Virtual Appliance Installation Guide

In This Document:

Installing the OpenManage Network Manager Virtual Appliance – 2
Virtual Appliance Quick Start – 2
Start the Virtual Machine – 6
Start the Application – 7
The Application is Ready to Use - What's Next? – 8
Upgrading the VM – 9
Security Considerations – 10

Installing the OpenManage Network Manager Virtual Appliance

The OpenManage Network Manager Virtual Appliance, or virtual machine (VM) is a single .ova file, compatible with Vmware products including VMWare ESX, VmWare Workstation and VMware Player.



Note

This document assumes in depth Linux and VMware® Administration knowledge.

The following assumes that the VM is a standalone server and client access comes from a client browser from another host. If you need client access directly on the VM, you must install a compatible browser on the VM.

For best experience and use of time, trial users should allocate sufficient resources during the trial period so they can evaluate the full set of features. We encourage you, to use the many resources available.

Refer to the hardware requirements for a conventional installation (*Best Practices: Single Server Hardware of the Installation Guide*) for more about resource requirements. You may also get additional information, videos and access to support and a knowledge base from the website where you downloaded the software.

OpenManage Network Manager is already installed on the Virtual Appliance. This guide describes the process to configure OpenManage Network Manager as a virtual appliance for your environment. The instructions assume you have already installed and configured the VM hypervisor that will be the host for the Virtual Appliance. For additional information about installing and configuring the ESX®, or other VMware hypervisors, consult your VMware® documentation.

Virtual Appliance Quick Start

It is recommended that you read this entire guide before installation. Here are the quick start steps:

1. Import the .OVA file and power on.
2. Start the VM and login with user= synergy password=synergyP@$$
3. Run ./setup command and select Option #1 for initial VM configuration. This will install the 30 day trial license.
4. After restarting the VM, go to ./setup menu and run the "Check server status option" to confirm server startup status.
5. Using a remote browser go to url http://<yourIP>:8080 and logon with username=admin, password=admin

The Virtual Appliance Quick Start steps should be enough to get the VM up and running in your environment. Once completed, go to *The Application is Ready to Use - What's Next?* on page 8.

If you encounter issues or more details are required, the following section provides more detailed steps.



How to:

Configure OpenManage Network Manager as a Virtual Appliance

To configure OpenManage Network Manager as a virtual appliance, follow the steps below. Details about each step follow this list.

1. Prerequisites
2. Deploy the OVA Template
3. Start the Virtual Machine
4. Initial VM Host Configuration
5. Start the Application
6. Connect the Client Browser
7. The Application is Ready to Use - What's Next?

Prerequisites

Make sure you have the following:

- A downloaded OpenManage Network Manager.ova file
- An IPv4 address has been identified for the VM appliance
- The VM host must have a connectivity to the target managed devices.
- Neither Firewalls nor other restrictions block communication for ICMP, SNMP, FTP, TFTP, SCP, SSH, Telnet, HTTP.
- SMTP and internet access are required for notification from OpenManage Network Manager by e-mail as well as for license/subscription renewal

VM constraints

The VM is intended and sized to support trial/evaluation of OpenManage Network Manager Software for up to 100 devices. Other deployments may be supported and may require additional VM reconfiguration. Many factors affect the VM performance. The underlying hardware resources must be able to support the desired deployment configuration. Reconfiguration may require more RAM, Hard drives, faster hard drives, CPU/Cores or storage allocated to the VM. Refer to the *User Guide* sizing section for details.

The Virtual machine file (.ova) was created with the VMware workstation 9.0.1 and is compatible with following VMware products:

- Fusion 5.0
- Workstation 9.0
- ESX

If the Virtual Appliance requires reconfiguration, you are limited to these maximum resource settings:

- 64 GB memory limit
- 8 processor limit
- 10 network adapter limit
- 2 TB disk size limit

If you need resources in excess of these constraints, you need to create your own VM by performing a package installation on your new VM. If you need to expand an existing system beyond these limits, you need to follow the database migration procedures to backup the mysql database, re-install the same software version on your target VM, and then restore the database files to the target VM.

Hardware Requirements

- The Virtual Machine is configured with 4 processors and 1 core per processor for a total of 4 Cores. 6-8 cores are recommended for Production/Non-trial environments with 500-1000 devices.

  Adjusted the number of cores needed based on the Application performance by right-clicking the imported VM and selecting a "settings" option for adjusting a VM's resources.
- CPU speed should exceed 3.0 Ghz
- The host machine has a minimum of 12 GB RAM allocated to the VM. Your Hypervisor must have sufficient memory resources to allocate to the VM. Adjust the Memory setting as required for you environment.
- The virtual machine should be allocated at minimum 120 GB disk space. The OpenManage Network Manager (OMNM) VM is pre-set to installation defaults and dynamically grows up to 85 GB. If the VM is used beyond a trial evaluation, you may need more space depending on your specific usage and needs for OMNM. For example, higher Data retention policies for Performance, TFA, Audit logs, Events, and so on increase the database space needs. To allocate more space you need to increase the:
  - Space allocate to the VM from the hypervisor (Hypervisor->select the VM->settings)
  - Size of the OMNM mysql database

  Refer to *User Guide* "Mysql Database issues" section for detailed steps on how to extend the Mysql db size when the VM has reached its limit or you decide to extend the size before the limit is reached. Also consult your VM and/or Linux administrator prior to adjusting the VM size.

For better performance, the database should consist of 1 or more 10-15K RPM disk, or the equivalent solid state disk.

Ensure that the VMware® virtual disk runs on adequately performing physical disk infrastructure. Heavy performance monitoring and TFA requires disk IO speeds that support this configuration.

If you plan to use the VM beyond the initial trial configuration, consider some configuration changes to ensure proper sizing of the system. Refer to the *User Guide* for sizing recommendations before converting the trial VM to a production usage. You may need to do the following:

- Expand the storage capacity to accommodate the workload data and retention preferences.
- Allocate additional memory to support a production environment
- Ensure the VMware® virtual disk runs on adequately performing physical disk infrastructure. Heavy performance monitoring and TFA requires disk IO speeds that support this configuration.

Virtual Appliance Software Requirements

OpenManage Network Manager runs as a virtual appliance. It requires the following Hypervisors:

- VMware® Workstation v8 or higher
- vSphere® Hypervisor (ESXi) 4.1 and higher (must meet virtual appliance, port access, and listening port requirements)

Port Use

All necessary ports and firewall settings are pre-configured on this VM. Refer to the *User Guide* ports section for details.

OpenManage Network Manager Client Browser Requirements

This OpenManage Network Manager version supports the latest browser versions.

- Firefox
- Internet Explorer
- Chrome
- Safari
- All browsers require the latest adobe flash and acrobat
- All browser require Java 1.6 or higher
- Screen resolution must equal or exceed 1280 x 1024 pixels. Your screen must be at least 1250 pixels wide.

Deploy the OVA Template

You can deploy the Open Virtualization Format (OVA) template with VMware® workstation, VMware Player or ESX. High Availability Deployment options are available for OpenManage Network Manager that can you can deploy with or without VMs. Contact your sales representative if you are interested in these options. The trial Version is not intended to support conversion to a HA platform.



Note

If you see an error message about in-compatibility or OVF specifications make sure you have sufficient disk space and are using a local drive (not a share)

Deploy the OVA Template with VMware Workstation

1. In VMware workstation go to *File* > *Open* menu.
2. Select the Ova File.
3. Power on the VM

Deploy the OVA Template with VMware® Player

1. In VMware Player select *File* > *Open Virtual Machine*
2. Right click and Select *Play Virtual machine*

Deploy the OVA Template vSphere/ESX®

1. Start the VMware vSphere client on your ESX server
2. In the vSphere client, go to *File* > *Deploy OVA Template*.
3. Choose the *Deploy from file* option and browse to where you copied the Open-Manage Network Manager OVA file.
4. Select the OpenManage Network Manager `.ova` file and then click the *Next* button.

Start the Virtual Machine

After you have completed the above steps, you can start the OpenManage Network Manager in the VM console.



Note

Before you start the VM console, if you need to modify the VM settings you can right click the Image to get the menu of options.

1. Start the VM by clicking on its name and choosing *Power* > *Power On*.
2. Open the VM Console
3. Log in with the default credentials (`synergy` user).

   Username: synergy

   Password: synergyP@$$

   The synergy user has passwordless sudo privileges

Initial VM Host Configuration

A user setup menu script simplifies VM initialization. After logging in as the synergy user (synergy/synergyP@$$), type these commands:

```
./setup
```

1. Select 1) VM Configuration Menu and follow the prompts. If setup is not successful you may resolve any issues and rerun the VM configuration menu option or follow the steps detailed below to manually configure the VM.



Note

The VM initialization is designed to detect all available ethernet interfaces. Typically this is eth0 or ens32. Make sure eth<zero> is entered when asked. eth0 (oh) is not a valid Linux interface and

*interface configuration will not be successful. If no interfaces are listed, **do not** proceed and **do not** make up an interface name. Consult your VM administrator.*

If customized VM configuration is required to support alternate interfaces, DNS or other environments, please consult you Linux and network administrator.

2. On completion of the VM setup, you will be prompted to reboot the VM. After Rebooting the VM, enter ./setup and select the "Check Server Status" option. This will continuously check the server status until the servers have successfully started. If successful you will see the following message.

```
==================================================
Application server status:---- appserver: ready
Web server Status:---------- synergy is running synergy is ready
Database server status:------- owaredb is running
==================================================
```

3. VM configuration is complete. The next steps will cover application configuration.

Start the Application

Follow these steps to start the application:

1. Restart the VM if you have not already done so as follows:
   a. Shut down the Web and application servers using one of the following:
      - Use option 6
      - Use the following commands:

        ```
        sudo service oware stop
        sudo service synergystop
        ```

   b. Shutdown the database as follows:

      ```
      sudo service owaredb stop
      ```

   c. Restart the VM as follows:

      ```
      sudo shutdown -r now
      sude service
      ```



Note

By default the OpenManage Network Manager servers are configured to auto start. After restarting the VM, all of the servers should come up and the application is ready soon after startup.

2. Confirm that the server is up and running by selecting option 5 from the ./setup menu.

Troubleshooting

In addition to the troubleshooting chapter in your application's guides, you may want to try the following if application server does not start:

- The likeliest cause is an expired license. If the license has expired, the Check server status (option 5) displays the error condition.
- Another common problem is failure to meet the VM minimum requirements. If there are not enough RAM resources, the servers cannot start.
- Contact support if your server still fails to start.

Re-Starting

On reboot or system restart, by default, application server, web server and the database are configured to autostart. If you need to stop or start the server without rebooting the VM, you can use the following commands

- To stop or start the Application server: `sudo service oware start | stop`
- To stop or start the Synergy server (web server service): `sudo service synergy start | stop`

The startup process typically takes a few minutes, and depends on the speed of the host. The application server needs to be fully up before the web server can provide full client access. The web server should be fully functional within five minutes of the application server being up.

Connect the Client Browser

Using a browser, login to this URL: `http://<newIPAddress>:8080`

Default portal login credentials: Username: `admin`, Password: `admin`

The initial login prompts for a Password reminder for the admin user. This supplies the information for the `Forgot password` link in the login page.

The Application is Ready to Use - What's Next?

The Home page contains the "Getting Started" portlet. Walk through each step to configure the primary features for managing and monitoring your network.

Application Setup Tasks

Once the Web portal is up you must perform some initial setup and validation tasks.

File server

For device backup/ restore / deploy firmware capabilities, the VM comes with a pre-installed file server.

You can set your own external file server parameters for any existing server you may already have in your environment. A file server is already configured on the Linux OS. The settings below apply the two pre-configured file servers on the Virtual Appliance. The VM_FTP_TFTP file server is dynamically used for devices that support FTP AND TFTP. The VM_FS_SCP file server supports devices that require a

more secure protocol like SCP. These file servers are automatically created during the VM initialization (./setup - option 1) process when you set the IP address for the VM.

The following list defines the built in files server attributes.

Attribute	Value
Name	VM_FS_FTP_TFTP or VM_FS_SCP
Enabled	Checked
Select File Server Type	FTP with optional TFTP or SCP only
IP address	The <newIPaddress> set for the VM
Login	ftpuser
Password	ftpuserPaSS
External IP Address	Leave blank. This is only required if the managed devices are using a different IP address to reference this same File server.
Net Mask	The mask for the <newIPaddress>

To create an entry for a new File server in OpenManage Network Manager, follow these steps:

1. Go to Setting -> Common Setup task under setting and edit the "File servers" task.
2. Click the Test Button on the lower right to confirm the server is working, once configured.
3. Click Save, once everything works.

This completes the file server setup for your system.

Upgrading the VM

The OpenManage Network Manager Virtual Appliance/VM can be upgraded similar to a standard linux install. If the OpenManage Network Manager application on the Virtual Appliance/VM requires upgrade, you will need to transfer the unzipped OpenManage Network Manager software via FTP to the VM or mount a share on VM with access to the OpenManage Network Manager install files. You can then proceed to upgrade to the new OpenManage Network Manager software in the same way you would upgrade any linux install. Refer to your VM admin and the install guide for details.

Security Considerations

Before putting OpenManage Network Manager into a production environment, change the default passwords noted in this guide, such as the Linux OS login (user = synergy) and the ftp account (user=ftpuser). Change the password for the mysql data base as well. Refer to the user guide for more details on the mysql db credentials.



Caution!

If credentials are not updated correctly, other processes may stop working. For example, the pre-installed File servers use the ftpuser account. The ftpuser password can be changed in the linuxOS. However, the backup/restore operation fails if you do not chang the password within OMNM too.