Install the Virtual Center

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

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

To retrieve the virtual machine installation file:

Procedure

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.

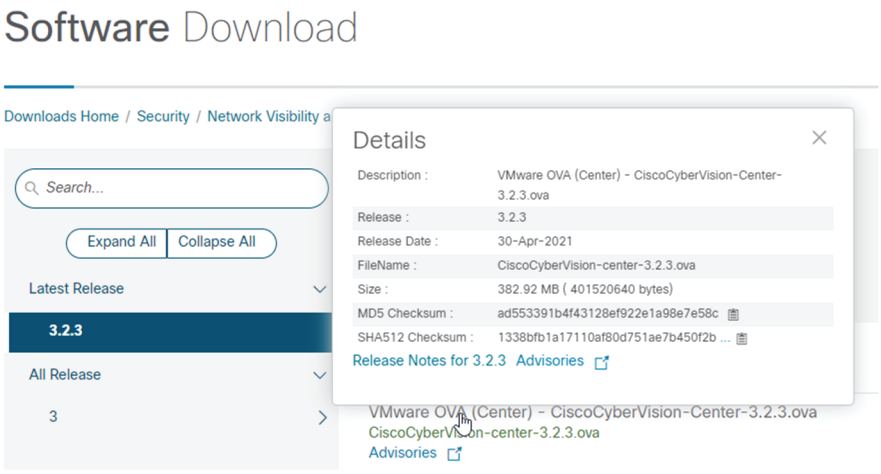
Step 5 Open a shell prompt such as Windows Powershell and use the following command to retrieve the file checksum:

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

```
PS C:\Users\[redacted]> Get-FileHash .\Downloads\CiscoCyberVision-center-3.2.3.ova -Algorithm SHA512 | Format-List

Algorithm : SHA512
Hash      : 1338BFB1A17110AF80D751AE7B450F2B29CCB4CB54F550F38B8E6B4236865EC9EDF7773FD05D1055C7F1EF76E68C2B8A96CFE69AB
            1B622E4B0BB8EBB9E94DB16
Path      : C:\Users\[redacted]\Downloads\CiscoCyberVision-center-3.2.3.ova
```

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



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

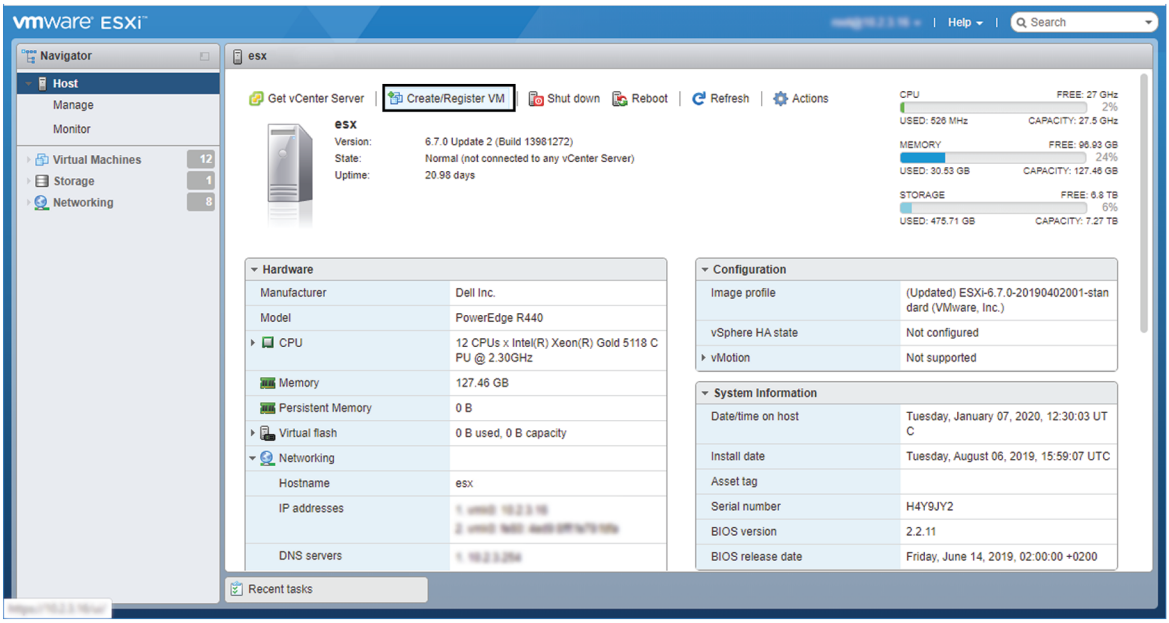
Before taking the steps below to create a VM on ESXi, **you must set two network interfaces** (the Administration and the Collection network interfaces), and a third if deploying a Center with DPI (the DPI network interface), accordingly to the infrastructure of the network. To do so, refer to VMware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

To create the Virtual Machine and deploy Cisco Cyber Vision:

Procedure

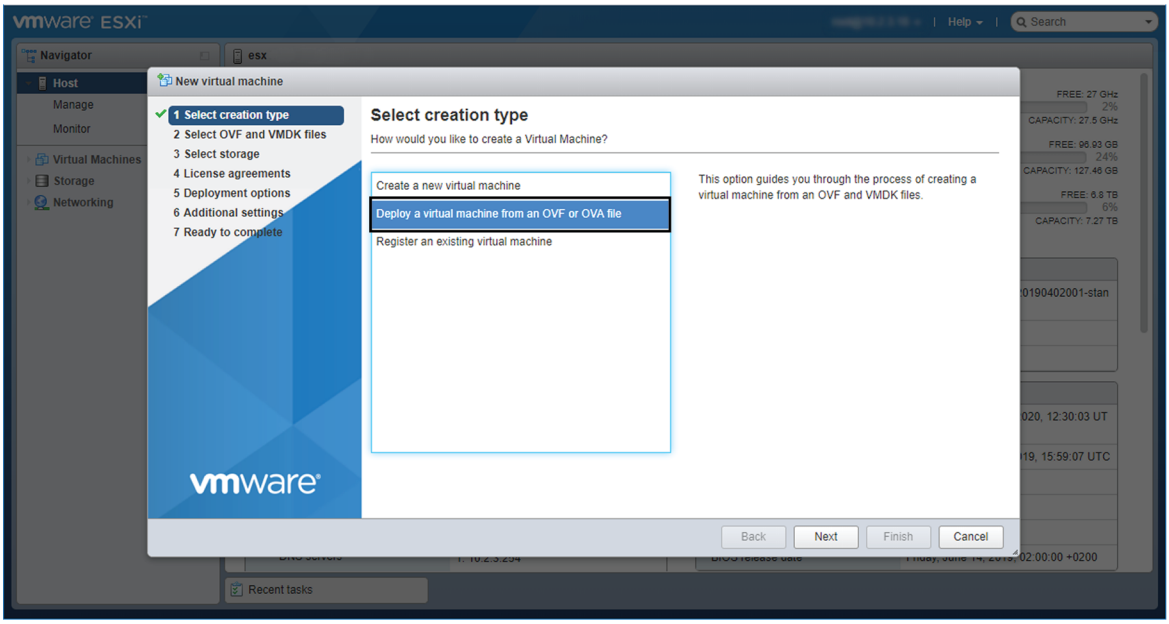
Step 1 Login to VMware EXSi.

Step 2 Click Create/Register VM.

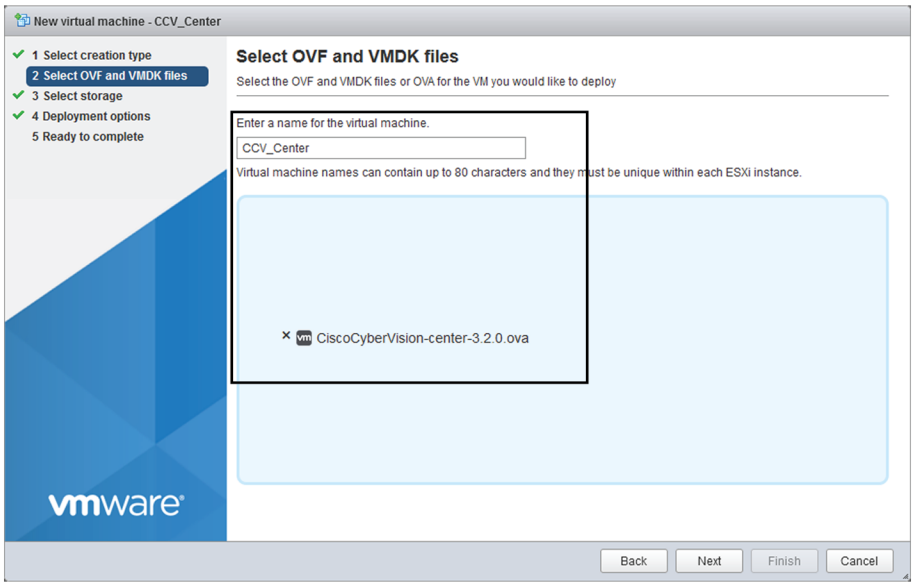


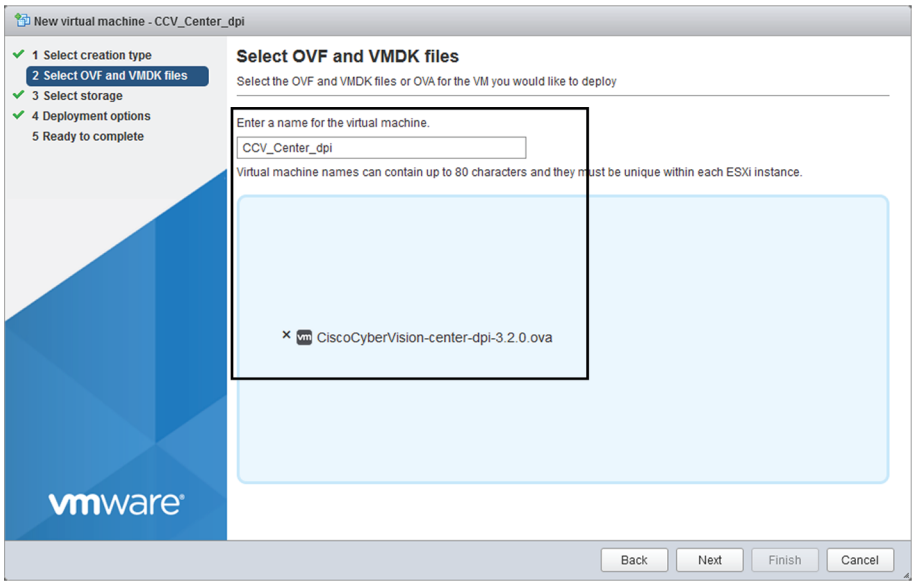
The wizard to create a new virtual machine opens.

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

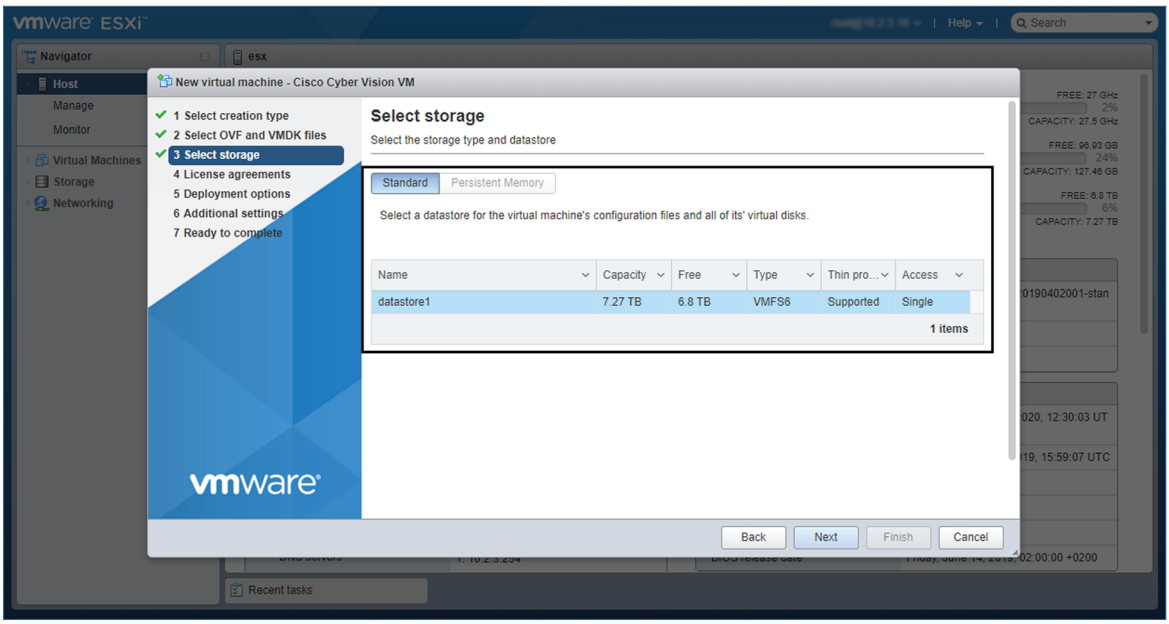


Step 4 Give a name to the virtual machine and select the Cisco Cyber Vision OVA file. Select the DPI OVA file to enable the sensor function on the Center VM.





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)**.

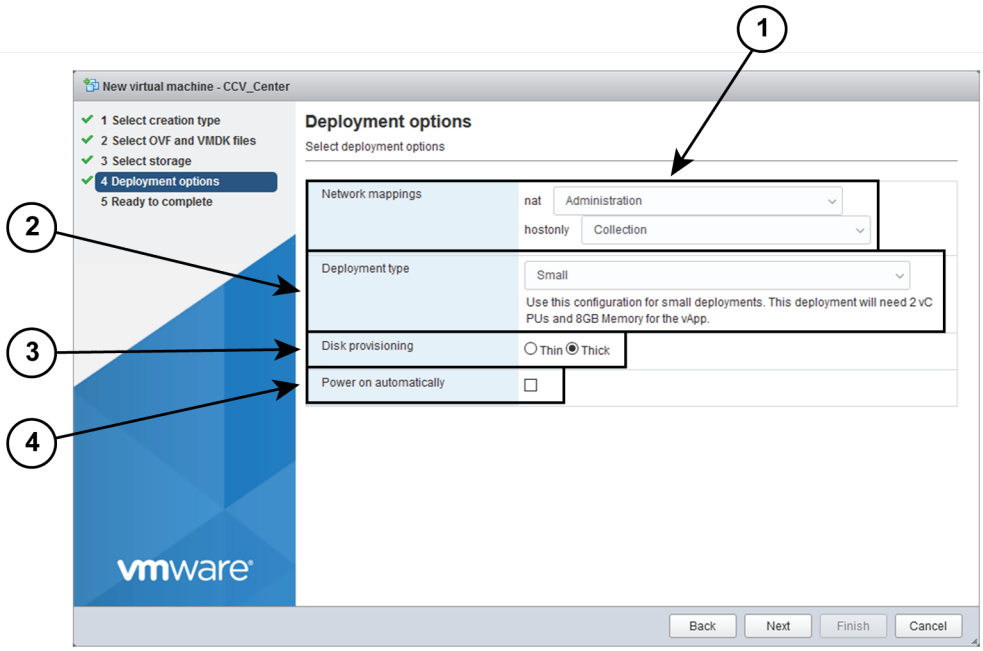
Step 8 Set the Deployment type as Small, Medium or Large **(3)**. The deployment size for an OVA DPI file is Large by default.

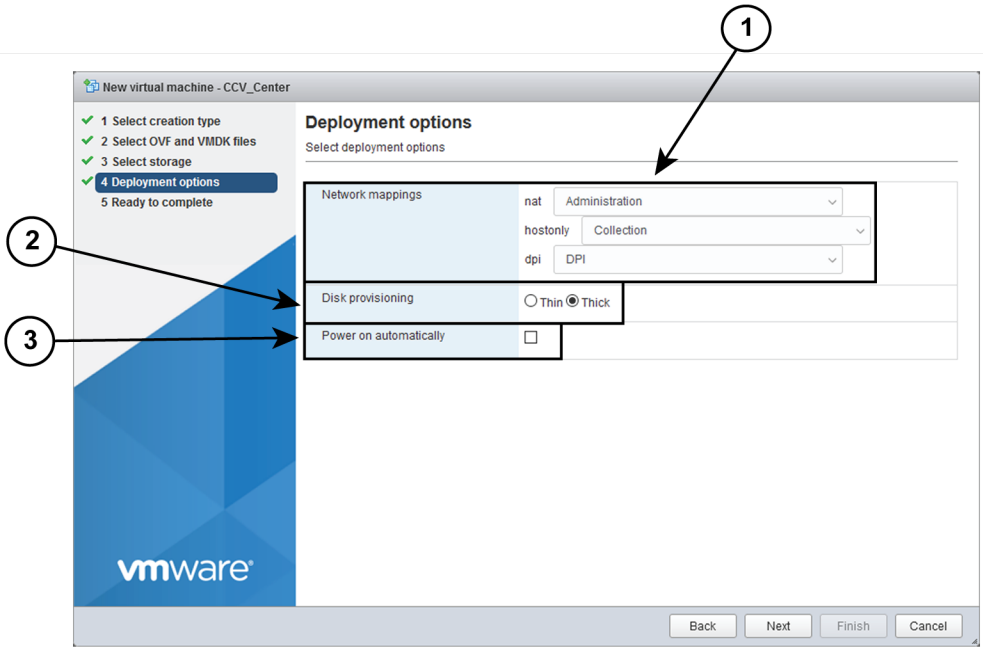
Small: Intel Xeon, 8 cores, 16GB RAM

Medium: Intel Xeon, 10 cores, 32GB RAM

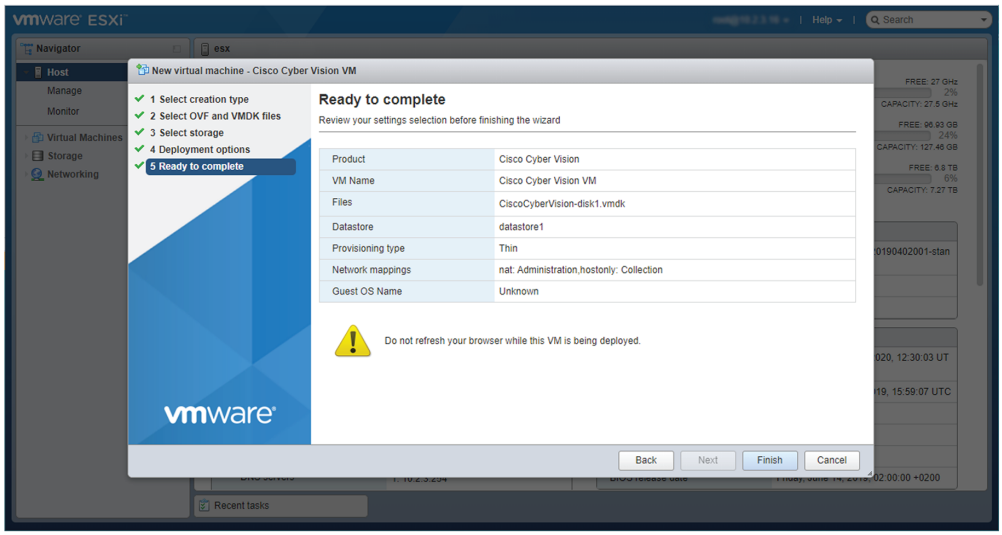
Large: Intel Xeon, 16 cores, 64GB RAM

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

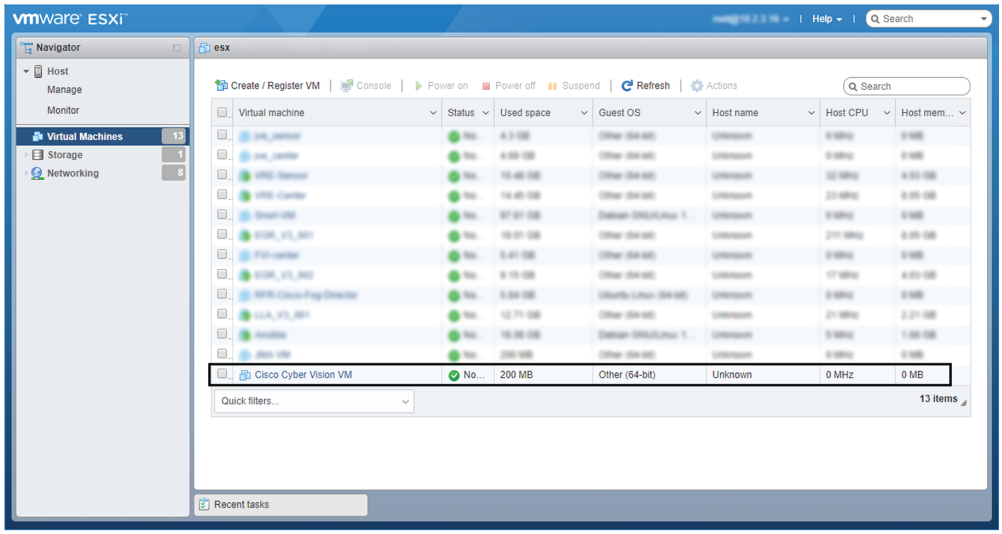




Step 10 Check the new VM's settings before clicking Finish.



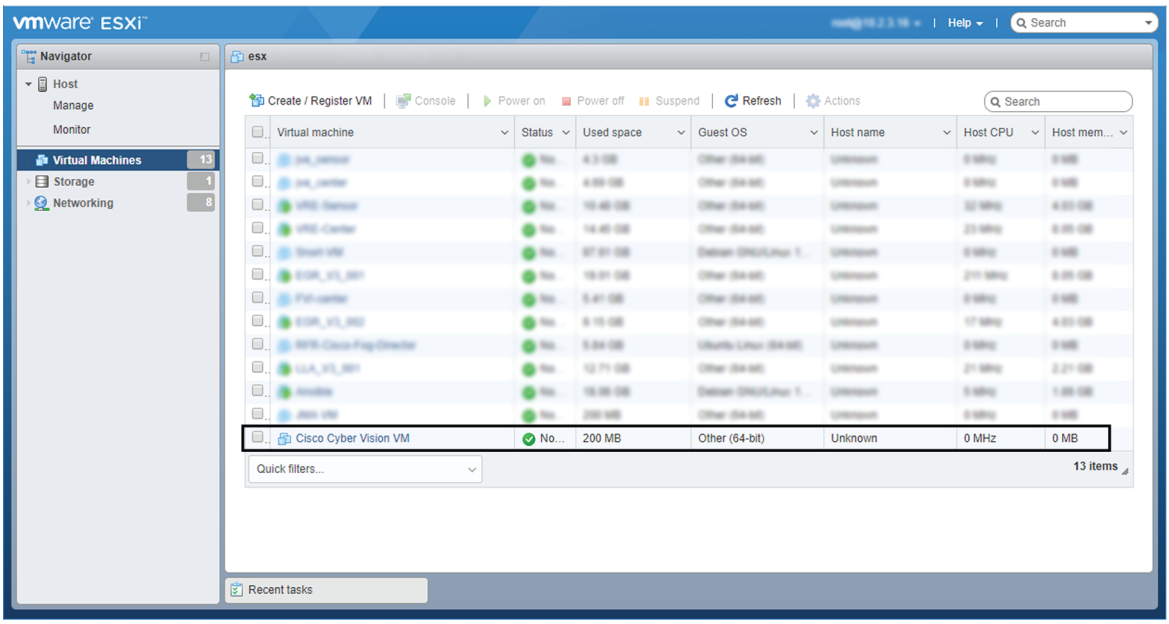
Your new VM is displayed in the virtual machine list.



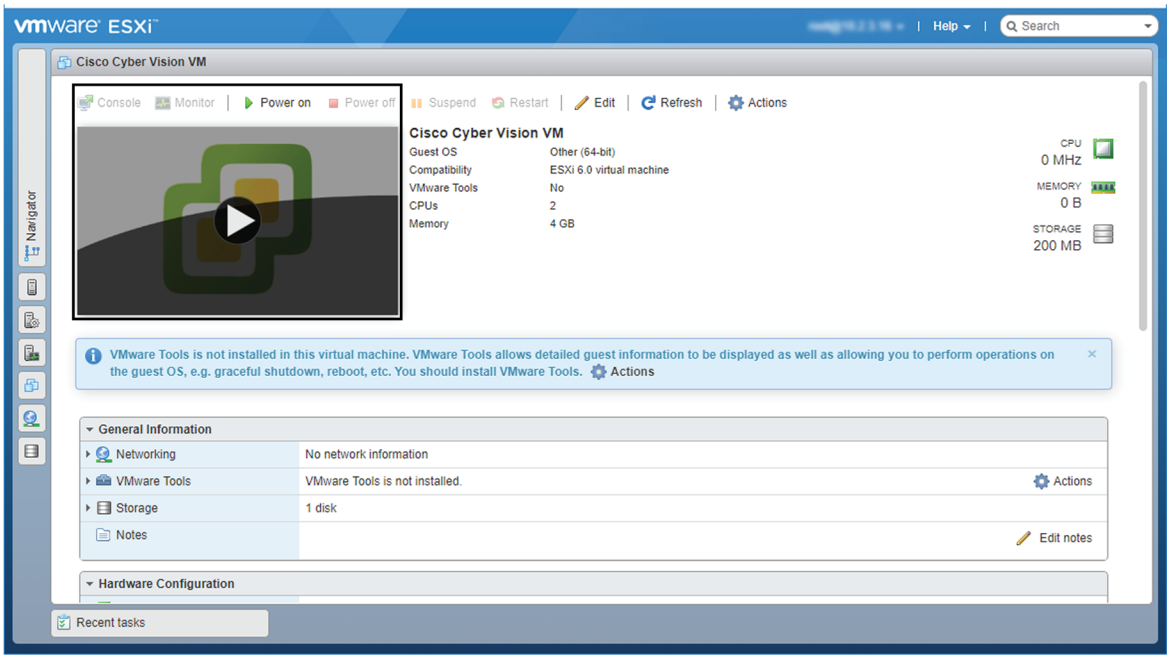
Boot the Virtual Machine

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

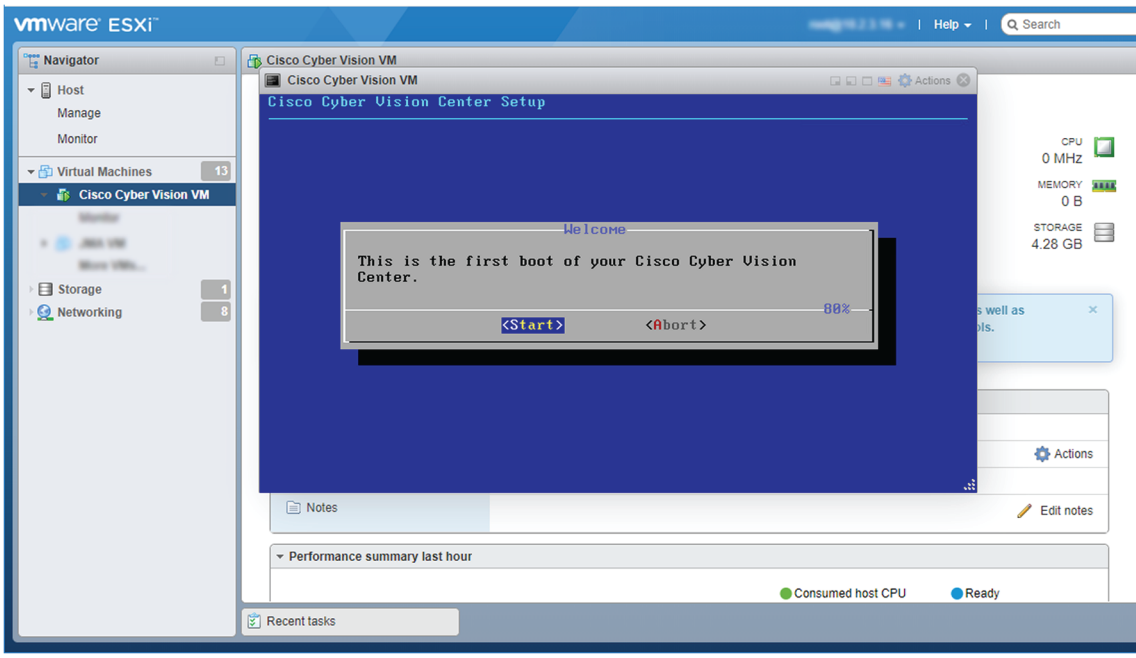
1. Click the VM in the list.



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

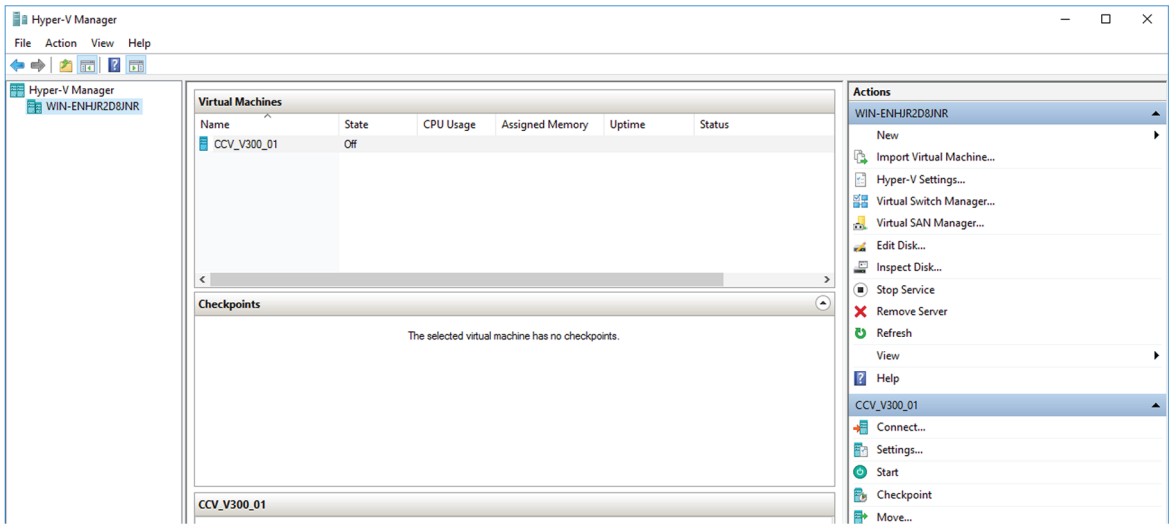
Create a Virtual Machine

To create a new VM:

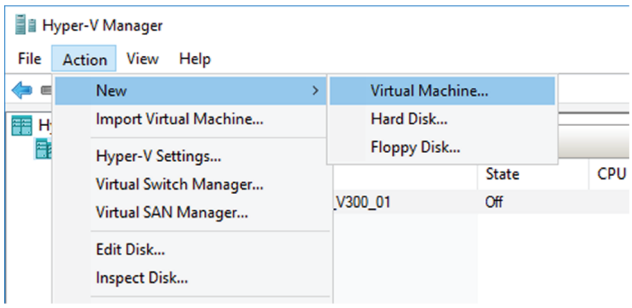
Procedure

Step 1 Open Hyper-V Manager.

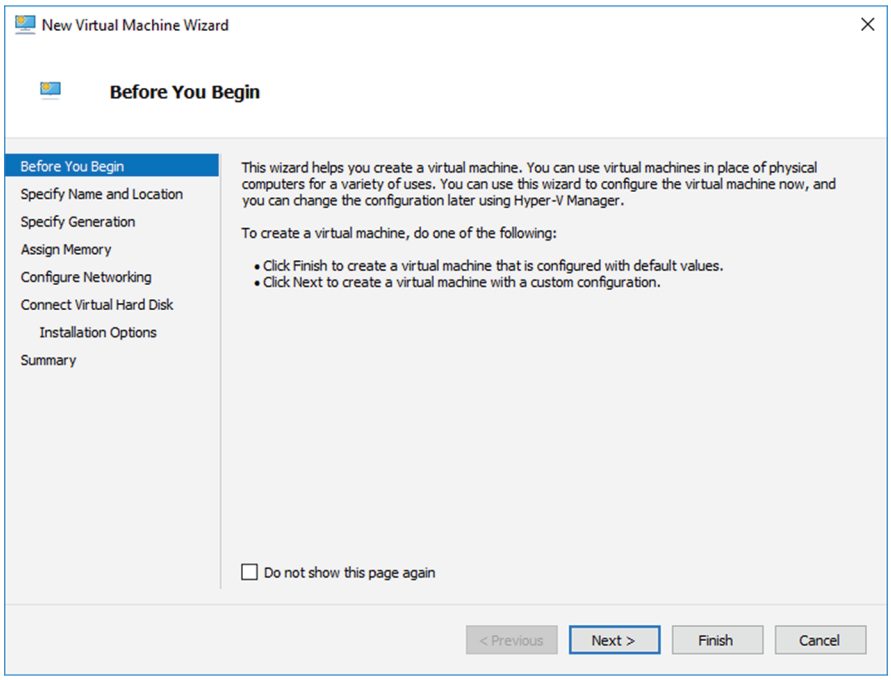
The following home screen appears:



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



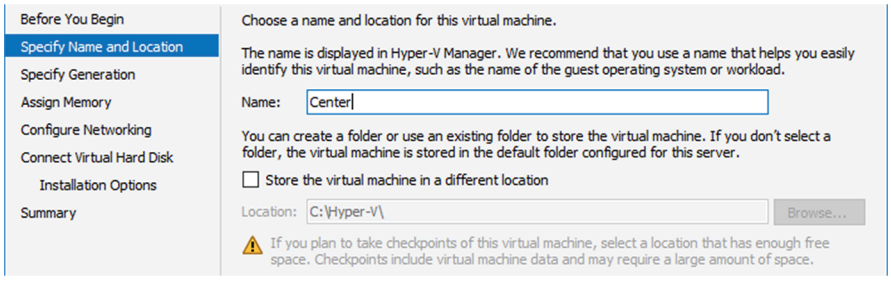
The New Virtual Machine Wizard is displayed.



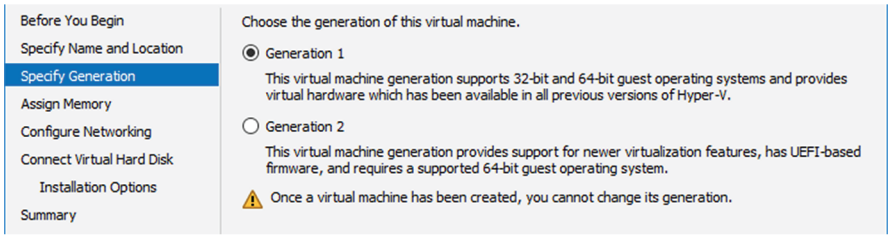
Step 3 Click Next to start.

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).

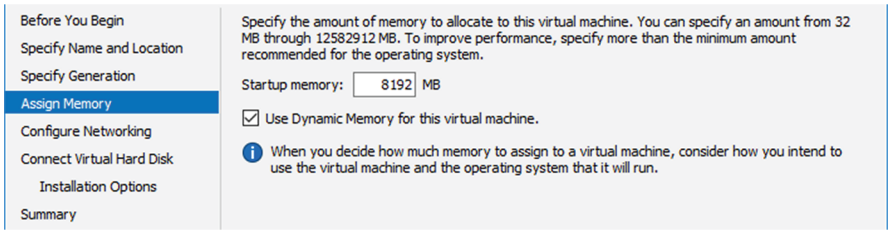


Step 6 Set the VM as Generation 1.

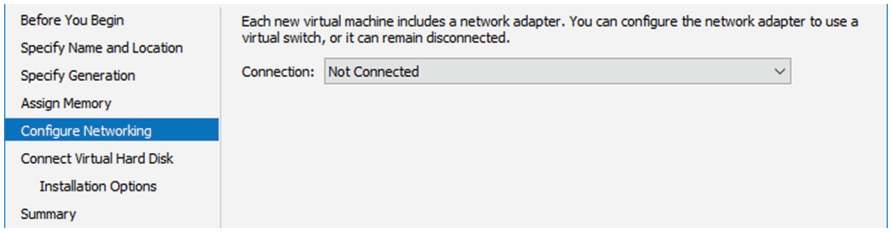


Step 7 Assign memory to the VM.

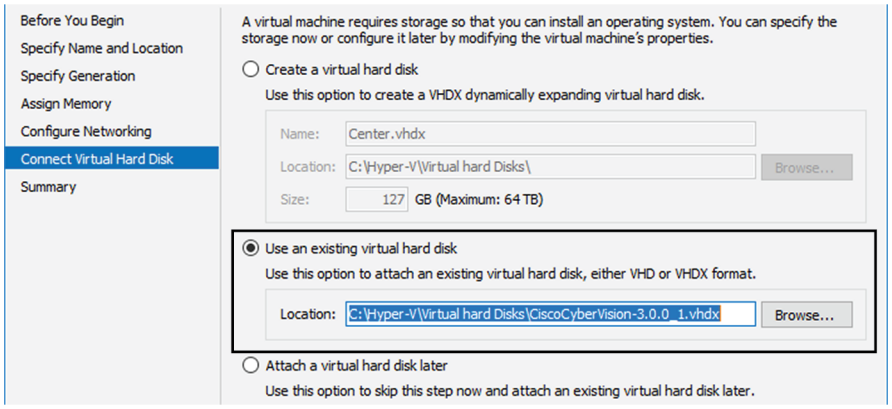
Note The minimum configuration required is 8192 MB.



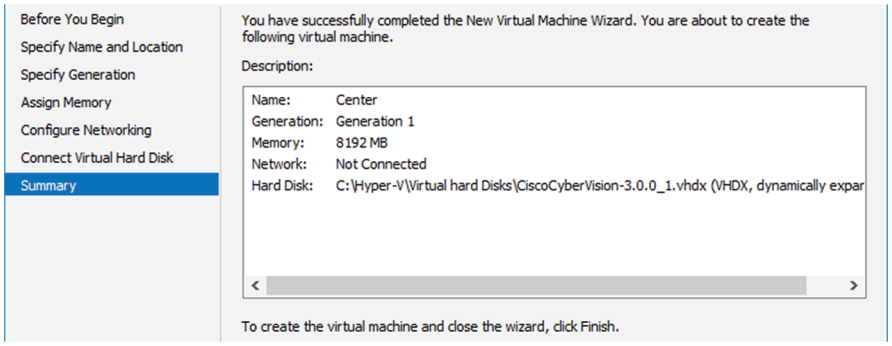
Step 8 Leave the network connection disconnected.



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



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



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

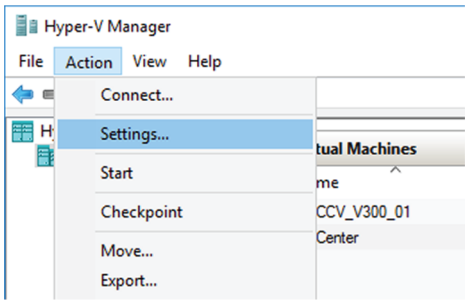
Configure the disk size

To configure the disk size:

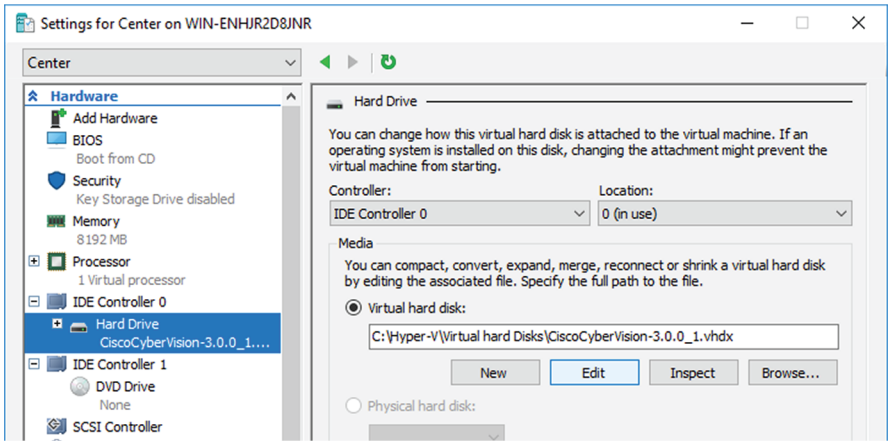
Procedure

Step 1 In the Hyper-V Manager select the Center.

Step 2 Click Action > Settings.

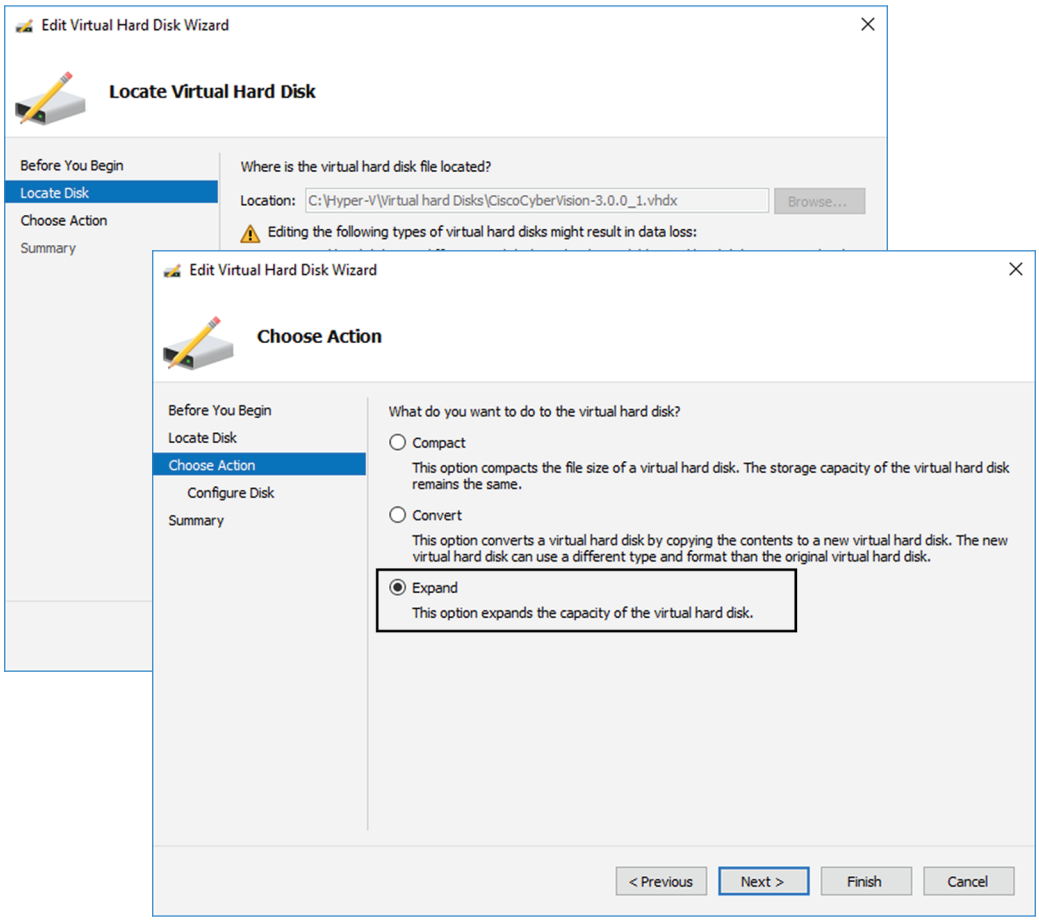


Step 3 Click Hard Drive, then Edit.



The Edit Virtual Hard Disk Wizard displays.

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



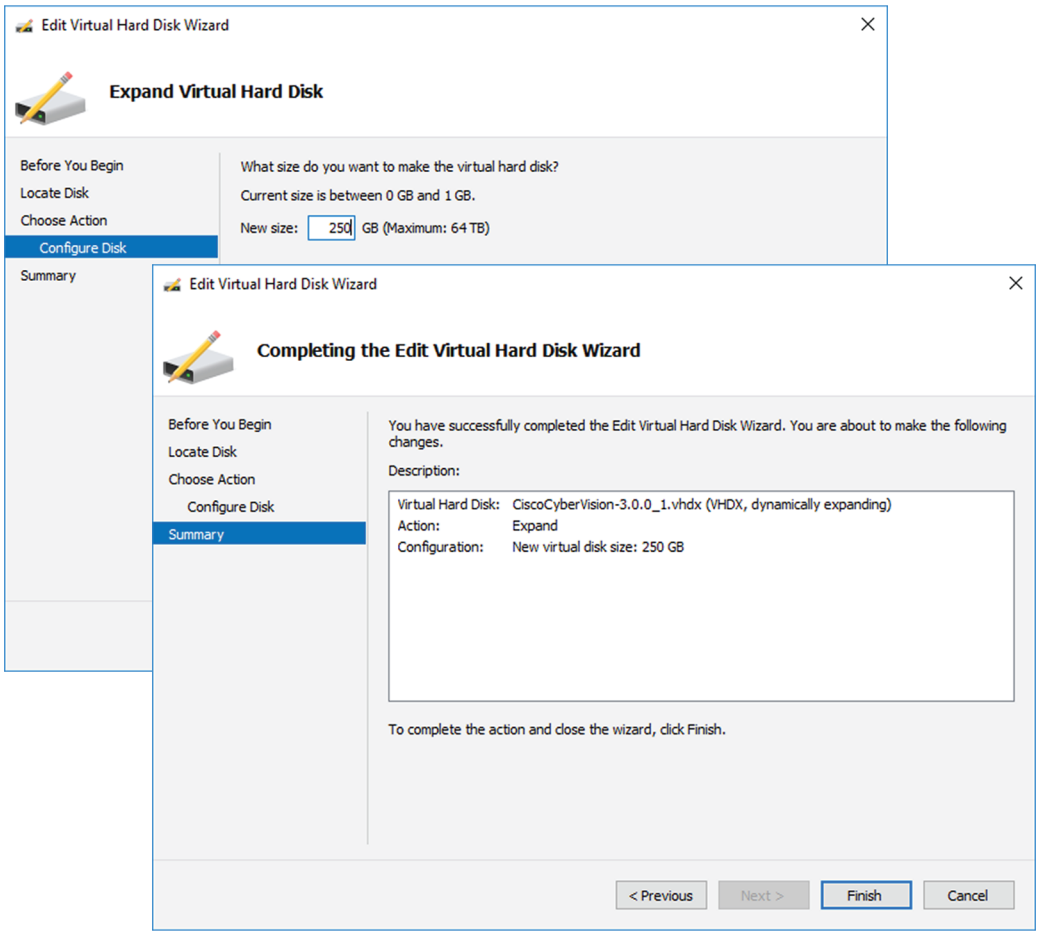
Step 5 As you are on the Choose Action tab select the Expand option.

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.

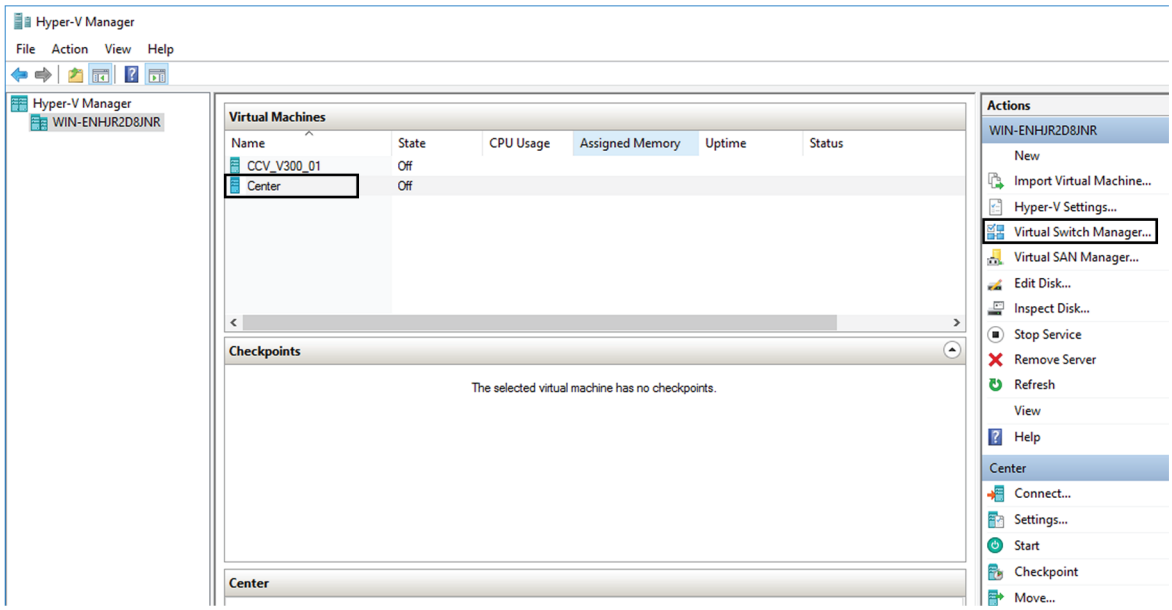
Create the network interfaces

To create the Admin and Collection network interfaces:

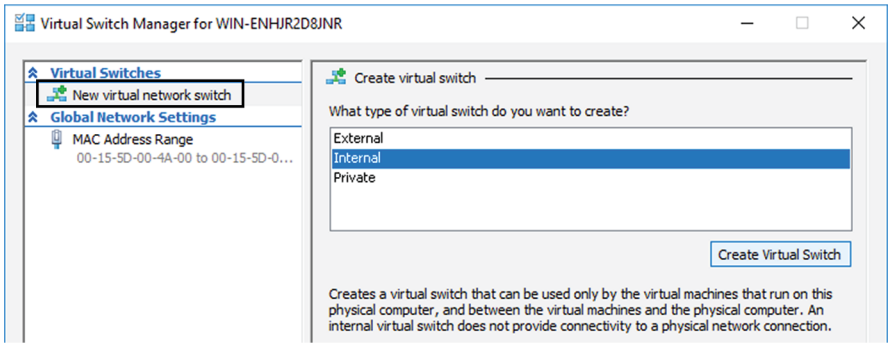
Procedure

Step 1 Select the Center.

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



The Virtual switch manager opens.

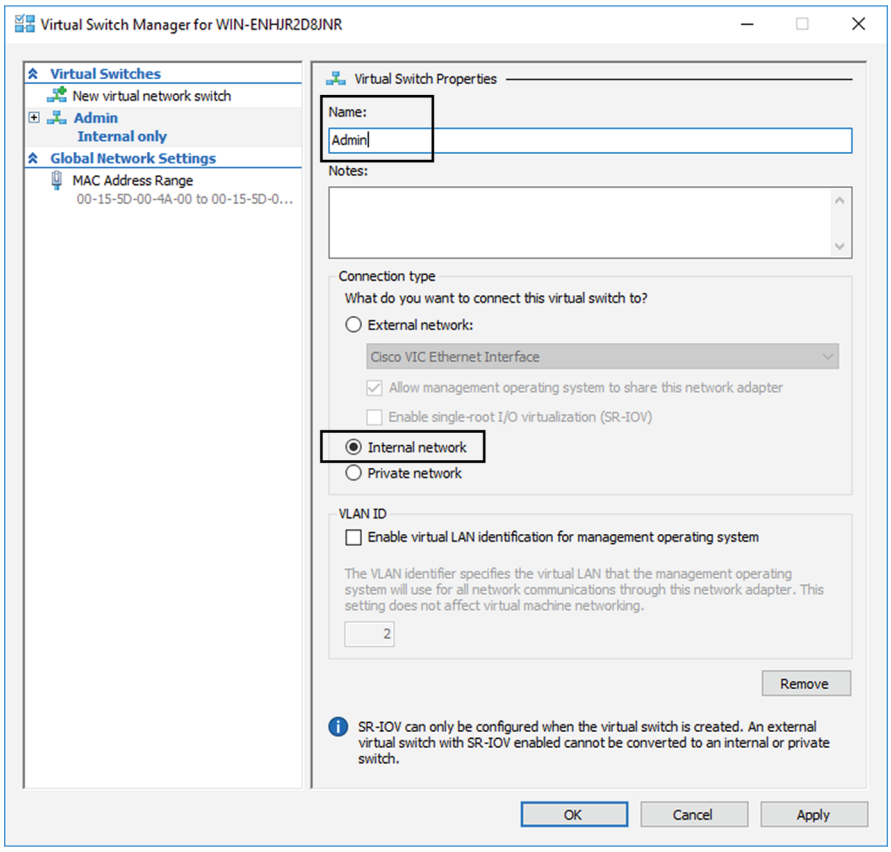


Step 3 Click 'New virtual network switch'.

Step 4 The new virtual switch displays.

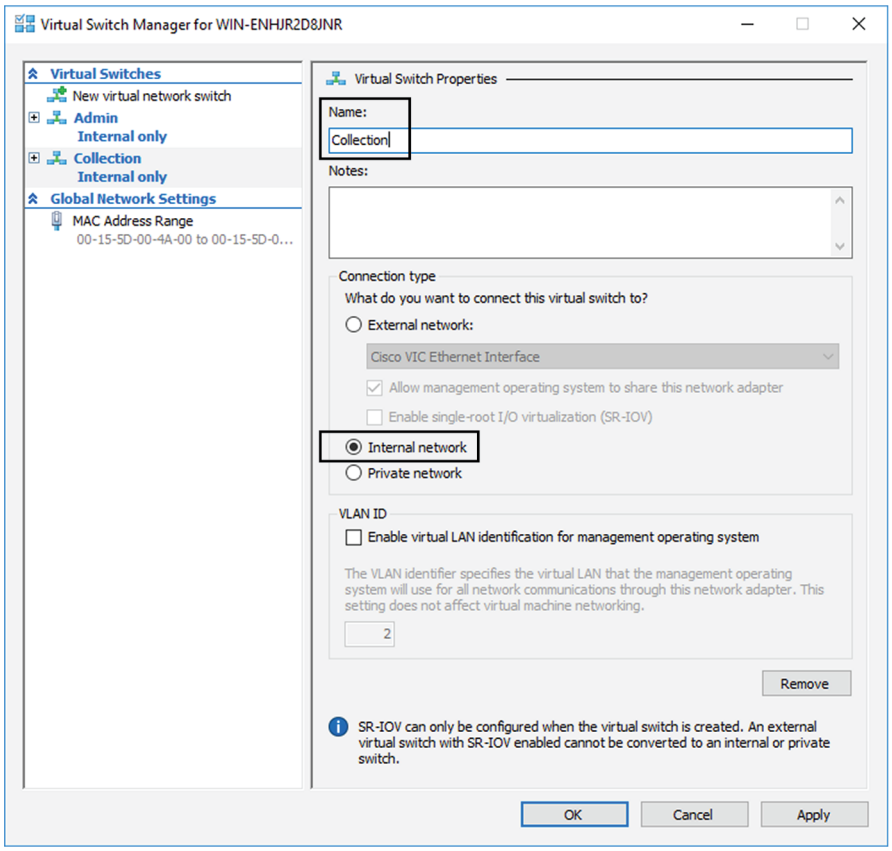
Step 5 Name it 'Admin'.

Step 6 Select 'Internal network'.



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

Step 8 Select 'Internal network'.



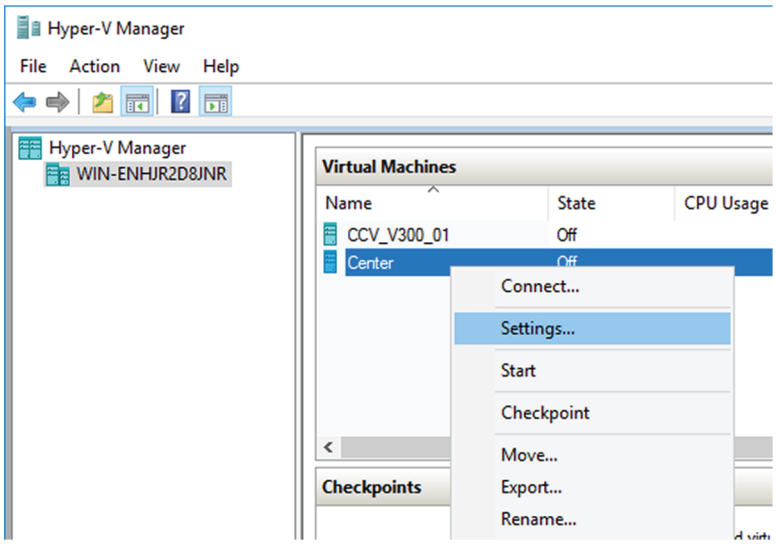
Map the network interfaces

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'.

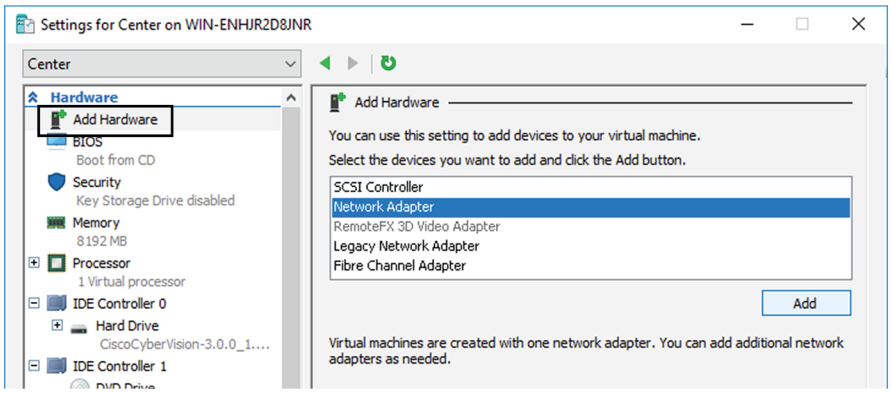


The settings window for the Virtual Center is displayed.

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:

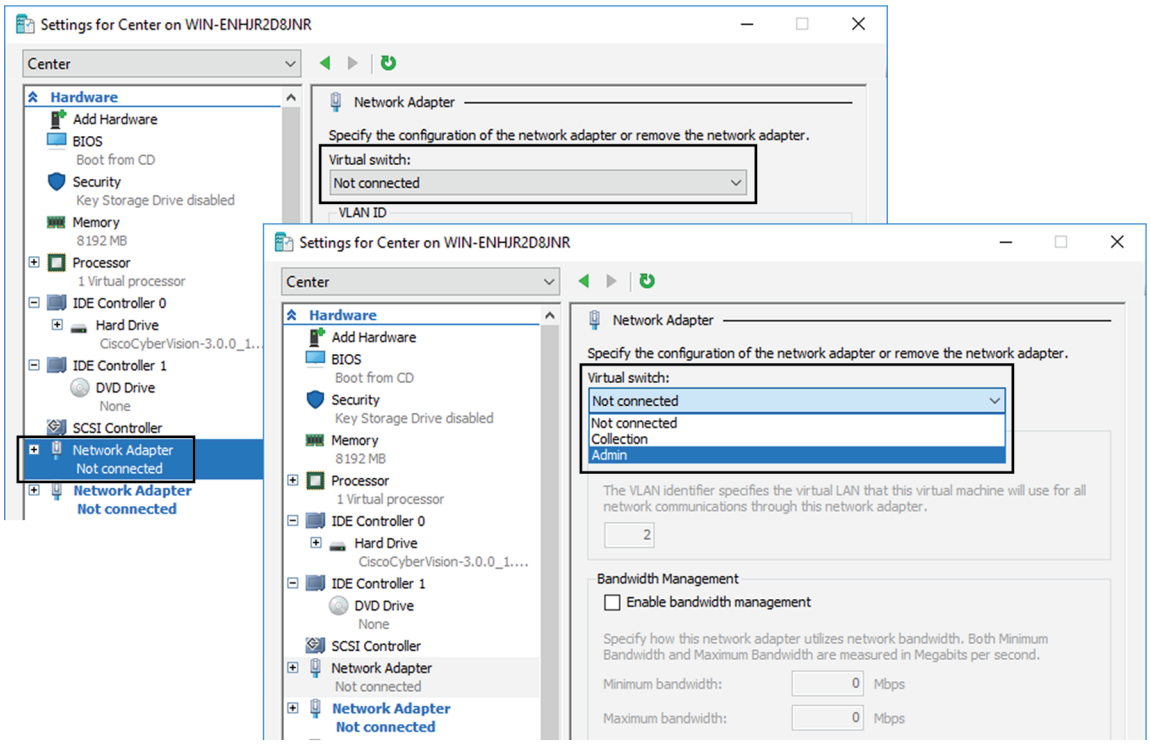
Step 5 Select the first network adapter.

Step 6 Select 'Admin' as Virtual Switch.

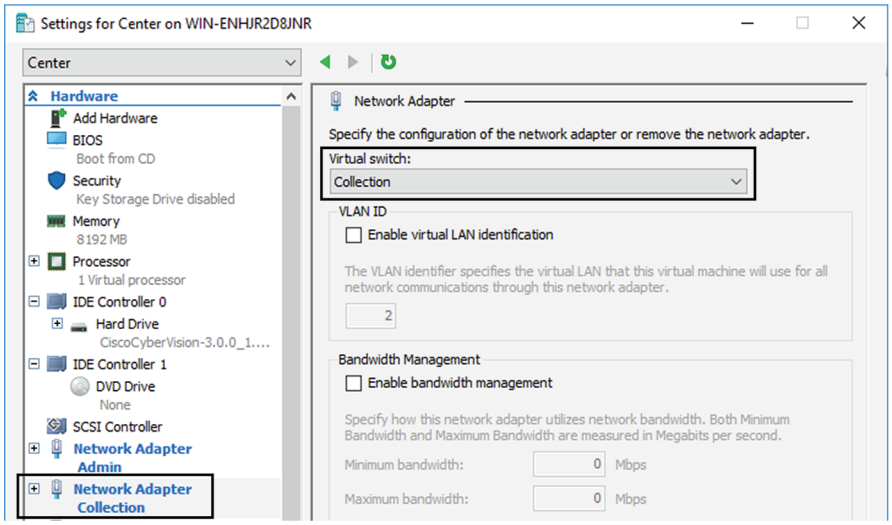
Note You must configure network interfaces in order of appearance inside the network list to avoid confusions:

Note - The first network card as the Administration network interface (eth0).

Note - The second one as the Collection network interface (eth1).



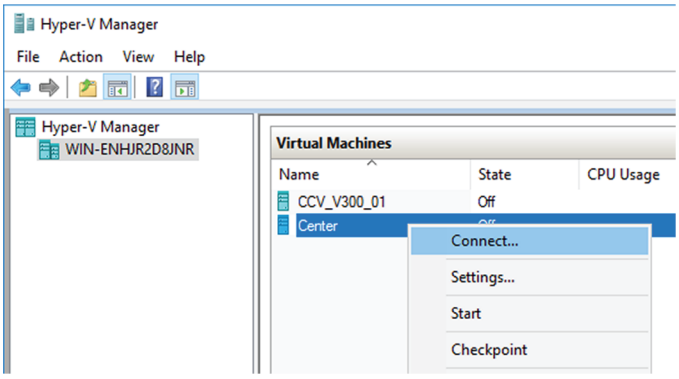
Step 7 Repeat the previous action for the second network adapter and select 'Collection' as Virtual Switch.



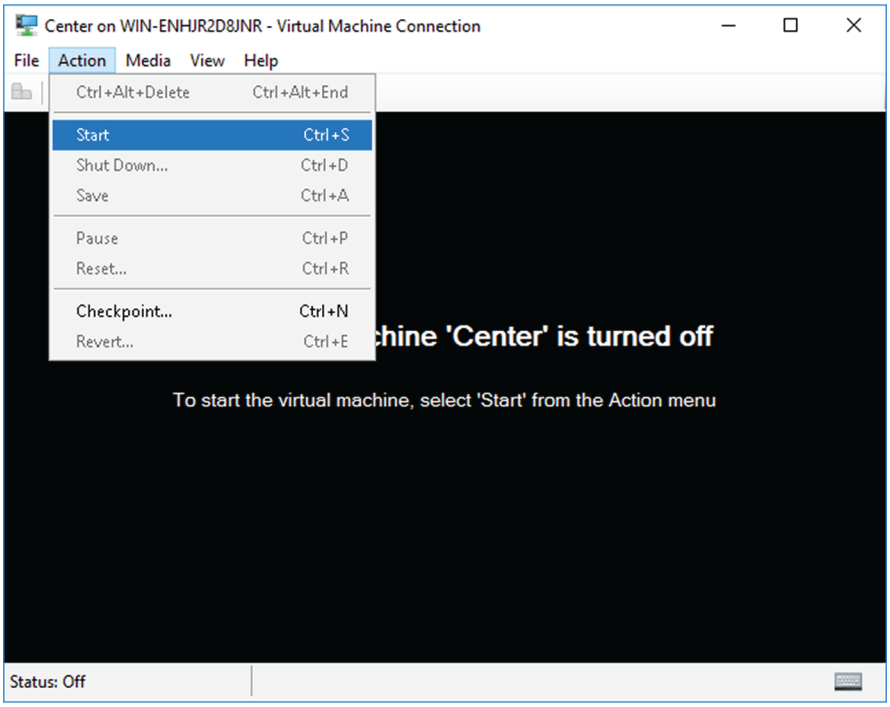
Boot the Virtual Machine

You can now proceed to the Virtual Center first boot.

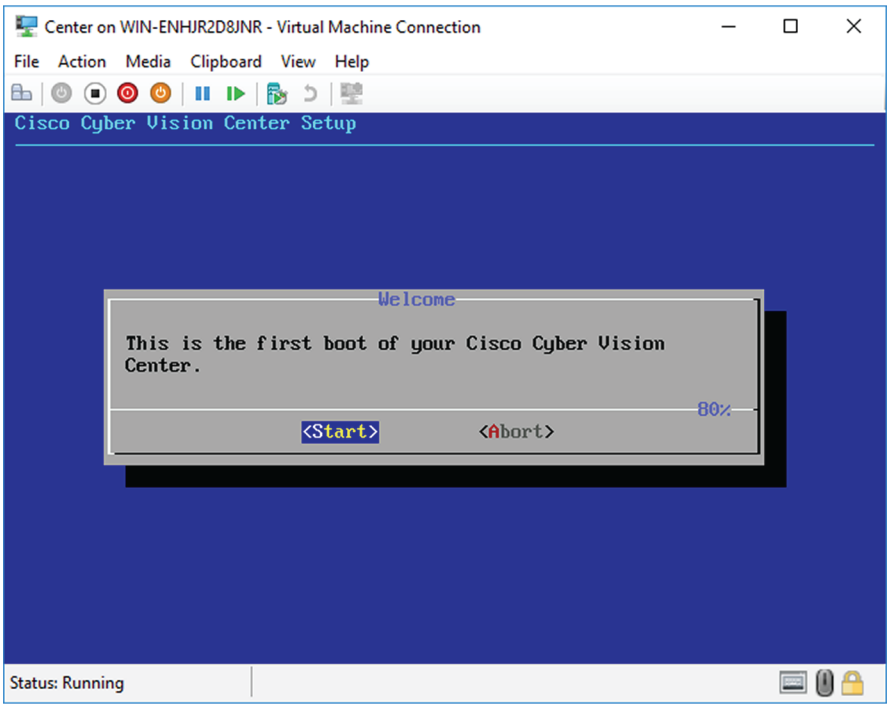
1. Click Center on Hyper-V Manager and click 'Connect'.



2. Start the Virtual Center.



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



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

The Virtual Center is now ready for basic configuration.

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.