE OneView Monitored Enclosure Interconnect Class.....	44
HPE OneView Monitored Enclosure XFM Bay Class.....	45
HPE OneView for HPE Synergy Enclosure Class.....	45
HPE OneView for HPE Synergy Monitored Enclosure Class.....	47
HPE OneView for HPE Synergy Enclosure InterConnect Bay Class.....	48
HPE OneView Synergy Monitored Enclosure InterConnect Bay Class.....	48
HPE OneView for HPE Synergy Enclosure Device Bay Class.....	49
HPE OneView for HPE Synergy Monitored Enclosure Device Bay Class.....	50
HPE OneView for HPE Synergy Enclosure Manager Bay Class.....	50
HPE OneView for HPE Synergy Monitored Enclosure Manager Bay Class.....	51
HPE OneView for HPE Synergy Enclosure Power Supply.....	52
HPE OneView Synergy Monitored Enclosure Power Supply.....	53
HPE OneView for HPE Synergy Enclosure Fan Class.....	53
HPE OneView for HPE Synergy Monitored Enclosure Fan Class.....	54
HPE OneView for HPE Synergy Managed Enclosure Appliance Bay class.....	54
HPE OneView Synergy Monitored Enclosure Appliance Bay class.....	55
Views.....	55
Enclosure Group State (under HPE OneView Systems).....	56
Active Alert.....	57
HPE Enclosure Device Bay state view.....	57
Working with Device Bay State View.....	58
HPE Enclosure Interconnect state view.....	58
Working with Interconnect state view.....	59
HPE Enclosure Health Collection State View.....	59
Working with Health Collection state view.....	60
HPE Enclosure State View.....	60
Working with Enclosure state view.....	61
HPE Enclosure view options.....	61
Group Diagram.....	62
Discovering HPE OneView Managed (C7000/Synergy) Enclosures .....	62
Discovery rules.....	62
Adding HPE OneView Managed (C7000/Synergy) Enclosures .....	62
Tasks.....	63
Security settings.....	63
HPE OneView Web Console.....	63
HPE Onboard Administrator.....	63
Discovering HPE OneView Monitored (C7000/Synergy/SDX) Enclosures .....	63
Discovery rules.....	63
Adding HPE OneView Monitored (C7000/Synergy/SDX) Enclosures .....	63
Tasks.....	64
Security settings.....	64



HPE OneView Web Console.....	64
HPE Onboard Administrator.....	64
Monitors.....	64
Event rules.....	66
Alerts for Synergy/SDX.....	67
<b>Using HPE OneView Virtual Connect Management Pack.....</b>	<b>72</b>
Classes.....	72
Views.....	76
HPE Networks views.....	77
Active Alerts.....	78
Ethernet Network State.....	78
FC Network State.....	80
FCoE Network State.....	81
HPE Server Profiles views.....	81
HPE Virtual Connects Views.....	82
Active Alerts View.....	83
Group Diagram view.....	83
Interconnect State View.....	84
Uplink Set State view.....	85
Logical Interconnect State view.....	85
Discovering HPE OneView Virtual Connect modules.....	86
Tasks.....	86
Predefined tasks.....	87
Security settings.....	87
Monitors.....	87
State monitors.....	87
Propagation Dependency Monitors .....	87
Event rules for Virtual Connect.....	88
Alerts for Interconnect.....	88
<b>Using HPE OneView Storage System Management Pack.....</b>	<b>90</b>
Classes.....	90
Views.....	94
Active Alerts.....	94
Group Diagram.....	96
Storage System State.....	97
Task Pane.....	98
Discovering HPE OneView Storage Systems.....	98
Discovering Rules.....	98
Discovering HPE OneView Storage System.....	99
Monitors.....	99
Event Rules.....	100
<b>Using HPE OneView Server Management Pack.....</b>	<b>101</b>
Classes.....	101
HPE OneView ProLiant Server Class.....	101
Views.....	102
Active Alert.....	102
Group Diagram.....	103
HPE Server State.....	103
Discovering HPE OneView ProLiant server.....	105
Discovery rules.....	105

Adding HPE OneView ProLiant Server.....	105
Tasks.....	105
Security settings.....	106
HPE OneView Web Console.....	106
HPE Integrated Lights-Out.....	106
Monitors.....	106
Event rules.....	107

## **HPE OneView Event Manager Service..... 111**

HPE OneView Event Manager Service NT events.....	111
Using Windows PowerShell.....	112

## **Troubleshooting..... 113**

Administrative issues.....	113
Alerts are not working.....	113
When running multiple HPE OneView appliances, the group diagram under HPE Enclosures, HPE Virtual Connects, HPE Storage Systems, and HPE Servers views does not breakout the resources in a separate HPE OneView instance.....	113
Privilege issue while installing HPE OneView SCOM Integration Kit.....	113
Operations Manager is not discovering HPE OneView appliances.....	114
Operations Manager is not discovering HPE OneView Appliance/Enclosure/Virtual Connect/Storage Systems/Servers.....	115
Operational and usage issues.....	117
After upgrade, HPE OneView Configuration DashBoard (OCD) may not be showing previously discovered HPE OneView appliances or is blank.....	117
Active Alert view displays only one alert when there are multiple device state changes.....	117
HPE OneView appliance discovery will fail via HPE OneView Configuration Dashboard using the appliance hostname on Windows Server 2008 R2.....	117
All discovered managed devices and their subcomponents may disappear during a discovery cycle.....	117
Uninstall may retain files and folders when the HPE OneView Management Pack is installed in a custom path.....	117
Scalability Guidelines for the HPE OneView Management Pack.....	118

## **Websites..... 120**

## **Support and other resources..... 121**

Accessing Hewlett Packard Enterprise Support.....	121
Accessing updates.....	121
Registering for software technical support and update service.....	122
How to use your software technical support and update service.....	122
Hewlett Packard Enterprise authorized resellers.....	122
Related information.....	122
Customer self repair.....	123
Remote support.....	123
Warranty information.....	123
Regulatory information.....	124
Documentation feedback.....	124

## **Migrating from HPE Insight Control Management Packs to HPE OneView Management Pack..... 125**

You are migrating from Virtual Connect Manager (VCM) to HPE OneView (OV).....	125
Action required.....	125
Scenario 1.....	125
Current scenario.....	125
Action required.....	125
Scenario 2.....	127
Current scenario.....	127
Action required.....	127
Scenario 3.....	128
Current scenario.....	129
Action required.....	129
Scenario 4.....	129
Current scenario.....	129
Action required.....	129

# Overview

This guide is intended for system administrators who have standardized Microsoft System Center as their primary management platform, and have adopted HPE OneView.

You should be familiar with the configuration and operation of Microsoft Windows, Microsoft System Center Operations Manager (SCOM), HPE OneView, and HPE OneView for Microsoft System Center. Because of the potential risk of data loss, only individuals who are experienced with using this software should implement the procedures described in this guide. This guide supplements the Microsoft System Center user documentation.

Supported hardware and software information is included in [Support matrix](#) on page 11. For product documentation, see [Related information](#).

## Licensing

Servers designated as managed by HPE OneView require HPE OneView Advanced licenses. Older generation servers such as G6 and G7, monitored enclosures, and Hewlett Packard Enterprise storage do not require HPE OneView Licenses.

## Introduction

Hewlett Packard Enterprise delivers management packs that complement and extend Operations Manager 2012 R2 and Operations Manager 2016, integrating alert processing, state monitoring, and hardware resource lifecycle management of HPE OneView appliance, as well as hardware management of supported enclosures, Virtual Connect modules, Servers, and Storage Systems being managed by the appliances.

Designed specifically for Operations Manager 2012 R2 and Operations Manager 2016, the HPE OneView Management Pack provides predefined discoveries, views, monitors, event processing rules, and tasks which enable administrators to proactively streamline IT operations and ensure increased systems availability by monitoring Microsoft Windows environments and Hewlett Packard Enterprise hardware platforms through a common Operations Manager console.

For advanced hardware lifecycle management and remote administration of Hewlett Packard Enterprise systems, the HPE OneView Management Pack for Operations Manager includes tasks that launch the HPE OneView web console and HPE Onboard administrator for group systems administration.

## Features

The HPE OneView Management Pack has the following features:

- Discovery and inventory of supported HPE OneView appliances.
- Health monitoring of HPE OneView appliances.
- Console tasks to launch the HPE OneView appliance web page and HPE Onboard administrator.
- HPE OneView remote support.
- Console tasks which find the management server of the appliance in the HPE Resource Pool.
- Monitors state change alerts of the appliance (healthy to critical/warning).
- State monitoring for the HPE OneView appliance and the Hewlett Packard Enterprise hardware systems managed by the HPE OneView appliance.
- Predefined rules for processing and displaying Windows Event Log entries for enclosures, Virtual Connect modules, Servers, and Storage Systems alerts in Operation Manager Console sourced from HPE OneView.
- HPE OneView appliance and the Hewlett Packard Enterprise hardware systems managed by HPE OneView represented in the Diagram view.

# Benefits

HPE OneView Management Pack enables IT system administrators and teams to better monitor HPE OneView appliances, thus, reducing the cost and errors of lifecycle management.

The HPE OneView Management Pack provides the following benefits:

- Hardware resource management for Hewlett Packard Enterprise systems managed by HPE OneView with augmented Operations Manager 2012 R2 and 2016.
- Simplified and proactive monitoring of the Microsoft Windows and Hewlett Packard Enterprise hardware resources using a common Operations Manager 2012 R2 console and Operations Manager 2016.
- Streamlined IT administration and increased systems availability.
- More robust monitoring with the System Center Operations Manager 2012R2 and Operations Manager 2016 Resource Pools capabilities.

# Architecture

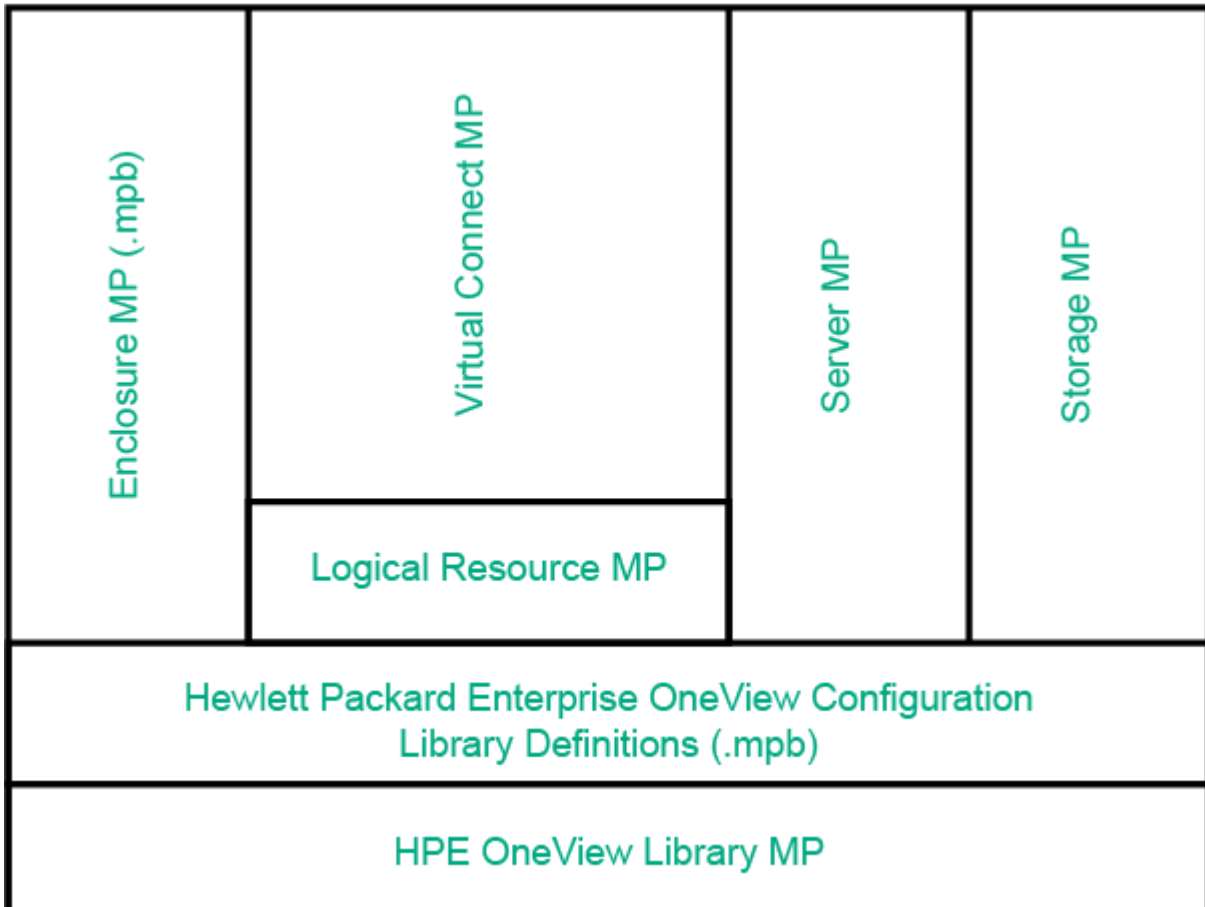


Figure 1: HPE OneView Management Pack dependency

# Components

The HPE OneView SCOM Integration Kit components include:

- **HPE OneView Management Pack**—includes the following:
  - HPE OneView Library Management Pack
  - HPE OneView Configuration Library definitions (.mpb)
  - HPE OneView Enclosure Management Pack (.mpb)

- HPE OneView Logical Resource Management Pack
- HPE OneView Virtual Connect Management Pack
- HPE OneView Storage System Management Pack
- HPE OneView Server Management Pack
- **HPE OneView Configuration Dashboard (OCD)**--is a custom dashboard view which has a UI to enter the details of the HPE OneView appliance which needs to be monitored from SCOM. The OCD enables you to configure the required credentials and configuration information for each HPE OneView appliance.
- **HPE OneView Data Layer**—is a Dynamic-link library (.dll) utilized by the SCOM integration module . The HPE OneView Management Packs and the HPE OneView Managed Devices Cmdlets depend on this layer to collect the data from HPE OneView appliances.
- **HPE OneView Managed Devices Cmdlets**—the PowerShell cmdlets are used by the management packs to collect data from HPE OneView appliances.
- **Resource Pool for HPE OneView Management Pack**—manages a group of management servers.
- **HPE OneView Event Manager**—processes and manages alerts from HPE OneView appliances for enclosures, Virtual Connect modules, Servers, and Storage Systems.
- **HPE Virtual Connect**—enables the management of HPE Virtual Connect's physical and logical components being managed by the appliance.
- **HPE Enclosure**—enables the management of HPE Enclosure's physical and logical components being managed by the appliance.
- **HPE Storage**—enables the management of HPE Storage's physical and logical components being managed by the appliance.
- **HPE Server**—enables the management of HPE Server's physical and logical components being managed by the appliance.

# Support matrix

## HPE OneView Virtual Connect Management Pack (v 3.3) for System Center

Category	Support
System Center Products	<p>The SCOM environment must have one of the following Microsoft System Center products available:</p> <ul style="list-style-type: none"><li>• Operations Manager 2012 R2</li><li>• Operations Manager 2016</li></ul>
HPE Insight Management Agents	Not applicable.
Hardware Dependencies	<p>The following Virtual Connect Modules are supported for management:</p> <ul style="list-style-type: none"><li>• Virtual Connect FlexFabric-20/40 F8 Module</li><li>• Virtual Connect FlexFabric 10Gb/24-Port Module</li><li>• Virtual Connect Flex-10 10Gb Ethernet Module</li><li>• Virtual Connect Flex-10/10D Ethernet Module</li><li>• Virtual Connect 8Gb 20-Port Fiber Channel Module</li><li>• Virtual Connect 8Gb 24-Port Fiber Channel Module</li><li>• HPE Virtual Connect SE 40Gb F8 Module for Synergy</li><li>• HPE Virtual Connect SE 16Gb Fibre Channel Module for Synergy</li><li>• HPE Synergy 12GB SAS Connection Module</li></ul> <hr/> <p><b>NOTE:</b> HPE OneView recommends that you update the firmware for all interconnect modules to the VC firmware version 3.15 at a minimum.</p> <hr/>
Other Dependencies	<p>The following management packs and event manager service must be installed:</p> <ul style="list-style-type: none"><li>• HPE OneView Library Management Pack</li><li>• HPE OneView Configuration Library Definitions Management Pack</li><li>• HPE OneView Logical Resource Management Pack</li><li>• HPE OneView Event Manager Service</li></ul>

# HPE OneView Enclosure Management Pack (v 3.3) for System Center

Category	Support
System Center Products	<p>The SCOM environment must have one of the following Microsoft System Center products available:</p> <ul style="list-style-type: none"> <li>• Operations Manager 2012 R2</li> <li>• Operations Manager 2016</li> </ul>
Hardware Dependencies	<ul style="list-style-type: none"> <li>• HPE BladeSystem c7000 Enclosure</li> <li>• HPE BladeSystem c7000 Enclosure (RoHS compliant)</li> <li>• HPE BladeSystem c7000 Platinum Enclosure (Platinum)</li> <li>• Synergy SY12000</li> <li>• SDX Enclosure</li> </ul> <hr/> <p><b>NOTE:</b> HPE BladeSystem c3000 is not supported.</p> <hr/>
Other Dependencies	<p>Hewlett Packard Enterprise recommends Onboard Administrator firmware version 4.0 or later. The following management packs and event manager service must be installed:</p> <ul style="list-style-type: none"> <li>• HPE OneView Library Management Pack</li> <li>• HPE OneView Configuration Library Definitions Management Pack</li> <li>• HPE OneView Event Manager Service</li> </ul>



# HPE OneView Storage System Management Pack (v 3.3) for System Center

Category	Support
System Center Products	<p>The SCOM environment must have one of the following Microsoft System Center products available:</p> <ul style="list-style-type: none"> <li>• Operations Manager 2012 R2</li> <li>• Operations Manager 2016</li> </ul>
Hardware Dependencies	<p>HPE 3PAR StoreServ 8000 and 20000 Family</p> <ul style="list-style-type: none"> <li>• 3PAR OS 3.2.2 MU1</li> <li>• 3PAR OS 3.2.2 MU2</li> <li>• 3PAR OS 3.2.2 MU3</li> </ul> <p>HPE 3PAR StoreServ 7000 and 10000 Family</p> <ul style="list-style-type: none"> <li>• 3PAR OS 3.2.1</li> <li>• 3PAR OS 3.2.1 MU1</li> <li>• 3PAR OS 3.2.1 MU2</li> <li>• 3PAR OS 3.2.1 MU3</li> <li>• 3PAR OS 3.2.2 MU1</li> <li>• 3PAR OS 3.2.2 MU2</li> <li>• 3PAR OS 3.2.2 MU3</li> </ul> <p>HPE 3PAR StoreServ Storage 9450 &amp; 20800 Systems</p> <ul style="list-style-type: none"> <li>• 3PAR OS v3.3.1 or later</li> </ul> <p>Drive enclosure state, D3940 storage module for synergy</p>
Other Dependencies	<p>The following management packs and event manager service must be installed:</p> <ul style="list-style-type: none"> <li>• HPE OneView Library Management Pack</li> <li>• HPE OneView Configuration Library Definitions Management Pack</li> <li>• HPE OneView Event Manager Service</li> </ul>

# HPE OneView Server Management Pack (v 3.3) for System Center

Category	Support
System Center Products	The SCOM environment must have one of the following Microsoft System Center products available: <ul style="list-style-type: none"><li>• Operations Manager 2012 R2</li><li>• Operations Manager 2016</li></ul>
Hardware Dependencies	HPE ProLiant servers and Synergy compute modules that are supported by HPE OneView. For more information, see the <a href="#">HPE OneView Support Matrix</a> .
Other Dependencies	The following management packs and event manager service must be installed: <ul style="list-style-type: none"><li>• HPE OneView Library Management Pack</li><li>• HPE OneView Configuration Library Definitions Management Pack</li><li>• HPE OneView Event Manager Service</li></ul>

## HPE OneView Event Manager

Category	Support
System Center Products	The SCOM environment must have one of the following Microsoft System Center products available: <ul style="list-style-type: none"><li>• Operations Manager 2012 R2</li><li>• Operations Manager 2016</li></ul>
Other Dependencies	<ul style="list-style-type: none"><li>• .NET 4.5.</li><li>• HPE OneView Event Manager must be installed on all the management servers in the Resource Pool.</li><li>• PowerShell 3.0.</li></ul> <p><b>NOTE:</b> For earlier versions of PowerShell, additional configuration is required. For more information, refer to the <a href="#">Troubleshooting</a> on page 113.</p>

## Supported HPE OneView for Microsoft System Center and HPE OneView versions

HPE OneView for Microsoft System Center Version	HPE OneView Version Supported	Remarks
HPE OneView for Microsoft System Center 7.4	1.10.03 to 1.10.08	This release support only 1.10 releases. 1.10.09 or later patches are not supported.
HPE OneView for Microsoft System Center 7.4.1	1.10.03 to 1.10.08	This release support only 1.10 releases. 1.10.09 or later patches are not supported.
HPE OneView for Microsoft System Center 7.4.2	1.10.09 or later	This release support only 1.10 releases. This release added support for 1.10.09 or later patches.
HPE OneView for Microsoft System Center 7.5	1.20.01 to 1.20.04	This release support only 1.20 releases. 1.20.05 or later patches are not supported.
HPE OneView for Microsoft System Center 7.5.1	1.20.01 or later	This release support only 1.20 releases. This release added support for 1.20.05 or later patches.
HPE OneView for Microsoft System Center 7.6	1.20.01 or later	This release support only 1.20 releases. 1.20.05 or later patches are supported.
HPE OneView for Microsoft System Center 8.0	1.20.01 or later and 2.0	This release added support for 2.0 and backward compatibility support for 1.20.
HPE OneView for Microsoft System Center 8.1	2.0 or later and 3.0	This release supports HPE OneView version 3.0 and backward compatibility support for 2.0
HPE OneView for Microsoft System Center 8.2	2.0 or later and 3.0	This release supports HPE OneView version 3.0 and backward compatibility support for 2.0
HPE OneView for Microsoft System Center 8.3	3.0 and 3.1	This release supports HPE OneView version 3.0 and 3.1.

# HPE OneView for Microsoft System Center and HPE OneView Upgrade Compatibility

HPE OneView for Microsoft System Center Upgrade	HPE OneView Version Supported with HPE OneView for Microsoft System Center 8.0
HPE OneView for Microsoft System Center 7.4.x to 8.0	1.20 and 2.0
HPE OneView for Microsoft System Center 7.5.x to 8.0	1.20 and 2.0
HPE OneView for Microsoft System Center 7.6 to 8.0	1.20 and 2.0
HPE OneView for Microsoft System Center 8.0 to 8.1	2.0 and 3.0
HPE OneView for Microsoft System Center 8.1 to 8.2	2.0 and 3.0
HPE OneView for Microsoft System Center 8.2 to 8.3	3.0 and 3.1

## **IMPORTANT:**

- Hewlett Packard Enterprise recommends that you first upgrade to HPE OneView version prior to upgrading to HPE OneView for Microsoft System Center 8.3 version.
- HPE OneView for Microsoft System Center 7.6 or earlier versions of the plug-in do not work with HPE OneView 2.0 or later. If you are using 7.6 or an earlier version of plug-ins, update your plug-in to version 8.3 to support HPE OneView 3.0 .
- Ensure that you have the supported version of HPE OneView for Microsoft System Center available before upgrading to the latest version of HPE OneView. It is not recommended to use the unsupported versions of HPE OneView for Microsoft System Center, after you upgrade to the latest version of HPE OneView.
- By default, HPE OneView Management Packs discovery interval is set to 4 hours. If you plan the upgrade of HPE OneView version within this maintenance window, then the existing HPE OneView inventory data in the SCOM server will not be lost. If the upgrade takes beyond 4 hours, then the inventory data disappears from the SCOM server and the data gets restored during subsequent SCOM discovery cycles, when the HPE OneView appliance is back. After the upgrade of HPE OneView appliance is complete, upgrade to the supported version of HPE OneView SCOM Integration Kit and subsequently upgrade the management packs.

# Installing the HPE OneView SCOM Integration Kit

## Upgrading HPE OneView Management Pack (OVMP)

### Prerequisites:

Prior to upgrading the HPE OneView SCOM Integration kit, upgrade the supported HPE OneView Appliance. For supported HPE OneView appliance, refer to Support Matrix.

### Procedure:

1. Close the SCOM Console, Event viewer.
2. Install and upgrade the HPE OV SCOM Kit on all the management server in the resource pool.
3. Re-Import the new HPE OneView Management Packs.

---

### NOTE:

- Re-Importing will replace the older OV MPs automatically.
  - Existing HPE OneView instances and discovered resources that are registered with the OCD will be retained.
  - Health and other historical data will be retained.
- 

## Installing

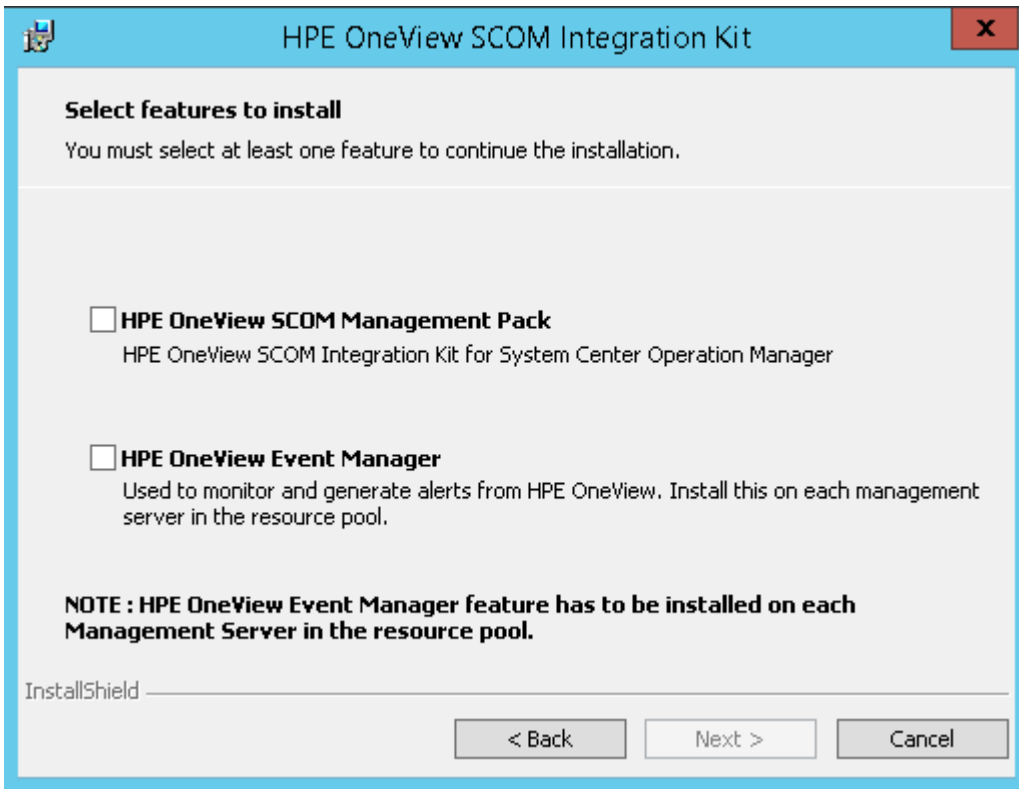
To install the HPE OneView SCOM Integration Kit:

### Procedure

1. Ensure that the prerequisites are met for the following:

Component	Prerequisite
HPE OneView Management Packs	<ul style="list-style-type: none"><li>• Microsoft System Center Operations Manager console is installed.</li><li>• .NET Framework 4.5 is installed.</li></ul>
HPE OneView Event Manager	<ul style="list-style-type: none"><li>• .NET Framework 4.5 is installed.</li><li>• Operations Manager Management Servers installed.</li></ul>

2. Log on as a user with administrator privileges.
3. On the SCOM server, start the installation from the HPE OneView for Microsoft System Center image by executing `autorun.hta`. Click **Install HPE OneView SCOM Integration Kit**. For more information on troubleshooting administrative privileges, refer to **Troubleshooting** on page 113.
4. From the **Welcome** screen, click **Next**.
5. From the **License Agreement** screen, select **I accept the terms in the license agreement**, and then click **Next**.
6. From the **Select features to install** screen, select the features to install, and then click **Next**.



---

**NOTE:**

- If the installer is running on a machine which does not have a management server, the HPE OneView Event Manager feature will be disabled.
- If you select the Management Pack feature, the HPE OneView Event Manager is not selected automatically. Instead, a message pops up stating the Event Manager has to be installed on the management server. In SCOM resource pool environment, the HPE OneView Event Manager must be installed on all the Management Servers in the resource pool.

- 
7. On the **Ready to Install** screen, click **Install**, and then wait for the installation to complete.
  8. Click **Finish** to close the installer.

---

**NOTE:**

- The installer does not automatically import management packs into SCOM.
- If you have installed the HPE OneView Management Pack feature, import the management packs into SCOM.
- The Hewlett Packard Enterprise management pack files are available at the following location:
  - For fresh installation: **installation-path**\HPE OneView Management Packs\Management Packs
  - For already installed products having HP names: **installation-path**\HP OneView Management Packs\Management Packs

- 
9. Restart the Operations Manager console and the Windows NT event viewer (if needed).

---

❗ **IMPORTANT:**

The HPE OneView Event Manager feature must be installed on all the Management Servers in the resource pool.

The logged in user has administrator level privileges and has full access to the following registry paths:

- HKEY\_LOCAL\_MACHINE\SOFTWARE\Hewlett-Packard
  - HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\PowerShell\1\PowerShellSnapIns
  - HKEY\_LOCAL\_MACHINE\SYSTEM\CurrentControlSet\Services\EventLog
- 

## Uninstalling

---

**NOTE:**

Uninstalling the HPE OneView SCOM Integration Kit from the server does not delete imported management packs from the SCOM. Delete the management packs from the SCOM before you uninstall the HPE OneView SCOM Integration Kit feature from the server.

---

You can use either of these methods to uninstall HPE OneView SCOM Integration Kit and tools:

- Use the **Programs and Features** (Windows Server 2008 and later) control panel to uninstall the HPE OneView SCOM Integration Kit.
  - Use the **Remove** option of the installer.
- 

❗ **IMPORTANT:**

The SCOM console must be closed when uninstalling the HPE OneView SCOM Integration Kit. If the SCOM console is open during the uninstall, you will receive an error message.

The NT Event Viewer also needs to be closed during the uninstall to avoid a reboot pop-up.

---

## Modifying

If the current release of the HPE OneView SCOM Integration Kit is installed, you can use the **Modify** option of the installer to add or remove features.

---

❗ **IMPORTANT:**

The SCOM console must be closed when modifying the HPE OneView SCOM Integration Kit. If the SCOM console is open during the modification, you will receive an error message.

---

# Using HPE OneView SCOM Integration Kit

This chapter describes the various tasks performed using the HPE OneView SCOM Integration Kit. Before using the management pack, ensure the HPE OneView SCOM Integration Kit has been properly installed and configured. For more information on installing the HPE OneView SCOM Integration Kit, see [Installing the HPE OneView SCOM Integration Kit](#) on page 17. Also, ensure that all other prerequisites and requirements described in the [Support matrix](#) on page 11 are met.

## Classes

The following key classes are required for optimal HPE OneView appliance management functionality:

- HPE OneView ApplianceInfo
- HPE OneView Appliance
- HPE Health Collection
- HPE OneView Health Component

### HPE OneView ApplianceInfo class

The HPE OneView ApplianceInfo Class defines the credentials of a managed HPE OneView appliance such as IP address, login user name, and password. It includes properties used for the following classes:

- HewlettPackard.OneView.ApplianceCredential
  - HewlettPackard.OneView.Appliance (inherited)

**Table 1: HPE OneView ApplianceInfo class properties**

Property	Type	Description
ID	String	Domain ID of the managed appliance
HostAddress	String	IP Address/DNS Name of managed appliance
UserName	String	Login user name of managed appliance
Password	String	Password of managed appliance in encrypted format

### HPE OneView Appliance Class

The following properties are available for the HPE OneView Appliance Class, HewlettPackard.OneView.Appliance:

**Table 2: HPE OneView Appliance class properties**

Property	Type	Description
HostName	String	Host Name of managed appliance
IPv4 address	String	IP Address of managed appliance
IPv6 address	String	IP Address of managed appliance

*Table Continued*



Property	Type	Description
ObjectID	String	Encrypted object ID
DomainName	String	Domain name of managed appliance
Model	String	Model of managed appliance
Build	String	Build of managed appliance
Revision	String	Revision of managed appliance
Software Version	String	HPE OneView appliance version
Managed By	String	Host Name of the management server
Used API version	String	HPE OneView API version
Appliance API version	String	HPE OneView Appliance API version

## HPE OneView Health Collection class

The following properties are available for the HPE OneView Health Collection class, `HewlettPackard.OneView.HPHealthCollection`:

**Table 3: HPE OneView Health Collection class properties**

Property	Type	Description
ResourceName	String	Name of discovered resource

## HPE OneView Health Component class

The following properties are available for the HPE OneView Health Component class, `HewlettPackard.OneView.HPHealthComponent`:

**Table 4: HPE OneView Health Component class properties**

Property	Type	Description
ObjectID	String	Object ID of discovered component
Name	String	Name of the component
DomainName	String	Domain name of the appliance which is managing the component

## Views

The SCOM console provides a collection of folders and windows for viewing information stored in the Operation Manager database. The HPE OneView Management Pack includes predefined HPE OneView appliance views that present information about each HPE OneView appliance and associated alerts.

The following views are added on the SCOM console after successful installation of the management pack:

- HPE OneView Systems This is the root folder that includes all views related to monitored HPE OneView appliances. All other folders in this list are in the **HPE OneView Systems** folder.
  - Active Alert
  - Appliance State
  - Configuration Dashboard
  - Enclosure Group State
  - Event Manager Service
  - Group Diagram
  - Health Dashboard
  - Task Status

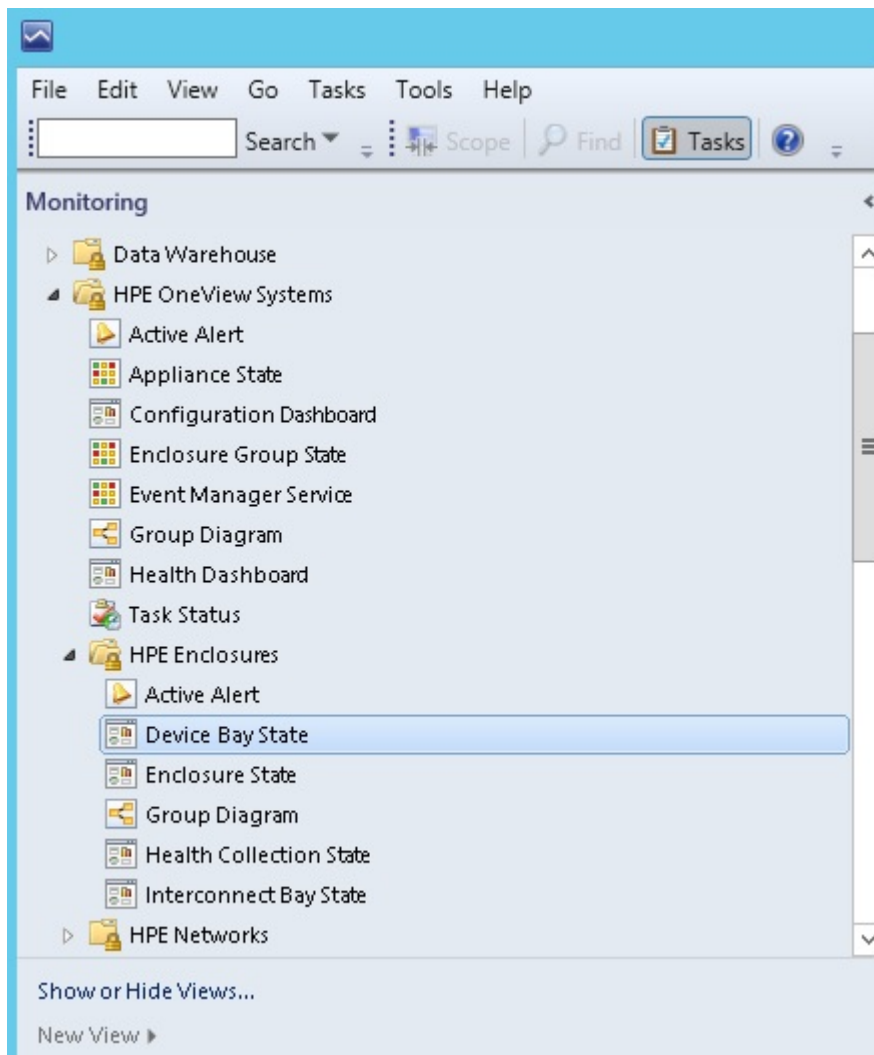


Figure 2: HPE OneView Management Pack views

## Active Alert View

The **Active Alert** view shows all active alerts associated with Health Collection classes. To display details for an individual alert, select the alert from the **Active Alert** pane. The Alert Details pane shows HPE Knowledge base text.

## NOTE:

There is no NT Event message for the unit monitor state change alerts.

The predefined event processing rules included with the HPE OneView Management Pack are designed to automatically identify and display HPE OneView events received in the Windows Event Log as alerts.

The following information appears in the Alert Details:

- Alert Name
- Source of Alert
- Path
- Alert Rule Name
- Created Time
- Alert Description
- Knowledge
  - Resolution with embedded console tasks
  - Causes
  - Summary
  - Related Links

The Resolution section contains the HPE OneView Web Console task to assist in tool access.

The screenshot displays the HPE OneView Monitoring interface. On the left, a navigation pane shows 'Monitoring' selected, with sub-items like 'Active Alert', 'Appliance State', and 'HPE Enclosures'. The main area shows a table of active alerts:

Severity	Path	Source	Name	Resolution State	Created	Age
Critical (4)						
✖	428bfa94-7654-...	L2R1Encl2	The temperature sensor in enclosure in rack has been set to...	New	6/19/2017 3:39:41 AM	2 Days, 20 Hour...
✖	428bfa94-7654-...	L2R1Encl2	The power supply 0 in enclosure in rack has been set to failed.	New	6/19/2017 3:41:24 AM	2 Days, 20 Hour...
✖	428bfa94-7654-...	L2R1Encl2-Encl...	The stacking health has changed to disconnected.	New	6/21/2017 10:25:52 PM	2 Hours, 9 Min...
✖	428bfa94-7654-...	L2R1Encl2-Encl...	For uplink set Upl_eth, uplink ports L2R1Encl2, interconnect 2...	New	6/21/2017 10:25:52 PM	2 Hours, 9 Min...
Warning (2)						

The 'Alert Details' pane for the selected alert shows:

- Alert Name:** The stacking health has changed to disconnected.
- Source:** L2R1Encl2-Encl\_Rajesh logical interconnect group
- Full Path Name:** 172.25.203.202:OneViewDomain\HPE Virtual Connect Module Collection\HPE Logical InterConnect Collection\L2R1Encl2-Encl\_Rajesh logical interconnect group
- Alert Rule:** A HPE OneView logical interconnect is in critical state
- Created:** 6/21/2017 10:25:52 PM
- Alert Description:** Description: The stacking health has changed to disconnected. User Action: Verify that the interconnects in the logical interconnect are fully stacked (redundantly connected). If the interconnect is part of an interconnect link topology, verify that there are no interconnect link topology errors. After completing these verifications, either refresh the enclosure or reapply the configuration to the logical interconnect.
- Resolution:** [crm.logicalInterconnectStateChange]

## Analyzing Hewlett Packard Enterprise alerts

The Hewlett Packard Enterprise alerts contain hardware and services information that enable you to identify the cause of an issue and implement a timely and effective response. The **Product Knowledge** tab indicates suggested resolutions to the alert. To view full knowledge information, click **View additional knowledge** from the Alert Details pane. Read the Product Knowledge and take action as described in the Resolutions section. If necessary, launch the console tasks defined in the Product Knowledge.

## Alert processing for supported resources

Starting with the 8.2 release, HPE OneView for SCOM integration supports all the alerts available in HPE OneView along with the alerts and events available from version 8.1 and earlier. The Event Manager receives all the critical and warning alerts for the supported resources with event IDs 41001 and 41002 respectively.

The entries are logged in the event viewer with generic information about the alert. For more information about these alerts, see the *HPE OneView User Guide*.

## Appliance State View

The **Appliance State** view displays the status of all managed HPE OneView appliances.

---

### NOTE:

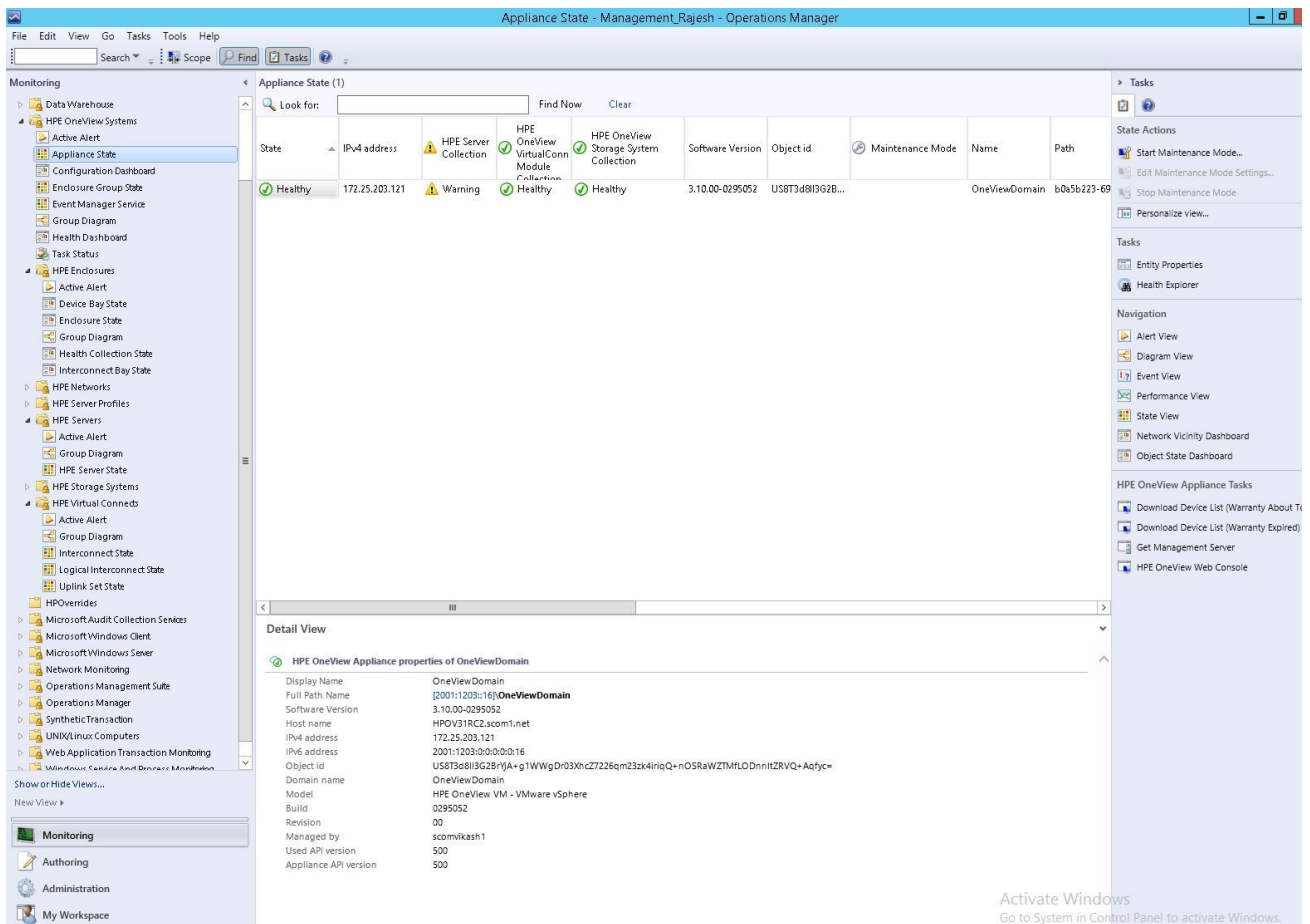
This information is customizable. You can go to the **Personalize** option and select the properties that you need to display.

---

The **Appliance State view** displays the overall status of HPE OneView appliance which was added using the OCD to manage it. To view detailed state information for HPE OneView health collections for an appliance, select the appliance, and launch **Health Explorer** from the **Context** menu or from the link in the Actions panel.

Detailed information for each HPE OneView appliance domain appears under the **Detail View** section of the screen:

- Display Name
- Full Path Name
- Software version
- Host name
- IPv4 address
- IPv6 address
- Object id
- Domain name
- Model
- Build
- Revision
- Managed By
- Used API version
- Appliance API version



## Health Explorer

The Health Explorer can be launched from the **Appliance State** view and the **Diagram** view. It displays the result of state propagation in folder style. The Health Explorer automatically expands those folders in which red or yellow states are observed. Select the last node in the folder to get knowledge information, and then select the **State Change Event** tab to view state change history.

## Configuration Dashboard view

Once added, a managed HPE OneView appliance must be discovered by the HPE OneView Configuration Dashboard (OCD). The **Configuration Dashboard** view allows you to add and remove HPE OneView appliances and displays a list of managed HPE OneView appliances.

### NOTE:

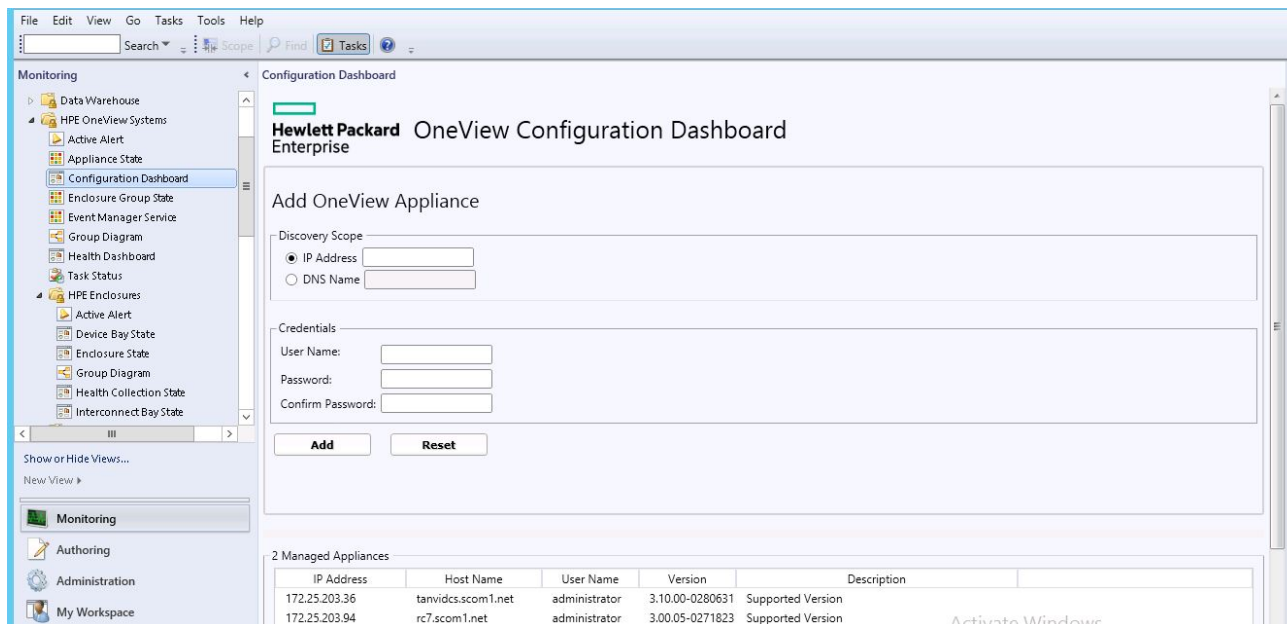
In order to access and view the OCD, the domain user account must be set up as a member of the local administrator group.

The HPE OneView password must not contain any of the following characters: less than (<), greater than (>), semicolon (;), comma (,), double-quotation mark ("), apostrophe ('), ampersand (&), backslash (\), slash (/), vertical bar (|), plus sign (+), colon (:), equal sign (=), and space.

The Managed Appliances list displays all managed HPE OneView appliances and includes the following information:

- IP Address
- Host Name
- User Name

- Version
- Description



## Health Dashboard Information

The health dashboard is a WPF user control dashboard. The health dashboard provides insights into the SCOM data. You can retrieve information from the SCOM database through SCOM SDK. Additionally, the dashboard provides a graphical health representation of the following resources:

- HPE OneView Appliance
- Server Hardware
- Enclosure group
- Server Profiles
- Enclosures
- Logical Interconnect
- Interconnects
- Storage Pool
- Storage Volume
- Storage System
- Uplink Set
- Drive Enclosure



To obtain metrics about an individual resource, click the resource to drill down further. Each resource Health GUI displays the following information:

- The total number of discovered instances
- The health status of the discovered instance in terms of percentage.

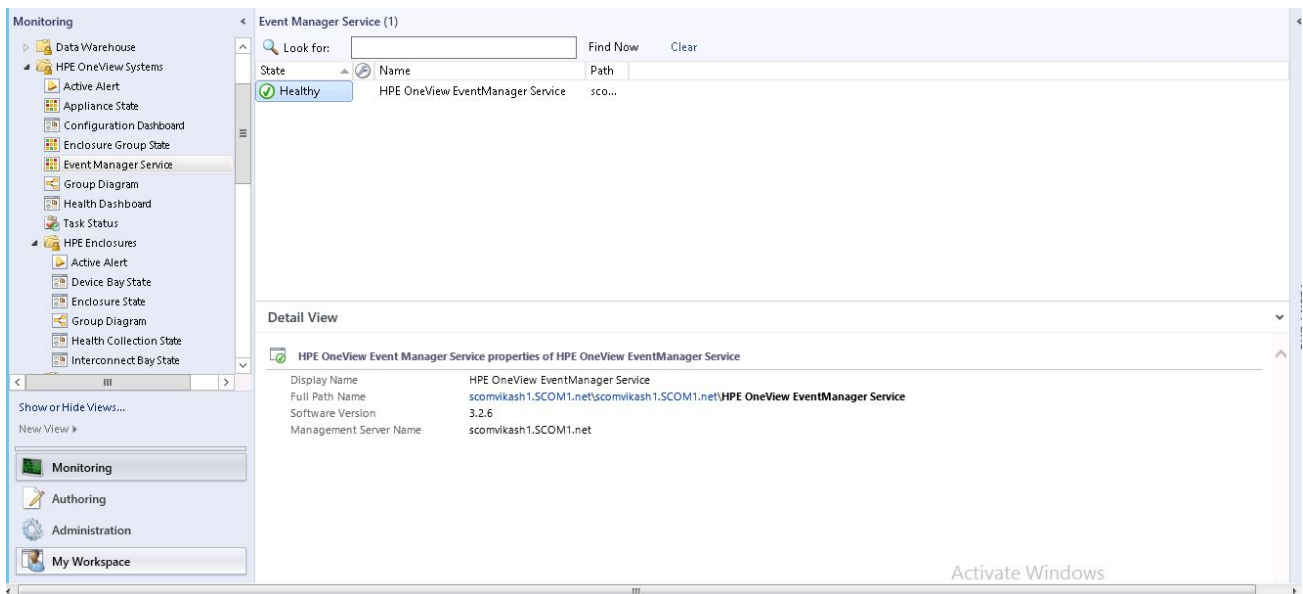
The status icons (Error, Unknown, Warning, and healthy) under each resource groups the number of discovered instances along with their respective health status.

**NOTE:**

Storage volumes in warning or critical state will only be displayed in Health dashboard.

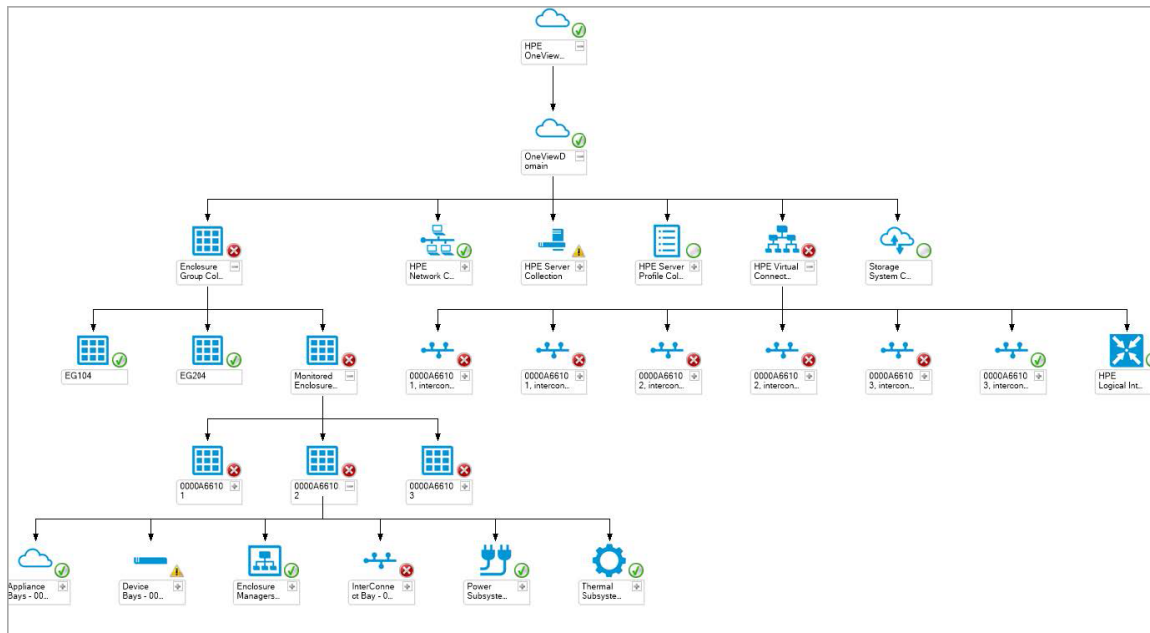
## Event Manager Service view

The **Event Manager Service** view displays the status of Event manager service running on the standalone alone management server and all the managements servers in the resource pool.



## Group Diagram view

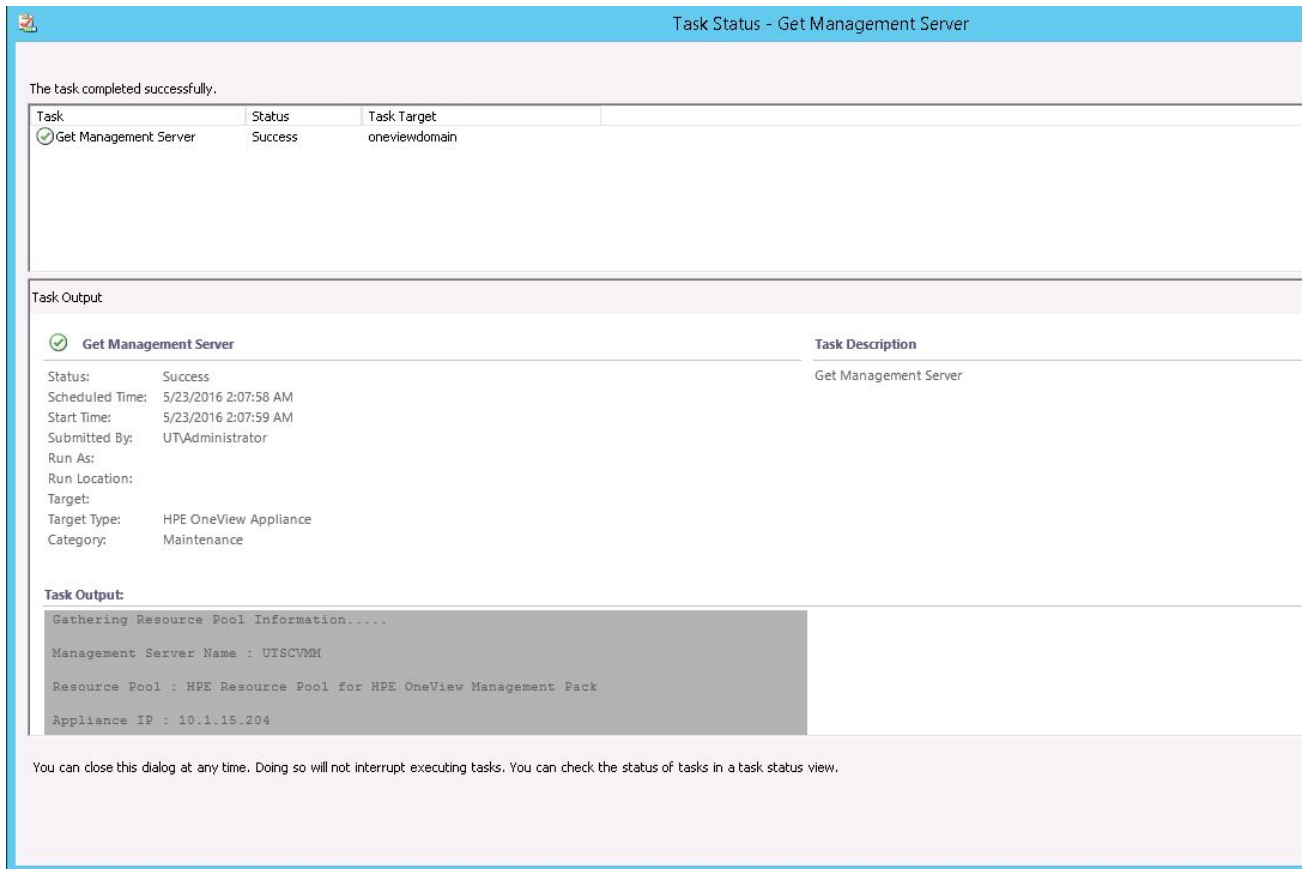
The **Group Diagram** view provides a graphical display of the HPE OneView appliance groups with a status icon on the lower right of each element. Expand each icon node to drill down to the next level of information. The group diagram opens to the first three levels by default.



## Task Status view

The Task Status view describes the tasks that are available in the Actions section on the Operations Manager console. These tasks are available for all the appliance instances that are discovered.





## Discovering HPE OneView Appliances

The following requirements must be met before adding an HPE OneView appliance:

- A supported Microsoft System Center Operations Manager product must be used (SCOM 2012R2 and SCOM 2016 only).
- Both the HPE OneView Library Management Pack and the HPE OneView Configuration Library Definitions Management Pack must be properly installed/imported in the SCOM console.
- A supported OS must be used.
- The HPE OneView appliance must be a supported version that is properly configured. See [Support matrix](#) on page 11.
- The HPE OneView appliance should be accessible from all the management servers in the resource pool.
- The Event manager must be installed on each of the standalone management server and all the management servers in the resource pool.

## Adding HPE OneView appliances

To add an HPE OneView appliance to be managed by the SCOM:

### Procedure

1. Expand the **HPE OneView Systems** folder in **Monitoring** view of the SCOM. The **HPE OneView Systems** folder expands revealing several views including the **Configuration Dashboard** view.
2. Select the **Configuration Dashboard** view. The **Configuration Dashboard** shows a custom-defined control, allowing adding/editing or removing of HPE OneView appliance.
3. Add the HPE OneView appliance details to the **Configuration Dashboard**.

- IP Address or DNS Name
  - User Name (Local or Active directory user)
  - Password
  - Confirm Password
4. Click **Add**. The **Configuration Dashboard** indicates the supported appliance has been added and lists the newly added appliance in the **Managed Appliances** list. The new appliance will be discovered in the Console following the next discovery cycle.

---

**NOTE:** By default, the discovery interval of HPE OneView Appliance class is set to 4 hours. The interval can be customized by the user.

---

**NOTE:** When adding HPE OneView appliances using Active Directory users, use the `Directoryname\domainuser` format, where `Directoryname` is the name of the directory provided in HPE OneView during the Active Directory integration.

---

**NOTE:** Users must have full HPE OneView administrator rights when adding HPE OneView instances in the HPE OneView Configuration Dashboard.

---

## Removing HPE OneView appliances

To remove an HPE OneView appliance from the SCOM:

### Procedure

1. Expand the **HPE OneView Systems** folder in Monitoring view of the SCOM. The **HPE OneView Systems** folder expands revealing several views including the **Configuration Dashboard** view.
2. Select the **Configuration Dashboard** view. The **Configuration Dashboard** displays.
3. From the **Managed Appliances** list, select the HPE OneView appliance to be removed.
4. Click **Remove** or right-click on the selected HPE OneView appliance to remove. The **HPE OneView Configuration Dashboard** indicates the appliance has been removed.

---

**NOTE:**

To remove multiple appliances, select the appliances listed under **Managed Appliances**, and then click **Remove**.

---

## Tasks

The HPE OneView Library Management Pack includes predefined tasks that can be used to launch the HPE OneView appliance web console and the Get Management Server task that runs the PowerShell script and displays the name of the management server in the resource pool which is managing the selected appliance. Not all tasks appear in every view, because tasks are associated with specific classes. The following tasks are available:

- Launching the HPE OneView web console task
- Launching the Get Management Server task

## Security settings

A prompt for login credentials will display when a task is open in Internet Explorer. You will need to enter your user credentials.

## Launching the HPE OneView web console task

To launch the HPE OneView web console task:

### Procedure

1. Select **HPE OneView Web Console** from the **Tasks** panel. A web browser opens the HPE OneView web page of the appliance.

## Launching the Get Management Server task

To launch the Get Management Server task:

### Procedure

1. Select **Get Management Server** from the **Tasks** panel. The **Tasks** panel pops up showing the target and the run location.
2. Click **Run**. The **Get Management Server** task runs and the results are displayed in the **Task Output** section. The management server is identified for each specific HPE OneView appliance.

The screenshot displays the HPE OneView web console interface. On the left, a navigation tree under 'Monitoring' includes 'Task Status'. The main area shows a 'Task Status (2)' table with two entries, both marked as 'Success'. Below this, the 'Task Details' section for 'Get Management Server' is expanded, showing a 'Task Description' and a 'Task Output' section. The task output contains the following text:

```
Gathering Resource Pool Information.....
Management Server Name : UTSCVMM
Resource Pool : HPE Resource Pool for HPE OneView Management Pack
Appliance IP : 10.1.15.204
Appliance Host Name : rmonview30SynergyMonitored.an.rm
```

## Monitors

HPE OneView Library Management Packs include a set of monitors to update the health states from HPE OneView management software. Monitors are presented in the following categories:

- HPE OneView Appliance Health monitoring These monitors update the health states to each HPE OneView Appliance Health class instance.
- HPE OneView Appliance To HPE OneView Domain Group Health Rollup monitoring These monitors update the health states to propagate from a lower associated class instance to a higher class instance.

**Table 5: Monitors for HPE OneView Library Management Pack**

ID: Name	Type	Target class	Description
HewlettPackard.OneView.Appliance.UnitMonitor	Unit Monitor	HPE OneView Appliance	Monitors the health of HPE OneView appliances.
HewlettPackard.OneView.Library.HewlettPackard.OneView.Appliance.DependencyMonitor	Dependency Monitor	HPE OneView Servers Group	This Health Rollup Monitor rolls up from the HPE OneView Appliance to the HPE OneView Domain Group.
HPOneViewEMS.UnitMonitor	Unit Monitor	HPE OneView Event Manager Service	Monitors the health of HPE OneView Event Manager service.

The HPE OneView Management Pack adds these items to the Monitoring view of the SCOM console:

- **HPE OneView Systems**

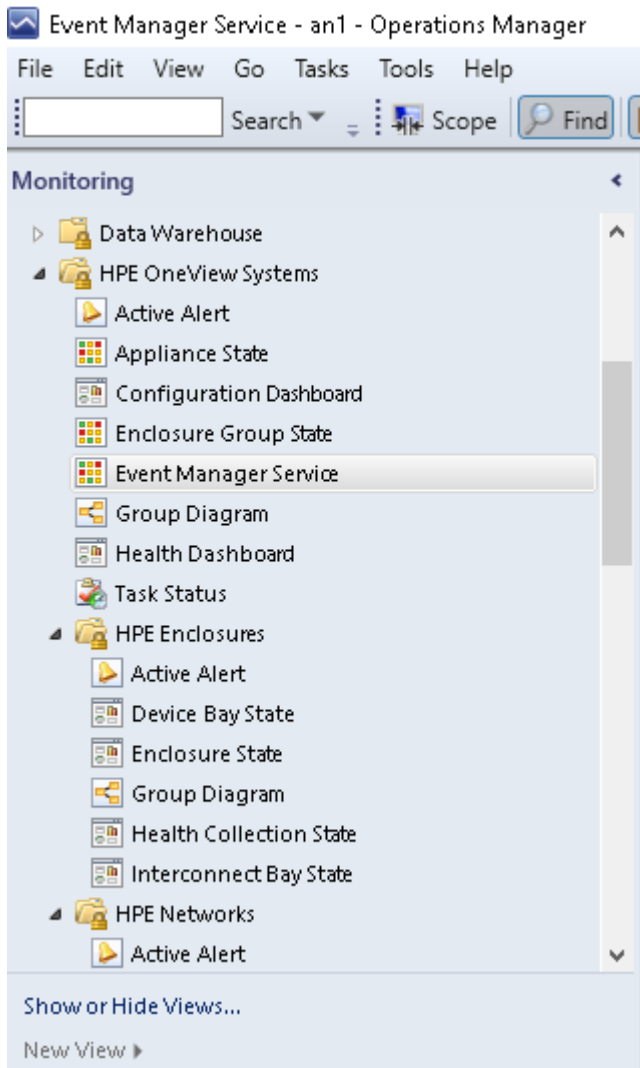
This folder contains these views for managed HPE OneView appliances and the configuration dashboard to add/edit/remove appliances:

**Table 6: Monitoring views**

View	Description
Active Alerts	A list of all health alerts received from HPE OneView
Appliance State	A list of all managed HPE OneView appliances
Configuration Dashboard	A custom-defined control, allowing adding/editing or removing of HPE OneView appliances
Enclosure Group State	A list of all managed Enclosure group
Event Manager Service	A list of all instances of HPE OneView Event Manager service from all the Management Servers
Group Diagram	A hierarchical group view with status icons on the lower right of each element

*Table Continued*

View	Description
Health Dashboard	A WPF User control, giving the overall health status of individual resources and the discovered instance
Task Status	Shows detailed status information for tasks



## Health Monitoring

Health monitoring includes:

- HPE OneView Appliance
- HPE OneView Domain Group

HPE OneView appliance instances are updated every 15 minutes (interval can be overridden and customized by the user) by running a monitoring module.

---

### NOTE:

The monitoring interval can be overridden and customized as applicable.

---

The following table describes the mapping between the health state values returned from the appliance rest interface, and the health state values displayed by SCOM:

SCOM Health State	HPE OneView Appliance Health State	Description
Healthy	OK	Represents OK status
Warning	Warning	Represents degraded status
Critical	Error	Represents failure status
Unknown	Unknown	Unknown or other status

**NOTE:**

By default, the Monitor state change alerts are disabled (Generate Alerts is set to **False**) in this management pack. To receive the Monitor state change alerts, you need to create an override and set Generate Alerts to **True**.

## Run As Profiles

The HPE OneView Library Management Pack includes a Run As Profile that enables non-default Run As accounts to be used for discovery and monitoring of HPE OneView appliances. The following Run As Profile is included:

- **HPE OneView Appliance Discovery/Monitoring Account**—Used for discovery and monitoring of HPE OneView appliances and the Hewlett Packard Enterprise systems managed by HPE OneView.

By default, the Agent Action Account specified in the Discovery Wizard is used for discovery and monitoring of HPE OneView appliances and the Hewlett Packard Enterprise systems managed by HPE OneView. If the Local System account is not selected and an Other account is specified with insufficient privileges, discovery and monitoring of an HPE OneView appliance and its managed resources might fail.

If an Agent Action Account is specified that has insufficient privileges to discover and monitor the target servers, the Run As profiles can be used to specify another account with sufficient privileges. The Run As profiles can be configured with the following steps:

1. Use the **Create Run As Account Wizard** to create an account that has sufficient privileges to perform discovery and monitoring of the target HPE OneView appliance.
2. Select the **Run As Profile Wizard** for the HPE OneView Discovery and Monitoring account profile and specify the Run As account that was created in step 1.

The Run As account used to discover and monitor the target HPE OneView appliances must have sufficient privileges to access certain resources on the managed server.

## Firewall Setting on System Center Operation Manager for HPE SCOM Integration Kit

System Center Operations Manager (SCOM) enables you to monitor services, devices, and operations for many computers from a single console. It uses a single interface that shows state, health and performance information of computer systems. It also provides alerts generated according to some availability, performance, configuration or security situation being identified.

SCOM can be extended by importing management packs (MPs) which define how SCOM monitors systems. Management Packs contain logic for discovering and monitoring the health of the elements of an application or device that is monitored by Operations Manager.

SCOM Console has 3 aspects:

- Discovery
- Monitoring
- Alert

Several SCOM servers can be aggregated together to monitor multiple networks. For discovery/ monitoring, there is no port requirement except HPE Oneview should be accessible from all the SCOM management servers in the resource pool. But for the alert , port 5671 needs to be open/ enabled on the Firewall. port 5671 must not be blocked which is used for SCMB subscription for alerts. Also, if there is a network firewall device enabled, the same 5671 port has to open /enabled.

# Using HPE OneView Enclosure Management Pack

The HPE OneView Enclosure Management Pack enables management of Enclosure and its sub component being managed by the appliance. HPE OneView appliances v3.0 and v3.1 are supported. For more information, see [Support matrix](#) on page 11.

This management pack has the following features:

- Discovery and inventory of supported resources (like interconnect bay, enclosure, device bay, onboard administrator, power subsystem, thermal subsystem for C7000).
- Discovery and inventory of supported resources (like interconnect bay, Enclosure, Device bay, manager bays, power subsystem, Thermal Subsystem for Synergy)
- Discovery and inventory of supported resources (like interconnect bay, Enclosure, Device bay, manager bays, power subsystem, thermal Subsystem, XFM bay for SDX)
- Health monitoring of resources (like interconnect bay, enclosure, device bay, onboard administrator, power subsystem, thermal subsystem, XFM bay).
- Task that open HPE OneView appliance, Hewlett Packard Enterprise onboard administrator web page in context to the selected resource.
- Monitor state change alert of the resources (Healthy to warning/critical).
- Rules to generate alerts.
- Identifies, groups, and displays enclosures being managed by HPE OneView in the management console.
- Populates Operations Manager with enclosure attributes and configuration data for the enclosure and its sub-components.
- Identifies, translates, and displays Enclosure hardware events written to the Windows Event Log by the HPE OneView Event Manager as Operations Manager alerts.
- Provides links to HPE OneView web console for hardware resource management and advanced administration from Operations Manager.

## Classes

The structure of management pack classes is defined to seamlessly provide operations with the HPE OneView Management Pack. The HPE OneView Enclosure Management Pack defines the classes in the following list.

- HPE OneView Enclosure Group  
Collection(ID=HewlettPackard.OneView.Enclosure.HPEnclosureGroupCollection)
- HPE OneView Enclosure Group(ID=HewlettPackard.OneView.Enclosure.HPEnclosureGroup)
- HPE OneView Enclosure Health  
Collection(ID=HewlettPackard.OneView.Enclosure.HPEnclosureHealthCollection)
- HPE OneView Enclosure Health  
Component(ID=HewlettPackard.OneView.Enclosure.HPEnclosureHealthComponent)
- HPE OneView Enclosure Interconnects(ID=HewlettPackard.OneView.Enclosure.HPIinterconnects)
- HPE OneView Enclosure Onboard Administrator  
Collection(ID=HewlettPackard.OneView.Enclosure.HPEnclosureOnboardAdministratorCollection)
- HPE OneView Enclosure DeviceBay  
Collection(ID=HewlettPackard.OneView.Enclosure.HPEnclosureDeviceBayCollection)
- HPE OneView Enclosure Thermal  
Subsystem(ID=HewlettPackard.OneView.Enclosure.HPEnclosureThermalSubsystem)
- HPE OneView Enclosure Power  
Subsystem(ID=HewlettPackard.OneView.Enclosure.HPEnclosurePowerSubsystem)
- HPE OneView Enclosure(ID=HewlettPackard.OneView.Enclosure.HPEnclosure)



- HPE OneView Enclosure Onboard Administrator(ID=HewlettPackard.OneView.Enclosure.HPEnclosureOnboardAdministrator)
- HPE OneView Enclosure Interconnect Bay(ID=HewlettPackard.OneView.Enclosure.HPInterconnectBay)
- HPE OneView Enclosure Fan(ID=HewlettPackard.OneView.Enclosure.HPEnclosureFan)
- HPE OneView Enclosure Power Supply(ID=HewlettPackard.OneView.Enclosure.HPEnclosurePowerSupply)
- HPE OneView Enclosure Device Bay(ID=HewlettPackard.OneView.Enclosure.HPEnclosureDeviceBay)
- HPE OneView Monitored Enclosure(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosure)
- HPE OneView Monitored Interconnect Collection(ID=HewlettPackard.OneView.Enclosure.HPMonitoredInterconnects)
- HPE OneView Monitored Onboardadministrator Collection(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureOnboardAdministratorCollection)
- HPE OneView Monitored Thermal Subsystem (ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureThermalSubsystem)
- HPE OneView Monitored Power subsystem(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosurePowerSubsystem)
- HPE OneView Monitored Device Bay Collection(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureDeviceBayCollection)
- HPE OneView Monitored Interconnects(ID=HewlettPackard.OneView.Enclosure.HPMonitoredInterconnectBay)
- HPE OneView Monitored Enclosure Interconnect Bay(ID=HewlettPackard.Oneview.Enclosure.HPMonitoredEnclosureOnboardAdministrator)
- HPE OneView Monitored Enclosure Onboard Administrator(ID=HewlettPackard.Oneview.Enclosure.HPMonitoredEnclosureFan)
- HPE OneView Monitored Enclosure Power Supply(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosurePowerSupply)
- HPE OneView Monitored Device Bay(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureDeviceBay)
- HPE OneView Monitored XFM Bay Collection(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureXFMbayCollection)
- HPE OneView Monitored XFM Bay(ID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureXFMbay)

## HPE OneView Managed Enclosure class

The following table displays the properties of each class:

Class	Property Name	Sample Value
HPE OneView Enclosure class	Object id	09SGH100X6J1
	Serial number	SGH100X6J1
	Enclosure	Enc1
	Enclosure group	RM DCS EG
	Asset tag	NA
	Enclosure type	BladeSystem c7000 Enclosure G2

*Table Continued*

Class	Property Name	Sample Value
	Part number	455880-B21
	Rack	Rack-217
	Server licensing policy	HPE OneView Advanced
	State	Configured
	UUID	09SGH100X6J1
	VCM domain	OneViewDomain
	Device bay count	16
	Interconnect bay count	8
	OA bay count	Numeric Value
	Fan bay count	Numeric Value
	Power supply bay count	Numeric Value
	Primary OA	IP Format (IPv4 and IPv6)
	Standby OA	IP Format (IPv4 and IPv6)
	Associated logical enclosure	Logical Enclosure Name
	Remote Support	Enabled
	Remote Support Level	Warranty
	Warranty Start Date	Date & time format (1/1/2018 12:00 PM)
	Warranty Expiration Date	Date & time format (1/1/2018 12:00 PM)
	Enclosure Interconnect Bay Class	Bay number
Product name		HPE VC FlexFabric 10Gb/24-Port Module
Object id		09USE6452AH5:InterconnectBay:6
Name		Interconnect - Bay 6
Domain name		OneViewDomain
Logical interconnect		Encl1-LI

*Table Continued*

Class	Property Name	Sample Value
	Serial number	WECFSED101
	Part number	571956-B21
	Location	Encl1, interconnect 2
	State	Configured
	Bay Type	C7000Interconnect bay
Enclosure Device Bay Class	Name	Device Bay 1 - ProLiant BL660c Gen8
	Domain name	OneViewDomain
	Enclosure	Encl1
	Bay number	1
	Server hardware	Encl1, bay 1
	Server profile	Bay1-ServerProfile
	Model	ProLiant BL660c Gen8
	State	ProfileApplied
	Server hardware type	BL460c Gen8 1
	Serial number	MXQ31107WC
	Power state	On
	Integrated Lights-Out address	172.16.2.1 (IPv4 and IPv6)
	Integrated Lights-Out model	iLO4
	CPU	2 processors, Intel®, Xeon® CPU E5-2650 0 (2.00GHz / 8-core)
	Part number	670656-S01
ROM version	I31 11/02/2014	
HPE OneView Enclosure Onboard Administrator Class	Object id	09SGH224M602:OABay:1
	Name	Active OA
	Domain name	OneViewDomain
	Role	Active

*Table Continued*

Class	Property Name	Sample Value
	Firmware version	4.01
	Firmware build date	April 01 2013
	Bay number	1
	Fqdn host name	IP Format
	IPv4 address	IP Format
	IPv6 address	IPv6 Format
	State	Configured
HPE OneView Enclosure Power Supply	Object id	09SGH224M602:PowersupplyBay:1
	Name	String Value
	Domain name	OneViewDomain
	Bay number	numeric value
	Model	HPE 2400W HE PSU
	Serial number	5AGUD0AHLZN2AJ
	Part number	499253-B21
Spare part number	500242-001	
HPE OneView Enclosure Fan Class	Object id	09SGH224M602:FanBay:10
	Bay number	numeric value
	Name	Active OA
	Domain name	OneViewDomain
	Device required	False
	Model	Fan
	Part number	413996-001
	Spare part number	412140-B21
	State	OK

## HPE OneView Monitored Enclosure Class

ID : HewlettPackard.OneView.Enclosure.HPMonitoredEnclosure

**Monitored Enclosure Class** table displays each of the properties within the HPE OneView Monitored Enclosure Class:

**Table 7: Monitored Enclosure Class**

Property	Type	Description	Example
Object ID	String	Enclosure Identifier. Key Property in SCOM. Inherited from HPE Logical hardware	09SGH100X6J1
Serial Number	String	Serial No of Enclosure	SGH100X6J1
Enclosure Name	String	Enclosure Name	Encl1
Asset Tag	String	Product Name. This tag is for inventory control	QA_Enclosure
Enclosure Type	String	Type of Enclosure	BladeSystem c7000 Enclosure G2
Part number	String	Part Number of the Enclosure Module	455880-B21
Rack Name	String	name of the Rack	Rack-217
Server Licensing Policy	String	HPE OneView license	HPE OneView Standard
State	String	State of Enclosure	Configured
UUID	String	Any ID	09SGH100X6J1
VCM Domain Name	String	VCM Domain Name	OneViewDomain
Device Bay Count	String	Count	16
InterConnect Bay Count	String	InterConnect Bay Count	8
OA Bay Count	String	OA Bay Count	Numeric Value
Fan Bay Count	String	Fan Bay Count	Numeric Value
Power Supply Bay Count	String	Power Supply Bay Count	Numeric Value
Primary OA	String	IP of Primary OA	IP Format (IPv4 and IPv6)
Standby OA	String	IP of Standby OA	IP Format (IPv4 and IPv6)

*Table Continued*

Property	Type	Description	Example
Remote Support	String	HPE remote support status	Enabled
Remote Support Level	String	Level of remote support	Warranty
Warranty Start Date	String	Date on which warranty has started	Date & time format ( 1/1/2018 12:00 PM)
Warranty Expiration Date	String	Date on which warranty is going to end	Date & time format ( 1/1/2018 12:00 PM)

## HPE OneView Monitored Enclosure Device Bay Class

ID: HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureDeviceBay

**Monitored Enclosure Device Bay Class** table displays each of the properties within the HPE OneView Monitored Enclosure Device Bay Class:

**Table 8: HPE OneView Monitored Enclosure Device Bay Class**

Property	Type	Description	Examples
Name	String	Name of the Device Bay	Device Bay 1 - ProLiant BL660c Gen8
Domain Name	String	Domain Name	OneViewDomain
Enclosure Name	String	Name of the Enclosure	Encl1
Bay Number	String	Bay Number	1
Sevrer Hardware name	String	Server Name	Encl1, bay 1
Server profile name	String	Name of Server profile	Bay1-ServerProfile
Model	String	Model Name	ProLiant BL660c Gen8
State	String	Device Bay State	Healthy
Server Hardware Type	String	Server Type	ProLiant BL420c Gen8
Serial Number	String	Device Bay Serial No	2M2309002B
Power State	String	Power State	ON
Integrated Lights-Out address	String	iLO IP Address	172.16.2.1 (IPv4 and IPv6)
Integrated Lights-Out model	String	Model Name	iLo4

*Table Continued*

Property	Type	Description	Examples
CPU	String	CPU Speed and Processor type	2 processors, Intel®, Xeon® CPU E5-2650 0 (2.00GHz / 8-core)
Part Number	String	Part Number	455880-B21
ROM Version	String	ROM Version	I30 11/03/2014

## HPE OneView Monitored Enclosure Onboard Administrator Class

ID : HewlettPackard.Oneview.Enclosure.HPMonitoredEnclosureOnboardAdministrator

**Monitored Enclosure Onboard Administrator Class** table displays each of the properties within the HPE OneView Enclosure OA class:

**Table 9: HPE OneView Monitored Enclosure Onboard Administrator Class**

Property	Type	Description	Examples
Name	String	Name of the OA	Active OA
Domain name	String	Associated appliance domain name	OneViewDomain
Role	String	Role of the OA	Active
Firmware Version	String	Version	4.01
Firmware Build date	String	Date of build	April 01 2013
Bay Number	String	OA Bay Number	1
Fqdn host name	String	Domain Name	IP Format
IPv4 Address	String	IP Address	IP Format
IPv6 Address	String	IP Address	IPv6 Format
State	String	State of OA	Configured

## HPE OneView Monitored Enclosure Power Supply

ID : HewlettPackard.OneView.Enclosure.HPMonitoredEnclosurePowerSupply

**Monitored Enclosure Power Supply** table displays each of the properties within the HPE OneView Monitored Enclosure Power Supply:

**Table 10: HPE OneView Monitored Enclosure Power Supply**

Property	Type	Description	Examples
Name	String	name of power supply	Power Supply - Bay 4
Domain Name	String	Appliance Domain	OneViewDomain
Bay Number	String	Bay Number	1
Model	String	Model Name	HPE 2400W HE PSU
Serial Number	String	Serial Number of Enclosure Power Supply	5AGUD0AHLZN2AJ
Part Number	String	Part Number	499253-B21
Spare part Number	String	Spare Part Number	500242-001

## HPE OneView Monitored Enclosure Fan Class

ID : HewlettPackard.Oneview.Enclosure.HPMonitoredEnclosureFan

**Monitored Enclosure Fan Class** table displays each of the properties within the HPE OneView Monitored Enclosure Fan Class:

**Table 11: HPE OneView Monitored Enclosure Fan Class**

Property	Type	Description	Examples
Name	String	Name of the FAN	FAN 1
Domain name	String	Associated appliance domain name	OneViewDomain
Device Required	String	Fan requirement	False
Model	String	Fan model	Active Cool 200 Fan
Part Number	String	Part number	413996-001
Spare Part Number	String	Spare part number	412140-B21
State	String	State of Fan	OK

## HPE OneView Monitored Enclosure Interconnect Class

ID : HewlettPackard.Oneview.Enclosure.HPMonitoredInterconnectBay



**Table 12: HPE OneView Monitored Enclosure Interconnect Class**

Property	Type	Description	Examples
Display name	String	Display name	Interconnect - Bay 3
Object id	String	Interconnect id	09SGH102X6J1:InterconnectBay:3
Name	String	Interconnect name	Interconnect - Bay 3
Domain name	String	Domain name	OneViewDomain
Bay number	String	Interconnect bay number	3
Product name	String	interconnect model name	HPE VC Flex-10 Enet Module
Serial number	String	Interconnect serial number	WECFSED108
Part number	String	Interconnect part number	455880-B21
Location	String	Interconnect bay	Encl2, interconnect 3
State	String	Interconnect state	Inventory

## HPE OneView Monitored Enclosure XFM Bay Class

ID: HewlettPackard.OneView.Enclosure.HPMonitoredEnclosureXFMbay

**Table 13: HPE OneView Monitored Enclosure XFM Bay Class**

Property	Type	Description	Examples
Bay Number	String	Bay Number	Bay 1
Part Number	String	Part Number	413996-001
Serial Number	String	Serial Number	5AGUD0AHLZN2AJ
Associated Enclosure	String	Enclosures	Encl1

## HPE OneView for HPE Synergy Enclosure Class

ID : HewlettPackard.OneView.Synergy.HPManagedEnclosure

**Synergy Enclosure Class** table displays each of the properties within the HPE OneView for HPE Synergy Enclosure Class:

**Table 14: HPE OneView for HPE Synergy Enclosure Class**

Property	Type	Description	Examples
Object ID	String	Enclosure Identifier. Key Property in SCOM. Inherited from HPE Logical hardware	09SGH100X6J1
Serial Number	String	Serial No of Enclosure	SGH100X6J1
Enclosure Name	String	Enclosure Name	Encl1
Enclosure Group Name	String	Enclosure group name	RM DCS EG
Enclosure Type	String	Type of Enclosure	SY12000
Part number	String	Part Number of the Enclosure Module	455880-B21
Rack Name	String	Name of the Rack	Rack-217
State	String	State of Enclosure	Configured
UUID	String	Any ID	09SGH100X6J1
Device Bay Count	String	Count	16
InterConnect Bay Count	String	InterConnect Bay Count	8
ManagerBaysCount	string	OA Bay Count	Numeric Value
Fan Bay Count	String	Fan Bay Count	Numeric Value
Power Supply Bay Count	String	Power Supply Bay Count	Numeric Value
ApplianceBaysCount	String	Count	Numeric Value
AssociatedLogicalEnclosure	String	Associated Enclosure	Enclosure Name
Remote Support	String	HPE Remote Support Status	Enabled
Remote Support Level	String	Level of Remote Support	Warranty
Warranty Start Date	String	Date on which warranty started	Date & time format ( 1/1/2018 12:00 PM)
Warranty Expiration Date	String	Date on which warranty is going to end	Date & time format ( 1/1/2018 12:00 PM)

# HPE OneView for HPE Synergy Monitored Enclosure Class

ID : HewlettPackard.OneView.Synergy.HPMonitoredEnclosure

**Table 15: HPE OneView for HPE Synergy Monitored Enclosure Class**

Property	Type	Description	Examples
Display Name	String	Enclosure name	Encl1
Full Path Name	String	Enclosure full path	10.1.15.204\OneViewDomain\Enclosure Group Collection\Monitored Enclosure Collection\0000A66103
Enclosure serial number	String	Enclosure serial number	0000A66103
Object id	String	Enclosure object id	0000000000A66103
Part number	String	Enclosure part number	000000-010
Enclosure type	String	Enclosure type	SY12000
Rack Server Licensing policy	String	License	NotApplicable
State	String	Enclosure state	Monitored
UUID	String	Any id	0000000000A66103
Device Bay Count	String	Total device bay number	12
Interconnect bay count	String	Total interconnect bay number	6
Manager bay count	String	Total manager bay number	2
Fan bay count	String	Total fan bay number	10
Power supply bay count	String	Total power supply bay number	6
Appliance bay count	String	Total appliance bay number	2
Remote Support	String	HPE Remote Support Status	Enabled
Remote Support Level	String	Level of Remote Support	Warranty

*Table Continued*

Property	Type	Description	Examples
Warranty Start Date	String	Date on which warranty started	Date & time format ( 1/1/2018 12:00 PM)
Warranty Expiration Date	String	Date on which warranty is going to end	Date & time format ( 1/1/2018 12:00 PM)

## HPE OneView for HPE Synergy Enclosure InterConnect Bay Class

ID : HewlettPackard.OneView.Synergy.HPInterconnectBay

**Synergy Enclosure InterConnect Bay Class** table displays each of the properties within the HPE OneView Synergy Enclosure InterConnect Bay Class:

**Table 16: HPE OneView for HPE Synergy Enclosure InterConnect Bay Class**

Property	Type	Description	Examples
Bay Number	String	No of Bays	2
Name	String	Name of the Product	Virtual Connect SE 40Gb F8 Module for Synergy
Logical InterConnect	String	Name of Logical InterConnects	Encl1-LI
Serial Number	String	Serial No	WECFSED101
Model	String	Model of InterConnect	Virtual Connect SE 40Gb F8 Module for Synergy
Logical interconnect	String	Associated LE	LE-Potash
BayType	String	Bay type of InterConnect bay	SY12000InterconnectBay

## HPE OneView Synergy Monitored Enclosure InterConnect Bay Class

ID : HewlettPackard.OneView. MonitoredSynergy.HPInterconnectBay

**Synergy Monitored Enclosure InterConnect Bay Class** table displays each of the properties within the HPE OneView Synergy Monitored Enclosure InterConnect Bay Class:

**Table 17: HPE OneView Synergy Monitored Enclosure InterConnect Bay Class**

Property	Type	Description	Examples
Bay Number	String	No of Bays	2
Name	String	Name of the Product	Virtual Connect SE 40Gb F8 Module for Synergy

*Table Continued*

Property	Type	Description	Examples
Domain name	String	Domain name	OneView Domain
Serial Number	String	Serial No	WECFSED101
Model	String	Model of InterConnect	Virtual Connect SE 40Gb F8 Module for Synergy
BayType	String	Bay type of InterConnect bay	SY12000InterconnectBay

## HPE OneView for HPE Synergy Enclosure Device Bay Class

ID : HewlettPackard.OneView.Synergy.HPEnclosureDeviceBay

**Synergy Enclosure Device Bay Class** table displays each of the properties within the HPE OneView for HPE Synergy Enclosure Device Bay Class:

**Table 18: HPE OneView for HPE Synergy Enclosure Device Bay Class**

Property	Type	Description	Examples
Name	String	Name of the Device Bay	Device Bay 1 - ProLiant BL660c Gen8
Domain Name	String	Domain Name	OneViewDomain
Enclosure Name	String	Name of the Enclosure	Encl1
Bay Number	String	Bay Number	1
Sevrer Hardware name	String	Server Name	Encl1, bay 1
Server profile name	String	Name of Server profile	Bay1-ServerProfile
Model	String	Model Name	ProLiant BL660c Gen8
Server Hardware Type	String	Server Type	ProLiant BL420C gen 8
Serial Number	String	Device Bay Serial No	2M2309002B
Power State	String	Power State	ON
Integrated Lights-Out address	String	iLO IP Address	172.16.2.1 (IPv4 and IPv6)

*Table Continued*

Property	Type	Description	Examples
Integrated Lights-Out model	String	Model Name	iLO4
CPU	String	CPU Speed and Processor type	2 processors, Intel®, Xeon® CPU E5-2650 0 (2.00GHz / 8-core)

## HPE OneView for HPE Synergy Monitored Enclosure Device Bay Class

ID : HewlettPackard.OneView.MonitoredSynergy.HPEnclosureDeviceBay

**Synergy Monitored Enclosure Device Bay Class** table displays each of the properties within the HPE OneView for HPE Synergy Monitored Enclosure Device Bay Class:

**Table 19: HPE OneView for HPE Synergy Monitored Enclosure Device Bay Class**

Property	Type	Description	Examples
Name	String	Name of the Device Bay	Device Bay 1 - ProLiant BL660c Gen8
Domain Name	String	Domain Name	OneViewDomain
Enclosure Name	String	Name of the Enclosure	Encl1
Bay Number	String	Bay Number	1
Sevrer Hardware name	String	Server Name	Encl1, bay 1
Model	String	Model Name	ProLiant BL660c Gen8
Server Hardware Type	String	Server Type	ProLiant BL460c Gen8
Serial Number	String	Device Bay Serial No	2M2309002B
Power State	String	Power State	ON
Integrated Lights-Out address	String	iLO IP Address	172.16.2.1 (IPv4 and IPv6)
Integrated Lights-Out model	String	Model Name	iLO 4
CPU	String	CPU Speed and Processor type	2 processors, Intel®, Xeon® CPU E5-2650 0 (2.00GHz / 8-core)

## HPE OneView for HPE Synergy Enclosure Manager Bay Class

ID : HewlettPackard.Oneview.Synergy.HPEnclosureManagerBay

**Synergy Enclosure Manager Bay Class** table displays each of the properties within the HPE OneView Synergy Enclosure Manager Bay Class:

**Table 20: HPE OneView for HPE Synergy Enclosure Manager Bay Class**

Property	Type	Description	Examples
Role	String	Role of the Enclosure Manager	Active
Firmware Version	String	Version	4.01
Firmware Build date	String	Date of build	11/12/2014,01:53:01
Bay Number	String	Numeric value	1
managerType	String	Manager type	EnclosureManager
IPv6 Address	String	IP address	fe80::2:0:9:4%eth2
SerialNumber	String	Serial no of the manager bay	0000A66102
SparePartNumber	String	Spare part no	807963-001
PartNumber	String	Part no	802341-B21
MgmtPortLinkStatus	String	Management link port status	unlinked
PortSpeed	String	Port speed	10
Model	String	model	HPE Synergy Frame Link Module

## HPE OneView for HPE Synergy Monitored Enclosure Manager Bay Class

ID : HewlettPackard.Oneview.MonitoredSynergy.HPEnclosureManagerBay

**Synergy Monitored Enclosure Manager Bay Class** table displays each of the properties within the HPE OneView for HPE Synergy Monitored Enclosure Manager Bay Class:

**Table 21: HPE OneView for HPE Synergy Monitored Enclosure Manager Bay Class**

Property	Type	Description	Examples
Role	String	Role of the Enclosure Manager	Active
Firmware Version	String	Version	4.01
Firmware Build date	String	Date of build	11/12/2014,01:53:01

*Table Continued*

Property	Type	Description	Examples
Bay Number	String	Numeric value	1
managerType	String	Manager type	EnclosureManager
IPv6 Address	String	ID address	fe80::2:0:9:4%eth2
SerialNumber	String	Serial no of the manager bay	0000A66102
SparePartNumber	String	Spare part no	807963-001
PartNumber	String	Part no	802341-B21
MgmtPortLinkStatus	String	Management link port status	unlinked
PortSpeed	String	Port speed	10
Model	String	model	HPE Synergy Frame Link Module

## HPE OneView for HPE Synergy Enclosure Power Supply

ID : HewlettPackard.OneView.Synergy.HPEnclosurePowerSupply

**Synergy Enclosure Power Supply** table displays each of the properties within the HPE OneView Synergy Enclosure Power Supply:

**Table 22: HPE OneView for HPE Synergy Enclosure Power Supply**

Property	Type	Description	Examples
Name	String	Name of power supply	Power Supply - Bay 1
Domain Name	String	Appliance Domain	OneViewDomain
Bay Number	String	Bay Number	1
Model	String	Model Name	HPE 2400W HE PSU
Serial Number	String	Serial Number of Enclosure Power Supply	5AGUD0AHLZN2AJ
Part Number	String	Part Number	499253-B21
Spare part Number	String	Spare part number	500242-001
PowerSupplyBayType	String	Power supply type	HPE 2400W HE PSU
OutputCapacityWatts	Int	Output capacity	2650 W



## HPE OneView Synergy Monitored Enclosure Power Supply

ID : HewlettPackard.OneView.MonitoredSynergy.HPEnclosurePowerSupply

**Synergy Monitored Enclosure Power Supply** table displays each of the properties within the HPE OneView Synergy Monitored Enclosure Power Supply:

**Table 23: HPE OneView Synergy Monitored Enclosure Power Supply**

Property	Type	Description	Examples
Name	String	name of power supply	String Value
Domain Name	String	Appliance Domain	OneViewDomain
Bay Number	String	Bay Number	1
Model	String	Model Name	HPE 2400W HE PSU
Serial Number	String	Serial Number of Enclosure Power Supply	5AGUD0AHLZN2AJ
Part Number	String	Part Number	499253-B21
Spare part Number	String	Spare part number	500242-001
PowerSupplyBayType	String	Power supply type	HPE 2400W HE PSU
OutputCapacityWatts	Int	Output Capacity	2650

## HPE OneView for HPE Synergy Enclosure Fan Class

ID : HewlettPackard.Oneview.Synergy.HPEnclosureFan

**Synergy Enclosure Fan Class** table displays each of the properties within the HPE OneView for HPE Synergy Enclosure Fan Class:

**Table 24: HPE OneView for HPE Synergy Enclosure Fan Class**

Property	Type	Description	Examples
Name	String	Name of the FAN	FAN1
Domain name	String	Associated appliance domain name	OneViewDomain
Device Required	String	Device requirement	False
Model	String	Fan model	Active Cool 200 Fan
Part Number	String	Part number	413996-001
Spare Part Number	String	Spare part number	412140-B21

*Table Continued*

Property	Type	Description	Examples
State	String	State of Fan	OK
Status	String	Status of Fan	OK
BayNumber	String	Fan bay number	2
SerialNumber	String	Fan serial number	3C34431019
FanBayType	String	Fan bay type	SY12000FanBay

## HPE OneView for HPE Synergy Monitored Enclosure Fan Class

ID : HewlettPackard.Oneview.MonitoredSynergy.HPEnclosureFan

**Synergy Monitored Enclosure Fan Class** table displays each of the properties within the HPE OneView for HPE Synergy Monitored Enclosure Fan Class:

**Table 25: HPE OneView for HPE Synergy Monitored Enclosure Fan Class**

Property	Type	Description	Examples
Name	String	Name of the FAN	FAN1
Domain name	String	Associated appliance domain name	OneViewDomain
Device Required	String	Device requirement	False
Model	String	Fan model	Active Cool 200 Fan
Part Number	String	FAN part number	413996-001
Spare Part Number	String	Spare Part number	412140-B21
State	String	State of Fan	Healthy
Status	String	Fan status	OK
BayNumber	String	Fan Bay number	3
SerialNumber	String	Fan serial number	3C34431019
FanBayType	String	Fan bay type	SY12000FanBay

## HPE OneView for HPE Synergy Managed Enclosure Appliance Bay class

ID : HewlettPackard.OneView.Synergy.HPApplianceBay

**Synergy Managed Enclosure Appliance Bay Class** table displays each of the properties within the HPE OneView for HPE Synergy Managed Enclosure Appliance Bay class:

**Table 26: HPE OneView for HPE Synergy Managed Enclosure Appliance Bay class**

Property	Type	Description	Examples
BayNumber	String	Bay number	2
Model	String	Model	HPE Synergy Composer
Part Number	String	Part number	804353-B21
Spare Part Number	String	Spare part number	807964-001
Bay Number	String	Appliance bay number	1
Serial Number	String	Appliance serial number	UH53CP0103

## HPE OneView Synergy Monitored Enclosure Appliance Bay class

ID : HewlettPackard.OneView.MonitoredSynergy.HPApplianceBay

**Synergy Monitored Enclosure Appliance Bay Class** table displays each of the properties within the HPE OneView Synergy Monitored Enclosure Appliance Bay class:

**Table 27: HPE OneView Synergy Monitored Enclosure Appliance Bay class**

Property	Type	Description	Examples
BayNumber	String	Bay number	2
Model	String	Model	HPE Synergy Composer
Part Number	String	Part number	804353-B21
Spare Part Number	String	Spare part number	807964-001
BayNumber	String	Appliance bay number	1
SerialNumber	String	Appliance serial number	UH53CP0103

## Views

The management console provides a collection of folders and windows for viewing information stored in the management database. The HPE OneView Enclosure Management Pack includes only a single folder for Enclosure state, Device Bay State, Interconnect State, and for Health Collection State. These single state views lists all the respective resources from all the different types of enclosures.

The views are displayed at the following location: **HPE OneView Systems > HPE Enclosures**.

- **Active Alert** This view displays active alerts generated from the HPE OneView Enclosures and its sub-components. The same alerts appear in the HPE OneView Systems/Active Alerts view.
- **Group Diagram** This view displays the Diagram view, starting with the Enclosure Groups. The same groups also appear in the HPE OneView Systems/Group Diagram view.
- **Device Bay State** This view displays device bays with state and properties in managed and monitored HPE OneView Enclosures.

- Interconnect Bay State This view renders a list of all the managed Interconnects instances.
- Enclosure State This view renders a list of all the managed and monitored Enclosure instances.
- Health Collection State This view renders a list of all the managed and monitored Enclosure's Health collection instances.

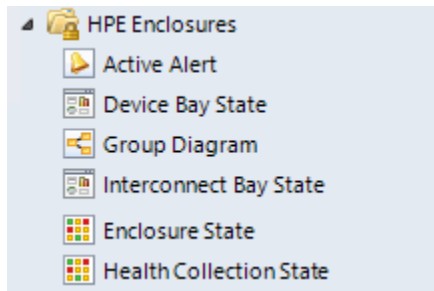
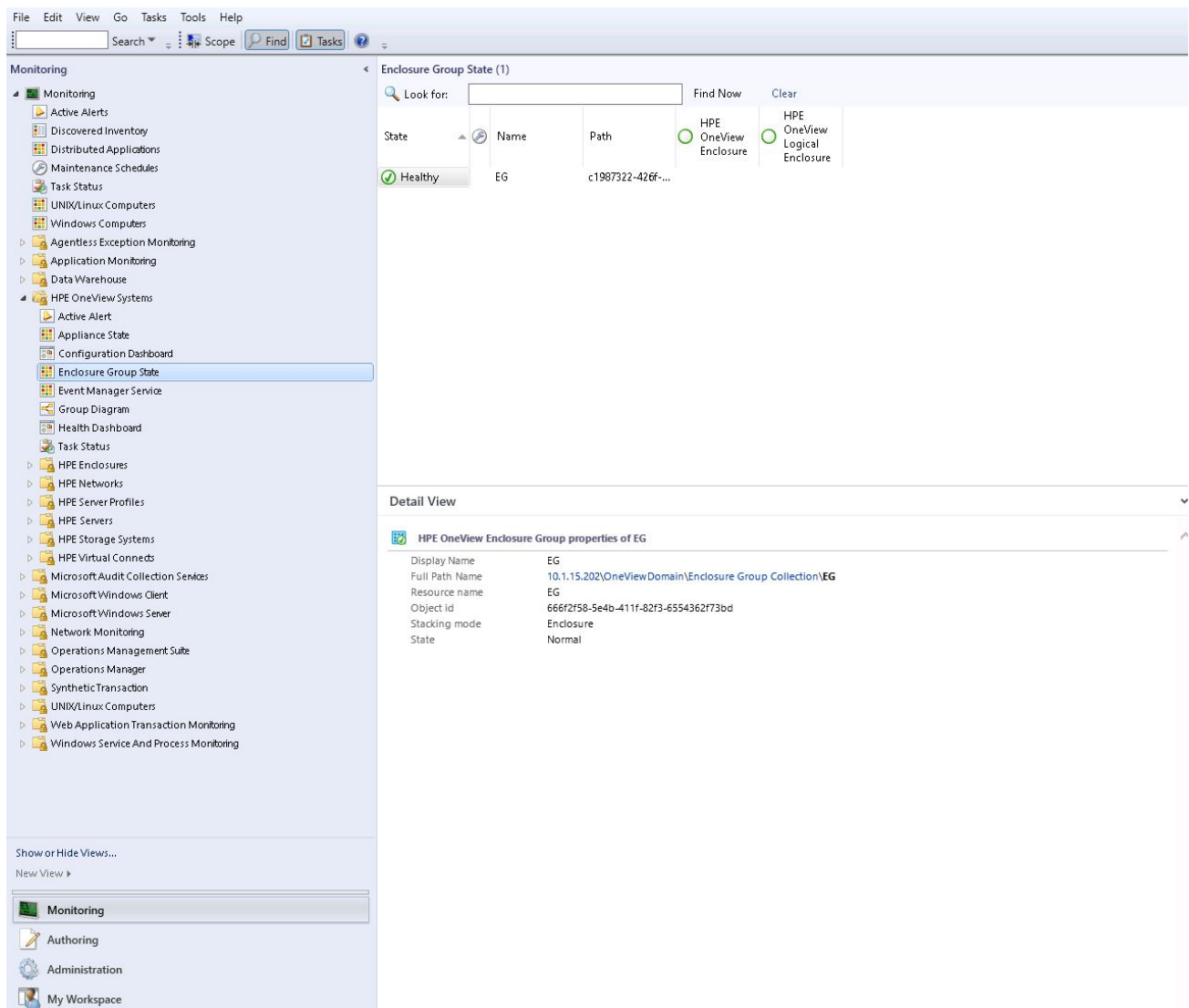


Figure 3: HPE Enclosures folders and views

## Enclosure Group State (under HPE OneView Systems)

This Enclosure Group State view is located under the HPE OneView Systems folder. It lists the managed enclosure group states.



## Active Alert

The Active Alert view provides a listing of alerts for the managed and monitored enclosures in the Operations Manager database. The Alert details panel shows new knowledge base text under the Knowledge section.

The Active Alerts view displays active alerts associated with HPE OneView Enclosure classes and HPE OneView Monitored Enclosure Classes. To display details for an alert, select the Enclosure alert from the Active Alerts pane. The Alert Details pane displays Knowledge Base text with the originated Windows NT Event message in the Alert Description. Event processing rules included with the HPE OneView Enclosure Management Pack identify and display Enclosure events received in the Windows Event Log as Operations Manager alerts. These events are located in the HPE OneView Management Event Log and are generated by the Hewlett Packard Enterprise OneView Event Manager Service.

The following information appears in the Alert Details pane:

- Alert name
- Alert source
- Path
- Alert rule name
- Created time
- Alert description
- Knowledge
  - Causes
  - Summary
  - Related links

Path	Source	Name	Resolution State	Created	Age
428bfa94-7654-...	L2R1EncI2	The power supply 0 in enclosure in rack ha...	New	6/19/2017 3:41:24 AM	2 Days, 20 Hour...
428bfa94-7654-...	L2R1EncI2	The temperature sensor in enclosure in rac...	New	6/19/2017 3:39:41 AM	2 Days, 20 Hour...

**Alert Details**

**The temperature sensor in enclosure in rack has been set to failed.**

**Alert Description**

Description: The temperature sensor in enclosure in rack has been set to failed.  
User Action: Shutdown the enclosure and possibly the rack as soon as possible. Ensure all fans are working properly and that air flow in the rack has not been blocked.

Appliance IPv4 Address: '172.25.203.202';  
Appliance IPv6 Address: 'Not set';  
Host Name: 'OV30d11.scom1.net';  
Resource Type: 'enclosures';  
Resource Name: 'L2R1EncI2';  
Resource Serial Number / Object ID: 'USE0474AU';  
Resource Part Number: '507019-821';  
Alert State: 'Active';  
Health Category: 'Thermal';  
Alert Uri: '/rest/alerts/3928'

[Trap.cpqRackEnclosureTempFailed]

**Knowledge:** View additional knowledge...

**Summary**  
HPE OneView managed C7000 enclosure is in critical state.

## HPE Enclosure Device Bay state view

The Enclosure State Device Bay State view displays the state of device bays from the following types of discovered enclosures:

- C7000 managed enclosures
- C7000 monitored enclosures
- Synergy managed enclosures

- Synergy monitored enclosures
- SDX monitored enclosures

Health State	Bay Number	Enclosure Name	Server Hardware Name	Model	Server Hardware	Serial Number	Power State	ILO IPv4 Address	ILO IPv6 Address	ILO
Warning	4	L2R1Enc1	L2R1Enc1, bay 4	ProLiant BL460c	BL460c Gen9 1	USE449FREK	On	172.25.11.210	2001:1011:0:0:0:0:0:0:0	iLO
Healthy	3	L2R1Enc2	L2R1Enc2, bay 3	ProLiant BL420c	BL420c Gen8 1	2M2309002B	On	172.25.11.214	none	iLO
Critical	5	L2R1Enc1	L2R1Enc1, bay 5	ProLiant BL465c	BL465c Gen8 1	MXQ42300RY	On	172.25.11.211	2001:1011:0:0:0:0:0:0:0	iLO
Critical	7	L2R1Enc1	L2R1Enc1, bay 7	ProLiant BL620c	BL620c G7 1	2M21230002	Unknown	none	2001:1011:0:0:0:0:0:0:0	iLO
Critical	11	L2R1Enc1	L2R1Enc1, bay 11	ProLiant BL420c	BL420c Gen8 1	2M22330124	On	172.25.11.213	2001:1011:0:0:0:0:0:0:0	iLO

**Detail View**

**HPE Oneview Managed Enclosure Device Bay Properties of Device Bay 3- ProLiant BL420c Gen8**

Display Name: Device Bay 3- ProLiant BL420c Gen8  
 Full Path Name: 172.25.203.202(OneViewDomain)\Enclosure Group Collection\Encl\_Rajesh\L2R1Enc2\Device Bays - L2R1Enc2\Device Bay 3- ProLiant BL420c Gen8  
 Object Id: 09USE0474ALJ:DeviceBay:3  
 Domain Name: OneViewDomain  
 Enclosure: L2R1Enc2  
 Bay Number: 3  
 Server Hardware: L2R1Enc2, bay 3  
 Server Profile: none  
 Model: ProLiant BL420c Gen8  
 State: NoProfileApplied  
 Server Hardware Type: BL420c Gen8 1  
 Serial Number: 2M2309002B  
 Power State: On  
 Integrated Lights-Out IPv4 address: 172.25.11.214  
 Integrated Lights-Out IPv6 address: none  
 Integrated Lights-Out model: iLO4  
 CPU: 1 processor, Intel(R) Xeon(R) CPU E5-2430 0 (2.20GHz / 6-core)  
 Part Number: 668357-B21  
 Rom Version: 130 11/03/2014

The Detail View in the lower pane displays properties of the selected device bay. The list of properties displayed varies depending on the enclosure that you select.

## Working with Device Bay State View

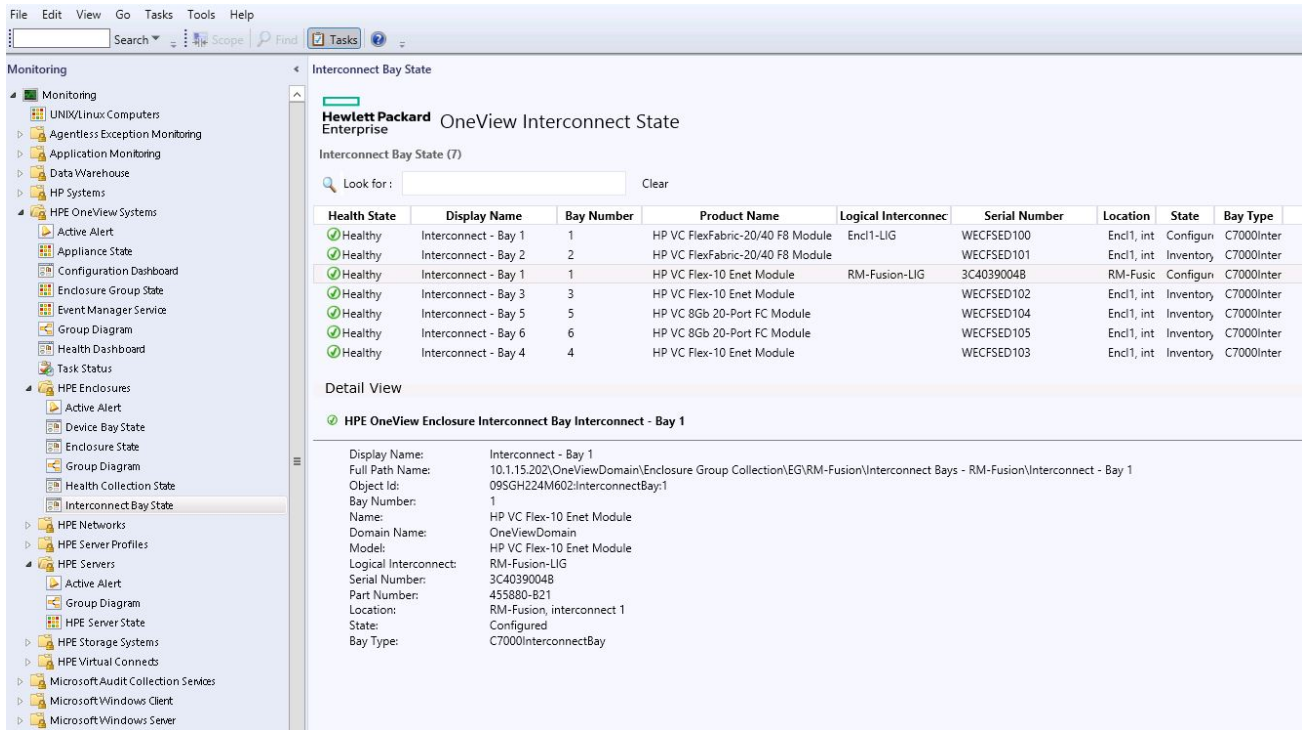
Right-click on the GUI to select any of the following options:

- **Refresh**
- **Open HPE Oneview**
- **Open HPE iLO**
- **Open HPE Onboard Administrator**
- **Personalized view**

## HPE Enclosure Interconnect state view

The Interconnect state view displays the state all the interconnects from the following types of discovered enclosures:

- C7000 managed enclosures
- Synergy managed enclosures
- Synergy monitored enclosures



The Detail View displays all the properties of the selected Interconnect state. The list of properties displayed varies depending on the enclosure that you select.

## Working with Interconnect state view

Right-click on the GUI to select any of the following options:

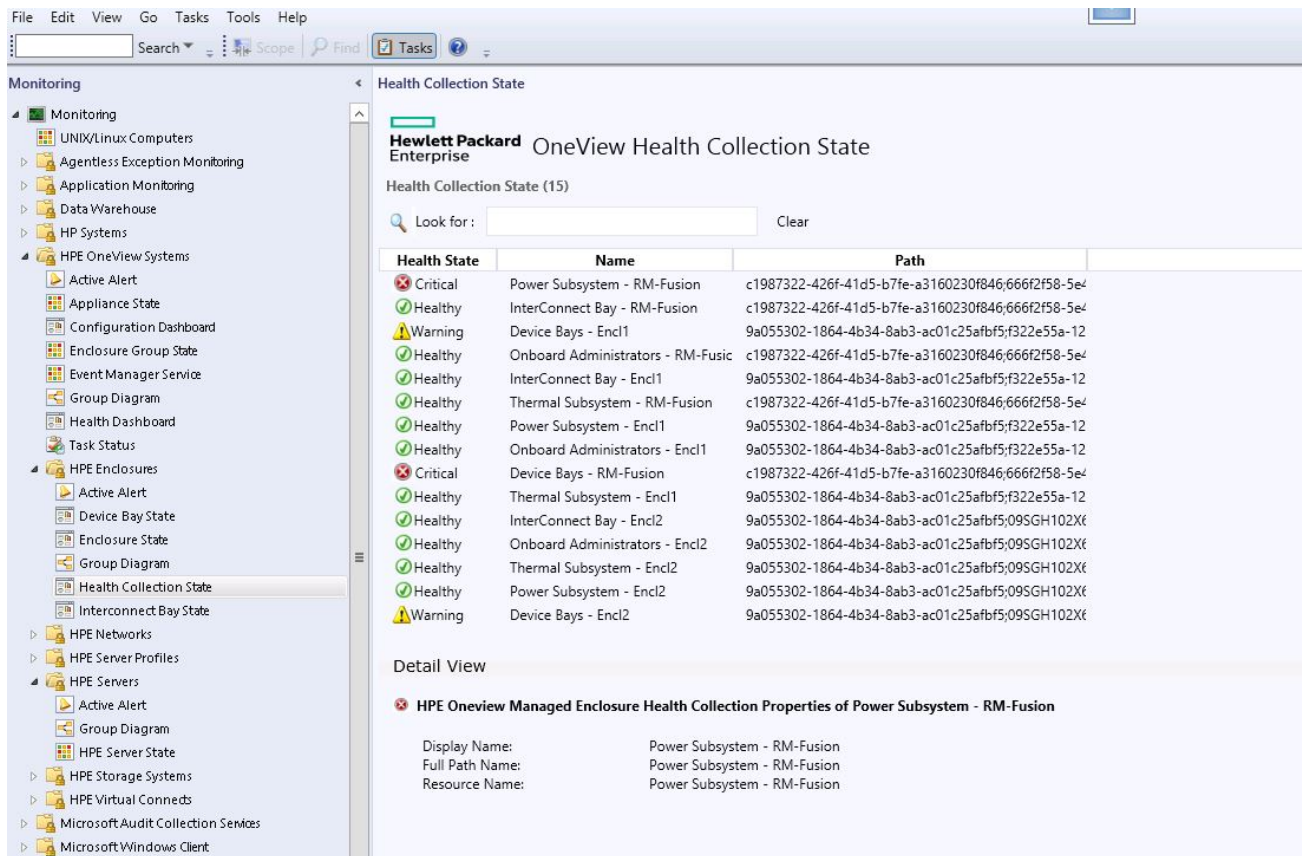
- **Refresh**
- **Open HPE Oneview**
- **Open HPE Onboard Administrator**
- **Personalized view**

## HPE Enclosure Health Collection State View

The Health Collection State view displays the detailed view of the enclosure health collection for the following types of discovered enclosures:

- C7000 managed enclosures
- C7000 monitored enclosures
- Synergy managed enclosures
- Synergy monitored enclosures
- SDX monitored enclosures





## Working with Health Collection state view

Right-click on the GUI to select any of the following options:

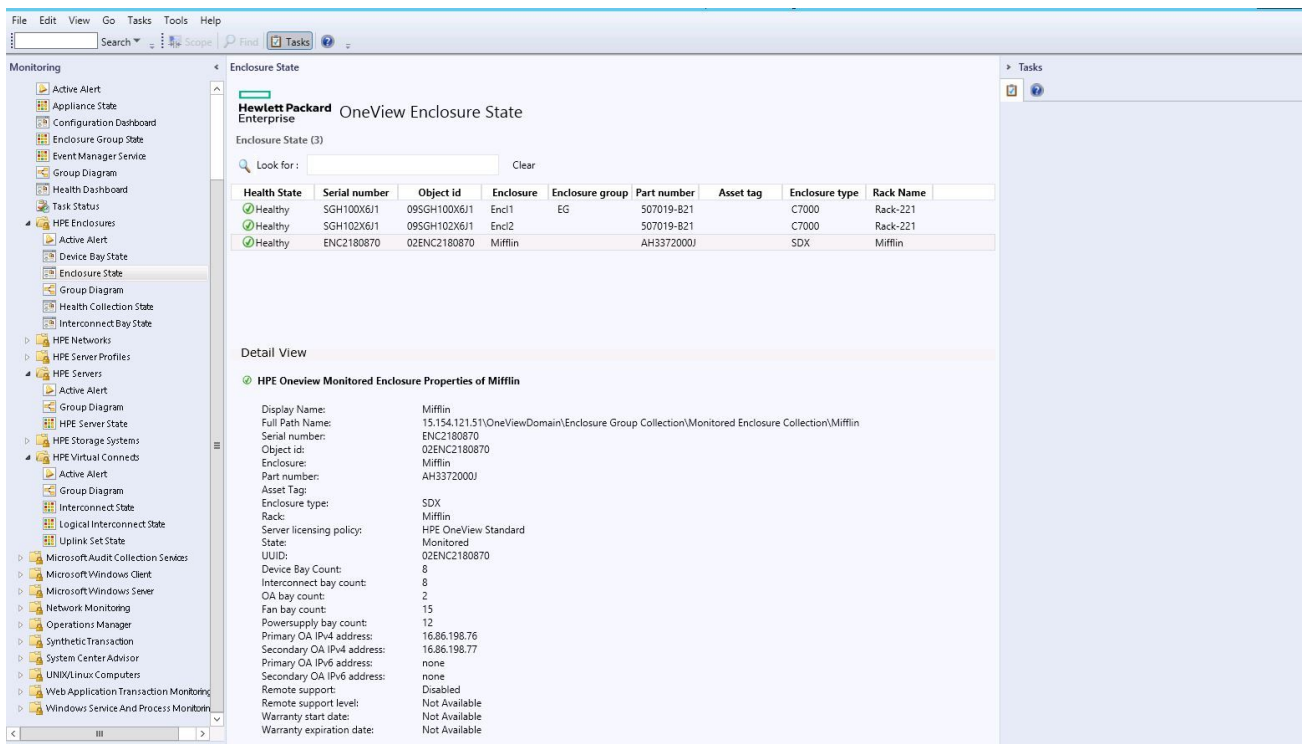
- **Refresh**
- **Personalized view**

## HPE Enclosure State View

The Enclosure State view displays the state of the following types of discovered enclosures:

- C7000 managed enclosures
- C7000 monitored enclosures
- Synergy managed enclosures
- Synergy monitored enclosures
- SDX monitored enclosures





The Detail View in the lower pane displays properties of the selected enclosure. The list of properties displayed varies depending on the enclosure that you select.

## Working with Enclosure state view

Right-click on the GUI to select any of the following options:

- **Refresh**
- **Open HPE Oneview**
- **Open HPE Onboard Administrator**
- **Personalized view**

## HPE Enclosure view options

### Options

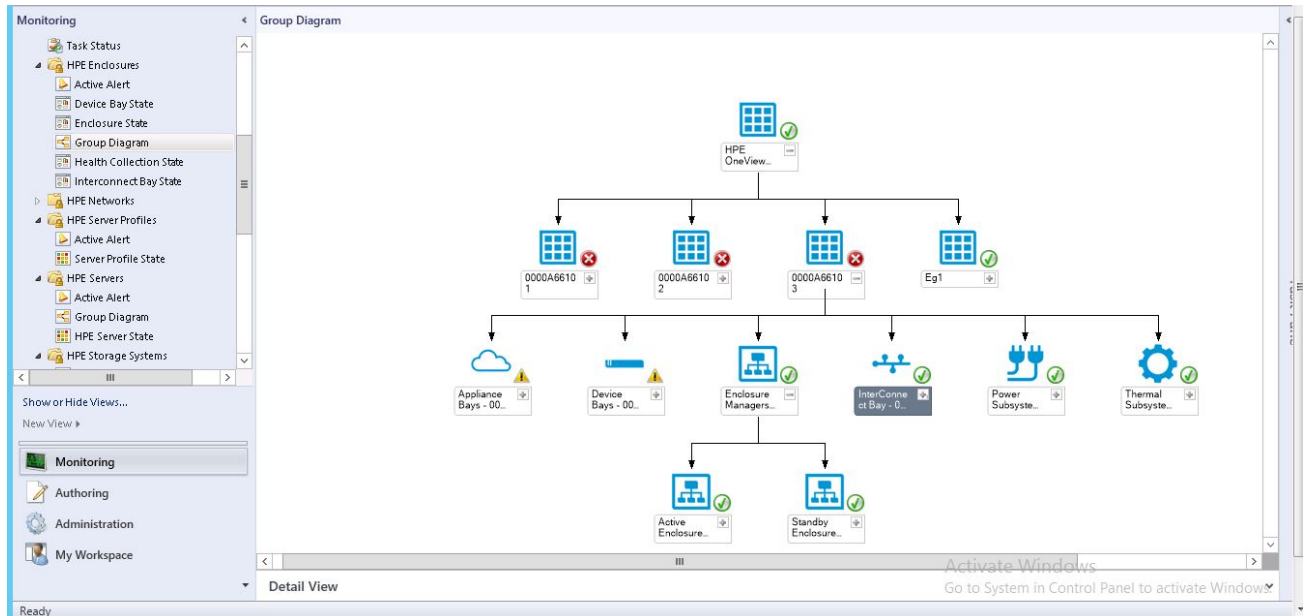
- **Refresh**—reloads the discovered entries from all views when you click this option on any of the following views:
  - Device Bay state
  - Interconnect state
  - Health Collection state
  - Enclosure state
- **Open HPE Oneview**—launches the HPE OneView web console, when you click this option on any of the entries of the following views:
  - Device Bay
  - Interconnect state
  - Enclosure state
- **Open HPE iLO**—launches the respective HPE iLO console, when you click the option on the Device Bay state entries.

- **Personalized View**—enables you to select the list of properties to be displayed in the state view.
- **Open HPE Onboard Administrator**—launches the respective Onboard Administrator when you click this option on the Enclosure state entry.

The Search option in the GUI allows you to search for a particular keyword in the discovered entries. When you type a keyword in the text box, the system lists all the entries that matches the keyword. Click **Clear** next to **Search** to clear the text box.

## Group Diagram

The Group Diagram view provides a hierarchical group view with status icons on the lower right of each element.



## Discovering HPE OneView Managed (C7000/Synergy) Enclosures

### Discovery rules

- HPE OneView Enclosure Group Discovery
- HPE OneView Enclosure Group Collection Discovery

### Adding HPE OneView Managed (C7000/Synergy) Enclosures

To discover an HPE OneView Managed Enclosure:

#### Procedure

1. Add an HPE OneView appliance using the OCD.
2. Import the HPE OneView Enclosure Management Pack.
3. Once the management pack is imported, all enclosures under the HPE OneView appliances managed in the SCOM will be discovered.

---

**NOTE:**

The default polling interval for an enclosure discovery is 4 hours (14400 seconds). You can override and customize the interval if applicable.

---

## Tasks

The following tasks are available in the Actions section of the Operations Manager console:

- HPE OneView Web Console
- HPE Onboard administrator
- HPE Integrated Lights-Out (available only for device bay classes)

## Security settings

A prompt for login credentials will display when a task is open in Internet Explorer. You will need to enter your user credentials.

## HPE OneView Web Console

HPE OneView Web Console task currently launches the HPE OneView web page of the appliance. The current application path is used:

```
%windir%\explorer.exe <appliance IPAddress>
```

## HPE Onboard Administrator

HPE OneView Onboard administrator task currently launches the HPE OA web page of the Enclosure. The current application path is used:

```
%windir%\explorer.exe <OA IP>
```

## Discovering HPE OneView Monitored (C7000/Synergy/SDX) Enclosures

### Discovery rules

- HPE OneView Monitored Enclosure Discovery

## Adding HPE OneView Monitored (C7000/Synergy/SDX) Enclosures

To discover an HPE OneView monitored enclosure:

### Procedure

1. Add an HPE OneView appliance using the OCD.
2. Import the HPE OneView Enclosure Management Pack.
3. After the Management Pack is imported, all enclosures under the HPE OneView appliances managed in the SCOM will be discovered.

---

**NOTE:**

The default polling interval of an enclosure discovery is 4 hours (14400 seconds). You can override and customize the interval, if applicable.

---

## Tasks

The following tasks are available in the Actions section of the Operations Manager console:

- OneView Web Console
- Integrated Lights-Out (available only for device bay classes)

## Security settings

A prompt for login credentials will display when a task is open in Internet Explorer. You will need to enter your user credentials.

## HPE OneView Web Console

HPE OneView Web Console task currently launches the HPE OneView web page of the appliance. The current application path is used:

```
%windir%\explorer.exe <appliance IPAddress>
```

## HPE Onboard Administrator

HPE OneView Onboard administrator task currently launches the OA web page of the Enclosure. The current application path is used:

```
%windir%\explorer.exe <OA IP>
```

## Monitors

The HPE OneView Enclosure Management Pack includes a set of monitors to update the health states from HPE OneView appliances. Monitors are presented in the following categories:

- Health Collection State monitoring—The monitors update the health states to each Health Collection class instance.
- State Propagation monitoring—These monitors update the health states to propagate from a lower associated class instance to a higher class instance.

Enclosures and their subsystem instances are updated every 15 minutes (interval can be overridden and customized by the user) by running a monitoring module.

---

**NOTE:**

The monitoring interval can be overridden and customized as applicable.

---

The following table describes the mapping between the health state value returned from the enclosure REST interface, and the health state value exposed by SCOM:

SCOM Health State	HPE OneView Appliance Health State	Description
Healthy	OK	Represents OK status
Warning	Warning	Represents degraded status

*Table Continued*

Critical	Error	Represents failure status
Unknown	Unknown	Unknown or other status

The following monitors are available with the HPE OneView Enclosure Management Pack.

- HPE OneView Enclosure Group Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPEnclosureGroup.UnitMonitor
- HPE OneView Enclosure Health MonitorID=HewlettPackard.OneView.Enclosure.HPEnclosure.UnitMonitor
- HPE OneView Enclosure Interconnect Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPInterconnectBay.UnitMonitor
- HPE OneView Enclosure Fan Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPFanBay.UnitMonitor
- HPE OneView Enclosure Power Supply Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPPowerSupplyBay.UnitMonitor
- HPE OneView Enclosure Device Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.DeviceBay.UnitMonitor
- HPE OneView Enclosure Onboard Administrator Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPOABay.UnitMonitor
- HPE OneView Monitored Enclosure Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredEnclosure.UnitMonitor
- HPE OneView Monitored Enclosure Device Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredDeviceBay.UnitMonitor
- HPE OneView Monitored Enclosure Interconnect Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredInterconnectBay.UnitMonitor
- HPE OneView Monitored Enclosure Onboard Administrator Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredOABay.UnitMonitor
- HPE OneView Monitored Enclosure PowerSupply Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredPowerSupplyBay.UnitMonitor
- HPE OneView Monitored Enclosure Fan Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredFanBay.UnitMonitor
- HPE OneView Monitored Enclosure XFM Bay Health  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredXFMBay.UnitMonitor

The following dependency monitors are also included with the HPE OneView Enclosure Management Pack.

- HPE OneView Enclosure HPE FanBay to HPE OneView Enclosure Thermal Subsystem Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPThermalSubsystemContainsFan.DependencyMonitor
- HPE OneView Enclosure HPE PowerSupplyBay to HPE OneView Enclosure Power Subsystem  
Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPPowerSubsystemContainsHPPowerSupplyBay.  
DependencyMonitorContainsHPPowerSupplyBay.DependencyMonitor
- HPE OneView Enclosure HPInterconnectBay to HPE OneView Enclosure HPInterconnectBayCollection  
Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPInterconnectBayCollectionContainsHPInterconnectBay.  
DependencyMonitor
- HPE OneView Enclosure HPDeviceBay to HPE OneView Enclosure HPDeviceBayCollection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPDeviceBayCollectionContainsHPDeviceBay.  
DependencyMonitor
- HPE OneView Enclosure HPEnclosureGroup to HPE OneView Enclosure HPEnclosureGroupCollection  
Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPEnclosureGroupCollectionContainsEnclosureGroup.  
DependencyMonitor

- HPE OneView Enclosure HPOABay to HPE OneView Enclosure HPOABayCollection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPOABayCollectionContainsHPOABay.DependencyMonitor
- HPE OneView Enclosure Group to HPE OneView Enclosure Groups Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPOneViewEnclosureGroupsContainsHPOneViewEnclosureGroup.DependencyMonitor
- HPE OneView Monitored Enclosure to HPE OneView Monitored Enclosure Collection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPOneViewMonitoredEnclosureCollectionContainsMonitoredEnclosure.DependencyMonitor
- HPE OneView Monitored Enclosure HPDeviceBay to HPE OneView Monitored Enclosure HPDeviceBayCollection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredDeviceBayCollectionContainsHPMonitoredDeviceBay.DependencyMonitor
- HPE OneView Monitored Enclosure HPInterconnectBay to HPE OneView Monitored Enclosure HPInterconnectBayCollection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredInterconnectBayCollectionContainsHPMonitoredInterconnectBay.DependencyMonitor
- HPE OneView Monitored Enclosure HPOABay to HPE OneView Monitored Enclosure HPOABayCollection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredOABayCollectionContainsHPMonitoredOABay.DependencyMonitor
- HPE OneView Monitored Enclosure PowerSupplyBay to HPE OneView Monitored Enclosure Power Subsystem Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredPowerSubsystemContainsHPMonitoredPowerSupplyBay.DependencyMonitor
- HPE OneView Monitored Enclosure HPXFMBay to HPE OneView Monitored Enclosure HPXFMBayCollection Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredXFMBayCollectionContainsMonitoredXFM.DependencyMonitor
- HPE OneView Monitored Enclosure FanBay to HPE OneView Monitored Enclosure Thermal Subsystem Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPMonitoredThermalSubsystemContainsMonitoredFan.DependencyMonitor
- HPE OneView Monitored Enclosure to HPE OneView Enclosure Groups Dependency  
MonitorID=HewlettPackard.OneView.Enclosure.HPOneViewEnclosureGroupsContainsHPOneViewMonitoredEnclosure.DependencyMonitor

---

**NOTE:**

By default, the Monitor state change alerts are disabled (Generate Alerts is set to **False**) in this management pack. To receive the Monitor state change alerts, you need to create an override and set Generate Alerts to **True**.

---

## Event rules

The following table contains a list of supported events in the Enclosure Management Pack for both managed as well as monitored enclosures.

NT Events	Description	Event Type
22005	A rack enclosure has overheated.	Critical
22006	A rack enclosure is overheating.	Warning
22013	A rack power supply has failed.	Critical

*Table Continued*

22014	A rack power supply has degraded.	Warning
22018	A rack power subsystem is not redundant.	Warning
22019	A rack power subsystem input has a voltage problem.	Warning
22055	A server blade group has a capper error.	Critical
22020	A rack power subsystem is overloaded.	Warning
22037	An Onboard Administrator has degraded.	Warning
22008	A rack enclosure fan has failed.	Critical
22009	A rack enclosure fan has degraded.	Warning
22041	An Onboard Administrator role has changed to Primary.	Warning
22042	A Server blade e-keying has failed.	Warning
22046	The interconnect has failed.	Critical
22047	The interconnect has degraded.	Warning

**NOTE:**

The event rules are only supported when you upgrade the HPE OneView SCOM Integration kit from version 8.1 to 8.2.

## Alerts for Synergy/SDX

The following table contains a list of supported alerts for HPE Synergy for both managed as well as monitored enclosures and supported alerts for SDX monitored enclosures.

Event ID	Alert Title	Severity
31001	Server hardware will not be allowed to power on	Critical
31002	The device in bay cannot be discovered.	Critical
31003	The device in bay is missing hardware information and cannot be discovered.	Critical
31004	iLO for the server hardware has failed to boot	Critical
31005	Server hardware cannot be discovered	Critical
31006	iLO for the server hardware had a communication timeout	Critical
31007	The device in bay was not allowed to power on due to an insufficient cooling in the enclosure	Critical

*Table Continued*

31008	The device in bay was not allowed to power on due to an insufficient power in the enclosure	Critical
31009	Mezzanine card(s) installed in the server hardware is/are missing	Critical
31010	Mezzanine card(s) installed on the server hardware cannot be discovered	Critical
31011	The device in bay was not allowed to power on	Critical
31012	The device in bay was not allowed to power on	Critical
31013	The device in bay was powered off	Critical
31014	The device in bay has reached the warning temperature threshold	Warning
31015	Appliance %1 cannot be discovered.	Critical
31016	Appliance %1 is missing hardware information and cannot be discovered.	Critical
31017	Link module %1 was unable to establish redundant management of the enclosure	Critical
31018	Link module %1 has failed a power-on test	Critical
31019	Link module %1 is missing hardware information and cannot be discovered	Critical
31020	Standby link module in bay %1 has a firmware mismatch with the active link module	Critical
31021	Internal LINK port on link module %1 has lost communication	Warning
31022	LINK port on link module %1 is connected to an unknown device	Critical
31023	LINK port on link module %1 is not connected	Warning
31024	LINK port on link module is not managed by this appliance	Critical
31025	Link module %1 is missing	Warning
31026	The MGMT port for link module %1 is unlinked	Warning
31027	Link module has an internal error	Critical
31028	Link module has exceeded the critical temperature threshold	Critical
31029	Unable to read temperature sensor for link module	Warning

*Table Continued*



31030	Link module has exceeded the warning temperature threshold	Warning
31031	Fan has failed	Critical
31032	Fan has failed	Critical
31033	Fan is missing hardware information	Critical
31034	Front panel failed to provide identifying hardware information	Critical
31035	Enclosure front panel is missing hardware information	Critical
31036	Enclosure does not have the required fans to be sufficiently cooled	Critical
31037	Enclosure does not have the required number of operational fans for redundancy	Warning
31050	Frame midplane cannot be discovered	Critical
31051	Frame midplane is missing hardware information and cannot be discovered	Critical
31052	Power supply is unplugged or the input power has failed	Warning
31053	Enclosure power subsystem is not capable of supplying the allocated power	Critical
31054	Power subsystem is not capable of supplying enough power	Warning
31055	Power supply has failed	Critical
31056	Power supply is missing hardware information and cannot be discovered	Warning
31058	The interconnect in bay is missing hardware information.	Warning
31059	The MGMT port for link module is unlinked. It must be linked to the Image Streamer deployment network because an Image Streamer appliance is present in the enclosure.	Warning
31060	The device in bay has failed.	Critical
31061	The device bay is not compatible with the link module firmware version.	Critical
31062	The device bay is not compatible with its frame.	Critical
31063	Device experienced a communication timeout with the link module.	Warning

*Table Continued*

31064	The management processor on the device in bay is reporting a critical internal health status.	Critical
31065	The management processor on the device in bay is reporting a warning internal health status.	Warning
31066	The device in bay is not seated properly in its bay.	Critical
31067	Mezzanine card(s) installed in the server hardware in bay is/are not compatible with the link module firmware version.	Critical
31068	Mezzanine card(s) installed in the server hardware in bay is/are not compatible with its/their frame.	Critical
31069	The device in bay was not allowed to power on due to a connector mating error.	Warning
31070	The device in bay has failed.	Critical
31071	Appliance is not compatible with the link module firmware version.	Critical
31072	Appliance is not compatible with its frame.	Critical
31073	Link module is not compatible with the link module firmware version.	Critical
31074	Link module is not compatible with its frame.	Critical
31075	The link module is no longer receiving information from the link module cabled to the LINK port.	Warning
31076	The MGMT port on link module is connected to another link module and that is not a valid connection. The MGMT port may only be connected to the management network.	Warning
31077	The MGMT port on link module is connected to another link module and that is not a valid connection. The MGMT port may only be connected to the Image Streamer deployment network.	Warning
31078	The LINK port on link module is linked but a redundant link module is missing. A redundant link module is expected if the LINK port is linked.	Warning
31079	Fan is not compatible with the link module firmware version.	Critical
31080	Fan is not compatible with its frame.	Critical
31081	The front panel is not compatible with the link module firmware version.	Critical

*Table Continued*

31082	The front panel is not compatible with its frame.	Critical
31083	The frame midplane is not compatible with the link module firmware version.	Critical
31084	There is a power supply mismatch in the frame. The same power supply type is required in each bay.	Warning
31085	Power supply is not compatible with the link module firmware version.	Warning
31086	Power supply is not compatible with its frame.	Warning
31087	Interconnects are not present in same bay set	Critical
31088	Invalid interconnect link topology	Critical
31089	Invalid interconnect link topology	Critical
31090	Invalid interconnect link topology.	Critical
31091	Invalid interconnect link topology.	Critical
31092	Invalid combination of interconnect modules.	Critical
31093	Connected port on an Interconnect is powered off.	Critical
31094	Interconnect port is not cabled	Critical
31095	Interconnect port is incorrectly connected.	Critical
31096	Invalid interconnect link topology	Critical
31097	Invalid interconnect link topology.	Critical
31098	Interconnect is invalid.	Critical
31099	Invalid interconnect link topology.	Critical

---

**NOTE:**

The event rules are only supported when you upgrade the HPE OneView SCOM Integration kit from version 8.1 to 8.2.

---

# Using HPE OneView Virtual Connect Management Pack

The HPE OneView Virtual Connect Management Pack enables the management of HPE Virtual Connect's physical and logical components being managed by the appliance.

This management pack has the following features:

- Identifies, groups, and displays HPE Virtual Connect modules, uplink sets, networks and server profiles being managed by HPE OneView in the management console.
- Monitors and displays the state of HPE Virtual Connect's physical and logical (networks and server profile) components.
- Identifies, translates, and displays HPE Virtual Connect hardware events written to the Windows Event Log by the HPE OneView Event Manager as Operations Manager alerts.
- Provides links to HPE OneView web console for hardware resource management and advanced administration from Operations Manager.
- Renders a list of all the managed Logical Interconnect instances.
- Renders a list of all the managed Uplink Set instances.

## Classes

The structure of management pack classes is defined to seamlessly provide operations with HPE OneView Management Pack for System Center. The HPE OneView Virtual Connect Management Pack defines the classes in the following table.

### HPE Virtual Connect management pack classes

**Table 28: HPE Virtual Connect management pack classes**

Class ID	Description
HewlettPackard.OneView.LogicalResource.HPLogicalResourceHealthCollection	Base Class for all Health Collection
HewlettPackard.OneView.VirtualConnect.HPLogicalInterConnectCollection	Hosting class of Logical Interconnect
HewlettPackard.OneView.LogicalResource.HPNetworkCollection	Hosting class of HPEEnclosureNetworkCollection
HewlettPackard.OneView.LogicalResource.HPServerProfileCollection	Hosting class of HPEEnclosureServerProfileCollection
HewlettPackard.OneView.LogicalResource.HPEnclosureServerProfileCollection	Hosting class of VCServerProfile
HewlettPackard.OneView.LogicalResource.HPEnclosureNetworkCollection	Hosting class of HPVCEnetNetwork
HewlettPackard.OneView.VirtualConnect.HPLogicalInterConnect	Hosting class of VCUplink Sets

*Table Continued*

Class ID	Description
HewlettPackard.OneView.VirtualConnect.HPUplinkSet	Class representation of HPE OneView Uplink set
HewlettPackard.OneView.VirtualConnect.HPVirtualConnectModuleCollection	Collection of InterConnect module and hosting class of it

### Class details

**Table 29: Class details**

Class	Property	Description
HPE OneView Virtual Interconnect Module	Object id	HPE OneView Storage System Group VC Module Identifier. Key Property in SCOM. Inherited from HPE Health Component.
	Enclosure	Enclosure name which contains the interconnect.
	Enclosure location	Rack Name
	Bay number	Bay where the VC module is hosted
	Product name	Product name
	Serial number	Serial Number of the VC Module
	Part number	Part Number of the VC Module
	Interconnect IP	Interconnect Module IP Address (IPv4 and IPv6)
	Firmware version	Firmware version
	Interconnect power	Power State of the VC Module
	Uplink ports	Comma separated Uplink ports of the module configured as parts of EnetNetwork are only shown.
	Domain name	Associated appliance domain name
	Location	Name of VC module
	State	Interconnect state
HPE OneView Virtual Connect Ethernet Network	Logical interconnect	Name of the associated Logicalinterconnect
	Object id	HPE Health Component Module Identifier. Key Property in SCOM.
	Name	Name of the Virtual Connect ethernet network
	VLAN	Enet Network Identifier. Key Property in SCOM.
	Domain name	Associated appliance domain name
Type	Type of Enet Network	

*Table Continued*

<b>Class</b>	<b>Property</b>	<b>Description</b>
	Used by	Associated Server Profile
	Associated networksets	Associated Network Set
	Associated uplinksets	Associated Uplink Set
	Smart link	Indicates whether this network is a smart link
	Private network	Indicates whether this network is a private network
	Purpose	Indicates purpose of network
HPE OneView Virtual Connect FC Fabric	Object id	Health Component Module Identifier. Key Property in SCOM.
	Name	Name of the FC Fabric
	Domain name	Associated appliance domain name
	Type	Type of the FC Fabric
	Uplink bandwidth	Bandwidth of uplink associated with Interconnect Module
	Associated uplinksets	Associated uplink set
	Used by	Server profile to which it is associated
	State	Health State
	Login redistribution	Login redistribution
HPE OneView Virtual Connect FCoE Network	Display Name	Name of network
	Full Path Name	Path Name
	Object id	GUID
	Name	Name of network
	Domain name	HPE OneView domain name
	State	State
	VLAN	Vlan id
	Type	Network type

*Table Continued*

<b>Class</b>	<b>Property</b>	<b>Description</b>
	Used by	Server profile name
	Uplink set	uplink set name
HPE OneView Virtual Connect Server Profile	Object id	Health Component Module Identifier. Key Property in SCOM.
	Name	Name of the server profile
	Domain name	Associated appliance domain name
	Server hardware	Identifies the server hardware to which the server profile is currently assigned, if applicable.
	Bay number	Identifies the enclosure device bay number that the Server Profile is currently assigned to, if applicable
	Enclosure group	Identifies the enclosure group for which the Server Profile was designed
	Enclosure	Identifies the enclosure that the Server Profile is currently assigned to, if applicable
	Serial number	A 10-byte value that is exposed to the Operating System as the server hardware's Serial Number. The value can be a virtual serial number, user defined serial number or physical serial number read from the server's ROM. It cannot be modified after the profile is created.
	State	The current resource state of the server profile
	Ethernet connections	Associated ethernet network connections
	Fibre channel connections	Associated fibre channel connections
	Server hardware type	Server Hardware Type
	Associated Server Profile template—SPT1	Associated Server Profile template — SPT1
HPE OneView Virtual Connect Object id Uplink Sets	Object id	Health Component Module Identifier. Key Property in SCOM.
	Name	Name of Uplink Set

*Table Continued*

Class	Property	Description
	Domain name	Associated appliance domain name
	Associated Network(s)	Network Name
	Associated Enclosure Name	Enclosure Name
	Logical Interconnect	Logical interconnect name
	Network type	Ethernet / FibreChannel
	Uplink port(s)	Associated uplink ports
HPE Virtual Connect Logical InterConnect	Object ID	Health Component Module Identifier. Key Property in SCOM.
	Name	Name of Logical Interconnect
	Associated Enclosure	Associated Enclosure Name
	Associated Logical Interconnect group	Logical interconnect group name
	Associated Interconnect(s)	Interconnects Name

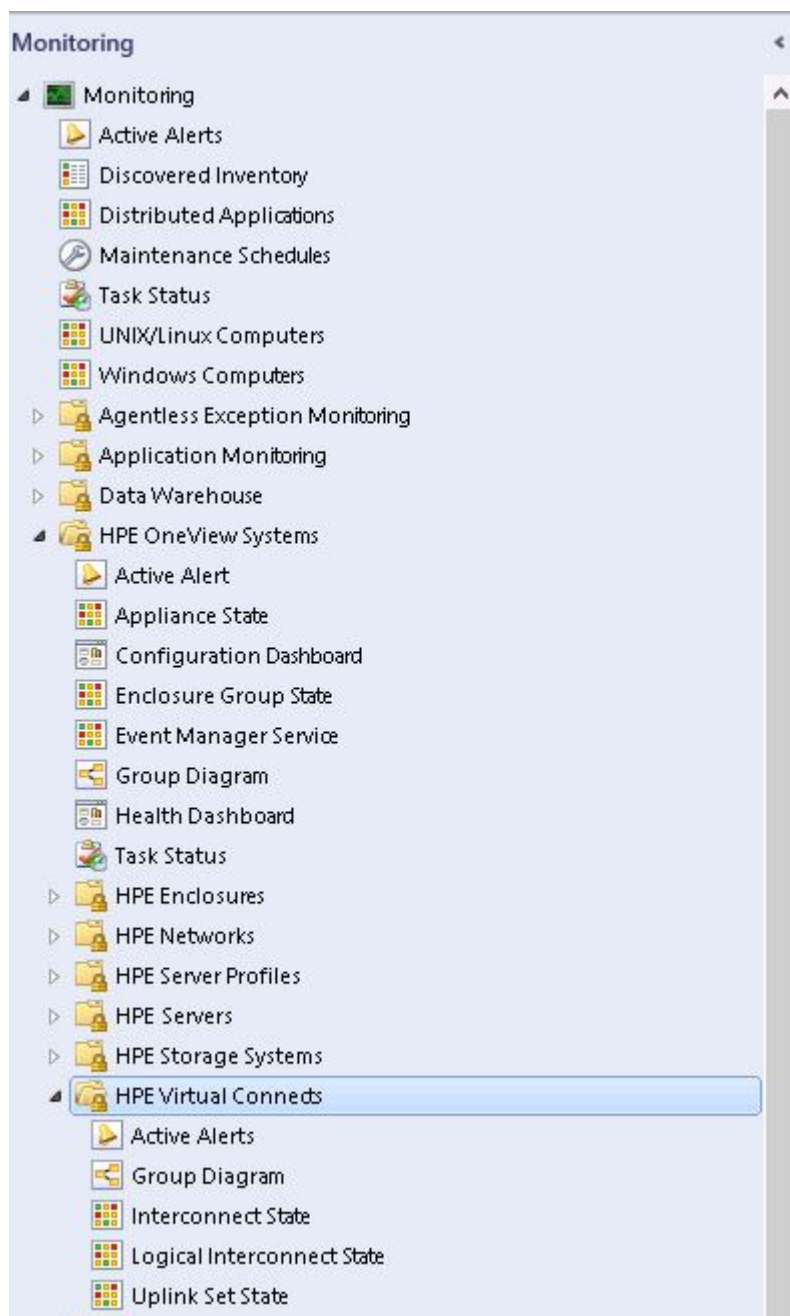
## Views

The management console provides a collection of folders and windows for viewing information stored in the management database. The HPE OneView Virtual Connect Management Pack includes Virtual Connects views that present information and associated alerts for each Virtual Connect module, Network, logical interconnect, uplink set, and ServerProfile that are managed by the HPE OneView appliance which is being monitored. The following views are added on the management console after installation of the HPE OneView Virtual Connect Management Pack:

- **HPE OneView Systems**
  - **HPE Networks**
    - Active Alert—scoped alerts
    - Ethernet Network State—renders a list of all the managed Ethernet network instances
    - FC Network State—renders a list of all the managed FC network instances
    - FCoE Network State—renders a list of all the managed FCoE network
  - **HPE Server Profiles**
    - Active Alert—scoped alerts
    - Server Profile State—renders list of all types of available server profile instances in HPE OneView
  - **HPE Virtual Connects**



- Active Alerts—scoped alerts
- Group Diagram—renders a hierarchical Virtual Connect group view with status icon on the lower right of each element
- Interconnect State—renders a list of all the managed interconnect instances
- Logical Interconnect State—renders a list of all the managed logical interconnect instances
- Uplink Set State—renders a list of all the managed uplink set instances



**Figure 4: HPE Virtual Connect folders and views**

## HPE Networks views

The HPE Networks folder provides state views for the following:

- Active Alerts
- Ethernet Networks

- FC Networks
- FCoE Network

## Active Alerts

Active Alerts views provide a listing of alerts in the Operations Manager database. Alert details panel shows new knowledge base text under Knowledge section.

The screenshot displays the 'Active Alerts (2)' view in the Operations Manager console. The interface includes a menu bar (File, Edit, View, Go, Tasks, Tools, Help), a search bar, and a left-hand navigation pane under 'Monitoring'. The main area shows a table of alerts:

Severity	Path	Source	Name	Resolution State	Created	Age
<b>Critical (1)</b>	39463fb1-9d43-...	INFRA-Encl-2-L...	HPE OneView Uplink Set has failed	New	2/2/2017 6:19:51 PM	7 Days, 23 Hour...
<b>Warning (1)</b>	39463fb1-9d43-...	INFRA-Encl-2-L...	The logical interconnect INFRA-Encl-2-LIG ...	New	2/10/2017 1:23:03 PM	4 Hours, 27 Mi...

The 'Alert Details' panel for the warning alert shows the following information:

- Alert Description:** The logical interconnect INFRA-Encl-2-LIG cannot complete the firmware operation. One or more interconnects are not in a valid state for firmware update. User Action: Visit the listed interconnects and examine the Activity view and follow the problem resolution steps listed there in order to bring the interconnects back to a Configured state or an Unmanaged state in case of unsupported firmware. Try the logical interconnect firmware update again after the interconnects are back to a valid state. If the problem continues to occur, contact...
- Source:** INFRA-Encl-2-LIG
- Full Path Name:** 172.25.203.64\OneViewDomain\HPE Virtual Connect Module Collection\HPE Logical InterConnect Collection\INFRA-Encl-2-LIG
- Alert Rule:** A HPE OneView logical interconnect is in warning state.
- Created:** 2/10/2017 1:23:03 PM

## Ethernet Network State

The Ethernet Network State view shows the state of each Virtual Connect Ethernet network.

Ethernet Network State - SCOM12 - Operations Manager

File Edit View Go Tasks Tools Help

Search Scope Find Tasks

Monitoring

- Monitoring
  - UNIX/Linux Computers
  - Agentless Exception Monitoring
  - Application Monitoring
  - Data Warehouse
  - HPE OneView Systems
    - Active Alert
    - Appliance State
    - Configuration Dashboard
    - Enclosure Group State
    - Event Manager Service
    - Group Diagram
    - Task Status
  - HPE Enclosures
    - HPE Networks
      - Active Alert
      - Ethernet Network State**
      - FC Network State
      - FCoE Network State
  - HPE Server Profiles
  - HPE Servers
  - HPE Storage Systems
  - HPE Virtual Connects
  - HPE ProLiant PRO
  - HPE Systems
  - Microsoft Audit Collection Services
  - Microsoft Windows Client
  - Microsoft Windows Server
  - Network Monitoring
  - Operations Manager
  - Synthetic Transaction
  - System Center Advisor
  - UNIX/Linux Computers
  - Web Application Transaction Monitoring
  - Windows Service And Process Monitorin

Ethernet Network State (1)

Look for: Find Now Clear

State	Name	Path
Healthy	LAN1	86c92890-1a9a-...

Detail View

HPE OneView VC Ethernet Network properties of LAN1

Display Name	LAN1
Full Path Name	10.1.15.204\OneViewDomain\HPE Network Collection\HPE Enclosure Network Collection\LAN1
Object id	d2b4fb9c-11ee-45e9-93fd-7234eeeb2162
Name	LAN1
Domain name	OneViewDomain
VLAN	24
Smart link	False
Private network	False
Purpose	General
Type	Ethernet
Used by	no server profiles
Associated networksets	none
Associated uplinksets	none

## FC Network State

The FC Network State view shows the state of each Virtual Connect fibre channel fabric.

The screenshot shows the SCOM12 Operations Manager interface. The title bar reads "FC Network State - SCOM12 - Operations Manager". The menu bar includes "File", "Edit", "View", "Go", "Tasks", "Tools", and "Help". Below the menu bar is a search bar with "Search" and "Scope" options, and a "Find" button. The left-hand navigation tree is expanded to "HPE Networks" > "FC Network State". The main content area displays "FC Network State (1)" with a search bar and "Find Now" and "Clear" buttons. Below this is a table with the following data:

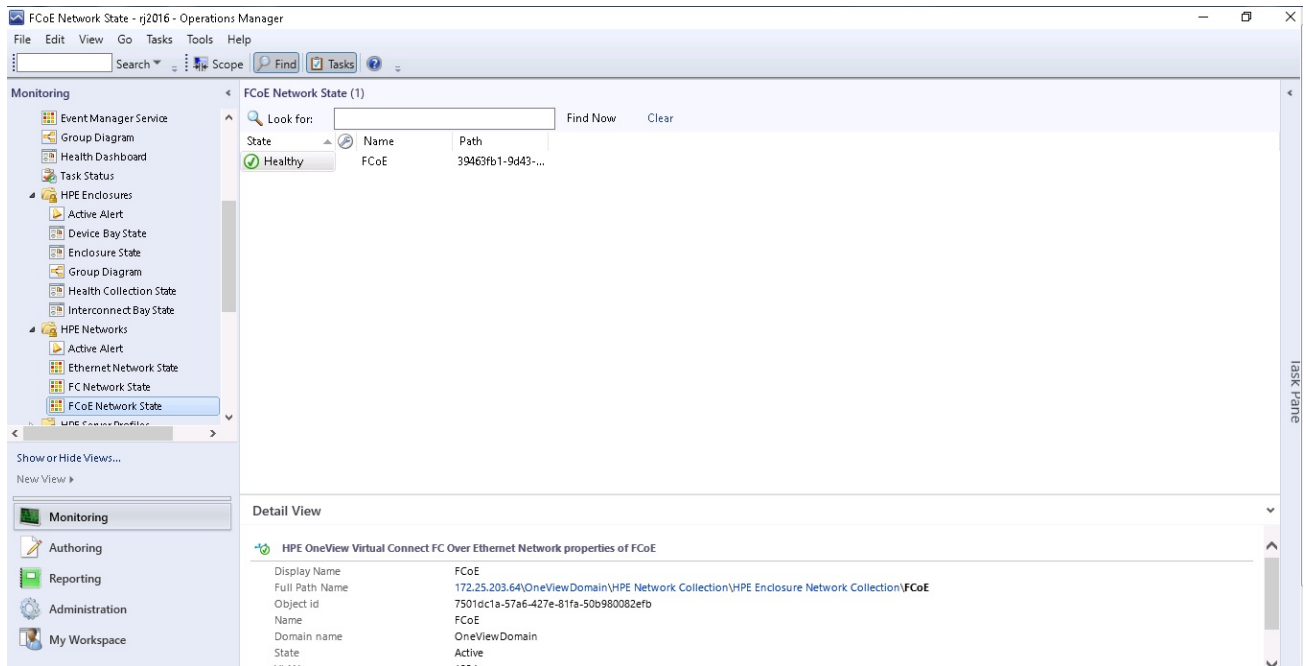
State	Name	Path
Healthy	FC104	86c92890-1a9a-...

Below the table is a "Detail View" section titled "HPE OneView Virtual Connect FC Fabric properties of FC104". The properties are listed as follows:

Display Name	FC104
Full Path Name	10.1.15.204\OneViewDomain\HPE Network Collection\HPE Enclosure Network Collection\FC104
Object id	5b140bb0-0098-474e-8ce3-cccdce00bebd
Name	FC104
Domain name	OneViewDomain
Type	Fibre Channel (FabricAttach)
Associated uplinksets	none
Login redistribution	Auto
Used by	no server profiles
State	Active

## FCoE Network State

The FCoE Network State view shows the state of each Virtual Connect fibre channel over ethernet.



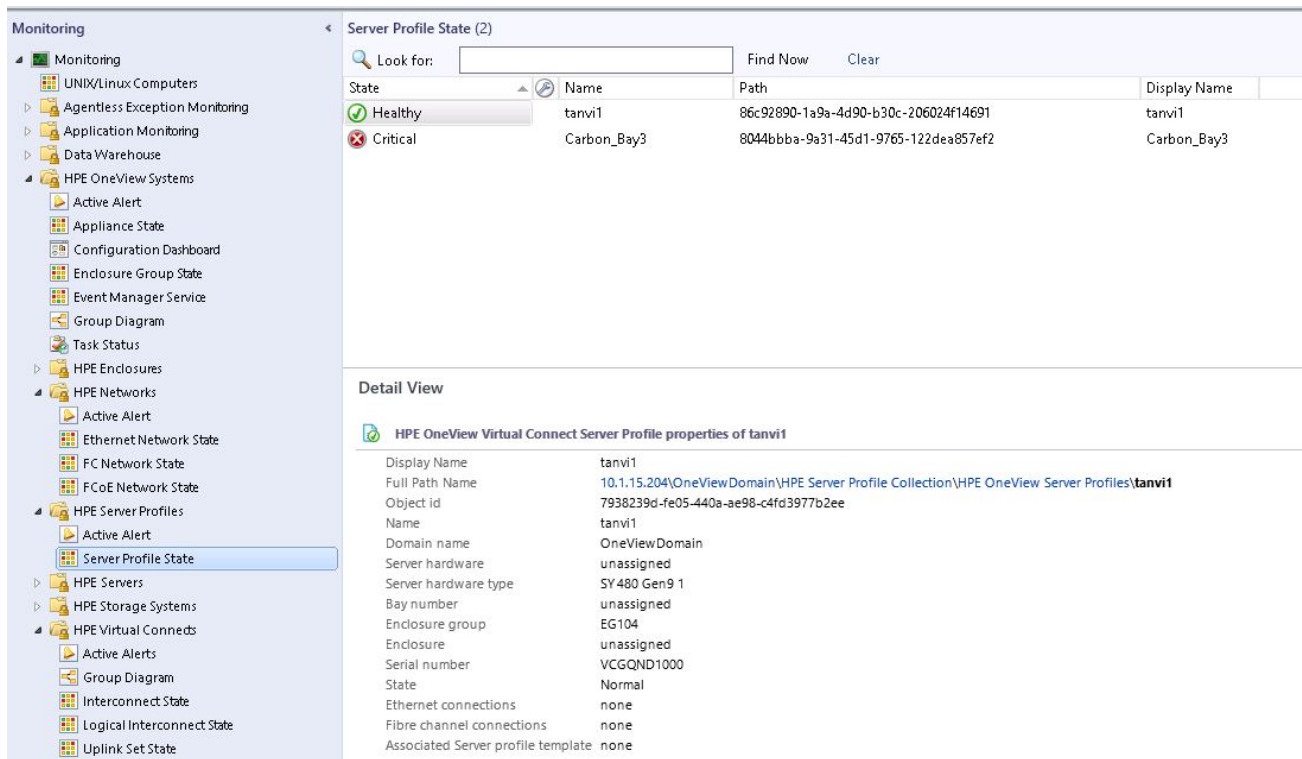
## HPE Server Profiles views

The HPE Server Profiles folder provides state views for the following:

- Active Alerts
- Server Profile State

Active Alerts are scoped alerts associated with server profiles.

The Server Profile State shows list of all types of available server profile instances in HPE OneView appliance.



## HPE Virtual Connects Views

The management console provides a collection of folders and windows for viewing information stored in the management database. The HPE OneView Virtual Connect Management Pack includes Virtual Connects views that present information about HPE Virtual Connect components and associated alerts.

The following views are added to the management console after installation of the management pack:

- HPE Virtual Connect This root folder includes all Virtual Connects views. It appears in the HPE OneView Systems folder which is defined by the HPE OneView Library Management Pack.
  - Active Alerts This view displays active alerts in the Operations Manager database generated from Virtual Connect and uplink set. The same alerts appear in the HPE OneView Systems/Active Alerts view. Alert views provide a listing of alerts in the Operations Manager database. The Alert details panel also shows new knowledge base text under the Knowledge Base section.
  - Group Diagram This view displays the Diagram view, starting with the Virtual Connect domains group. The same information also appears in the HPE OneView Systems/Group Diagram view. The Detail View displays the Virtual Connect Group properties.
  - Interconnect State This view displays the state view for all the managed Virtual Connect modules. The Detail View provides the properties for each Virtual Connect module.
  - Logical Interconnect State This view renders a list of all the managed logical interconnect instances.
  - Uplink Set State This view renders a list of all the managed uplink set instances.

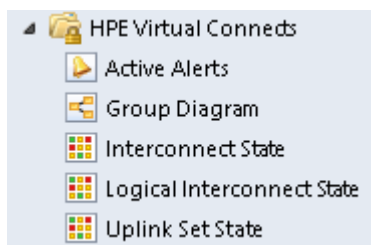


Figure 5: HPE Virtual Connect folders and views

## Active Alerts View

The Active Alerts view provides a listing of alerts for the Virtual Connect module and uplink set in the Operations Manager database. The Alert details panel shows new knowledge base text under the Knowledge section. The Active Alerts view displays active alerts associated with HPE OneView Virtual Connect classes. To display details for an alert, select the Virtual Connect alert from the Active Alerts pane. The Alert Details pane displays Knowledge Base text with the originated Windows NT Event message in the Alert Description. Event processing rules included with the HPE OneView Virtual Connect Management Pack identify and display Virtual Connect events received in the Windows Event Log as Operations Manager alerts. These events are located in the HPE OneView Management Event Log and are generated by the HPE OneView Event Manager Service.

The following information appears in the Alert Details pane:

- Alert name
- Alert source
- Path
- Alert rule name
- Created time
- Alert description
- Knowledge
  - Resolution (with links to console tasks)
  - Causes
  - Summary
  - Related events
  - Related links

Monitoring

Active Alert (4)

Look for:  Find Now Clear

Path	Source	Name	Resolution State	Created	Age
<b>Severity: Critical (2)</b>					
428bfa94-7654-...	L2R1Enc2-Encl...	For uplink set Upl_eth, uplink ports L2R1Enc...	New	6/22/2017 10:55:52 AM	2 Hours, 2 Min...
428bfa94-7654-...	L2R1Enc2-Encl...	The stacking health has changed to disconn...	New	6/22/2017 10:55:52 AM	2 Hours, 2 Min...
<b>Severity: Warning (2)</b>					
428bfa94-7654-...	L2R1Enc2, inte...	Interconnect L2R1Enc2, interconnect 2 has ...	New	6/22/2017 10:57:00 AM	2 Hours, 1 Min...
428bfa94-7654-...	L2R1Enc2, inte...	Interconnect L2R1Enc2, interconnect 1 has ...	New	6/22/2017 10:55:50 AM	2 Hours, 2 Min...

Alert Details

**For uplink set Upl\_eth, uplink ports L2R1Enc2, interconnect 2 :X4, L2R1Enc2, interconnect 1 :X4 are non operational.**

Alert Description

Source: L2R1Enc2-Encd\_Rajesh logical interconnect group  
172.25.203.202\OneViewDomain\HPE Virtual Connect Module Collection\HPE Logical InterConnect Collection\L2R1Enc2-Encd\_Rajesh logical interconnect group

Full Path Name: L2R1Enc2-Encd\_Rajesh logical interconnect group

Alert Rule: A HPE OneView logical Interconnect is in critical state

Created: 6/22/2017 10:55:52 AM

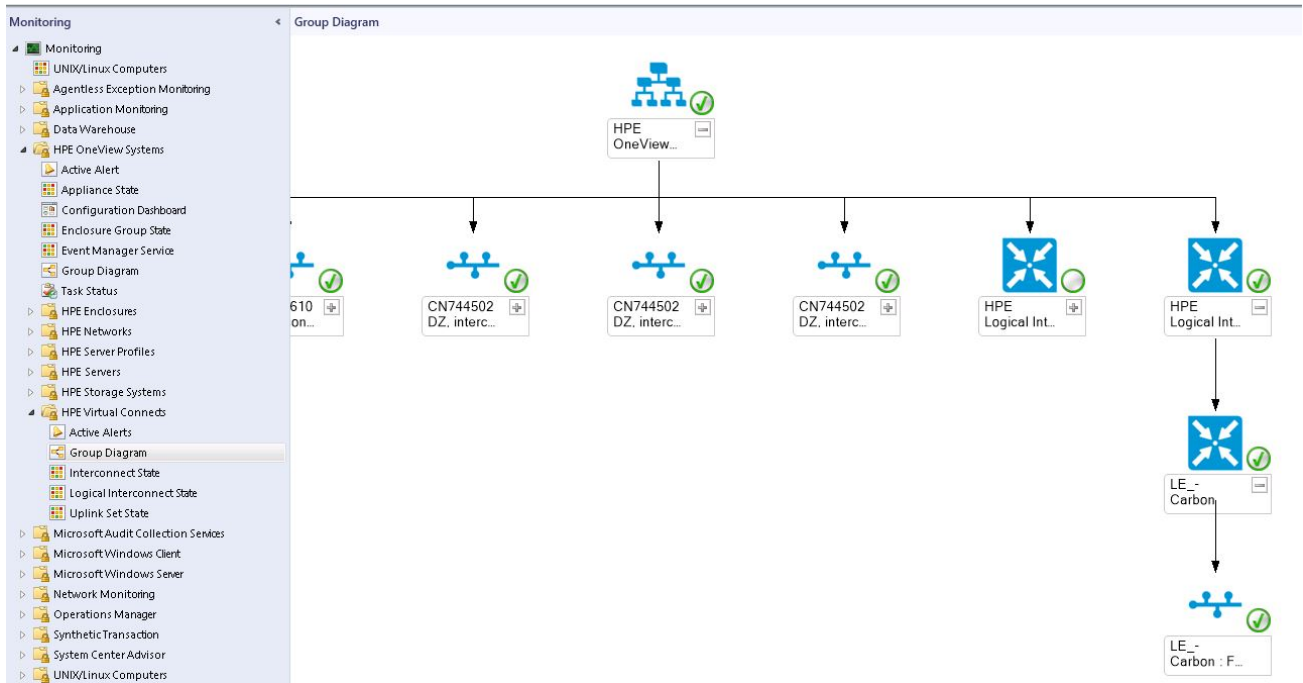
Description: For uplink set Upl\_eth, uplink ports L2R1Enc2, interconnect 2 :X4, L2R1Enc2, interconnect 1 :X4 are non operational.  
User Action: Verify that the uplink ports used by the uplink set are enabled and linked. Verify that both the LAG configuration and status on the upstream switch ports are correct. If the uplink set contains FCoE network(s), verify the uplink port DCBX status and FCoE configuration on the upstream switch ports.

Appliance IPv4 Address: '172.25.203.202';  
Appliance IPv6 Address: 'Not set';  
Host Name: 'OV30d11.scom1.net';  
Resource Type: 'logical-interconnects';  
Resource Name: 'L2R1Enc2-Encd\_Rajesh logical interconnect group';  
Resource Serial Number / Object ID: '038dcb71-051b-4f88-a0cd-62039efc6feb';  
Resource Part Number: 'NA';  
Alert State: 'Active';  
Health Category: 'logical-interconnect';  
Alert Uri: '/rest/alerts/3952'

## Group Diagram view

The Group Diagram view renders a hierarchical Group view with a status icon on the lower right of each element.





## Interconnect State View

The Interconnect State view displays the state of Virtual Connect. This view displays the State view for all the managed Virtual Connect modules. The Detail view provides the properties for each Virtual Connect module.

Interconnect State - SCOM12 - Operations Manager

Monitoring > Interconnect State (14)

State	Name	Enclosure
Healthy	Enc11, interconnect 1	Enc11
Healthy	Enc11, interconnect 2	Enc11
Critical	Enc11, interconnect 3	Enc11
Critical	Enc11, interconnect 4	Enc11
Critical	Enc11, interconnect 5	Enc11
Critical	Enc11, interconnect 6	Enc11
Healthy	Enc12, interconnect 1	Enc12
Healthy	Enc12, interconnect 2	Enc12
Healthy	Enc12, interconnect 3	Enc12
Healthy	Enc12, interconnect 4	Enc12
Healthy	Enc12, interconnect 5	Enc12
Healthy	Enc12, interconnect 6	Enc12
Healthy	Mifflin, interconnect 1	Mifflin
Healthy	Mifflin, interconnect 5	Mifflin

Detail View: HPE OneView VirtualConnect Module properties of Enc11, interconnect 1

- Display Name: Enc11, interconnect 1
- Full Path Name: 15.154.121.51\OneViewDomain\HPE Virtual Connect Module Collection\Enc11, interconnect 1
- Object ID: f4b5ede7-4178-41d3-a6e3-936fea5071ac
- Domain name: OneView.Domain
- Logical Interconnect: Enc11-LIG
- Bay number: 1
- Serial number: WECFSED100
- Part number: 691367-821
- Location: Enc11, interconnect 1
- Interconnect power: On
- State: Configured
- Firmware version: 4.30
- Interconnect ipv4: 172.18.1.111
- Interconnect ipv6: Not Applicable
- Enclosure: Enc11
- Product name: HP VC FlexFabric-20/40 F8 Module
- Enclosure location: Rack-221
- Uplink ports: Q1-1, Q1-2, Q1-3, Q1-4, Q2-1, Q2-2, Q2-3, Q2-4, Q3-1, Q3-2, Q3-3, Q3-4, Q4-1, Q4-2, Q4-3, Q4-4, X1, X2, X3, X4, X5, X6, X7, X8, X9, X10



**NOTE:** After you upgrade to HPE OneView for Microsoft System Center version 7.5 or later, the **HPE OneView VC Uplink Port Collection** column will be empty as its discovery has been removed. You can hide this column from this view by using the **Personalize View** dialog and unselecting it.

## Uplink Set State view

The Uplink Set State view displays the state view for all Uplink Set instances. The State column shows the health of the Uplink Set.

The screenshot displays the 'Uplink Set State (2)' view. The table below shows the state of two Uplink Set instances:

State	Name	Path	Associated enc...
Healthy	L3R5E2-C7K-Eg...	a1345c22-20e7-...	L3R5E2-C7K
Healthy	L3R5E2-C7K-Eg...	a1345c22-20e7-...	L3R5E2-C7K

The 'Detail View' section provides the following properties for the selected Uplink Set:

- Display Name: L3R5E2-C7K-Eg1 logical interconnect group : san\_up
- Full Path Name: 172.25.203.94\OneViewDomain\HPE Virtual Connect Module Collection\HPE Logical InterConnect Collection\L3R5E2-C7K-Eg1 logical interconnect group\L3R5E2-C7K-Eg1 logical interconnect group : san\_up
- Object id: 062dice68-96f6-4c12-96ac-5dc934344068
- Name: san\_up
- Domain name: OneViewDomain
- Associated enclosure: L3R5E2-C7K
- Logical interconnect: L3R5E2-C7K-Eg1 logical interconnect group
- Associated network(s): san
- Network type: FibreChannel
- Uplink port(s): [L3R5E2-C7K, interconnect 1:XT]

## Logical Interconnect State view

Logical Interconnect state view shows all the Logical Interconnect instances. The State column shows the health of the Logical Interconnect.

The screenshot displays the 'Logical Interconnect State (1)' view. The table below shows the state of one Logical Interconnect instance:

State	Name	Path	HPE OneView Virtual Connect Uplink Set
Healthy	LE_-Carbon	8044bbba-9a31-45d1-9765-122dea857ef2	Healthy

The 'Detail View' section provides the following properties for the selected Logical Interconnect:

- Display Name: LE\_-Carbon
- Full Path Name: 15.154.122.77\OneViewDomain\HPE Virtual Connect Module Collection\HPE Logical InterConnect Collection\LE\_-Carbon
- Object id: a1beeda-293a-4bdf-8d1b-3f2ef5402665
- Name: LE\_-Carbon
- Associated logical interconnect group: Carbon
- Associated enclosure: CN744502DZ
- Associated interconnect(s): [CN744502DZ, interconnect 2]

# Discovering HPE OneView Virtual Connect modules

The management pack contains the following discovery rules:

## Procedure

### 1. HPE OneView Virtual Connect Module Discovery Rule

This discovery rule targets Virtual Connect Module Collection instances and instantiates the following:

a. HPE OneView Virtual Connect Module

### 2. HPE OneView Logical Interconnect Discovery Rule

This discovery rule targets Virtual connect module Collection instance and instantiates the following:

a. HewlettPackard.OneView.VirtualConnect.HPLogicalInterConnect

b. HewlettPackard.OneView.VirtualConnect.HPUplinkSet

### 3. HPE OneView Server Profile Discovery Rule

This discovery rule targets the VC Server Profile Collection instance and instantiates HewlettPackard.OneView.VirtualConnect.HPVCServerProfile.

### 4. HPE OneView Virtual Connect Ethernet Network Discovery Rule

This discovery rule targets the Enclosure Network Collection instance and instantiates HewlettPackard.OneView.VirtualConnect.HPVCEnetNetwork.

### 5. HPE OneView Virtual Connect FC Fabric Network Discovery Rule

This discovery rule targets the Virtual Connect FC Fabric Network Collection instance and instantiates HewlettPackard.OneView.VirtualConnect.HPVCFCFabric.

### 6. HPE OneView Virtual Connect FCoE Network Discovery Rule

This discovery rule targets the Enclosure Network Collection instance and instantiates HewlettPackard.OneView.VirtualConnect.HPVCFCoE.

### 7. HPE OneView Virtual Connect Module Collection Discovery

This discovery rule targets the HewlettPackard.OneView.Appliance instance and instantiates HewlettPackard.OneView.VirtualConnect.ModuleCollection.

### 8. HPE OneView Logical Interconnect Collection Discovery

This discovery rule targets the HewlettPackard.OneView.VirtualConnect.HPVirtualConnectModuleCollection instance and instantiates HewlettPackard.OneView.VirtualConnect.LogicalInterConnectCollection.Discovery.

To discover an HPE OneView Virtual Connect module:

- Add the HPE OneView appliance using the OCD.
- Import the HPE OneView Virtual Connect Management Pack and its dependent management packs
- Once the management pack is imported, all Virtual Connect modules and their components under the HPE OneView appliances managed in the SCOM will be discovered.

---

#### NOTE:

The default polling interval for an enclosure discovery is 4 hours (14400 seconds). You can override and customize the interval if applicable.

---

## Tasks

## Predefined tasks

The HPE OneView Virtual Connect Management Pack includes predefined tasks that can be used to access in-depth Virtual Connect information. Hewlett Packard Enterprise tasks appear in the Actions window from the associated class instance. Not all tasks appear in every view because tasks are associated with specific classes.

The management pack includes the following tasks:

- HPE OneView Web Console

## Security settings

A prompt for login credentials will display when a task is open in Internet Explorer. You will need to enter your user credentials.

## Monitors

### State monitors

- HPE OneView Virtual Connect Health  
MonitorID=HewlettPackard.OneView.VirtualConnect.HewlettPackard.OneView.VirtualConnect.Interconnect . UnitMonitor
- HPE OneView Logical Interconnect Health  
MonitorID=HewlettPackard.OneView.VirtualConnect.LogicalInterconnect.UnitMonitor
- HPE OneView Uplink Sets Health  
MonitorID=HewlettPackard.OneView.VirtualConnect.UplinkSet.UnitMonitor
- HPE OneView Virtual Connect Ethernet Network Health  
MonitorID=HewlettPackard.OneView.VirtualConnect.HewlettPackard.OneView.VirtualConnect.Ethernet. UnitMonitor
- HPE OneView Virtual Connect Fibre Channel Health  
MonitorID=HewlettPackard.OneView.VirtualConnect.HewlettPackard.OneView.VirtualConnect.Fabrics. UnitMonitor
- HPE OneView Virtual Connect Server Profile Health  
MonitorID=HewlettPackard.OneView.VirtualConnect.HewlettPackard.OneView.VirtualConnect.ServerProfile. UnitMonitor
- HPE OneView Virtual Connect FCoE Network Health Monitor  
ID=HewlettPackard.OneView.VirtualConnect.HewlettPackard.OneView.VirtualConnect.FCoE. UnitMonitor

### Propagation Dependency Monitors

The HPE OneView Virtual Connect Management Pack contains the following propagation monitors:

- HPE OneView Virtual Connect FC Fabric to HPE OneView Enclosure Network Collection Dependency Monitor
- HPE OneView Virtual Connect Ethernet Network to HPE OneView Enclosure Network Collection Dependency Monitor
- HPE OneView Virtual Connect FCoE to HPE OneView Enclosure Network Collection Dependency Monitor
- HPE OneView Virtual Connect Server Profile to HPE OneView Enclosure Server Profile Collection Dependency Monitor
- HPE OneView Virtual Connect Module to HPE OneView Virtual Connect Group Dependency Monitor
- HPE OneView Logical Interconnect Collection to HPE OneView Virtual Connect Group Dependency Monitor
- HPE OneView Logical Interconnect to HPE OneView Logical Interconnect Collection Dependency Monitor

---

**NOTE:**

By default, the Monitor state change alerts are disabled (Generate Alerts is set to **False**) in this management pack. To receive the Monitor state change alerts, you need to create an override and set Generate Alerts to **True**.

---

## Event rules for Virtual Connect

**Table 30: Virtual Connect NT events**

NT event	Description	Type
7300	Virtual Connect Module has degraded. The OA reported a Degraded module state. It is also possible that the HPE OneView appliance is unable to communicate with the module or the OA.	Warning
7300	Virtual Connect Module has failed. The OA reported a Failed module state.	Critical
7900	HPE OneView Uplink Set has degraded.	Warning
7900	HPE OneView Uplink Set has failed.	Critical
7400	The server profile (7400) is not consistent with its server profile template	Warning

---

**NOTE:**

The event rules for Virtual Connect are only supported when you upgrade the HPE OneView SCOM Integration kit from version 8.1 to 8.2.

---

## Alerts for Interconnect

**Table 31: Interconnect alerts**

NT event	Description	Type
31038	Interconnects are not present in same bay set	Critical
31039	Invalid interconnect link topology	Critical
31040	Invalid interconnect link topology	Critical
31041	Invalid interconnect link topology.	Critical
31042	Invalid interconnect link topology.	Critical
31043	Invalid combination of interconnect modules.	Critical

*Table Continued*

<b>NT event</b>	<b>Description</b>	<b>Type</b>
31044	Connected port on an Interconnect is powered off.	Critical
31045	Interconnect port is not cabled	Critical
31046	Interconnect port is incorrectly connected.	Critical
31047	Invalid interconnect link topology	Critical
31048	Invalid interconnect link topology.	Critical
31049	Interconnect is invalid.	Critical
31057	Invalid interconnect link topology.	Critical

---

**NOTE:**

The alerts for Interconnect are only supported when you upgrade the HPE OneView SCOM Integration kit from version 8.1 to 8.2.

---

# Using HPE OneView Storage System Management Pack

The HPE OneView Storage System Management Pack enables the management of HPE Storage Systems and their logical components that are managed by the HPE OneView appliance. For more information, see HPE OneView Support Matrix at <http://www.hpe.com/info/oneview/docs>.

The HPE OneView Storage System Management Pack has the following features:

- Discovery and inventory of 3PAR StoreServ Storage System and its logical components, namely Storage Pools, Storage Volumes, and Snapshots.
- Health monitoring of logical components, namely Storage Systems, Storage Pools, Storage Volumes, and Snapshots.
- Rules to generate alerts.
- Identify, group, and display the Storage Volumes, Snapshots, Storage Pools, and Storage Systems managed by HPE OneView.
- Populate Operations Manager with Storage Systems, Storage Pools, Storage Volumes, Snapshots and their properties.

## Classes

The management pack classes contain storage data retrieved from the HPE OneView appliance. The following classes are defined in the HPE OneView Storage System Management Pack:

- HPE OneView Storage System Group (ID=HewlettPackard.OneView.HPStorageSystemGroup)
- HPE OneView Storage System Collection (ID = HewlettPackard.OneView.Storage.HPStorageGroupCollection)
- HPE OneView Storage System (ID=HewlettPackard.OneView.Storage.HPStorageSystem)
- HPE OneView Storage Pool (ID=HewlettPackard.OneView.Storage.HPStorageSystemPools)
- HPE OneView Storage Volume (ID=HewlettPackard.OneView.Storage.HPStorageSystemOVVolumes)
- HPE OneView Storage Snapshot (ID=HewlettPackard.OneView.Storage.HPStorageSystemOVSnapshots)

### HPE OneView Class Properties

The following table displays the properties of each class:

**Table 32: HPE OneView Class Properties**

Class Name	Property Name	Sample Value
HPE OneView Storage System Group	Display Name	HPE OneView Storage System Group
HPE OneView Storage System Collection	Display Name	Storage System Collection
	Resource Name	Storage System Collection
HPE OneView Storage System	Display Name	SANDR_P74002N_PRI

*Table Continued*

Class Name	Property Name	Sample Value
	Allocated Capacity	39 GiB
	Category	storage-systems
	Description	1637772
	Firmware	3.2.1.124
	Free Capacity	10 GiB
	Managed Domain	SCVMM_LK
	Model	HPE_3PAR 7400
	Name	SANDR_P74002N_PRI
	Serial Number	1637772
	State	Configured
	Status	Warning
	Total Capacity	100 GiB
	Type	StorageSystemV2
	URI	/rest/storage-systems/1637772
	WWN	2F:F7:00:02:AC:00:93:BC
OneView IP	15.218.10.10	
HPE OneView Storage Pool	Display Name	SCVMM_OneView_Test
	Allocated Capacity	19.9 GiB
	Category	storage-pools
	Device Speed	Default
	Device Type	FC
	Domain	SCVMM_LK
	Free Capacity	9 GiB
	Name	SCVMM_OneView_Test

*Table Continued*

Class Name	Property Name	Sample Value
	State	Configured
	Status	Critical
	Storage System URI	/rest/storage-systems/1637772
	Supported RAID Level	RAID1
	Total Capacity	30 GiB
	Type	StoragePool
	URI	/rest/storage-pools/162381AD-D3B8-400D-A51B
	OneView IP	15.218.10.10
HPE OneView Storage Volume	Display Name	Test_Volume
	Allocated Capacity	16 GiB
	Category	storage-volumes
	Device Volume Name	Test_Volume
	Is Permanent	TRUE
	Name	Test_Volume
	Number of Snapshots	1
	ObjectID	8F7E818F-0343-42AE-B130
	Provision Type	Thin
	Provisioned Capacity	10 GiB
	Shareable	FALSE
	State	Normal
	Status	OK
Storage Pool URI	/rest/storage-pools/162381AD-D3B8-400D-A51B	

*Table Continued*



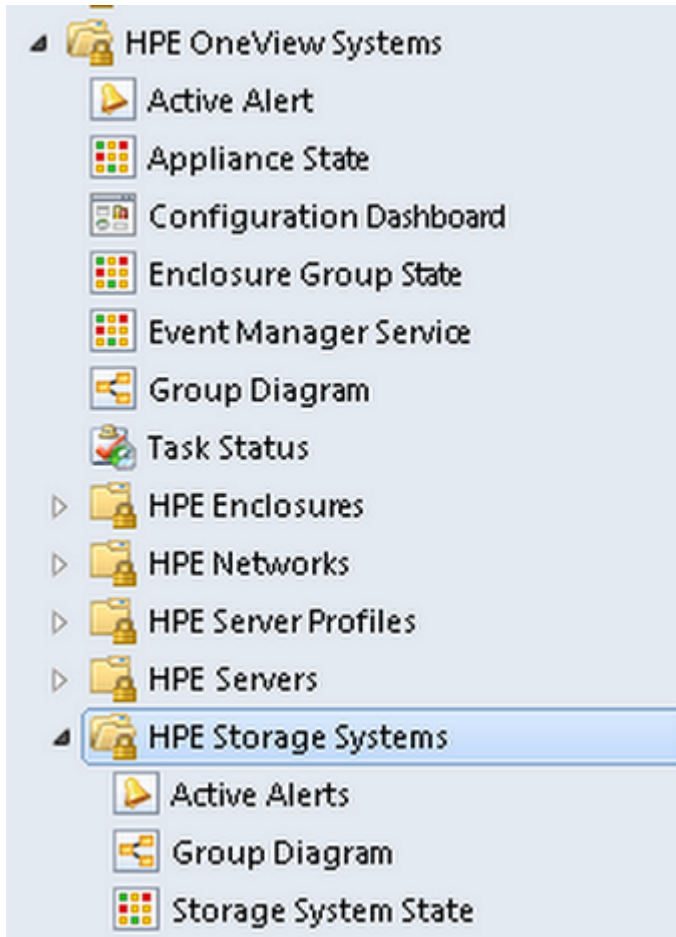
Class Name	Property Name	Sample Value
	Storage System URI	/rest/storage-systems/1637772
	Type	StorageVolumeV2
	URI	/rest/storage-volumes/8F7E818F-0343-42AE-B130
	WWN	60:00:2A:C0:00:00:00:00:04:00:16:82:00:00:93:8C
	OneView IP	15.218.10.10
HPE OneView Storage Snapshot	Display Name	AlertVolume_20160418085741
	Category	snapshots
	Device Snapshot Name	AlertVolume_20160418085741
	Name	AlertVolume_20160418085741
	Is Read Only	True
	Parent Volume Name	AlertVolume
	Snapshot Type	VirtualCopy
	State	Configured
	Status	Critical
	Storage Pool URI	/rest/storage-pools/696881E9-8959-43DA-9EA2-D3DA85DE0BA6
	Storage System URI	/rest/storage-systems/4UW0001486
	Storage Volume URI	/rest/storage-volumes/249F178F-787F-4F07-A0BF-D3489FB72E0F
	Type	Snapshot
	URI	/rest/storage-volumes/249F178F-787F-4F07-A0BF-D3489FB72E0F/snapshots/A330D48B-C0BC-497B-9D59-D022830F7B40
	WWN	60:00:2A:C0:00:00:00:00:00:00:8F:50:00:07:E1:E6
OneView IP	15.218.10.10	

# Views

The HPE OneView Storage System Management Pack views display details and alerts of all Storage Systems and their logical components managed by the HPE OneView appliance. After installation of the HPE OneView Storage System Management Pack, the following additional views are added in the management console:

The views are displayed at the following location: **HPE OneView Systems > HPE Storage Systems**.

- Active Alerts displays alerts generated by HPE OneView for Storage Systems and their logical components.
- Group Diagram displays a hierarchical group view of the Storage Systems and their logical components. All components are displayed with status icons.
- Storage System State displays the health state of the Storage Systems.



## Active Alerts

The Active Alerts view displays the active alerts generated by HPE OneView for Storage Systems and their logical components. All alerts generated by HPE OneView are also displayed at **HPE OneView Systems > Active Alert** view.

The HPE OneView Event Manager Service captures the storage alerts generated by HPE OneView and routes them to a Windows event log. The Hewlett Packard Enterprise Storage alerts are stored and retrieved from the Operations Manager database and displayed in the SCOM Console by the alert processing rules available in the HPE OneView Storage System Management Pack.

Alerts are generated for the following components:

- Managed Storage Systems
- Storage Pools
- Storage Volumes and Snapshots

To view alert details, in the **Active Alerts** pane, select **Alert**.

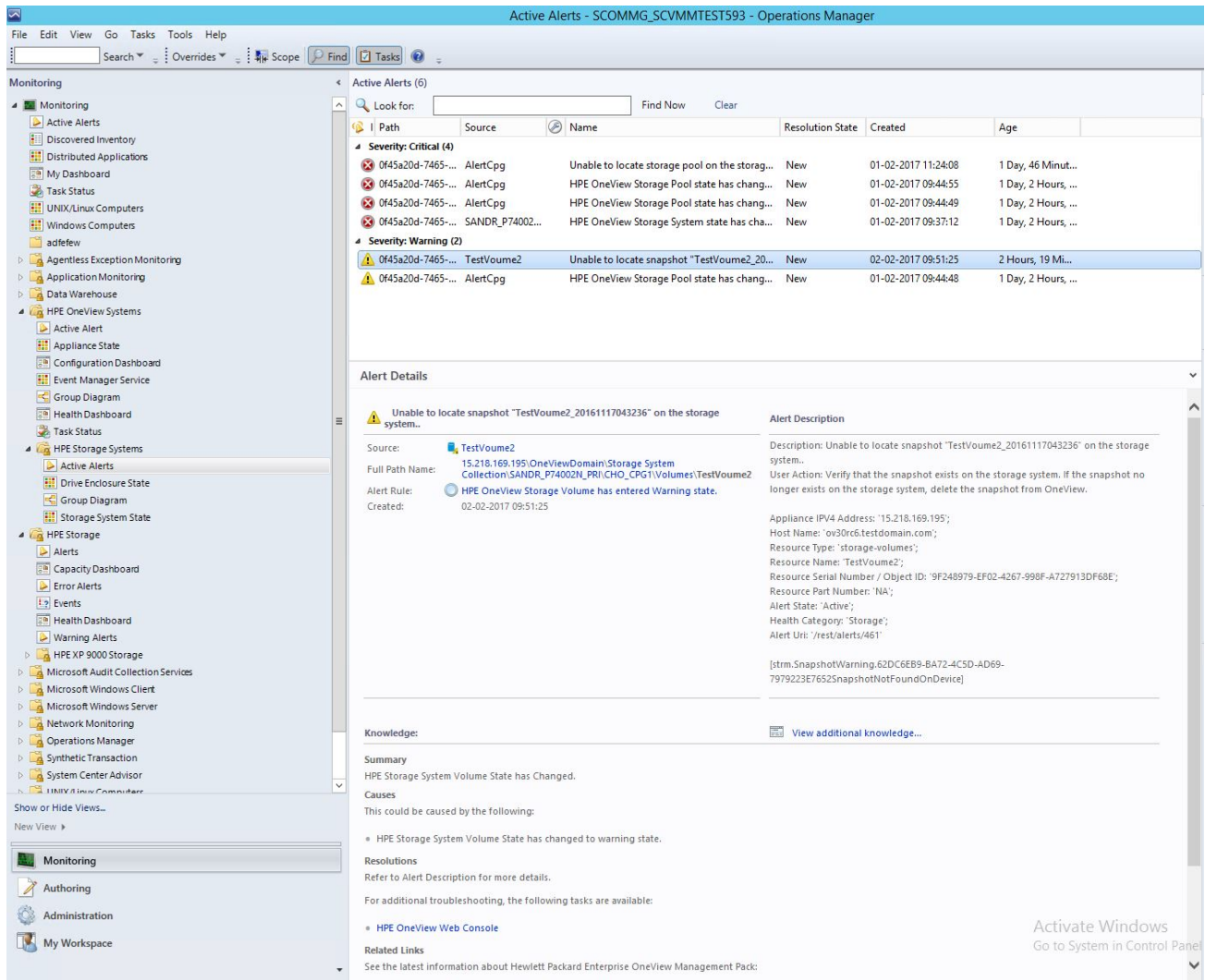
The following information appears in the **Alert Details** pane.

- Alert name
- Alert source
- Path
- Alert rule name
- Created time
- Alert description
- Knowledge
  - Resolution
  - Causes
  - Summary
  - Related events
  - Related links

---

**NOTE:**

- The Storage Volume and Snapshot alerts captured on the SCOM Console before upgrading to HPE OneView Storage System Management Pack 3.2 do not appear on the SCOM Console after the upgrade. However, they can be seen on OneView.
  - In OneView, the Snapshot alerts are displayed as Storage Volume alerts and hence are seen in the Storage Volume Alert View.
-



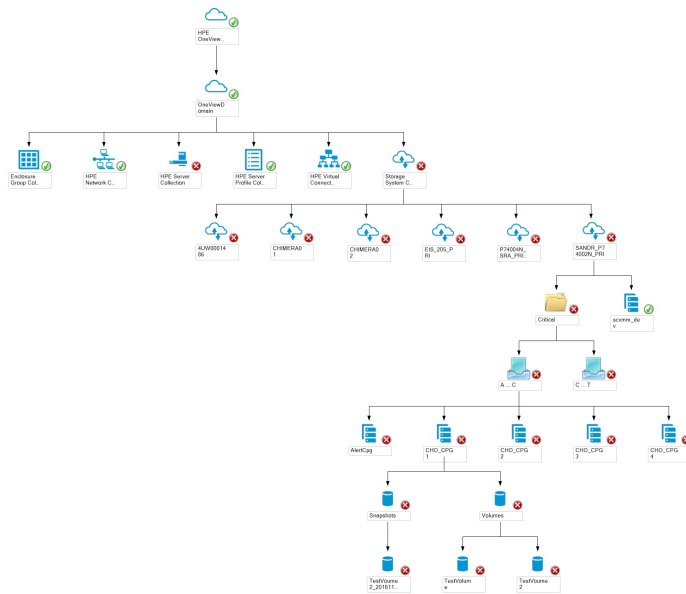
## Group Diagram

The **Group Diagram** view displays a hierarchical group view for Storage Systems and their logical components along with a status icon for each element. All Storage Systems and their logical components managed by HPE OneView are also displayed at **HPE OneView Systems > Group Diagram** view.

In the **Group Diagram** view, the Storage Systems and their logical components managed by HPE OneView are identified and displayed by the discovery rules available in the HPE OneView Storage System Management Pack.

The **Group Diagram** view displays the following components:

- Storage System Group
- Storage System
- Storage Pool
- Storage Volume and Snapshot



## Storage System State

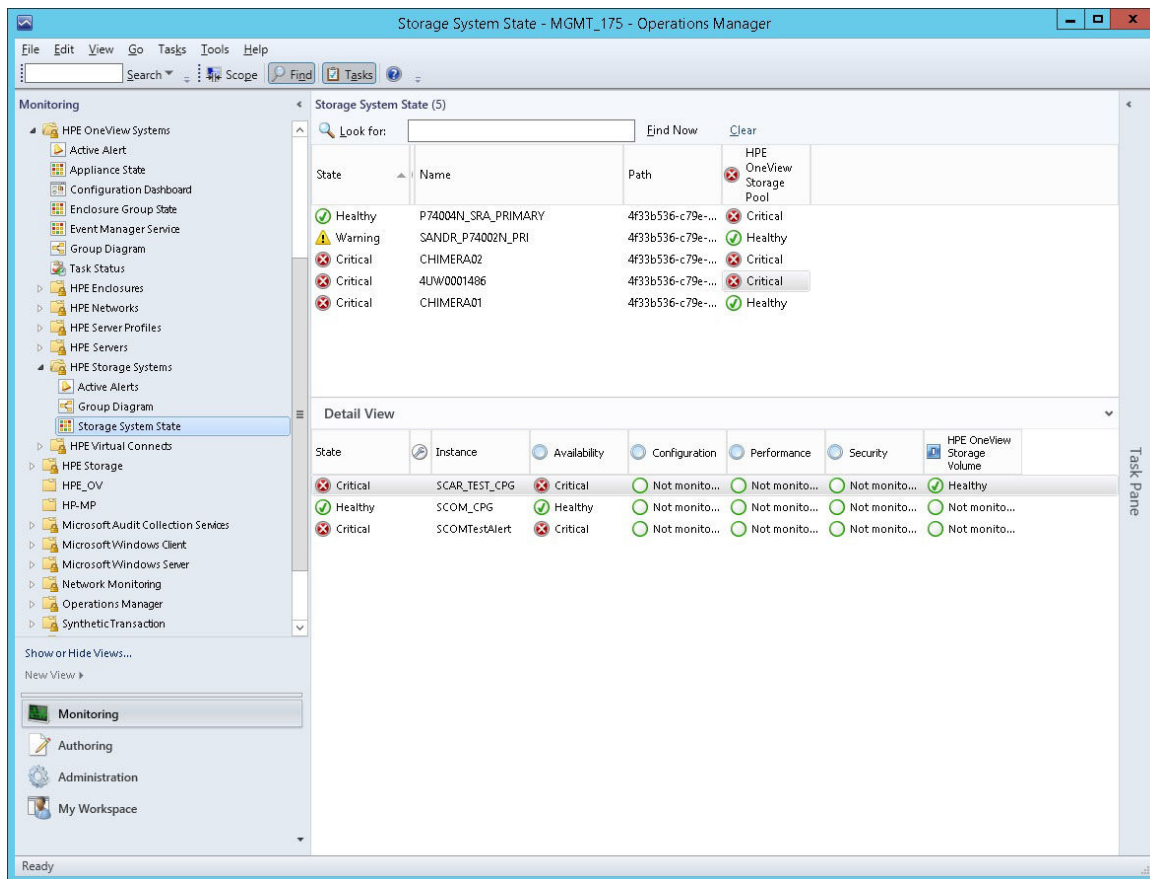
The **Storage System State** view displays the health of all Storage Systems and their logical components managed by HPE OneView.

- To view the Storage System details, select a Storage System in the **State** view. The **Detail View** displays the properties of the system selected.
- To view the Storage Pool health states select HPE OneView Storage Pool in the **State** view. The **Detail View** displays health state of individual Storage Pools.

---

### NOTE:

- If no Storage Pools are managed by HPE OneView for a Storage System, the collective health state is displayed as **Blank** for the HPE OneView Storage Pool.
  - If no Storage Volumes are managed by HPE OneView for a Storage System, then the collective health state is displayed as **Not monitored** for the HPE OneView Storage Volume.
-



## Task Pane

After installation of the HPE OneView Storage System Management Pack, the HPE OneView Web Console is available in the **Task Pane**. The HPE OneView Web Console displays details of the selected Storage System and its components, managed by HPE OneView. The Web Console launches the HPE OneView web page of the appliance. The Web console is available for all components displayed in the Group Diagram view and Active Alerts view.

### NOTE:

The HPE OneView Web Console is available in the Storage System State view only for Storage Systems.

To view details of the selected Storage System and its components managed by HPE OneView, you must enter the credentials of HPE OneView appliance.

## Discovering HPE OneView Storage Systems

### Discovering Rules

Configure the following rules to discover an Storage System:

- HPE OneView Storage System Collection Discovery
- HPE OneView Storage System Discovery

## Discovering HPE OneView Storage System

To discover an Storage System:

1. In the HPE OneView Systems folder, navigate to **Configuration Dashboard**.
2. Enter the IP address and credentials for the HPE OneView Appliance.
3. Click **Add**.
4. Import the HPE OneView Storage System Management Pack.

Once imported, all Storage Systems and their logical components managed by the HPE OneView appliance are discovered.

The default polling interval for storage discovery rule is 4 hours (14400 seconds). To change the polling interval, override the following:

- HPE OneView Storage System Collection Discovery
- HPE OneView Storage System Discovery

## Monitors

The HPE OneView Storage System Management Pack monitors are used to retrieve the health states of all Storage Systems and their logical components. The following monitors are available:

- Unit Monitors—To retrieve the health state of all Storage Systems and their components.
- Health State Roll up Monitors—To propagate the health state from a child node to a parent node depending on the association.

The Health state of the Storage Systems and their components are refreshed every 15 minutes by the monitoring module. You can customize the refresh cycle in the monitoring module.

The following table displays the health state mapping between HPE OneView appliance and SCOM:

**Table 33: Mapping of health states**

SCOM Health State	HPE OneView Appliance Health State	Description
Healthy	OK	Indicates the state is ok
Warning	Warning	Indicates the state is degraded
Critical	Error	Indicates the state is failed
Unknown	Unknown	Indicates the state is unknown

The following monitors are available in the HPE OneView Storage System Management Pack:

- HP Storage System Unit MonitorID=HewlettPackard.OneView.Storage.HPStorageSystem.UnitMonitor
- HP Storage Pool Unit MonitorID=HewlettPackard.OneView.Storage.HPStorageSystemPools.UnitMonitor
- HP Storage Volume Unit  
MonitorID=HewlettPackard.OneView.Storage.HPStorageSystemVolumes.UnitMonitor
- HP Storage Snapshot Unit  
MonitorID=HewlettPackard.OneView.Storage.HPStorageSystemSnapshots.UnitMonitor

The following dependency monitors are also available in the HPE OneView Storage System Management Pack:

- HPE Storage Volumes to Volumes group Health Roll-up  
MonitorID=HewlettPackard.OneView.Storage.HPStorageVolumestoVolumesGroup.HealthRollupMonitor
- HPE Storage Snapshots to Snapshots group Health Roll-up  
MonitorID=HewlettPackard.OneView.Storage.HPStorageSnapshotstoSnapshotsGroup.HealthRollupMonitor
- HPE Storage Volumes group to Storage Pool Health Roll up  
MonitorID=HewlettPackard.OneView.Storage.HPStorageVolumesGrouptoStoragePool.HealthRollupMonitor
- HPE Storage Snapshots group to Storage Pool Health Roll up  
MonitorID=HewlettPackard.OneView.Storage.HPStorageSnapshotsGrouptoStoragePool.HealthRollupMonitor
- HPE Storage Pools to Storage System Health Roll-up  
monitorID=HewlettPackard.OneView.Storage.HPStoragePoolstoStorageSystem.HealthRollupMonitor
- HPE Storage System to Storage Group Collection Health Roll-up  
monitorID=HewlettPackard.OneView.Storage.HPStorageSystemtoStorageSystemCollection.HealthRollupMonitor
- HPE Storage System to Storage System Group Health Roll-up  
monitorID=HewlettPackard.OneView.Storage.HP3PARStorageSystemGroupContains3PARStorageSystem

## Event Rules

The following table lists the events supported by HPE OneView Storage System Management Pack:

**Table 34: Event Rules**

Event ID	Description	Event Type
8900	Storage System state changed to Warning	Warning
8900	Storage System state changed to Critical	Critical
8900	Storage Pool state changed to Warning	Warning
8900	Storage Pool state changed to Critical	Critical
8900	Storage Volume state changed to Warning	Warning
8900	Storage Volume state changed to Critical	Critical

**NOTE:**

The Snapshot events and the Volumes have the same event ID and Description, since Snapshot is considered as a Volume.

These alerts are supported when you upgrade the HPE OneView SCOM Integration kit from version 8.1 to 8.2.



# Using HPE OneView Server Management Pack

The HPE OneView Server Management Pack enables management of HPE Server hardware being managed by the appliance. HPE OneView appliances v3.0 and v3.1 are supported. For more information, see [Support matrix](#) on page 11.

This management pack has the following features:

- Discovery and inventory of supported server hardware (both managed and monitored)
- Health monitoring of server hardware
- Task that open HPE OneView appliance, Integrated Lights-Out web page in context to the selected resource
- Monitor state change alert of the resources (Healthy to critical).
- Rules to generate alerts
- Identifies, groups, and displays server hardware being managed by HPE OneView in the management console
- Populates Operations Manager with server hardware attributes
- Identifies, translates, and displays server hardware events written to the Windows Event Log by the HPE OneView Event Manager as Operations Manager alerts
- Provides links to HPE OneView web console for server hardware resource management and advanced administration from Operations Manager

## Classes

The structure of management pack classes is defined to seamlessly provide operations with the HPE OneView Management Pack. The HPE OneView Server Management Pack defines the classes in the following list.

### HPE OneView ProLiant Server Class

The HPE OneView ProLiant Server includes following properties:

ID : HewlettPackard.Oneview.Server.HPProLiantServer

**Table 35: HPE OneView ProLiant Server Class Properties**

Property	Example
Object ID	Any GUID
Name	ILOSGH047XT32
Memory	24 GB
Model	ProLiant DL460C Gen10
Product Name	ProLiant DL360 G7
License	OneView Standard
iLO IPv6 Address	Any IPv6 Address

*Table Continued*

Property	Example
iLO IPv4 Address	Any IPv4 Address
iLO Model	iLO 3
iLO Version	1.85 May 13 2015
iLO Host Name	ILOSGH047XT32
Part Number	579237-B21
Server Power	On
CPU	2 processors, Intel(R) Xeon(R) CPU E5640 (2.67GHz / 4-core)
ROM Version	P68 05/05/2011
Serial Number	SGH047XT32
Server Hardware Type	BL460c Gen8 2
Server Profile	n/a
Remote Support	Enabled
Warranty Start Date	Date & time format (1/1/2018 12:00PM)
Warranty Expiration Date	Date & time format (1/1/2018 12:00PM)
Host Name	Target Server ( SCOM2016.RM.NET)
OS Name	Microsoft Windows Server 2016

## Views

The management console provides a collection of folders and windows for viewing information stored in the management database. The HPE OneView Server Management Pack includes HPE ProLiant Server views that present information about each server hardware and associated alerts managed by the HPE OneView appliance which is being monitored. The following views are added on the management console after installation of the HPE OneView Server Management Pack:

- **Active Alert**—This view displays active alerts generated from the HPE OneView Server hardware. The same alerts appear in the HPE OneView Systems/Active Alerts view.
- **Group Diagram**—This view displays the Diagram view, starting with the Server hardware collection. The same groups also appear in the HPE OneView Systems/Group Diagram view.
- **Server State**—This view renders a list of all the managed and monitored server hardware instances.

## Active Alert

The Active Alert view provides a listing of alerts for Server hardwares in the Operations Manager database. The Alert details panel shows new knowledge base text under the Knowledge section. The Active Alerts view displays active alerts associated with HPE OneView Server hardwares classes. To display details for an alert,

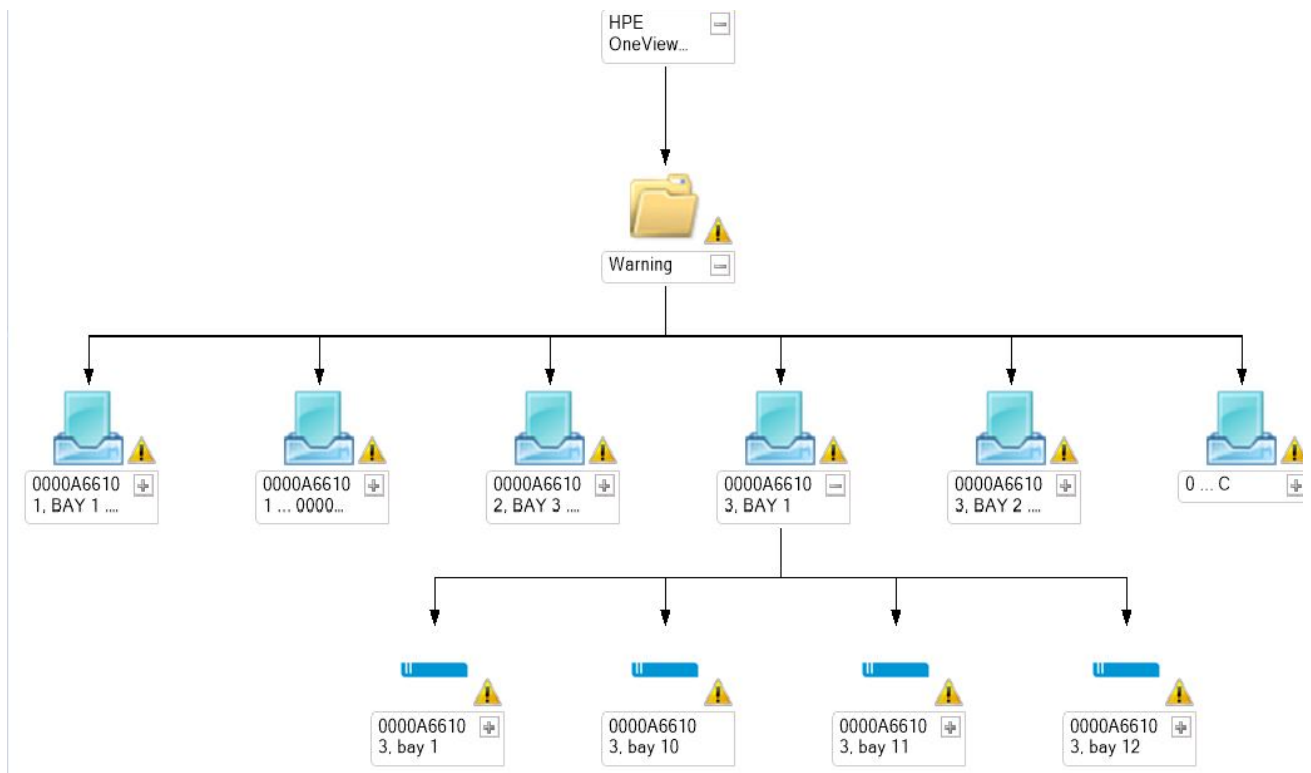
select the Server hardware alert from the Active Alerts pane. The Alert Details pane displays Knowledge Base text with the originated Windows NT Event message in the Alert Description. Event processing rules included with the HPE OneView server Management Pack identify and display Server hardware events received in the Windows Event Log as Operations Manager alerts. These events are located in the HPE OneView Management Event Log and are generated by the HPE OneView Event Manager Service.

The following information appears in the Alert Details pane:

- Alert name
- Alert source
- Path
- Alert rule name
- Created time
- Alert description
- Knowledge
- Resolution (with links to console tasks)
- Causes
- Summary
- Related links

## Group Diagram

The Group Diagram view provides a hierarchical group view with status icons on the lower right of each element.



## HPE Server State

The Server State displays a list of all the managed and monitored server hardware instances. Gen10 server hardware is supported under HPE Server. A new hardware series called XL servers are also discovered under HPE server.

The screenshot shows the HPE OneView Monitoring console. The left sidebar contains a tree view with categories like HPE Networks, HPE Server Profiles, HPE Servers, HPE Storage Systems, and HPE Virtual Connects. The main area displays the 'HPE Server State (5)' for 'L2R1Enc12, bay 3'. A table lists server states: Healthy (L2R1Enc12, bay 3), Critical (L2R1Enc11, bay 7), and Critical (L2R1Enc11, bay 5). Below this is a 'Detail View' for 'HPE OneView ProLiant Server properties of L2R1Enc12, bay 3'. The details include: Display Name (L2R1Enc12, bay 3), Full Path Name (172.25.203.202\OneViewDomain\HPE Server Collection\L2R1Enc12, bay 3), Name (L2R1Enc12, bay 3), UUID (33383636-3735-4D32-3233-303930303242), Memory (12 GB), Model (ProLiant BL420c Gen8), Location (Rack1, L2R1Enc12, bay 3), License (HPE OneView Advanced), iLO IP4 address (172.25.11.214), iLO IP6 address (none), iLO model (iLO4), iLO host name (ILO2M2309002B), iLO version (2.50 Sep 23 2016), Part number (668357-821), Server power (On), CPU (1 processors, Intel(R) Xeon(R) CPU E5-2430 0 ( 2.20GHz / 6-core)), ROM version (I30 11/03/2014), Serial number (2M2309002B), Server hardware type (BL420c Gen8 1), Server profile (none), Host name (Not Available), Operating system (Not Available), Remote support (Disabled), Remote support level (Not Available), Warranty start date (Not Available), and Warranty expiration date (Not Available).

The screenshot shows the HPE OneView Monitoring console with a list of server states and a detail view for 'OA2, bay 16'. The list shows various server states (Healthy, Warning) for different bays (10, 12, 13, 11, 14, 9, 16) with their respective hardware types and capacities. The detail view for 'HPE OneView ProLiant Server properties of OA2, bay 16' includes: Display Name (OA2, bay 16), Full Path Name (192.168.2.162\OneViewDomain\HPE Server Collection\OA2, bay 16), Name (OA2, bay 16), UUID (30373438-3231-4337-4536-343050314445), Memory (32 GB), Model (ProLiant BL460c Gen10), Location (Rack3\_C7000, OA2, bay 16), License (HPE OneView Advanced), iLO IP4 address (192.168.3.40), iLO IP6 address (none), iLO model (iLO5), iLO host name (ILO7CE640P1DE), iLO version (1.10 May 05 2017), Part number (847012-001), Server power (On), CPU (2 processors, Intel(R) Genuine processor (2.2 GHz / 4-core)), ROM version (I41 v1.00 (05/22/2017)), Serial number (7CE640P1DE), Server hardware type (BL460c Gen10 1), Server profile (BL460Gen10), Host name (BL460GEN103), Operating system (Microsoft Windows Server 2016), Remote support (Disabled), Remote support level (Not Available), Warranty start date (Not Available), and Warranty expiration date (Not Available).

Hostname property, Operating system property is added under the detail view of server state of HPE servers. Displaying OS name is only supported for Gen 10 DL/BL Servers, earlier servers have default value **Not Available**.

Remote support property is added under Detail view of HPE Servers in HPE Oneview Systems to provide Warranty Status of the resources like Server Hardware and enclosure of an Appliance in HPE OVMP. Remote Support of Server Hardware introduces new properties like, Remote support, Remote support level, Warranty start date and Warranty expiration date. Remote Support contains two values as Enabled and Disabled that define remote support's availability for a Server Hardware. Remote support level defines support level Values. Warranty start date defines the date when the Warranty of Remote Support of Server Hardware has been started. Warranty expiration date defines the date when the Remote Support Warranty of Server Hardware has been started.

The screenshot displays the HPE OneView Monitoring interface. On the left is a navigation tree with categories like HPE Enclosures, HPE Networks, HPE Server Profiles, HPE Servers, and HPE Storage Systems. The main area shows a table of server states and a detailed view for 'Enclosure 2, bay 5'.

State	Name	Path	Remote support	Remote suppo...	Warranty start ...	Warranty expir...
Healthy	Mifflin, nPar0001	9a055302-1864-...	Disabled	Not Available	Not Available	Not Available
Warning	Enc12, bay 5	9a055302-1864-...	Enabled	Warranty	4/8/2010 5:00:0...	12/30/2018 4:00...
Warning	Enc11, bay 12	9a055302-1864-...	Enabled	Warranty	4/8/2010 5:00:0...	12/30/2018 4:00...
Warning	Enc11, bay 4	9a055302-1864-...	Enabled	Warranty	4/8/2010 5:00:0...	12/30/2018 4:00...

HPE OneView ProLiant Server properties of Enc12, bay 5	
Display Name	Enc12, bay 5
Full Path Name	15.154.121.51\OneViewDomain\HPE Server Collection\Enc12, bay 5
Name	Enc12, bay 5
UUID	37333036-3831-4753-4831-30385838524E
Memory	32 GB
Model	ProLiant BL460c Gen8
Location	Rack-221, Enc12, bay 5
License	HPE OneView Standard
iLO IPV4 address	172.18.6.21
iLO IPV6 address	none
iLO model	iLO4
iLO host name	172.18.6.21
iLO version	2.20 Nov 01 2014
Part number	603718-C21
Server power	Off
CPU	2 processors, Intel(R) Xeon(R) Processor E5620 ( 2.4GHz / 4-core)
ROM version	I31 09/30/2011
Serial number	SGH108X8RN
Server hardware type	BL460c Gen8 2
Server profile	n/a
Host name	Not Available
Operating system	Not Available
Remote support	Enabled
Remote support level	Warranty
Warranty start date	4/8/2010 5:00:00 PM
Warranty expiration date	12/30/2018 4:00:00 PM

## Discovering HPE OneView ProLiant server

### Discovery rules

Configure the following rules to discover an HPE OneView ProLiant server:

- HPE OneView ProLiant Server Group to ProLiant Server membership discovery rule
- Server Collection Discovery
- HPE OneView ProLiant Server Discovery

### Adding HPE OneView ProLiant Server

To discover an HPE OneView ProLiant Server:

#### Procedure

1. Add an HPE OneView appliance using the OCD.
2. Import the HPE OneView Server Management Pack.
3. Once the management pack is imported, all ProLiant Servers under the HPE OneView appliances managed in the SCOM are discovered.

---

#### NOTE:

The default polling interval for a ProLiant Server discovery is 4 hours (14400 seconds). You can override and customize the interval, if applicable.

---

### Tasks

The following tasks are available in the Actions section of the Operations Manager console:

- HPE OneView Web Console
- Integrated Lights-Out

## Security settings

A prompt for login credentials will display when a task is open in Internet Explorer. Enter your user credentials at the prompt.

## HPE OneView Web Console

HPE OneView Web Console task currently launches the HPE OneView web page of the appliance. The current application path such as, %windir%\explorer.exe <appliance IPAddress> is used.

## HPE Integrated Lights-Out

Integrated Lights-Out task currently launches the HPE iLO web page of the ProLiant server. The current application path such as, %windir%\explorer.exe <iLO IP> is used.

## Monitors

The HPE OneView Server Management Pack includes a set of monitors to update the health states from HPE OneView appliances. Monitors are presented in the following categories:

- Health Collection State Monitors—These monitors update the health states to each Health Collection class instance.
- State Propagation Monitors—These monitors update the health states to propagate from a lower associated class instance to a higher class instance.

HPE OneView ProLiant server instances are updated every 15 minutes (interval can be overridden and customized by the user) by running a monitoring module.

---

### NOTE:

The monitoring interval can be overridden and customized as applicable.

---

**Mapping of health states** table describes the mapping between the health state value returned from the enclosure REST interface, and the health state value exposed by SCOM.

**Table 36: Mapping of health states**

SCOM Health State	HPE OneView Appliance Health State	Description
Healthy	OK	Indicates the state is ok
Warning	Warning	Indicates the state is degraded
Critical	Error	Indicates the state is failed
Unknown	Unknown	Indicates the state is unknown

The following monitors are available with the HPE OneView Server Management Pack.

- HPE OneView ProLiant Server Health Monitor ID= HewlettPackard.Oneview.Server.HPProliantServer.UnitMonitor

The following dependency monitors are also included with the HPE OneView Server Management Pack.

- HPE OneView Proliant Server to HPE OneView Proliant Server Collection Dependency Monitor ID= ProliantServerCollectionContainsProliantServer
- HPE OneView Proliant Server to HPE OneView Proliant Server Group Dependency Monitor ID= ProliantServerGroupContainsProliantServer

**NOTE:**

By default, the Monitor state change alerts are disabled (Generate Alerts is set to **False**) in this management pack. To receive the Monitor state change alerts, you must create an override and set Generate Alerts to **True**.

## Event rules

**Server Alerts** table lists the events supported by HPE OneView Server Management Pack

**Table 37: Server Alerts**

Event ID	Description	Event Type
6043, 6044, 6045	DC-DC power converter degraded or failed	Warning
3039	Drive Array Accelerator data degraded or failed	Error
3038, 3040	Drive Array Accelerator degraded or failed or battery failed	Error
3034	Drive Array Logical Drive degraded	Warning
6070	System Battery Failed	Error
6071	System Battery Removed	Error
3046	Drive Array Physical Drive degraded	Warning
3047	Drive Array Spare Drive degraded	Warning
3043, 3045, 3041	Drive Array Tape Drive degraded	Warning
3042	Drive Array Tape Library door degraded	Warning
16017, 16018, 16019	External Array Accelerator failed or data failed or battery failed	Error
16014, 16020, 16008	External Array Controller degraded or failed	Error
16022	External Array Logical Drive failed	Error
16016	External Array Physical Drive failed	Error
16023, 16024, 16002	External Tape Drive degraded	Warning

*Table Continued*



Event ID	Description	Event Type
16026	External Tape Library degraded	Warning
16027	External Tape Library door degraded	Warning
6021, 6035, 6037	Fan degraded	Warning
6020, 6023, 6036	Fan failed	Error
16028	Fibre Channel Controller degraded	Warning
14004	IDE ATA Disk degraded	Warning
6067	Memory Board or Cartridge is failed	Error
6065	Memory Board or Cartridge or Riser is Removed	Warning
6047, 6051, 6052, 6053, 6064, 6068	Memory degraded	Warning
6016	Memory error tracking disabled	Warning
18002, 18006, 18012	Network Interface failed	Error
18008	NIC Teaming failed	Error
6027	Power-On-Self-Test degraded	Warning
6028, 6032, 6034, 6049, 6050, 6069	Power subsystem degraded or failed	Warning
1005	Processor degraded	Warning
1012	Flash media failed	Error
1014	USB storage device sync failed	Error
22024, 22025, 22027, 22030, 22031, 22032, 22033, 22035, 22036	Rack enclosure power subsystem degraded	Warning
22019, 22020, 22034	Rack power subsystem degraded.	Warning
22018	Rack power subsystem not redundant.	Warning
22013	Rack power supply failed	Error

*Table Continued*



<b>Event ID</b>	<b>Description</b>	<b>Event Type</b>
22022, 22023	Rack server power subsystem degraded	Warning
9007	Remote Management Processor battery connector degraded.	Warning
9004	Remote Management Processor battery failed	Error
9006	Remote Management Processor degraded.	Warning
9005	Remote Management Processor failed	Error
9008	Remote Management Processor keyboard connector degraded.	Warning
9009	Remote Management Processor mouse connector degraded.	Warning
9010	Remote Management Processor power connector degraded	Warning
5023	SAS/SATA Logical Drive degraded	Warning
5022	SAS/SATA Physical Drive degraded.	Warning
5025	SAS Tape Drive degraded.	Warning
5020	SCSI Physical Drive failed.	Error
5008, 5009	SCSI Tape Drive degraded.	Warning
5019	SCSI Tape Drive failed.	Error
5018	SCSI Tape Library failed.	Error
8008, 8022, 8029, 8020	Storage System Fan degraded.	Warning
8015, 8031	Storage System Fault Tolerant Power Supply degraded.	Warning
8024, 8021	Storage System Power Supply degraded.	Warning
8018	Storage System Power Supply UPS degraded.	Warning
8025	Storage System Recovery Server degraded.	Warning
8013	Storage System Side Panel degraded.	Warning
8010, 8019, 8023, 8030	Storage System Temperature degraded.	Warning
8009	Storage System Temperature failed.	Error
6018, 6041	Temperature degraded.	Warning

*Table Continued*

Event ID	Description	Event Type
6017, 6040	Temperature failed and system shutdown.	Error
3033, 3048	Drive Array Controller degraded.	Warning
8032	Storage System Connection degraded.	Warning
14005	IDE Logical Drive degraded.	Warning
3049502614006	Solid State Disk degraded	Error
8033	Storage system Global Service Indicator Status Change	Error

---

**NOTE:**

The event rules are only supported when you upgrade the HPE OneView SCOM Integration kit from version 8.1 to 8.2.

---

# HPE OneView Event Manager Service

HPE OneView Event Manager Service (EMS) provides monitoring data to indicate any information change to the monitored devices. It consumes state change messages from HPE OneView appliances by establishing a SCMB exchange. As soon as it receives state change messages from the appliance, it formulates the message and generates NT events for the SCOM rule to pick.

---

**NOTE:**

The HPE OneView Event Manager feature needs to be installed in all the management servers under the Resource Pool for HPE OneView Management Pack.

---

## HPE OneView Event Manager Service NT events

The following table lists the NT events that may be reported when the HPE Event Manager Service to appliance connection fails. The events are entered in the HPE OneView Event Manager Log file. The event source is the HPE OneView Management Core.

These events can be caused by the following conditions:

- Communication with the appliance has been lost.
- The certificate has not been generated.
- There is an issue in establishing a SCMB exchange with the appliance.

**Table 38: Virtual Connect NT events**

NT event	Description	Type
201	HTTP request error.	Rest calls to the appliance fails. This could be due to various reasons: <ul style="list-style-type: none"><li>• Appliance not reachable from the server.</li><li>• Network connection from the server to the appliance not stable.</li><li>• Http Ports are blocked due to firewall issue.</li></ul>
221	The HPE OneView Event Manager Configuration Error.	This error can happen if configuration file corrupted or not found. Please check if master.xml file exists in the Event Manager installation folder.
222	The HPE OneView Event Manager was unable to get client certificate.	This can happen due to following reasons: <ul style="list-style-type: none"><li>• Post rest calls to appliance fails.</li><li>• Firewall blocks port and appliance not reachable.</li><li>• Some unknown reason appliance refuses the request.</li></ul>
223	Internal Error.	Internal processing error.

*Table Continued*

NT event	Description	Type
224	Log related error.	This may happen if it not able to write in the log file as handle has been taken by somebody else or permission issue.
230	Unknown error.	

## Using Windows PowerShell

HPE OneView Management Packs use Windows PowerShell, the Microsoft Command Console, and scripting language to collect discovery and monitoring data from an appliance.

When the Event Manager Service is installed, the PowerShell cmdlets are available to get resource information about the managed appliance. If the modules are not available, the following command can be used to load the correct PowerShell snap-in:

```
Add-PSSnapin HPOneView.ManagedDevicesCmdlets
```

---

### NOTE:

The information in this chapter assumes you are familiar with Windows PowerShell. For more information, access the Windows PowerShell Owner's Manual at the following website:

<http://technet.microsoft.com/en-us/library/ee221100.aspx>

---

### ⓘ IMPORTANT:

- You must have Administrator rights to use PowerShell with HPE OneView Management Pack.
  - PowerShell must be running on the system on which the Event Manager Service is installed.
-

# Troubleshooting

## Cause

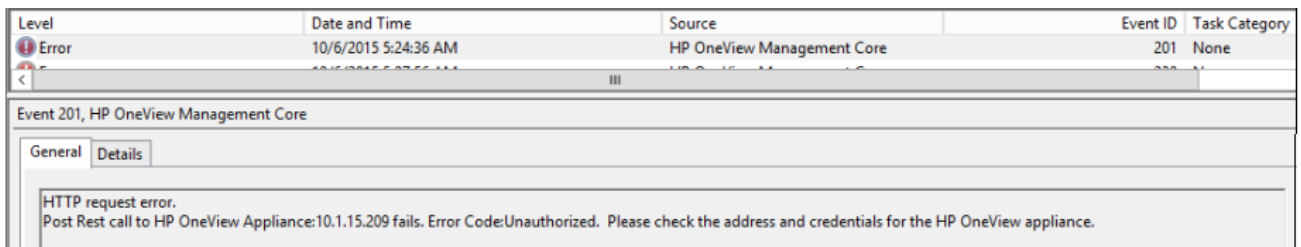
The following information is designed to help resolve some common problems that may occur when using the HPE OneView Management Pack.

## Administrative issues

The following sections provide troubleshooting information for administrative issues with the HPE OneView Management Pack.

### Alerts are not working

Open HPE OneView Management event log file and check if there is any event present with event ID 201 as shown in **Figure 6: Event page** on page 113.



Level	Date and Time	Source	Event ID	Task Category
Error	10/6/2015 5:24:36 AM	HP OneView Management Core	201	None

Event 201, HP OneView Management Core

General Details

HTTP request error.  
Post Rest call to HP OneView Appliance:10.1.15.209 fails. Error Code:Unauthorized. Please check the address and credentials for the HP OneView appliance.

**Figure 6: Event page**

This may occur if the HPE OneView appliance user, who is added to the HPE OneView Configuration Dashboard does not have full administrator rights.

To resolve the issue, perform the following steps:

1. Open **Configuration Dashboard** in the SCOM console.
2. Select the appliance available in the list view.
3. Click **Edit**, open **Context** menu, and click **Edit**. The Edit dialogue opens.
4. Enter the HPE OneView appliance user ID and password who has full administrator rights and click **OK**.

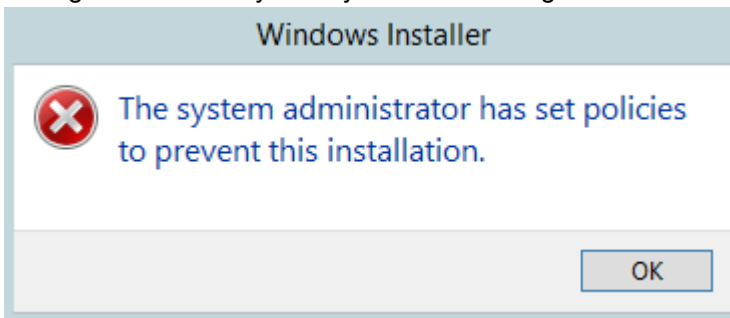
### When running multiple HPE OneView appliances, the group diagram under HPE Enclosures, HPE Virtual Connects, HPE Storage Systems, and HPE Servers views does not breakout the resources in a separate HPE OneView instance

In this case, to see the HPE OneView instance breakout, go to the top level master group diagram view under **HPE OneView Systems > Group Diagram**.

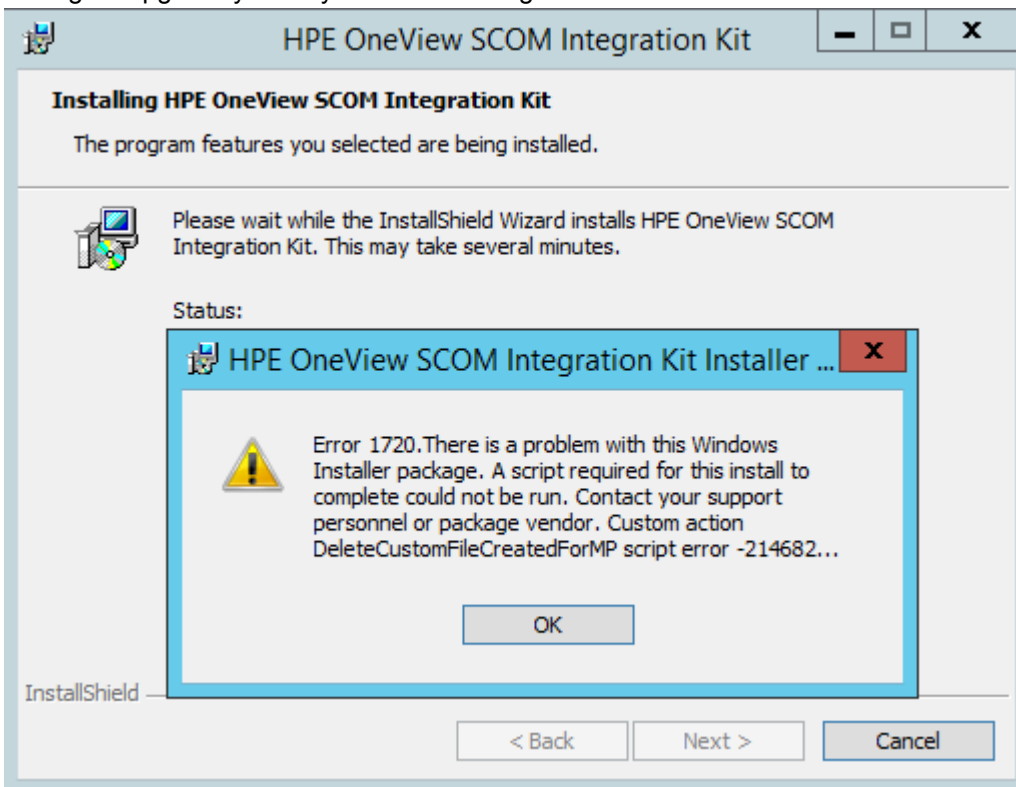
### Privilege issue while installing HPE OneView SCOM Integration Kit

The following issues may occur during the installation of the HPE OneView SCOM integration kit.

- During a fresh install you may see this message:



- During an upgrade you may see this message:



These errors can be encountered if user does not have sufficient privileges. Check to make sure the logon user has administrator privileges, then use the `Run As Administrator` option to launch the installer.

## Operations Manager is not discovering HPE OneView appliances

HPE OneView appliances may not be discovered by Operations Manager for several reasons. Verify that the following conditions exist on all HPE OneView appliances to be managed:

- HPE OneView management environment is properly installed and configured.
- HPE OneView appliance is properly added via the HPE OneView Configuration Dashboard (OCD).

**NOTE:**

The following table lists potential OCD error codes and their descriptions.

Error Code	Description
100	Device already added to SCOM. The same IP/DNS name has been entered while addition.
101	Credentials error. Check the IP and credentials entered into OCD.
102	Internal error occurred while adding appliance to SCOM.
103	Logging Off error from HPE OneView session while removal of HPE OneView.
104	Internal error during removal of appliance from SCOM.
105	Internal error during edit HPE OneView appliance in SCOM.
106	Check credentials during modify option.
107	The HPE OneView appliance at {0} version {1} not supported. Please check and, if necessary, update the appliance version.
108	Same appliance is not getting edited due to different domain ID.
109	REST API call made to HPE OneView appliance exceeds the time limit defined.
112	HPE OneView Appliance version is not supported.

- Ensure that a discovery cycle has completed since you registered the server.
- Ensure all current active alerts in the domain of Operations Manager. Resolve all active alert issues, and then close the Active Alerts view.
- Ensure network connectivity from the management server to the appliance is stable and the http ports are not blocked by a firewall.
- Examine the Operations Manager Log. Review the Error and Warning entries that can cause issues with the system. Report these issues to Microsoft.

## Operations Manager is not discovering HPE OneView Appliance/Enclosure/Virtual Connect/Storage Systems/Servers

When the EMS is installed, the PowerShell cmdlets are available to get resource information from the managed appliance. Use the following command to see if the modules are available:

- Open PowerShell and type `Get-PsSnapin -re`.
- The `Get-PsSnapin -re` command should show the entry of `HPOneView.ManagedDevicesCmdlets`.

```

Administrator: Windows PowerShell
Windows PowerShell
Copyright (C) 2013 Microsoft Corporation. All rights reserved.

PS C:\Users\Administrator.UT> Get-PSSnapin -re

Name       : HPOneView.ManagedDevicesCmdlets
PSVersion  : 4.0
Description : HPE OneView SCOMAddIn PowerShell SnapIn

Name       : Microsoft.EnterpriseManagement.OperationsManager.Client
PSVersion  : 1.0
Description : Microsoft Operations Manager Shell Snapin

Name       : WDeploySnapin3.0
PSVersion  : 2.0
Description : This is a PowerShell snap-in that contains cmdlets for managing Microsoft Web Deployment infrastructure.

```

- If the above entry is missing, then open the command prompt and run the following command: **<Window Dir>\Microsoft.NET\Framework64\v4.0.30319\InstallUtil.exe<HPE OneView Management Pack Install Directory>\HP OneView Event Manager \HPOneViewSCOMAddInCmdlets.dll** Open the **<SCOM kit installation dir> \Program Files\HP OneView Management Packs\HP OneView EventManager \HPOneViewSCOMAddInCmdlets.InstallLog** and check if there is a no unauthorize exception error messages present. If the error message is present then try to run the above command using the Run as Administrator option.
- Open PowerShell and type the following command:`Add-PSSnapin HPOneView.ManagedDevicesCmdlets`

Since these cmdlets use assemblies which were built with .NET 4.5, PowerShell should load .NET 4.5 compiled assemblies. In Windows Server 2008 R2, PowerShell 2.0 is installed by default and it does not support .NET 4.5 compiled assemblies.

An error may be encountered while loading the PowerShell snap-in.

```

PS C:\Users\administrator.AN> Add-PSSnapin HPOneView.ManagedDevicesCmdlets
Add-PSSnapin : Cannot load Windows PowerShell snap-in HPOneView.ManagedDevicesCmdlets because of the following error: Could not load file or assembly 'file:///C:\Users\administrator.AN\Desktop\HPOneViewSCOMAddInCmdlets.dll' or one of its dependencies. This assembly is built by a runtime newer than the currently loaded runtime and cannot be loaded.
At line:1 char:13
+ Add-PSSnapin <<<< HPOneView.ManagedDevicesCmdlets
+ CategoryInfo          : InvalidArgument: (HPOneView.ManagedDevicesCmdlets:String) [Add-PSSnapin], PSSnapinException
+ FullyQualifiedErrorId : AddPSSnapinRead,Microsoft.PowerShell.Commands.AddPSSnapinCommand

```

This can be resolved using any of the following options:

- Install PowerShell 3.0 (recommended).
- Add .NET 4.5 runtime support in the PowerShell configuration file:
  1. Create a file `powershell.exe.config` in `<Windows Installation Dir> \System32\WindowsPowerShell\v1.0`.
  2. Add the following content in the configuration file:

```

<?xml version="1.0"?>
<configuration>
  <startup useLegacyV2RuntimeActivationPolicy="true">
    <supportedRuntime version="v4.0.30319"/>
    <supportedRuntime version="v2.0.50727"/>
  </startup>
</configuration>

```
  3. Copy the same file in the Windows Installation folder: `<Windows Installation Dir> \SysWOW64\WindowsPowerShell\v1.0`



# Operational and usage issues

The following sections provide troubleshooting information for operational and usage issues with the HPE OneView Management Pack.

## After upgrade, HPE OneView Configuration DashBoard (OCD) may not be showing previously discovered HPE OneView appliances or is blank

To resolve this issue, after the upgrade is performed, close and reopen the SCOM console.

## Active Alert view displays only one alert when there are multiple device state changes

The event processing rules of this management pack are designed to consolidate similar events and to not repeat issues. The consolidated status appears by enabling the `Repeat Count` property in the **Active Alerts** view settings. If events are consolidated, the **Alert Description** in the Alert Details pane shows the first event that was generated only. To view the most recent similar alert, click **View additional knowledge** from the Alert Details pane, and then select the **Alert Context** tab on the **Alert Properties** screen.

---

### NOTE:

All alerts generated by HPE OneView for Storage will be displayed in case of multiple device state changes.

---

## HPE OneView appliance discovery will fail via HPE OneView Configuration Dashboard using the appliance hostname on Windows Server 2008 R2

To resolve this issue, do one of the following:

- Use the appliance IP address or Fully Qualified Domain Name to discover HPE OneView appliance, or
- Update .NET version to 4.5 on the SCOM server.

## All discovered managed devices and their subcomponents may disappear during a discovery cycle

This may occur due to a timeout error from the HPE OneView appliance. Verify that error 201 appears in the HPE OneView Management Event Log. This may be due to a large amount of HPE OneView resource workload stress on the management server.

To resolve this issue, wait for the next discovery cycle to occur, or temporarily override the discovery interval with a smaller value.

---

### NOTE:

Once the devices have been discovered completely, reset the discovery cycle value to its previous value.

---

## Uninstall may retain files and folders when the HPE OneView Management Pack is installed in a custom path

This issue may occur when installing the HPE OneView Management Pack in a custom path and then uninstalling from the control panel.

To resolve this issue, delete the leftover files and folders manually. To prevent this issue from occurring, perform one of the following options:

- Install the HPE OneView Management Pack features in a default path, or
- Use the **Remove** option of the installer to uninstall the HPE OneView Management Pack

## Scalability Guidelines for the HPE OneView Management Pack

HPE OneView appliances are added in SCOM using the HPE OCD. Once added, a managed HPE OneView appliance must be discovered by the OCD via regular discovery intervals targeting the instance of HPE OneView (see **Discovering HPE OneView Appliances** on page 29). The discovery cycles collect inventory data from the HPE OneView appliance. As the number of managed resources in a HPE OneView appliance increases, the response time for collecting inventory data increases.

Recommended guidelines for the maximum number of resources managed by a single HPE OneView appliance are defined in the following tables for Synergy and for C7000 enclosures.

### Synergy Enclosure

Resource Name	Resource Number
Ethernet Networks	1000
FC Networks	64
FCoE Networks	64
Networks Sets	100
Logical Interconnect Group	20
Enclosures	21
Logical Enclosures	7
Interconnects	126
Server hardware	190
Device Bays	252
Server Profile	130
Storage Systems	20
Storage pools	800
Volumes	10091
Volume Templates	205

### C7000 Enclosures

Resource Name	Resource Number
<b>Servers</b>	
Enclosures	73
Interconnects	170
Server Profiles	560
Ethernet Network	1000
FC Networks	64
FCoE	64
Server Hardware	936
Device Bays	1146
<b>Storage</b>	
Storage systems per appliance	40
Total number of storage pools	80
Volume per appliance	9000
Volume templates	188

If a single HPE OneView appliance manages more than the number of recommended resources, a timeout error may occur (see **All discovered managed devices and their subcomponents may disappear during a discovery cycle** on page 117). Hewlett Packard Enterprise suggests using multiple HPE OneView appliances and additional management servers in the SCOM resource pool to ensure your managed resources are within the prescribed numbers listed in the table above.

# Websites

## General websites

**Hewlett Packard Enterprise Information Library**

**[www.hpe.com/info/EIL](http://www.hpe.com/info/EIL)**

**Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix**

**[www.hpe.com/storage/spock](http://www.hpe.com/storage/spock)**

**Storage white papers and analyst reports**

**[www.hpe.com/storage/whitepapers](http://www.hpe.com/storage/whitepapers)**

For additional websites, see **Support and Other Resources**.

# Support and other resources

## Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:  
<http://www.hpe.com/assistance>
- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:  
<http://www.hpe.com/support/hpesc>

### Information to collect

- Technical support registration number (if applicable)
- Product name, model or version, and serial number
- Operating system name and version
- Firmware version
- Error messages
- Product-specific reports and logs
- Add-on products or components
- Third-party products or components

## Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.
- To download product updates:

### Hewlett Packard Enterprise Support Center

[www.hpe.com/support/hpesc](http://www.hpe.com/support/hpesc)

### Hewlett Packard Enterprise Support Center: Software downloads

[www.hpe.com/support/downloads](http://www.hpe.com/support/downloads)

### Software Depot

[www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot)

- To subscribe to eNewsletters and alerts:  
[www.hpe.com/support/e-updates](http://www.hpe.com/support/e-updates)
- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:  
[www.hpe.com/support/AccessToSupportMaterials](http://www.hpe.com/support/AccessToSupportMaterials)

---

### ⓘ IMPORTANT:

Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

---

# Registering for software technical support and update service

Insight Management includes one year of 24 x 7 Hewlett Packard Enterprise Software Technical Support and Update Service. This service provides access to Hewlett Packard Enterprise technical resources for assistance in resolving software implementation or operations problems.

The service also provides access to software updates and reference manuals in electronic form as they are made available from Hewlett Packard Enterprise. Customers who purchase an electronic license are eligible for electronic updates.

With this service, Insight Management customers benefit from expedited problem resolution as well as proactive notification and delivery of software updates. For more information about this service, see the HPE OneView Services website at [HPE OneView Services](#).

Registration for this service takes place following online redemption of the license certificate.

## How to use your software technical support and update service

As Hewlett Packard Enterprise releases updates to software, the latest versions of the software and documentation are made available to you. The Software Updates and Licensing portal gives you access to software, documentation and license updates for products on your Hewlett Packard Enterprise software support agreement.

You can access this portal from the Hewlett Packard Enterprise Support Center:

<http://www.hpe.com/support/hpesc>

After creating your profile and linking your support agreements to your profile, see the Software Updates and Licensing portal at <http://www.hpe.com/info/hpesoftwareupdatesupport> to obtain software, documentation, and license updates.

## Hewlett Packard Enterprise authorized resellers

For the name of the nearest Hewlett Packard Enterprise authorized reseller, see the following sources:

- In the United States, see the Hewlett Packard Enterprise U.S. service locator website: [http://www.hpe.com/support/service\\_locator](http://www.hpe.com/support/service_locator)
- In other locations, see the Contact Hewlett Packard Enterprise worldwide website: <http://www.hpe.com/info/assistance>

## Related information

The following documents and websites provide related information:

### Documents

- *HPE OneView for VMware vCenter Installation Guide*
- *HPE OneView for VMware vCenter Release Notes*
- *HPE Insight Control Getting Started Guide*
- *HPE Systems Insight Manager User Guide*
- *HPE iLO User Guide*
- *HPE BladeSystem Onboard Administrator User Guide*
- *HPE Insight Management Support Matrix*

## Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

<http://www.hpe.com/support/selfrepair>

## Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

### Remote support and Proactive Care information

#### HPE Get Connected

[www.hpe.com/services/getconnected](http://www.hpe.com/services/getconnected)

#### HPE Proactive Care services

[www.hpe.com/services/proactivecare](http://www.hpe.com/services/proactivecare)

#### HPE Proactive Care service: Supported products list

[www.hpe.com/services/proactivecaresupportedproducts](http://www.hpe.com/services/proactivecaresupportedproducts)

#### HPE Proactive Care advanced service: Supported products list

[www.hpe.com/services/proactivecareadvancedsupportedproducts](http://www.hpe.com/services/proactivecareadvancedsupportedproducts)

### Proactive Care customer information

#### Proactive Care central

[www.hpe.com/services/proactivecarecentral](http://www.hpe.com/services/proactivecarecentral)

#### Proactive Care service activation

[www.hpe.com/services/proactivecarecentralgetstarted](http://www.hpe.com/services/proactivecarecentralgetstarted)

## Warranty information

To view the warranty for your product or to view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products* reference document, go to the Enterprise Safety and Compliance website:

[www.hpe.com/support/Safety-Compliance-EnterpriseProducts](http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts)

### Additional warranty information

#### HPE ProLiant and x86 Servers and Options

[www.hpe.com/support/ProLiantServers-Warranties](http://www.hpe.com/support/ProLiantServers-Warranties)

#### HPE Enterprise Servers

[www.hpe.com/support/EnterpriseServers-Warranties](http://www.hpe.com/support/EnterpriseServers-Warranties)

#### HPE Storage Products

[www.hpe.com/support/Storage-Warranties](http://www.hpe.com/support/Storage-Warranties)

## Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

[www.hpe.com/support/Safety-Compliance-EnterpriseProducts](http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts)

### Additional regulatory information

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

[www.hpe.com/info/reach](http://www.hpe.com/info/reach)

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

[www.hpe.com/info/ecodata](http://www.hpe.com/info/ecodata)

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

[www.hpe.com/info/environment](http://www.hpe.com/info/environment)

## Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback ([docsfeedback@hpe.com](mailto:docsfeedback@hpe.com)). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.



# Migrating from HPE Insight Control Management Packs to HPE OneView Management Pack

This appendix provides the migration path and customer scenarios necessary to move to the HPE OneView Management Pack.

## You are migrating from Virtual Connect Manager (VCM) to HPE OneView (OV)

### Action required

1. You discovered Virtual Connects (VCs) and Onboard Administrators (OAs) using Virtual Connect and BladeSystem Management Packs part of HPE SCOM Integration Kit.
2. Migrate enclosures from VCM to HPE OneView (refer to the HPE OneView documentation for migration procedure).
3. Import the HPE OneView Management Pack and discover OAs/VCs via the HPE OneView Management Pack.
4. Delete the HPE OneView managing OAs/VCMs from the DMC/DMS to avoid alert and data duplication.
5. Discover all resources through HPE OneView Management Pack.

### Scenario 1

In the existing SCOM environment, the environment consists of hardware which is managed by Virtual Connect Manager (VCM). The customer migrates all the enclosures to be managed by HPE OneView.

### Current scenario

The enclosures are being managed by the VC domain and the customer is using the following management packs to manage the Hewlett Packard Enterprise hardware.

- **HPE Virtual Connect Management Pack**  
—This management pack identifies, groups, and displays Virtual Connect logical and physical components in the SCOM console.
- **HPE BladeSystem Management Pack**  
—This management pack identifies, groups, and displays BladeSystem enclosures in the SCOM console.
- **HPE ProLiant Server Management Pack**  
—This management pack automatically identifies, groups, and displays ProLiant Windows servers in the SCOM console.

### Action required

The customer should migrate all enclosures to HPE OneView, and then choose any of the following options to monitor the Hewlett Packard Enterprise hardware in the SCOM console.

- **Option 1**  
The following management packs can be used to monitor the Hewlett Packard Enterprise hardware:
  - **HPE OneView Virtual Connect Management Pack**

- This management pack identifies, groups, and displays Virtual Connect modules, uplink sets, Logical Interconnects, networks, and server profiles being managed by HPE OneView in the SCOM console.
- **HPE OneView Enclosure Management Pack**
  - This management pack identifies, groups, and displays enclosures and their sub-components being managed by HPE OneView in the SCOM console.
- **HPE ProLiant Server Management Pack**
  - This management pack automatically identifies, groups, and displays ProLiant Windows servers in the SCOM console.

By selecting this option, the Virtual Connect domains and enclosures will be monitored by the HPE OneView Management Pack. However, the ProLiant servers will be monitored using the ProLiant Server Management Pack.

Management Pack	Advantage	Disadvantage
HPE OneView Virtual Connect Management Pack	No need to explicitly add the credentials for each of the Virtual Connect to be managed. Once the credentials of HPE OneView appliance are added and the management pack is imported, all the VC modules being managed by the appliance will be automatically discovered and monitored. The HPE OneView Management Pack does not require the Device Monitoring Service (DMS) to be set up to manage the different hardware resources.	The historical data available in the Virtual Connect Management Pack on the alerts or state changes will be lost when migrating to the HPE OneView Management Pack.
HPE OneView Enclosure Management Pack	No need to explicitly add the credentials of the enclosure. Once the credentials of HPE OneView appliance are added and the management pack is imported, all the enclosures being managed by the appliance will be automatically discovered and monitored. The HPE OneView Management Pack does not require the Device Monitoring Service (DMS) to be set up to manage the different hardware resources.	The historical data on the alerts or state changes will be lost when migrating to the HPE OneView Management Pack.

- **Option 2**

The following management packs can be used to monitor the Hewlett Packard Enterprise hardware:

- **HPE OneView Virtual Connect Management Pack**
  - This management pack identifies, groups, and displays Virtual Connect modules, uplink sets, Logical Interconnects, networks, and server profiles being managed by HPE OneView in the SCOM console.
- **HPE BladeSystem Management Pack**
  - This management pack identifies, groups, and displays BladeSystem enclosures in the SCOM console.
- **HPE ProLiant Server Management Pack**
  - This management pack automatically identifies, groups, and displays ProLiant Windows servers within the SCOM console.

By selecting this option, the Virtual Connect will be monitored from new HPE management packs. However, the enclosure and ProLiant server will be monitored using the BladeSystem Management Pack and ProLiant Server Management Pack, respectively.

Management Pack	Advantage	Disadvantage
HPE OneView Virtual Connect Management Pack	No need to explicitly add the credentials for each of the Virtual Connect modules to be managed. Once the credentials of the HPE OneView appliance are added and the management pack is imported, all the VC modules being managed by the appliance will be automatically discovered and monitored. The HPE OneView Management Pack does not require the Device Monitoring Service (DMS) to be set up to manage the different hardware resources.	The historical data available in the Virtual Connect Management Pack on the alerts or state changes will be lost when migrating to the HPE OneView Management Pack.

## Scenario 2

In an environment, having a set of enclosures being managed by SCOM and Virtual Connect Domain software, a subset of these enclosures are migrated to be managed by HPE OneView.

### Current scenario

The enclosures that are being managed by the VC domain and the following management packs are used to manage the Hewlett Packard Enterprise hardware.

- **HPE Virtual Connect Management Pack**  
—This management pack identifies, groups, and displays Virtual Connect logical and physical components in the SCOM console.
- **HPE BladeSystem Management Pack**  
—This management pack identifies, groups, and displays BladeSystem enclosures in the SCOM console.
- **HPE ProLiant Server Management Pack**  
—This management pack automatically identifies, groups, and displays ProLiant Windows servers within the SCOM console.

### Action required

No change is required for the enclosures being managed by the VC domain. They will continue to function as they did previously in the SCOM console (under the HPE Systems folder).

For the enclosures which are now being managed by HPE OneView, the HPE OneView Virtual Connect Management Pack has to be imported to manage the Virtual Connects and customers will have two options to manage the enclosures.

- **Virtual Connect modules**  
To manage and monitor Virtual Connect modules, perform the following steps:

1. In the SCOM console, delete the Virtual Connect domain entries that will be managed by HPE OneView from the Device Monitor Console (DMC).
2. Install the HPE OneView SCOM Integration Kit using the HPE OneView for Microsoft System Center image. For installation steps, see [Installing the HPE OneView SCOM Integration Kit](#) on page 17 in this guide.
3. Import the HPE OneView Management Pack, along with its dependent management packs.

---

**NOTE:**

The HPE OneView Management Pack identifies, groups, and displays Virtual Connect modules, uplink sets, Logical Interconnects, networks, and server profiles being managed by HPE OneView in the SCOM console.

- 
4. Add an HPE OneView enclosure to be managed by the SCOM. For information on adding an enclosure, see the [Adding HPE OneView Managed \(C7000/Synergy\) Enclosures](#) on page 62 in this guide.

All the views for Virtual Connect components will be available under the HPE OneView Systems folder in the monitoring section of the SCOM console.

- **Enclosures**

To manage and monitor enclosures in the SCOM console, use one of the following options:

- **Option 1**

Continue using the BladeSystem Management Pack to monitor enclosures.

- **Option 2**

To use the HPE OneView Enclosure Management Pack to monitor enclosures, perform the following steps:

1. Delete the enclosure entries that will be managed by HPE OneView from the DMC.
2. Install the HPE OneView SCOM Integration Kit using the HPE OneView for Microsoft System Center image. For installation steps, refer to [Installing the HPE OneView SCOM Integration Kit](#) on page 17 in this guide.
3. Import the HPE OneView Management Pack, along with its dependent management packs.

---

**NOTE:**

The HPE OneView Management Pack identifies, groups, and displays Virtual Connect modules, uplink sets, Logical Interconnects, networks, and server profiles being managed by HPE OneView in the SCOM console.

- 
4. Add an HPE OneView appliance to be managed by the SCOM. For information on adding an appliance, see the [Adding HPE OneView appliances](#) on page 29 in this guide.

All the views for enclosures will be available under the HPE OneView Systems folder in the monitoring section of the SCOM console.

---

**NOTE:**

ProLiant servers will be monitored using the ProLiant Server Management Pack.

---

## Scenario 3

A brand new environment with enclosures is being managed by HPE OneView and is now required to be managed by SCOM.

## Current scenario

The SCOM environment does not have any Hewlett Packard Enterprise management packs installed.

## Action required

The HPE OneView Management Pack and its dependents management packs should be imported to manage the Hewlett Packard Enterprise hardware in the SCOM console.

- **HPE OneView Virtual Connect Management Pack**

—This management pack identifies, groups, and displays Virtual Connect modules, uplink sets, Logical Interconnects, networks, and server profiles being managed by HPE OneView in the SCOM console.

- **HPE OneView Enclosure Management Pack**

—This management pack identifies, groups, and displays Enclosures being managed by HPE OneView in the SCOM console.

- **HPE ProLiant Server Management Pack**

—This management pack automatically identifies, groups, and displays ProLiant Windows servers within the SCOM console.

The Virtual Connect domains and enclosures will be monitored by the HPE OneView Management Pack. However, the ProLiant servers will be monitored using the ProLiant Server Management Pack.

All the views for Virtual Connect components and enclosures will be available under the HPE OneView Systems folder in the monitoring section of the SCOM console. The views of ProLiant servers will be available under the Systems folder in the monitoring section of the SCOM console.

## Scenario 4

The enclosure is managed by HPE OneView and added explicitly through DMC.

## Current scenario

The customer is using the BladeSystem Management Pack to manage the enclosures and would like to import HPE OneView Enclosure Management Pack and add the appliance in the HPE OneView Management Pack.

In this scenario, the enclosures will be managed by both the HPE OneView Enclosure Management Pack and the BladeSystem Management Pack. The data and alerts can be seen in the views of both management packs.

## Action required

To manage the enclosures using both the HPE OneView Enclosure Management Pack and the HPE OneView Management Pack, select one of the following options.

### Procedure

#### 1. Option 1

To manage an enclosure with the HPE OneView Enclosure Management Pack:

- a. Remove the enclosure entry from the DMC.
- b. Delete the BladeSystem Management Pack.

#### 2. Option 2

To manage an enclosure with the BladeSystem Management Pack, delete the HPE OneView Enclosure Management Pack.