Dell OpenManage Plug-in Version 3.0 For Nagios XI
Installation Guide
Notes, cautions, and warnings

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

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

[WARNING]: A WARNING indicates a potential for property damage, personal injury, or death.
This guide provides information about the software requirements, system requirements and the steps to install, upgrade and uninstall the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI.

This plug-in provides capabilities to monitor the supported Dell EMC devices in environments managed by Nagios XI. This plug-in gives you complete hardware-level visibility of Dell EMC devices, including overall and component-level health monitoring. The plug-in enables you to view the basic inventory information and conduct event monitoring of Dell EMC devices. The plug-in also supports one-to-one web console launch of the Dell EMC devices for further troubleshooting, configuration, and management activities.

The Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI supports the following Dell EMC devices:

- 12th and later generations of PowerEdge servers through the agent-free method by using Integrated Dell Remote Access Controller (iDRAC) with Lifecycle Controller (LC)
- OEM Servers
- Datacenter Scalable Solutions (DSS)
- Hyper-converged Infrastructure (HCI) Platforms - Dell EMC VxRail and Dell EMC XC device
- PowerEdge FX2/FX2s chassis, PowerEdge VRTX chassis, and PowerEdge M1000e chassis
- EqualLogic PS-Series Storage Arrays, PowerVault MD 34/38 Series Storage Arrays, and Compellent SC-Series Storage Arrays
- Dell EMC Network Switches

For more details on the supported Dell EMC device models, see Support matrix in the “Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI User’s Guide.”

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<tr>
<th>Table 1. Key features</th>
<th>Functionality</th>
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<tr>
<td><strong>Feature</strong></td>
<td><strong>Functionality</strong></td>
</tr>
<tr>
<td>Device Discovery</td>
<td>Discovers Dell EMC devices. Once the discovery is complete, host and service definitions are created for each device.</td>
</tr>
<tr>
<td></td>
<td>- Discovering Dell EMC servers through iDRAC with Lifecycle Controller could be done either using SNMP or WSMAN protocol or Redfish REST APIs.</td>
</tr>
<tr>
<td></td>
<td>- Dell EMC storage and Dell EMC Network Switch discovery is supported using SNMP protocol.</td>
</tr>
<tr>
<td></td>
<td>- Dell EMC chassis discovery is supported using WSMAN protocol.</td>
</tr>
<tr>
<td>Device Information</td>
<td>Displays information about the discovered device such as Service Tag, Firmware Version, Device Name, Device Model, and so on after a device discovery is successful. You can view this information in the Hosts or the Services view in the Nagios XI console.</td>
</tr>
<tr>
<td></td>
<td>For more information about device services and their description, see Device Information in the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI User’s Guide.</td>
</tr>
<tr>
<td>Monitor overall health of Dell EMC devices</td>
<td>Monitors the overall health of Dell EMC devices.</td>
</tr>
<tr>
<td>Component level health of Dell EMC devices</td>
<td>Monitors health of the Dell EMC device components such as Physical Disks, Power Supply, Temperature Probe and Voltage Probe and displays the information about the respective components.</td>
</tr>
<tr>
<td>Feature</td>
<td>Functionality</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Monitor SNMP alerts</td>
<td>Monitors SNMP alerts for Dell EMC devices. This feature displays only the last received SNMP alert.</td>
</tr>
<tr>
<td></td>
<td>To view all received SNMP alerts navigate to Reports &gt; Alerts &gt; History in the Nagios Core console.</td>
</tr>
<tr>
<td></td>
<td>You can also view the Alert Knowledge Base (KB) information for the supported Dell EMC devices corresponding to an SNMP alert for faster troubleshooting of the respective alert.</td>
</tr>
<tr>
<td></td>
<td>For more information, see Knowledge Base (KB) messages for the generated alerts in the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI User’s Guide.</td>
</tr>
<tr>
<td>Launching Dell EMC device specific consoles</td>
<td>Launches the respective Dell EMC one-to-one consoles to further troubleshoot and manage the supported Dell EMC devices.</td>
</tr>
<tr>
<td>Warranty information</td>
<td>Monitors and displays the warranty information for the supported Dell EMC devices. For more information, see Warranty information for Dell EMC devices in the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI User’s Guide.</td>
</tr>
</tbody>
</table>

This plug-in supports Nagios XI versions 5.4.11 and 5.4.13.

Before installing Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI, download the latest documents from Dell EMC OpenManage Plug-in for Nagios XI for the latest information about this product.
Before you install the plug-in, ensure that you meet the following requirements:

Common prerequisites:

- Any Nagios XI version between 5.4.11 to 5.4.13 is installed and all the Nagios XI components are functional.
- OMSDK (OpenManage Python Software Development Kit) version 1.1.268 is installed.
- Python version 2.7.5 and above or 3.6,3 and above is installed.
- Python Argparse module is installed.
- Python Netaddr module is installed.
- (Optional) Java version 1.6 or later is installed to view Dell EMC warranty information.
- (Optional) SNMP Trap Translator (SNMPTT) version 1.3 or later is installed to receive SNMP alerts. It is recommended to use the latest version.

**NOTE:** You can discover iDRAC devices either using SNMP or WSMAN protocol or Redfish REST APIs. Dell EMC storage and Dell EMC Network Switch discovery is supported using SNMP protocol. Dell EMC chassis discovery is supported using WSMAN protocol.

**NOTE:** For information regarding installation, uninstallation and upgrade of OMSDK, refer OMSDK Installation

Topics:

- System requirements for management systems
- System requirements for managed systems

### System requirements for management systems

A management system is the server where Nagios XI is installed. The requirements for the management systems are as follows:

- Red Hat Enterprise Linux (RHEL) version 7.3 and RHEL 6.9 (64-bit)

The ESXi hypervisor that hosts the supported versions of RHEL, SLES and Ubuntu guest operating systems is also supported.

### System requirements for managed systems

A managed system is a supported Dell EMC device that you are monitoring. The requirements for the managed systems are as follows:

<table>
<thead>
<tr>
<th>Dell EMC devices</th>
<th>Firmware</th>
<th>Supported Firmware Versions</th>
</tr>
</thead>
<tbody>
<tr>
<td>14th generation of PowerEdge servers</td>
<td>iDRAC9</td>
<td>3.17.17,17, 3.15.15,15, 3.11.11,11 and 3.00.00.00</td>
</tr>
<tr>
<td>13th generation of PowerEdge servers</td>
<td>iDRAC8</td>
<td>2.50.50.50 and 2.41.40.40</td>
</tr>
<tr>
<td>12th generation of PowerEdge servers</td>
<td>iDRAC7</td>
<td>2.50.50.50 and 2.41.40.40</td>
</tr>
<tr>
<td>Datacenter Scalable Solutions</td>
<td>iDRAC8</td>
<td>2.50.50.50 and 2.41.40.40</td>
</tr>
<tr>
<td>Nutanix XC</td>
<td>iDRAC8</td>
<td>2.50.50.50 and 2.41.40.40</td>
</tr>
<tr>
<td>Dell EMC devices</td>
<td>Firmware</td>
<td>Supported Firmware Versions</td>
</tr>
<tr>
<td>----------------------------------------</td>
<td>----------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>iDRAC9</td>
<td></td>
<td>3.15.15.15 and 3.11.11.11</td>
</tr>
<tr>
<td>VxRail</td>
<td>iDRAC8</td>
<td>2.50.50.50 and 2.41.40.40</td>
</tr>
<tr>
<td></td>
<td>iDRAC9</td>
<td>3.15.15.15 and 3.11.11.11</td>
</tr>
<tr>
<td>PowerEdge M1000e Chassis</td>
<td>CMC</td>
<td>6.0 and 5.22</td>
</tr>
<tr>
<td>PowerEdge VRTX Chassis</td>
<td>CMC</td>
<td>3.0 and 2.23</td>
</tr>
<tr>
<td>PowerEdge FX2/FX2s Chassis</td>
<td>CMC</td>
<td>2.0 and 1.42</td>
</tr>
<tr>
<td>Compellent SC-Series Storage Arrays</td>
<td>NA</td>
<td>7.2.10 and 7.2.1</td>
</tr>
<tr>
<td>EqualLogic PS-Series Storage Arrays</td>
<td>NA</td>
<td>9.1.5 and 9.1.4</td>
</tr>
<tr>
<td>PowerVault MD 34/38 Series Storage Arrays</td>
<td>NA</td>
<td>08.25.13.60 and 08.25.11.60</td>
</tr>
<tr>
<td>Dell EMC Network Switches M, S, FN, Z and C-Series</td>
<td>NA</td>
<td>9.13.0.0 and 9.11.2.8</td>
</tr>
<tr>
<td>Dell EMC Network Switches N-Series</td>
<td>NA</td>
<td>6.3.3.10 and 6.3.3.9</td>
</tr>
</tbody>
</table>

- If you are using SNMP protocol, ensure that SNMP is configured in the respective devices.
- If you want to receive SNMP traps in the Nagios XI console, ensure that you configure the SNMP trap destination in the respective devices.

For more information, see Appendix in the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI User’s Guide at dell.com/omconnectionsEnterpriseSystemsManagement.

- If you are using RedFish REST APIs, ensure that RedFish is enabled in the respective devices.
- If you are using WSMan protocol, it is recommended that you use a WSMan service account other than the default service account. For more information, see Configuring User Accounts and Privileges in the respective device’s User’s Guide at Dell.com/esmmanuals.

For the list of supported platforms, see Support Matrix in the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI User’s Guide.
To install the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI, you must extract the component-specific files on the systems. The installer is packaged as a .tar.gz file named Dell_EMC_OpenManage_Plugin_v3.0_Nagios_XI_A00.tar.gz.

Before you begin deploying the files, follow the instructions below to download Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI.

1. Open the browser and enter the URL www.dell.com/support.
2. Navigate to your Dell EMC product page or search by Dell EMC Service Tag.
3. Select Drivers and Downloads from the left pane options.
4. The page will display a list of supported software and plug-in available for the selected Dell EMC device.
5. Click on Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI and download the file.

Navigate to the location where you have downloaded the file, and extract its contents.

The following files are extracted:

- Dell_EMC_OM_NagiosXI_monitoring_wizard.zip file
- Dell_EMC_OM_Plugin_3_0_For_NagiosXI_IG.pdf file
- Dell_EMC_OM_Plugin_3_0_For_NagiosXI_ReadMe.txt file
- license_en.txt file
- Upgrade folder.

Login to Nagios XI console with your credentials.

The Nagios XI home page is displayed.

4. Click the Admin tab.
5. In the left pane, under System Extensions, click Manage Config Wizards.
6. The Manage Configuration Wizards page is displayed.
7. Navigate to the location where you have extracted the contents of the Dell_EMC_OpenManage_Plugin_v3.0_Nagios_XI_A00.tar.gz file, select the Dell_EMC_OM_NagiosXI_monitoring_wizard.zip file and click Open.
8. Click the Upload & Install button.

The Dell EMC OpenManage Plug-in for Nagios XI is successfully installed in your system and is displayed under the Wizard Information menu along with its copyright and version information as depicted in the image below.
Post installation requirements

This section lists the optional steps that you need to perform based on your monitoring requirements. Once you have successfully installed the Dell EMC OpenManage Plug-in for Nagios XI version 3.0, you must perform the steps listed in the sections below based on your monitoring requirement.

- Configuring alerts or events if you want to monitor traps.
- Configuring Knowledge Base (KB) articles to be able to view more information about the alerts or events (traps) received.

If you have installed Nagios XI in a non default location, then perform the steps listed in the section Configuring Nagios XI installed (non default) path.

Topics:
- Configuring alerts or event traps
- Configuring Knowledge Base articles
- Configuring Nagios XI installed in non default path

Configuring alerts or event traps

Monitoring SNMP traps is an optional prerequisite. To configure SNMPTT to receive SNMP alerts, perform the following steps:

1. Navigate to `cd <NagiosXI installed path>/html/includes/configwizards/Dell_EMC_OM_NagiosXI_monitoring_wizard/plugins` and run the following command:
   
   ```bash
   ./postinstall.sh trap
   ```

   The default location for Nagios XI is `/usr/local/nagiosxi`.

2. Provide the path where the `snmptt.ini` file is installed and then press ENTER. Alternatively, you can press Enter to continue with the default file path, `/etc/snmp/snmptt.ini`.

3. Provide the path where trap configuration files are installed and then press ENTER to continue. Alternatively, you can press Enter to continue with the default file path, `/usr/local/nagios/libexec`.

4. Restart the SNMPTT services by running the following command:
   
   ```bash
   service snmptt restart
   ```

   You will now be able to receive SNMP alerts or events (traps).

Configuring Knowledge Base articles

Knowledge base articles are associated with alerts or events generated by the discovered Dell EMC devices. To be able to view KB articles in the Nagios XI console, you must configure it.

Navigate to `cd <Nagios XI installed path>/html/includes/configwizards/Dell_EMC_OM_NagiosXI_monitoring_wizard/plugins` and run the following command:

```bash
./postinstall.sh dellkb
```

The default location for Nagios XI is `/usr/local/nagiosxi`.

The KB articles are now configured. You will now be able to view the KB articles.
Configuring Nagios XI installed in non default path

By default, Nagios is installed in the following path:
/usr/local/nagios/

If you have installed Nagios XI in a non default path, then, perform the following steps to integrate this path:

1. Navigate to `cd <Nagios XI installed path>/html/includes/configwizards/Dell_EMC_OM_NagiosXI_monitoring_wizard/plugins` and run the following command:
   ```bash
   ./postinstall.sh nagiosinstallpath
   ```

2. Provide the path where the `submit_check_result.sh` script file is installed and then press ENTER.

3. Restart the SNMPTT services by running the following command:
   ```bash
   service snmptt restart
   ```

The Nagios XI installed path is now configured.
Upgrading to Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI

You can upgrade from Dell OpenManage Plug-in Version 1.0 to Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI by performing the following steps:

1. Download the latest Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI installer from the Dell EMC support website at [Dell.com/support](http://Dell.com/support) or from Nagios exchange at [exchange.nagios.org/](http://exchange.nagios.org/).
   The installer is packaged as a .tar.gz file named `Dell_EMC_OpenManage_Plugin_v3.0_Nagios_XI_A00.tar.gz`.

2. Copy the `Dell_EMC_OpenManage_Plugin_v3.0_Nagios_XI_A00.tar.gz` file to the Nagios XI setup.

3. Navigate to the location where you have downloaded the folder, and extract its contents.
   The following folder and files are extracted:
   - `Dell_OpenManage_Plugin` folder
   - `Dell_EMC_OM_Plugin_3_0_For_NagiosXI_IG.pdf` file
   - `Dell_EMC_OM_Plugin_3_0_For_NagiosXI_ReadMe.txt` file
   - `license_en.txt` file
   - `Dell_EMC_OM_NagiosXI_monitoring_wizard.zip` file
   - Upgrade folder.

4. Delete Dell OpenManage Plug-in Version 1.0 by following the below steps:
   - Login to the Nagios XI console with your credentials.
     The Nagios XI home page is displayed.
   - Click the Admin Tab.
   - In the left pane, under System Extensions, click Manage Config Wizards.
     The Manage Configuration Wizards page is displayed.
   - Locate the Dell Plug-in under Wizard Information and click the ✗ (Delete) button under Actions to uninstall the Dell OpenManage Plug-in for Nagios XI wizard.
     The Dell OpenManage Plug-in is successfully uninstalled from your system.

5. Install the Dell EMC OpenManage plug-in Version 3.0 by following the below steps:
   - Login to Nagios XI console with your credentials.
     The Nagios XI home page is displayed.
   - Click the Admin Tab.
   - In the left pane, under System Extensions, click Manage Config Wizards.
   - In the Upload a Wizard menu, click Browse.
     The File Upload windows is displayed.
   - Navigate to the location where you have extracted the contents of the `Dell_EMC_OpenManage_Plugin_v3_Nagios_XI_A00.tar.gz` file, select the `Dell_EMC_OM_NagiosXI_monitoring_wizard.zip` file and click Open.
   - Click the Upload & install button.
     The Dell EMC OpenManage Plug-in for Nagios XI Version 3.0 is successfully installed in your system and is displayed under the Wizard Information.

6. Navigate to Upgrade folder and run the below command:
   ```sh```
   ```
   sh Upgrade.sh <DBPassword> <DBName>
   ```
NOTE: Running Database script will change the previously discovered service names to new service names. Upgrade is supported only if the database is in the same management node.

Rediscover the devices.

NOTE: Dell EMC OpenManage plug-in Version 3.0 is the latest upgrade version of Dell OpenManage plug-in Version 1.0. No intermediate versions available.
Uninstalling the Dell EMC OpenManage Plug-in Version 3.0 for Nagios XI

1. Login to Nagios XI console with your credentials. The Nagios XI home page is displayed.
2. Click the Admin tab.
3. In the left pane, under System Extensions, click Manage Config Wizards. The Manage Configuration Wizards page is displayed.
4. Locate the Dell EMC Plug-in under Wizard Information and click the (Delete) button under Actions. to uninstall the Dell EMC OpenManage Plug-in for Nagios XI wizard.

The Dell EMC OpenManage Plug-in is successfully uninstalled from your system.
Accessing documents from the Dell EMC support site

You can access the required documents using the following links:

- For Dell EMC Enterprise Systems Management documents — www.dell.com/esmmanuals
- For Dell EMC OpenManage documents — www.dell.com/openmanagemanuals
- For Dell EMC Remote Enterprise Systems Management documents — www.dell.com/esmmanuals
- For iDRAC and Dell Lifecycle Controller documents — www.dell.com/idracmanuals
- For Dell EMC OpenManage Connections Enterprise Systems Management documents — www.dell.com/esmmanuals
- For Dell EMC Serviceability Tools documents — www.dell.com/serviceabilitytools

a Go to www.dell.com/support.
b Click Browse all products.
c From All products page, click Software, and then click the required link from the following:
  - Analytics
  - Client Systems Management
  - Enterprise Applications
  - Enterprise Systems Management
  - Public Sector Solutions
  - Utilities
  - Mainframe
  - Serviceability Tools
  - Virtualization Solutions
  - Operating Systems
  - Support
d To view a document, click the required product and then click the required version.

- Using search engines:
  - Type the name and version of the document in the search box.
In addition to this guide, you can access the following guides available on the Dell EMC Support website at [Dell.com/support/manuals](Dell.com/support/manuals). On the Manuals page, click **Software & Security** and click the appropriate product link to access the documents:

- Integrated Dell Remote Access Controller 9 (iDRAC9) Version 3.00.00.00 User’s Guide
- Dell EMC XC Series Hyperconverged Appliances manuals
- Dell EMC VxRail Appliance Series manuals
- Integrated Dell Remote Access Controller 8 with Lifecycle Controller User’s Guide
- Integrated Remote Access Controller 7 User’s Guide
- Dell EMC Chassis Management Controller for Dell PowerEdge M1000e User’s Guide
- Dell EMC Chassis Management Controller for Dell PowerEdge VRTX User’s Guide
- Dell EMC Chassis Management Controller for Dell PowerEdge FX2/FX2s User’s Guide
- Compellent SC-Series Storage Arrays User’s Guide
- EqualLogic PS-Series Storage Arrays User’s Guide
- PowerVault MD-Series Storage Arrays User’s Guide
- Dell EMC Network Switch User’s Guide

Also see [www.nagios.org/documentation](www.nagios.org/documentation) for any Nagios XI related documentation.
OMSDK Installation

OMSDK is available as a standard python package in pypi.org. You can install OMSDK using pip.

**Installing OMSDK package:**

Run the below command to Install OMSDK:

```
pip install omsdk==1.1.268
pip install omdrivers==1.1.268
```

**Upgrading OMSDK package:**

Run the below command to Upgrade OMSDK:

```
pip install omsdk --upgrade
pip install omdrivers --upgrade
```

**Uninstalling OMSDK package:**

Run the below command to Uninstall OMSDK:

```
pip uninstall omsdk
pip uninstall omdrivers
```