

ExtremeCloud™ Appliance

VE6120H Virtual Appliance Installation Guide

9036608-00 RevAA
February 2020



Copyright © 2020 Extreme Networks, Inc. All rights reserved.

Legal Notice

Extreme Networks, Inc. reserves the right to make changes in specifications and other information contained in this document and its website without prior notice. The reader should in all cases consult representatives of Extreme Networks to determine whether any such changes have been made.

The hardware, firmware, software or any specifications described or referred to in this document are subject to change without notice.

Trademarks

Extreme Networks and the Extreme Networks logo are trademarks or registered trademarks of Extreme Networks, Inc. in the United States and/or other countries.

All other names (including any product names) mentioned in this document are the property of their respective owners and may be trademarks or registered trademarks of their respective companies/owners.

For additional information on Extreme Networks trademarks, please see:

www.extremenetworks.com/company/legal/trademarks

Open Source Declarations

Some software files have been licensed under certain open source or third-party licenses. End-user license agreements and open source declarations can be found at:

www.extremenetworks.com/support/policies/software-licensing



Table of Contents

Preface.....	iv
Conventions.....	iv
Text Conventions.....	iv
Documentation and Training.....	vi
Providing Feedback.....	vi
Getting Help.....	vi
Subscribe to Service Notifications.....	vii
Virtual Appliance Deployment.....	8
Deployment Requirements.....	8
Connectivity Requirements.....	9
Deploy the VE6120H on a Host Platform.....	9
Download the VE6120H Image.....	10
Unpack ZIP Files on the Host.....	10
Access the Hyper-V Host.....	10
Install the Virtual Appliance Image.....	13
Configure the Network Adapter.....	21
Virtual Appliance Configuration.....	25
Access the Virtual Appliance Console.....	25
Configure the Virtual Appliance Using the Basic Configuration Wizard.....	27
Set Up the Virtual Appliance Using the Basic Configuration Wizard.....	28
Current Data Port Settings.....	28
Current Host Attributes Settings.....	29
Current Global Default Gateway Settings.....	29
Current Time Settings.....	30
Upgrade the Virtual Appliance Software.....	31
Activate the ExtremeCloud Appliance.....	33
Configure Virtual Switches for the Virtual Appliance.....	35
Create a New Virtual Switch on the Host Server.....	35
Disable Receive Segment Coalescing (RSC) on a Virtual Switch (Windows Server 2019).....	38
Clone a Deployed Virtual Appliance.....	38
Shut Down and Restart a Virtual Machine.....	39
Shut Down and Restart a Virtual Machine Using the Graphical User Interface (GUI).....	39
Shut Down a Virtual Machine on a Hyper-V Server.....	40
Index.....	41



Preface

This section describes the text conventions used in this document, where you can find additional information, and how you can provide feedback to us.

Conventions

This section discusses the conventions used in this guide.

Text Conventions

Unless otherwise noted, information in this document applies to all supported environments for the products in question. Exceptions, like command keywords associated with a specific software version, are identified in the text.

When a feature, function, or operation pertains to a specific hardware product, the product name is used. When features, functions, and operations are the same across an entire product family, such as ExtremeSwitching switches or SLX routers, the product is referred to as *the switch* or *the router*.

Table 1: Notes and warnings




Icon	Notice type	Alerts you to...
	Tip	Helpful tips and notices for using the product.
	Note	Useful information or instructions.
	Important	Important features or instructions.

Table 1: Notes and warnings (continued)



Icon	Notice type	Alerts you to...
	Caution	Risk of personal injury, system damage, or loss of data.
	Warning	Risk of severe personal injury.

Table 2: Text

Convention	Description
<code>screen displays</code>	This typeface indicates command syntax, or represents information as it appears on the screen.
The words <i>enter</i> and <i>type</i>	When you see the word <i>enter</i> in this guide, you must type something, and then press the Return or Enter key. Do not press the Return or Enter key when an instruction simply says <i>type</i> .
Key names	Key names are written in boldface, for example Ctrl or Esc . If you must press two or more keys simultaneously, the key names are linked with a plus sign (+). Example: Press Ctrl+Alt+Del
<i>Words in italicized type</i>	Italics emphasize a point or denote new terms at the place where they are defined in the text. Italics are also used when referring to publication titles.
NEW!	This symbol identifies new content. In a PDF, this is searchable text.

Table 3: Command syntax

Convention	Description
bold text	Identifies command names, keywords, and command options.
<i>italic</i> text	Identifies a variable.
[]	Syntax components displayed within square brackets are optional. Default responses to system prompts are enclosed in square brackets.
{ x y z }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, such as passwords, are enclosed in angle brackets.
...	Repeat the previous element, for example, <i>member</i> [<i>member</i> ...].
\	Indicates a “soft” line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

Documentation and Training

Find Extreme Networks product information at the following locations:

[Current Product Documentation](#)

[Release Notes](#)

[Hardware/software compatibility matrices](#) for Campus and Edge products

[Supported transceivers and cables](#) for Data Center products

[Other resources](#), like white papers, data sheets, and case studies

Extreme Networks offers product training courses, both online and in person, as well as specialized certifications. For details, visit www.extremenetworks.com/education/.

Providing Feedback

The Information Development team at Extreme Networks has made every effort to ensure the accuracy and completeness of this document. We are always striving to improve our documentation and help you work better, so we want to hear from you. We welcome all feedback, but we especially want to know about:

- Content errors, or confusing or conflicting information.
- Improvements that would help you find relevant information in the document.
- Broken links or usability issues.

If you would like to provide feedback, you can do so in three ways:

- In a web browser, select the feedback icon and complete the online feedback form.
- Access the feedback form at <https://www.extremenetworks.com/documentation-feedback/>.
- Email us at documentation@extremenetworks.com.

Provide the publication title, part number, and as much detail as possible, including the topic heading and page number if applicable, as well as your suggestions for improvement.

Getting Help

If you require assistance, contact Extreme Networks using one of the following methods:

[Extreme Portal](#)

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

[The Hub](#)

A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

[Call GTAC](#)

For immediate support: (800) 998 2408 (toll-free in U.S. and Canada) or 1 (408) 579 2826. For the support phone number in your country, visit: www.extremenetworks.com/support/contact

Before contacting Extreme Networks for technical support, have the following information ready:

- Your Extreme Networks service contract number, or serial numbers for all involved Extreme Networks products
- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

Subscribe to Service Notifications

You can subscribe to email notifications for product and software release announcements, Vulnerability Notices, and Service Notifications.

1. Go to www.extremenetworks.com/support/service-notification-form.
2. Complete the form (all fields are required).
3. Select the products for which you would like to receive notifications.



Note

You can modify your product selections or unsubscribe at any time.

4. Select **Submit**.



Virtual Appliance Deployment

[Deployment Requirements on page 8](#)

[Connectivity Requirements on page 9](#)

[Deploy the VE6120H on a Host Platform on page 9](#)

The virtual appliance can be deployed on the following platforms:

- Windows server 2016 or later version.
- Windows server 2016 core with Hyper-V role only.
- Standalone Hyper-V 2016 or later version.

Deployment Requirements

The entire virtual appliance is delivered as a .ZIP file, that needs to be installed once. Software upgrades for the virtual appliance are delivered in files with .spe extensions.



Note

You only need to install the “.zip” file when you first install VE6120H. All subsequent upgrades can be performed using the standard appliance upgrade procedure to apply a “.spe” file. Refer to the [Extreme Cloud Appliance User Guide](#) for more information about upgrading VE6120H.

The Virtual Appliance is configured with one Ethernet interface for administration and two network adapters Ethernet interfaces for forwarding payload traffic.

Configuration option:

- Small reflects the default configuration for VE6120H.

Table 4: Virtual ExtremeCloud Appliances on VE6120H

Extreme application	VE6120H		
	Small	Medium	Large
Total access points managed in standalone mode	50	250	500
Additional access points supported in high-availability mode	50	250	500

Table 4: Virtual ExtremeCloud Appliances on VE6120H (continued)

Extreme application	VE6120H		
Total managed access points per appliance pair	100	500	1000
Total switches managed per appliance	50 or 100	100 or 200	200 or 400
Total simultaneous users in standalone mode	1000	4000	8000
Additional simultaneous users supported in high-availability mode	1000	4000	8000
Total simultaneous users per appliance pair	2000	8000	16000
Hardware requirements			
CPU	4 (4 distinct physical cores or 2 cores with hyperthreading)	6	8
RAM (GB)	8	16	24
Hard disk (GB)	80	80	80

Connectivity Requirements

The Virtual Appliance has one management interface (Admin) and two data plane interfaces (PhysAdapter1, and PhysAdapter2). If all three interfaces are used, they must be connected to separate external virtual switches on the Hyper-V host.



Tip

The best practice is to configure the virtual switches before installing the appliance for ease of installation.

For more information, see [Create a New Virtual Switch on the Host Server](#) on page 35 for instructions on how to create and configure virtual switches that can be used by the Virtual Appliance's network adapter ports.

Deploy the VE6120H on a Host Platform

About This Task

To deploy the VE6120H on a host:

Procedure

1. [Download the VE6120H image.](#)
2. [Unpack the ZIP files on the Hyper-V platform.](#)
3. [Access the Hyper-V host.](#)
4. [Install the virtual appliance image.](#)
5. [Configure the network adapter.](#)

Download the VE6120H Image

About This Task

Download the VE6120H virtual appliance software image to your Hyper-V host.

Procedure

1. Access the VE6120H download page at <https://extremeportal.force.com>.
2. Download the image from **Downloads > Downloads Home** tab.
 - a. Log into the **Downloads Home** using your Extreme Portal login credentials.
 - b. Type VE6120H in the search tab and select the search icon. The image list is displayed.
 - c. Download the latest VE6120H virtual appliance image.

Unpack ZIP Files on the Host

About This Task

After you download the image from the website, unpack the files to the host.

Procedure

1. Locate the ZIP file on your computer.
2. Double-click the ZIP file.
3. Select a folder on the host machine, and unpack the ZIP files which contain the following files or directories:
 - VE6120H
 - Snapshots
 - Virtual hard disk
 - Virtual machines

Access the Hyper-V Host

About This Task

The instructions to access the host are for computers using windows-based operating system.

Procedure

1. Launch **Remote Desktop Connection** application.
The connection screen is displayed.

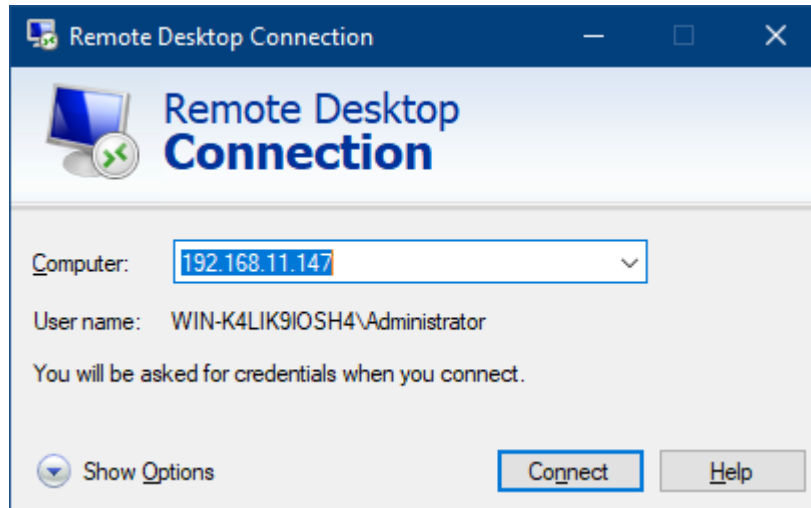


Figure 1: Remote Desktop Application connection screen

2. On the login screen:
 - a. Type the IP address of the Hyper-V server in the computer field.
 - b. Select **Connect**.
 - c. Select **Use Another Account**.
 - d. Select **Ok**.
 - e. Enter the username and password of an account that has full admin access.
 - f. Select **Ok**.

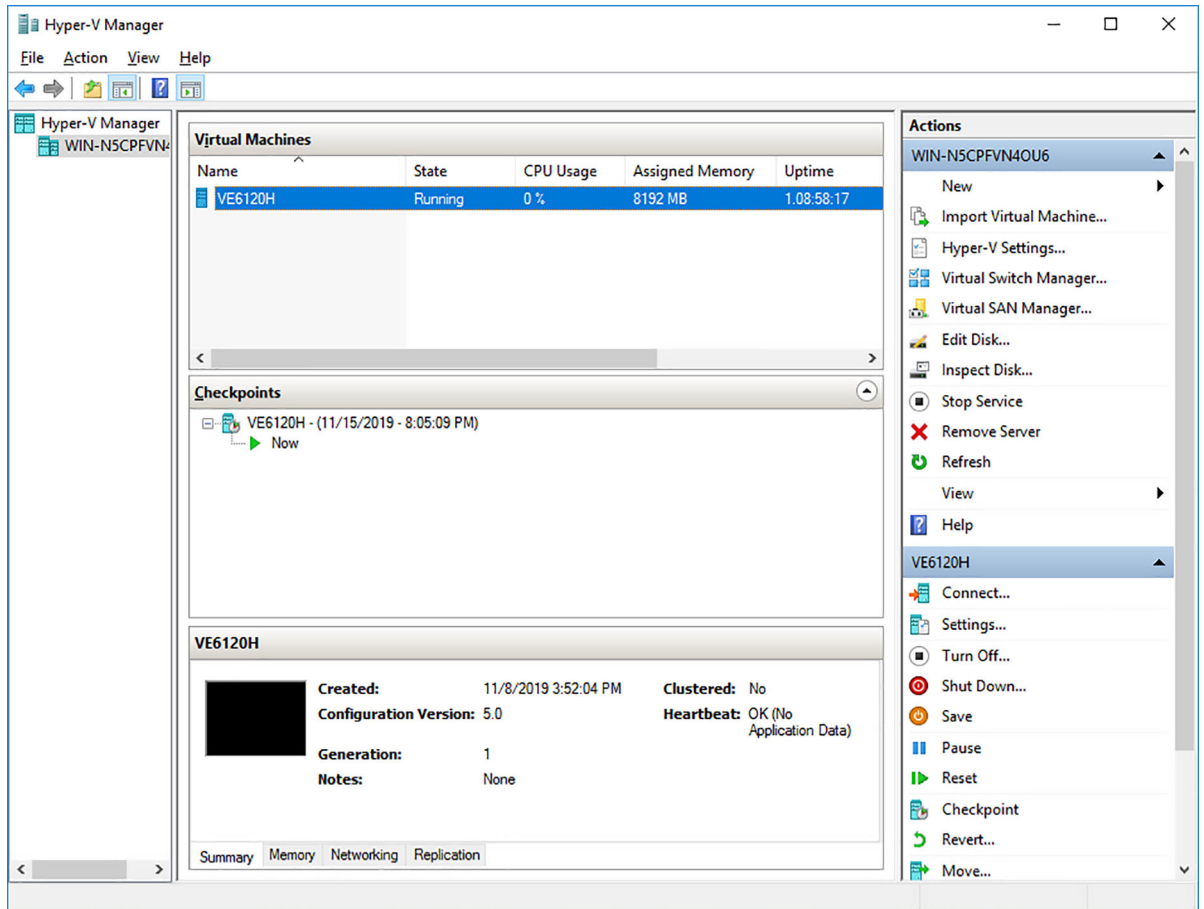


Note

Hyper-V Manager can be used remotely to manage the Hyper-V role on servers other than Hyper-V manager's home. But the sequence is different.

You are logged into the remote desktop.

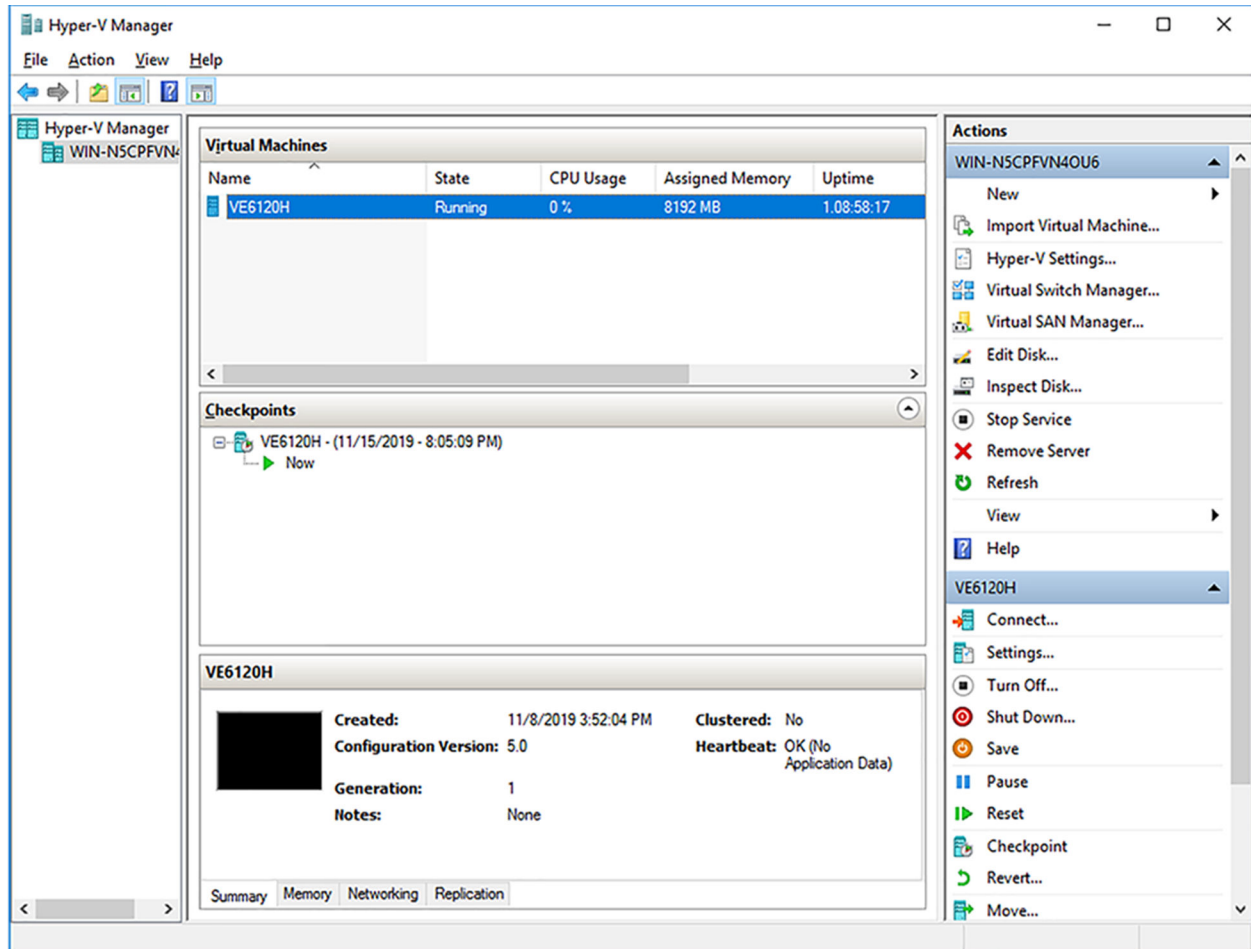
- In the Start menu, select **Hyper-V Manager**.
The Hyper-V Manager screen displays.



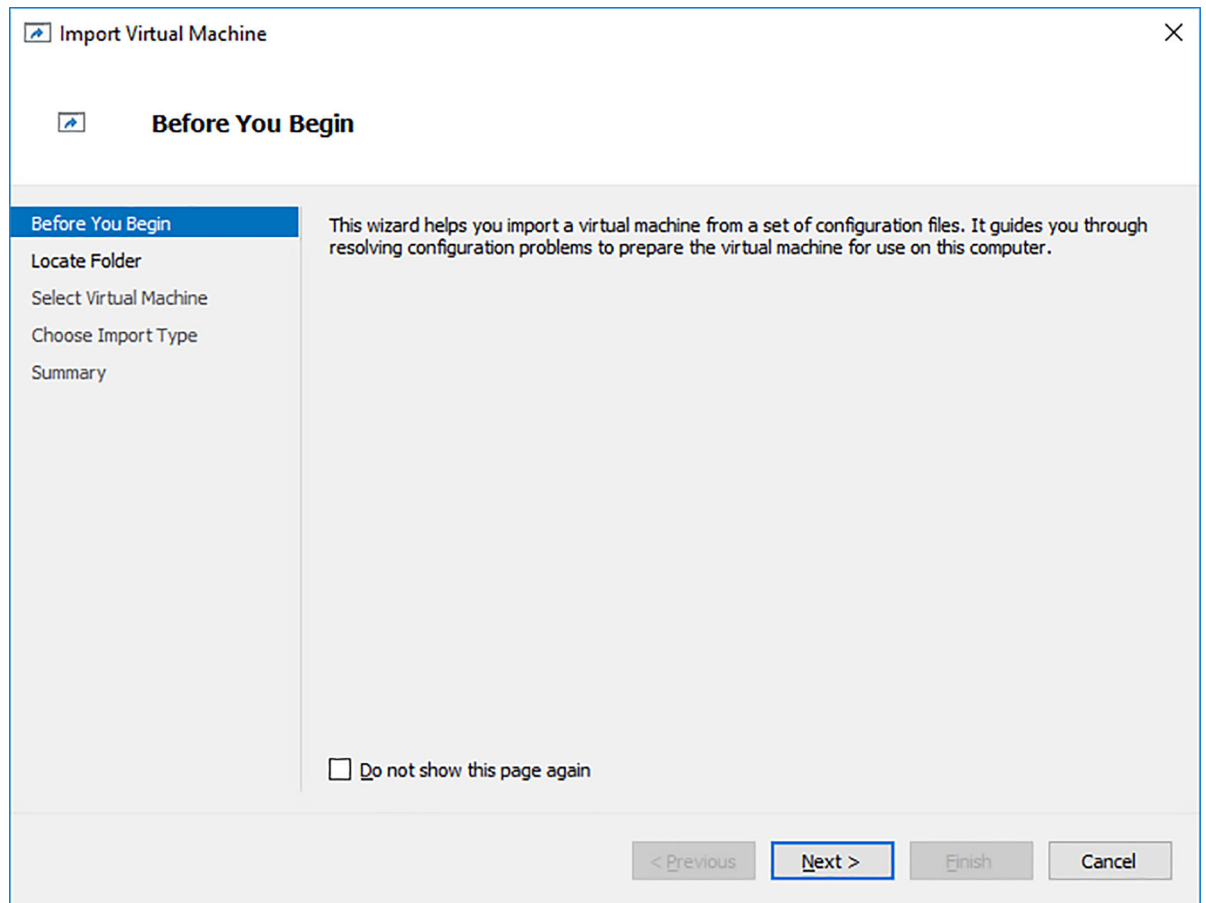
Install the Virtual Appliance Image

Procedure

1. Select the WIN-N5CPFVN40U6 host from the Hyper-V Manager dialog, under Hyper-V Manager.

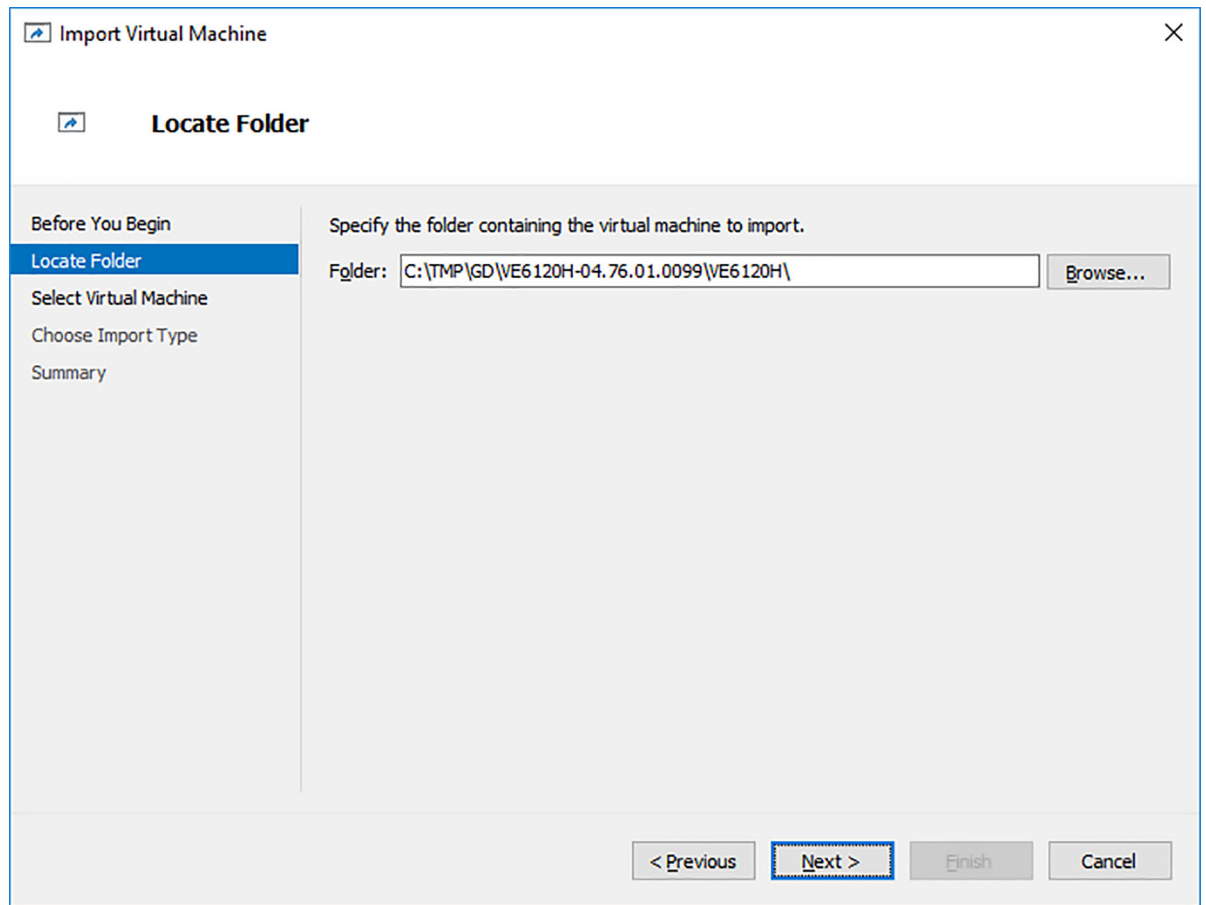


2. Select import virtual machine from Actions.
The import virtual machine screen displays.



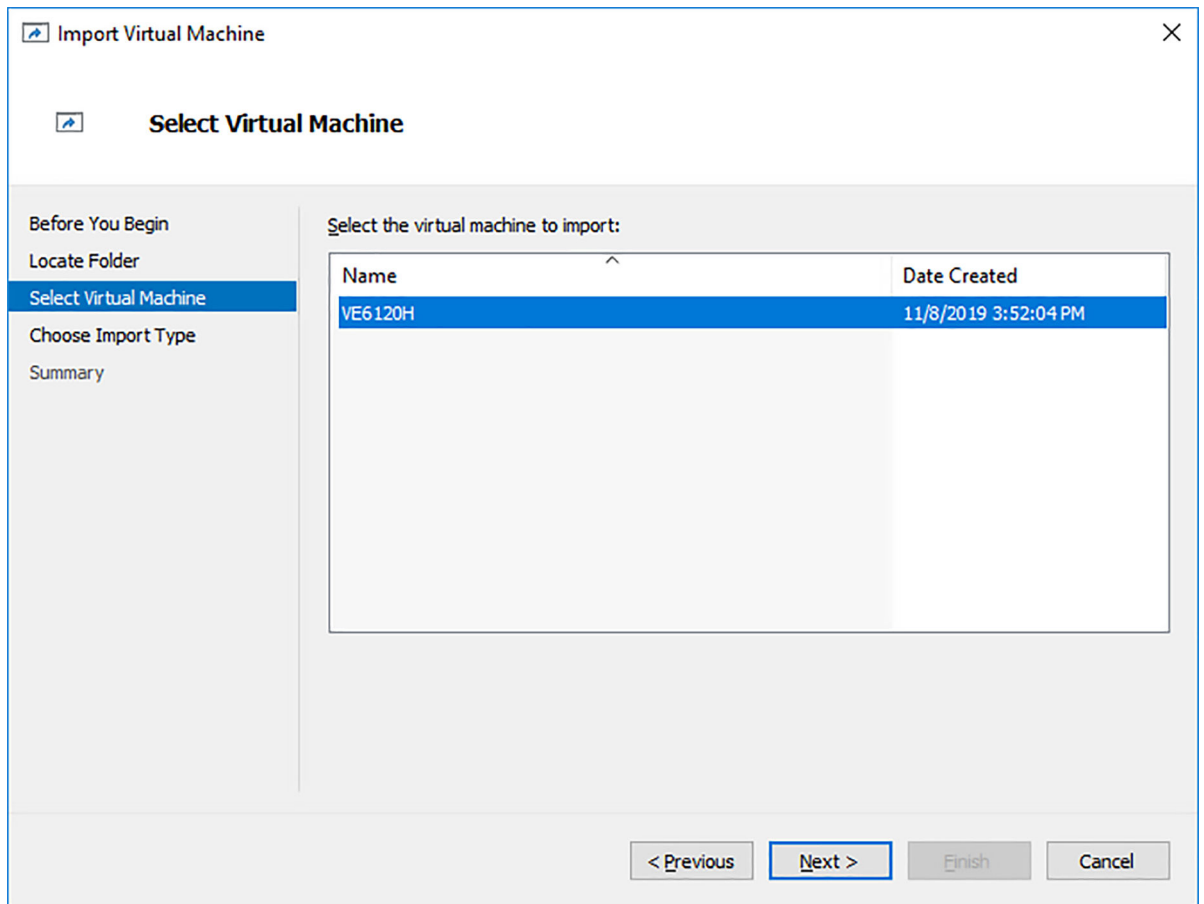
3. Select **Next**.
The **Locate Folder** screen is displayed.

4. Select **Browse** on the **Locate Folder** screen, and specify the folder where you have unpacked the VE6120H files.



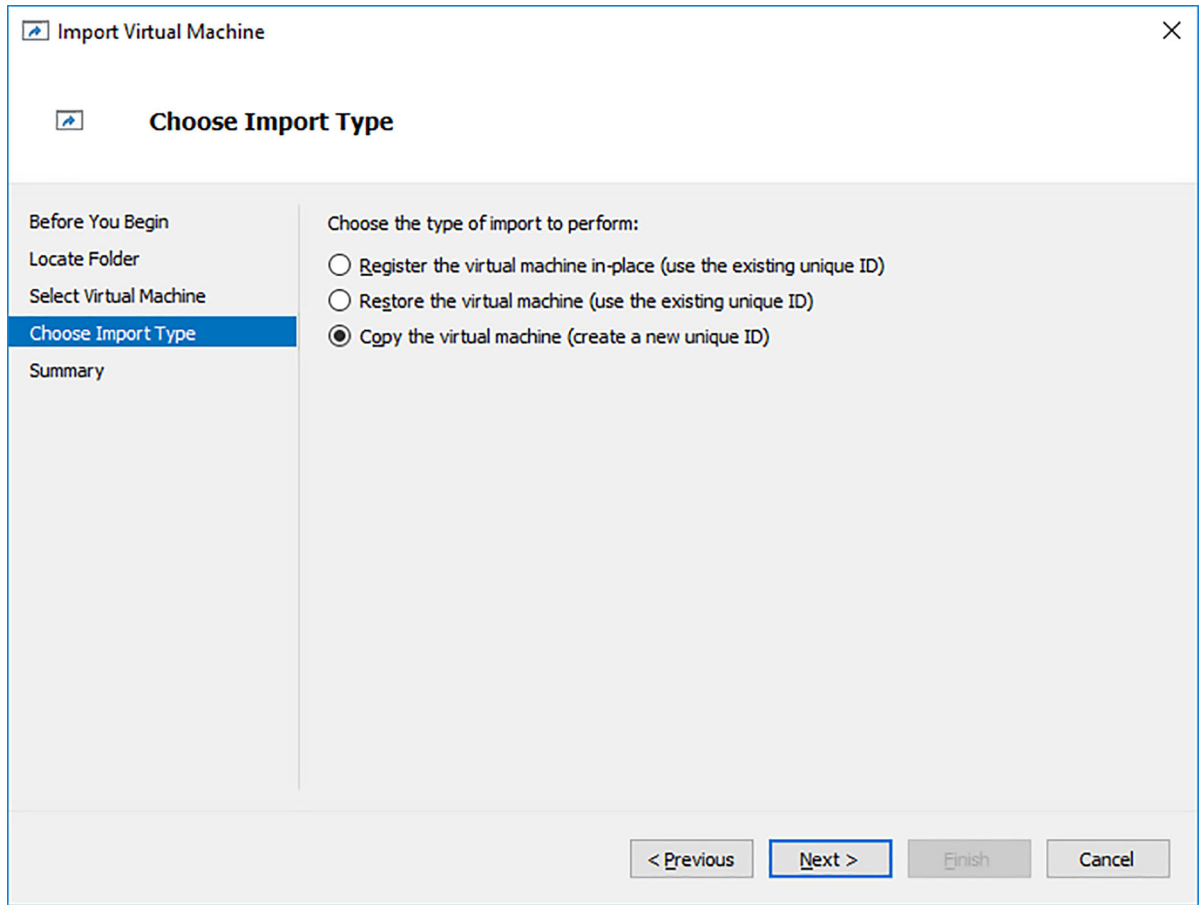
5. Select **Next**.

- From **Select Virtual Machine**, select the VE6120H file.

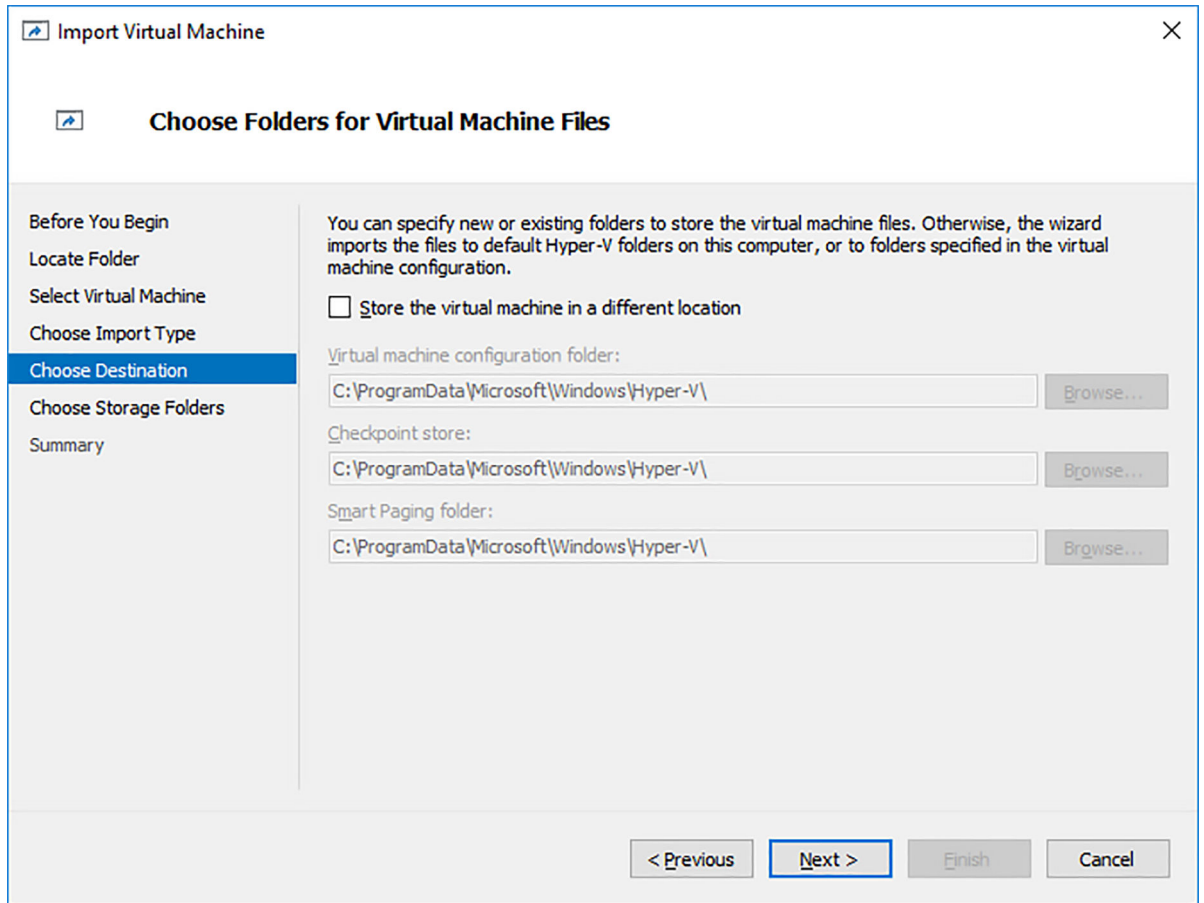


- Select **Next**.

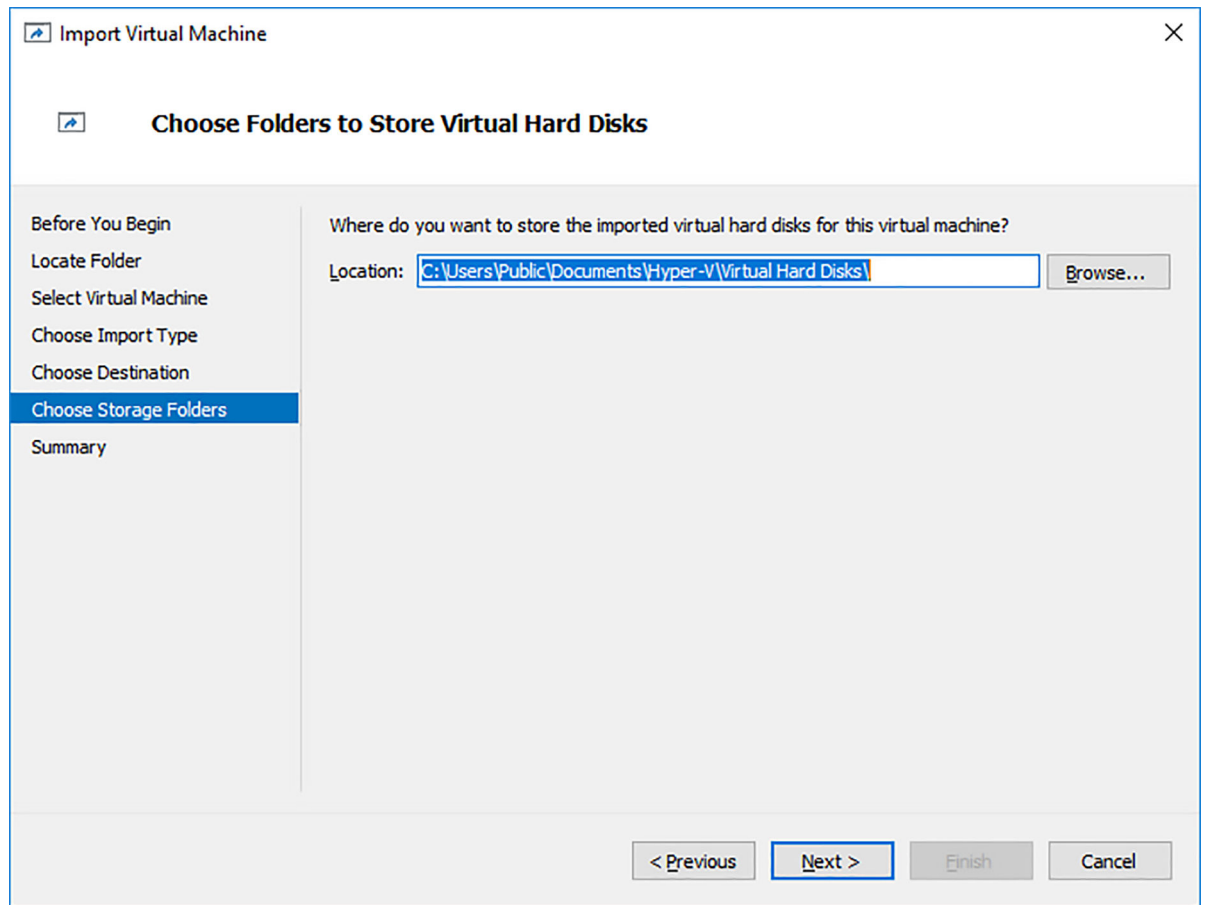
8. On the **Choose Import Type** screen, select **Copy the virtual machine**, and select **Next**.



9. On the **Choose Destination** screen, use the default settings for the virtual machine file, and select **Next**.



10. On the **Choose Storage Folders** screen, choose the default folders to store the virtual hard disks, and select **Next**.

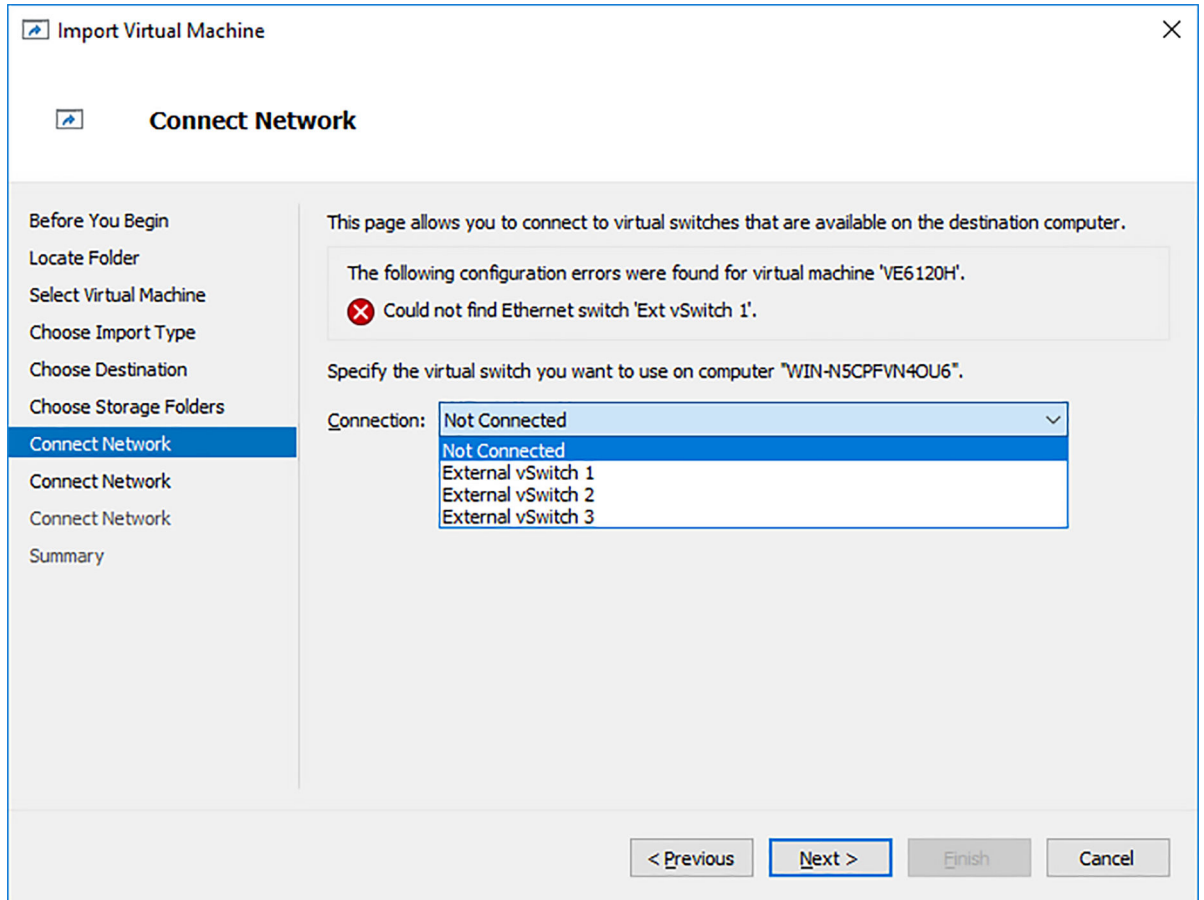


- On the **Connect Network** screen, select a virtual switch type from the drop-down menu, and select **Next**.



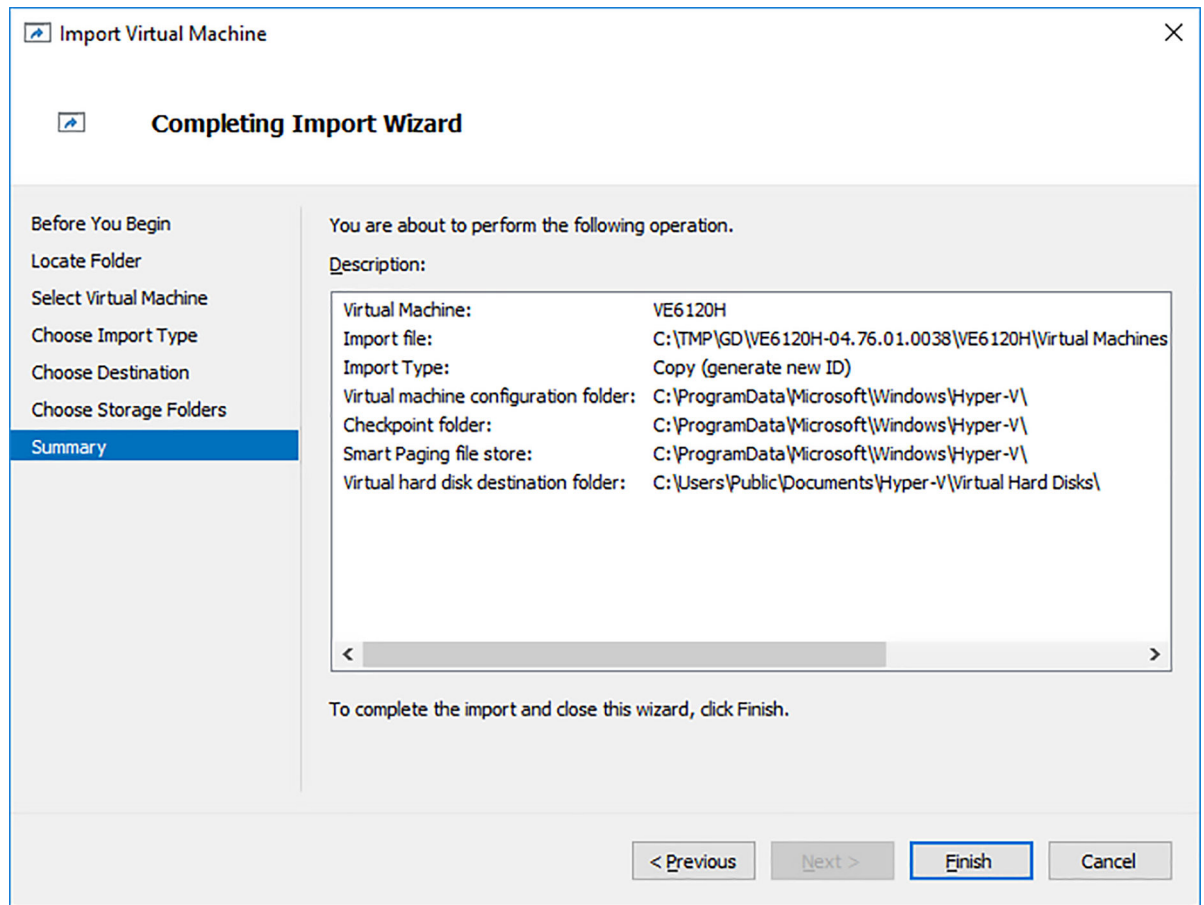
Note

The configuration error message displayed is expected behavior. Hyper-V Manager will not display this screen when all virtual switches for the image configuration matches one-to-one with switches configured on the host.

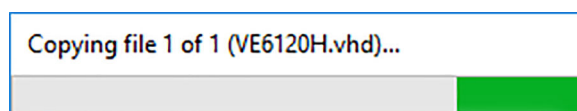


The summary page displays a summary of your selections.

- Review each setting, select **Previous** to return to previous screens and make any required changes. Select **Finish** to complete the deployment.



- Select **Finish**.
The image will be imported. A progress bar reports deployment progress.



Configure the Network Adapter

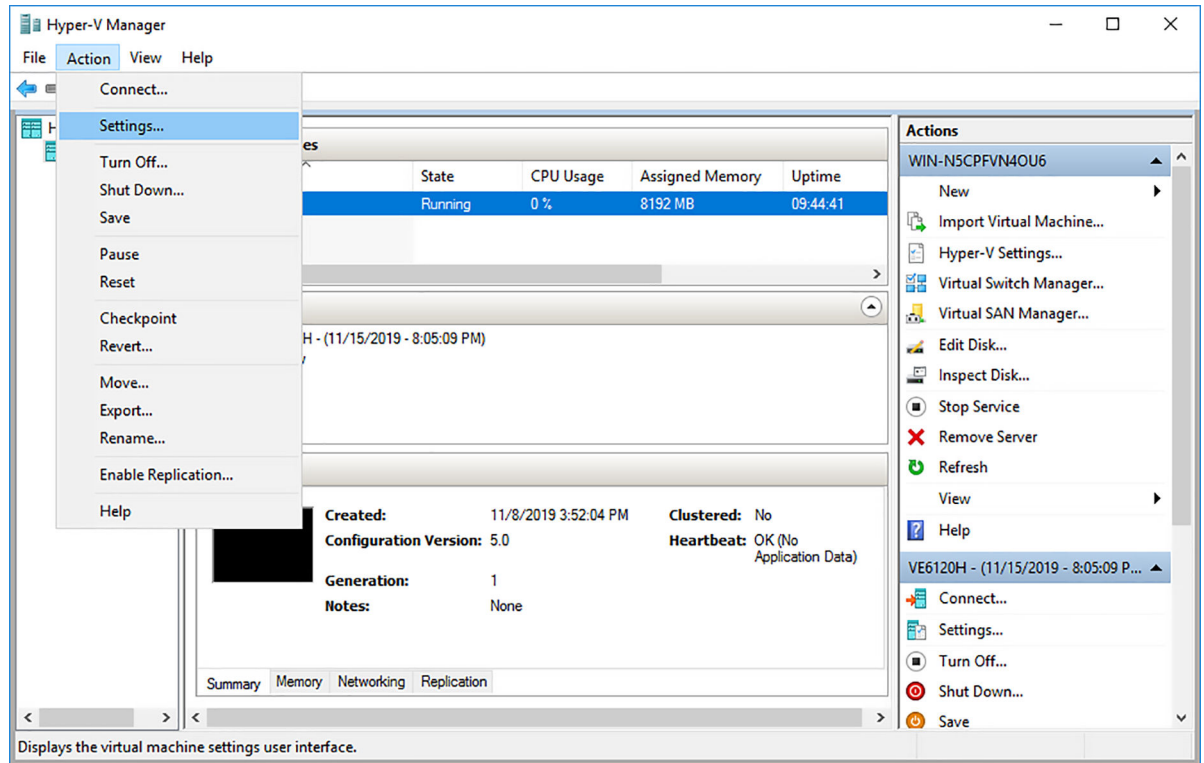
About This Task

The Hyper-V settings menu is used to map the VE6120H ports to virtual switches configured on the Hyper-V host.

Procedure

- Open the Hyper-V manager.
- On the **Hyper-V Manager** screen, select a deployed virtual machine from the Virtual Machines list provided.
- If necessary, [Install the virtual appliance](#).

4. Select **Settings** from the **Action** menu.



5. From Hardware, select one of the following adapters:

- MgmtAdapter

MgmtAdapter is the network the VE6120H management port is expecting to connect to. That network should be mapped to a virtual switch that will be used for management traffic.

- PhysAdapter1

PhysAdapter1 is the network that the VE6120H Port1 expects to use. That network should be mapped to a virtual switch on the host that will carry traffic between the VE6120H and the access points.

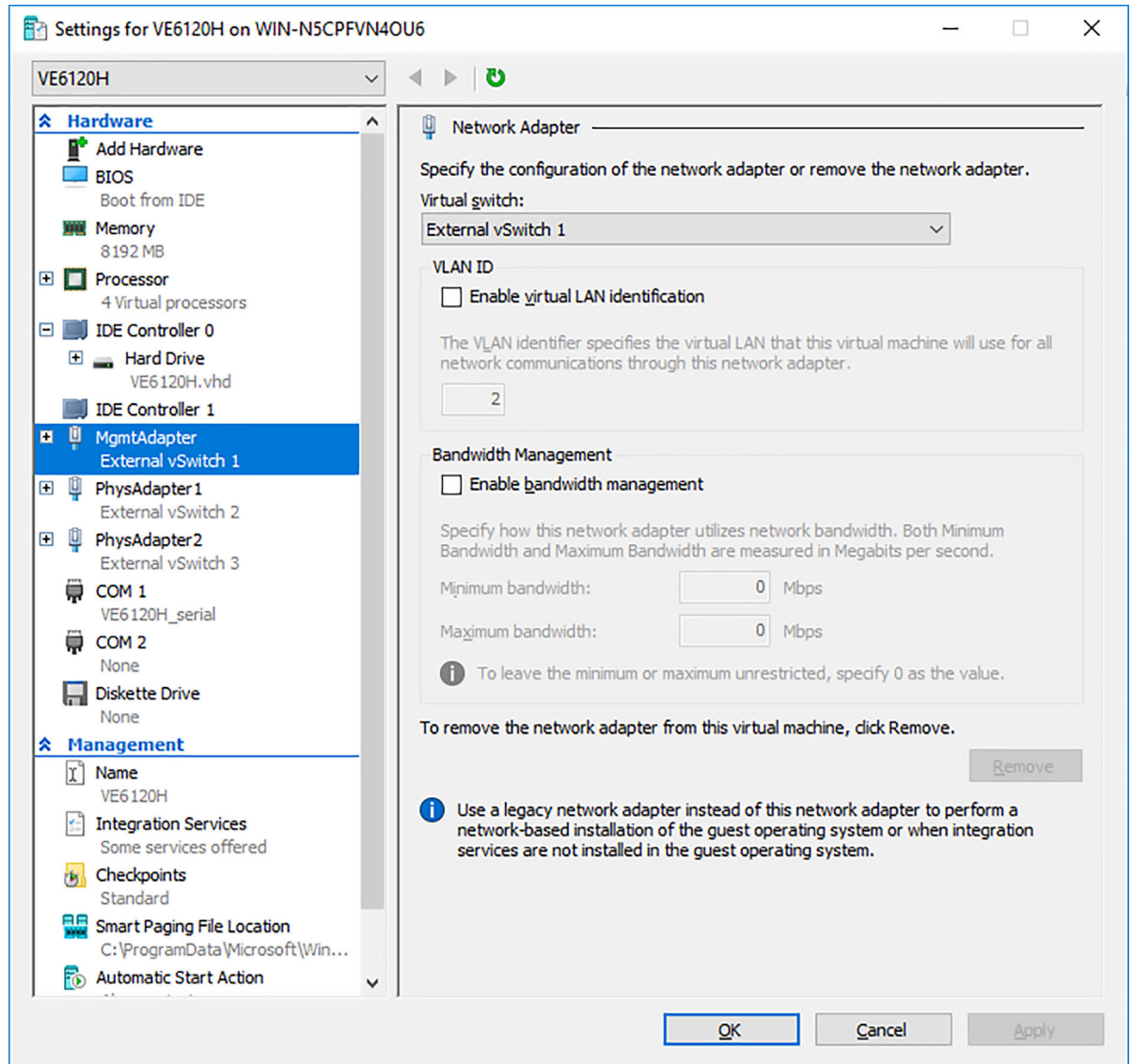
- PhysAdapter2

PhysAdapter2 is the network that the VE6120H Port2 expects to use. That network should be mapped to a virtual switch on the host that will carry traffic between the VE6120H and the access points.

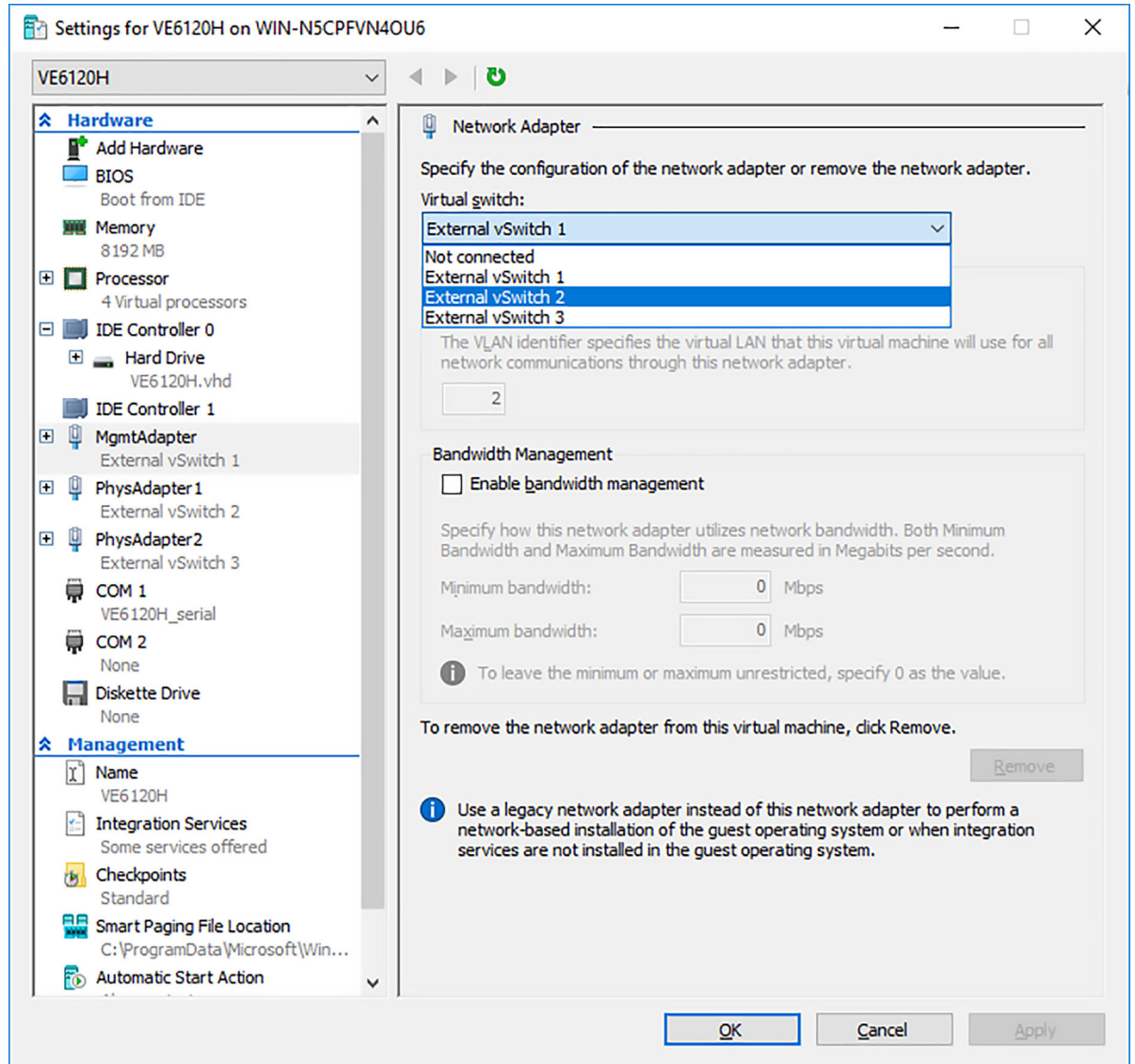


Note

Do not use the bandwidth management feature since the appliance performs CoS enforcement on all traffic that egresses the appliance.



6. Select the Virtual Switch to connect to from the drop-down menu on Virtual switch under Network Adapter.



7. Select **Ok**.



Virtual Appliance Configuration

[Access the Virtual Appliance Console on page 25](#)

[Configure the Virtual Appliance Using the Basic Configuration Wizard on page 27](#)

[Set Up the Virtual Appliance Using the Basic Configuration Wizard on page 28](#)

[Upgrade the Virtual Appliance Software on page 31](#)

[Activate the ExtremeCloud Appliance on page 33](#)

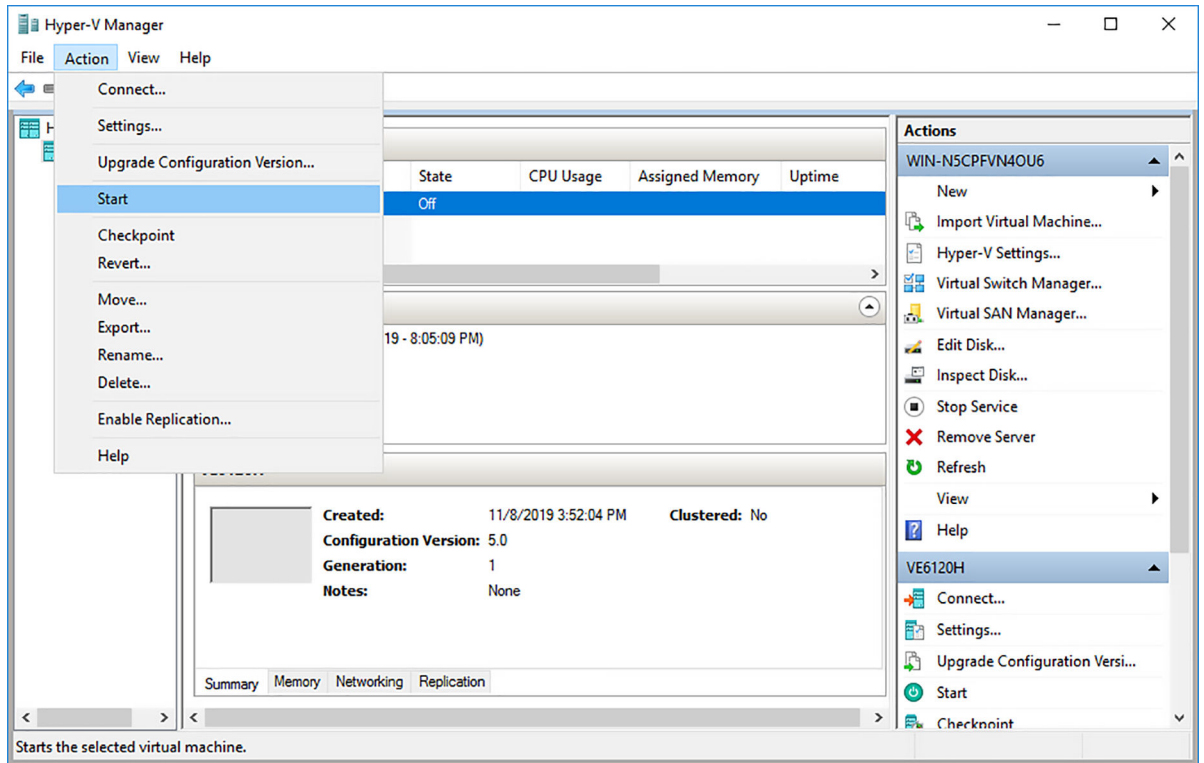
After the VE6120H ExtremeCloud Appliance has been deployed on a MS Hyper-V server using the instructions in [Virtual Appliance Deployment](#), you are ready to perform initial server configuration.

Access the Virtual Appliance Console

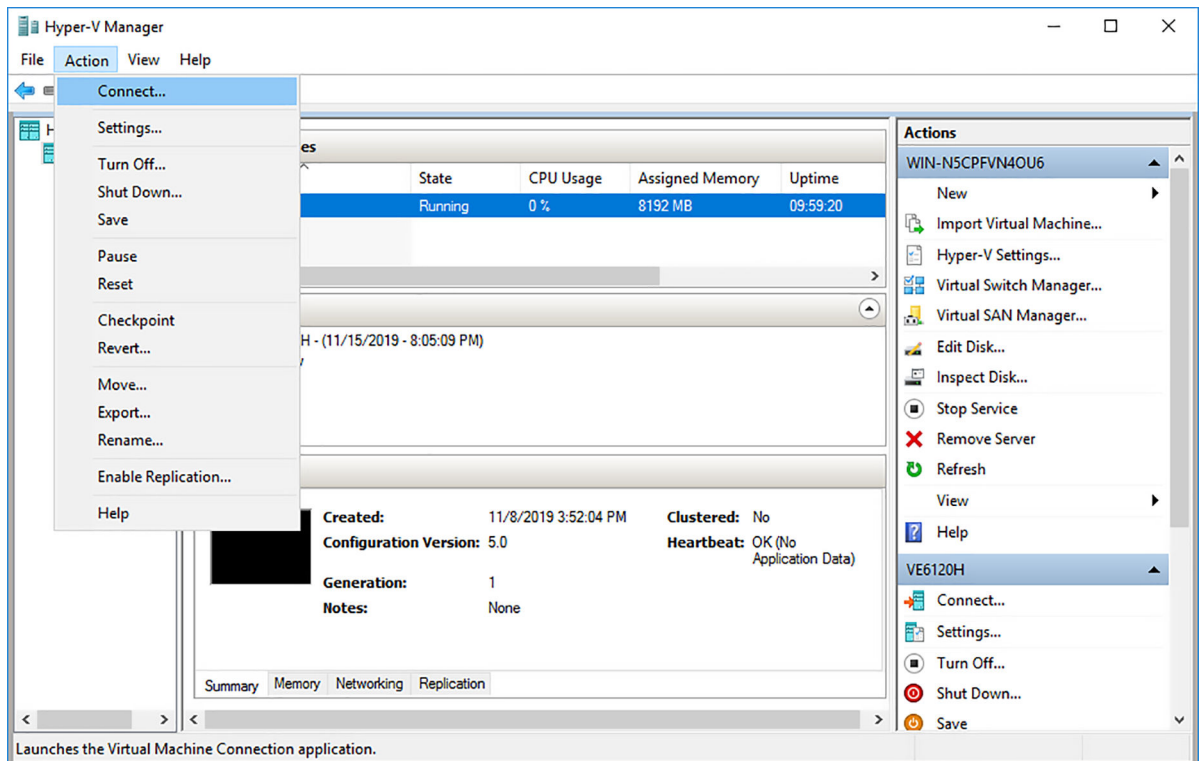
Procedure

1. From the Hyper-V Manager dialog, under Virtual Machines, select the virtual appliance.

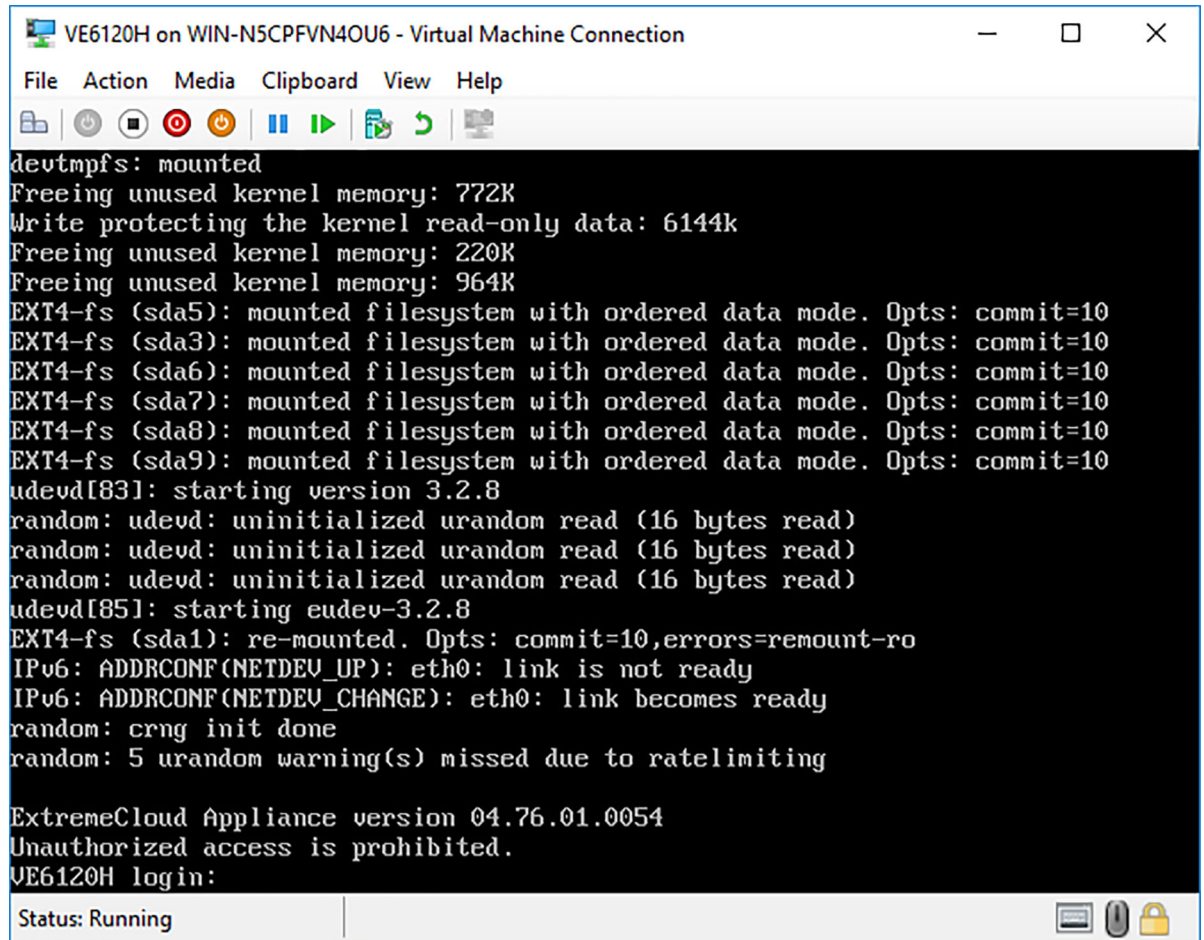
2. Select **Action > Start** to start the Virtual Machine.



3. Select **Action > Connect** to open the Virtual Machine command line interface (CLI).



The console will prompt for credentials.



```
VE6120H on WIN-N5CPFVN4OU6 - Virtual Machine Connection
File Action Media Clipboard View Help
devtmpfs: mounted
Freeing unused kernel memory: 772K
Write protecting the kernel read-only data: 6144k
Freeing unused kernel memory: 220K
Freeing unused kernel memory: 964K
EXT4-fs (sda5): mounted filesystem with ordered data mode. Opts: commit=10
EXT4-fs (sda3): mounted filesystem with ordered data mode. Opts: commit=10
EXT4-fs (sda6): mounted filesystem with ordered data mode. Opts: commit=10
EXT4-fs (sda7): mounted filesystem with ordered data mode. Opts: commit=10
EXT4-fs (sda8): mounted filesystem with ordered data mode. Opts: commit=10
EXT4-fs (sda9): mounted filesystem with ordered data mode. Opts: commit=10
udevd[83]: starting version 3.2.8
random: udevd: uninitialized urandom read (16 bytes read)
random: udevd: uninitialized urandom read (16 bytes read)
random: udevd: uninitialized urandom read (16 bytes read)
udevd[85]: starting eudev-3.2.8
EXT4-fs (sda1): re-mounted. Opts: commit=10,errors=remount-ro
IPv6: ADDRCONF(NETDEV_UP): eth0: link is not ready
IPv6: ADDRCONF(NETDEV_CHANGE): eth0: link becomes ready
random: crng init done
random: 5 urandom warning(s) missed due to ratelimiting

ExtremeCloud Appliance version 04.76.01.0054
Unauthorized access is prohibited.
VE6120H login:

Status: Running
```



Note

Double-click inside the console window to make the window interactive. If the prompt is not visible, press the Enter key.

4. Enter the following credentials:

For username, enter admin.

For password, enter abc123.

You are now working in the virtual appliance CLI.

Configure the Virtual Appliance Using the Basic Configuration Wizard

The ExtremeCloud Appliance software provides a Basic Configuration Wizard that helps administrators configure the minimum settings necessary to deploy a fully functioning appliance on a network.

Administrators must use the wizard to quickly configure the appliances for deployment, and then once the installation is complete, continue to revise the configuration accordingly.

The wizard is automatically launched when an administrator logs on to the virtual appliance CLI for the first time, including after the system has been reset to the factory default settings.

The configuration wizard prompts with a set of **Yes** or **No** questions. The default value is indicated in parenthesis. To accept the default value, select **Enter**.

For more information about using the Basic Configuration Wizard, see [Set Up the Virtual Appliance using the Basic Configuration Wizard](#).

Set Up the Virtual Appliance Using the Basic Configuration Wizard

About This Task

After you log into the Basic Configuration Wizard CLI, you will be able to set up the virtual appliance using a set of **Yes** or **No** commands. When you log into the Basic Configuration Wizard CLI, you will be prompted to change the password.

Procedure

1. To begin admin password setup, press **Enter**.
The **Admin password Configuration** screen is displayed.
 - a. To change the admin password, press **Enter**.
 - b. Type the new password for the admin account.



Note

The password must be between 8–24 characters.

- c. Repeat the new admin account password and press **Enter**.
The password is accepted if there is a match.
- d. Press **Enter** to accept the changes.

The **AP access password** screen is displayed.

2. Type a new password to reset the AP access password.



Note

The password must be between 5–30 alphanumeric characters and can include period, dash, underscore, and space.

3. Retype the AP access password.
4. Press **Enter**.
Your AP access password is now reset and the **Current Data Port Settings** CLI is displayed.

Current Data Port Settings

About This Task

Once you configure the admin password, you will be prompted to set up the **Current Data Port Settings**.

Procedure

1. Press **Enter** to select **Port1**.
Port1 is the default port.

2. Set IP address to **10 . 0 . 0 . 1**.
3. Press **Enter**.
4. Set the Netmask value to **255 . 255 . 255 . 0**.
5. Press **Enter**.
6. Press **Enter** again to set the default VLAN.
The tagged frames command is displayed.
7. Press **Enter** to keep the default tagged frames value to **No**.
8. To enable management on the interface, press **Enter** to select the default value, **Yes**.
9. Press **Enter** to enable device registration, and select the default value **yes**.
The updated Data Port Settings is displayed.
10. Press **Enter** to accept the changes and keep the data port values you have chosen.
The Data Port Interface is now set. The CLI navigates to the **Current Host Attributes Settings** screen.

Current Host Attributes Settings

About This Task

To set up the host attributes:

Procedure

1. Press **Enter** to change the host attributes.
2. Press **Enter** to type the host name.
3. Type **y** to setup a dedicated Admin port for out-of-band management.
The default option is **no**. A note is displayed that the Admin port does not allow device registration.
4. Type the IP address in the **xx . xx . xx . xxx** format to set up the IP address for the Admin port.
5. Press **Enter** to accept the default IP netmask for the Admin port.
6. Press **Enter** to accept the default domain name for the appliance.
The default domain name is **extremenetworks . com**.
7. Press **Enter** to configure the primary DNS server.
8. Type another IP address in the **xx . xx . xx . xxx** format to set up the primary DNS server IP address.
9. Press **Enter**.
The default option to set up a secondary DNS server is **no**.
10. Press **Enter** to accept the default option.
The updated host attributes settings are displayed.
11. Press **Enter** to accept the changes you have made.
The **Current Global Default Gateway Settings** CLI is displayed.

Current Global Default Gateway Settings

About This Task

The global default gateway may be on any Admin or data port topology or subnet.

Procedure

1. Type an IP address.
2. Press **Enter** to accept the changes.
You are navigated to the **Current Time Settings** CLI.

Current Time Settings

About This Task

The current time settings option allows you to change the timezone as per your location.

Procedure

1. Press **Enter** to change the time settings.
2. Press **Enter** again to change the timezone.
The region number list is displayed. Pick a number from the region numbers displayed on screen to select your continent.
3. Type a number that corresponds to the region.
You can type **n** to move down the list, or **p** to move up the list. To go back to the region selection, type **c**.
4. Press **Enter** to run NTP as a client.
5. Provide the fully qualified domain name of the NTP server.
6. Press **Enter**.
You are prompted to enter a second NTP server. The default option is **y**.
7. Type **n** and press **Enter**.
NTP client is enabled.
8. Press **Enter** to accept the timezone and NTP server changes.
You are navigated to the **Controller Post Configuration** screen along with the menu.
9. If you want to revisit any of the previous screens or exit without applying the configuration changes, enter one of the corresponding numbers or alphabets displayed on screen.

```

*****
Controller Post Installation Configuration

Admin password Configuration          1
Change AP Password                   2
Change Data Port Settings            3
Change Host Attributes Settings      4
Change Global Default Gateway Settings 5
Change Time Settings                 6
Apply Settings and Exit              A
Exit Without Applying                E
*****

Main Menu[A]: █

```

When you revisit any other screen, you will have to reconfigure all subsequent area settings. For example, if you decide to reconfigure the admin password, which is at the beginning of the configuration wizard, you will have to reconfigure all the subsequent configuration wizard settings.

10. Press **Enter** to accept the settings.
The default option for accepting the settings is **A**.
Your settings are now applied successfully.

Upgrade the Virtual Appliance Software

About This Task

If you are not installing the latest ExtremeCloud Appliance release, you need to upgrade the software to the latest patch release.

Procedure

1. Go to the [Extreme Networks Support](#) site and download the most recent ExtremeCloud Appliance software patch.
2. Log in to the virtual appliance using the admin user and password that you configured.
For more information, refer to the [Set Up the Virtual Appliance Using the Basic Configuration Wizard](#) on page 28.
3. Go to **Administration > System**.
The **System** screen is displayed.
4. Select the **Software Upgrade** tab.
5. Navigate to the **Upgrade** section.
6. Select the **plus** icon to add the image file.

The screenshot shows the 'Upgrade' section of the virtual appliance interface. It features a 'Select Image' dropdown menu with a plus icon to its right, which is highlighted with a red box. Below this are two more dropdown menus: 'Backup System Image to' (set to 'Local') and 'Upgrade' (set to 'Now'). A blue button labeled 'UPGRADE NOW' is positioned below the 'Upgrade' dropdown. At the bottom of the section, it indicates 'Scheduled Upgrade' as 'No Upgrade scheduled'.

Figure 2: Upgrade section

The **Copy Upgrade Image** window is displayed.

7. From the Upload Method field, select **Local** or **FTP** or **STP**.

Option

Local If you select Local as your file upload method, drop the file into the **Select File or Drop File** area.

FTP or SCP If you select FTP or STP as your file upload method, enter the following details:

- Service IP
- Username

Option

- Password
- Directory
- Filename
- Destination

From the Destination field, select **Local**.

8. Select **Ok**.

The Copy Upgrade Image progress bar displays the progress of your image upload.

9. After the image gets uploaded, select **Local** or **No Backup** from the **Backup System Image to** field option.



Note

The best practice is to select **Local**.

10. Select **Now** on the **Upgrade** field to upgrade your software.

Select **Schedule** to configure your upgrade schedule.

Results

You have now successfully upgraded your software and the results are displayed in the **Upgrade Result** window.

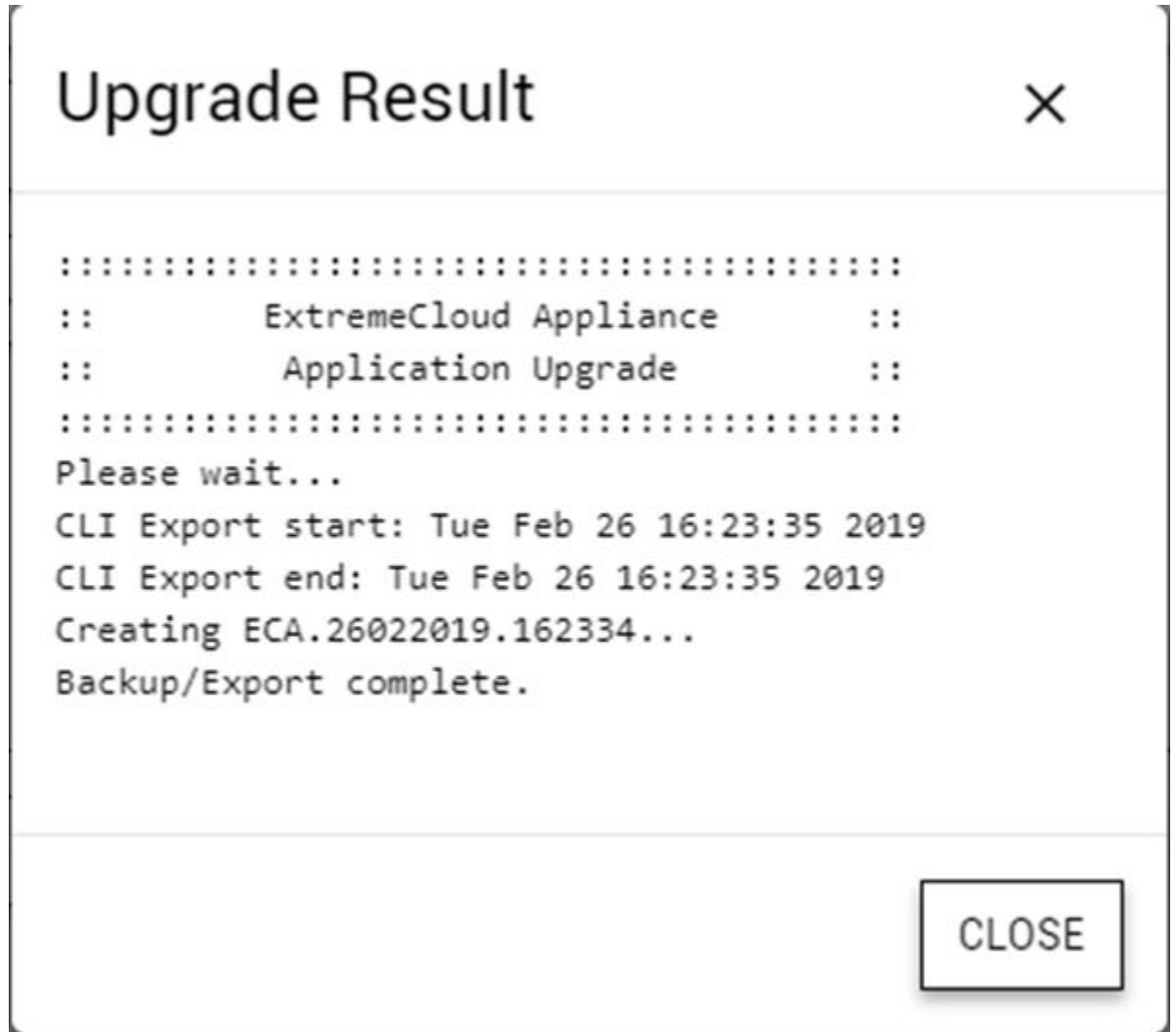


Figure 3: Upgrade result window

What to Do Next

For more information about the software upgrade options, refer to the [ExtremeCloud Appliance User Guide](#).

Activate the ExtremeCloud Appliance

About This Task

Activating the Virtual Appliance requires an activation key that must be obtained from [Extreme Networks Support](#). The activation key can be permanent or temporary depending on the license you have obtained.

To activate the Virtual Appliance:

Procedure

1. Log in to the ExtremeCloud Appliance.
2. In the left pane, from the **Administration** drop-down, select **License**.
The License page with the License Summary is displayed.

3. Enter the activation key in the Activation Key field and click **Apply**.

There is also a field for Capacity Key if you have a permanent license for the ExtremeCloud Appliance. The capacity key is used for enhancing the capacity of the appliance to manage devices.

To obtain the capacity key:

- a. Contact [Extreme Networks Support](#).
- b. Enter the capacity key in the Capacity Key field and click **Apply**.

The permanent license key and the capacity key are applied and the ExtremeCloud Appliance is activated.

What to Do Next

For more information on licensing, refer to the [ExtremeCloud™ Appliance's User Guide](#).



Configure Virtual Switches for the Virtual Appliance

[Create a New Virtual Switch on the Host Server on page 35](#)

[Disable Receive Segment Coalescing \(RSC\) on a Virtual Switch \(Windows Server 2019\) on page 38](#)

[Clone a Deployed Virtual Appliance on page 38](#)

The Virtual Appliance has some specific requirements on the virtual switches to which its data plane ports (PhysAdapter1 and PhysAdapter2) are connected. This chapter explains how to create a virtual switch on a Hyper-V host that satisfies these requirements.

To configure virtual switches, you must have gained access to the Hyper-V Manager using credentials that grant full administrative access to the host server.

Create a New Virtual Switch on the Host Server

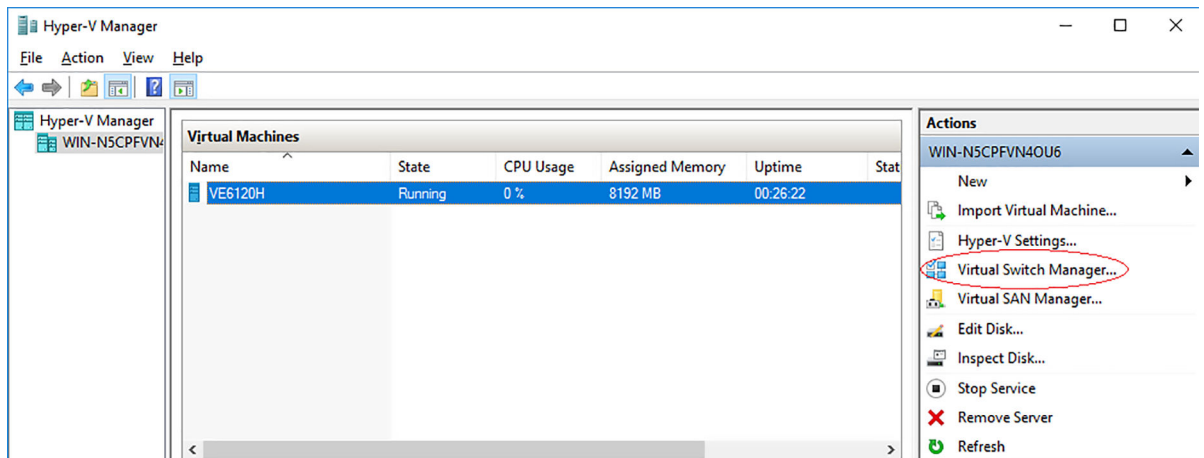
About This Task

This is an optional step since it is possible to reconfigure the virtual switch created by default when Hyper-V is installed to support VLANs or another acceptable custom virtual switch might be configured on the host. However, using separate virtual switches for the data plane traffic helps to isolate that traffic from other virtual devices and permits the switch to be configured specifically to meet the needs of the VE6120H appliance.

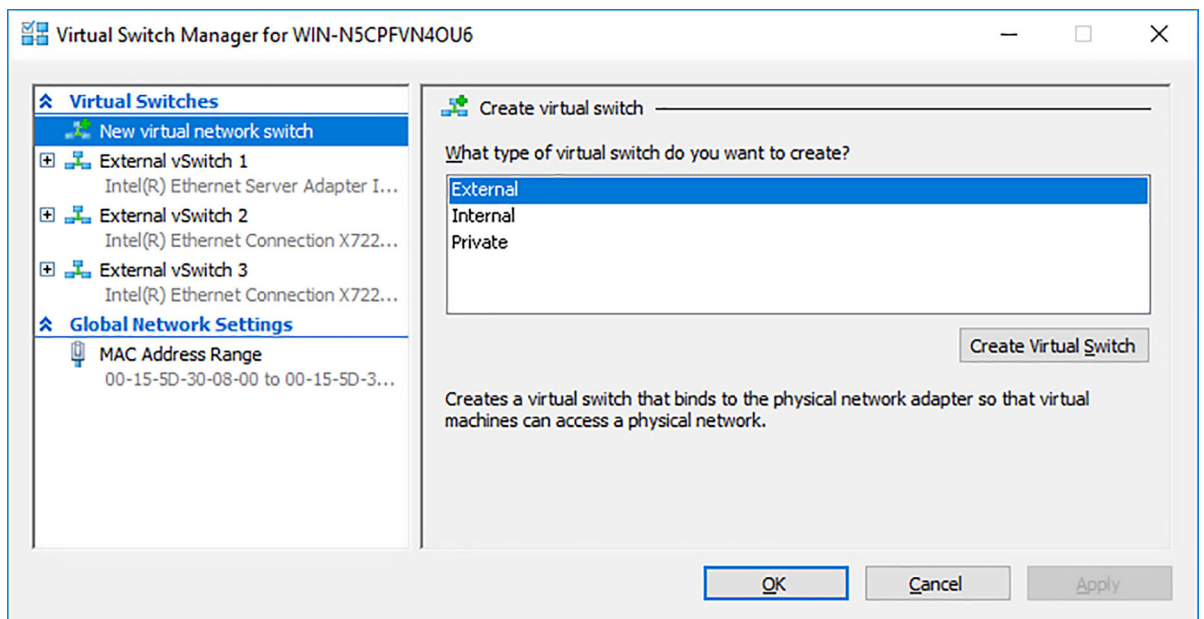
Procedure

1. Launch the Hyper-V manager application.

2. Select **Virtual Switch Manager** on **Hyper-V Manager > Actions**.



3. Create a virtual switch for each data plane interface as follows:
 - a. Select **New virtual network switch** from **Virtual Switches**.
 - b. Select **External** type of virtual switch from **Create virtual switch**.
 - c. Select **Create Virtual Switch**.

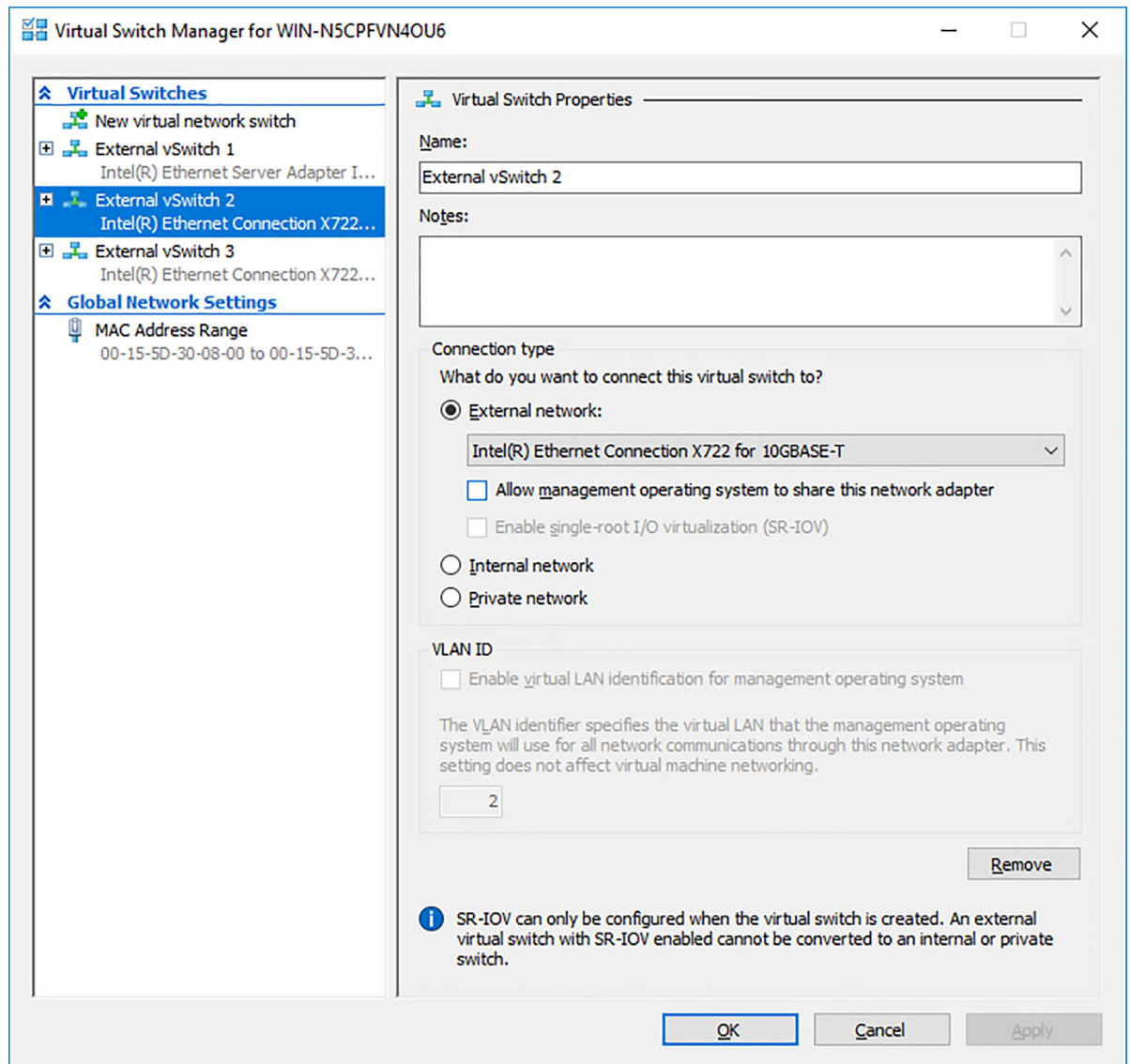


- Select **External network**, and select **Allow management operating system to share this network adapter** from Connection type to change VLAN ID for management operating system.



Note

The Allow management selection is required only if the external physical network card is going to be shared between the Hyper-V host (host management) and the virtual machine. For example, here we don't enable this on data port adapters (PhysAdapter1 and 2) having one to one mapping to the physical network cards.



Note

Only one virtual switch is created in this example, but more can be created by repeating the [procedure](#).

- Select **Ok** and **Apply**.

Disable Receive Segment Coalescing (RSC) on a Virtual Switch (Windows Server 2019)

About This Task

Windows Server 2019 Hyper-V has a new feature on a Virtual Switch called Receive Segment Coalescing (RSC), which is enabled by default.

This feature results in Hyper-V server freeze when there is excessive traffic.



Tip

The best practice is to disable the RSC feature on the virtual switches used for the appliance data ports (PhysAdapter1 and PhysAdapter2).

Use the following commands for the Power Shell:

Procedure

1. Check the existing setting by using the command:

```
Get-VMSwitch -name <vSwitch-Name> | Select-Object *RSC*
```

2. Disable RSC by using the command

```
Set-VMSwitch -name <vSwitch-Name> -EnableSoftwareRsc $false
```

Clone a Deployed Virtual Appliance

It is possible to clone a deployed virtual appliance. If the source virtual machine is off when you launch the clone virtual machine, the clone virtual machine will use the original MAC address, which will result in MAC address change on the original virtual machine. This will result in an unstable setup.

To avoid this issue, when you clone a virtual machine, ensure that the original virtual appliance and any other clones derived from the original virtual appliance are running. This is to keep the MAC addresses on all the appliances separate.



Warning

Assign MAC addresses to the cloned virtual appliances manually. If you run a cloned virtual appliance before changing the MAC address, the license on the original virtual appliance will become invalid.



Shut Down and Restart a Virtual Machine

[Shut Down and Restart a Virtual Machine Using the Graphical User Interface \(GUI\) on page 39](#)

[Shut Down a Virtual Machine on a Hyper-V Server on page 40](#)

About This Task

You need to shut down a virtual machine before configuring it to gain more networking performance.

For information on how to access the Basic Configuration Wizard, see [Access the Virtual Appliance Console](#) on page 25.

To shut down and restart the virtual machine using the CLI in the **Basic Configuration Wizard**:

Procedure

1. Type **shutdown halt**.
2. Press **Enter**.
The virtual machine shuts down.
3. Type **shutdown reboot**.
4. Press **Enter**.
The virtual machine restarts.

Shut Down and Restart a Virtual Machine Using the Graphical User Interface (GUI)

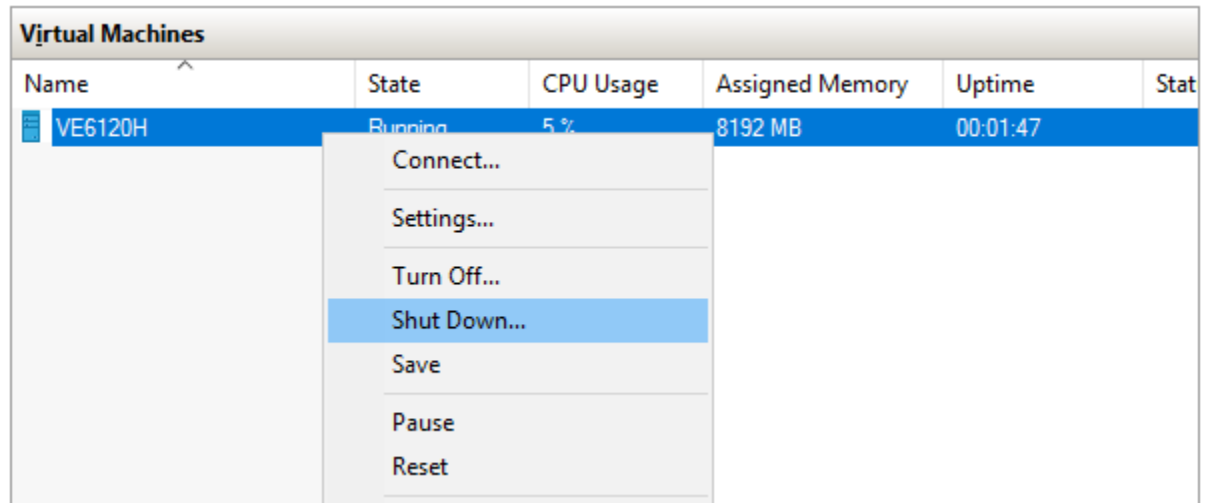
Procedure

1. Navigate to **Administration > System > Maintenance**.
2. Select **Halt System (SHUTDOWN)**.
The virtual machine shuts down.
3. Select **Restart System (REBOOT)**.
The virtual machine restarts.

Shut Down a Virtual Machine on a Hyper-V Server

Procedure

Right-click the virtual machine you need to shut down, and select **Shut Down**.



The virtual machine shuts down.



Index

A

access the virtual appliance console 25

B

basic configuration wizard 27

C

configure the virtual appliance 27

configure virtual switches 35

conventions

notice icons iv

text iv

create virtual switch 35

D

disable receive segment coalescing 38

disable rsc on a virtual switch 38

documentation

feedback vi

location vi

F

feedback vi

H

host server 35

N

network adapter configuration 21

notices iv

R

restart a virtual machine

GUI restart 39

Hyper-V server restart 39

rsc 38

S

set up

data port settings 28

gateway settings 28

set up (*continued*)

host attributes 28

time settings 28

virtual appliance 28

software upgrade 31

support, see technical support

T

technical support

contacting vi, vii

U

Unpack ZIP files 10

V

VE6120 image download 10

VE6120H configuration 25

VE6120H connectivity requirements 9

VE6120H console 25

VE6120H deployment 9

VE6120H deployment requirements 8

VE6120H host 10

VE6120H on a host platform 9

virtual appliance cloning 38

virtual appliance console 25

virtual appliance deployment 8

virtual appliance image install 13

virtual appliance software 31

virtual machine

restart a virtual machine 39

shut down a virtual machine 39

virtual switch 35

virtual switches 35

W

warnings iv

Z

ZIP files 10