Dell EMC OpenManage Integration Version 1.2.1 with ServiceNow

Installation Guide

September 2021
Rev. A01

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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1

Overview of Dell EMC OpenManage Integration with ServiceNow

Dell EMC OpenManage Integration with ServiceNow assists enterprise-level organizations to improve the efficiency of their business-critical operations by bridging any gaps between their services and Operations Management processes. It is a native application—within the ServiceNow platform—that provides seamless interface between OpenManage Enterprise (Infrastructure management capabilities) and ServiceNow (service and operations management capabilities). OpenManage Enterprise is a one-to-many systems management console that provides comprehensive, unified life cycle management for PowerEdge Modular Infrastructure, rack, and tower servers. The OpenManage Integration provides automation capabilities to transfer device inventory information and events between OpenManage Enterprise and ServiceNow, and therefore assists Service Management teams to quickly detect, diagnose, and resolve issues that impact business services and IT infrastructure health.

Also, OpenManage Integration with ServiceNow integrates with SupportAssist Enterprise for viewing and keeping track of the support cases—opened to the Dell EMC support teams—from within the ServiceNow instance. SupportAssist Enterprise is an application that proactively detects hardware issues—before they actually occur—and alerts the Tech Support teams about your PowerEdge servers, storage, and networking devices. With this integration, operations and service management teams can keep themselves abreast with the tech support tickets generated for PowerEdge servers, and track their progress from incident to resolution.

Dell EMC OpenManage Enterprise

OpenManage Enterprise is a systems management and monitoring application that provides a comprehensive view of the Dell EMC servers, chassis, storage, and network switches on the enterprise network. With OpenManage Enterprise, a web-based and one-to-many systems management application, you can:

- Discover and manage devices in a data center environment.
- Group and manage devices.
- View hardware inventory and compliance reports.
- Monitor the health of your devices.
- Manage device firmware versions and perform system updates and remote tasks.
- View and manage system alerts and alert policies.

For more information about Dell EMC OpenManage Enterprise, see the documents available at Dell OpenManage Enterprise page Dell.com/OpenManageManuals.

Dell EMC SupportAssist Enterprise

SupportAssist Enterprise automates technical support for your Dell EMC servers, storage, and networking devices. It monitors your devices and proactively detects hardware issues that may occur. When a hardware issue is detected, SupportAssist Enterprise automatically opens a support case with Technical Support and sends you an email notification.

For more information about SupportAssist Enterprise, see the documents available at Serviceability Tools page Dell.com/ServiceabilityTools.

Key features of OpenManage Integration with ServiceNow

- Native ServiceNow application support: OpenManage integration with ServiceNow can be installed and deployed on a ServiceNow instance.
- OpenManage Enterprise integration:
  - CMDB integration:

        - Periodic and on-demand sync of PowerEdge servers and chassis detailed inventory from one or more OpenManage Enterprise instances into a ServiceNow Configuration Management Database (CMDB).
        - Automatic creation of configuration items (CIs) for all the PowerEdge servers and chassis that are imported from one or more OpenManage Enterprise instances into a ServiceNow CMDB.
    - Event and incident management integration:
        - Periodic and on-demand sync of events from one or more OpenManage Enterprise instances into a ServiceNow instance.
        - Automatic mapping of events (critical and warning) and alerts with the CI's in ServiceNow.
        - Automatic creation of incidents for critical and warning alerts.
- SupportAssist Enterprise integration: Import support cases from one or more SupportAssist Enterprise instances for the monitored servers into a ServiceNow instance and automatically create incidents for the corresponding support cases.
- OpenManage Enterprise SupportAssist Plugin integration: Import support cases from one or more SupportAssist plugin instances for the monitored servers into a ServiceNow instance and automatically create incidents for the corresponding support cases.
- The server and chassis inventory information, events, and Dell EMC support cases are fetched by OpenManage Integration by using the REST APIs provided by OpenManage Enterprise and SupportAssist Enterprise applications.

Topics:

- What is new

What is new

This is a defect fix release. For more information, see *Fixes* section in the Release Notes

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Installing OpenManage Integration with ServiceNow

To install OpenManage Integration in a ServiceNow instance, perform the following steps:

- Download the OpenManage Integration installer package from the Dell EMC support site.
- Install the OpenManage Integration by uploading the OpenManage Integration update set.
- Deploy the Connector .jar file on a MID Server for fetching the inventory information, alerts, and Dell EMC support cases from OpenManage Enterprise and SupportAssist Enterprise respectively.
- Configure instances of OpenManage Enterprise and SupportAssist Enterprise in ServiceNow.

To uninstall the previous OpenManage Enterprise with ServiceNow version 1.2.1, see Uninstalling OpenManage Integration with ServiceNow on page 18

To upgrade from OpenManage Enterprise with ServiceNow version 1.1 to 1.2.1 and 1.2 to 1.2.1, see Upgrading to OpenManage Integration with ServiceNow on page 13

Topics:

- Compatibility matrix
- Required user privileges
- Installation prerequisites
- Install and configure MID Servers
- Download OpenManage Integration with ServiceNow
- Scripts for installation, upgrade and uninstallation
- Install OpenManage Integration in ServiceNow by uploading update set into ServiceNow instance
- Deploy OpenManage Integration connector .JAR on MID Server

Compatibility matrix

Table 1. Compatibility matrix

Supported software, operating system, and hardware	Version
ServiceNow releases	Orlando, Paris and Quebec . See https://www.docs.servicenow.com/.
Dell EMC OpenManage Enterprise	3.7 and later
Dell EMC SupportAssist Enterprise	2.0.x and 4.0.x
Browsers	For more information about the supported browsers by ServiceNow, see the ServiceNow documentation at https://www.docs.servicenow.com/.
Operating systems—to deploy and configure a MID server.	• Microsoft Windows Server 2016 • Windows Server 2019 • Red Hat Enterprise Linux 8 • Ubuntu 18
• PowerEdge servers • PowerEdge Chassis • PowerEdge servers in VxRail and XC Series hyper-converged infrastructure (HCI) appliances **NOTE:** An OpenManage Integration with ServiceNow license must be installed on the	For more information about the supported PowerEdge servers managed by using OpenManage Integration with ServiceNow, see the: • *Supported Dell EMC PowerEdge servers* section in the *Dell EMC OpenManage Enterprise Version 3.5 Support Matrix* at Dell.com/OpenManageManuals. • *Supported servers* section in the *SupportAssist Enterprise Support Matrix* at Dell.com/ServiceabilityTools.

Table 1. Compatibility matrix (continued)

Supported software, operating system, and hardware	Version
target PowerEdge Servers for monitoring in ServiceNow.	

Required user privileges

The OpenManage Integration with ServiceNow application installs the following set of user roles in a ServiceNow instance:

- `x_310922_omisnow.OMISNOW Operator` for the OpenManage Integration Operator role.
- `x_310922_omisnow.OMISNOW User` for the OpenManage Integration User role.

Ensure that appropriate roles and privileges are assigned to the ServiceNow users to use the OpenManage Integration with ServiceNow application. If required, additional users can be created in ServiceNow and assign them OpenManage Integration Operator and User roles.

Table 2. Required user privileges

OpenManage Integration with ServiceNow features	ServiceNow Administrator	OpenManage Integration with ServiceNow Operator	OpenManage Integration with ServiceNow User
Upload the OpenManage Integration with ServiceNow update set to ServiceNow	Allowed	Not allowed	Not allowed
Deploy OpenManage Integration with ServiceNow connector .jar on a MID Server	Allowed	Not allowed	Not allowed
Create, Modify, or Delete OpenMange Enterprise connection profiles	Allowed	Allowed	Not allowed
Create, Modify, or Delete SupportAssist Enterprise connection profiles	Allowed	Allowed	Not allowed
Retrieve the server and chassis inventory information from OpenManage Enterprise instances	Allowed	Allowed	Not allowed
Retrieve all the server and chassis events from OpenManage Enterprise	Allowed	Allowed	Not allowed
Retrieve cases from SupportAssist Enterprise	Allowed	Allowed	Not allowed
View the application logs in ServiceNow	Allowed	Not allowed	Not allowed
Schedule the OME inventory collection,	Allowed	Allowed	Not allowed

Table 2. Required user privileges (continued)

OpenManage Integration with ServiceNow features	ServiceNow Administrator	OpenManage Integration with ServiceNow Operator	OpenManage Integration with ServiceNow User
OME Event Collection, Server Health Collection, SAE Plugin Case Collection, SAE Case Collection intervals			
View the alerts and incidents created for the retrieved events from OpenManage Enterprise	Allowed	Allowed	Allowed
Update the alerts and incidents	Allowed	Allowed	Not allowed
Enable or disable alert management rule	Allowed	Not allowed	Not allowed
Enable or disable alert correlation rule	Allowed	Not allowed	Not allowed
Delete OpenManage Integration application from ServiceNow	Allowed	Not allowed	Not allowed
Create or edit alert correlation rules	Allowed	Not allowed	Not allowed
Assign incidents to OME and SAE groups	Allowed	Allowed	Not allowed
Activate and deactivate transform maps	Allowed	Allowed	Not allowed
Configure parallel queues, Devices per basic inventory request, Devices per detailed inventory request	Allowed	Allowed	Not allowed
Acknowledging the OME events once incidents are created	Allowed	Allowed	Not Allowed
To log application logs in work notes	Allowed	Allowed	Not Allowed
To view, configure and delete inbound webservices	Allowed	Not Allowed	Not Allowed
To view, configure and delete staging table	Allowed	Not Allowed	Not Allowed
System Scheduler	Allowed	Not Allowed	Not Allowed
OpenManage Device health sync	Allowed	Allowed	Not Allowed
SupportAssist Plugin case sync	Allowed	Allowed	Not Allowed
Viewing and editing of dashboard	Allowed	Allowed	Allowed (View only)

Installation prerequisites

Ensure the following prerequisites are met before you start with the installation of OpenManage Integration with ServiceNow.

- A supported version of ServiceNow instance is available. For more information about the supported software and hardware, see Compatibility matrix on page 6.
- The MID servers are installed and configured in your enterprise environment.
- Environment variable (JAVA_HOME) should be set where MID server is installed. JAVA_HOME environment variable is required to store the certificate check in the trust store.
- An OpenManage Integration with ServiceNow license must be installed on the target PowerEdge Servers for monitoring in ServiceNow. For more information, see the *License requirements for OpenManage Integration with ServiceNow section* in the *Dell EMC OpenManage Integration with ServiceNow User's Guide*.
- Ensure that you have ServiceNow Administrator privilege to install and configure the OpenManage Integration on the ServiceNow instance.

NOTE: Enabling of event management plugin is not mandatory to upload update set in ServiceNow application.

Install and configure MID Servers

OpenManage Integration with ServiceNow requires Management, Instrumentation and Discovery (MID) servers to be installed and configured in your data center. The MID Servers must be installed on the system that is running on the following operating systems. For more information on MID server supported operating systems and versions, see Compatibility matrix on page 6.

- Windows
- Red Hat Enterprise Linux
- Ubuntu

The MID Servers facilitates communication and exchange of information (device inventory, alerts and open support cases details) between a ServiceNow instance and OpenManage Enterprise and SupportAssist Enterprise applications. It is important that MID servers are able to access the OpenManage Enterprise and SupportAssist Enterprise applications over the data center network.

In case of multiple connection profiles, configure MID servers based on the number of OpenManage Enterprise and SupportAssist Enterprise connection profiles. It is recommended to use one MID server per OpenManage Enterprise profile.

For more information about downloading, installing, and configuring a MID Server in your data center, see the ServiceNow documentation at https://docs.servicenow.com/.

Download OpenManage Integration with ServiceNow

Do keep the Service Tag of your Dell EMC PowerEdge server handy. It is recommended that you use the Service Tag to access all support on the Dell Support Website. This ensures that you download the appropriate version of the software for your platform.

To download the OpenManage Integration with ServiceNow installer package:

1. Go to Dell.com/support.
2. Perform one of the following actions:
   - Enter the Service Tag of your Dell EMC PowerEdge server, and then select **Search**.
   - Select **Browse all products** > **Servers** > **PowerEdge**, and select the appropriate model of your PowerEdge server.
3. On the support page of your server, select **Drivers & downloads**.
4. From the **Category** list, select **Systems Management**.
   The supported version of OpenManage Integration with ServiceNow is displayed.
5. Perform one of the following actions to download the installer package on your file system:
   - Click **Download**.
   - Select the check box to add the software to your download list, and then click **Downloaded Selected Files**.

The downloaded `DELL_EMC_OpenManage_Integration_1.2.1_ServiceNow_<Build#>_A00.tar.gz` file contains an update set (.xml file), a connector .jar file, a readme file, an installation guide, an End User License Agreement (.PDF file), and a `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder contains the scripts for performing certain installation, upgrade, and uninstallation steps. For more information about installing the OpenManage Integration application in a ServiceNow instance, see Installing OpenManage Integration with ServiceNow on page 6.

Scripts for installation, upgrade and uninstallation

This topic provides details and its usage on the scripts used for installation, upgrade and uninstallation

Installation Script

Script used: `installation_permissions.js`

1. Ensure to provide read, create, update, and delete permission to the table **sysauto_script** and **cmdb_ci_outofband_device**
2. Ensure to provide create and update permission to the table **em_alert_management_rule** in case where event management plugin is installed.
3. Ensure to provide read permission to the table **sysevent**
4. Ensure to provide create, delete and update permissions to **sys_report_color** and **pa_chart_color_schemes** tables.
5. Ensure to activate the identifier entry with **ip_address** attributes under criterion attribute for the hardware rule cmdb identifier.

Background script

Background script is performed when user activates event management plugin later to use ServiceNow Out Of Box solution for event management. Following are the steps to run background script.

Script used: `BackgroundScriptToCreateAlertManagementRules.js`

1. Ensure to provide create and update access to the table **em_alert_management_rule**
2. Create alert management rules **Create Incident on Critical Alerts** , **Create Incident on Warning Alerts**

Upgrade Script

Scripts used: `upgrade_permission_1.0-1.2.1.js` ,`upgrade_permission_1.1-1.2.1.js`, `upgrade_permission_1.2-1.2.1.js`, `upgrade_permission_1.0_afterinstall_1.2.1_updateset.js`, `upgrade_permission_1.1_afterinstall_1.2.1_updateset.js`, `upgrade_permission_1.2_afterinstall_1.2.1_updateset.js`, `Upgrade_records_1.0-1.2.1.js`, `Upgrade_records_1.1-1.2.1.js`, `Upgrade_records_1.2-1.2.1.js`

1. These scripts help in upgrading to the next available version of ServiceNow along with new updates.
2. `upgrade_permissions_1.0-1.2.1.js` provides read, create, update, delete permissions to the table for the upgrade from 1.1 to 1.2.1
3. `upgrade_permissions_1.1-1.2.1.js` provides read, create, update, delete permissions to the table for the upgrade from 1.1 to 1.2.1
4. `upgrade_permissions_1.2-1.2.1.js` provides read, create, update, delete permissions to the table for the upgrade from 1.1 to 1.2.1
5. `upgrade_permission_1.0_afterinstall_1.2.1_updateset.js` is used after the installation of 1.2.1 application's updateset.
6. `upgrade_records_1.0-1.2.1.js` helps migrate all the server, connection profile and properties records from 1.0 version to the 1.2.1 version.
7. `upgrade_records_1.1-1.2.1.js` helps migrate all the server, connection profile and properties records from 1.1 version to the 1.2.1 version.
8. `upgrade_records_1.2-1.2.1.js` helps migrate all the server, connection profile and properties records from 1.2 version to the 1.2.1 version.

Uninstallation script

Scripts used: `uninstall_deletePermissionScript.js` `uninstall_deleteAllrecords.js` `uninstall_DeleteRecords.js` `uninstall_backout.js` `stop_jobs.js` `uninstall_SelectAction.js`

1. Before uninstalling the serviceNow, ensure to delete jar files, CI's, assignment rules, log files and the related records. Later stop the scheduled jobs and delete the Update set using `uninstall_backout.js` script.

2. `uninstall_deletePermissionScript.js` gives permission to delete the records from the table.
3. `uninstall_deleteallrecords.js` and `uninstall_DeleteRecords.js` deletes all the records from the table.
4. `stop_jobs.js` helps to de-activate the scheduled jobs.
5. `uninstall_backout.js` deletes the system update xml from the ServiceNow instance.
6. `uninstall_SelectAction.js`helps the user to select **keep current as action** when user faces issue while selecting an option for multiple back out problems.

Install OpenManage Integration in ServiceNow by uploading update set into ServiceNow instance

Before you upload the update set to the ServiceNow instance, ensure that you have downloaded and extracted the OpenManage Integration with ServiceNow installer file from the Dell EMC Support Site. For more information, see Download OpenManage Integration with ServiceNow on page 9

To upload the OpenManage Integration with ServiceNow update set into the ServiceNow instance:

1. You can run the script `installation_permissions.js` to enable required permission to the tables. To enable permission using the script, do the following:
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `installation_permissions.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background**.
   d. In the **Run script** box, paste the `installation_permissions.js` content, select the scope as **Global**, and then click **Run script**.
2. In the ServiceNow instance, enter `System Update Sets` in the navigation filter, and then select **Retrieved Update Sets**.
   The **Retrieved Update Sets** page is displayed.
3. Under **Related Links**, click **Import Update Set from XML**.
4. On the **Import XML** page, click **Choose File** and go to the file system where you have extracted the installer files of OpenManage Integration with ServiceNow, and then select the `Dell_EMC_OpenManage_Integration_1_2_1_ServiceNow_UpdateSet.xml` update set.
5. Click **Upload**.
   Upon successful completion of the upload, the update set is listed on the **Retrieved Update Sets** page and **Loaded** is displayed under the state column.
6. Under the **Name** column, click **Dell EMC OpenManage Integration** update set, and then in the upper right corner, click **Preview Update Set**.
   The progress is displayed in the **Update Set Preview** dialog box. After the preview of the update set completes successfully, close the dialog box and the state will be updated to **Previewed**.
7. To commit the update set changes to the ServiceNow instance, in the upper right corner, click **Commit Update Set**.
   The progress is displayed in the **Update Set Commit** dialog box. After successful completion of committing the update set, close the dialog box and the state field of the update set is updated to **Committed**.

The uploaded update set is listed under **System Update Sets** > **Retrieved Update Sets**. For more information about update set transfers, see the ServiceNow documentation at https://www.docs.servicenow.com/.

Deploy OpenManage Integration connector .JAR on MID Server

To enable communication between OpenManage Enterprise and ServiceNow and SupportAssist Enterprise and ServiceNow, you must deploy a connector .jar on the Management, Instrumentation, and Discovery (MID) Server.

Before you deploy the connector .jar on the MID Server, ensure that you have:

- Change the ServiceNow application scope to Dell EMC OpenManage Integration.
- A ServiceNow user with necessary user privileges. See Required user privileges on page 7.
- Installed and configured the MID Server in your environment.

- Downloaded and extracted the OpenManage Integration with ServiceNow installer file from the Dell EMC Support Site. For more information, see Download OpenManage Integration with ServiceNow on page 9.

To deploy the OpenManage Integration connector .jar file:

1. To import connector jar from ServiceNow, perform the following:
   On the application console, click on the **settings icon**> **Developer**> **Application**. Change the scope to **Dell EMC OpenManage Integration**
2. In the ServiceNow instance, enter `MID Server` in the navigation filter, and then select the **JAR Files** module.
3. Click **New**.
4. In the upper right corner, click **Manage Attachments** > **Choose file** and go to the file system where you have extracted the installer files of OpenManage Integration with ServiceNow, and then upload the `Dell_EMC_OpenManage_Integration_1_2_1_ServiceNow_Connector.jar` file.
   After the attachment is successfully uploaded, close the **Attachements** dialog box.
5. Enter a name for the imported connector .jar file, and then click **Submit**.
6. Enter `MID Server` in the navigation filter, and then select the **Servers** module.
7. Under the **Name** column, select the MID Server, and then select **Restart MID** under **Actions on selected rows**.
   The status of the MID Server changes from **Down** to **Up** after it is successfully restarted.

The Dell EMC connector .jar file is now deployed on the MID Server.

The installation of OpenManage Integration with ServiceNow is complete. To retrieve the devices, events, and support cases from OpenManage Enterprise and SupportAssist Enterprise, add connection profiles in the OpenManage Integration. For more information, see the *Dell EMC OpenManage Integration with ServiceNow User's Guide* on the support site.

3

Upgrading to OpenManage Integration with ServiceNow

This chapter provides user information on upgrading OpenManage Integration with ServiceNow.

Topics:

- Upgrading OpenManage Integration from version 1.0 to 1.2.1
- Upgrading OpenManage Integration from version 1.1 to 1.2.1
- Upgrading OpenManage Integration from version 1.2 to 1.2.1

Upgrading OpenManage Integration from version 1.0 to 1.2.1

These steps provides information to the user on how to upgrade ServiceNow instance from 1.0 to 1.2.1

- A ServiceNow user with necessary user privileges. See Required user privileges on page 7.

For more information about changing the application scope in a ServiceNow instance, see the ServiceNow documentation at https://docs.servicenow.com/

To upgrade OpenManage Integration with ServiceNow (OMISNOW), perform the following steps:

1. Run the script `stop_jobs.js` to stop the scheduled jobs for device sync and event sync, and stop the automatic creation of alerts based on the alert rules.
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `stop_jobs.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, paste the `stop_jobs.js` content, select the scope as **Global**, and then click **Run script**.
2. Copy the content of `upgrade_permissions_1.0-1.2.1.js` file, execute in the background script and select the scope as **Global**
3. In the ServiceNow instance, enter `System Update Sets` in the navigation filter, and then select **Retrieved Update Sets**.
   The **Retrieved Update Sets** page is displayed.
4. Under **Related Links**, click **Import Update Set from XML**.
5. On the **Import XML** page, click **Choose File** and go to the file system where you have extracted the installer files of OpenManage Integration version 1.2 with ServiceNow, and then select the `Dell_EMC_OpenManage_Integration_1_2_1_ServiceNow_UpdateSet.xml` update set.
6. Click **Upload**.
   Upon successful completion of the upload, the update set is listed on the **Retrieved Update Sets** page and **Loaded** is displayed under the state column.
7. Under the **Name** column, click **Dell EMC OpenManage Integration update set**, and then in the upper right corner, click **Preview Update Set**.
   The progress is displayed in the **Update Set Preview** dialog box. If there are any errors during the preview of the update set, close the errors dialog box. Under **Related links**, select all the errors and under **Action on Selected Rows**, click **Accept Remote update set**.

   After the preview of the update set completes successfully, close the dialog box and the state will be updated to **Previewed**.
8. To commit the update set changes to the ServiceNow instance, in the upper right corner, click **Commit Update Set**.
   The progress is displayed in the **Update Set Commit** dialog box. After successful completion of committing the update set, close the dialog box and the state field of the update set is updated to **Committed**.

The uploaded update set is listed under **System Update Sets** > **Retrieved Update Sets**. For more information about update set transfers, see the ServiceNow documentation at https://www.docs.servicenow.com/.

9. You can either manually or run the script `upgrade_permissions_1.0_afterinstall_1.2.1_updateset.js` to enable required permission to the tables. To enable permission using the script, do the following:
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `upgrade_permissions_1.0_afterinstall_1.2.1_updateset` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background**.
   d. In the **Run script** box, paste the `upgrade_permissions_1.0_afterinstall_1.2.1_updateset` content, select the scope as **Global**, and then click **Run script**.
10. Run the script `upgrade_records_1.0-1.2.1.js` to migrate the servers, events, OpenManage Enterprise connection profiles, SupportAssist connection profiles, and OpenManage Enterprise with ServiceNow properties.
    a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
    b. Open and copy the `upgrade_records_1.0-1.2.1.js` content.
    c. In the navigation filter, select **System Definition** > **Scripts - Background.**
    d. In the **Run script** box, paste the `upgrade_records_1.0-1.2.1.js` content, select the scope as **Global**, and then click **Run script**.
11. To view the application version, Navigate to **System Update Sets** > **Local Update Sets**> click on the menu icon(three vertical bars) on the **Application**>**Configure**>**List Layout**
    On the layout window, select Application and click on Expand selected reference field and select **version filed** and click **Save**.
12. Back out the update set for OMISNOW 1.0.

    NOTE: The application scope of the ServiceNow must be changed to Dell EMC OpenManage Enterprise application scope to back out the update set.

    a. In the navigation filter, select **System Update Sets** > **Local Update Sets**.
    b. Click the **Dell EMC OpenManage Integration** record with the version number **1.0.0** and in the **Update Set** page, click **Back out**.

       NOTE: By default, the **Update Sets** list view does not display the **Version** column. To view the **Version** column, click the three horizontal bar icon next to the **Application** column header, and then select **Configure** > **List Layout**. On the **Configuring Update Sets List** page, in the **Available** section, expand **Application**, and then select and move **Version** to the **Selected** section.
    c. On the **Back Out Update Set** dialog box, click **Proceed with Back Out**.

    NOTE: If the backout operation fails, click **Close**. Select all the backout problems and click **Decide to keep Current**. Click **Back Out** again to delete the OpenManage Integration from ServiceNow.

13. Delete the update set for OMISNOW 1.0.
    a. In the navigation filter, select **System Update Sets** > **Retrieved Update Sets**.
    b. On the **Retrieved Update Sets** page, select **Dell EMC OpenManage Integration** with the version **1.0.0**, and from the **Action and selected rows** list, click **Delete**
    c. On the **Confirmation** dialog box, review the warning message, and click **Delete**.
14. Delete the connector .jar file for OMISNOW 1.0.
    a. In the navigation filter, select **MID Server** > **JAR Files**.
    b. On the **MID Server JAR Files** page, delete the JAR file that is used.
15. Import the Dell EMC connecter .jar file for OMISNOW 1.2.1 in Dell EMC OpenManage Integration application scope, and then restart the MID server. To import the .jar file, see Deploy OpenManage Integration connector .JAR on MID Server on page 11.

    NOTE: Refresh the application picker and select the application scope as Dell EMC OpenManage Integration.

16. Once upgrade is successful, refresh the browser.
17. To monitor the devices, do the test connection, submit connection profile, run the OpenManage Enterprise inventory sync and SupportAssist Enterprise case sync.

Upgrading OpenManage Integration from version 1.1 to 1.2.1

The below information provides steps to upgrade from 1.1 version to 1.2.1 version of OpenManage Integration with ServiceNow

- A ServiceNow user with necessary user privileges. See Required user privileges on page 7.

For more information about changing the application scope in a ServiceNow instance, see the ServiceNow documentation at https://docs.servicenow.com/

1. Run the script `stop_jobs.js` to stop the scheduled jobs for device sync and event sync, and stop the automatic creation of alerts based on the alert rules.
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `stop_jobs.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, paste the `stop_jobs.js` content, select the scope as **Global**, and then click **Run script**.
2. In the ServiceNow instance, enter `System Update Sets` in the navigation filter, and then select **Retrieved Update Sets**.
   The **Retrieved Update Sets** page is displayed.
3. Under **Related Links**, click **Import Update Set from XML**.
4. On the **Import XML** page, click **Choose File** and go to the file system where you have extracted the installer files of OpenManage Integration version 1.2.1 with ServiceNow, and then select the `Dell_EMC_OpenManage_Integration_1_2_1_ServiceNow_UpdateSet.xml` update set.
5. Click **Upload**.
   Upon successful completion of the upload, the update set is listed on the **Retrieved Update Sets** page and select the application which has **Loaded** status under the state column.
6. Under the **Name** column, click **Dell EMC OpenManage Integration update set**, and then in the upper right corner, click **Preview Update Set**.
   The progress is displayed in the **Update Set Preview** dialog box. If there are any errors during the preview of the update set, close the errors dialog box. Under **Related links**, select all the errors and under **Action on Selected Rows**, click **Accept remote update**.

   After the preview of the update set completes successfully, close the dialog box and the state will be updated to **Previewed**.
7. To commit the update set changes to the ServiceNow instance, in the upper right corner, click **Commit Update Set**.
   The progress is displayed in the **Update Set Commit** dialog box. After successful completion of committing the update set, close the dialog box and the state field of the update set is updated to **Committed**.

   The uploaded update set is listed under **System Update Sets** > **Retrieved Update Sets**. For more information about update set transfers, see the ServiceNow documentation at https://www.docs.servicenow.com/.

To change the application properties during the upgrade, perform the following steps:

When the ServiceNow instance is upgraded from 1.1 to 1.2.1, the application properties remains as **Default**. To change the properties, perform the following steps.

a. Navigate to Properties table in 1.2.1 updateset ServiceNow instance.
b. Right click on the menu bar of **Name** > **Export** > **XML**.
c. Click **Download** from the display window to save the file locally in the computer.
d. Navigate to the properties table and right click on the menu bar of **Name** > select **Import XML**.

NOTE: XML file should be imported only when the updateset of Service 1.2.1 instance is loaded and committed. Ensure to provide `upgrade_permissions_1.1-1.2.1.js` before importing the properties files

NOTE: Properties file can be imported only when there is a change in the configuration of the properties file of 1.1 ServiceNow updateset instance.

e. Select the location of the saved XML file and click **Upload**.
f. Configuration file of the properties is updated successfully.

8. You can either manually or run the script `upgrade_permissions_1.1-1.2.1.js` to enable required permission to the tables. To enable permission using the script, do the following:

a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
b. Open and copy the `upgrade_permissions_1.1-1.2.1.js` content.
c. In the navigation filter, select **System Definition** > **Scripts - Background**.
d. In the **Run script** box, paste the `upgrade_permissions_1.1-1.2.1.js` content, select the scope as **Global**, and then click **Run script**.

9. Run the script `upgrade_records_1.1-1.2.1.js` to migrate the servers, events, OpenManage Enterprise connection profiles, SupportAssist connection profiles, and OpenManage Enterprise with ServiceNow properties.
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `upgrade_records_1.1-1.2.1.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, paste the `upgrade_records_1.1-1.2.1.js` content, select the scope as **Application/ x_310922**, and then click **Run script**.
10. Delete the connector .jar file for OMISNOW 1.1.
    a. In the navigation filter, select **MID Server** > **JAR Files**.
    b. On the **MID Server JAR Files** page, delete the JAR file that is used.
11. Import the Dell EMC connecter .jar file for OMISNOW 1.2.1 in Dell EMC OpenManage Integration application scope, and then restart the MID server. To import the .jar file, see Deploy OpenManage Integration connector .JAR on MID Server on page 11.
12. To monitor the devices, do the test connection, submit connection profile, run the OpenManage Enterprise inventory sync and SupportAssist Enterprise case sync.

Upgrading OpenManage Integration from version 1.2 to 1.2.1

The below information provides steps to upgrade from 1.2 version to 1.2.1 version of OpenManage Integration with ServiceNow

- A ServiceNow user with necessary user privileges. See Required user privileges on page 7.

For more information about changing the application scope in a ServiceNow instance, see the ServiceNow documentation at https://docs.servicenow.com/

1. Run the script `stop_jobs.js` to stop the scheduled jobs for device sync and event sync, and stop the automatic creation of alerts based on the alert rules.
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `stop_jobs.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, paste the `stop_jobs.js` content, select the scope as **Global**, and then click **Run script**.
2. In the ServiceNow instance, enter `System Update Sets` in the navigation filter, and then select **Retrieved Update Sets**.
   The **Retrieved Update Sets** page is displayed.
3. Under **Related Links**, click **Import Update Set from XML**.
4. On the **Import XML** page, click **Choose File** and go to the file system where you have extracted the installer files of OpenManage Integration version 1.2.1 with ServiceNow, and then select the `Dell_EMC_OpenManage_Integration_1_2_1_ServiceNow_UpdateSet.xml` update set.
5. Click **Upload**.
   Upon successful completion of the upload, the update set is listed on the **Retrieved Update Sets** page and select the application which has **Loaded** status under the state column.
6. Under the **Name** column, click **Dell EMC OpenManage Integration update set**, and then in the upper right corner, click **Preview Update Set**.
   The progress is displayed in the **Update Set Preview** dialog box. If there are any errors during the preview of the update set, close the errors dialog box. Under **Related links**, select all the errors and under **Action on Selected Rows**, click **Accept remote update**.

   After the preview of the update set completes successfully, close the dialog box and the state will be updated to **Previewed**.

7. To commit the update set changes to the ServiceNow instance, in the upper right corner, click **Commit Update Set**. The progress is displayed in the **Update Set Commit** dialog box. After successful completion of committing the update set, close the dialog box and the state field of the update set is updated to **Committed**.

   The uploaded update set is listed under **System Update Sets** > **Retrieved Update Sets**. For more information about update set transfers, see the ServiceNow documentation at https://www.docs.servicenow.com/.

To change the application properties during the upgrade, perform the following steps:

When the ServiceNow instance is upgraded from 1.2 to 1.2.1, the application properties remains as **Default**. To change the properties, perform the following steps.

a. Navigate to Properties table in 1.2.1 updateset ServiceNow instance.
b. Right click on the menu bar of **Name** > **Export** > **XML**.
c. Click **Download** from the display window to save the file locally in the computer.
d. Navigate to the properties table and right click on the menu bar of **Name** > select **Import XML**.

   NOTE: XML file should be imported only when the updateset of Service 1.2.1 instance is loaded and committed. Ensure to provide `upgrade_permissions_1.2-1.2.1.js` before importing the properties files

   NOTE: Properties file can be imported only when there is a change in the configuration of the properties file of 1.2 ServiceNow updateset instance.

e. Select the location of the saved XML file and click **Upload**.
f. Configuration file of the properties is updated successfully.

8. You can either manually or run the script `upgrade_permissions_1.2-1.2.1.js` to enable required permission to the tables. To enable permission using the script, do the following:
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `upgrade_permissions_1.2-1.2.1.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background**.
   d. In the **Run script** box, paste the `upgrade_permissions_1.2-1.2.1.js` content, select the scope as **Global**, and then click **Run script**.
9. Run the script `upgrade_records_1.2-1.2.1.js` to migrate the servers, events, OpenManage Enterprise connection profiles, SupportAssist connection profiles, and OpenManage Enterprise with ServiceNow properties.
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `upgrade_records_1.2-1.2.1.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, paste the `upgrade_records_1.2-1.2.1.js` content, select the scope as **Application/ x_310922**, and then click **Run script**.
10. Delete the connector .jar file for OMISNOW 1.2
    a. In the navigation filter, select **MID Server** > **JAR Files**.
    b. On the **MID Server JAR Files** page, delete the JAR file that is used.
11. Import the Dell EMC connecter .jar file for OMISNOW 1.2.1 in Dell EMC OpenManage Integration application scope, and then restart the MID server. To import the .jar file, see Deploy OpenManage Integration connector .JAR on MID Server on page 11.
12. To monitor the devices, do the test connection, submit connection profile, run the OpenManage Enterprise inventory sync and SupportAssist Enterprise case sync.

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Uninstalling OpenManage Integration with ServiceNow

A ServiceNow user with necessary user privileges. See Required user privileges on page 7.

The application scope of the ServiceNow must be changed to:

- (Optional) Global application scope to delete OpenManage Integration records such as events, alerts, and incidents.
- Dell EMC OpenManage Enterprise application scope to delete the OpenManage Integration.

For more information about changing the application scope in a ServiceNow instance, see the ServiceNow documentation at https://www.docs.servicenow.com/

To uninstall OpenManage Integration with ServiceNow (OMISNOW), perform the following steps:

1. In the navigation filter, select **System Definition** > **Scripts - Background**
2. In the **Run script** box, paste the `stop_jobs.js` content, select the scope as **Global**, and then click **Run script**
3. You can either manually or run the script `uninstall_deletePermissionScript.js` to enable required permission to the tables. To enable delete permission using the script, do the following:
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `uninstall_deletePermissionScript.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background**.
   d. In the **Run script** box, paste the `uninstall_deletePermissionScript.js` content, select the scope as **Global**, and then click **Run script**.

   NOTE: To provide delete permissions to the tables, run the script `uninstall_deletePermissionScript.js` in **Global** scope.

4. Run the script `uninstall_DeleteAllRecords.js`
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `uninstall_DeleteAllRecords.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, copy the `uninstall_DeleteAllRecords.js` content, and run in **Global** scope.

   NOTE: To keep track of deleted records, view the status in application logs.

   Wait for the message that confirms that there are no records left to be deleted before you proceed with the next step on the OMISNOW application logs.
5. Run the script `uninstall_deleterecords.js`
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `uninstall_deleterecords.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, paste the `uninstall_deleteRecords.js` content, select the scope as **Global**, and then click **Run script**.
6. Back out the update set.

   NOTE: The application scope of the ServiceNow must be changed to Dell EMC OpenManage Enterprise application scope to back out the update set.

   a. In the navigation filter, select **System Update Sets** > **Local Update Sets**.
   b. Click the **Dell EMC OpenManage Integration** record and in the **Update Set** page, click **Back out**.
   c. On the **Back Out Update Set** dialog box, click **Proceed with Back Out**.

NOTE: If the backout operation fails, select all the backout problems and click **Decide to keep current** or run `uninstall_SelectAction.js` script with scope set as **Global** . Click **Back Out** again to delete the OpenManage Integration from ServiceNow.

7. Delete the **Back Out application**
   To delete Back out application, perform the following steps:
   a. In the Navigation filter, type **Retrieved Update Set** and delete the **Back Out** application
8. Run the script `uninstall_backout.js` to delete the backed out application.
   a. Go to the file system where you have extracted the `DELL_EMC_OpenManage_Integration_ServiceNow_Background_Scripts` folder that contains the scripts.
   b. Open and copy the `uninstall_backout.js` content.
   c. In the navigation filter, select **System Definition** > **Scripts - Background.**
   d. In the **Run script** box, copy the `uninstall_backout.js` content, select the scope as **Global**, and then click **Run script**.

NOTE: When you uninstall OpenManage Integration with ServiceNow, the Preview Update Set and Commit Update Set operation takes longer duration than the new installation.

NOTE: Ensure to refresh the browser once the application is successfully uninstalled.

The OpenManage Enterprise connection profile, SupportAssist Enterprise connection profile, and the server details retrieved from OpenManage Enterprise are deleted from the ServiceNow instance.

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Additional resources

Table 3. Additional resources

Document	Description	Availability
Dell EMC OpenManage Integration with ServiceNow User's Guide	Provides information about using and troubleshooting OpenManage Integration with ServiceNow.	1. Go to Dell.com/OpenManageManuals. 2. Click **Dell EMC OpenManage Integration with ServiceNow** and select the required application version. 3. Click **Manuals & documents** to access these documents.
Dell EMC OpenManage Integration with ServiceNow Release Notes	Provides information about new features, known issues, and workarounds in OpenManage Integration with ServiceNow.	
Dell EMC OpenManage Enterprise User's Guide	Provides information about installing and using OpenManage Enterprise.	1. Go to Dell.com/OpenManageManuals. 2. Click **Dell EMC OpenManage Enterprise** and select the required application version. 3. Click **Manuals & documents** to access these documents.
Dell EMC OpenManage Enterprise and OpenManage Enterprise - Modular Edition RESTful API Guide	Provides information about integrating OpenManage Enterprise by using Representational State Transfer (REST) APIs and also includes examples of using REST APIs to perform common tasks.	
Dell EMC SupportAssist Enterprise User's Guide	Provides information about installing, configuring, using, and troubleshooting SupportAssist Enterprise.	Dell.com/ServiceabilityTools
ServiceNow documentation	For more information about using the ServiceNow application.	https://www.docs.servicenow.com/

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Accessing support content from the Dell EMC support site

Access supporting content related to an array of systems management tools using direct links, going to the Dell EMC support site, or using a search engine.

- Direct links:
  - For Dell EMC Enterprise Systems Management and Dell EMC Remote Enterprise Systems Management—https://www.dell.com/esmmanuals
  - For Dell EMC Virtualization Solutions—www.dell.com/virtualizationsolutions
  - For Dell EMC OpenManage—https://www.dell.com/openmanagemanuals
  - For iDRAC—https://www.dell.com/idracmanuals
  - For Dell EMC OpenManage Connections Enterprise Systems Management—https://www.dell.com/OMConnectionsEnterpriseSystemsManagement
  - For Dell EMC Serviceability Tools—https://www.dell.com/serviceabilitytools
- Dell EMC support site:
  1. Go to https://www.dell.com/support.
  2. Click **Browse all products**.
  3. From the **All products** page, click **Software**, and then click the required link.
  4. 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.

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Contacting Dell EMC

Dell EMC 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.

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

To contact Dell EMC for sales, technical support, or customer service issues:

1. Go to Dell.com/support.
2. Select preferred country or region from the list at the bottom right of the page.
3. Click **Contact Us** and select the appropriate support link.