VERTIV™

Avocent® MP1000VA Management Platform Virtual Appliance

Installation/Deployment Guide

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Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit https://www.vertiv.com/en-us/support/ for additional assistance.

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1 Getting Started

Once you have read the information outlined in the Vertiv™ Avocent® MP1000VA Management Platform Virtual Appliance Getting Started Guide, you should complete the procedures in this document to gain access to the Avocent MP1000VA Management Platform Virtual Appliance (VA) web User Interface (UI), where target devices are launched and managed.

This guide describes the virtualization platforms supported by the Avocent MP1000VA Management Platform Virtual Appliance and provides installation, deployment and network configuration instructions for the VA.

1.1 Virtualization Platforms

The VA can be deployed on any of the following virtualization platforms:

- Microsoft Hyper-V Hypervisor 2019
- VMware vCenter Server 7.0
- VMware vSphere Hypervisor (ESXi) 7.0

Before continuing, ensure you have installed one of these virtualization platforms to deploy the management platform VA. If you have not, please see the installation instructions for the appropriate platform on the corresponding website:

- VMware: Server Management Software - vCenter | VMware
- Hyper-V: Install the Hyper-V role on Windows Server | Microsoft Learn

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2 Installing the Virtual Appliance

NOTE: Vertiv distributes the Avocent MP1000VA Management Platform Virtual Appliance as an Open Virtual Appliance (OVA) disk image for VMware and as a Virtual Hard Disk v2 (VHDX) disk image for Hyper-V.

To install the VA:

1. From Vertiv.com, type **MP1000** into the search bar and press **Enter**.
2. Click *Vertiv™ Avocent® MP1000VA Management Platform Virtual Appliance.*
3. Scroll down and click the *Documents & Downloads* tab.
4. Under the Software heading, click *Vertiv™ Avocent® MP1000 Software Downloads.*
5. For Hyper-V, download the latest version of the VHDX file from the Software Download column.

NOTE: The VHDX disk image must be unzipped after downloading. Ensure you have adequate space available to support the uncompressed file (more than 20 GB). For more information, see Prerequisite on page 5.

-or-

For VMware, download the latest version of the OVA file from the Software Download column.

NOTE: Ensure you review the accompanying Release Notes for any updates or troubleshooting procedures regarding the software.

6. The VA is now installed and ready for deployment. Proceed to the next section for deployment instructions.

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3 Deploying the Virtual Appliance

To begin the deployment process, review the hardware requirements, then navigate to the appropriate section for your chosen virtualization platform for further instructions.

3.1 Hardware Requirements

Before continuing, ensure the following hardware resources have been provisioned:

⚠️ **CAUTION: Avoid oversubscribing the host server's resources. When possible, use resources preserved for the Avocent MP1000VA Management Platform Virtual Appliance.**

- Suitable processors, such as:
    - Intel Xeon Scalable Generation 1+ 6-Core+,
    - Intel Xeon Processor E5-1650 v4, 6C/12T @ 3.6GHz (4.0GHz),
    - Intel Xeon Silver 4309Y, 8C/8T @ 2.8GHz (3.6GHz),
    - AMD EPYC 72F3 [8C/16T @ 3.7GHz (4.1GHz)],
    - Or processors of equivalent or higher quality
- 4x vCPU
- 16 GB memory
- 1 TB storage

3.2 Microsoft Hyper-V Hypervisor 2019

3.2.1 Prerequisite

Prior to deployment, the VHDX disk image must be unzipped.

To prepare the VHDX disk image for deployment:

1. After downloading the VHDX disk image, move the .zip file to the Hyper-V server and use Windows Explorer to extract the VHDX file from the .zip file.
2. Move the extracted VHDX file to the location where the new Virtual Machine (VM) disk image will reside (the deployment location) and proceed to the next section of this guide for deployment instructions.

3.2.2 Deployment

To deploy the VA:

1. Using an account with administrator or Hyper-V management privileges, log into a remote desktop on the Windows 2019 server where Hyper-V is installed.
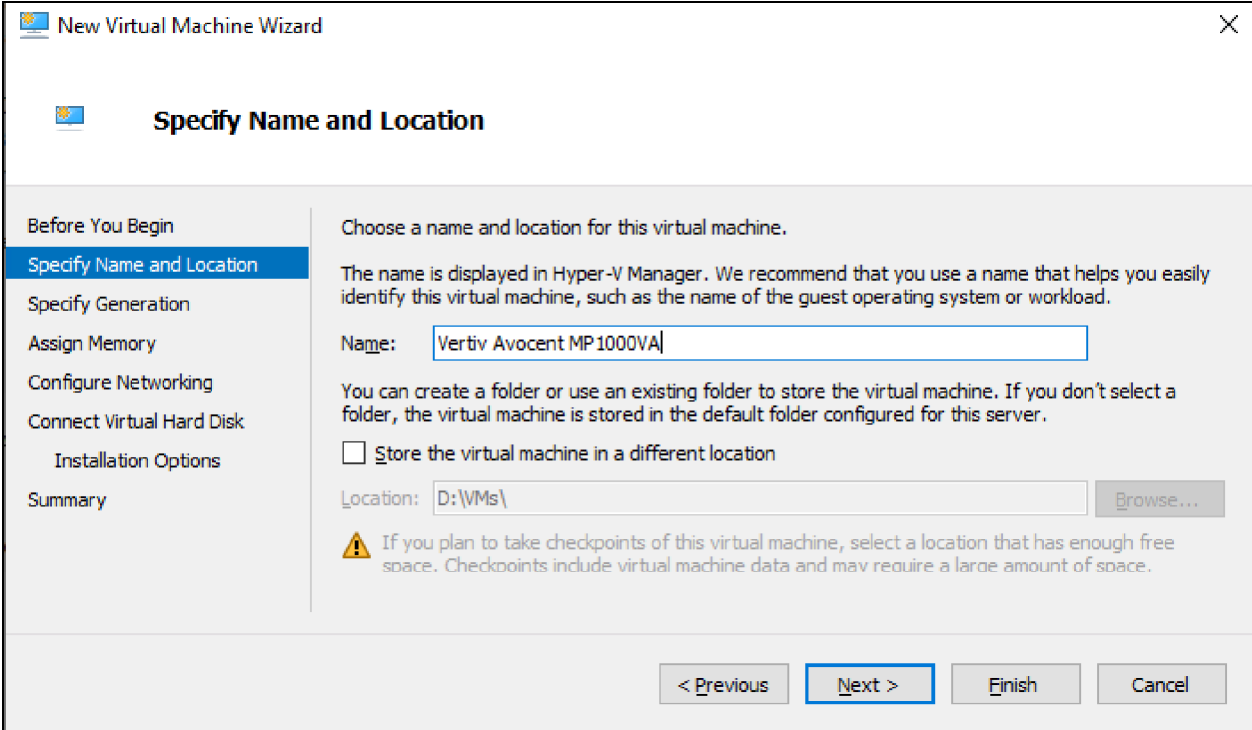2. Open the *Hyper-V Manager* application.

3. Under the Hyper-V Manager node in the left-hand sidebar, right-click on the connected hypervisor (*HSVTST-HYPERV* in the following example) and select *New-Virtual Machine*.

Figure 3.1 Hyper-V Manager Screen

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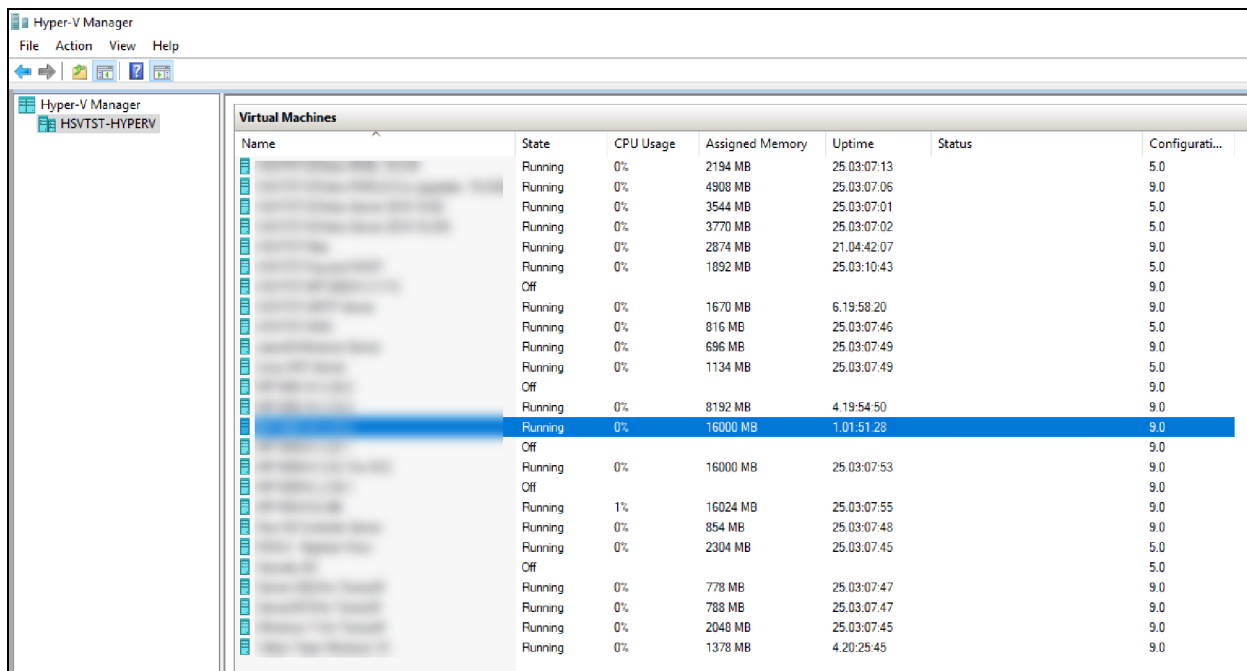
4. When the New Virtual Machine Wizard opens, select *Specify Name and Location,* then enter the name and storage location for the VM.

Figure 3.2   Specify Name and Location Screen

5. Click *Next.*

6. In the Specify Generation section of the Wizard, click the Generation 2 radio button and click *Next*.

NOTE: The Generation 1 option is not supported.

Figure 3.3 Specify Generation Screen
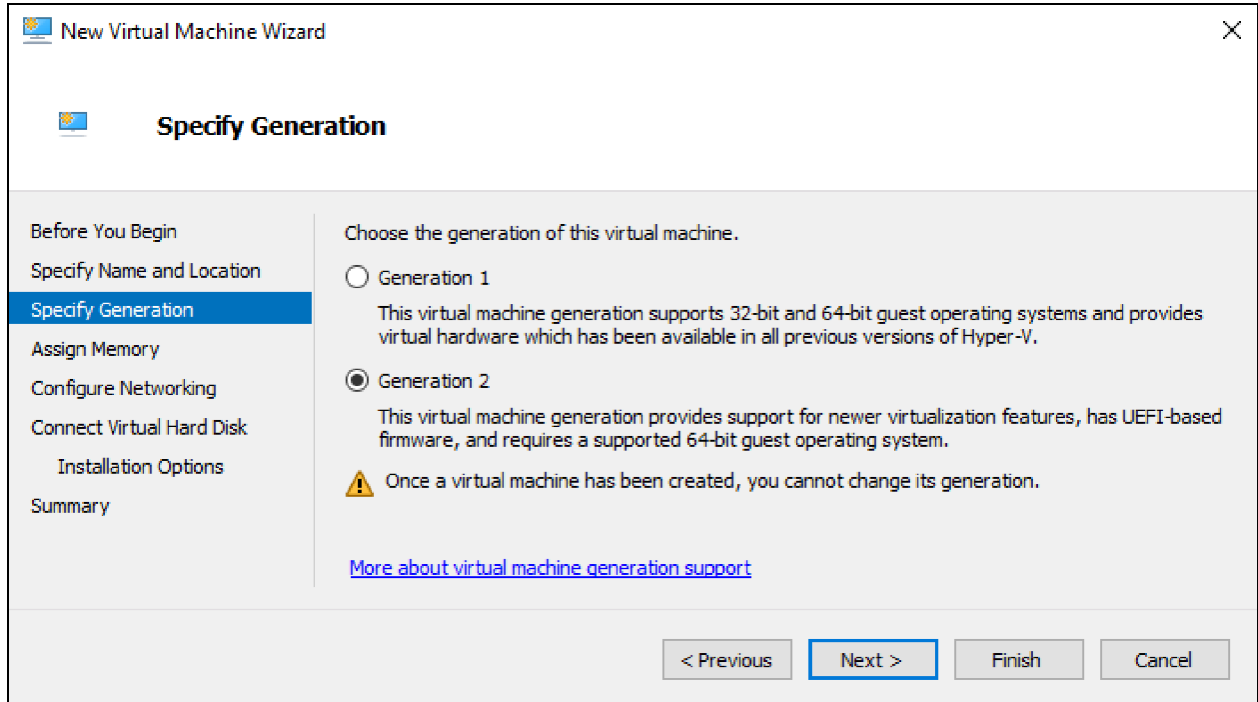
7. In the Assign Memory section of the Wizard, enter **16384 MB** (or greater) in the Startup memory field.

Figure 3.4 Assign Memory Screen

  3 Deploying the Virtual Appliance
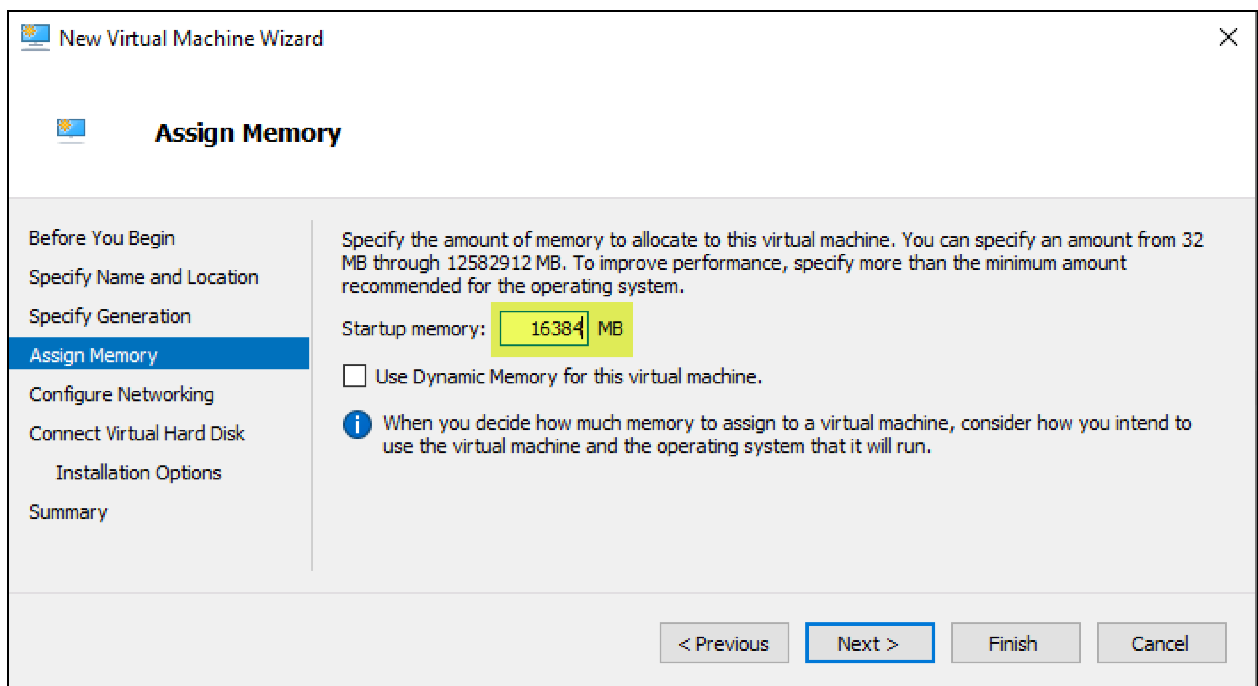
8. Leave the Use Dynamic Memory for this virtual machine checkbox unchecked (disabled) and click *Next*.

9. In the Configure Networking section of the Wizard, use the Connection drop-down menu to select the Hyper-V network to which you wish to connect.

Figure 3.5   Configure Networking Screen
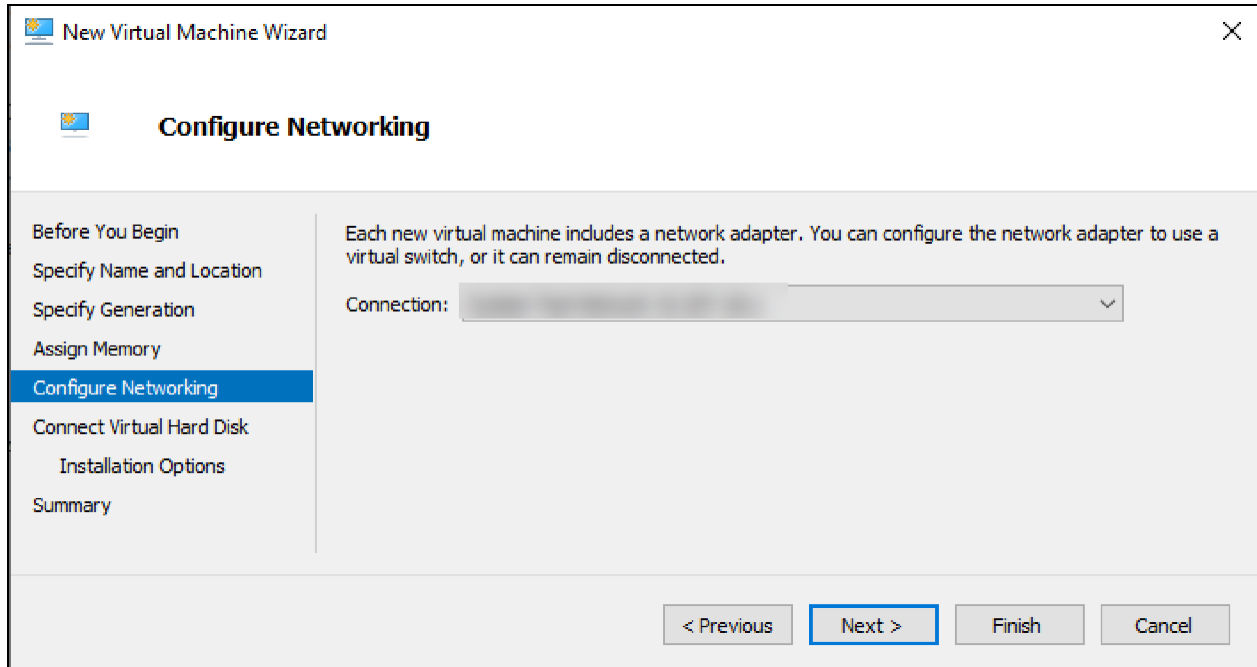
10. Click *Next*.

11. In the Connect Virtual Hard Disk section of the Wizard, click the radio button for the Use an existing virtual hard disk option and click *Browse*.
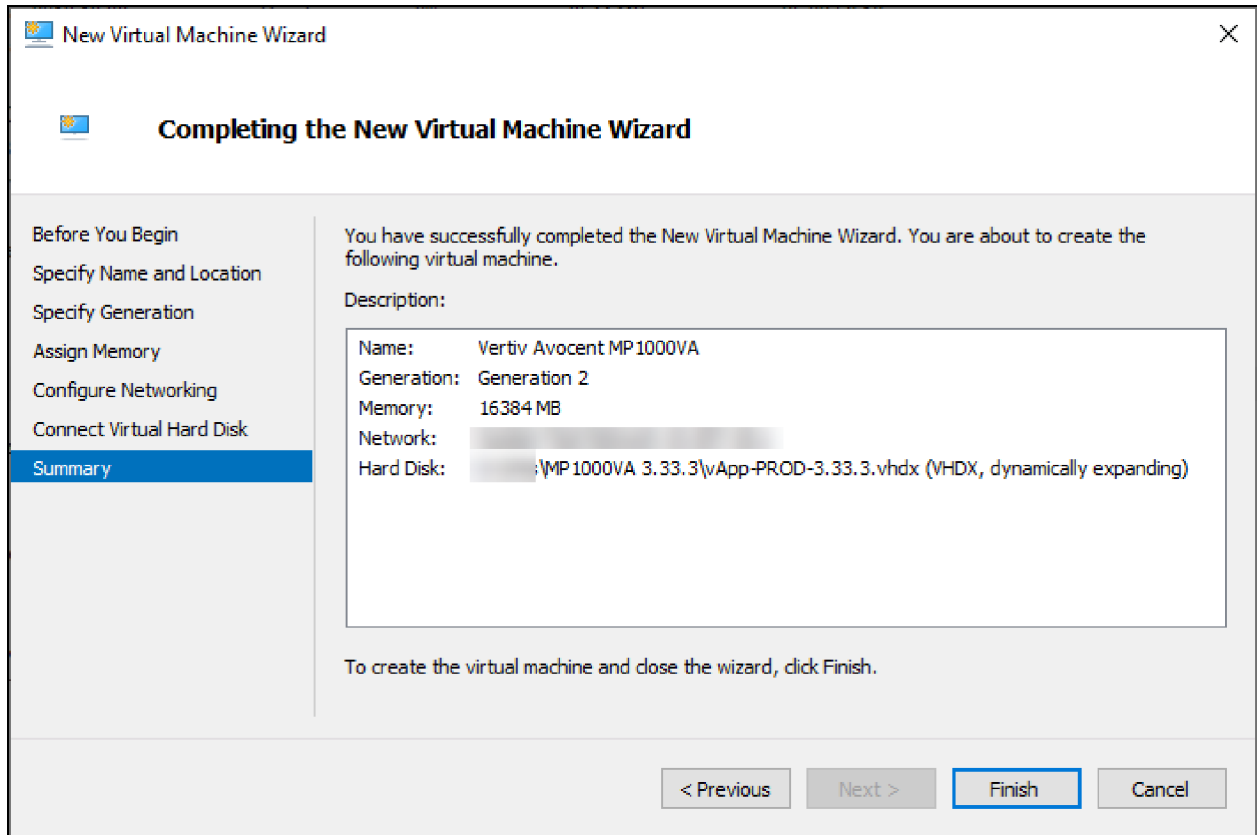
Figure 3.6   Connect Virtual Hard Disk Screen
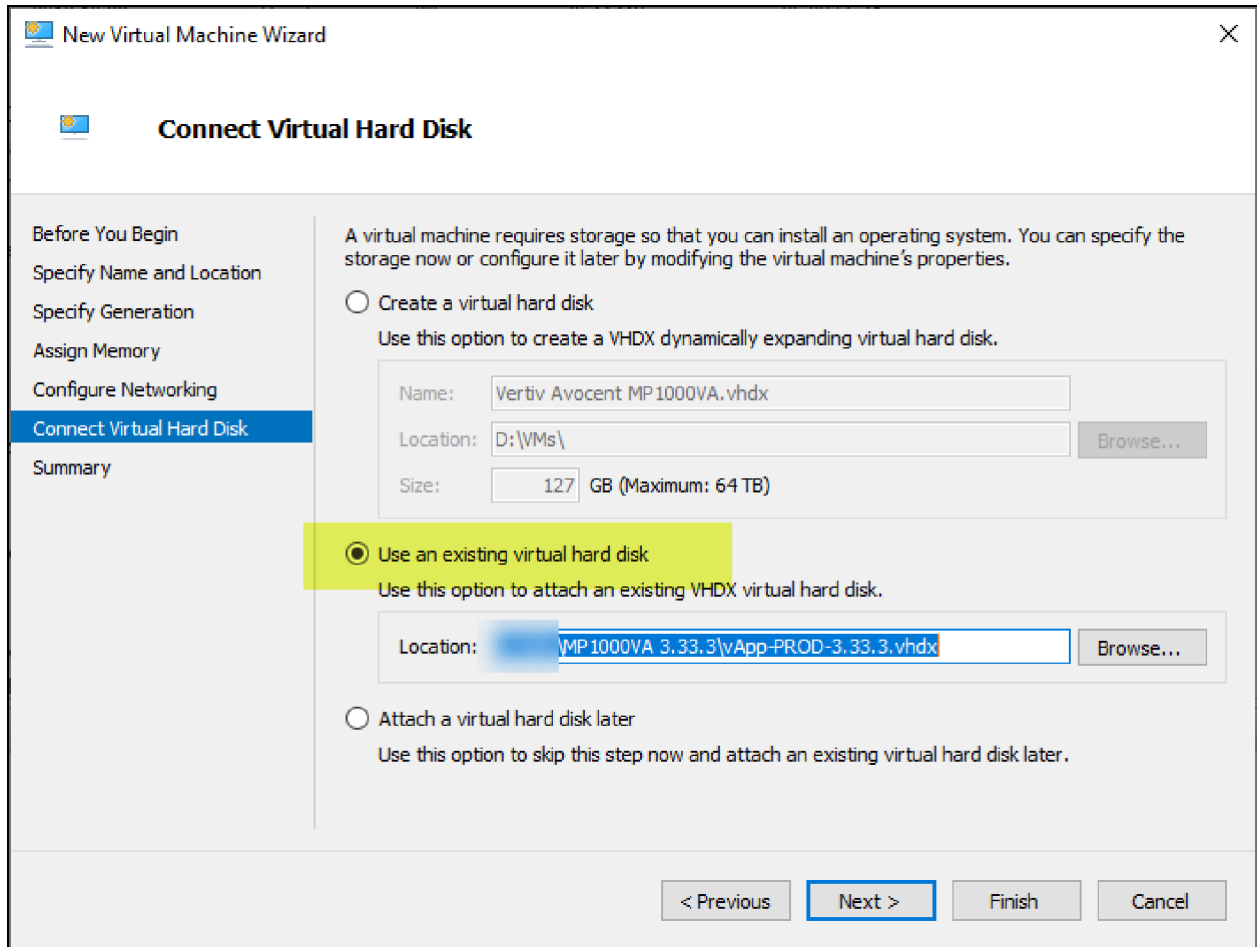
12. Browse to and select the extracted VHDX disk image (the image/file you extracted in Prerequisite on page 5).
13. Click *Next*.

14. In the Summary section of the Wizard, review the Description box and click *Finish* to confirm the details and create the VM.

Figure 3.7   Summary Screen

A progress bar appears to provide the status. When the VM creation process completes, the new VM appears in the Hyper-V Manager list.

15. In the Hyper-V Manager node in the left-hand sidebar, right-click on the new VM and select *Settings*.

16. In the Settings menu, select *Security* under the Hardware section.

17. By default, Secure Boot is enabled. Click the Enable Secure Boot checkbox to disable that option.

NOTE: Secure Boot must be disabled for the VA to boot on Hyper-V. Hyper-V uses Vertiv custom keys and does not support custom Secure Boot keys.

Figure 3.8 Security Screen
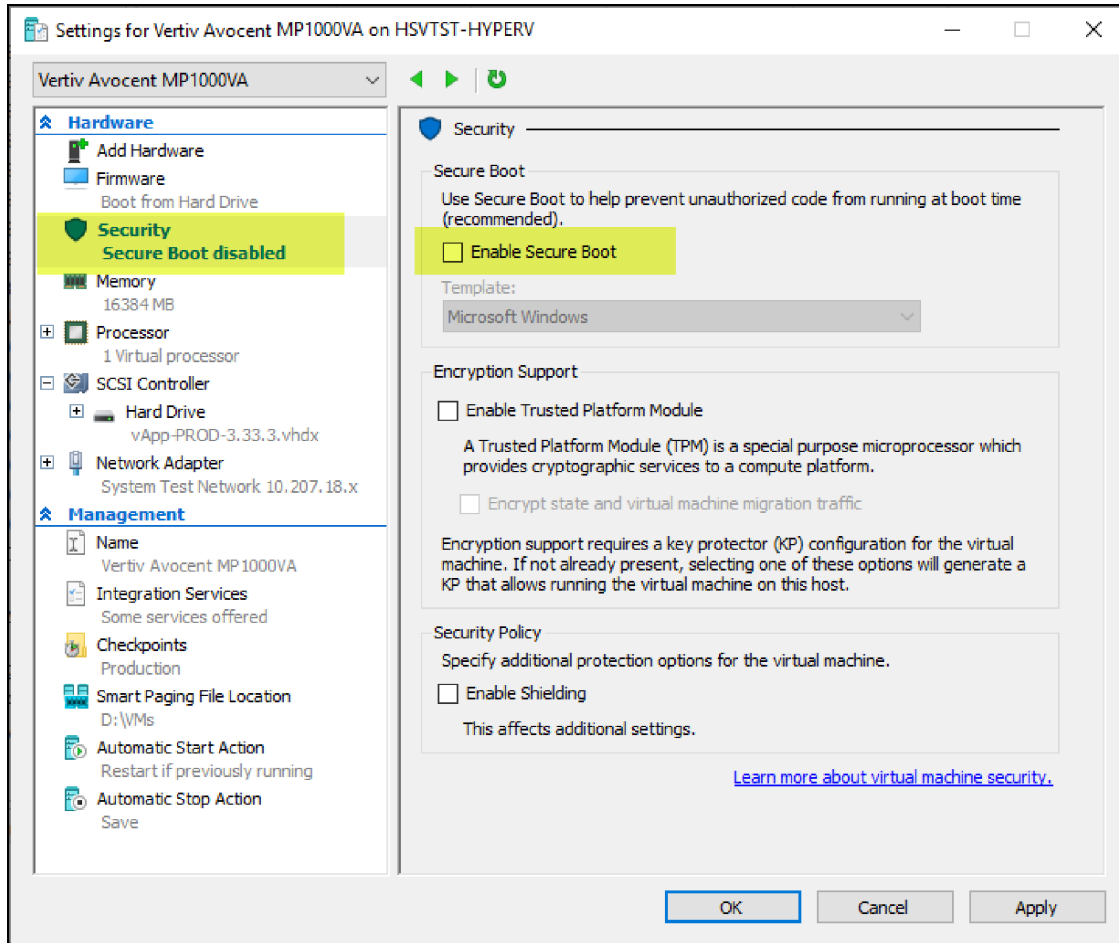
18. In the left-hand sidebar, select *Processor* and click the arrows in the Number of virtual processors field to increase the value to 4.

Figure 3.9 Processor Screen
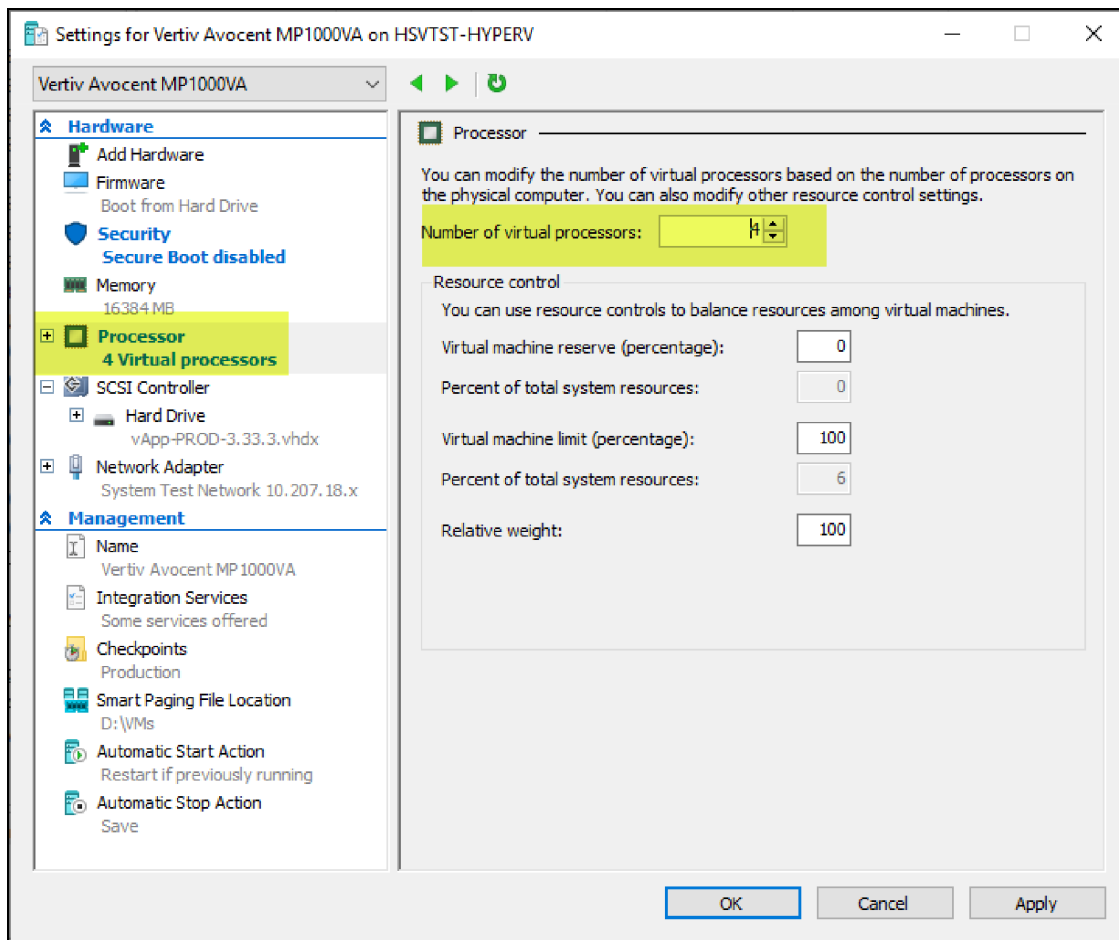
19. Under the Management section in the left-hand sidebar, select *Integration Services*.
20. In the Services list, click the Guest services checkbox to select this option.

Figure 3.10   Integration Services Screen
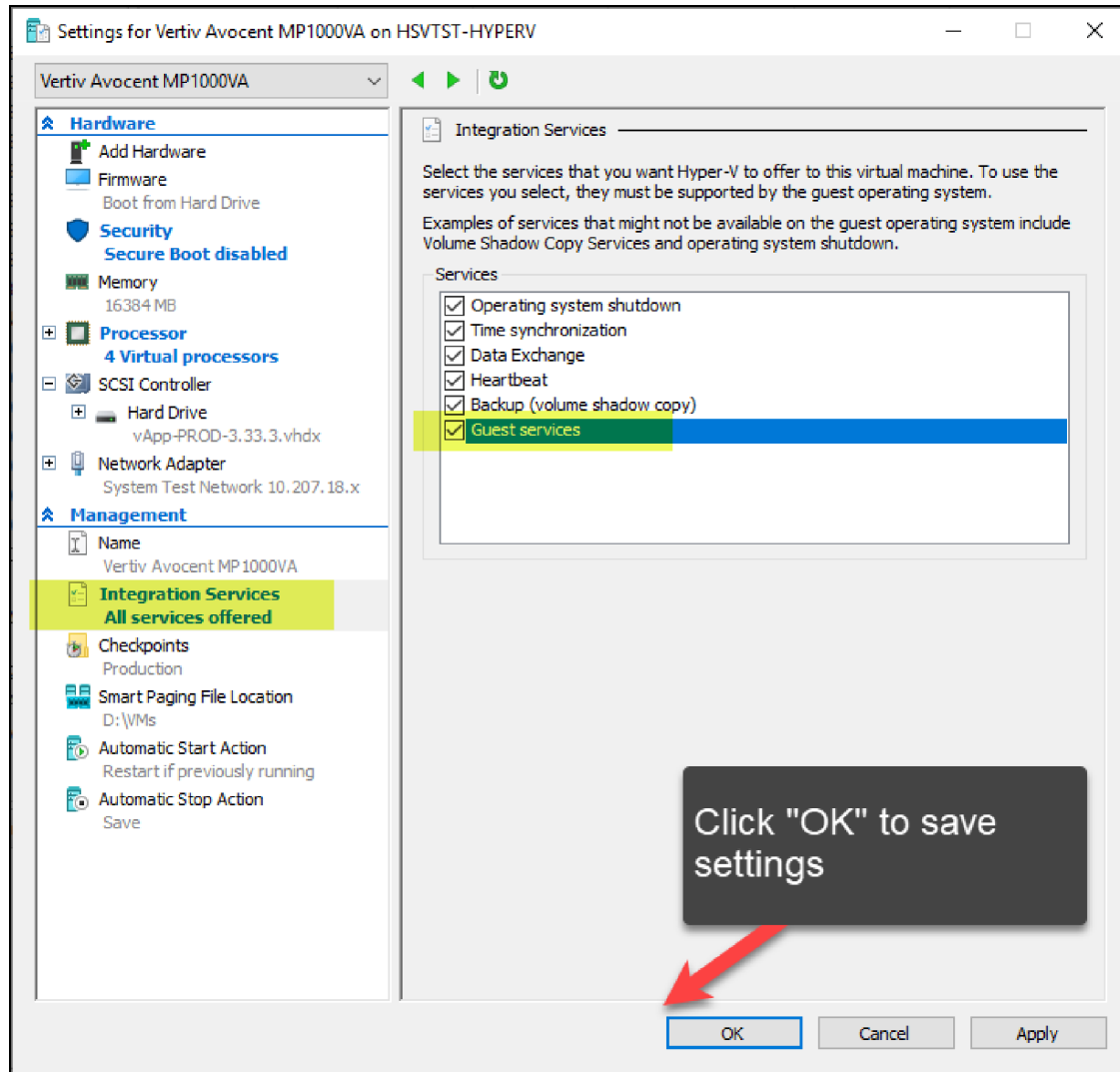
21. Click *OK* to save all settings.
22. After the settings are saved, right-click the VM again and select *Start*. The Avocent MP1000VA Management Platform Virtual Appliance will start and its status will change to *Running*.

NOTE: If the VM fails to boot, verify that Secure Boot is disabled.

3.3 VMware vCenter Server 7.0

3.3.1 Deployment

NOTE: You must have administrator permissions to import, create, and/or configure a Virtual Machine (VM) and to deploy an Open Virtualization Format (OVF).

To deploy the VA:

1. From the vSphere web UI, log in with administrator permissions.

Figure 3.11   VMware vSphere Client Home Page
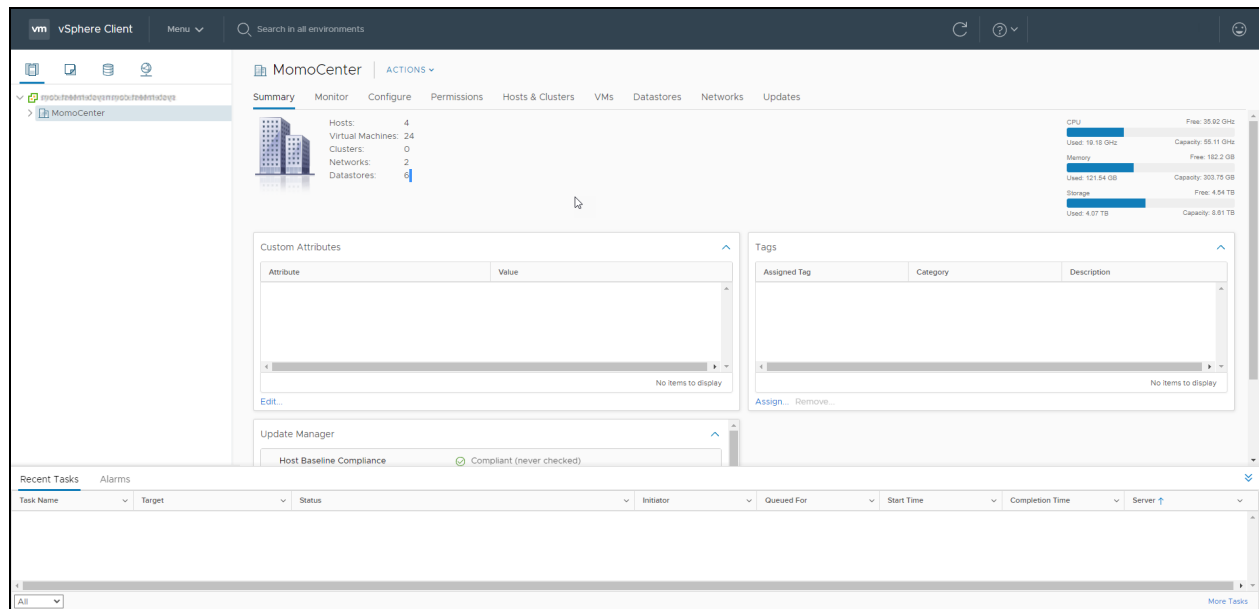
2. In the left- hand sidebar, right-click a data center and select *Deploy OVF Template*.
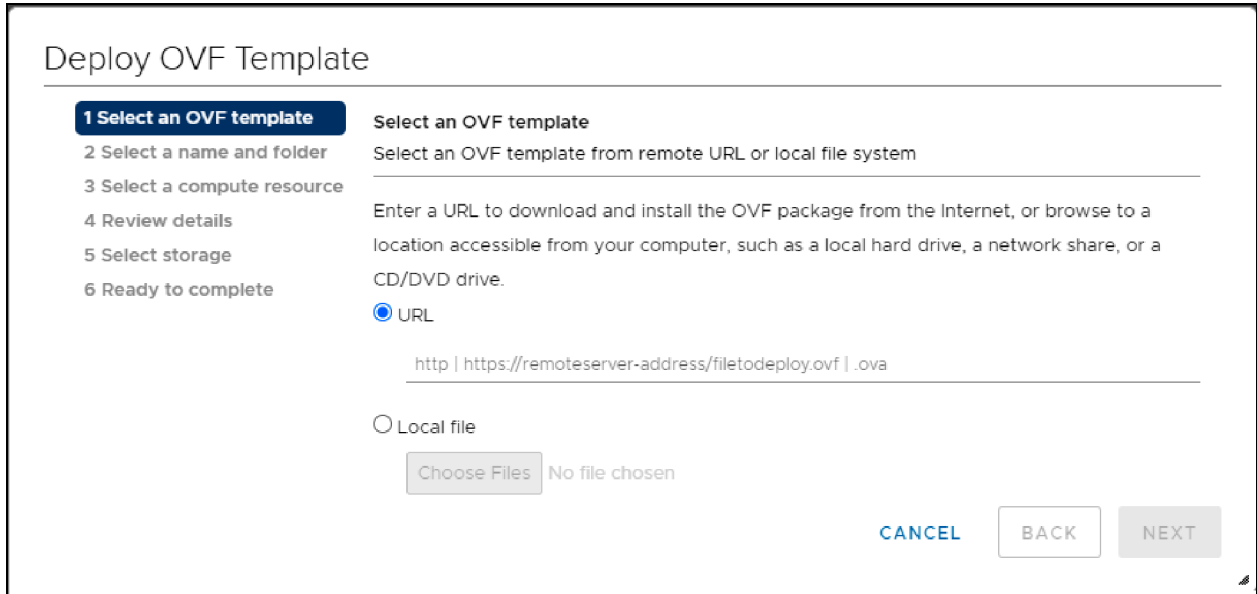
Figure 3.12   Deploy OVF Template

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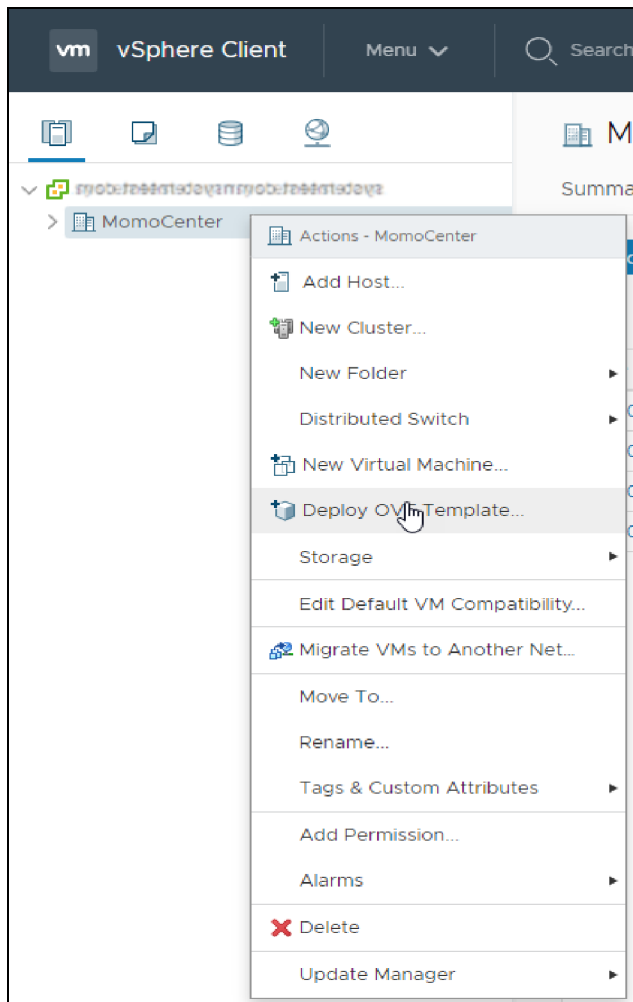
3. From the Select an OVF template tab, click the URL radio button to enter a URL for a remote OVA/OVF repository.

    -or-

    Click the Local file radio button to browse to a local file on your computer.

Figure 3.13   Select an OVF Template Screen

4. Click *Next*.
5. From the Select a name and folder tab, enter a unique name for the VM.

Figure 3.14   Select a Name and Location Screen
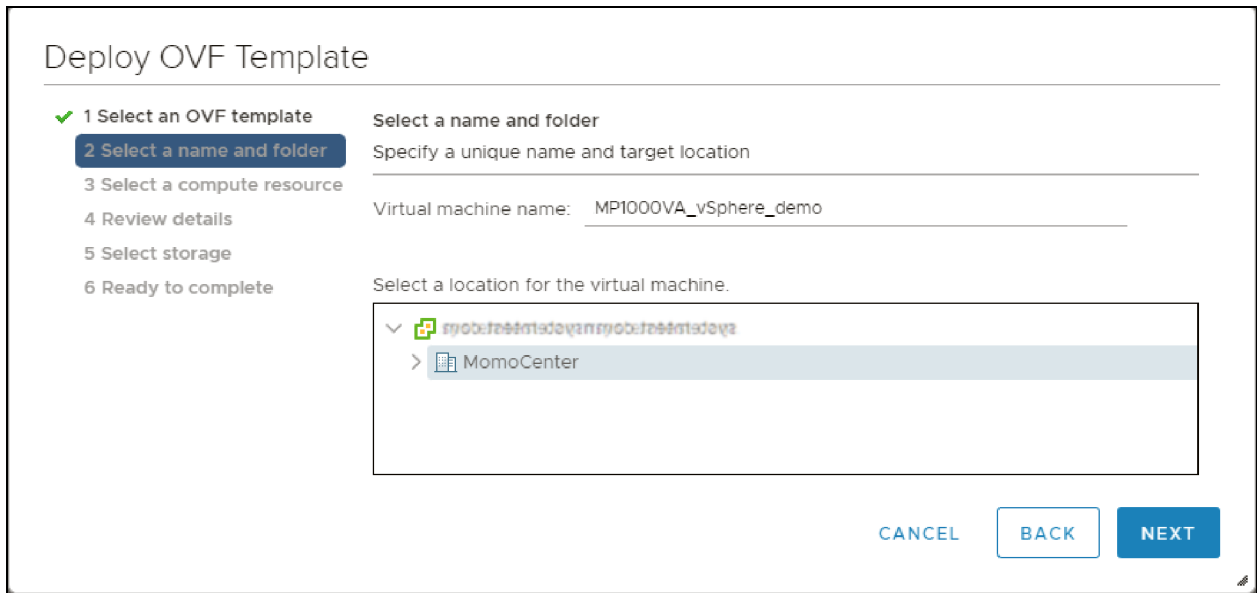
6. Select a location for the VM, then click *Next*.

7.   From the Select a compute resource tab, select a compute resource the VM can support, then click *Next*.

Figure 3.15   Select a Compute Resource Screen
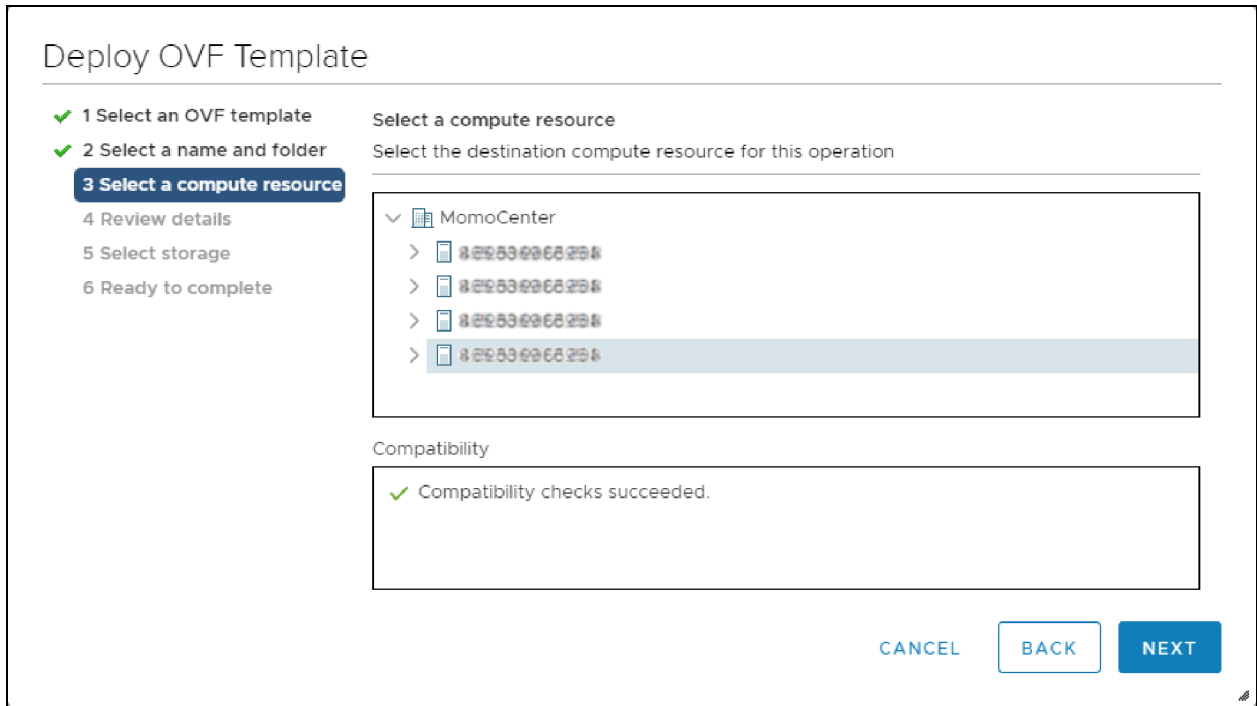
8.   From the Review details tab, verify the details in the provided table, then click *Next*.

Figure 3.16   Review Details Screen
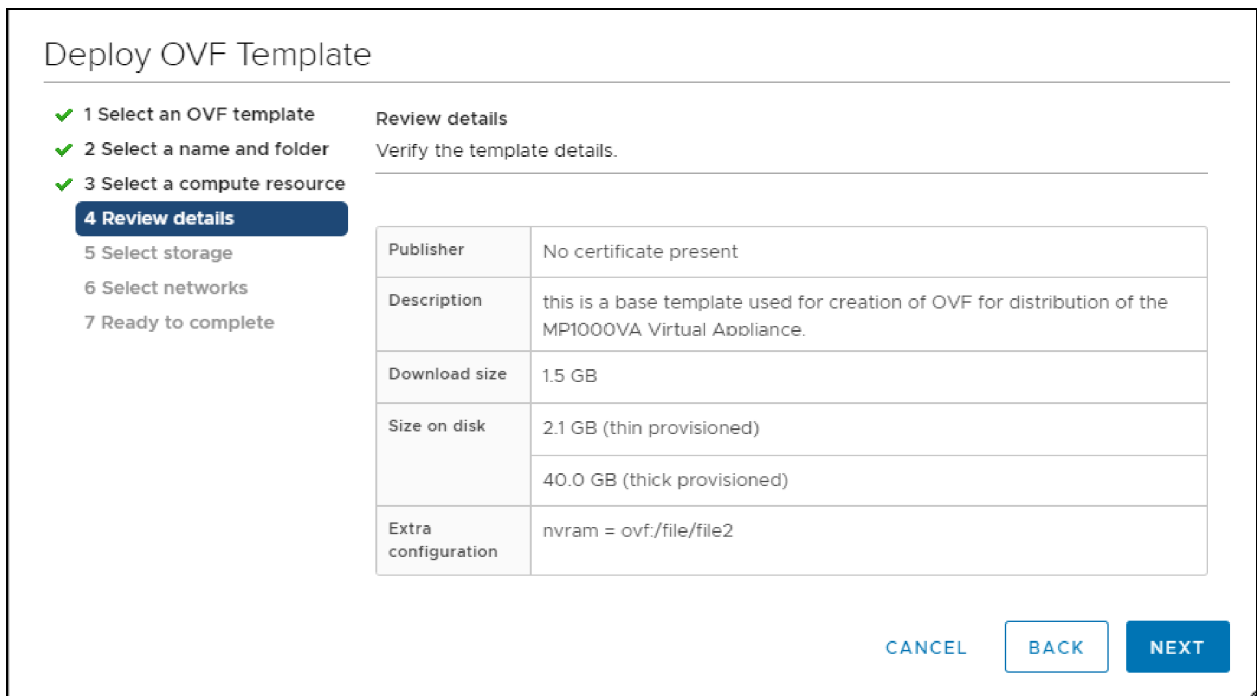
9. From the Select storage tab, use the drop-down menus to select the virtual disk format and VM storage policy.
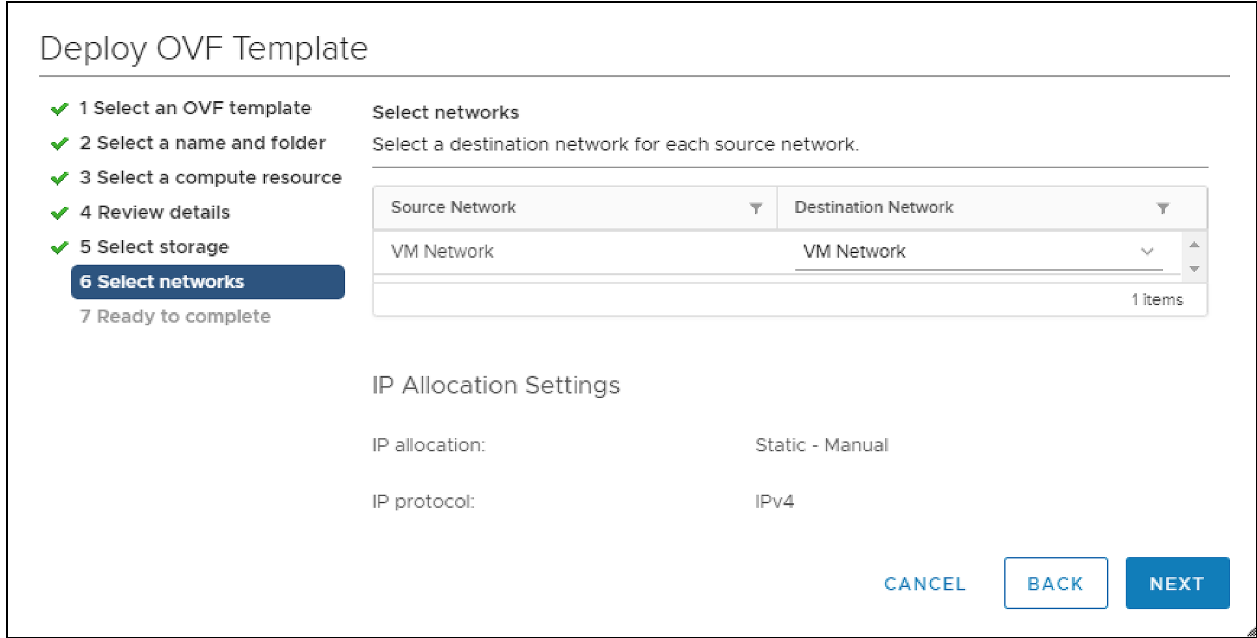
Figure 3.17   Select Storage Screen

10. Select a data store to store the VM's hard drive and configuration files, then click *Next*.

11. From the Select networks tab, use the table to map the VM network to the desired destination network.

NOTE: By default, the VM attempts to obtain an IP address via DHCP upon boot.
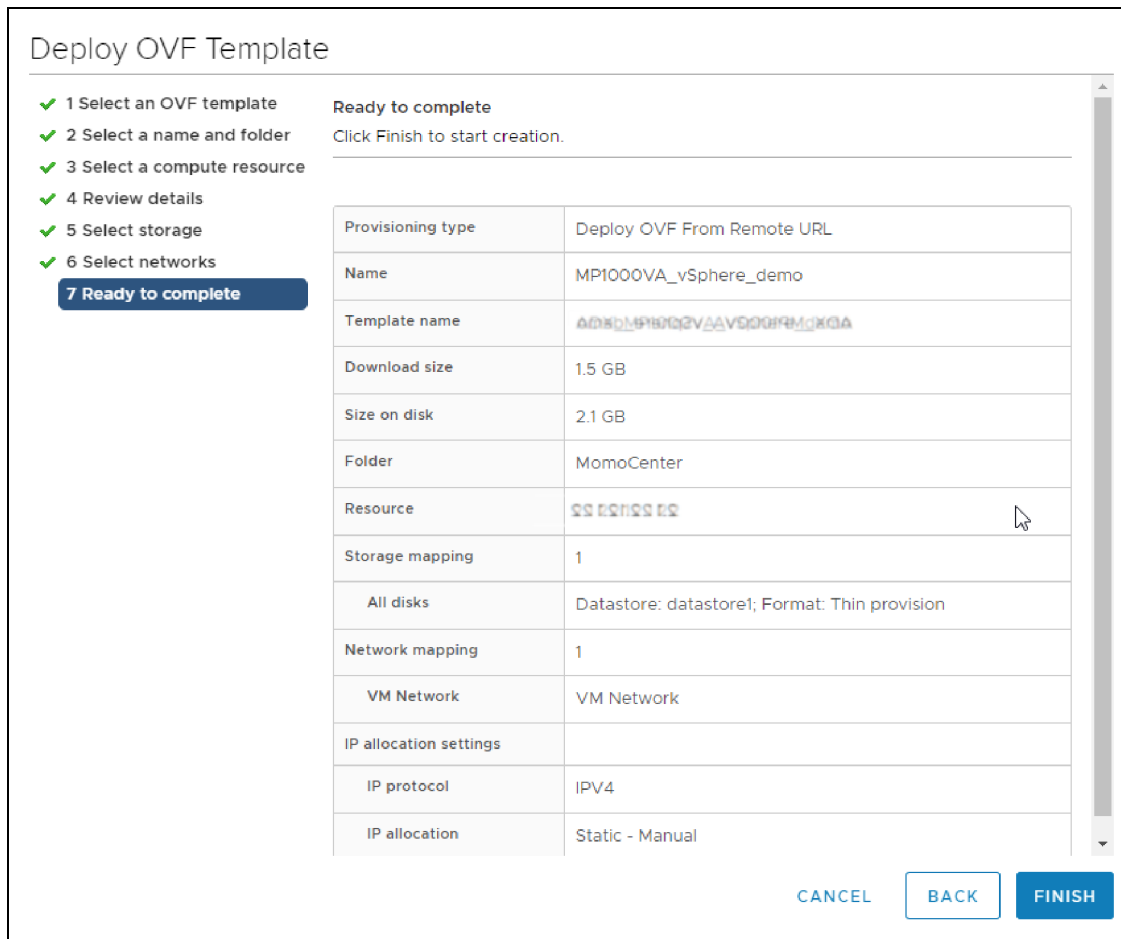
Figure 3.18   Select Networks Screen

12. Click *Next*.

13. From the Ready to complete tab, review the deployment details and click *Finish*.

Figure 3.19 Ready to Complete Screen

14. If you wish to monitor the deployment progress, expand the Recent Tasks panel at the bottom of the vSphere client.

Figure 3.20   Recent Tasks Panel

Figure 3.21   VM Summary with Import Completion Status

15. Once deployment is complete, locate the new VM under your chosen compute resource in the left-hand sidebar.

16. Click the VM name.

17. The VM appears in the main panel. Click the *Power On* button to start the VM.

Figure 3.22   VM Details
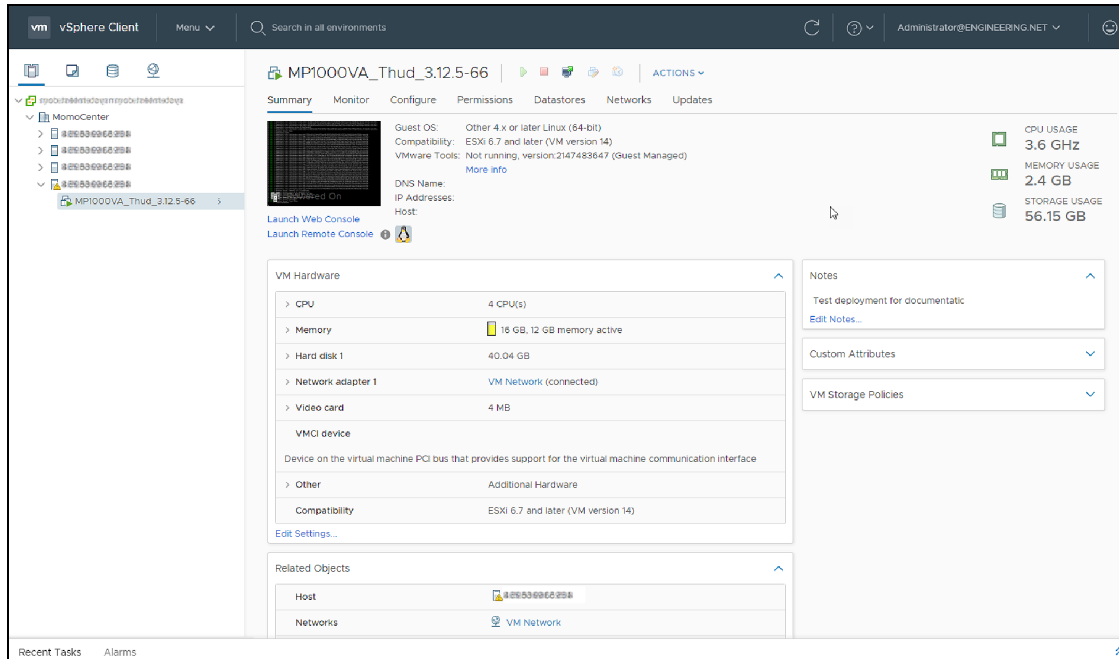
NOTE: The Notes section can be edited via the prompt dialogue that appears when you first connect to the CLI.

3.4 VMware vSphere Hypervisor (ESXi) 7.0

3.4.1 Deployment

NOTE: You must have administrator permissions to import, create, and/or configure a Virtual Machine (VM) and to deploy an Open Virtualization Format (OVF).

To deploy the VA:

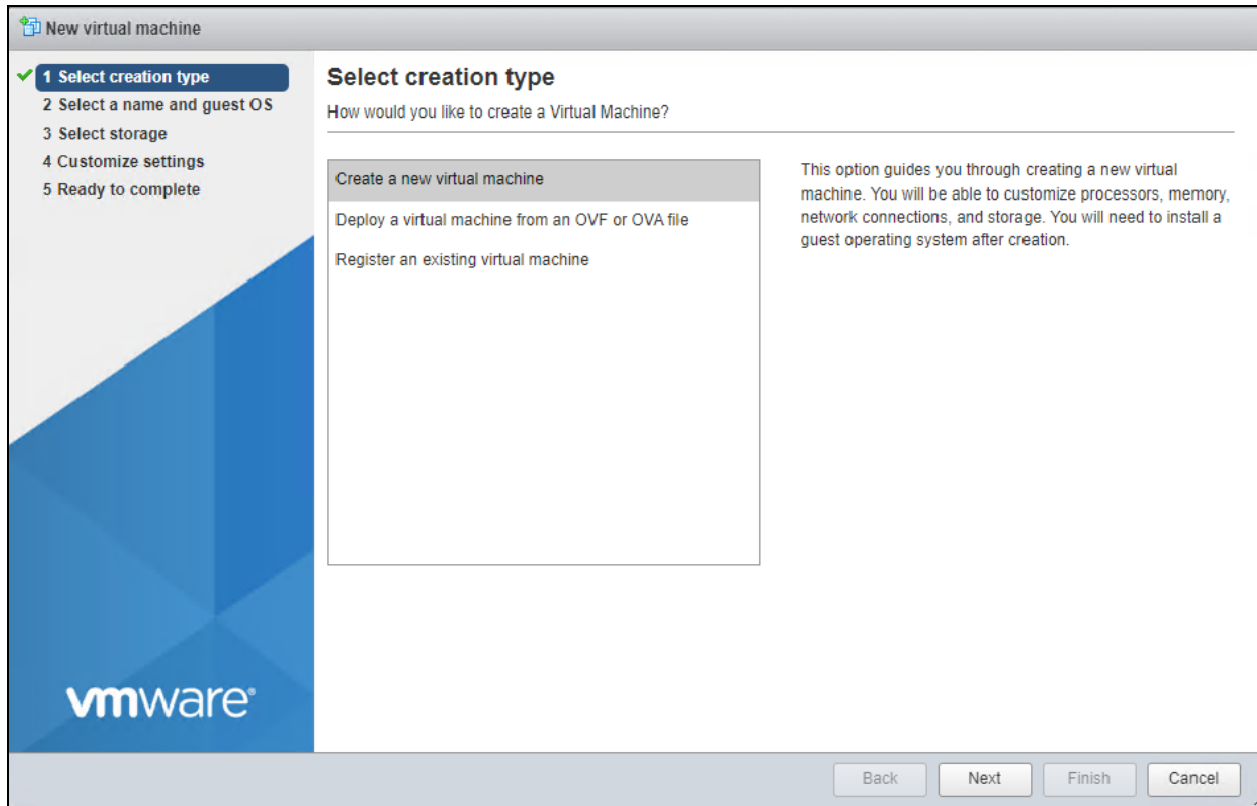1. From the vSphere web UI, log in with administrator permissions.

Figure 3.23   VMware vSphere Hypervisor (ESXi) 7.0 VM Summary

2. Click the *Create / Register VM* button.

3. From the Select creation type tab, click *Deploy a virtual machine from an OVF or OVA file.*

Figure 3.24 Select Creation Type Screen

4. From the Select OVF and VMDK files tab, locate the Avocent MP1000VA Management Platform Virtual Appliance software you downloaded in Installing the Virtual Appliance on page 3.

5. Upload the software file to the ESXi host server.

6. If you do not wish to use the default name, enter a new name for the VM.

7. Click *Next*.

Figure 3.25   Select OVF and VMDK Files Screen
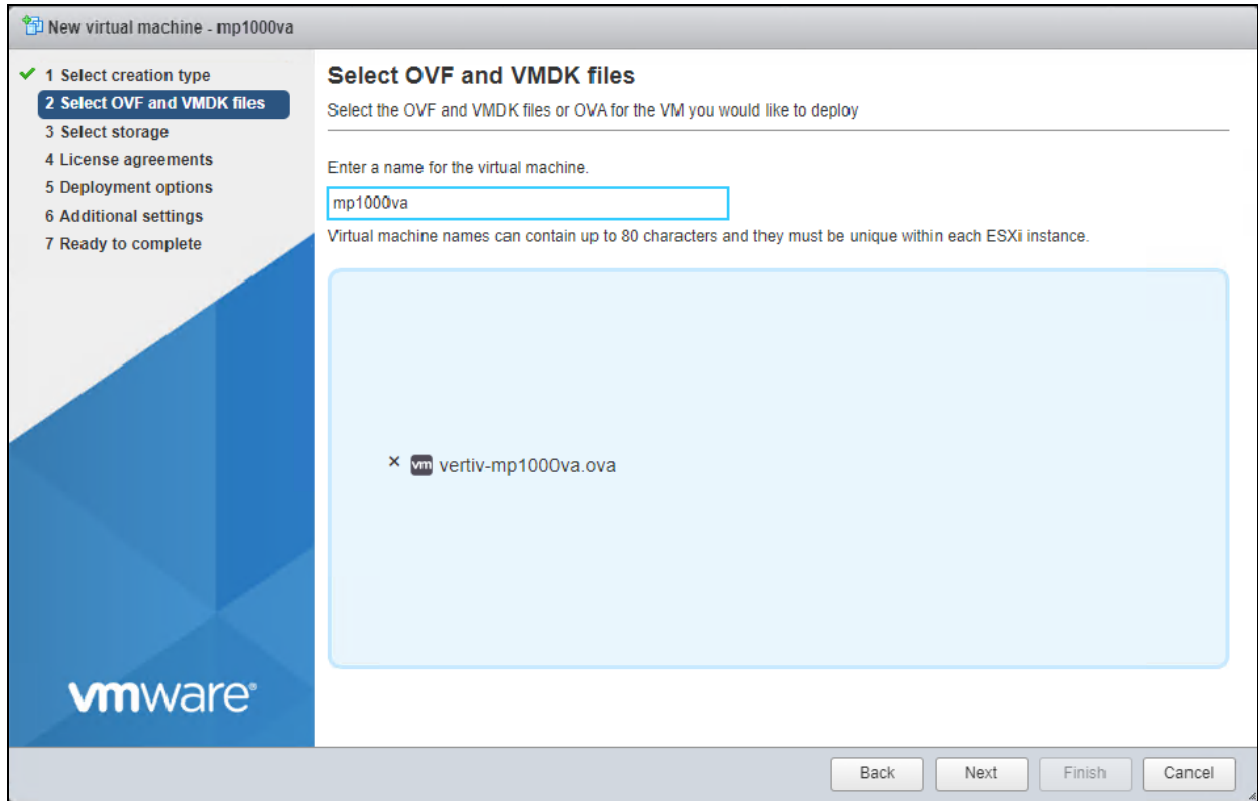
8. From the Select storage tab, select a data store for the VM's hard drive and configuration files, then click *Next*.

Figure 3.26   Select Storage Screen
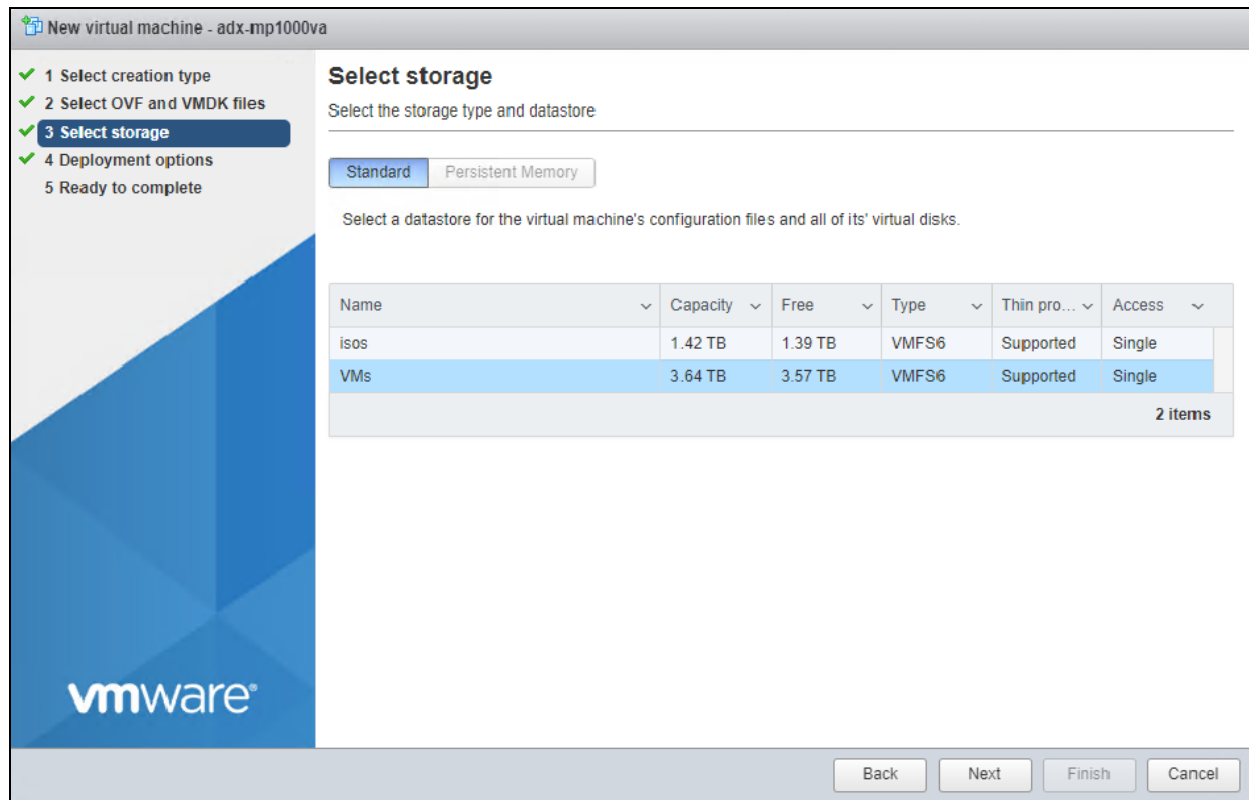
9. From the Deployment options tab, use the drop-down menu to select the VM network to map to the adapter.

NOTE: By default, the VM attempts to obtain an IP address via DHCP upon boot.

10. Select either the Thin or Thick radio button for disk provisioning.
11. Check the Power on automatically box, then click *Next*.

Figure 3.27   Deployment Options Screen

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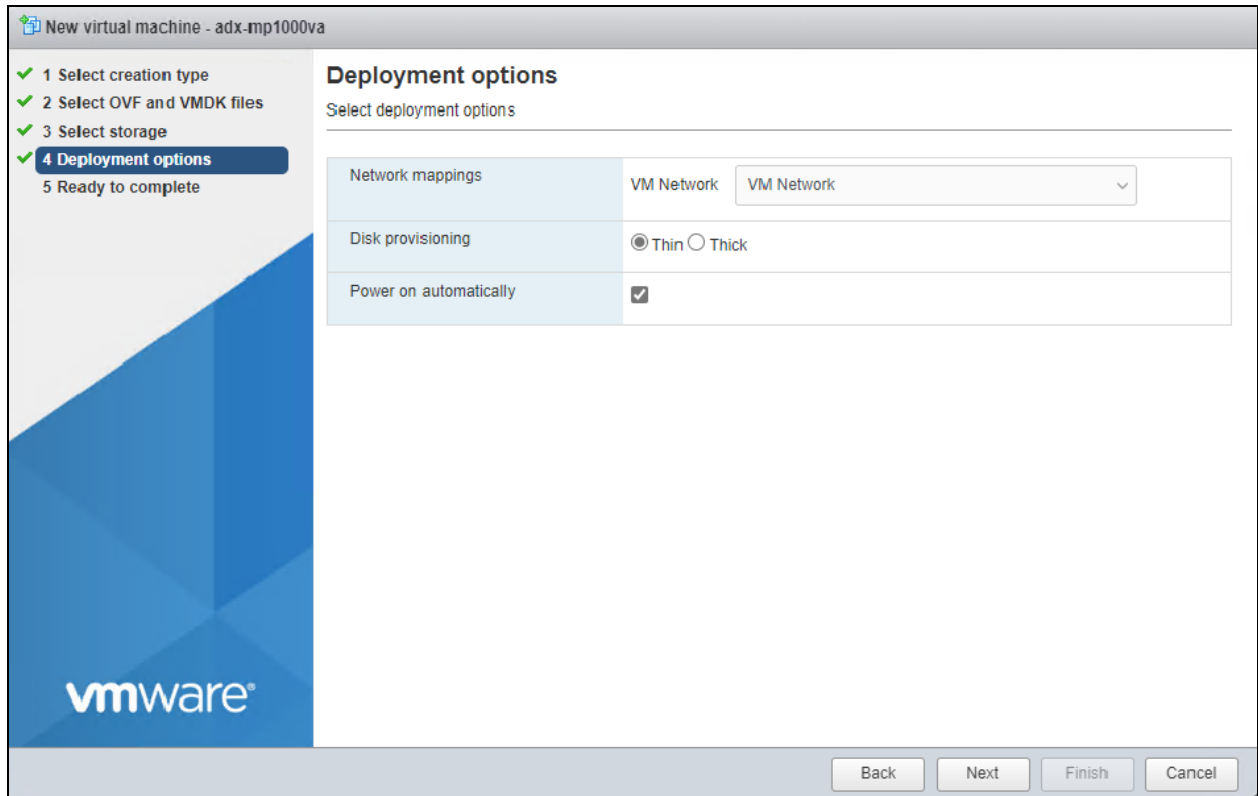
12. From the Ready to complete tab, verify your deployment options, then click *Finish*. The deployment process begins immediately.

⚠️ **CAUTION: Do NOT refresh your browser while the VM is being deployed.**

Figure 3.28   Ready to Complete Screen
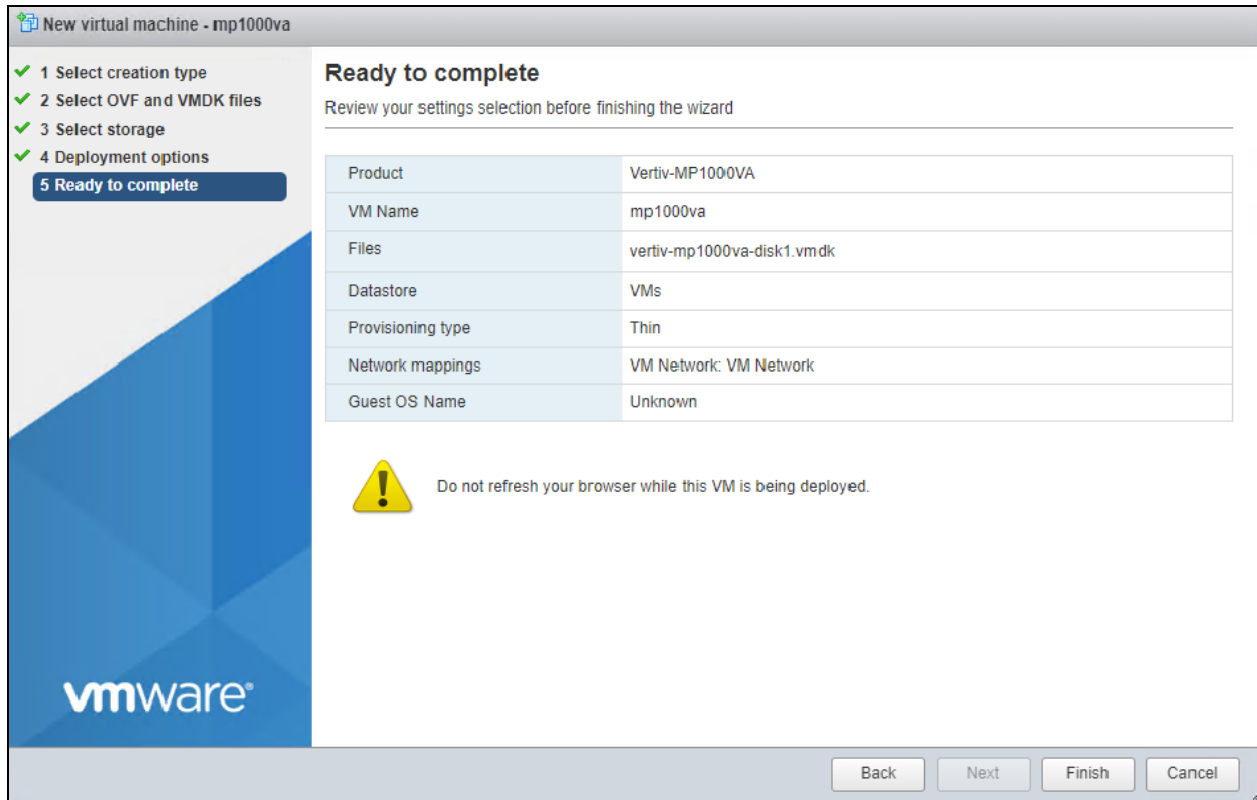
⚠️ **CAUTION: If you receive the error message *A required disk image was missing*, do NOT continue. For troubleshooting information, proceed to the next section.**

13. If you wish to monitor the deployment progress, expand the Recent tasks panel at the bottom of the client.

Figure 3.29   Recent Tasks Panel
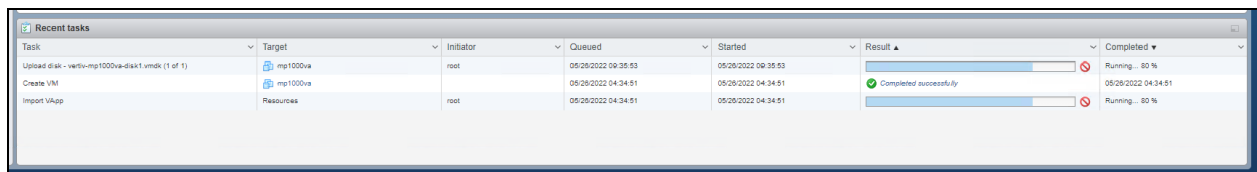
14. Once deployment is complete, locate the new VM in the left-hand sidebar.

15. Click the VM name.

16. The VM appears in the main panel. Click the *Power On* button to start the VM.

Figure 3.30   VM Details After Starting

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3.4.2 Troubleshooting for missing NVRAM disk image

If you are importing an OVA image file into the VMware standalone ESXi host, you may receive an error message indicating a required disk image is missing after clicking *Finish* on the Ready to complete screen.

NOTE: The following screenshot examples use OVA file version 3.17.8. The procedures are the same regardless of the version number.

Figure 3.31   Error Message
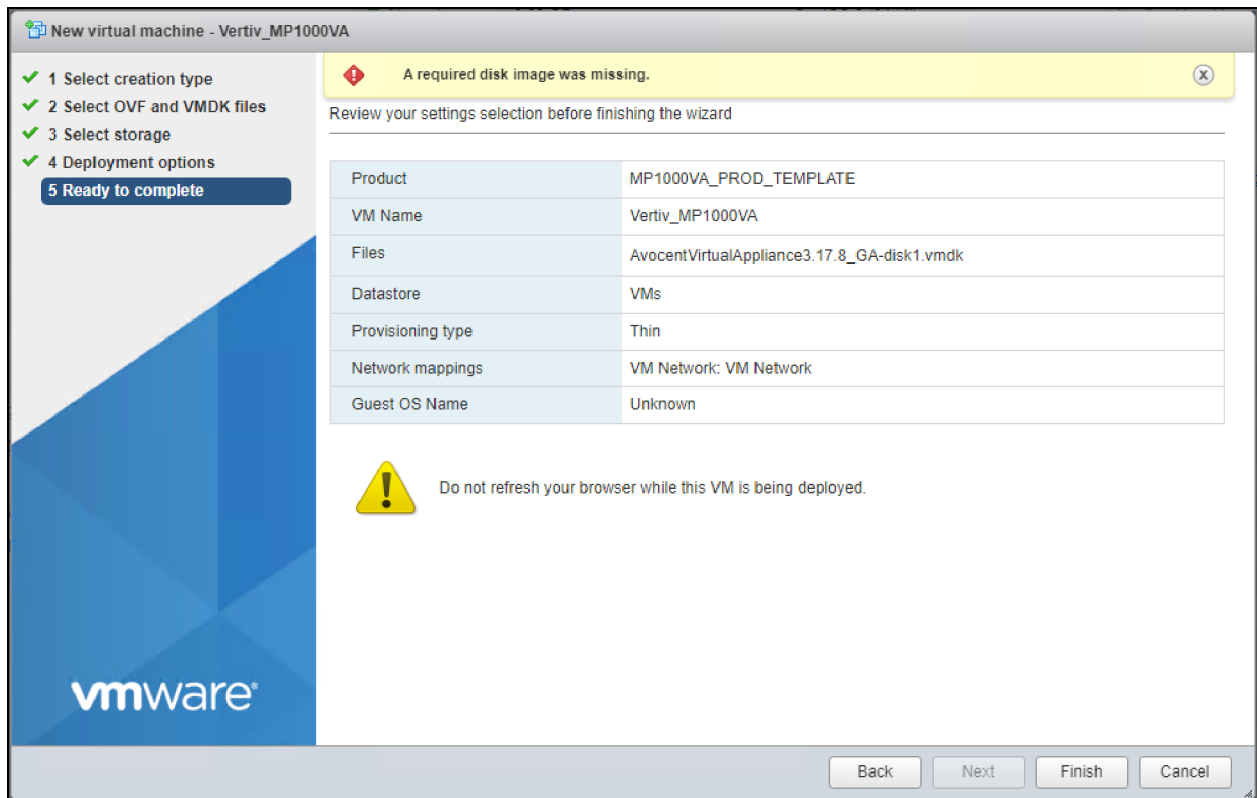
This message indicates you are missing a required NVRAM file. The deployment can still complete successfully without the NVRAM file; however, Secure Boot cannot be validated and the VA will boot into the EFI BIOS. Please refer to the following procedure.

To resolve a missing NVRAM file on ESXi OVA import:

1. Using a TAR file extractor application (such as WinZip or 7Zip), extract the NVRAM file from the OVA archive and place it into the same folder as the OVA file. The extracted file will be the AvocentADXVirtualAppliance<VERSION>-file1.nvram file.

2. From the deployment screen, click *Back* until you are in the Select OVF and VMDK files tab.

3.   In the Select OVF and VMDK files tab, drop the OVA and NVRAM file into the blue file drop box.

Figure 3.32   Upload the NVRAM File
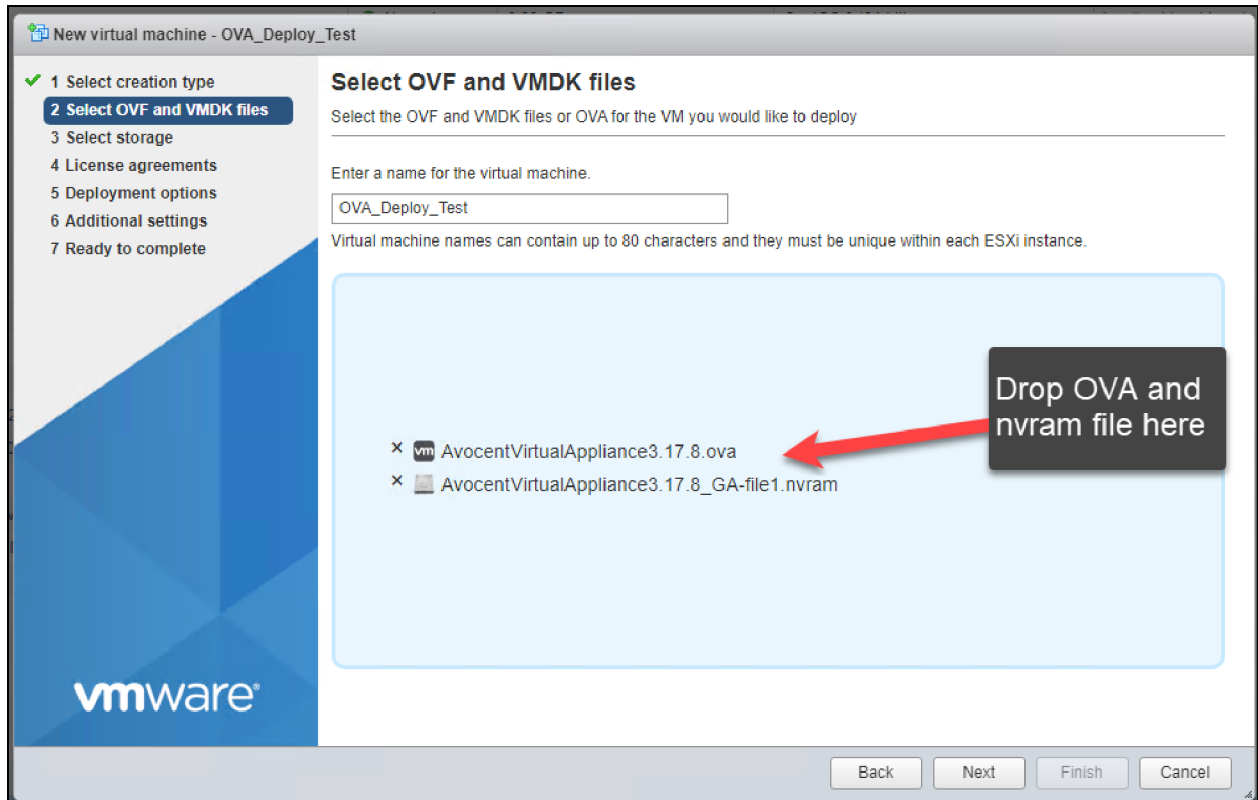
4.   Click *Next* until the Ready to complete screen appears.

NOTE: Do not select *Finish* until all settings are verified.

5.   Click *Finish*. This successfully deploys the .nvram file and enables the Secure Boot feature used when the virtual appliance is booted.

4 Assigning an IP Address

Once the Avocent MP1000VA Management Platform Virtual Appliance is deployed, an IP address must be assigned. The management platform uses an IP address to uniquely identify itself to IP-based target devices. By default, an IP address is obtained via DHCP. You can also manually configure a static IP address.

⚠ **CAUTION: The Avocent MP1000VA Management Platform Virtual Appliance only supports one virtual network interface. Additional interfaces will not be recognized by the application and may cause adverse effects, depending on the DHCP client/route metrics.**

Initially, the Avocent MP1000VA Management Platform Virtual Appliance must be accessed via the Command Line Interface (CLI) to update your password. Once you log in with your new credentials, you can view the DHCP-assigned IP address or configure a static IP address. You will then use this IP address to access the web UI. See the following procedures to configure the network.

To view the DHCP-assigned IP address or to configure a static IP address:

NOTE: When the VA initially boots, it may take time for the services to start before the CLI responds. If a *Still Starting* message appears, wait for it to clear before proceeding.

1. From the CLI, login using **admin** as the username and password. You are prompted to change the password.

Figure 4.1 Obsidian Login Screen
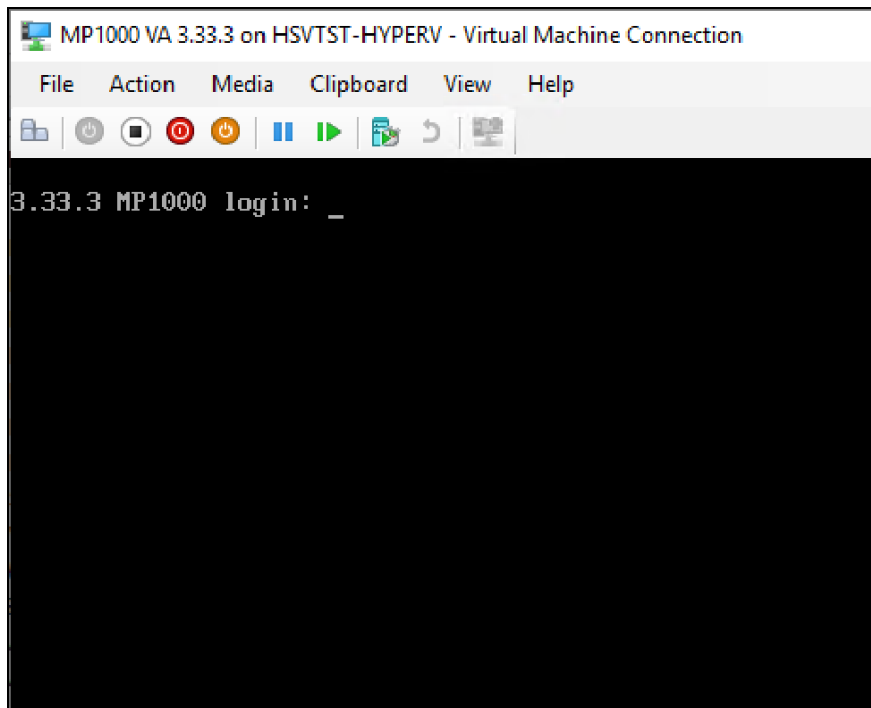
2. Enter **1** to select the Show/Configure Network Settings option.

Figure 4.2 Show/Configure Network Settings


```
Options:
0  Exit the CLI
1  Show/Configure Network Settings
2  Show Thermal and Power Data
3  Show/Configure Chassis
4  Show/Configure Manager
5  Change Admin Password
6  Require Admin Password Change on Next Login
7  Update Firmware
8  Reset to Factory Defaults
9  Shutdown
10 Reboot
11 Diagnostics
```

3. Enter **1** to select the eth0 option.

Figure 4.3 Network Information


```
:: /network
Options:
0  Return to the Root Menu
1  eth0 172.17.243.5
Select an option:
/network> 1

:: /network/eth0
Interface ID    : eth0
Enabled         : True
MAC Address     : 00:15:5d:38:01:00
DHCP or Static : DHCP
IP Address      : 172.17.243.5
Prefix Length  : 20
Gateway         : 172.17.240.1
Options:
.. Back to Network Interfaces
0  Return to the Root Menu
1  Use DHCP
2  Configure Static Address
Select an option:
/network/eth0> _
```

NOTE: The DHCP-assigned IP address appears once this option is selected. Access the web UI by entering **https://** and the IP address into a web browser.

NOTE: If you cannot log into the web UI, the time settings may be incorrect. Ensure you are on a network with a reachable NTP server or set the time manually. For more information, see the Vertiv™ Avocent® MP1000 Management Platform User Guide.

4. To assign a static IP address, enter **2** to select the Configure Static Address option, then follow the on-screen prompts to configure the IP, subnet and gateway.

5. Enter **0** (zero) to select the Return to the Root Menu option.

Figure 4.4 Return to the Root Menu

```
:: /network
Options:
0   Return to the Root Menu
1   eth0 172.17.243.5
Select an option:
/network> 1

:: /network/eth0
Interface ID    : eth0
Enabled         : True
MAC Address     : 00:15:5d:38:01:00
DHCP or Static  : DHCP
IP Address      : 172.17.243.5
Prefix Length   : 20
Gateway         : 172.17.240.1
Options:
.. Back to Network Interfaces
0   Return to the Root Menu
1   Use DHCP
2   Configure Static Address
Select an option:
/network/eth0> _
```

6. Open a web browser and type **https://** and the static IP address to access the web UI.

For information on configuring your network from the web UI, see the Vertiv™ Avocent® MP1000 Management Platform User Guide.

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5 Next Steps

With the completion of this guide, the VA has been installed, deployed and assigned an IP address. However, you cannot launch any target sessions until you obtain your licenses for the management platform and target devices.

To learn how to obtain your licenses and configure the web UI, refer to the Vertiv™ Avocent® MP1000 Management Platform User Guide, which can be found on the Vertiv™ Avocent® MP1000 Management Platform Virtual Appliance product page under the *Documents & Downloads* tab.

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