

# OpenManage Integration for VMware vCenter Version 4.3

## Compatibility Matrix

1

## Notes, cautions, and warnings

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

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

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

<b>Chapter 1: Overview</b> .....	<b>4</b>
Default virtual appliance configuration .....	4
Other documents you may need.....	5
<b>Chapter 2: Supported resources</b> .....	<b>6</b>
Browser and flash player requirements.....	6
BIOS, iDRAC, Lifecycle Controller versions .....	6
Port information.....	9
OpenManage Integration for VMware vCenter requirements.....	11
Supported ESXi versions on managed hosts.....	11
Supported features on PowerEdge chassis .....	12
Supported features on PowerEdge servers.....	13
<b>Chapter 3: Important notes</b> .....	<b>15</b>

# Overview

This document contains updated information about OpenManage Integration for VMware vCenter(OMIVV) and any other Technical Documentation included with the OMIVV software.

The OpenManage Integration for VMware vCenter 4.3 provides the following features:

- Support for the following:
  - PowerEdge MX7000 modular infrastructure
    - PowerEdge MX740c and PowerEdge MX840c servers.
    - Chassis and Servers management using unified Chassis Management IP
    - Standalone and Multi-Chassis Configuration deployment modes of PowerEdge MX7000 chassis.
    - PowerEdge R940 XA
- Enhancement in Chassis Profile test connection flow to make it automated.
- Support for OEM servers for OMIVV workflows.
- Support for VSphere 6.7U1 and VSphere 6.5U2.
- The following enhancements in the Firmware Update workflow:
  - Support to perform Clear Job Queue and reset iDRAC while creating a Firmware Update job.
  - Support to provide Custom Online Catalog location for a firmware update.
  - Support for HTTPS as default communication with Dell.com domains.
- Enhanced support in the OS deployment workflow:
  - OS deployment management network on PCI NICs.
  - OS deployment on the BOSS disk.
- Support to report Remaining Rated Write Endurance metrics for SSD in OMIVV.

**NOTE:** It is recommended to use Dell EMC OpenManage Enterprise-Modular Edition Version 1.00.01 with OMIVV 4.3.

**NOTE:** From OMIVV 4.0 onwards, only VMware vSphere Web client is supported and the vSphere Desktop client is not supported.

**NOTE:** For vCenter 6.5 and later, the OMIVV appliance is available only for the flash version. The OMIVV appliance is not available for the HTML5 version.

## Topics:

- [Default virtual appliance configuration](#)
- [Other documents you may need](#)

## Default virtual appliance configuration

**Table 1. System requirements for deployment modes**

Deployment modes	Number of hosts	Number of CPUs	Memory—in GB	Minimum Storage
Small	up to 250	2	8	44 GB
Medium	up to 500	4	16	44 GB
Large	up to 1000	8	32	44 GB

**NOTE:** For any of the mentioned deployment modes, ensure that you reserve sufficient amount of memory resources to the OMIVV virtual appliance by using reservations. See vSphere Documentation for steps about reserving memory resources.

## Other documents you may need

Go to [Dell.com/support/manuals](https://Dell.com/support/manuals) for the following list of documents for vSphere web client:

- *OpenManage Integration for VMware vCenter Version 4.3 Web Client User's Guide*
- *OpenManage Integration for VMware vCenter Version 4.3 Web Client Installation Guide*
- *OpenManage Integration for VMware vCenter Version 4.3 Release Notes*

## Supported resources

This chapter contains sections that provides information about the resources that support OpenManage Integration for VMware vCenter.

### Topics:

- [Browser and flash player requirements](#)
- [BIOS, iDRAC, Lifecycle Controller versions](#)
- [Port information](#)
- [OpenManage Integration for VMware vCenter requirements](#)
- [Supported features on PowerEdge chassis](#)
- [Supported features on PowerEdge servers](#)

## Browser and flash player requirements

To display OpenManage Integration for VMware vCenter, a system must have a minimum 1024 x 768 screen resolution and a web browser that meets minimum requirements based on the operating system.

OMIVV supports flash player version 16.0 or later for vCenter version 6.0 or later.

**i NOTE:** The browser and flash player requirements are as per the VMware guidelines for OpenManage Integration for VMware vCenter. The supported browsers are the Microsoft Internet Explorer, Google Chrome, and Mozilla Firefox. For specific browser versions, see the VMware Documentation for the vCenter version that you are using.

**i NOTE:** To access OpenManage Integration for VMware vCenter from Windows server 2012 or later, enable the Desktop Experience Feature to activate the flash player. Install the OpenManage Integration for VMware vCenter (virtual appliance) on any ESXi host.

## BIOS, iDRAC, Lifecycle Controller versions

The BIOS, iDRAC, and the Lifecycle Controller versions required to enable the features of OpenManage Integration for VMware vCenter are listed in this section.

It is recommended that you use the Bootable ISO created by using Repository Manager, or Lifecycle Controller's Platform to update your servers to one of the following base versions before using OMIVV:

**i NOTE:** It is recommended to use Dell EMC OpenManage Enterprise-Modular Edition Version 1.00.01 with OMIVV 4.3.

**Table 2. BIOS for PowerEdge 11<sup>th</sup> generation servers**

Server	Minimum version
PowerEdge R210	1.8.2 or later
PowerEdge R210II	1.3.1 or later
PowerEdge R310	1.8.2 or later
PowerEdge R410	1.9.0 or later
PowerEdge R415	1.8.6 or later
PowerEdge R510	1.9.0 or later
PowerEdge R515	1.8.6 or later
PowerEdge R610	6.1.0 or later

**Table 2. BIOS for PowerEdge 11<sup>th</sup> generation servers**

<b>Server</b>	<b>Minimum version</b>
PowerEdge R710	6.1.0 or later
PowerEdge R710	6.1.0 or later
PowerEdge R715	3.0.0 or later
PowerEdge R810	2.5.0 or later
PowerEdge R815	3.0.0 or later
PowerEdge R910	2.5.0 or later
PowerEdge M610	6.1.0 or later
PowerEdge M610x	6.1.0 or later
PowerEdge M710HD	5.0.1 or later
PowerEdge M910	2.5.0 or later
PowerEdge M915	2.6.0 or later
PowerEdge T110 II	1.8.2 or later
PowerEdge T310	1.8.2 or later
PowerEdge T410	1.9.0 or later
PowerEdge T610	6.1.0 or later
PowerEdge T710	6.1.0 or later

**Table 3. BIOS for PowerEdge 12<sup>th</sup> generation servers**

<b>Server</b>	<b>Minimum version</b>
T320	1.0.1 or later
T420	1.0.1 or later
T620	1.2.6 or later
M420	1.2.4 or later
M520	1.2.6 or later
M620	1.2.6 or later
M820	1.2.6 or later
R220	1.0.3 or later
R320	1.2.4 or later
R420	1.2.4 or later
R520	1.2.4 or later
R620	1.2.6 or later
R720	1.2.6 or later
R720xd	1.2.6 or later
R820	1.7.2 or later
R920	1.1.0 or later

**Table 4. BIOS for PowerEdge 13<sup>th</sup> generation servers**

<b>Server</b>	<b>Minimum version</b>
R630	1.0.4 or later

**Table 4. BIOS for PowerEdge 13<sup>th</sup> generation servers**

<b>Server</b>	<b>Minimum version</b>
R730	1.0.4 or later
R730xd	1.0.4 or later
R430	1.0.4 or later
R530	1.0.2 or later
R830	1.0.2 or later
R930	1.0.2 or later
R230	1.0.2 or later
R330	1.0.2 or later
T630	1.0.2 or later
T130	1.0.2 or later
T330	1.0.2 or later
T430	1.0.2 or later
M630	1.0.0 or later
M830	1.0.0 or later
FC430	1.0.0 or later
FC630	1.0.0 or later
FC830	1.0.0 or later

**Table 5. BIOS for PowerEdge 14<sup>th</sup> generation servers**

<b>Server</b>	<b>Minimum Version</b>
R240	1.0.0 or later
R340	1.0.0 or later
R940	1.0.0 or later
R940xa	1.0.0 or later
R740	1.0.0 or later
R740xd	1.0.0 or later
R740xd2	1.0.0 or later
R640	1.0.0 or later
R840	1.0.0 or later
R440	1.0.0 or later
M640	1.0.0 or later
T140	1.0.0 or later
T340	1.0.0 or later
T640	1.0.0 or later
T440	1.0.0 or later
R540	1.0.0 or later
FC640	1.0.0 or later
R6415	1.0.0 or later

**Table 5. BIOS for PowerEdge 14<sup>th</sup> generation servers**

Server	Minimum Version
R7425	1.0.0 or later
R7415	1.0.0 or later
MX740C	1.0.0 or later
MX840C	1.0.0 or later

**Table 6. iDRAC and Lifecycle Controller for deployment**

Generation	Version	
	iDRAC	Lifecycle Controller
PowerEdge 11th generation servers	3.35 for Modular, 1.85 for Rack or Tower	1.5.2 or later
PowerEdge 12th generation servers	2.30.30.30 or later	2.30.30.30 or later
PowerEdge 13th generation servers	2.30.30.30 or later	2.30.30.30 or later
PowerEdge 14th generation servers	3.00.00.00 and later	3.00.00.00 and later

**Table 7. BIOS and iDRAC requirements for cloud server**

Model	BIOS	iDRAC with Lifecycle Controller
C6320	1.0.2	2.30.30.30 or later
C4130	1.0.2	2.30.30.30 or later
C6420	1.0.0 or later	3.00.00.00 or later
C4140	1.0.0 or later	3.00.00.00 or later

## Port information

### Virtual appliance and managed nodes

In OMIVV, when you deploy the OMSA agent by using the *Fix non-compliance hosts* link available in the **Fix Non-compliant vSphere Hosts** wizard, OMIVV performs the following action:

- Starts the HTTP Client service
- Enables port 8080
- Makes the port available for ESXi 5.0 or later to download and install OMSA VIB

After the OMSA VIB installation is complete, the service automatically stops and the port is closed.

**Table 8. Virtual appliance**

Port Number	Protocols	Port Type	Maximum Encryption Level	Direction	Destination	Usage	Description
53	DNS	TCP	None	Out	OMIVV appliance to DNS server	DNS client	Connectivity to the DNS server or resolving the host names.
69	TFTP	UDP	None	Out	OMIVV appliance to TFTP server	TFTP Client	Used for firmware update on 11G servers with old firmware.
80/443	HTTP/HTTPS	TCP	None	Out	OMIVV appliance to internet	Dell Online Data Access	Connectivity to the online (Internet) warranty, firmware, and latest RPM information.

**Table 8. Virtual appliance**

Port Number	Protocols	Port Type	Maximum Encryption Level	Direction	Destination	Usage	Description
80	HTTP	TCP	None	In	ESXi server to OMIVV appliance	HTTP server	Used in operating system deployment flow for post installation scripts to communicate with the OMIVV appliance.
162	SNMP Agent	UDP	None	In	iDRAC/ESXi to OMIVV appliance	SNMP Agent (server)	To receive SNMP traps from managed nodes.
443	HTTPS	TCP	128-bit	In	OMIVV UI to OMIVV appliance	HTTPS server	Web services offered by OMIVV. These Web services are consumed by vCenter Web Client and Dell Admin portal.
443	WSMAN	TCP	128-bit	In/Out	OMIVV appliance to/from iDRAC/OMSA	iDRAC/OMSA communication	iDRAC, OMSA, and CMC or Management Module communication, used to manage and monitor the managed nodes.
445	SMB	TCP	128-bit	Out	OMIVV appliance to CIFS	CIFS communication	To communicate with Windows share.
4433	HTTPS	TCP	128-bit	In	iDRAC to OMIVV appliance	Auto Discovery	Provisioning server that is used for auto discovering managed nodes.
2049	NFS	UDP/TCP	None	In/Out	OMIVV appliance to NFS	Public Share	NFS public share that is exposed by OMIVV appliance to the managed nodes and used in firmware update and operating system deployment flows.
4001 to 4004	NFS	UDP/TCP	None	In/Out	OMIVV appliance to NFS	Public Share	These ports must be kept open to run the statd, quotd, lockd, and mountd services by the V2 and V3 protocols of the NFS server.
11620	SNMP Agent	UDP	None	In	iDRAC to OMIVV appliance	SNMP Agent (server)	Port used to receive the standard SNMP alerts by using UDP: 162. Data from iDRAC, OMSA, and CMC or Management Module are received to manage and monitor the managed nodes.
User-defined	Any	UDP/TCP	None	Out	OMIVV appliance to proxy server	Proxy	To communicate with the proxy server.

**Table 9. Managed nodes (ESXi)**

Port Number	Protocols	Port Type	Maximum Encryption Level	Direction	Destination	Usage	Description
162, 11620	SNMP	UDP	None	Out	ESXi to OMIVV appliance	Hardware Events	Asynchronous SNMP traps sent from ESXi. This port has to open from ESXi.
443	WSMAN	TCP	128-bit	In	OMIVV appliance to ESXi(OMSA)	iDRAC/OMSA communication	Used to provide information to the management station. This port has to open from ESXi.

**Table 9. Managed nodes (ESXi)**

Port Number	Protocols	Port Type	Maximum Encryption Level	Direction	Destination	Usage	Description
443	HTTPS	TCP	128-bit	In	OMIVV appliance to ESXi	HTTPS server	Used to provide information to the management station. This port has to open from ESXi.
8080	HTTP	TCP	128-bit	Out	ESXi to OMIVV appliance	HTTP server; downloads the OMSA VIB and fixes noncompliant vSphere hosts.	Helps ESXi to download the OMSA/ driver VIB.

**Table 10. Managed nodes (iDRAC or CMC or Management Module)**

Port Number	Protocols	Port Type	Maximum Encryption Level	Direction	Destination	Usage	Description
443	WSMAN /HTTPS, REST/ HTTPS	TCP	128-bit	In	OMIVV appliance to iDRAC or CMC or Management Module	iDRAC communication	Used to provide information to the management station and communicate to MX chassis by using REST or HTTPS protocols. This port has to open from iDRAC and CMC or Management Module.
4433	HTTPS	TCP	128-bit	Out	iDRAC to OMIVV appliance	Auto Discovery	For auto discovering iDRAC (managed nodes) in the management station.
2049	NFS	UDP	None	In/Out	iDRAC to/ from OMIVV	Public Share	For iDRAC to access NFS public share that is exposed by OMIVV appliance. That is used for operating system deployment and firmware update.  To access the iDRAC configurations from the OMIVV. Used in deployment flow.
4001 to 4004	NFS	UDP	None	In/Out	iDRAC to/ from OMIVV	Public Share	For iDRAC to access NFS public share that is exposed by OMIVV appliance. This is used for operating system deployment and firmware update.  To access the iDRAC configurations from the OMIVV. Used in deployment flow.
69	TFTP	UDP	128-bit	In/Out	iDRAC to/ from OMIVV	Trivial File Transfer	Used for managing the iDRAC successfully from the management station.

## OpenManage Integration for VMware vCenter requirements

### Supported ESXi versions on managed hosts

The following table provides information about the supported ESXi versions on managed hosts:

**Table 11. Supported ESXi versions**

ESXi version support	Server generation			
	11G	12G	13G	14G
v5.1	Y	Y	N	N
v5.1 U1	Y	Y	N	N
v5.1 U2	Y	Y	Y	N
v5.1 U3	Y	Y	Y (except M830, FC830, and FC430)	N
v5.5	Y	Y	N	N
v5.5 U1	Y	Y	N	N
v5.5 U2	Y	Y	Y	N
v5.5 U3	Y	Y	Y	N
v6.0	Y	Y	Y	N
v6.0 U1	Y	Y	Y	N
v6.0 U2	Y	Y	Y	N
v6.0 U3	Y	Y	Y	Y
v6.5	N	Y	Y	N
v6.5 U1	N	Y	Y	Y
v6.5 U2	N	Y	Y	Y
v6.7	N	N	Y	Y
v6.7 U1	N	N	Y	Y

**NOTE:** An MX host is supported only when used with ESXi 6.5 U2 and later.

The OpenManage Integration for VMware vCenter supports any of the following vCenter server versions:

**Table 12. Supported vCenter server versions**

vCenter version	Web client support
v6.0 U2	Y
v6.0 U3	Y
v6.5	Y
v6.5 U1	Y
v6.5 U2	Y
v6.7	Y
v6.7 U1	Y

**NOTE:** For more information about registering a vCenter server, see *OpenManage Integration for VMware vCenter Version 4.3 Web Client Install Guide* available at [Dell.com/support/manuals](http://Dell.com/support/manuals).

The OpenManage Integration for VMware vCenter version 4.3 supports VMware vRealize Operations Manager (vROPS) version 1.1 and 1.2.

## Supported features on PowerEdge chassis

This topic provides information about the supported features on the PowerEdge chassis.

**Table 13. Supported features on modular infrastructure**

Features	M1000e	VRTX	FX2s	MX
SNMP Alerts	Y	Y	Y	Y
Hardware Inventory	Y	Y	Y	Y
Link and Launch CMC or Management Module	Y	Y	Y	Y
License Information	N/A	Y	Y	Y
Warranty Information	Y	Y	Y	Y
Health Reporting	Y	Y	Y	Y
Multi-chassis management group relationship information	N	N	N	Y

## Supported features on PowerEdge servers

The following features are supported on the hosts managed by OpenManage Integration for VMware vCenter:

**Table 14. Supported features on PowerEdge servers**

Features	Platform		
	11th	12th and 13th	14th
Hardware Inventory	Y	Y	Y
Events and Alarms	Y (SNMP v1 only)	Y (SNMP v1 and v2)	Y (SNMP v1 and v2)
Component wise Health Monitoring*	Y	Y	Y
BIOS/Firmware Updates#	Y	Y	Y
Proactive HA <sup>§</sup>	N	Y	Y
Warranty Information	Y	Y	Y
Host Compliance	Y	Y	Y
Auto/Manual discovery of bare-metal server	Y	Y	Y
Bare-Metal compliance	Y	Y	Y
Hardware Configuration	Y	Y	Y
Bare-Metal Hypervisor Deployment	Y	Y	Y
Blink Server LED	Y	Y	Y
View/Clear SEL logs	Y	Y	Y
Link and Launch iDRAC	Y	Y	Y
iDRAC reset	Y	Y	Y
System Lockdown Mode	N	N	Y
System Profile	N	N	Y
Cluster Profile	N	Y ^	Y

**Table 14. Supported features on PowerEdge servers**

Features	Platform		
	11th	12th and 13th	14th
Host management using unified chassis IP	N	N	Y <sup>@</sup>
Support for OEM server	N	Y <sup>~</sup>	Y

\* In Cloud with model number C6320, health monitoring is not supported for the mezzanine cards.

# In Cloud with model number C6320, firmware updates are not supported for the mezzanine cards.

\$ Proactive HA feature is only applicable on vCenter 6.5 or later that has ESXi 6.0 or later. Also, Proactive HA feature is not supported on servers with embedded PSU and cloud server models.

^ In cluster profile, configuration drift is not supported.

@ Applicable only for an MX chassis host. Inventory, monitoring, Proactive HA, and firmware update features are supported.

~ Supported only for Rack servers.

## Important notes

This section provides important information that you must consider when you are working on OpenManage Integration for VMware vCenter.

- OMIVV supports BIOS mode to deploy hypervisor on the target server. Ensure that you have BIOS mode selected in the reference hardware profile before applying the hypervisor profile. If there is no hardware profile selected, ensure that you manually configure the Boot mode as BIOS and reboot the server before applying the hypervisor profile.
- OMIVV currently supports only the community named "Public" or "public". The SNMP community name is not configurable. If another community name is used, the events are not received by OMIVV and the events are not displayed in the VMware vCenter.
- A hardware profile created using a reference server with a certain BIOS version can cause deployment to fail. Some BIOS versions do not provide accurate information for certain BIOS settings, such as the Embedded NIC1 and NIC2 settings. When a server with the minimum BIOS version is used as a reference server in a hardware profile, the fields are ignored by both the UI and deployment. An issue may occur, however, if the settings in question are required to have a certain value for deployment to complete successfully. The solution to this issue is to use a server with up-to-date BIOS as a reference server for a hardware profile.

**NOTE:** Servers being used for deployment should also have updated BIOS. If deployment tries to apply settings to a server with issues in BIOS, deployment fails. Currently the BIOS version is not checked for compliance, but it is displayed on the server compliance page. Warnings are displayed on the hardware profile reference server and BIOS settings pages and when you select a deployment template with an affected hardware profile during deployment.

- OMIVV registered with the VMware vCenter by using Fully Qualified Domain Name (FQDN) is highly recommended. For FQDN-based registrations, the host name of the vCenter should be properly resolvable by the DNS server.

**NOTE:** For more information about the DNS requirements for vSphere, see the following links:

- [DNS requirements for vSphere 5.5](#)
- [DNS requirements for vSphere 6.0](#)
- [DNS requirements for vSphere 6.5 and Platform Services Controller appliance](#)
- For cloud server, iDRAC Enterprise license is required.
- Default SNMP Community string is Public. SNMP community string can be configured from **Manage > Settings > Appliance Settings > OMSA SNMP Trap Community String**.
- OMIVV supports only Server Message Block(SMB) version 1.0 and SMB version 2.0 based CIFS shares.
- vSAN firmware update is not supported on 11th generation PowerEdge servers.