



## Install the Virtual Center

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You need to complete several steps to install the Virtual Center:

1. Retrieve the Cisco Cyber Vision installation file.
2. Create a Virtual Machine on ESXi and deploy Cisco Cyber Vision ova file on the VM.

OR

Create a Virtual Machine on Hyper-V, set the disk size, create and map the network interfaces.

The only configurations that may be required during deployment are memory and disks size customization.

3. Configure the Cisco Cyber Vision Center.

- [Retrieve the installation file, on page 1](#)
- [ESXi, on page 2](#)
- [Hyper-V, on page 9](#)

## Retrieve the installation file

Before starting the VM installation, you must retrieve the virtual machine installation ova file.

To retrieve the virtual machine installation file:

### Procedure

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**Step 1** Access Cisco Cyber Vision Software Download platform.

**Step 2** Download the ova file required for Hyper-V or ESXi from the last version released. Ova files with the DPI option are also available.

To verify that the file you just downloaded is healthy, it is recommended to use the SHA512 checksum provided by Cisco.

To do so (Windows users):

**Step 3** Access Cisco Cyber Vision download page.

**Step 4** Download the file.

**Step 5** Open a shell prompt such as Windows Powershell and use the following command to retrieve the file checksum:

```
Get-FileHash .\CiscoCyberVision-<TYPE>-<VERSION>.<EXT> -Algorithm SHA512 | Format-List
```

```
PS C:\Users\ > Get-FileHash .\Downloads\CiscoCyberVision-center-3.2.3.ova -Algorithm SHA512 | Format-List
Algorithm : SHA512
Hash      : 13388FB1A17110AF80D751AE7B450F2829CCB4C854F550F3888E684236865EC9EDF7773FD05D1055C7F1EF7E6E8C2B8A96CFE69A8
          : 1B622E480B88EB89E94DB16
Path      : C:\Users\ \Downloads\CiscoCyberVision-center-3.2.3.ova
```

**Step 6** In the download page, mouse over the file and copy the SHA512 checksum.

## Software Download

The screenshot shows a 'Software Download' page with a search bar and 'Expand All'/'Collapse All' buttons. A dropdown menu shows 'Latest Release' with '3.2.3' selected. A 'Details' modal is open, displaying the following information:

Description :	VMware OVA (Center) - CiscoCyberVision-Center-3.2.3.ova
Release :	3.2.3
Release Date :	30-Apr-2021
FileName :	CiscoCyberVision-center-3.2.3.ova
Size :	382.92 MB ( 401520640 bytes)
MD5 Checksum :	ad553391b4f43128ef922e1a98e7e58c
SHA512 Checksum :	13388fb1a17110af80d751ae7b450f2b ...
<a href="#">Release Notes for 3.2.3</a> <a href="#">Advisories</a>	

**Step 7** Compare both checksums.

- If both checksums are identical it means the file is healthy.
- If the checksums do not match try to download the file again.
- If, after downloading the file again the checksums still don't match, please contact Cisco support.

# ESXi

## Create a Virtual Machine

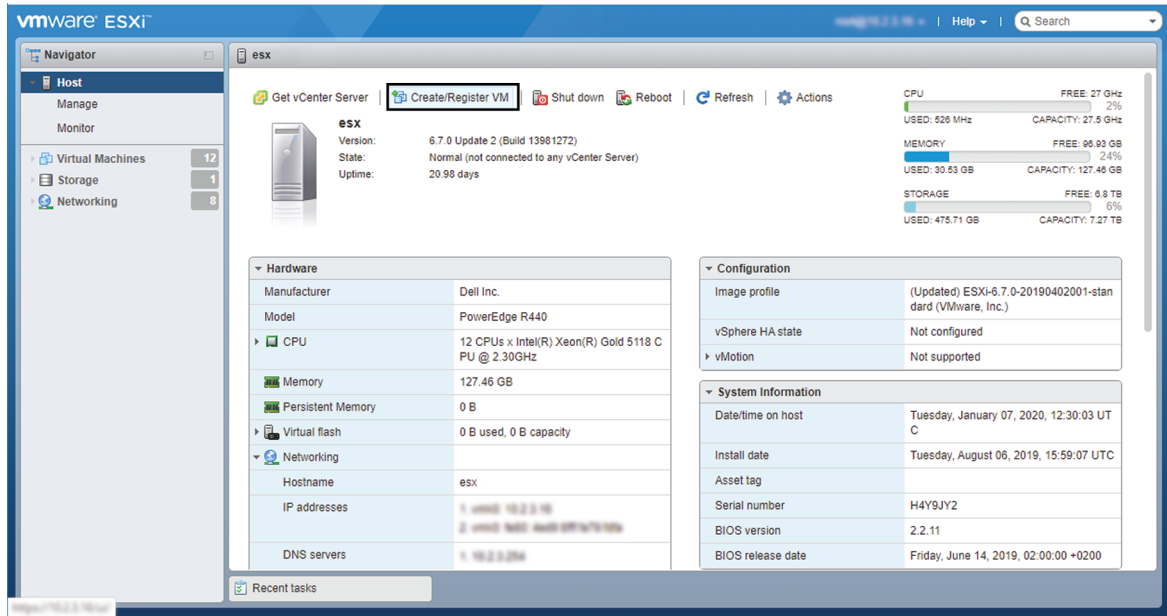
Before taking the steps below to create a VM on ESXi, **you must set two network interfaces** (the Administration and the Collection network interfaces), and a third if deploying a Center with DPI (the DPI network interface), accordingly to the infrastructure of the network. To do so, refer to VMware ESXi documentation.

To create the Virtual Machine and deploy Cisco Cyber Vision:

### Procedure

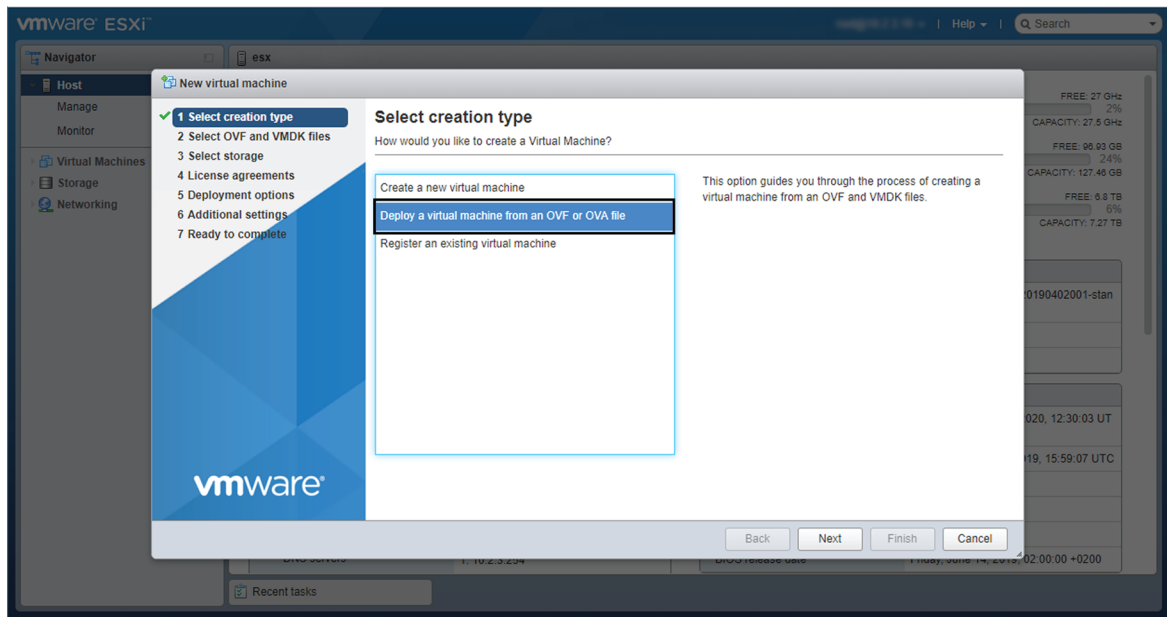
**Step 1** Login to VMware EXSi.

**Step 2** Click Create/Register VM.

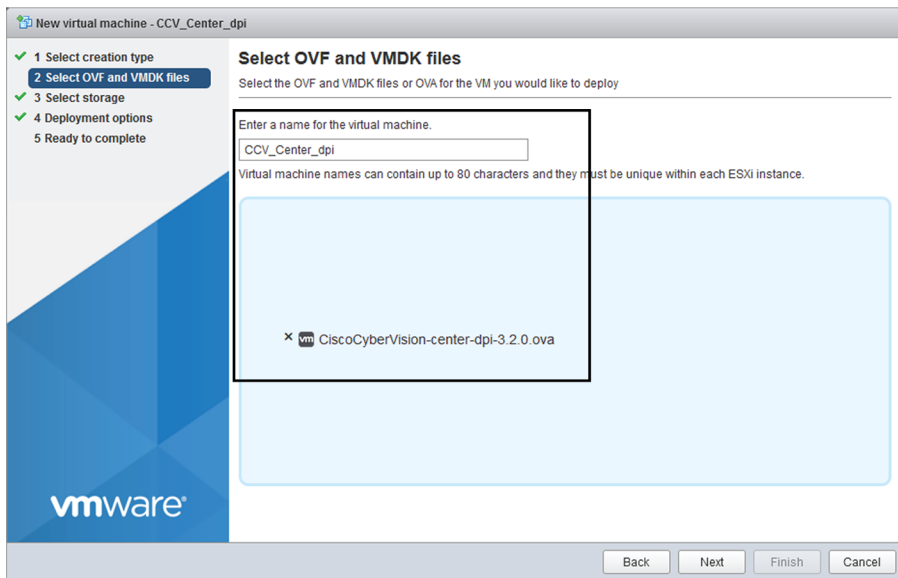
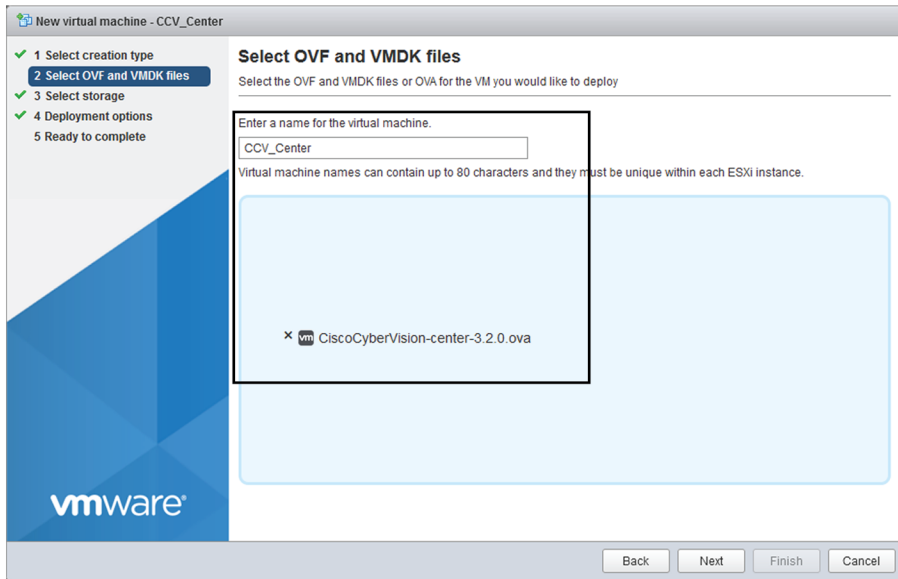


The wizard to create a new virtual machine opens.

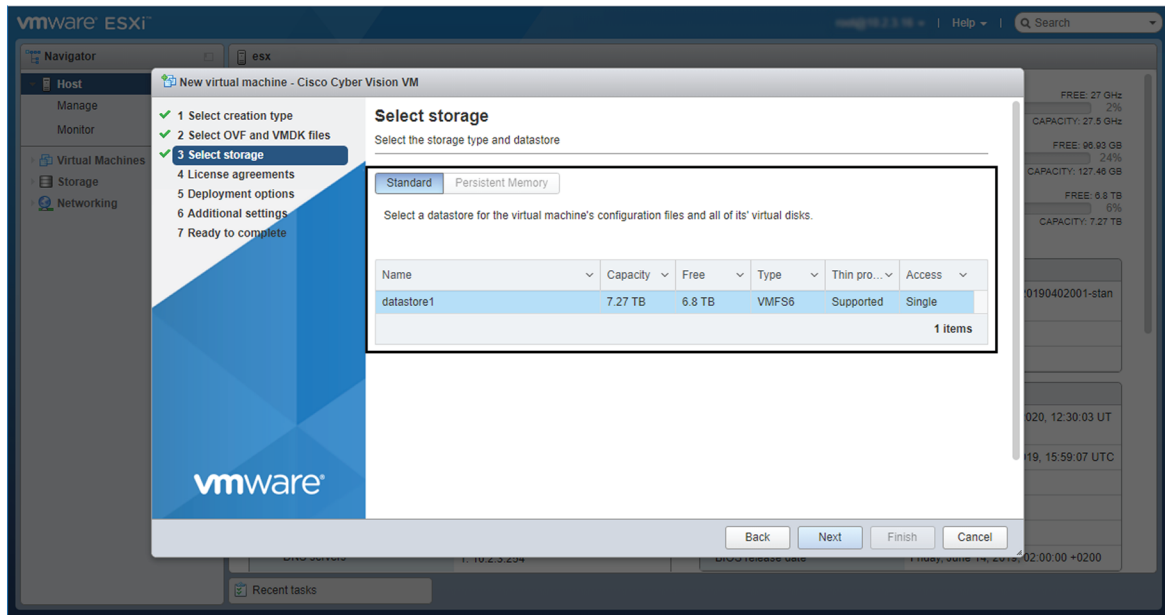
**Step 3** Click Deploy a virtual machine from an OVF or OVA file.



**Step 4** Give a name to the virtual machine and select the Cisco Cyber Vision OVA file. Select the DPI OVA file to enable the sensor function on the Center VM.



**Step 5** Select a disk with sufficient storage. Refer to [Requirements for installation](#).



**Step 6** Map the network interfaces you have previously created to the VM's ports (1), as shown below:

- The Administration network interface as eth0.
- The Collection network interface as eth1.
- If deploying a Center with DPI, the DPI network interface as eth2.

**Step 7** Set disk provisioning as Thin (2).

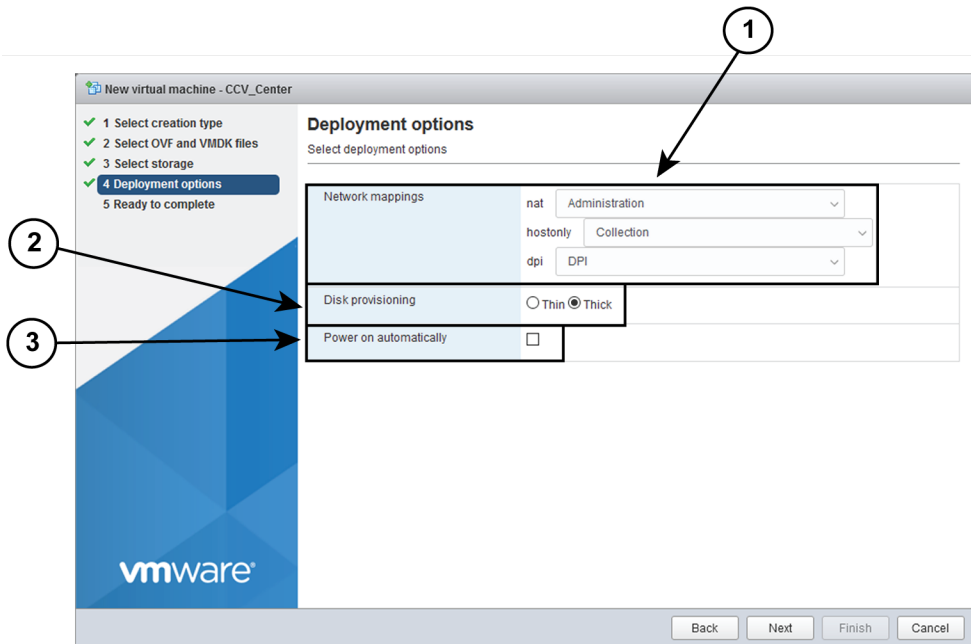
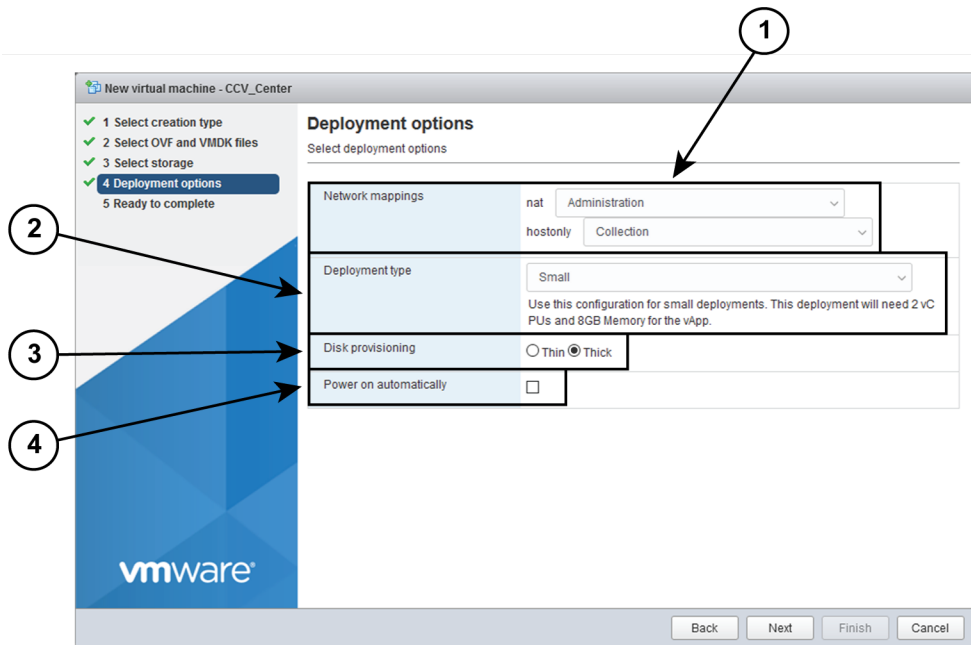
**Step 8** Set the Deployment type as Small, Medium or Large (3). The deployment size for an OVA DPI file is Large by default.

Small: Intel Xeon, 8 cores, 16GB RAM

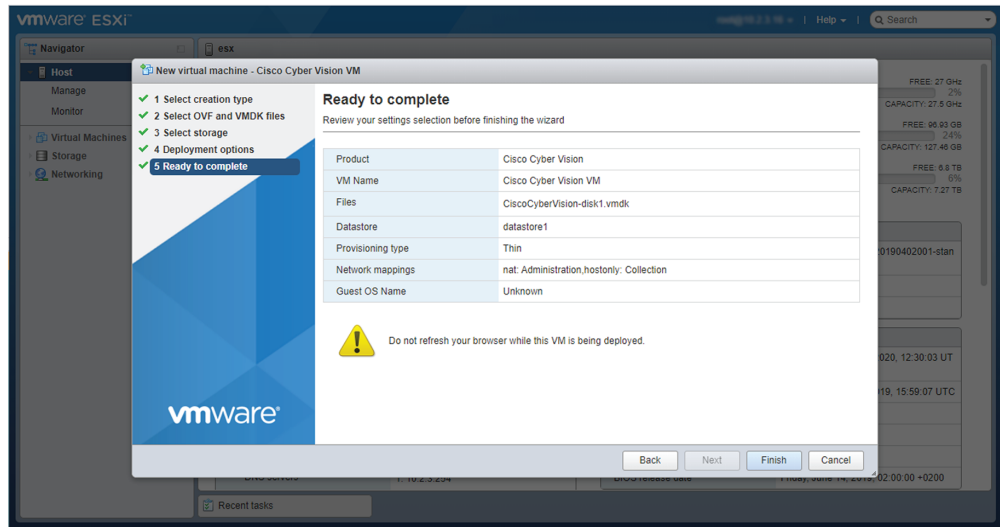
Medium: Intel Xeon, 10 cores, 32GB RAM

Large: Intel Xeon, 16 cores, 64GB RAM

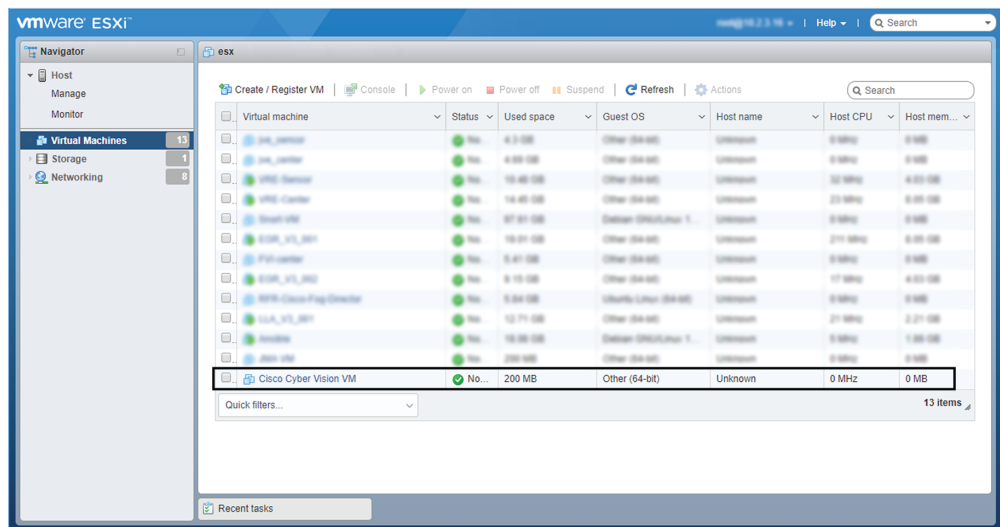
**Step 9** Disable the virtual machine's automatic start (4).



**Step 10** Check the new VM's settings before clicking Finish.



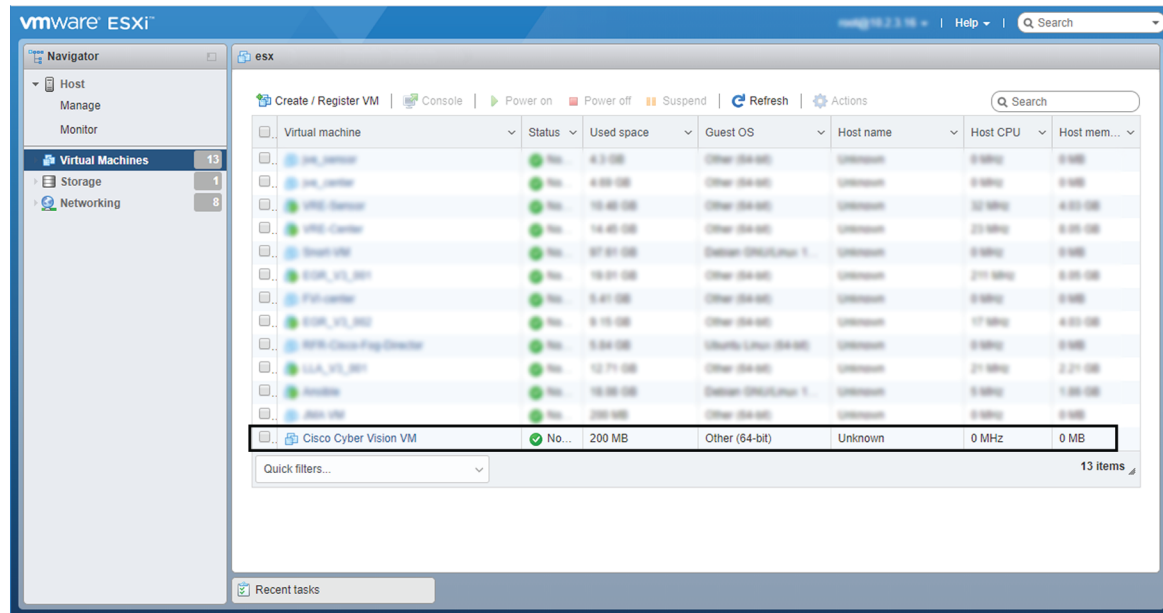
Your new VM is displayed in the virtual machine list.



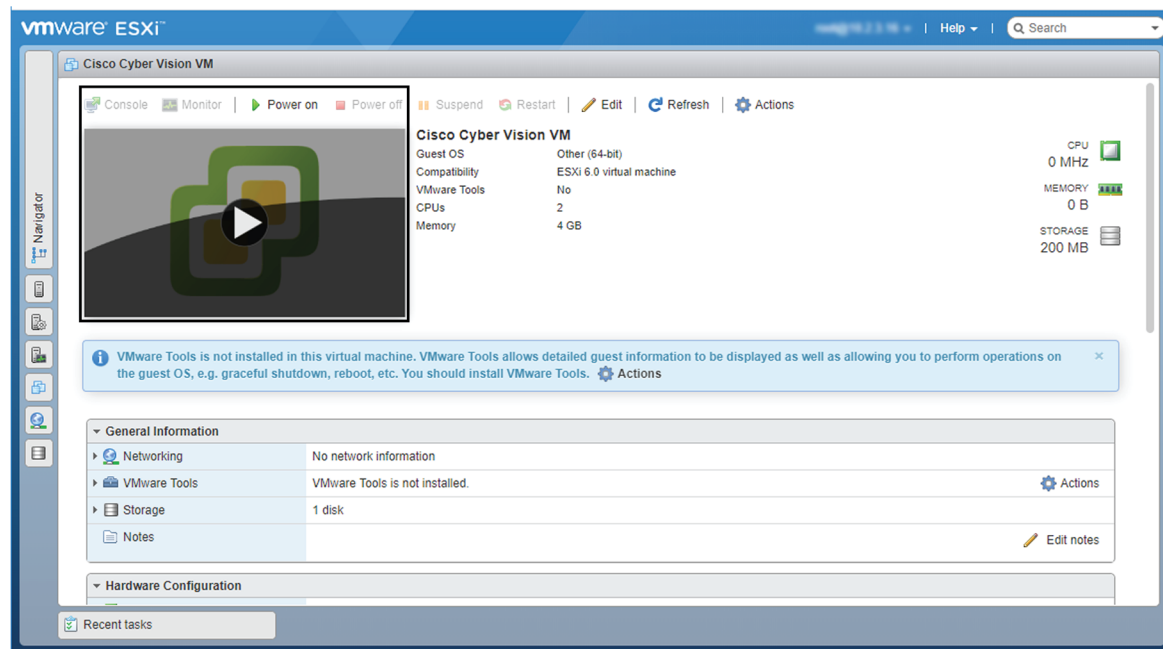
## Boot the Virtual Machine

After creating the VM, you can proceed to its first boot.

1. Click the VM in the list.

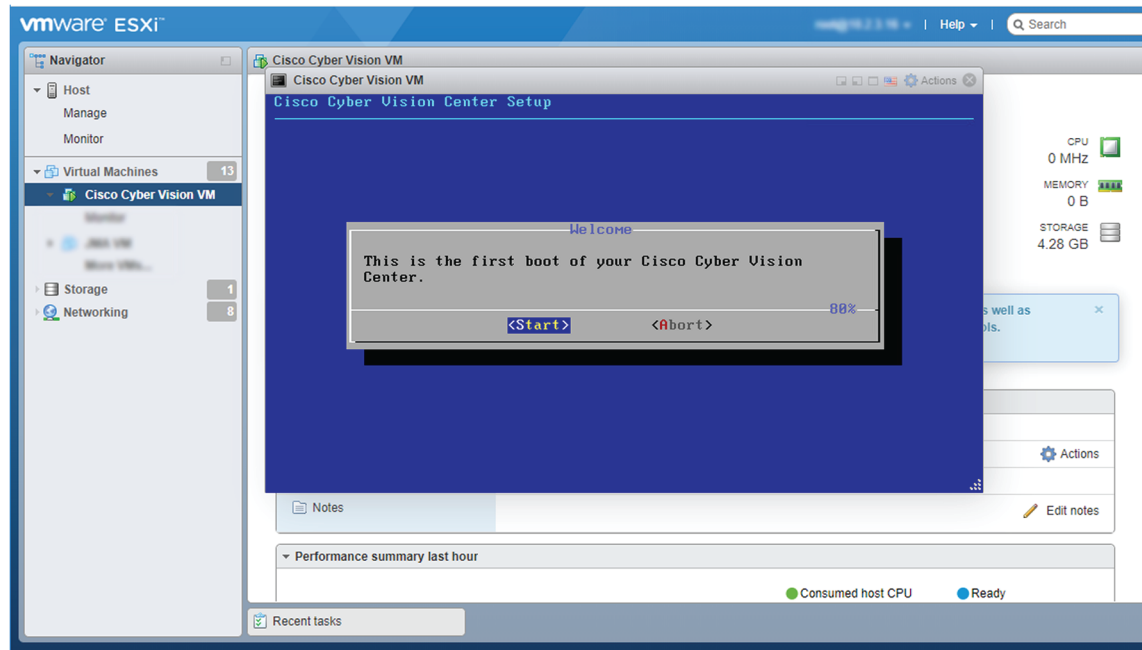


2. Power on the VM.



3. Wait a few moments for the VM initiation to complete. The following screen is displayed:





4. Press Ctrl+Alt to retrieve the control of your keyboard and mouse.  
The Virtual Center is now ready for basic configuration.

## Hyper-V

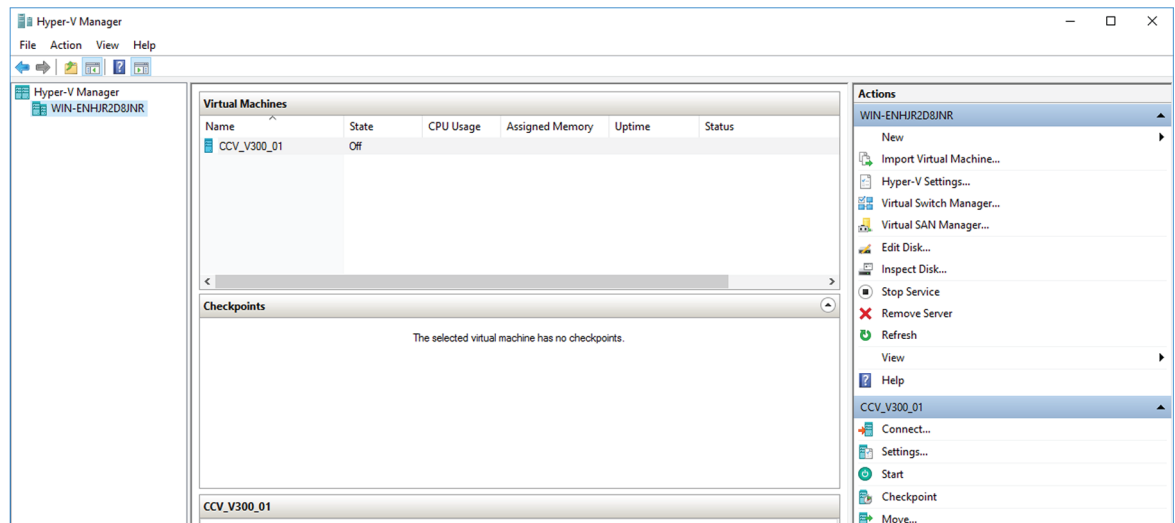
### Create a Virtual Machine

To create a new VM:

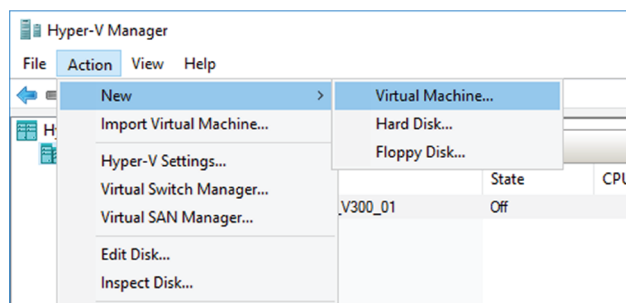
#### Procedure

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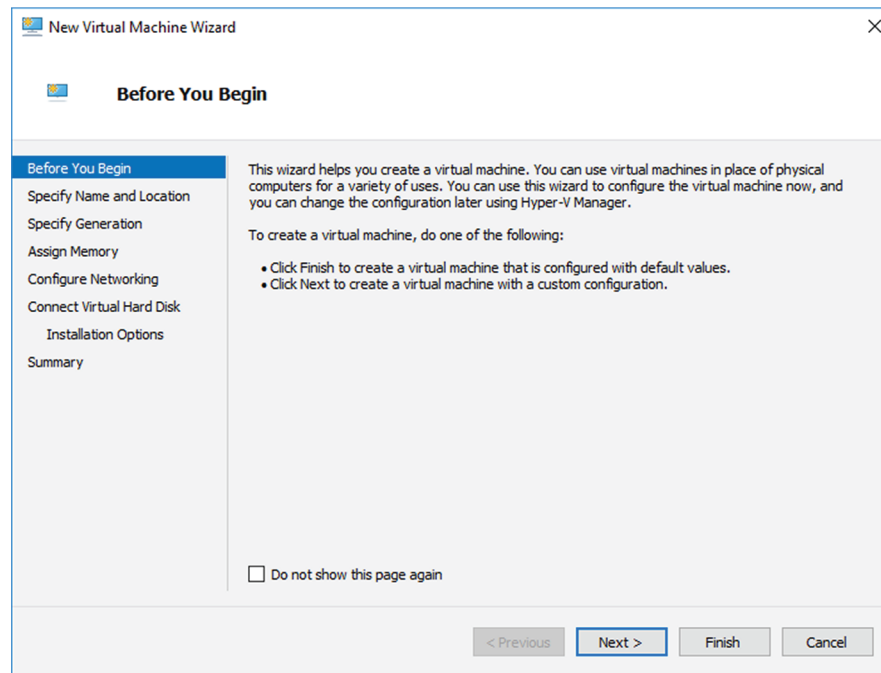
- Step 1** Open Hyper-V Manager.  
The following home screen appears:



**Step 2** Access the New Virtual Machine Wizard by clicking Action > New > Virtual Machine.



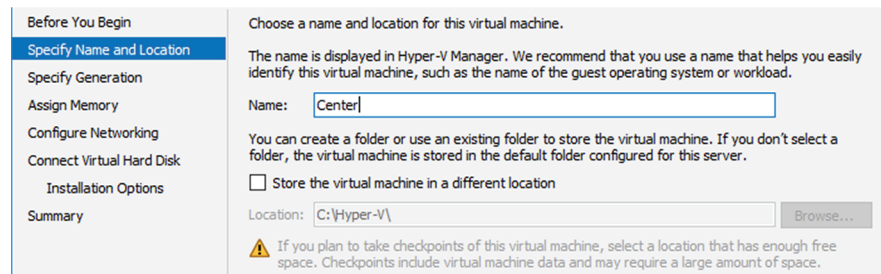
The New Virtual Machine Wizard is displayed.



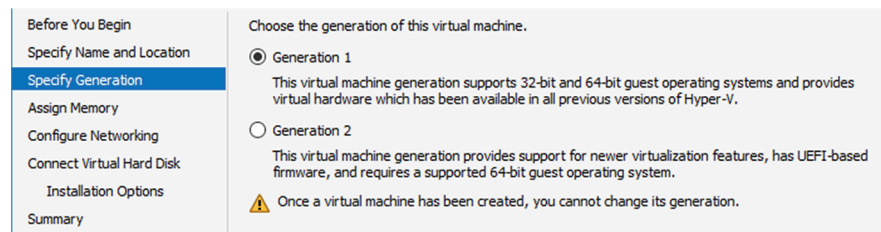
**Step 3** Click Next to start.

**Step 4** Give the new VM a name (e.g. 'Center').

**Step 5** If necessary, give the Virtual Center a different location on the server than the one set by default. In any case, the location chosen must have enough remaining space in case you plan to create snapshots (i.e. VM backups).



**Step 6** Set the VM as Generation 1.



**Step 7** Assign memory to the VM.

**Note** The minimum configuration required is 8192 MB.

Before You Begin	<p>Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 12582912 MB. To improve performance, specify more than the minimum amount recommended for the operating system.</p> <p>Startup memory: <input type="text" value="8192"/> MB</p> <p><input checked="" type="checkbox"/> Use Dynamic Memory for this virtual machine.</p> <p><b>i</b> When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.</p>
Specify Name and Location	
Specify Generation	
<b>Assign Memory</b>	
Configure Networking	
Connect Virtual Hard Disk	
Installation Options	
Summary	

**Step 8** Leave the network connection disconnected.

Before You Begin	<p>Each new virtual machine includes a network adapter. You can configure the network adapter to use a virtual switch, or it can remain disconnected.</p> <p>Connection: <input type="text" value="Not Connected"/></p>
Specify Name and Location	
Specify Generation	
Assign Memory	
<b>Configure Networking</b>	
Connect Virtual Hard Disk	
Installation Options	
Summary	

**Step 9** Select 'Use an existing hard disk' and choose the VHDX file.

Before You Begin	<p>A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties.</p> <p><input type="radio"/> Create a virtual hard disk</p> <p>Use this option to create a VHDX dynamically expanding virtual hard disk.</p> <p>Name: <input type="text" value="Center.vhdx"/></p> <p>Location: <input type="text" value="C:\Hyper-V\Virtual hard Disks\"/> <input type="button" value="Browse..."/></p> <p>Size: <input type="text" value="127"/> GB (Maximum: 64 TB)</p> <p><input checked="" type="radio"/> Use an existing virtual hard disk</p> <p>Use this option to attach an existing virtual hard disk, either VHD or VHDX format.</p> <p>Location: <input type="text" value="C:\Hyper-V\Virtual hard Disks\CiscoCyberVision-3.0.0_1.vhdx"/> <input type="button" value="Browse..."/></p> <p><input type="radio"/> Attach a virtual hard disk later</p> <p>Use this option to skip this step now and attach an existing virtual hard disk later.</p>
Specify Name and Location	
Specify Generation	
Assign Memory	
Configure Networking	
<b>Connect Virtual Hard Disk</b>	
Summary	

**Step 10** Click 'Finish' to create the VM and close the wizard.

Before You Begin	<p>You have successfully completed the New Virtual Machine Wizard. You are about to create the following virtual machine.</p> <p>Description:</p> <p>Name: Center</p> <p>Generation: Generation 1</p> <p>Memory: 8192 MB</p> <p>Network: Not Connected</p> <p>Hard Disk: C:\Hyper-V\Virtual hard Disks\CiscoCyberVision-3.0.0_1.vhdx (VHDX, dynamically expanding)</p> <p>&lt; <input type="text"/> &gt;</p> <p>To create the virtual machine and close the wizard, click Finish.</p>
Specify Name and Location	
Specify Generation	
Assign Memory	
Configure Networking	
Connect Virtual Hard Disk	
<b>Summary</b>	

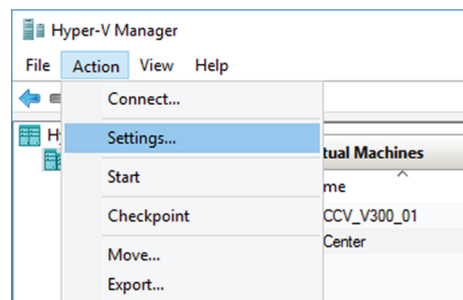
The Virtual Center created is displayed inside Hyper-V Manager home screen.

## Configure the disk size

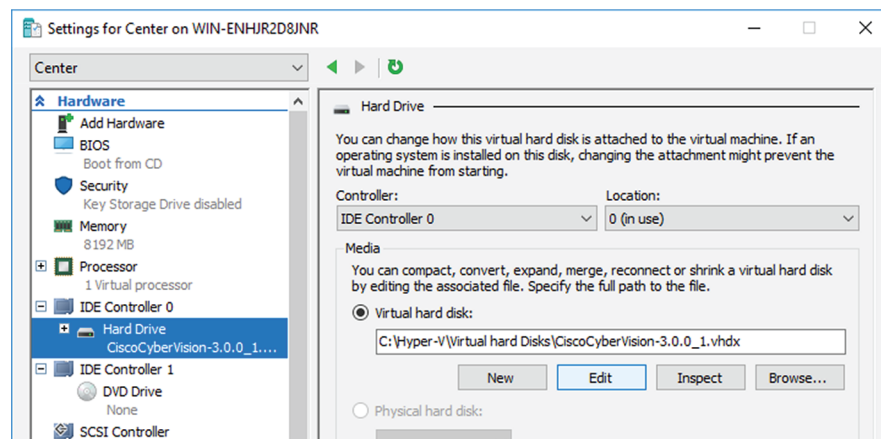
To configure the disk size:

### Procedure

- Step 1** In the Hyper-V Manager select the Center.
- Step 2** Click Action > Settings.

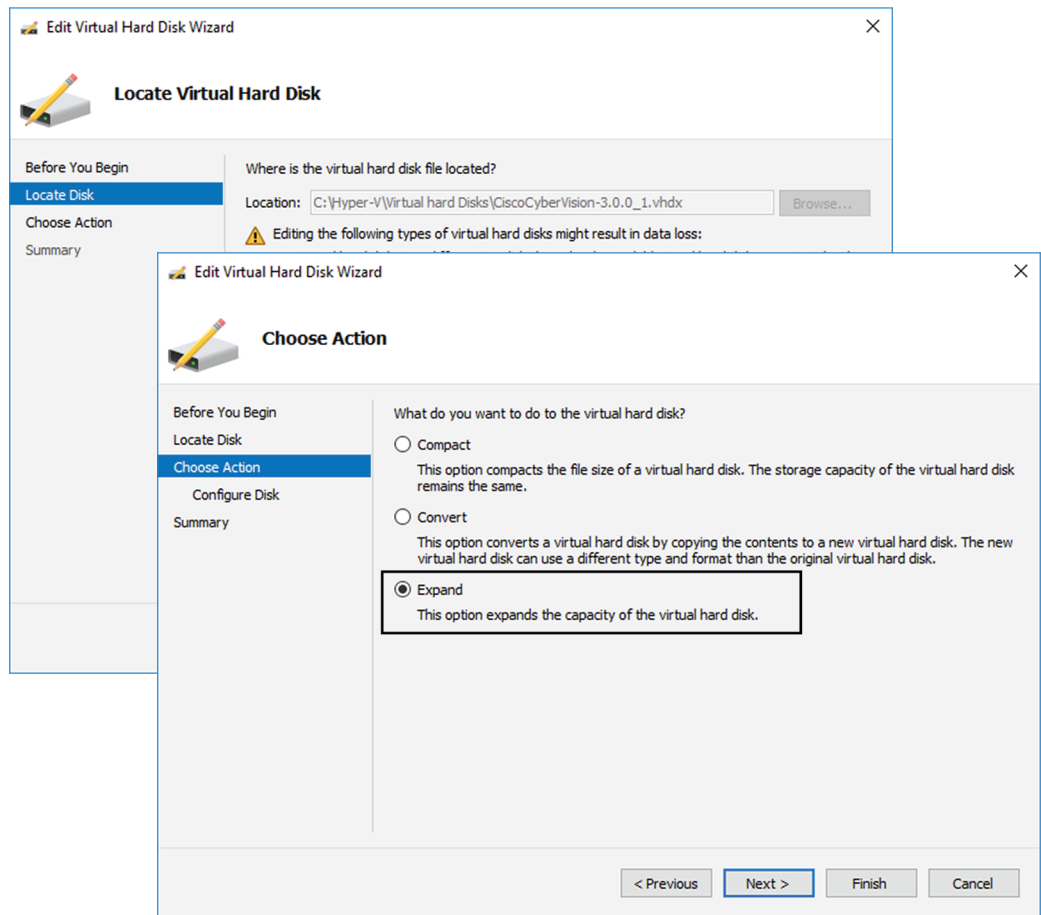


- Step 3** Click Hard Drive, then Edit.



The Edit Virtual Hard Disk Wizard displays.

- Step 4** Click Next to proceed until the Choose Action tab.



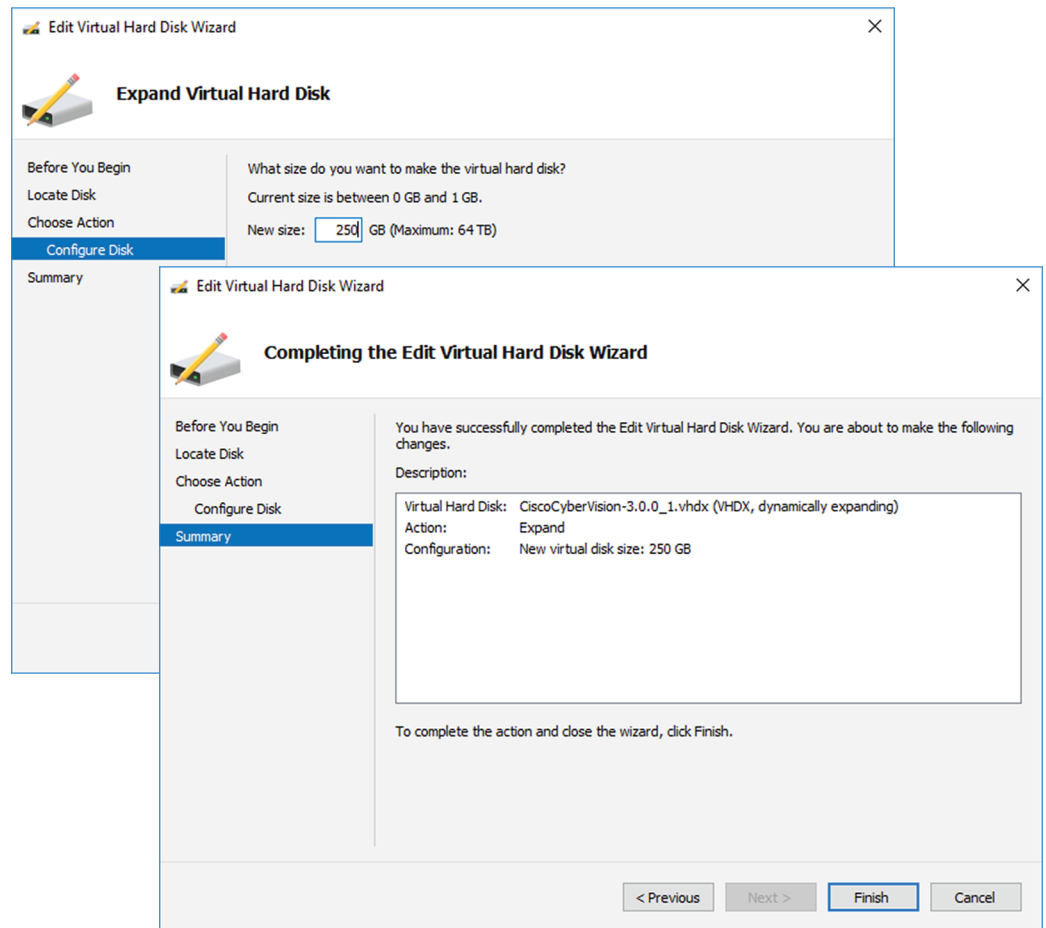
**Step 5** As you are on the Choose Action tab select the Expand option.

**Step 6** Configure a new size for the virtual hard disk.

It is recommended:

- that you set the minimum size at 16GB for a demo installation with small amounts of data.
- that you set the minimum size at 64GB for a cartography.
- that you set the minimum size at 250GB for a production environment.

The size you set here is a maximum. The virtual drive will expand as data is written on the virtual disk.



**Step 7** Click Finish.

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## Create the network interfaces

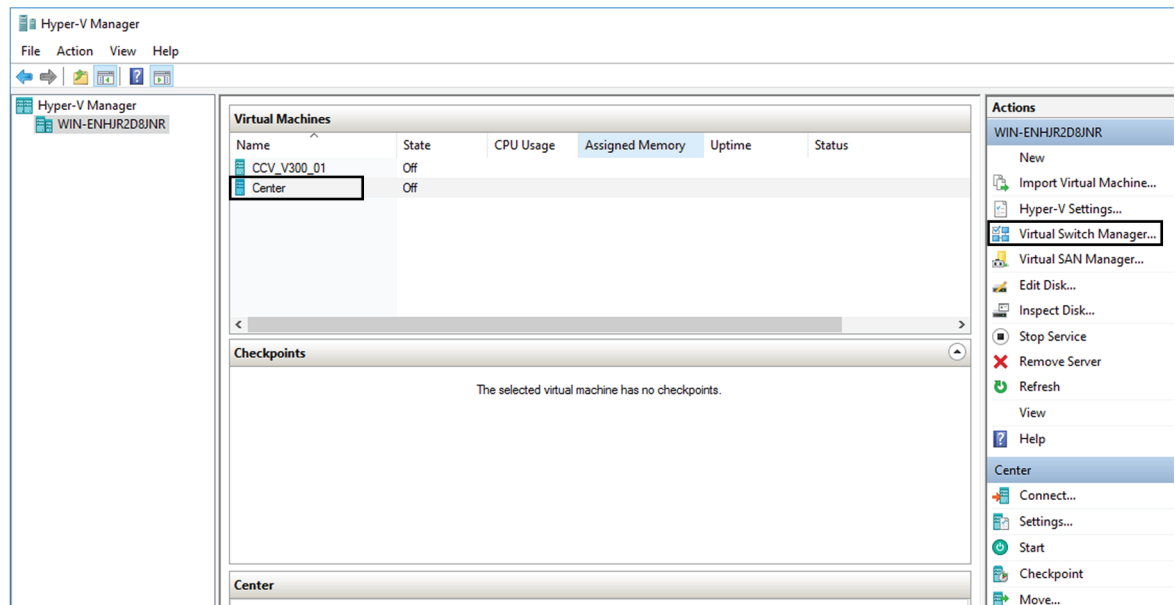
To create the Admin and Collection network interfaces:

### Procedure

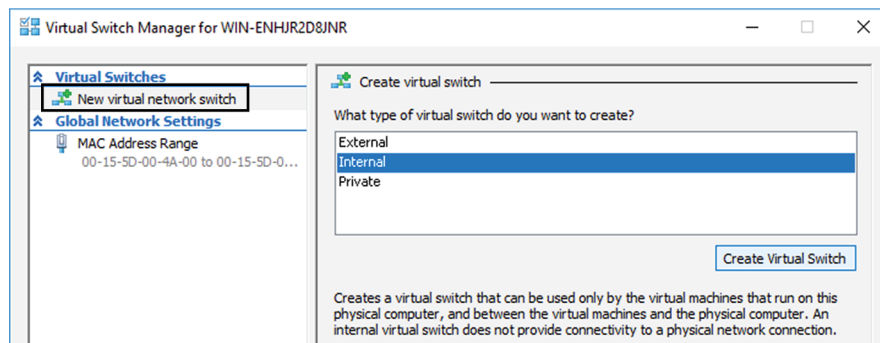
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**Step 1** Select the Center.

**Step 2** On the Actions menu, open the Virtual Switch Manager.

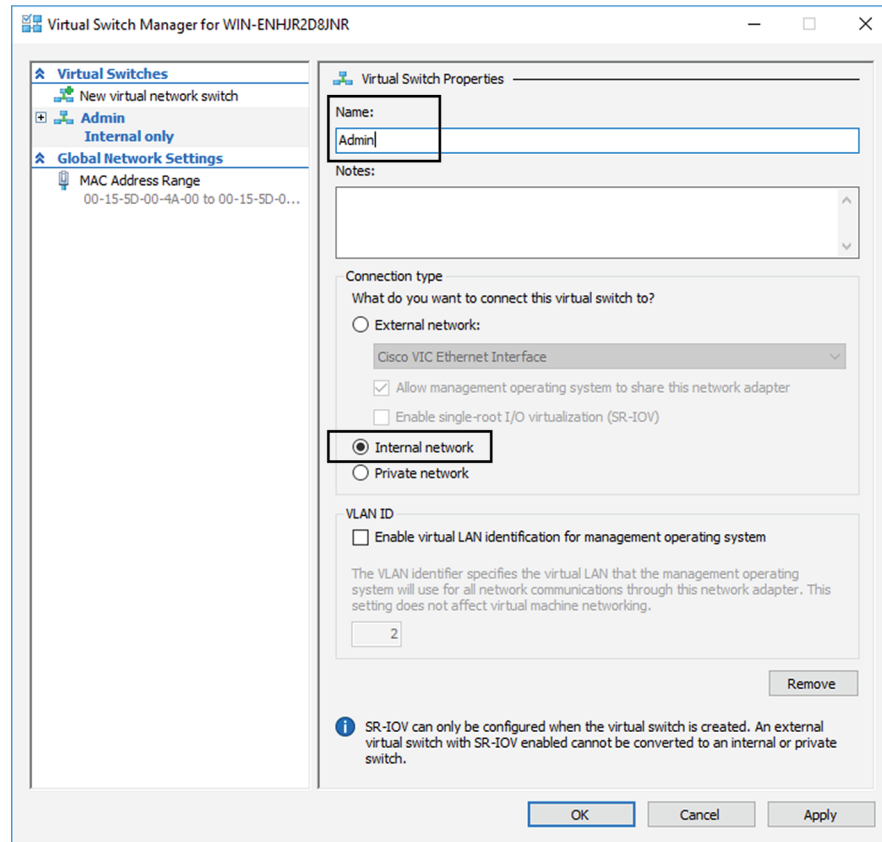


The Virtual switch manager opens.



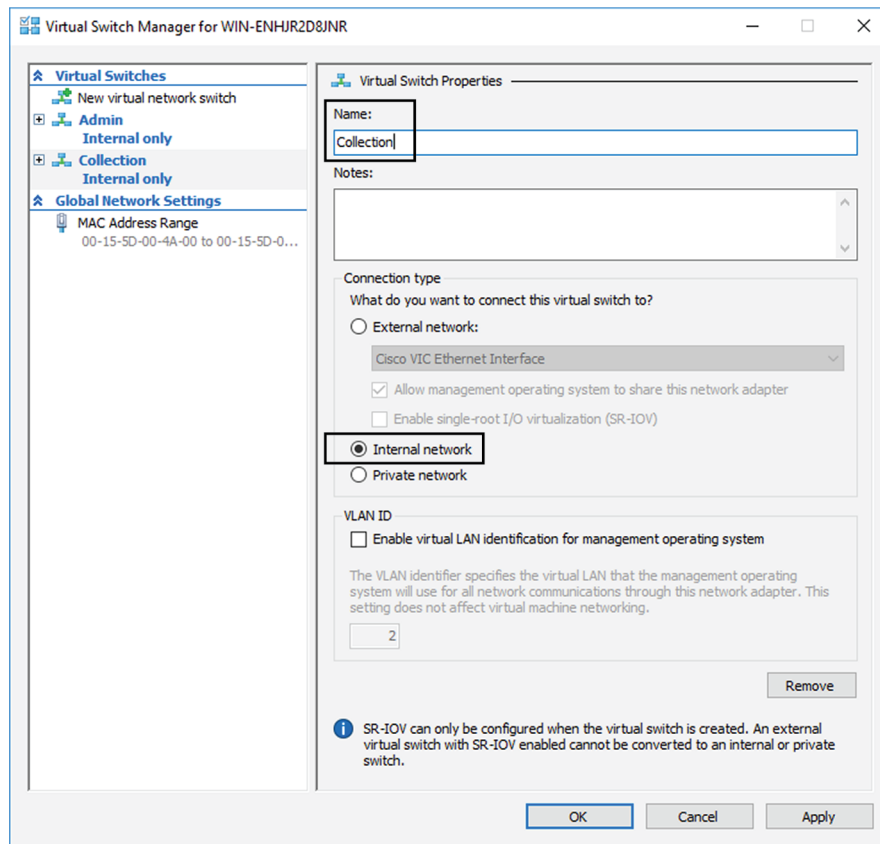
- Step 3** Click 'New virtual network switch'.
- Step 4** The new virtual switch displays.
- Step 5** Name it 'Admin'.
- Step 6** Select 'Internal network'.





**Step 7** Create a second virtual switch and name it 'Collection'.

**Step 8** Select 'Internal network'.



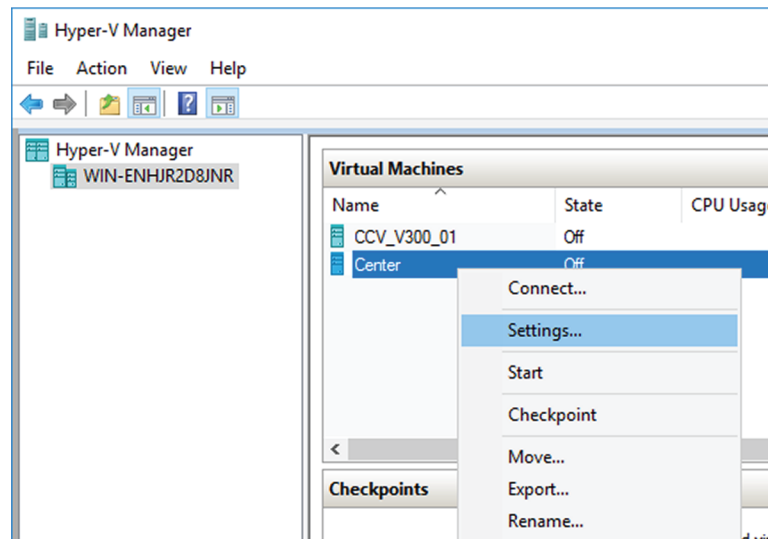
## Map the network interfaces

To add a network card:

ICS CyberVision needs two network adapters (i.e. network card) to which the Admin and Collection network interfaces will be assigned. Each new VM includes a network card when created which is available within the hardware list. Therefore, you need to create another one during this step.

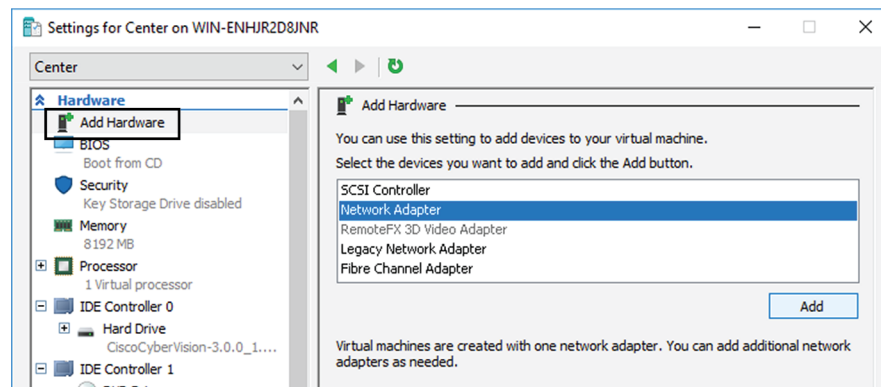
### Procedure

**Step 1** Right click the Center and click again 'Settings'.



The settings window for the Virtual Center is displayed.

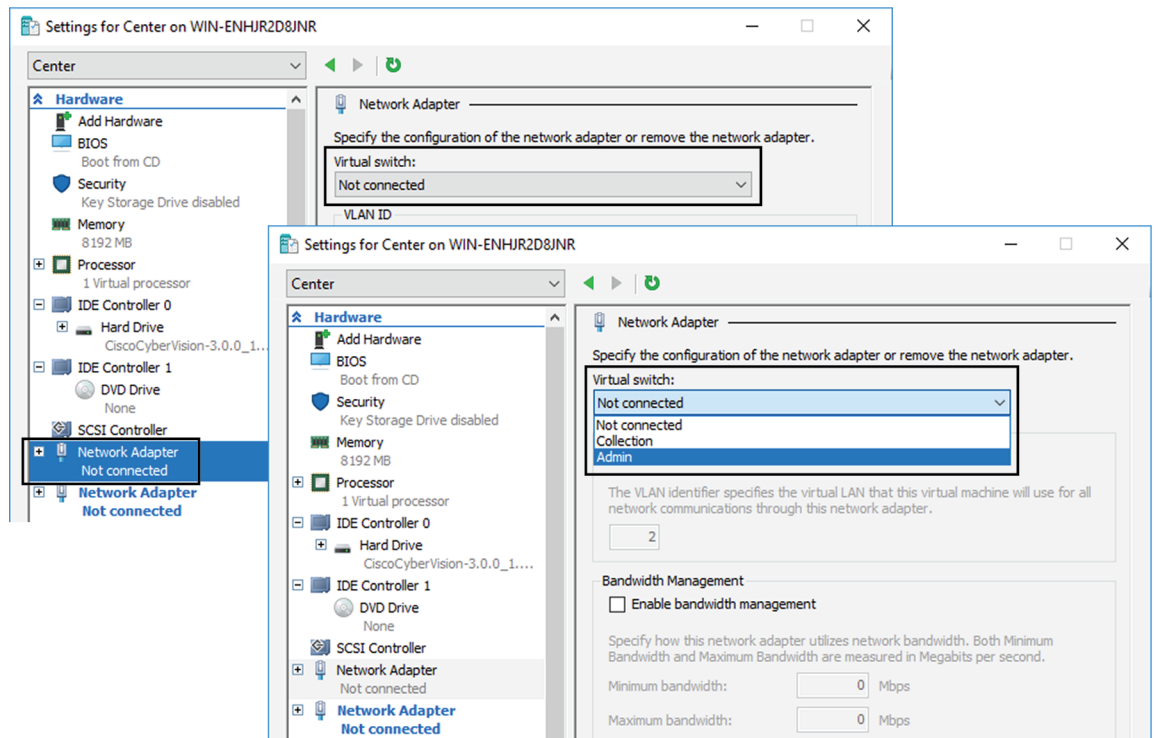
- Step 2** Click 'Add Hardware'.
- Step 3** Select 'Network Adapter'.
- Step 4** Click 'Add'.



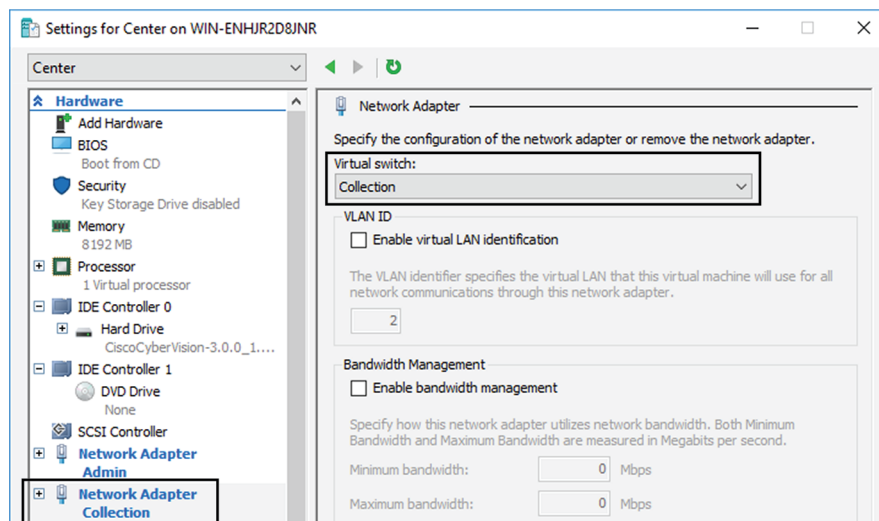
The second network adapter needed is created. Now you need to map each network adapter to a Virtual Switch.

To proceed to the network mapping:

- Step 5** Select the first network adapter.
- Step 6** Select 'Admin' as Virtual Switch.
- Note** You must configure network interfaces in order of appearance inside the network list to avoid confusions:
- Note** - The first network card as the Administration network interface (eth0).
- Note** - The second one as the Collection network interface (eth1).



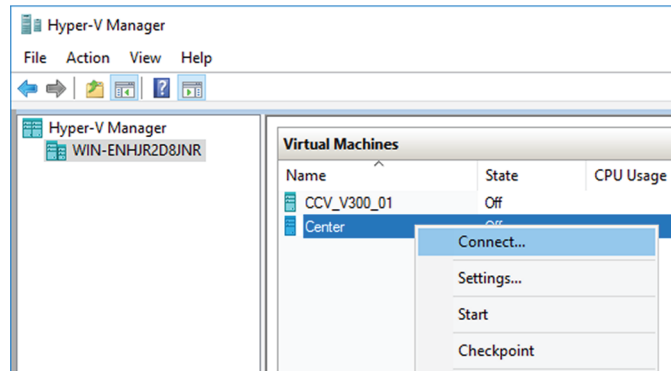
**Step 7** Repeat the previous action for the second network adapter and select 'Collection' as Virtual Switch.



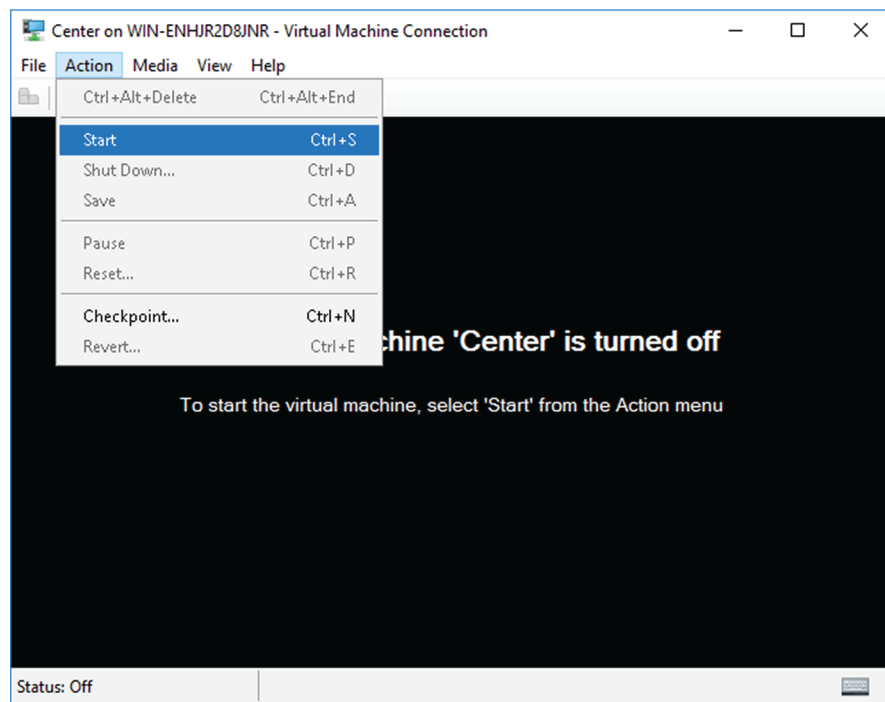
## Boot the Virtual Machine

You can now proceed to the Virtual Center first boot.

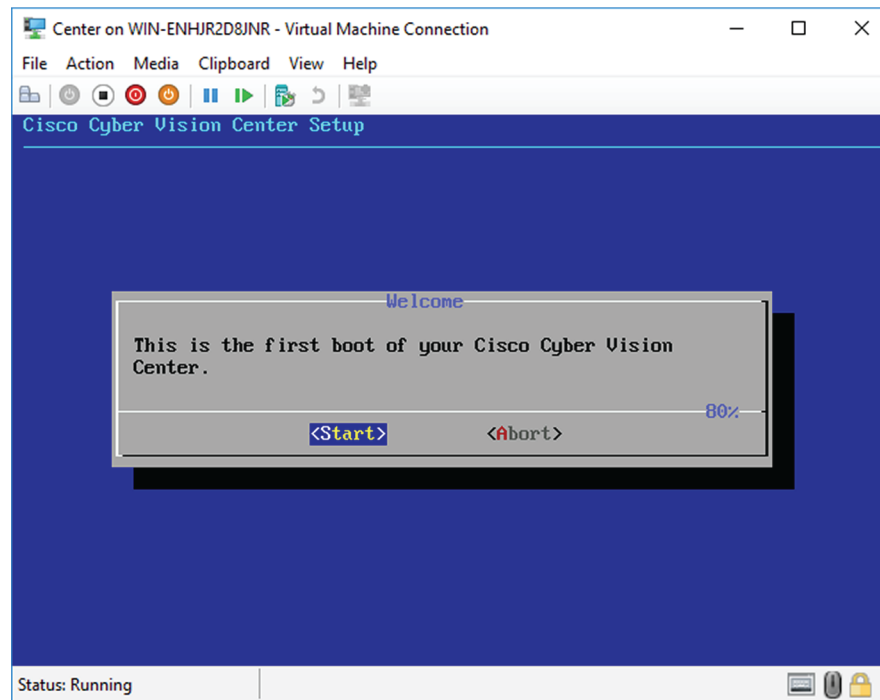
1. Click Center on Hyper-V Manager and click 'Connect'.



2. Start the Virtual Center.



Once the VM configuration completed successfully, the following screen appears:



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**Note** To retrieve the control of your keyboard and mouse, press Ctrl+Alt.

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The Virtual Center is now ready for basic configuration.



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**Note** Keeping your Virtual environment safe and clean. Once the VM first boot has completed successfully, Cisco recommends to shut down the Virtual Center and to delete the Virtual Disk from Hyper-V hardware list. Keeping interfaces to the minimum lowers possible access doors for attackers.

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