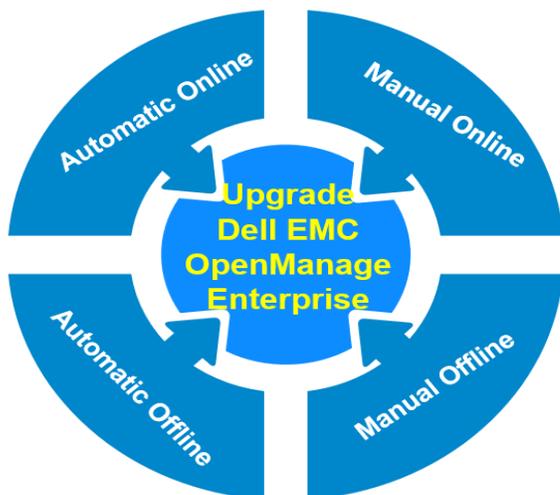


# Upgrade the Dell EMC OpenManage Enterprise appliance version

This Dell EMC technical white paper briefly discusses about the Online and Offline upgrade options to upgrade your Dell EMC OpenManage Enterprise appliance version.



## Abstract

Keeping your business-critical operations and IT infrastructure is key to providing seamless services. Updating your servers with the latest available Dell Update Packages enables you in this aspect. Dell EMC OpenManage Enterprise has enhanced features in monitoring and managing your services—this technical white paper provides step-step procedure about using the Online and Offline repositories to get notification about the new available updates, and then upgrading the OpenManage Enterprise appliance version. Where available, links to videos are also provided to enable you to view the action line and reproduce them effectively.

January 2019

## Revisions

Date	Description
January 2019	Initial release

## Acknowledgements

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## Executive summary

This technical white paper describes the process of upgrading the OpenManage Enterprise. Updating your servers with the latest available Dell Update Packages enables you in this aspect. Dell EMC OpenManage Enterprise has enhanced features in monitoring and managing your services—this technical white paper provides step-step procedure about using the Online and Offline repositories features to get notification about the new available updates, and then upgrading the OpenManage Enterprise appliance. Where available, links to videos are also provided to enable you to view the action line and reproduce them effectively.

OpenManage Enterprise is an easy-to-install, simple-to-use, one-to-many systems management console that requires minimal training and cost-effectively facilitates comprehensive, unified lifecycle management for Dell EMC PowerEdge Modular Infrastructure, rack and tower servers. OpenManage Enterprise also provides end-to-end infrastructure monitoring capabilities for Dell EMC storage and networking devices, and third-party hardware.

### 1.1 Key features of OpenManage Enterprise

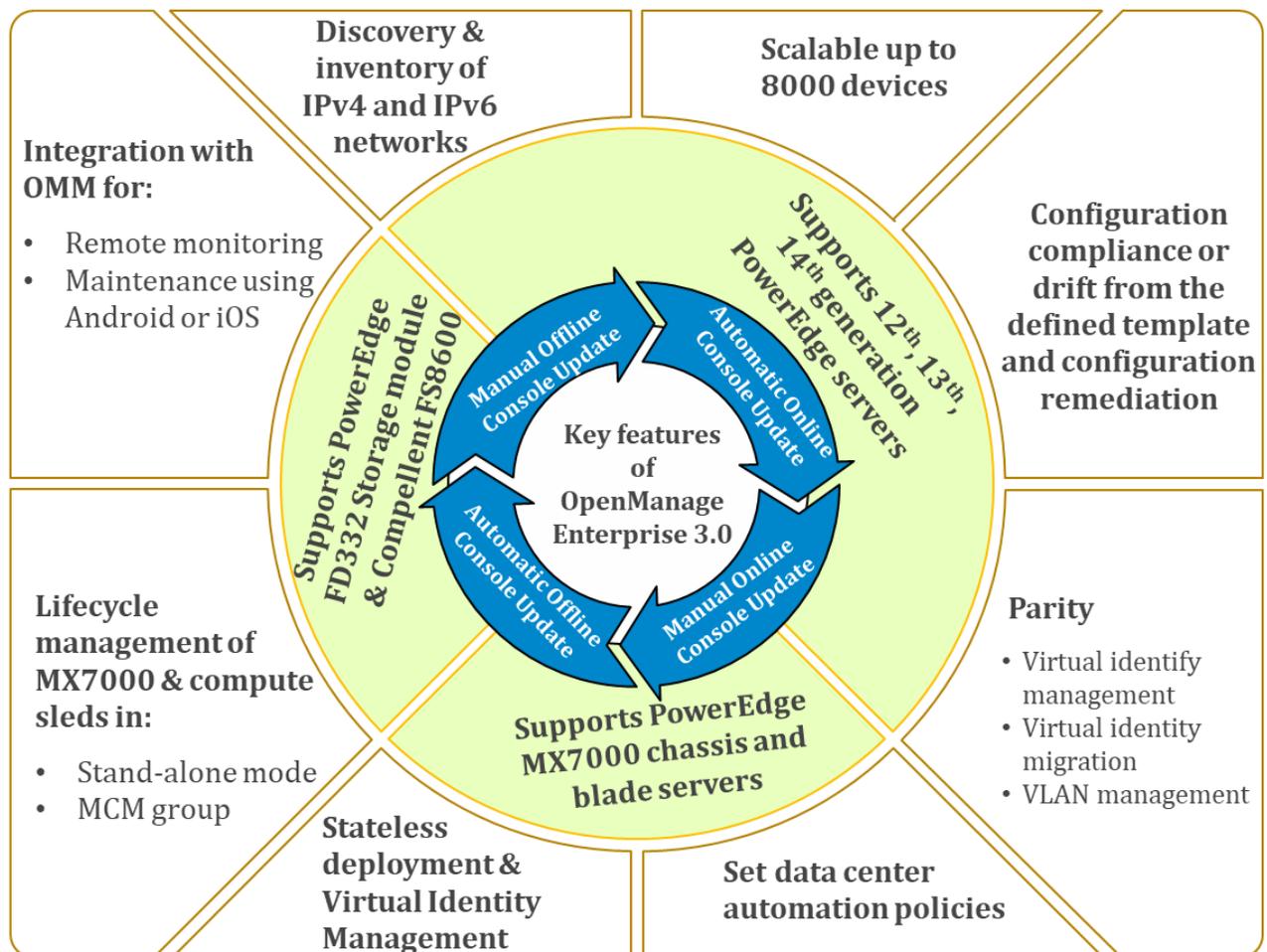


Figure 1 Key features of Dell EMC OpenManage Enterprise

It is recommended that you to upgrade your OpenManage Enterprise to its latest version so that you can fully utilize the following new features and enhancements:

- Enhanced scalability to support a max of 8,000 devices for larger Enterprise requirements.
- Discovery and inventory on IPV4 and IPV6 networks for up to 8,000 devices
- Unified support for multi-generational PowerEdge tower, rack, blades, and chassis from a single unified console with added support for the following new devices:
  - Latest 14th generation PowerEdge servers including the new PowerEdge MX7000 chassis and blade servers.
  - PowerEdge FD332 storage module.
  - Dell Compellent FS8600 storage.
- Full lifecycle management of the MX7000 chassis and contained compute sleds in either standalone mode or as a lead-chassis in a multi-chassis management (MCM) group.
- Enablement of "stateless deployments and virtual Identity management" to create a server environment that is both dynamic and flexible.
- Full parity with the following OpenManage Essentials v2.4 features:
  - Virtual identity management
  - Virtual identity migration
  - VLAN management
- Enablement of "Configuration Remediation" to assist in maintaining data center compliance to configuration standards upon detection of any drift/changes against a defined template.
- Enhanced data center automation policies based upon defined alert-policies, alert reception and processing from third party devices.
- Enablement of custom-guided template editing of deployment templates to assist in eliminating human errors. That is, the ability to edit the attributes of a deployment template by using:
  - Guided View (BIOS, boot sequence, and so on)
  - Advanced View (granular control of individual tokens)
    - Integration with the Dell EMC OpenManage Mobile (OMM) application for remote data center monitoring and maintenance using an Android or iOS mobile handheld device.

## 1.2 Before you upgrade the OpenManage Enterprise appliance

By clicking **OpenManage Enterprise** → **Application Settings** → **Console Update**, you can:

- View the current version of your OpenManage Enterprise
- Check if any updated version is available
- Upgrade the OpenManage Enterprise version.

A checklist you can follow for pre- and post-upgrade tasks is given in [Process map for checking and updating the OpenManage Enterprise version](#).

- Allocate at least an hour for the upgrade process. Allocate additional time if the upgrade must be downloaded by using a slower network connection.
- Make sure no device configuration tasks or deployment tasks are running or are scheduled to run during the planned downtime.
- Notify other console users of the impending scheduled upgrade.
- Take a VM snapshot of the console as a backup in case something unexpected occurs. (Allocate additional downtime for this, if necessary).

## 2 Upgrade the OpenManage Enterprise appliance

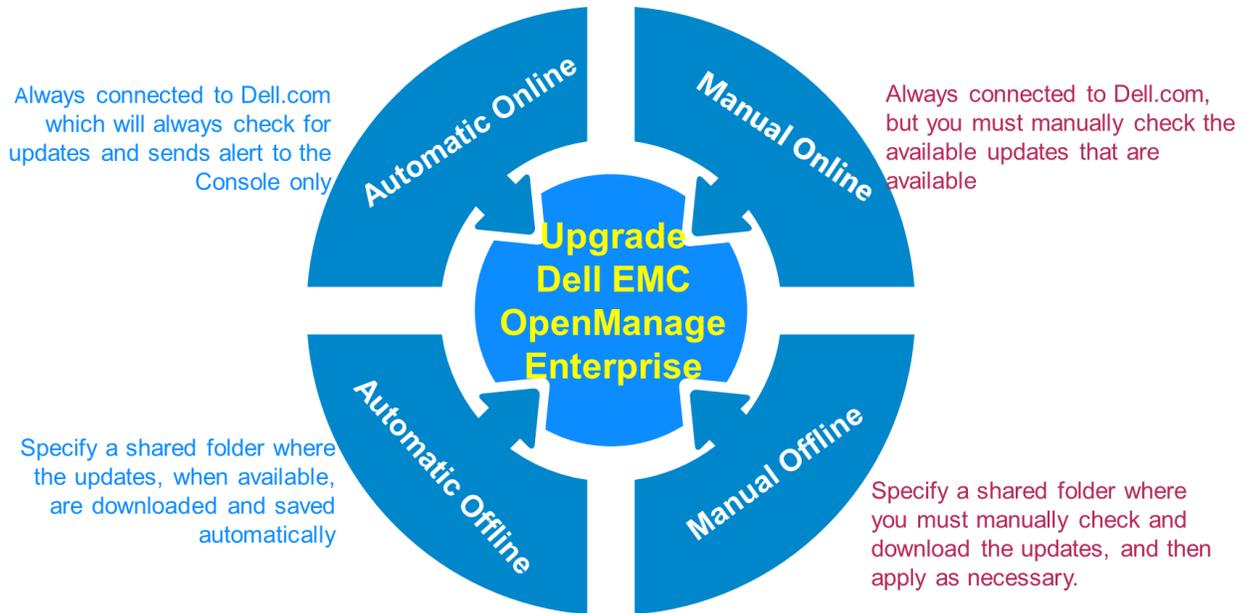


Figure 2 The Online and Offline repository options for updating OpenManage Enterprise

### 2.1 Upgrade OpenManage Enterprise by using Online repository information

By using the Online Console Update feature, you can automatically check for any available console upgrades, and then trigger job to upgrade the version.

---

**Note**— You cannot upgrade the OpenManage Enterprise appliance version when the proxy settings are enabled.

**Workaround**—If you have configured a proxy:

- 1) Create a shared folder that can be accessed without proxy from OpenManage Enterprise, and then download the update file into the folder.
  - 2) Remove the proxy setting during OpenManage Enterprise console upgrade.
- 

#### 2.1.1 Automatically upgrade OpenManage Enterprise by using Online repository information

When set in the Online-Automatic mode, OpenManage Enterprise automatically checks for available upgrades on every Monday. For a complete procedure, see [Step-by-step procedure to upgrade OpenManage Enterprise by using the Automatic Online feature](#).

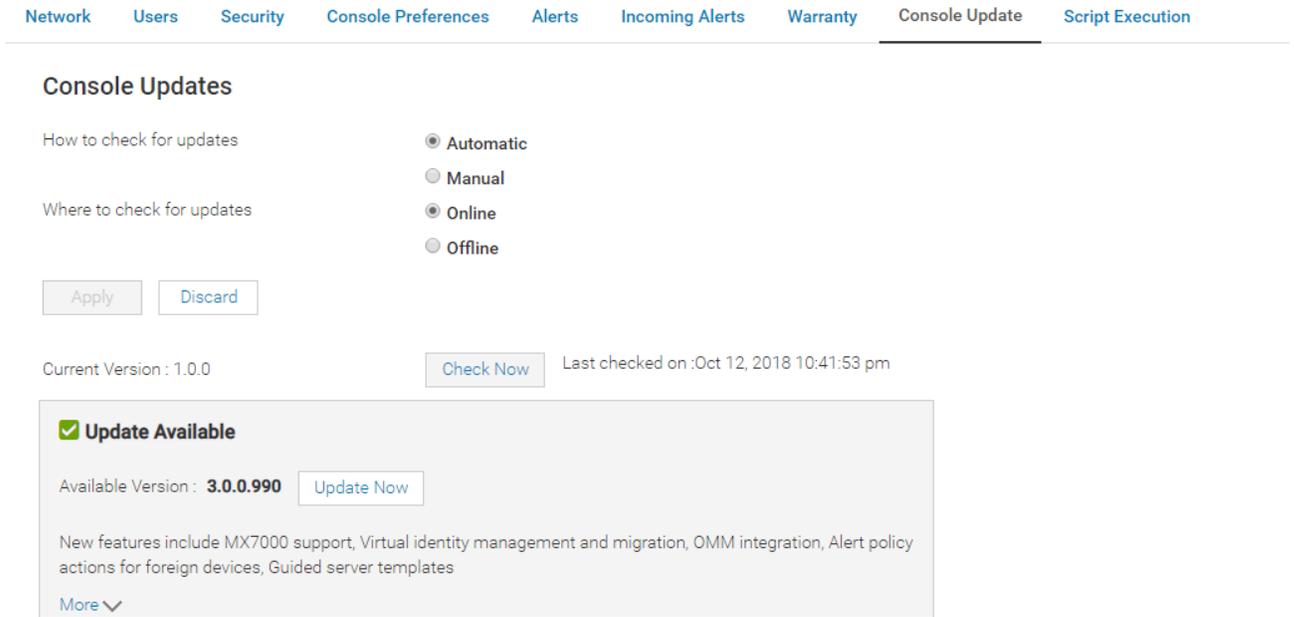


Figure 3 Select Automatic upgrade of OpenManage Enterprise by using Online information

## 2.1.2 Manually upgrade OpenManage Enterprise by using Online information

When set in the Online-Manual mode, OpenManage Enterprise checks for available upgrades only when manually requested by the user.

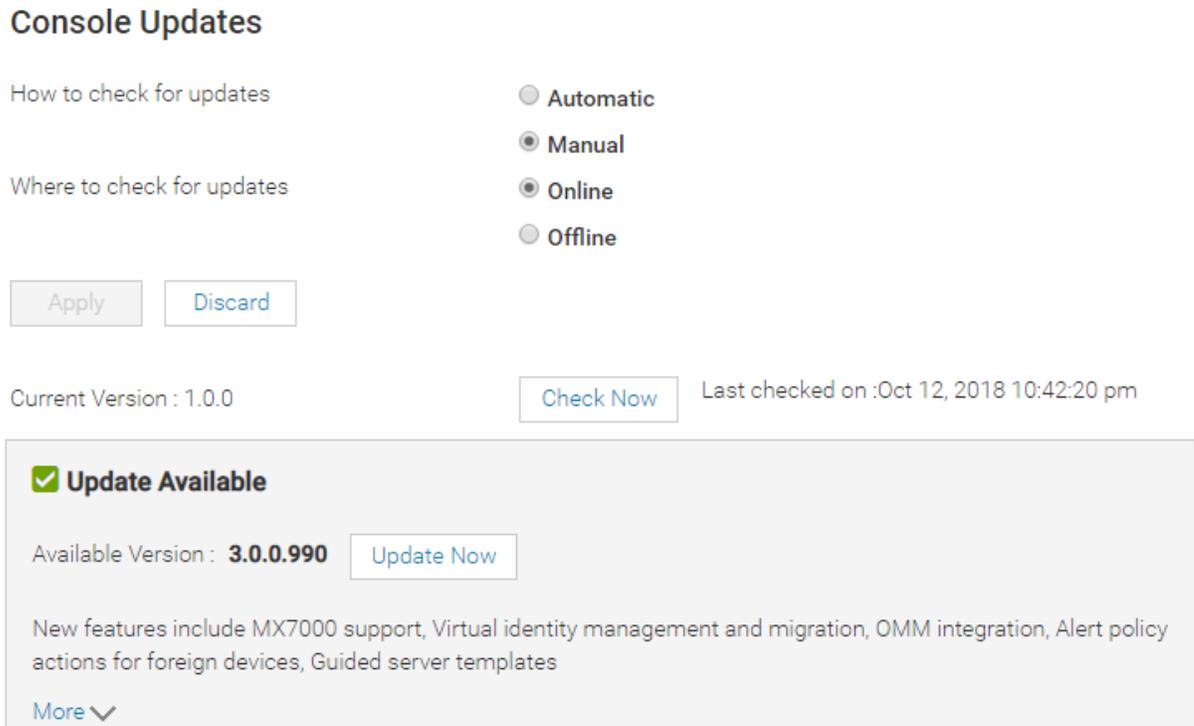


Figure 4 Manual upgrade of OpenManage Enterprise by using Offline information

## 2.2 Upgrade OpenManage Enterprise by using Offline information

### 2.2.1 Automatically upgrade OpenManage Enterprise by using Offline information

OpenManage Enterprise checks for upgrade offline, for example, from a Network File Share (NFS) after you have downloaded the upgrade files to the NFS from `NFS://<server_name>/<share_folder>`.

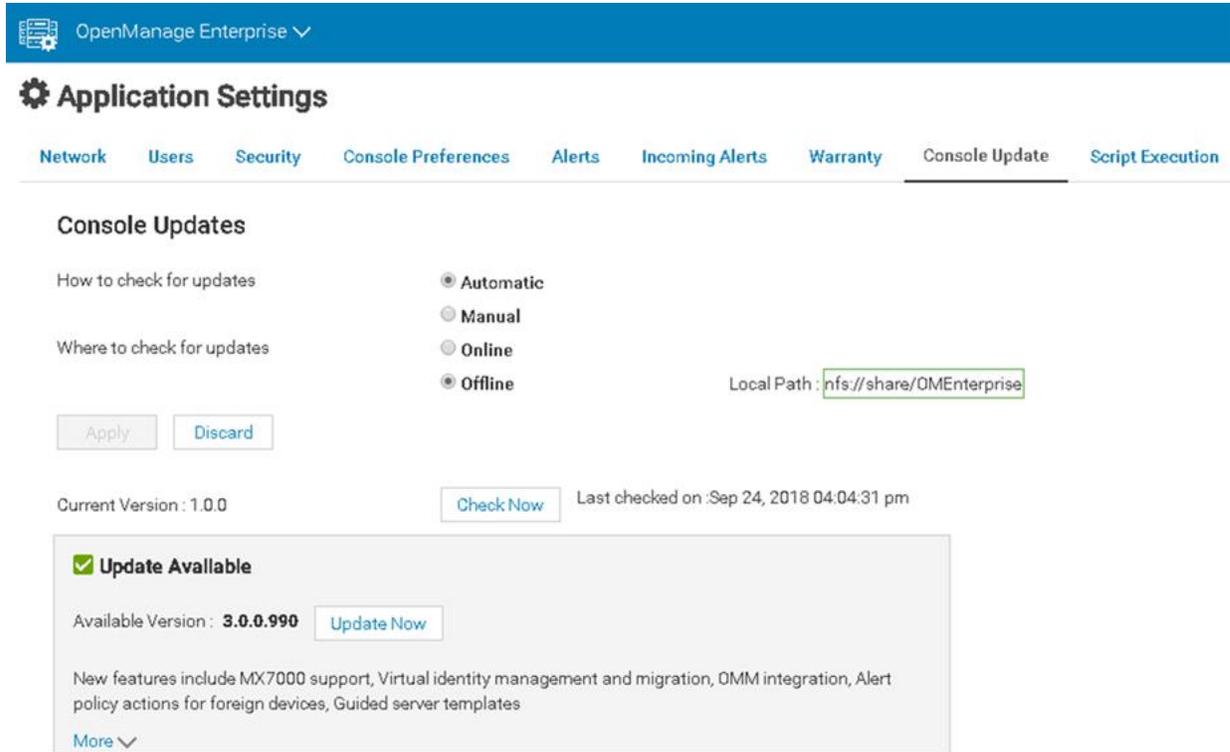


Figure 5 Automatic upgrade of OpenManage Enterprise by using Offline information

## 2.2.2 Manually upgrade OpenManage Enterprise by using Offline information

After the upgrade information is downloaded from [https://downloads.dell.com/openmanage\\_enterprise/](https://downloads.dell.com/openmanage_enterprise/), you must manually check if any upgrade information is available offline at the HTTPS.

### Console Updates

How to check for updates

Automatic

Manual

Where to check for updates

Online

Offline

Local Path :

Apply

Discard

Current Version : 1.0.0

Check Now

Last checked on : Oct 12, 2018 10:35:46 pm

**Update Available**

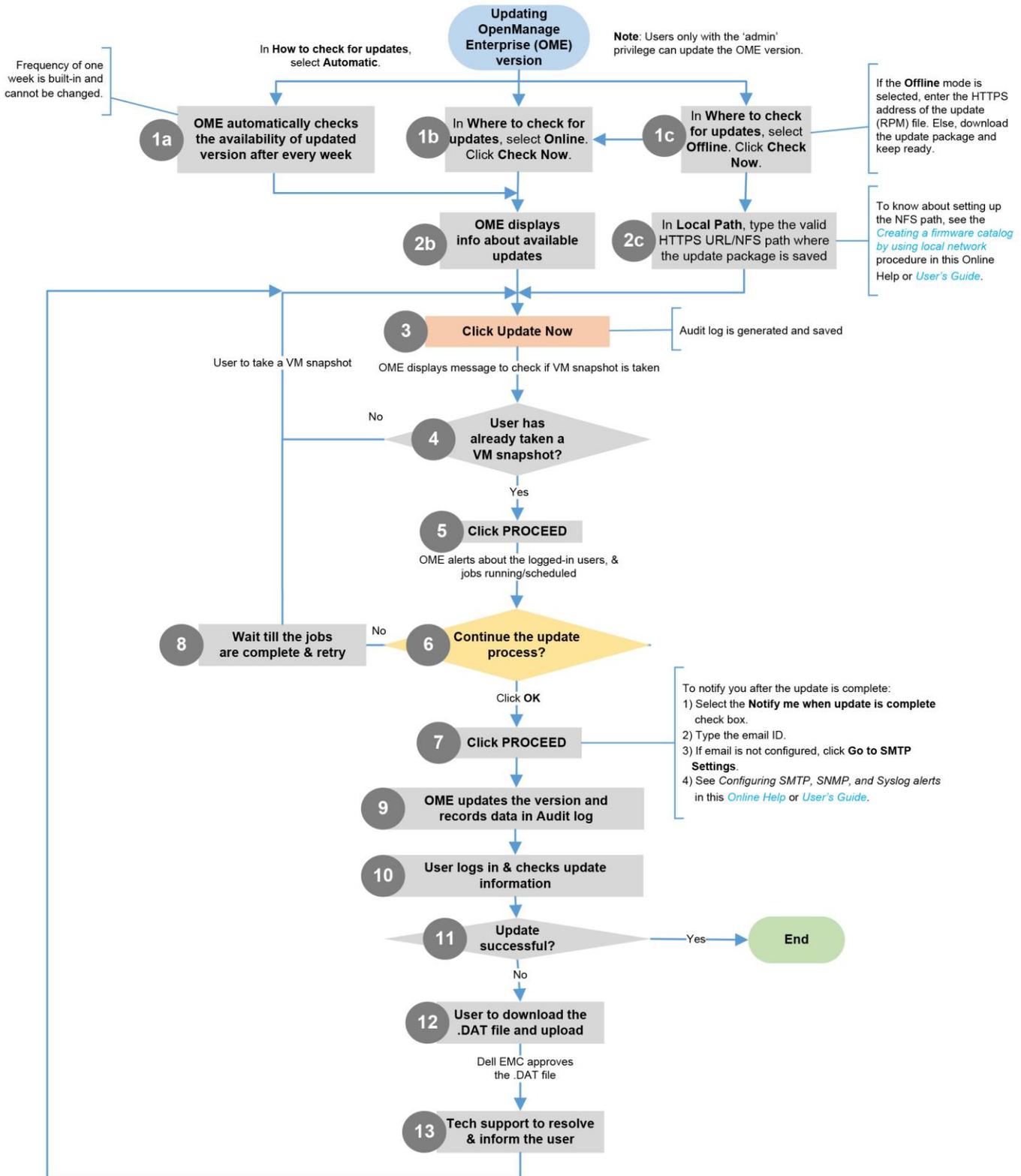
Available Version : **3.0.0.990**

New features include MX7000 support, Virtual identity management and migration, OMM integration, Alert policy actions for foreign devices, Guided server templates

[More](#) 

Figure 6 Manual upgrade of OpenManage Enterprise by using Offline information

### 3 Process map for checking and updating the OpenManage Enterprise version



## 4 Step-by-step procedure to upgrade OpenManage Enterprise by using the Automatic Online feature

When set to the Automatic Online mode, the latest available upgrade version is displayed.

1. To upgrade, click **Update Now**.

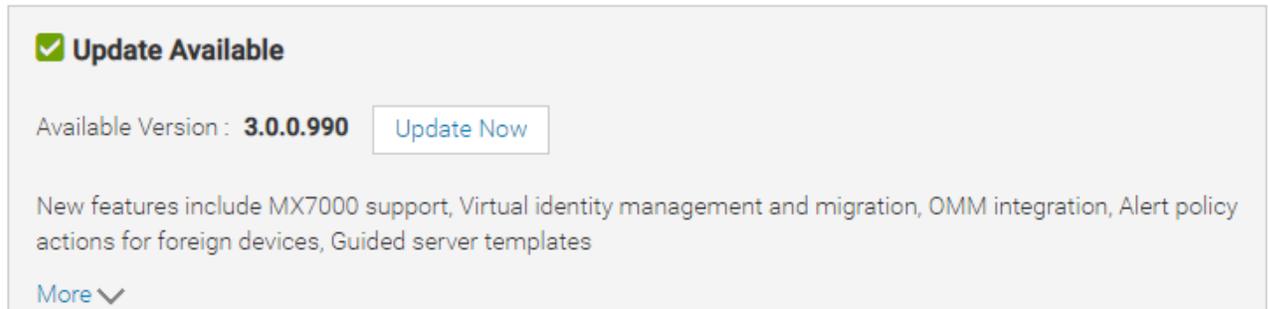


Figure 7 Automatic online upgrade of OpenManage Enterprise by using Online information

2. When prompted, take a VM snapshot of the console as a backup, in case if something unexpected occurs. Allocate additional downtime for this, if necessary.

---

**Note—It is highly recommended that you proceed only after taking a snapshot of the current VM configuration.**

---

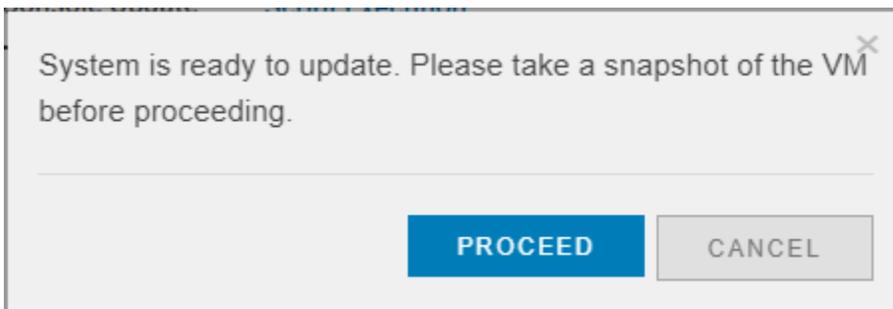


Figure 8 Take a snapshot of VM before updating OpenManage Enterprise

A message is displayed indicating that the system will be restarted after an upgrade.

3. Click **OK**.

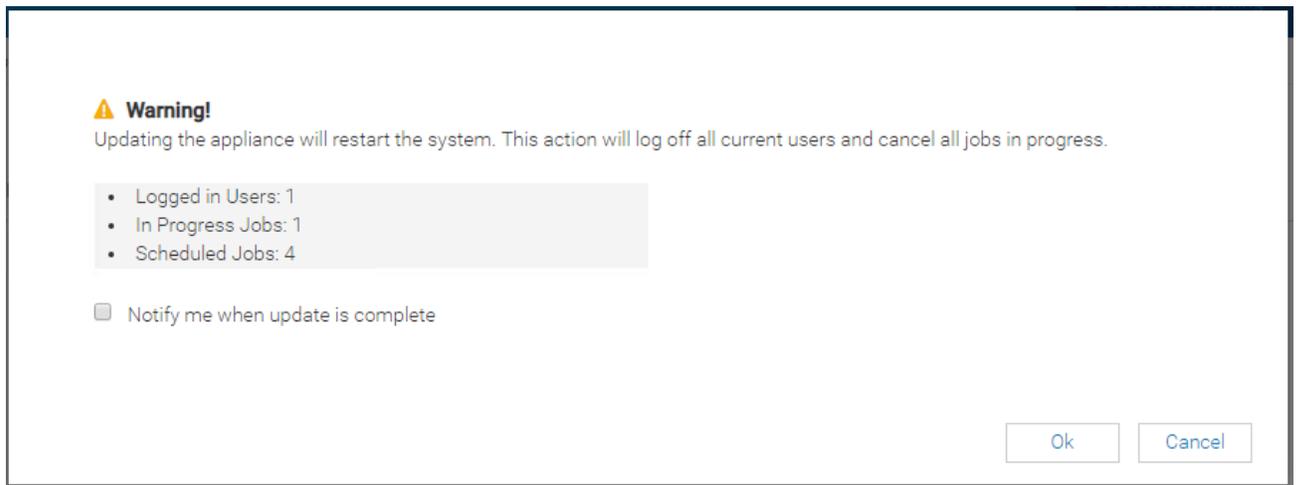


Figure 9 Message indicating that updating OpenManage Enterprise will logoff current users

4. To get a notification after the upgrade is completed, select the **Notify me when update is complete** check box.

---

**Note**—If not configured, configure the SMTP server by doing the following:

---

1. Expand **Email Configuration**.
  2. Enter the SMTP server network address that sends email messages.
  3. To authenticate the SMTP server, select the **Enable Authentication** check box, and then enter the username and password.
  4. By default, the SMTP port number to be accessed is 25. Edit if necessary.
  5. Select the **Use SSL** check box to secure your SMTP transaction.
  6. Click **Apply**.
  7. To reset the settings to default attributes, click **Discard**.
- 

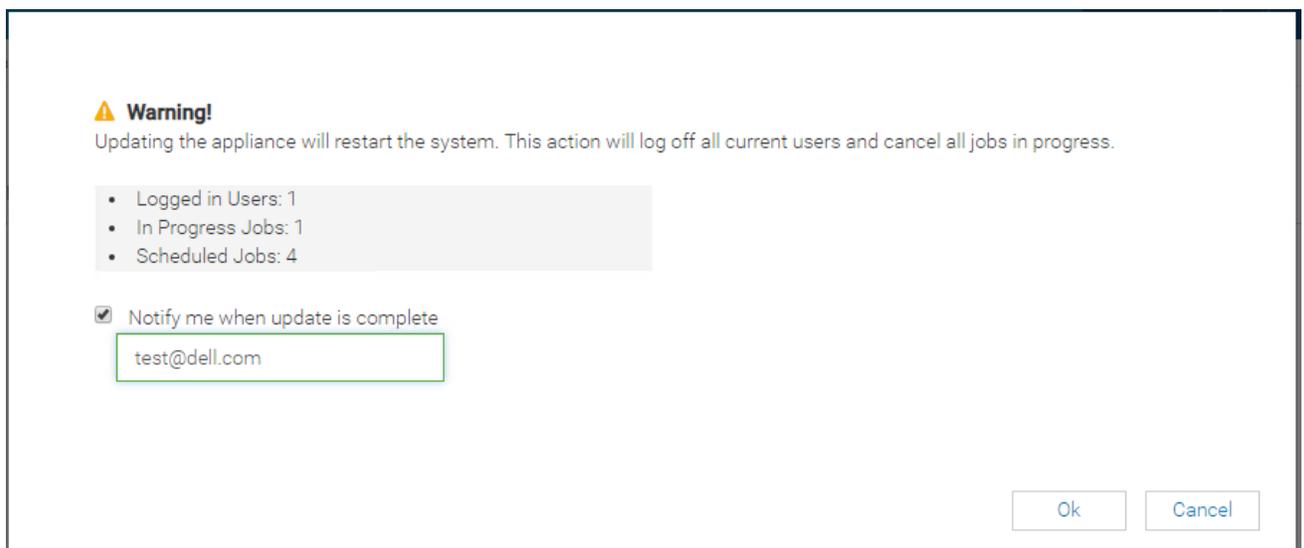


Figure 10 Enter email address where you can receive post- upgrade info about OpenManage Enterprise

5. Click **OK**.

The Update Packages are downloaded from the Dell EMC online repository at **downloads.Dell.com**. The download time would vary based on the internet speed.



Figure 11 Downloading update packages for updating OpenManage Enterprise from Dell.com

After downloading is complete, OpenManage Enterprise starts updating and this process may take about 30 minutes to complete.

After the upgrade process is completed, the system is automatically restarted.

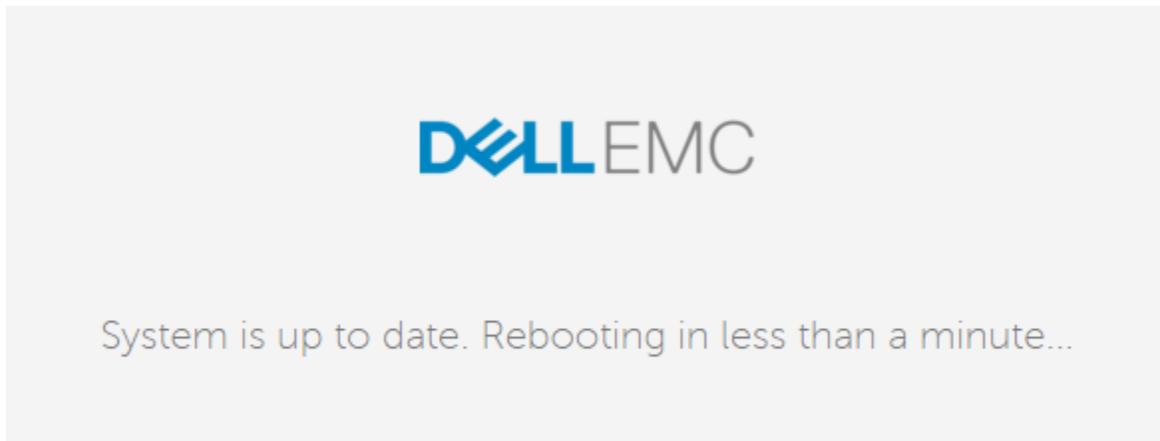


Figure 12 System is automatically restarted after updating OpenManage Enterprise

After the system is restarted, the services are also automatically started.

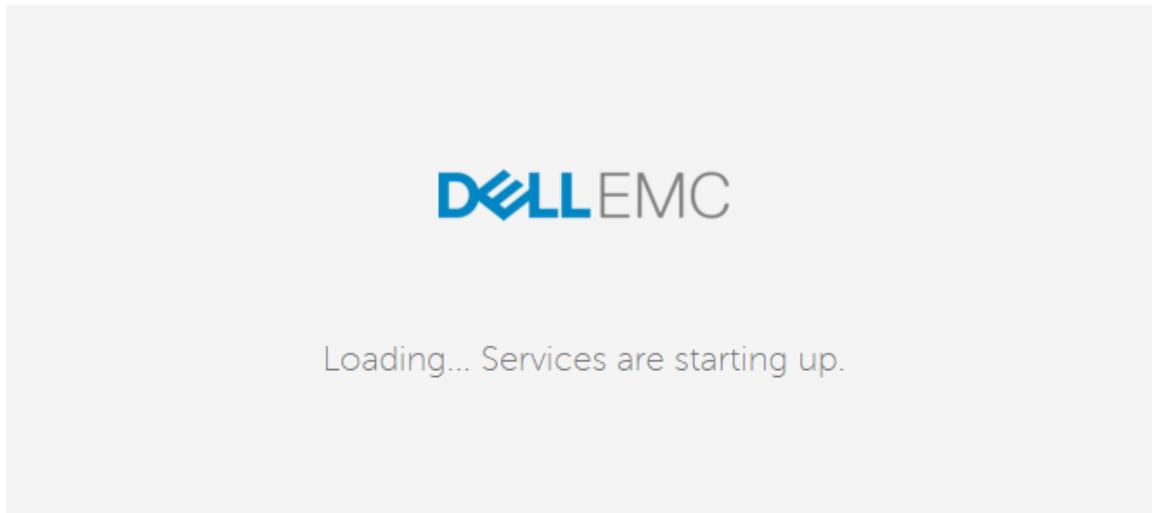


Figure 13 Services are restarted after updating OpenManage Enterprise

After the services are restarted, OpenManage Enterprise is started and the login page is displayed.

## 5 Upgrade OpenManage Enterprise by using the Automatic Offline feature

### 5.1.1 Download the Update Packages to a shared Network File Share (NFS)

1. When you choose to manually upgrade the OpenManage Enterprise version offline, download the upgrade files from Dell.com to the shared folder you have specified.

---

Note—To create an NFS folder on:

- A Windows server, see [Create NFS and configure to Dell EMC OpenManage Enterprise on a Windows server](#) in this technical white paper.
  - A Linux server, see [Create NFS and configure to Dell EMC OpenManage Enterprise on a Linux server](#) in this technical white paper.
- 

2. Ensure that you download the `tar.gz` file from the Archives folder.
3. Enter the file folder path of NFS in the following format:  
`nfs://<server_name>`
4. Click **Update Now**.
5. When prompted, take a snapshot of the VM before upgrading the console version.  
A message is displayed to indicate that the currently loggedin users will be logged off and all the running jobs will be automatically cancelled.
6. Click **OK**. The update files are downloaded from NFS, and then used to automatically upgrade the console version.
7. After downloading to the NFS shared location, enter the NFS URL in the following format.  
`nfs://<server_name>/<share_folder>`

#### Console Updates

How to check for updates  Automatic  Manual

Where to check for updates  Online  Offline Local Path :

Current Version : 1.0.0  Last checked on : Oct 12, 2018 10:41:27 pm

**Update Available**

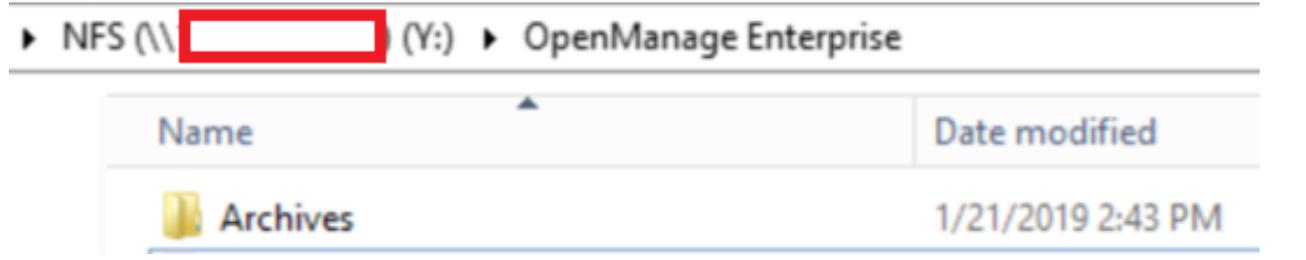
Available Version : **3.0.0.990**

New features include MX7000 support, Virtual identity management and migration, OMM integration, Alert policy actions for foreign devices, Guided server templates

[More](#)

Figure 14 Automatic offline update of OpenManage Enterprise by using Online information

Note—For upgrading the OpenManage Enterprise console version, the tar.gz file must be saved in the Archives folder. See the sample screen shot here.



## 5.1.2 Update Packages to a shared Network File Share (NFS)

When an update is available, you are prompted that an update is available.

1. Click **Update Now**.
2. When prompted, take a VM snapshot of the console as a backup in case something unexpected occurs. (Allocate additional downtime for this, if necessary).
3. Complete steps 2–5 in [Automatically upgrade OpenManage Enterprise by using Online repository information](#).

## 5.1.3 Create NFS and configure to Dell EMC OpenManage Enterprise on a Windows server

1. Download the files from [https://downloads.dell.com/openmanage\\_enterprise/](https://downloads.dell.com/openmanage_enterprise/). Ensure to download the upgrade tar.gz from the archives folder.
2. Recreate the same folder structure on your NFS folder.

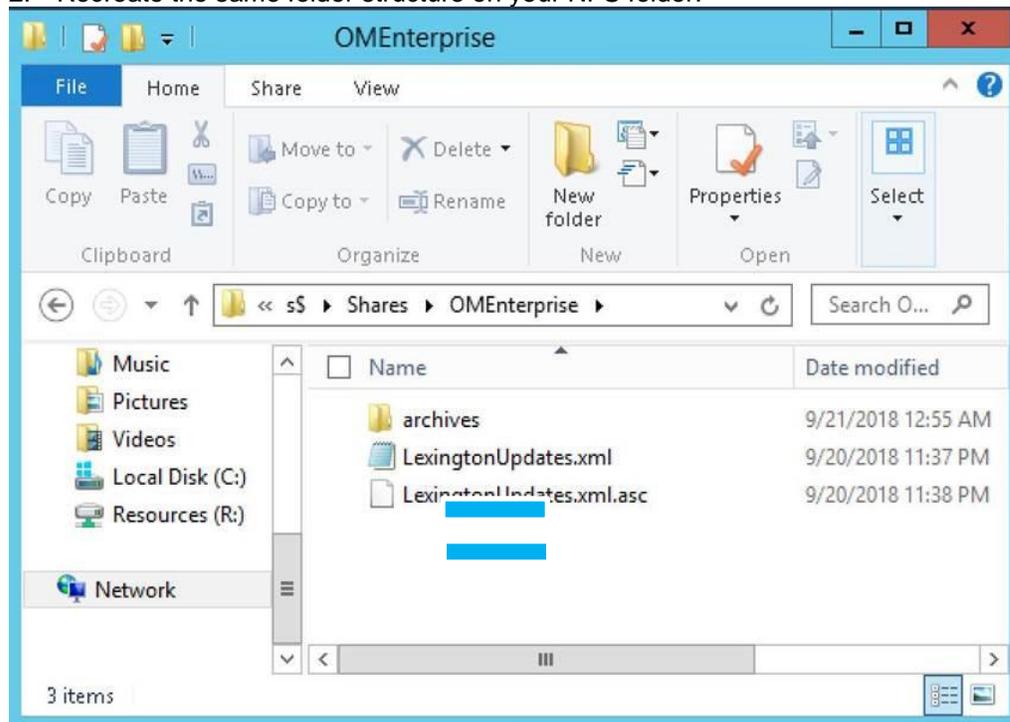


Figure 15 Recreate the OpenManage Enterprise Update Package folder structure on your NF

3. Set the authentication options as shown in the sample screen shot here:

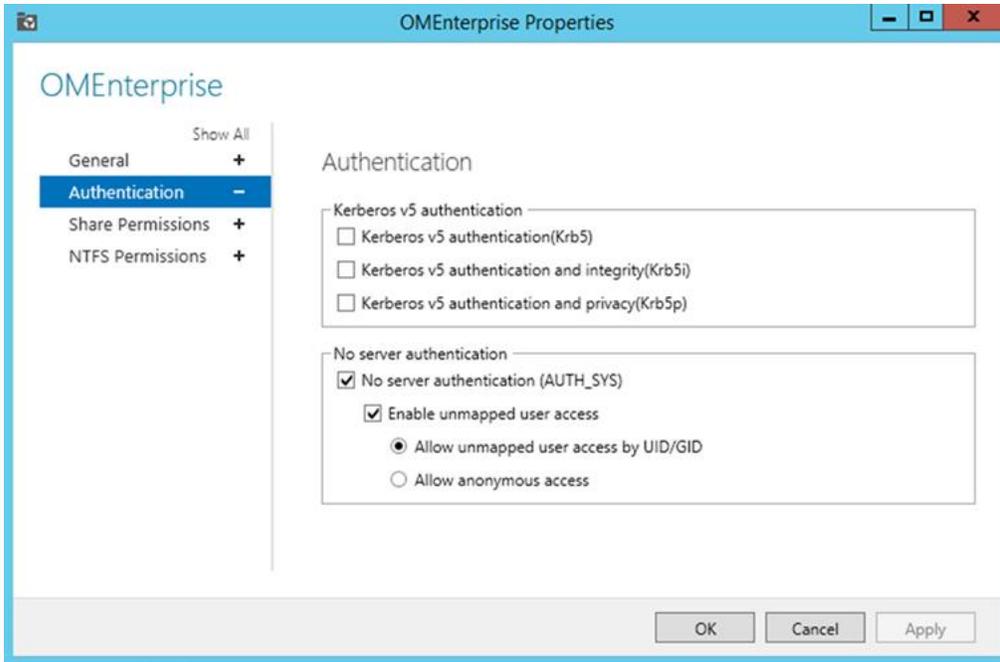


Figure 16 Set the server authentication properties

4. Set the NFS permissions. Add the host, enter IP address of the OM Enterprise appliance, and then provide the read-only access.

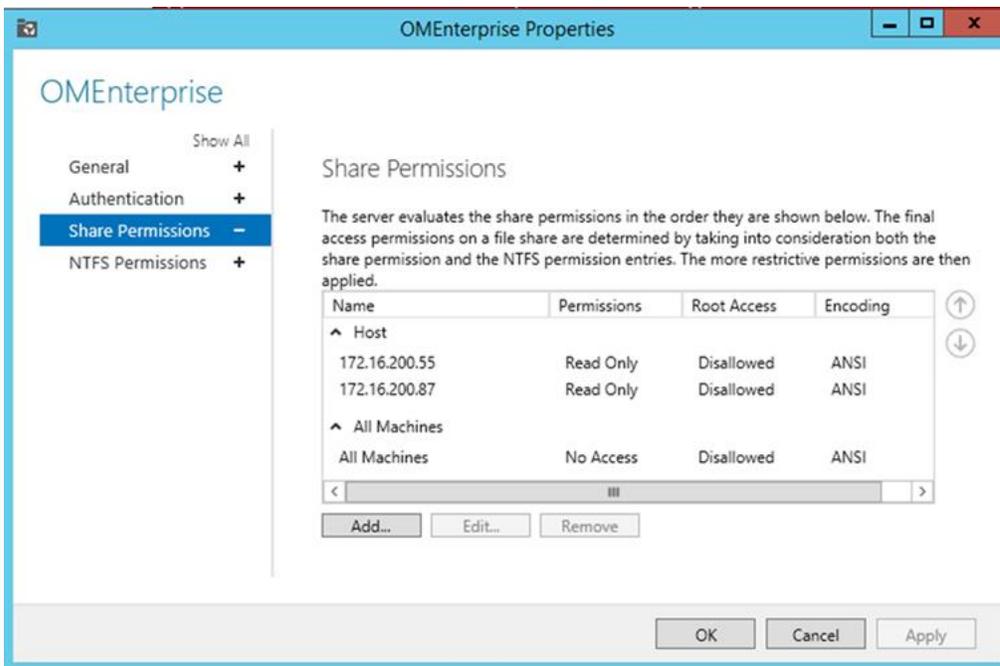


Figure 17 Set the NFS permissions

5. On the OpenManage Enterprise GUI, navigate to the **Console Update** page.
6. Enter the NFS folder path in the following format: `NFS://<server_name>/<share_folder>`

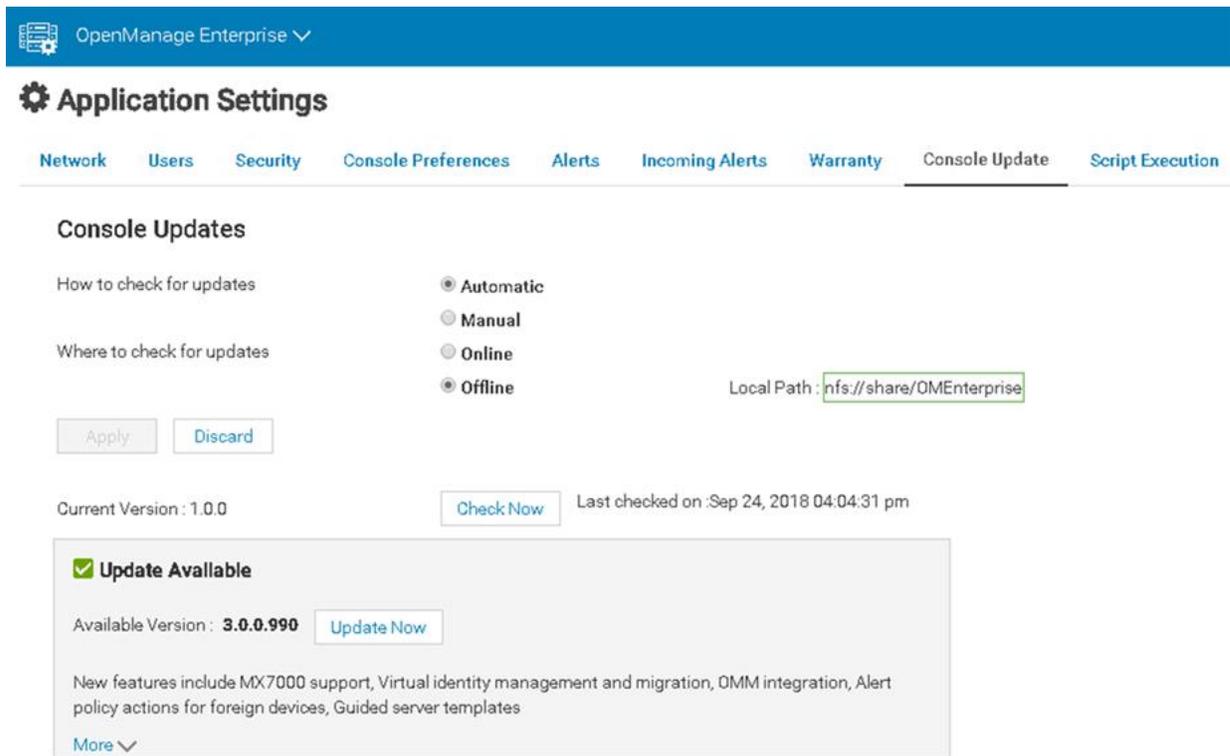


Figure 18 Enter the NFS path on the Console Update page in OpenMange Enterprise

7. Click **Apply**.

## 5.1.4 Create NFS and configure to Dell EMC OpenManage Enterprise on a Linux server

1. Before you start installing NFS package, ensure that the NFS package is not already installed on the server. Run the following command at the Command Line Interface (CLI):

```
# rpm -qa nfs
```

If there is no output you can proceed step 2. Else, skip step 2 and move to step 3.
2. To install NFS packages on an NFS server, run the following command:

```
# yum install nfs-utils libnfsidmap -y
```
3. After you install NFS:
4. Enable the NFS service by running the following command:

```
# systemctl enable rpcbind
# systemctl enable nfs-server
```
5. Start the NFS service by running the following command in the order specified here:

```
# systemctl start rpcbind
# systemctl start nfs-server
# systemctl start rpc-statd
# systemctl start nfs-idmapd
```

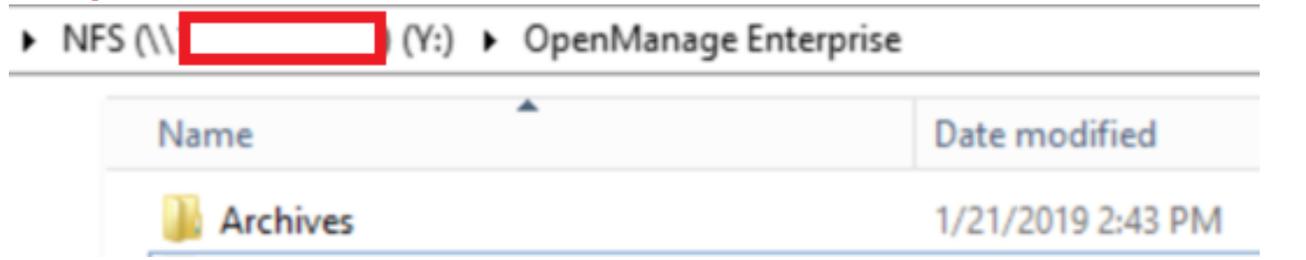
Services:

- `rpcbind`—The `rpcbind` server converts RPC program numbers into universal addresses.
  - `nfs-server`—It enables the clients to access NFS shares.
  - `nfs-lock / rpc-statd`—NFS file locking. Implement file lock recovery when an NFS server crashes and reboots.
  - `nfs-idmap`—It translates user and group IDs into names and vice versa.
6. Create NFS under the `/` partition by running the command:  

```
# mkdir /NFSSHARE
```
  7. Allow the client to read and write the data in the NFS you created by running the command:  

```
# chmod 777 /NFSSHARE
```

Note—For upgrading the OpenManage Enterprise console version, the `tar.gz` file must be saved in the Archives folder. See the sample screen shot here.



### 5.1.5 Configure MIME types for HTTP and HTTPS for upgrading OpenManage Enterprise

1. Start the IIS application.
2. Edit the MIME (Multipurpose Internet Mail Extensions) type from `.xml` to `application/octet-stream` in a Web server.
3. On the web server, add a new MIME type `.xml.asc` on the IIS by doing the following:
  - i. Start the CLI.
  - ii. Enter `cd \Windows\System32\inetsrv`.
  - iii. Enter `appcmd set config /section:staticContent /+[fileExtension='.xml.asc',mimeType='application/octet-stream']`.

## 6 Conclusion

OpenManage Enterprise is the next generation application to monitor and manage your business-critical IT infrastructure in a seamless manner. To effectively use your datacenter, you must keep the OpenManage Enterprise appliance upgraded. Options are available to plan your bandwidth by either automatically or manually updating the console version.

More information about field definitions and procedures can be viewed by clicking the ? symbol in the upper-right corner of the GUI element you are. You can also read the *OpenManage Enterprise User's Guide* available on the support site. Procedures to manage these features by using REST API are provided in the API documentation available on the support site.



You can also view the following videos to get more information about using the unmatched features of Dell EMC OpenManage Enterprise Graphical User Interface (GUI):

- [Dell EMC OpenManage Enterprise Systems Management Console \(02:02 m\)](#)
  - [Dell EMC OpenManage Enterprise \(01:44 m\)](#)
-

## A Technical support and resources

[Dell.com/support](https://dell.com/support) is focused on meeting customer needs with proven services and support.