

# OpenManage Integration for VMware vCenter Version 5.2

## Compatibility Matrix

## Notes, cautions, and warnings

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

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

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

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# 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 5.2 provides the following features:

- Introduction of OMIVV RESTful APIs

For more information, see the *OpenManage Integration for VMware vCenter Version 5.2 API Guide* available at <https://www.dell.com/support/>.

- Support for vSphere 7.0 U1
- Support for XE2420 PowerEdge server
- Support for IPv4 range-based bare-metal discovery
- Security enhancements
- Added filter option on the **Dell EMC Chassis** and **OMIVV Hosts** pages to filter host and chassis based on the health status
- Enhancement in warranty reporting for host with multiple or different warranties.

**NOTE:** Dell EMC recommends using Dell EMC OpenManage Enterprise-Modular Edition Version 1.00.01 and later with OMIVV 5.2.

**NOTE:** From OMIVV 5.0 onwards, only VMware vSphere Client (HTML-5) is supported and the vSphere Web Client (FLEX) is not supported.

## 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	95 GB
Medium	up to 500	4	16	95 GB
Large	up to 1000	8	32	95 GB
X large	up to 2000	12	32	95 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.

## Supported resources

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

### Supported servers and vSAN Ready Nodes

**Table 2. Supported PowerEdge servers and vSAN Ready Nodes**

12G		13G		iDRAC9-based			vSAN Ready Node
M420	R620	FC430	R530	FC640	R740xd2	R6515	C6420
M520	R720	FC630	R830	M640	R640	R7515	R740xd
M620	R720xd	FC830	R930	MX740C	R840	R6525	R640
M820	R820	M630	R230	MX840C	R440	R7525	R440
R220	R920	M830	R330	R240	R540	T140	R6415
R320	T320	R630	T630	R340	R7425	T340	R840
R420	T420	R730	T130	R940	R6415	T640	R6515
R520	T620	R730xd	T330	R940xa	R7415	T440	R7515
-	-	R430	T430	R740	R740xd	XR2	R740
-	-	-	-	-	-	XE2420	M740C

### Hardware requirements

OMIVV supports full support for Dell EMC PowerEdge servers with full feature support for iDRAC Express and Enterprise. To verify that your host servers are eligible, see information about the following in the subsequent subsections:

- [Supported BIOS and iDRAC versions](#)
- [Supported iDRAC versions \(both deployment and management\)](#)
- [Supported memory, CPU, and disk space for provisioned storage](#)

OMIVV requires LAN on motherboard or Network daughter card that can access the management network of iDRAC, CMC or OME-Modular systems management network, and the vCenter management network.

### Supported BIOS versions

The BIOS and iDRAC with Lifecycle Controller versions that are required to enable the features of OpenManage Integration for VMware vCenter.

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:

**Table 3. Supported BIOS version for 12G PowerEdge servers**

Server	Minimum BIOS Version
T320	1.0.1 or later

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<b>Server</b>	<b>Minimum BIOS Version</b>
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. Supported BIOS version for 13G PowerEdge servers**

<b>Server</b>	<b>Minimum BIOS Version</b>
R630	1.0.4 or later
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. Supported BIOS version for iDRAC9-based PowerEdge servers**

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<b>Server</b>	<b>Minimum BIOS 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
R7425	1.0.0 or later
R7415	1.0.0 or later
XR2	2.2.11 or later
MX740C	1.0.0 or later
MX840C	1.0.0 or later
R6515	1.0.3 or later
R7515	1.0.3 or later
R6525	1.0.0 or later
R7525	1.2.4 or later
XE2420	1.0.0 or later

**Table 6. Supported BIOS version for vSAN Ready Nodes**

<b>vSAN Ready Node</b>	<b>Minimum BIOS Version</b>
R740xd	1.0.0 or later
R640	1.0.0 or later
R440	1.0.0 or later
R6415	1.0.0 or later
C6420	1.0.0 or later
R840	1.0.0 or later

## Supported iDRAC with Lifecycle Controller versions

**Table 7. Supported iDRAC with Lifecycle Controller for deployment**

Servers	iDRAC with Lifecycle Controller
12G	2.50.50.50 or later
13G	2.50.50.50 or later
iDRAC9-based servers	3.00.00.00 and later

**Table 8. BIOS and iDRAC requirements for cloud server**

Model	BIOS	iDRAC with Lifecycle Controller
C6320	1.0.2	2.50.50.50 or later
C4130	1.0.2	2.50.50.50 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
C6525	1.0.0 or later	3.42.42.42 or later

## Supported features on PowerEdge servers

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

**Table 9. Supported features on PowerEdge servers**

Features	12G and 13G	iDRAC9-based Servers
Hardware Inventory	Y	Y
Events and Alarms	Y (SNMP v1 and v2)	Y (SNMP v1 and v2)
Component wise Health Monitoring*	Y	Y
BIOS/Firmware Updates#	Y	Y
Proactive HA	Y	Y
Warranty Information	Y	Y
Management Compliance	Y	Y
Configuration Compliance	Y	Y
Auto/Manual discovery of bare-metal server	Y	Y
Bare-Metal compliance	Y	Y
Hardware Configuration	Y	Y
OS Deployment	Y	Y
Blink Server LED	Y	Y
View/Clear SEL logs	Y	Y
Link and Launch iDRAC	Y	Y
iDRAC reset	Y	Y
System Lockdown Mode	N	Y
System Profile	Y	Y
Cluster Profile	Y	Y

**Table 9. Supported features on PowerEdge servers**

Features	12G and 13G	iDRAC9-based Servers
Host management using unified chassis IP	N	Y <sup>@</sup>
Support for OEM server	Y <sup>~</sup>	Y
vSphere Lifecycle Manager	Y <sup>^</sup>	Y <sup>^</sup>

\* 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.

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

~ Supported only for Rack servers.

^ Only platforms certified for vSphere 7.0 and 7.0 U1

## Supported features on PowerEdge chassis

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

**Table 10. 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
Firmware Update	N	N	N	Y

## Storage space required for provisioned storage

The OMIVV virtual appliance requires at least 95 GB of disk space for provisioned storage.

## Default virtual appliance configuration

The OMIVV virtual appliance is provisioned with 8 GB of RAM and two virtual CPU (Small Deployment Mode).

## Software requirements

Ensure that the vSphere environment fulfills virtual appliance system requirements, port access, clock synchronization, and listening port requirements. For more information about port requirements, see [Port information](#) on page 10.

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.

It is recommended that you use Google Chrome to access the OMIVV features. OMIVV supports Google Chrome and Mozilla Firefox. Microsoft Internet Explorer is not supported.

It is recommended to use the latest version of the supported browsers. For specific browser versions, see the VMware Documentation for the vCenter version that you are using.

**Requirements for VMware vSphere Client (HTML-5)**

vCenter 6.5 U2 and later

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

**Table 11. Supported vCenter server versions**

vCenter version	Client support
6.5 U2	Y
6.5 U3	Y
6.7	Y
6.7 U1	Y
6.7 U2	Y
6.7 U3	Y
7.0	Y
7.0 U1	Y

Use the latest patch build 13638625 or later for vCenter 6.5 U2.

The OMIVV 5.2 appliance runs on CentOS version 7.7.

## Supported ESXi versions on managed hosts

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

**Table 12. Supported ESXi versions**

ESXi Version	12G	13G	iDRAC9-based servers
6.0 U3	Y	Y	N
6.5	Y	Y	N
6.5 U1	Y	Y	Y
6.5 U2	Y	Y	Y
6.5 U3	Y	Y	Y
6.7	N	Y	Y
6.7 U1	N	Y	Y
6.7 U2	N	Y	Y
6.7 U3	N	Y	Y
7.0	N	Y	Y
7.0 U1	N	Y	Y

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

## Port information

This section lists all the port requirements to configure your virtual appliance and managed nodes.

**Table 13. 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.
68	DHCP	UDP	None	In	DHCP server to OMIVV appliance	Dynamic network configuration	To get the network details such as IP, gateway, Netmask, and DNS.
69	TFTP	UDP	128-bit	Out	OMIVV to iDRAC	Trivial File Transfer	Used to update the bare-metal server to minimum supported firmware version.
123	NTP	UDP	None	In	NTP to OMIVV appliance	Time Synchronization	To sync with specific time zone.
162	SNMP Agent	UDP	None	In	iDRAC or CMC, or OME-Modular to OMIVV appliance	SNMP Agent (server)	To receive SNMP traps from managed nodes.
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.
443	HTTPS	TCP	128-bit	In	OMIVV UI to OMIVV appliance	HTTPS server	Web services offered by OMIVV. These Web services are consumed by vSphere Client and Dell Admin portal.
443	HTTPS	TCP	128-bit	In	ESXi server to OMIVV appliance	HTTPS server	Used in operating system deployment flow for post installation scripts to communicate with the OMIVV appliance.
443	HTTPS	TCP	128-bit	In	iDRAC to OMIVV appliance	Auto Discovery	Provisioning server that is used for auto discovering managed nodes.
443	WSMAN	TCP	128-bit	In/Out	OMIVV appliance to or from iDRAC	iDRAC communication	iDRAC, or CMC, or OME-Modular communication, used to manage and monitor the managed nodes.
445/139	SMB	TCP	128-bit	Out	OMIVV appliance to CIFS	CIFS communication	To communicate with Windows share.
2049 /111	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.
User-defined	Any	UDP/TCP	None	Out	OMIVV appliance to proxy server	Proxy	To communicate with the proxy server.

**Table 14. Managed nodes (ESXi)**

**Table 14. Managed nodes (ESXi)**

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

For more information about the iDRAC and CMC port information, see the *Integrated Dell Remote Access Controller User's Guide* and *Dell Chassis Management Controller User's Guide* available at <https://www.dell.com/support>.

For more information about the OME-Modular port information, see the *Dell EMC OME-Modular User's Guide* available at <https://www.dell.com/support>.

## Important notes

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


- 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 system 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 system 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 system profile.
- 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.
- For more information about the DNS requirements for vSphere, see the following links:
  - [DNS requirements for vSphere 6.5 and Platform Services Controller appliance](#)
  - [DNS requirements for vSphere 6.7 and Platform Services Controller on Windows](#)
- For cloud server, iDRAC Enterprise license is required.
- OMIVV supports only Server Message Block (SMB) version 1.0 and SMB version 2.0 based CIFS shares.
- iDRAC Delegated Authorization using OAuth 2.0 is not supported.

## Other documents you may need

The following documents are available at [www.dell.com/support](http://www.dell.com/support):

- *OpenManage Integration for VMware vCenter Version 5.2 User's Guide*
- *OpenManage Integration for VMware vCenter Version 5.2 Installation Guide*
- *OpenManage Integration for VMware vCenter Version 5.2 Release Notes*
- *OpenManage Integration for VMware vCenter Version 5.2 API Guide*

# Contacting Dell

 **NOTE:** If you do not have an active Internet connection, you can find contact information on your purchase invoice, packing slip, bill, or Dell product catalog.

Dell provides several online and telephone-based support and service options. Availability varies by country and product, and some services may not be available in your area. To contact Dell for sales, technical support, or customer service issues:

1. Go to **Dell.com/support**.
2. Select your support category.
3. Verify your country or region in the **Choose a Country/Region** drop-down list at the bottom of the page.
4. Select the appropriate service or support link based on your need.