

Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core

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.

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Introduction to Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core

This guide provides information about the software requirements, and the steps to install, upgrade, and uninstall the Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core.

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

The Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core supports the following Dell EMC devices:

- iDRAC9 based PowerEdge Servers
- 12th Generation and 13th Generation 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)
- Hyperconverged Infrastructure (HCI) Platforms - Dell EMC VxRail, Dell EMC VxFlex, Dell EMC XC Series
- PowerEdge FX2/FX2s chassis, PowerEdge VRTX chassis, and PowerEdge M1000e and MX7000 chassis
- EqualLogic PS-Series Storage Arrays, PowerVault MD 34/38 , ME4 Storage Arrays and Dell Compellent SC-Series Storage Arrays
- Dell EMC Network Switches

For more details on device support, see Support matrix in the “*Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core User’s Guide.*”

Table 1. Key features

Feature	Functionality
Device Discovery	<p>Discovers Dell EMC devices and once the discovery is complete, host, and service definitions are created for each device</p> <p>Discovering Dell EMC servers through iDRAC with Lifecycle Controller is done either using SNMP, WSMAN protocol, Redfish protocols.</p> <p>Dell EMC storage and Dell EMC Network Switch discovery is supported using SNMP protocol.</p> <p>Dell EMC chassis discovery is supported using WSMAN protocol.</p> <p>Dell EMC MX7000 modular chassis and ME4 Storage Arrays are supported by REST.</p>
Security Enhancement	Enhanced security with AES 256-bit based password encryption in host definition files
Device Information	<p>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 Core console.</p> <p>For more information about device services and their description, see Device Information in the <i>Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core User’s Guide.</i></p>
Monitor overall health of Dell EMC devices.	Monitors the overall health of Dell EMC devices
Component level health of Dell EMC devices	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.

Table 1. Key features (continued)

Feature	Functionality
	For more information about Component level health of Dell EMC devices and their description, see Monitor Component Health of Dell EMC Devices in the <i>Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core User's Guide</i> .
Monitor SNMP alerts	<p>Monitors SNMP alerts for Dell EMC devices. This feature displays only the last received SNMP alert.</p> <p>To view all received SNMP alerts, go to Reports > Alerts > History in the Nagios Core console.</p> <p>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.</p> <p>For more information, see Knowledge Base (KB) messages for the generated alerts in the <i>Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core User's Guide</i>.</p>
Launching Dell EMC device-specific consoles	Launches the respective Dell EMC one-to-one consoles to further troubleshoot and manage the supported Dell EMC devices.
Warranty information	Monitors and displays the warranty information for the supported Dell EMC devices. For more information, see Warranty information for Dell EMC devices in the <i>Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core User's Guide</i> .

This plug-in supports Nagios Core versions 3.5.0 and later.

Before installing Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core, download the latest documents from *Dell EMC OpenManage Plug-in for Nagios Core* for the latest information about this product.

System requirements

Before you install the plug-in, ensure that you meet the following requirements:

Common prerequisites:

- Nagios Core version 3.5.1 or later is installed and all the Nagios Core components are functional.
- OpenManage Python Software Development Kit (OMSDK) is installed.
- Python version 2.7.5 and above or 3.6.3 and above are installed.
- Python Argparse module is installed.
- Python Netaddr module is installed.
- (Optional) Java version 1.8 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: ME4 storage and MX7000 chassis discoveries are supported using RedFish protocol. You can discover iDRAC devices either using SNMP, WSMAN protocol or Redfish protocol. Dell EMC storage (except for ME4) and Dell EMC Network Switch discovery are supported using SNMP protocol. Dell EMC chassis (except for MX7000) discovery is supported using WSMAN protocol. ME4 storage and MX7000 chassis discovery are supported using REST APIs

NOTE: For information regarding installation, upgrade and uninstallation on OMSDK, see [OMSDK Installation](#)

Topics:

- [System requirements for management systems](#)
- [System requirements for managed systems](#)

System requirements for management systems

The requirements for the management systems are as follows:

- RHEL 7.7
- RHEL 8.0
- Ubuntu 18.04.3
- Ubuntu 16.04.3
- SLES 15 SP1 and 12SP4
- Nagios core 3.5.1 and later

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

System requirements for managed systems

The requirements for the managed systems are as follows:

Table 2. Supported firmware versions for Dell EMC PowerEdge Servers

Dell EMC PowerEdge Servers	Firmware Versions
iDRAC9 based PowerEdge servers	4.0.0.0 and later versions
12th and 13th Generations PowerEdge servers	2.63.60.61 and later versions

NOTE: HCI, DSS devices also supports 13th generation and iDRAC9

Table 3. Supported firmware versions for PowerEdge Chassis

Dell EMC PowerEdge Chassis	CMC versions
PowerEdge M1000e Chassis	6.1 and later versions
PowerEdge MX7000 modular chassis	1.1 and later versions
PowerEdge VRTX chassis	3.2 and later versions
PowerEdge FX2/FX2s chassis	2.2 and later versions

Table 4. Supported firmware versions for Storage

Dell EMC Storage Arrays	Supported Firmware versions
Dell Compellent SC-Series Storage Arrays	7.2.1 and later versions
EqualLogic PS-Series Storage Arrays	9.1.4 and later versions
PowerVault MD 34/38 Series Storage Arrays	08.25.11.60 and later versions
PowerVault ME4 Storage Arrays	GT275R005-04 and later versions

Table 5. Supported firmware versions for Network switches

Dell EMC Operating System based Network switches	Supported firmware versions
Operating System 6	6.6.0.13 and later versions
Operating System 9	19.4.1.8 and later versions
Operating System 10	10.5.1.0 and later versions

NOTE: iDRAC versions are not applicable for Storage and network switches.

- 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 Core 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 3.1 for Nagios Core Users Guide* at dell.com/omconnectionsEnterpriseSystemsManagement.
- 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/esmanuals.

For the list of supported platforms, see **Support Matrix** in the *Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core User's Guide*.

Downloading and Installing

1. To install the latest Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core, you must extract the component-specific files on the systems. The installer is packaged as a `.tar.gz` file named **Dell EMC OpenManage Plugin v3.1 Nagios Core A00.tar.gz**. Before you begin deploying the files, follow the instruction below to download **Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core**.

- Open the browser and provide `www.dell.com/support`.
- Browse your **Dell EMC product page** or search by **Dell EMC Service Tag**.
- Select **Drivers and Downloads** from the left pane options.
- The page displays a list of supported software and plug-in available for the selected Dell EMC device.
- Click **Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core** and download the file.

2. Browse the location where you have downloaded the folder, and run the following command to extract its contents:

```
tar -zxvf Dell EMC OpenManage Plugin v3.1 Nagios Core A00.tar.gz
```

The following folder and files are extracted:

- Dell_OpenManage_Plugin folder
- Dell EMC OM Plugin 3_1_For_NagiosCore_IG.pdf file
- Dell EMC OM Plugin 3_1_For_NagiosCore_ReadMe.txt file
- license_en.txt file

3. Go to the `Dell_OpenManage_Plugin/Install` folder, and then run the following command to invoke the installer:

```
./install.sh
```

4. Press **Y** if Nagios Core version 3.5.0 or later is installed in your system, or press any other key to exit the installation process, install Nagios Core version 3.5.0 or later and then begin the installation process once again.

Alternatively, you can press **Enter** to browse the default value (Y).

5. When prompted for the installed Nagios Core location, provide the path, and then press **Enter**.

Alternatively, you can press **Enter** to browse the default location, `/usr/local/nagios`.

An invalid entry displays an error and exits the installation process.

A prerequisite check is run, and the installed prerequisites are displayed.

i NOTE: If any of the other prerequisites are not met, then the installation procedure displays an appropriate message and browses the installation. However, before the functionality invocation, all the mandatory prerequisites should be installed else an error message is displayed and functionality will be aborted.

6. Press **Y** if you accept the **End User License Agreement**, or any other key to exit the installation.

Alternatively, you can press **Enter** to browse the default value (Y).

7. Press **Y** to set the attribute `escape_html_tags` to '0', or press **N** to browse the default setting, '1'.

Alternatively, you can press **Enter** to browse the default value (N).

i NOTE: It is recommended that you continue the installation with the attribute `escape_html_tags` set to '0' for better readability (multiline view) in order to distinguish the different instances or entities in the Dell EMC plug-in.

8. If you have installed SNMPTT, provide the path where SNMPTT is installed, and then press **Y** to browse the installation.

Alternatively, you can press **Enter** to go to the default file path, `/etc/snmp/snmpd.ini`. If you have not installed SNMPTT and want to skip this step, press **Enter**.

i NOTE: If SNMPTT was not installed while installing this plug-in, but you later want to receive SNMP alerts, perform the following actions:

- **Install SNMPTT.**
- **Browse `<NAGIOS_HOME>/dell/install`, and then run the following command:**

```
./install.sh trap
```


<NAGIOS_HOME> is the installed location of Nagios Core and by default, the location of <NAGIOS_HOME> is /usr/local/nagios/.

- Restart SNMPTT.
- Restart Nagios service.

9. If you have installed Java, provide the path where Java is installed, and then press **Y** to browse the installation.

Alternatively, you can press **Enter** to browse the default file path, /usr/bin/java.

i **NOTE:** If Java was not installed while installing this plug-in, but you later want to install or upgrade the Java version, perform the following actions:

- Install Java.
- Browse <NAGIOS_HOME>/dell/install, and then run the following command:

```
./install.sh java
```

<NAGIOS_HOME> is the installed location of Nagios Core and by default, the location of <NAGIOS_HOME> is /usr/local/nagios/.

- Restart Nagios service.

The plug-in is now installed.

10. To verify the Nagios Core configuration entry, run the following command:

```
<NAGIOS_HOME>/bin/nagios -v <NAGIOS_HOME>/etc/nagios.cfg
```

A successful configuration update displays zero errors or warnings. If you receive any errors or warnings during this step, resolve them manually.

11. If you have installed SNMPTT and want to verify the SNMPTT configuration entry, go to the path where SNMPTT is installed and verify that the following entries are present in the snmptt.ini file under the section **TrapFiles**:

- <NAGIOS_HOME>/dell/config/templates/Dell_Agent_free_Server_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_Chassis_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_Compellent_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_EqualLogic_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_PowerVaultMD_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_Compellent_ME4_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_Chassis_NGM_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_F10_Switch_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_F10NG_Switch_Traps.conf
- <NAGIOS_HOME>/dell/config/templates/Dell_N_Series_Traps.conf

12. Restart the Nagios Core services by running the following command:

```
service nagios restart
```

13. If you have installed SNMPTT, then restart the SNMPTT services by running the following command:

```
service snmptt restart
```

Topics:

- [Post Installation](#)

Post Installation

Nagios host configuration files contain the check script definition which require passwords. Dell EMC Nagios 3.1 Plug-in provides a way in which the passwords can be encrypted. The passphrase for the encryption is stored in a secure location with required permission to the file. Following are the steps to create a file and a passphrase:

1. Create a Passphrase Resource file to store a passphrase for encryption and decryption.
2. Navigate to <NAGIOS_HOME>/etc/resource.cfg and define a macro \$OMINAGIOSRESPATH\$=<absolute path> in the resource.cfg and provide the absolute path of the file created in step 1.
3. Restart the Nagios core services by running the following command:

```
service nagios restart
```

Guidelines to create a Passphrase Resource file and a Passphrase

- Passphrase shall contain any alphanumeric and special characters.
- The length of the passphrase should be minimum of 10 characters and maximum of 25 characters.
- It is recommended to change the passphrase at regular interval of time.
- Passphrase Resource file should have a read permission for the nagios user and the user running discovery script
- Nagios User runs the discovery script.

Upgrading to Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core

To upgrade to latest plug-in, follow the below steps:

i **NOTE: To upgrade to Dell EMC OpenManage Plug-in from v2.0 to v3.1, user has to upgrade to v3.0 and then upgrade it to v3.1**

1. Download the latest Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core installer from the Dell EMC support website at **Dell.com/support** or from Nagios exchange at **exchange.nagios.org/**.

The installer is packaged as a `.tar.gz` file named **Dell_EMCMOpenManage_Plugin_v3.1_Nagios_Core_A00.tar.gz**.

2. Navigate to the location where you have downloaded the folder, and run the following command to extract its contents:

```
tar -zxvf Dell_EMCMOpenManage_Plugin_v3.1_Nagios_Core_A00.tar.gz
```

The following folder and files are extracted:

- Dell_OpenManage_Plugin folder
- Dell_EMCMOpenManage_Plugin_3.1_For_NagiosCore_IG.pdf file
- Dell_EMCMOpenManage_Plugin_3.1_For_NagiosCore_ReadMe.txt file
- license_en.txt file

3. Navigate to the Dell_OpenManage_Plugin/Install folder, and then run the following command to invoke the installer:

```
./install.sh
```

4. Press **Y** if Nagios Core version 3.5.0 or later is installed in your system, or press any other key to exit the installation process, install Nagios Core version 3.5.0 or later and then begin the installation process once again.

Alternatively, you can press any key to exit installation and the default value (Y).

5. When prompted for the installed Nagios Core location, provide the path, and then press **Enter**.

Alternatively, you can press **Enter** to continue with the default location, `/usr/local/nagios/`.

An invalid entry will display an error and exit the installation process.

A prerequisite check is run and the installed prerequisites are displayed.

i **NOTE: If any of the other required prerequisites are not met, then the installation procedure will display an appropriate message and continues with the installation. However, before the functionality invocation, all the mandatory prerequisites should be installed else an error message is displayed and functionality will be aborted.**

6. When prompted to upgrade to Dell EMC OpenManage Plug-in Version 3.1 for Nagios Core, press **Y**. Alternatively, you can press **Enter** to continue with the default value (Y).

If you do not want to upgrade, press any other key to exit the installation process.

7. Press **Y** if you accept the **End User License Agreement**, or any other key to exit the installation.

Alternatively, you can press **Enter** to continue with the default value (Y).

8. If you have installed SNMPTT, provide the path where SNMPTT is installed, and then press **Y** to continue with the installation.

Alternatively, you can press **Enter** to continue with the default file path, `/etc/snmp/snmpd.ini`. If you have not installed SNMPTT and want to skip this step, press **Enter**.

i **NOTE: If SNMPTT was not installed while installing this plug-in, but you later want to receive SNMP alerts, perform the following actions:**

- **Install SNMPTT.**
- **Navigate to <NAGIOS_HOME>/dell/install, and then run the following command:**

```
./install.sh trap
```

<NAGIOS_HOME> is the installed location of Nagios Core and by default, the location of <NAGIOS_HOME> is `/usr/local/nagios/`.

- **Restart SNMPTT.**
- **Restart Nagios service.**

9. If you have installed Java, provide the path where Java is installed, and then press **Y** to continue with the installation.

Alternatively, you can press **Enter** to continue with the default file path, `/usr/bin/java`.

i **NOTE: If Java was not installed while installing this plug-in, but you later want to install or upgrade the Java version, perform the following actions:**

- **Install Java.**
- **Navigate to `<NAGIOS_HOME>/dell/install`, and then run the following command:**

```
./install.sh java
```

<NAGIOS_HOME> is the installed location of Nagios Core and by default, the location of <NAGIOS_HOME> is `/usr/local/nagios/`.

- **Restart Nagios service.**

The plug-in is now installed.

10. To verify the Nagios Core configuration entry, run the following command:

```
<NAGIOS_HOME>/bin/nagios -v <NAGIOS_HOME>/etc/nagios.cfg
```

A successful configuration update will display zero errors or warnings. If you receive any errors or warnings during this step, resolve them manually.

11. If you have installed SNMPTT and want to verify the SNMPTT configuration entry, navigate to the path where SNMPTT is installed and verify that the following entries are present in the `snmptt.ini` file under the section **TrapFiles**:

- `<NAGIOS_HOME>/dell/config/templates/Dell_Agent_free_Server_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Chassis_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Compellent_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_EqualLogic_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_PowerVaultMD_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Compellent_ME4_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Chassis_NGM_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_F10_Switch_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_F10NG_Switch_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_N_Series_Traps.conf`

12. Restart the Nagios Core services by running the following command:

```
service nagios restart
```

13. If you have installed SNMPTT, then restart the SNMPTT services by running the following command:

```
service snmptt restart
```

Perform Post Installation steps and rediscover all the devices.

Uninstalling Dell EMC Openmanage Plug-in Version 3.1 for Nagios Core

1. Navigate to the `<NAGIOS_HOME>/dell/Install` folder, and run the following command:
`./uninstall.sh`
2. When prompted for confirmation of uninstallation, press **Y** to uninstall or **N** to quit the uninstallation process.
Alternatively, you can press **Enter** to exit the uninstallation.
3. When prompted to continue with the uninstallation process, press **Y** to continue or **N** to quit the uninstallation process.
Alternatively, you can press **Enter** to exit.

NOTE: If you have set the value of the attribute `escape_html_tags` to '0' during installation, then you can reset it back to its default value, '1' by navigating to the `<NAGIOS_HOME>/etc/cgi.cfg` file and editing this value.

The plug-in is now uninstalled.

4. To verify the uninstallation of the Dell EMC OpenManage Plug-in, navigate to the `<NAGIOS_HOME>` folder and ensure that the `dell` folder has been removed.
5. To verify the Nagios Core configuration entry, navigate to the path where Nagios Core is installed and then run the following command:

```
<NAGIOS_HOME>/bin/nagios -v <NAGIOS_HOME>/etc/nagios.cfg
```

A successful configuration update will display zero errors or warnings. If you receive any errors or warnings during this step, resolve them manually.

6. If you have installed SNMPTT, navigate to the path where SNMPTT is installed and verify that the following entries have been removed from the `snmptt.ini` file under the section **TrapFiles**:

- `<NAGIOS_HOME>/dell/config/templates/Dell_Agent_free_Server_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Chassis_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Compellent_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_EqualLogic_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_PowerVaultMD_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Compellent_ME4_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_Chassis_NGM_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_F10_Switch_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_F10NG_Switch_Traps.conf`
- `<NAGIOS_HOME>/dell/config/templates/Dell_N_Series_Traps.conf`

7. If you have installed SNMPTT, restart the SNMPTT services by running the following command:
`service snmptt restart`
8. Remove the Passphrase Resource file
9. Remove the reference to the Passphrase Resource file from `<NAGIOS_HOME>/etc/resource.cfg`
10. Restart the Nagios Core services by running the following command:
`service nagios restart`

Accessing documents from the Dell EMC support site

You can access the required documents in one of the following ways:

- Using the following links:
 - For Dell EMC Enterprise Systems Management, Dell EMC Remote Enterprise Systems Management, and Dell EMC Virtualization Solutions documents — www.dell.com/esmmanuals
 - For Dell EMC OpenManage documents — www.dell.com/openmanagemanuals
 - For iDRAC documents — www.dell.com/idracmanuals
 - For Dell EMC OpenManage Connections Enterprise Systems Management documents — www.dell.com/OMConnectionsEnterpriseSystemsManagement
 - For Dell EMC Serviceability Tools documents — <https://www.dell.com/serviceabilitytools>
- From the Dell EMC Support site:
 1. Go to <https://www.dell.com/support>.
 2. Click **Browse all products**.
 3. From **All products** page, click **Software**, and then click the required link from the following:
 - **Analytics**
 - **Client Systems Management**
 - **Enterprise Applications**
 - **Enterprise Systems Management**
 - **Mainframe**
 - **Operating Systems**
 - **Public Sector Solutions**
 - **Serviceability Tools**
 - **Support**
 - **Utilities**
 - **Virtualization Solutions**
 4. To view a document, click the required product and then click the required version.
- Using search engines:
 - Type the name and version of the document in the search box.

Related Documentation

In addition to this guide, you can access the following guides available on the Dell EMC Support website at [Dell.com/support/manuals](https://www.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*
- *PowerVault ME4-Series Storage User's Guide*
- *Dell EMC Network Switch User's Guide*

Also see www.nagios.org/documentation for any Nagios Core related documentation.

OMSDK Installation

OMSDK is available as a standard python package in `pypi.org`

Installing and uninstalling OMSDK package using pip

To install OMSDK package using pip, run the following commands:

```
pip install omsdk
```

```
pip install omdrivers
```

To uninstall OMSDK package using pip, run the following commands:

```
pip uninstall omsdk
```

```
pip uninstall omdrivers
```

Installing and uninstalling OMSDK package without pip

NOTE: Setup.py does not install omsdk dependent python libraries. Ensure to manually install along with the following libraries:

- `pysnmp>=4.4.1`
- `pyasn1>=0.4.4`
- `enum34>=1.1.6`
- `requests>=2.12.3`
- `PyYAML>=3.12`
- `future>=0.16.0`
- `pysnmp-mibs>=0`

To install OMSDK package without using pip,

1. Manually download the source package from <https://github.com/dell/omsdk>.
2. Click Clone or Download
3. Click Download zip and run the following commands:

```
cd <downloaded path>
```

```
unzip omsdk-devel.zip
```

```
cd omsdk-devel/
```

```
python setup.py install
```

To uninstall OMSDK package without using pip, run the following commands:

i | **NOTE:** Do not alter the `setup_file.txt` generated during installation of omsdk using `setup.py`

```
cd omsdk-devel/
```

```
python uninstall.py
```

i | **NOTE:** Set an environment to ensure `python` as a command is working.

Upgrading OMSDK package using pip

i | **NOTE:** To upgrade OMSDK without using pip, uninstall the current version and install the supported version of OMSDK.

Run the below command to Upgrade OMSDK using pip:

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

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