Deploy N-Reporter Virtual Machine

V031

2022/10/04

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Contents

Preface

This document is about how to deploy and set N-Reporter software in VMware ESXi, VMware Workstation, VirtualBox, Hyper-V, and KVM.

> When users need to redeploy or transfer it with vMotion or Live Migration, please contact N-Partner TAC first in case the license failes after the process.

1. Preperation

➢ Please prepare a server; recommended specifications are as follows:

- ✓ CPU: E3-1231 v3(8M Cache Memory and 3.40 GHz) or later versions
- ✓ Memory: More than 40G
- ✓ HDD space: 1TB or more, according to the needs
- ✓ Install VMware ESXi 6.0 or later versions
- ✓ Install Windows Hyper-V 2016 or later versions
- ✓ Install VirtualBox 5.0 or later versions (without long-term tests)
- ✓ Install KVM 4.2.0 or later versions

➢ To reach the best performance of N-Reporter, at least 32G memory is needed.

➢ Please prepare a Windows computer to manage VMware, VirtualBox, Hyper-V Server or KVM Server.

➢ For N-Reporter VM, the recommended CPU is 2.8GHz core x4 and memory 32GB.

➢ N-Reporter VM with Hyper-V, the required memory is 48GB.

2. Download N-Reporter VMware Image

➢ N-Reporter has multiple images. The main difference is their HDD space, and their functions are all the same. For example, NCloud6_Reporter_500G.ova means that it requires 500G HDD space after installation. Please download the applicable image as need. (Note 1)

➢ N-Reporter Image (zip file) download address for VMware: (Note 2)

https://www.npartnertech.com/download/vm/N-Cloud6_Reporter_500G.zip

https://www.npartnertech.com/download/vm/N-Cloud6_Reporter_1T.zip

https://www.npartnertech.com/download/vm/N-Cloud6_Reporter_2T.zip

➢ N-Reporter Image (zip file) download address for Hyper-V: (Note 2)

https://www.npartnertech.com/download/vm/Hyper-V/N-Cloud6_Reporter_500G.hpv.zip

https://www.npartnertech.com/download/vm/Hyper-V/N-Cloud6_Reporter_1T.hpv.zip

https://www.npartnertech.com/download/vm/Hyper-V/N-Cloud6_Reporter_2T.hpv.zip

Note 1: If VMware cannot be booted up after OVF file installation, modify N-Reporter VM configuration file by checking “Force BIOS” or press F2 when booting up to enter BIOS. Set Hard Drive(0:0) as the first device to boot up.

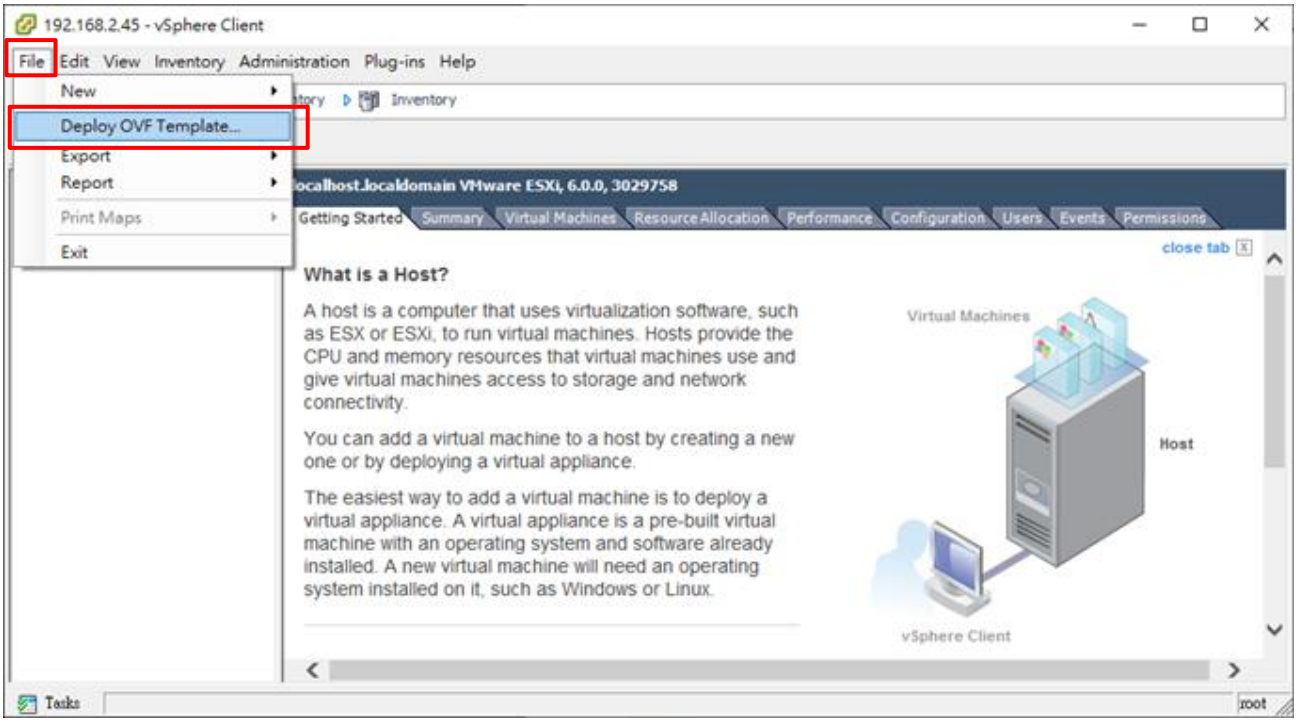
Note 2: The zip files above include a VMware OVA file and MD5 information file of OVA file. Please use compression software, such as 7-Zip, to unzip it.

3. Intallation Process

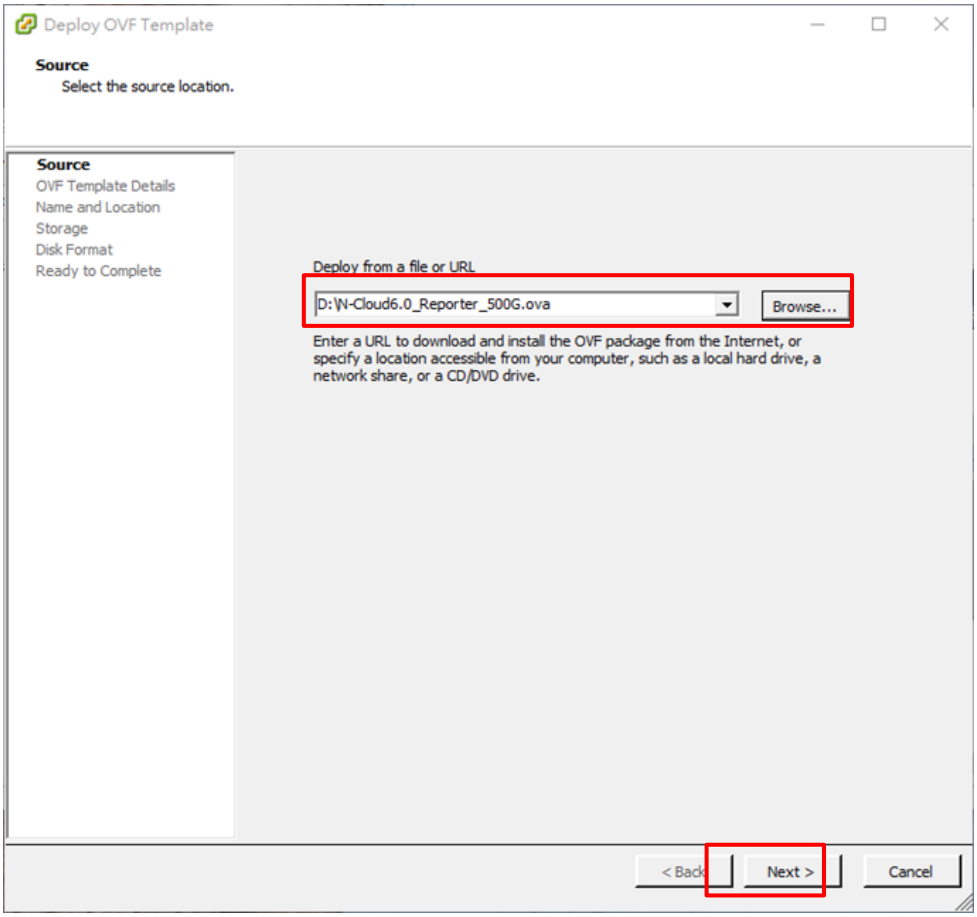
3.1 vSphere Client

(1) Open VMware vSphere Client, and enter VMware IP address, user name, and password. Click "Login."

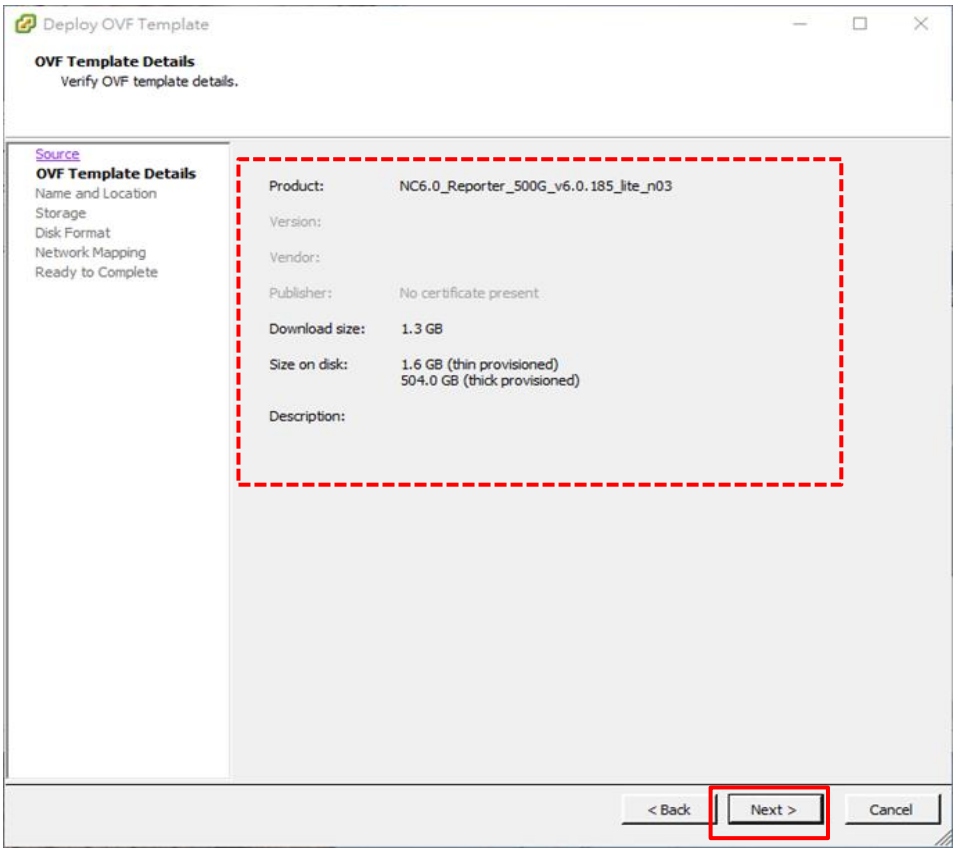
(2) Click "File→ Deploy OVF Template…."



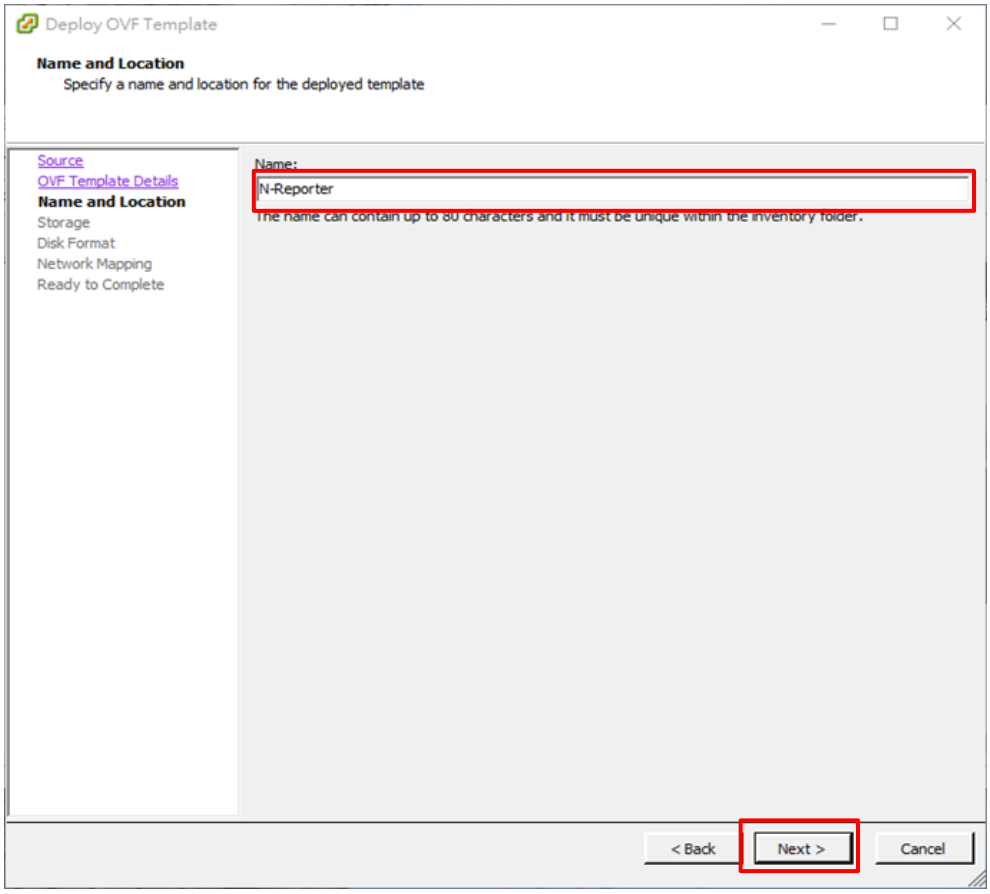
(3) Click “Browse...,” select the N-Reporter OVA file, and click “Next.”



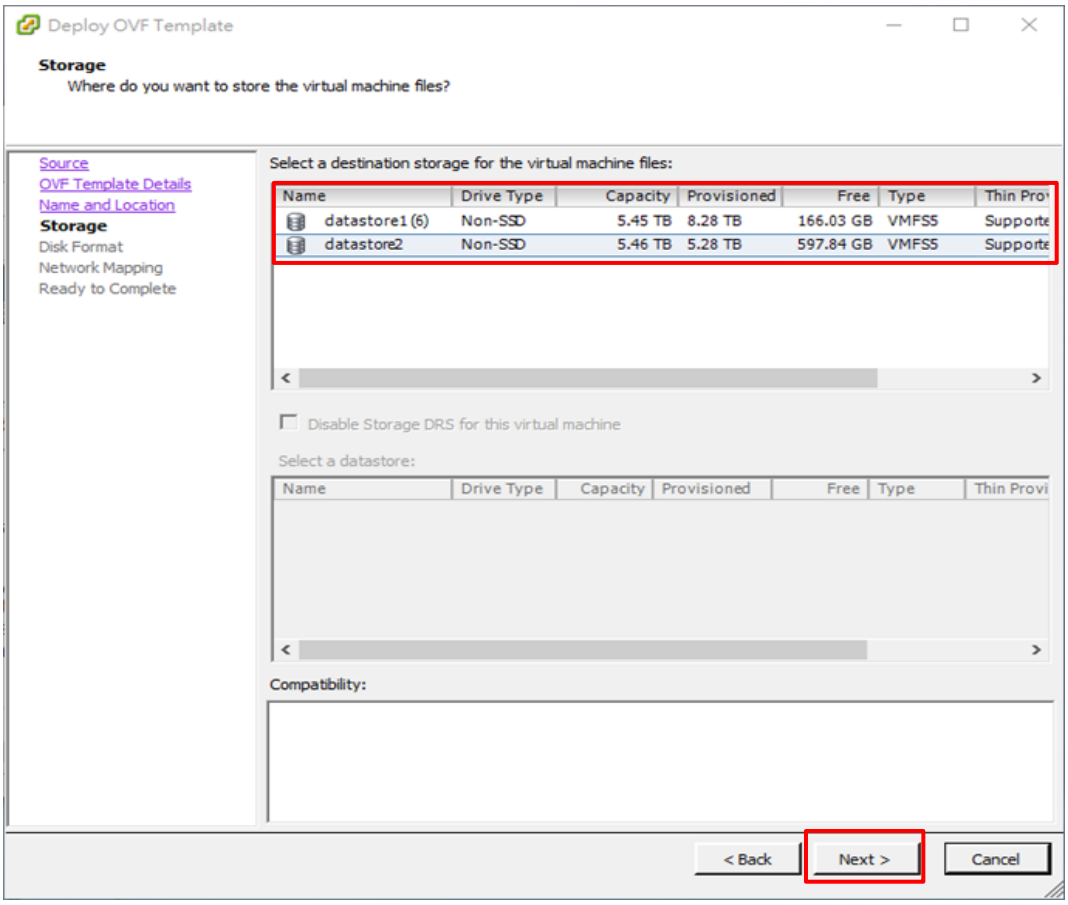
(4) Check the information and click “Next.”



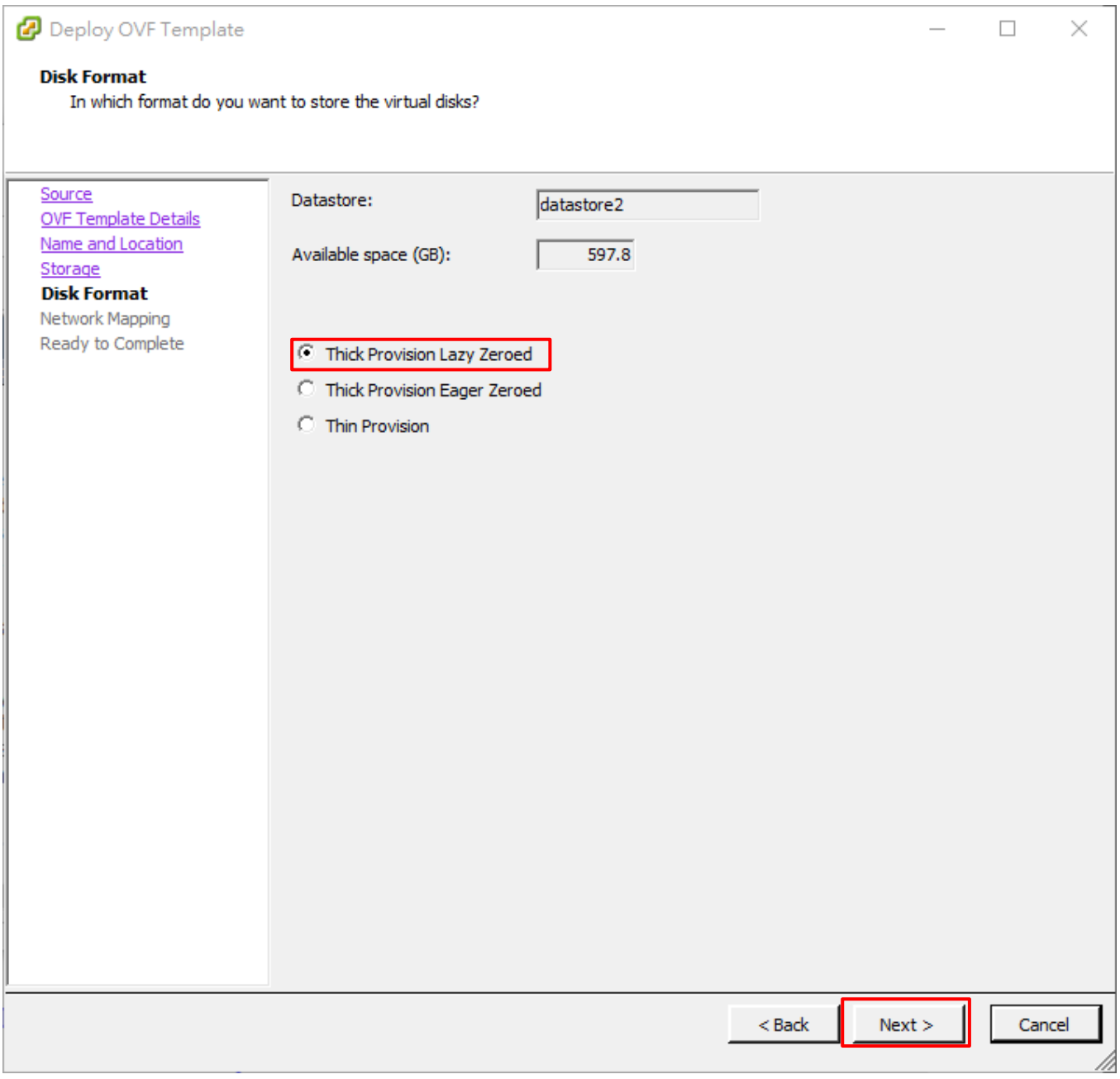
(5) Type in the virtual machine name and click “Next.”



(6) Select a destination storage and click “Next.”

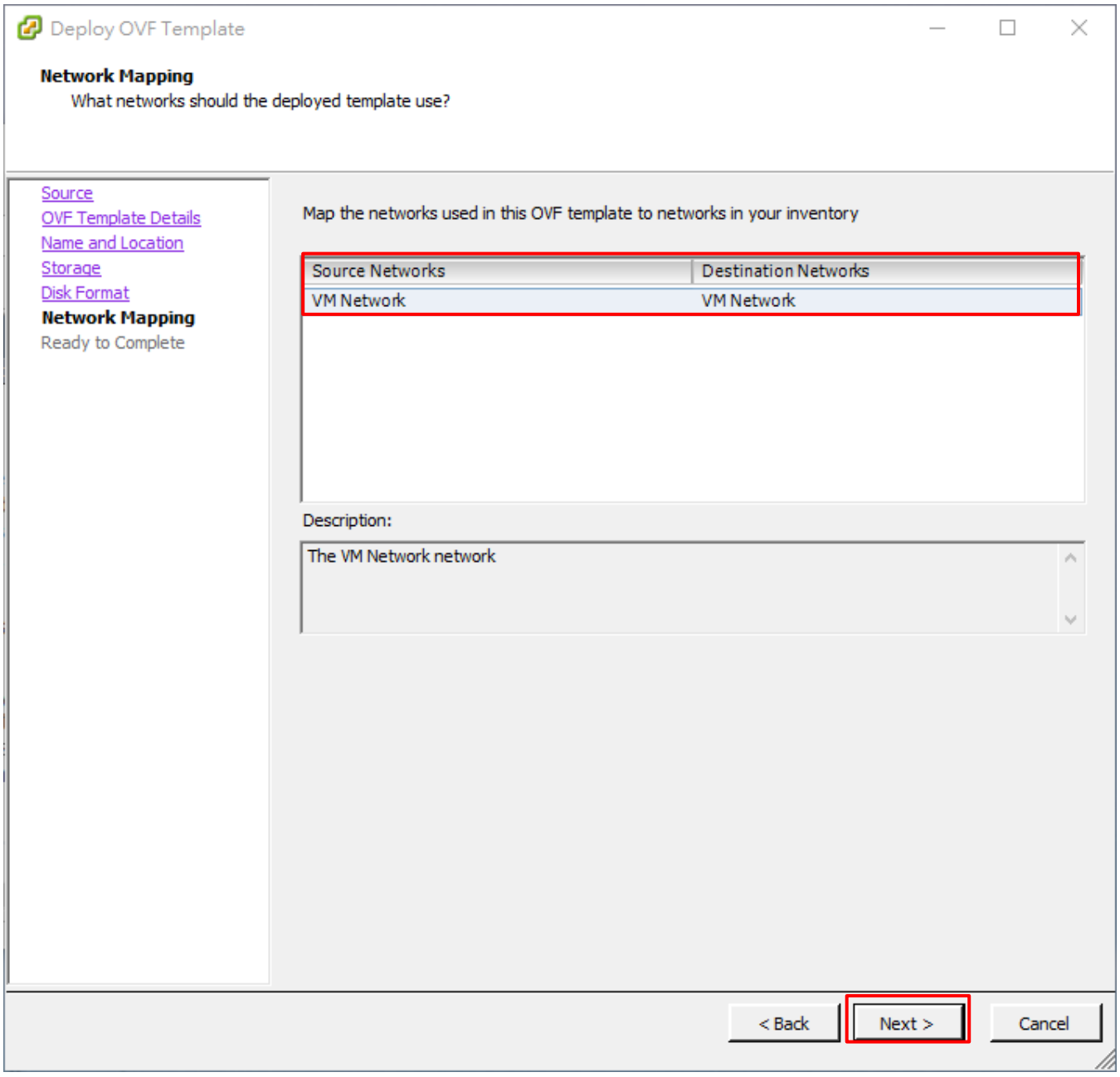


(7) Select “Thick Provision Lazy Zeroed” or “Thick Provision Eager Zeroed” as the format and click “Next.” Select either format, and N-Reporter VM can have the space it required. (Note 3)

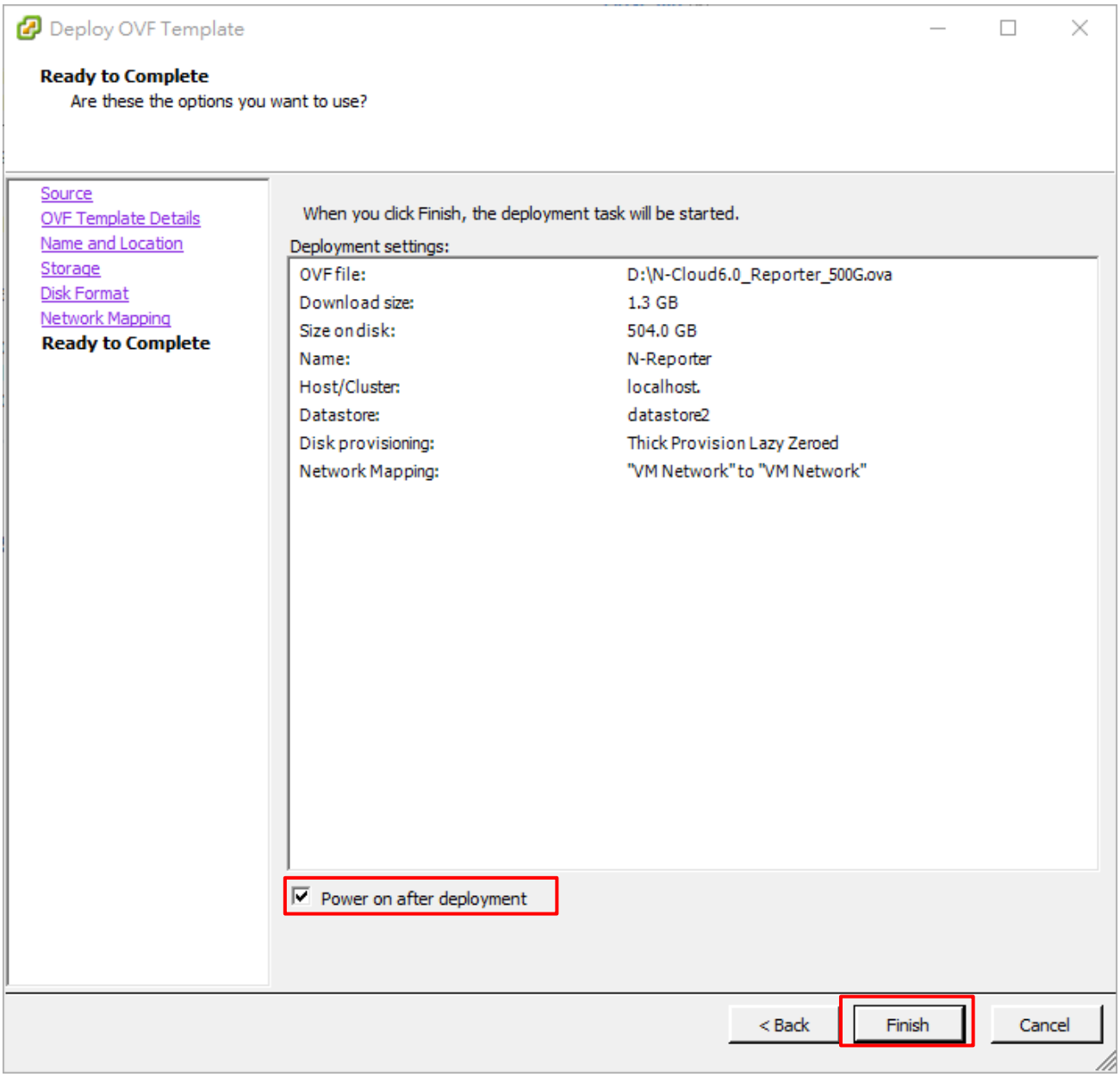


Note 3: Please do not select Thin Provision as format. When the datastore N-Reporter virtual machine in is full, N-Reporter will not be able to operate and will lose data.

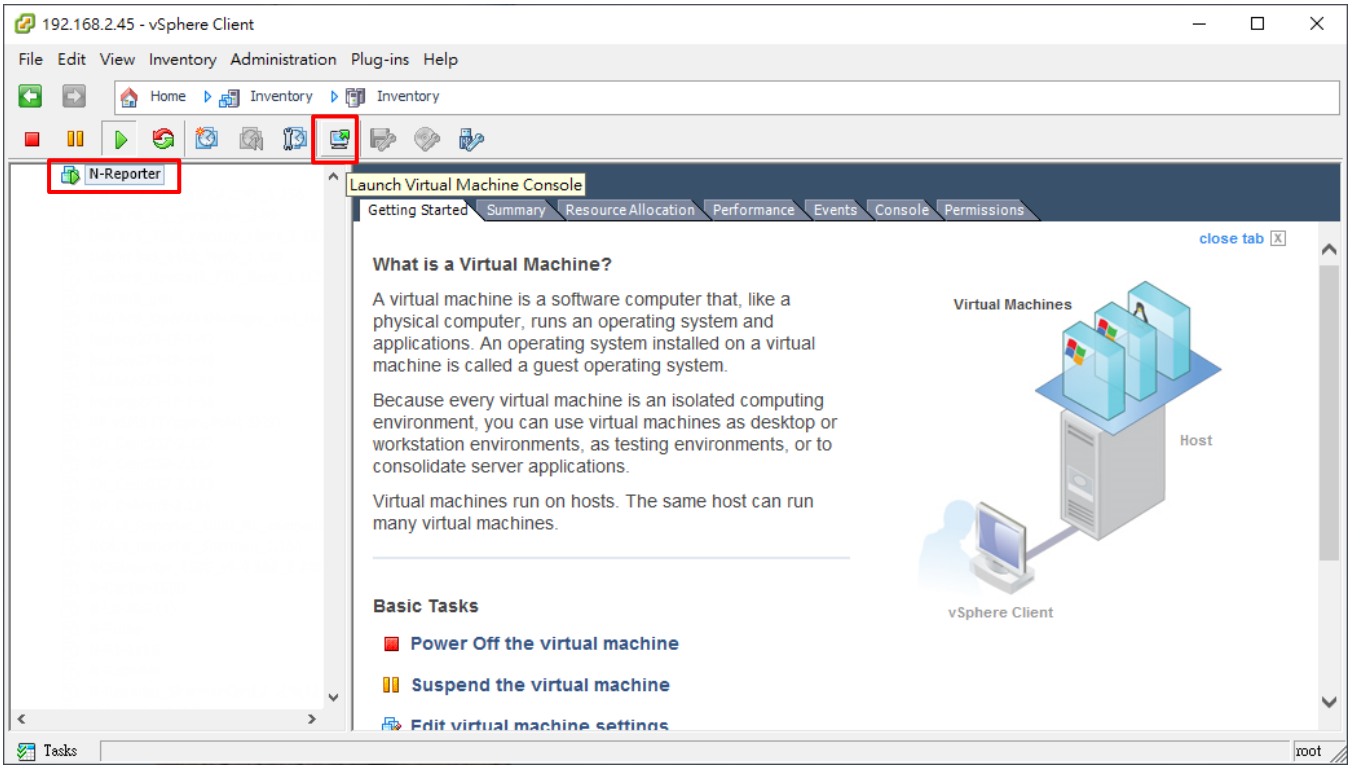
(8) Select the networks used in this template and click “Next.”



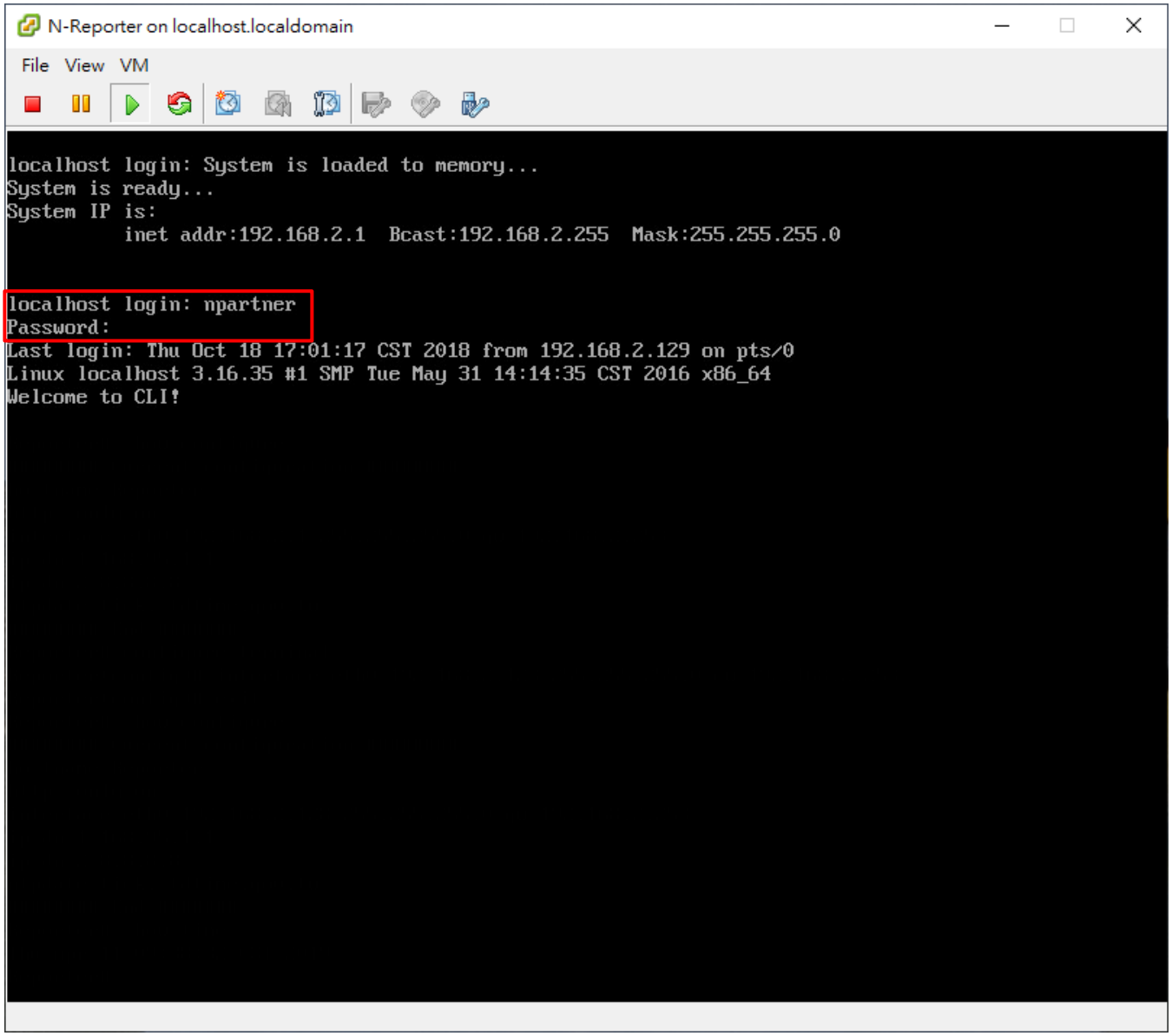
(9) Check the information, check “Power on after deployment” and click “Finish” to start virtual machine deploying.



(10) After finishing, click N-Reporter virtual machine, and click “Launch Virtual Machine Console.”



(11) Log in CLI. The default account/password is npartner/npartner.



(12) Check the settings of N-Reporter.

```
Reporter# show configure
```

```
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.2.1 255.255.255.0 gw 192.168.2.253
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntpdate tick.stdtime.gov.tw
######## End ########
```

(13) Change N-Reporter IP address.

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
```

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
######### Current configuration #########
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https-only on
interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntpdate tick.stdtime.gov.tw
######### End ########
```
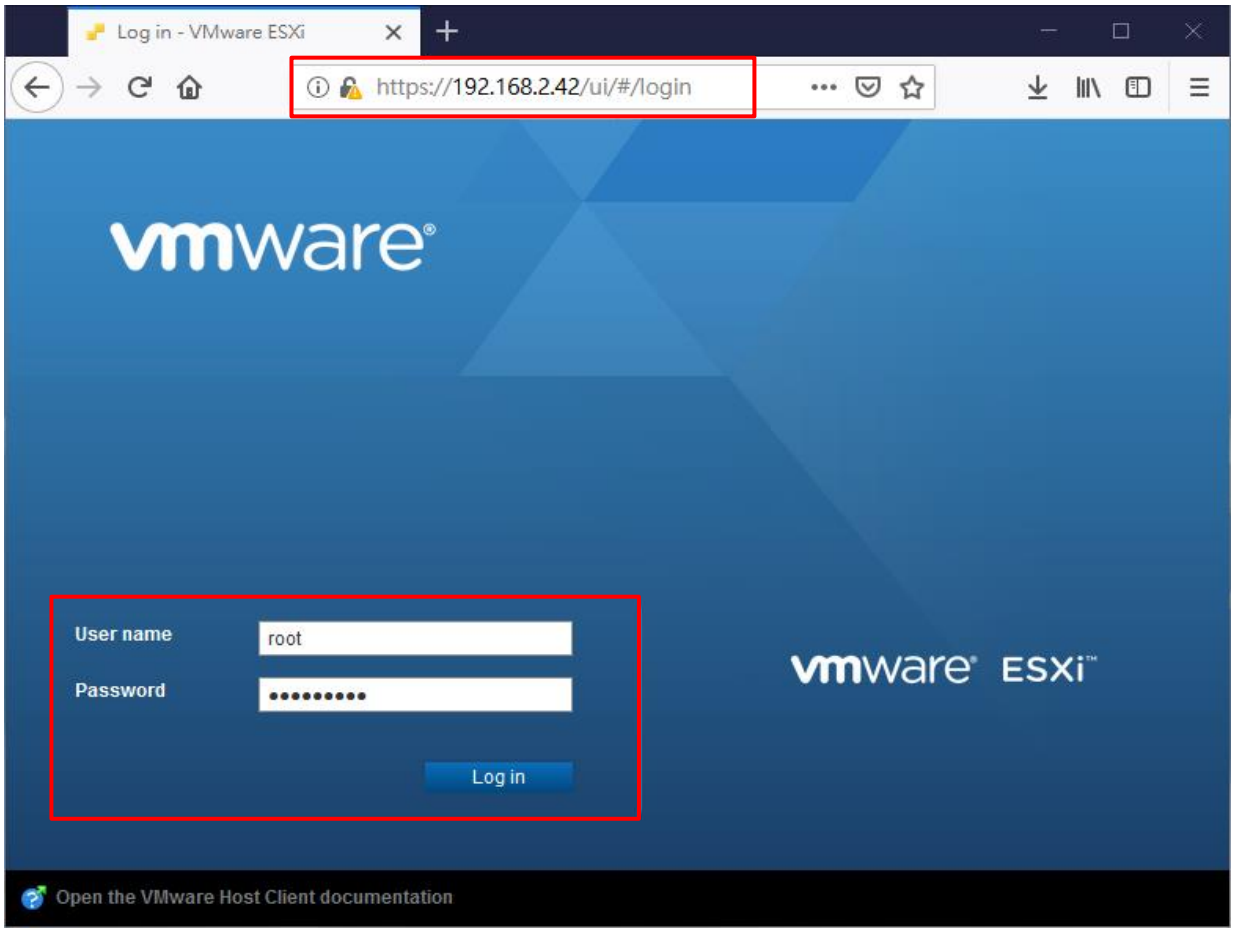

IP setting: interface [interface] [N-Reporter_IP] [subnet_mask] gw [gateway_IP]

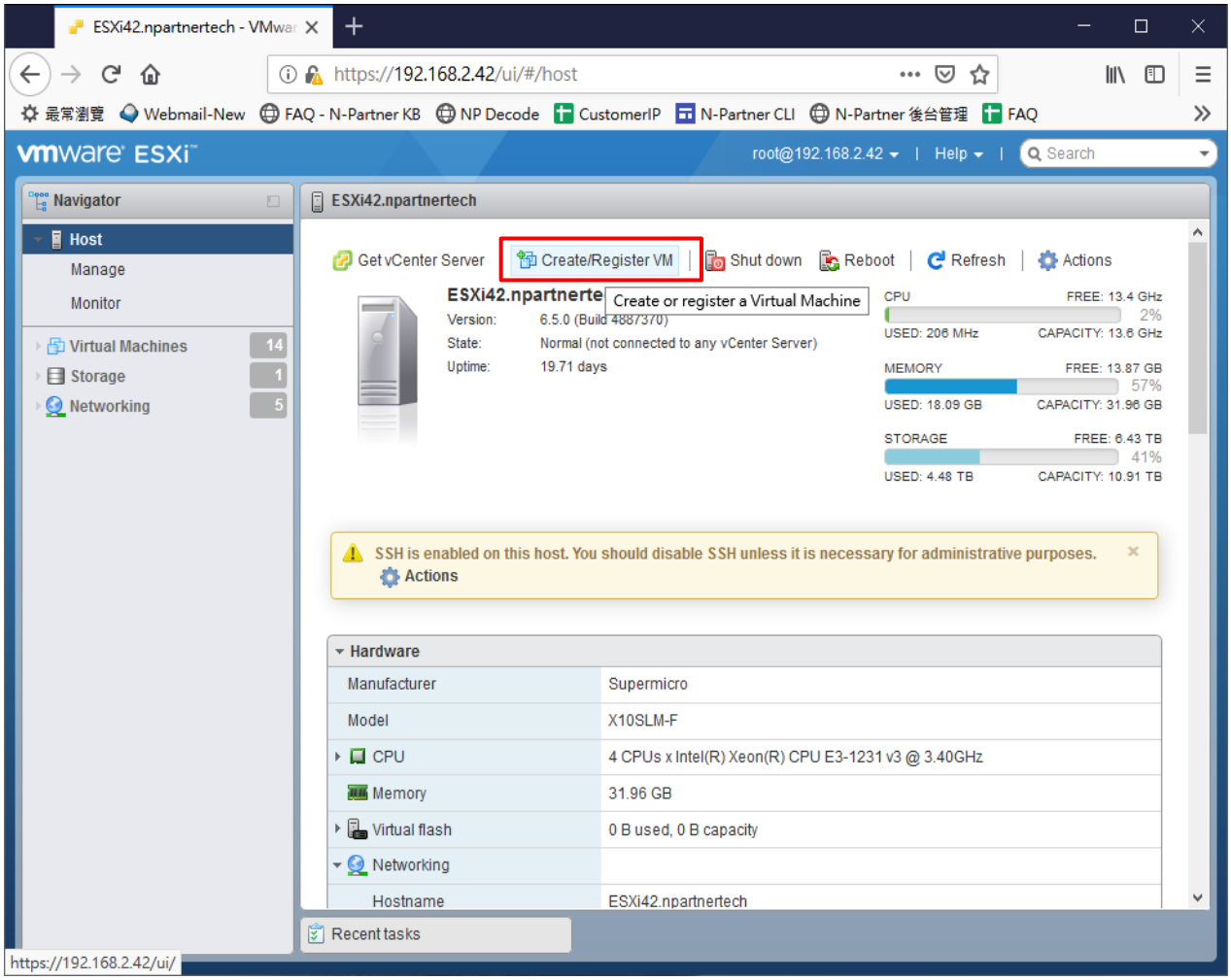
Please enter N-Reporter's IP address as the red part above.

3.2 vSphere Web Client

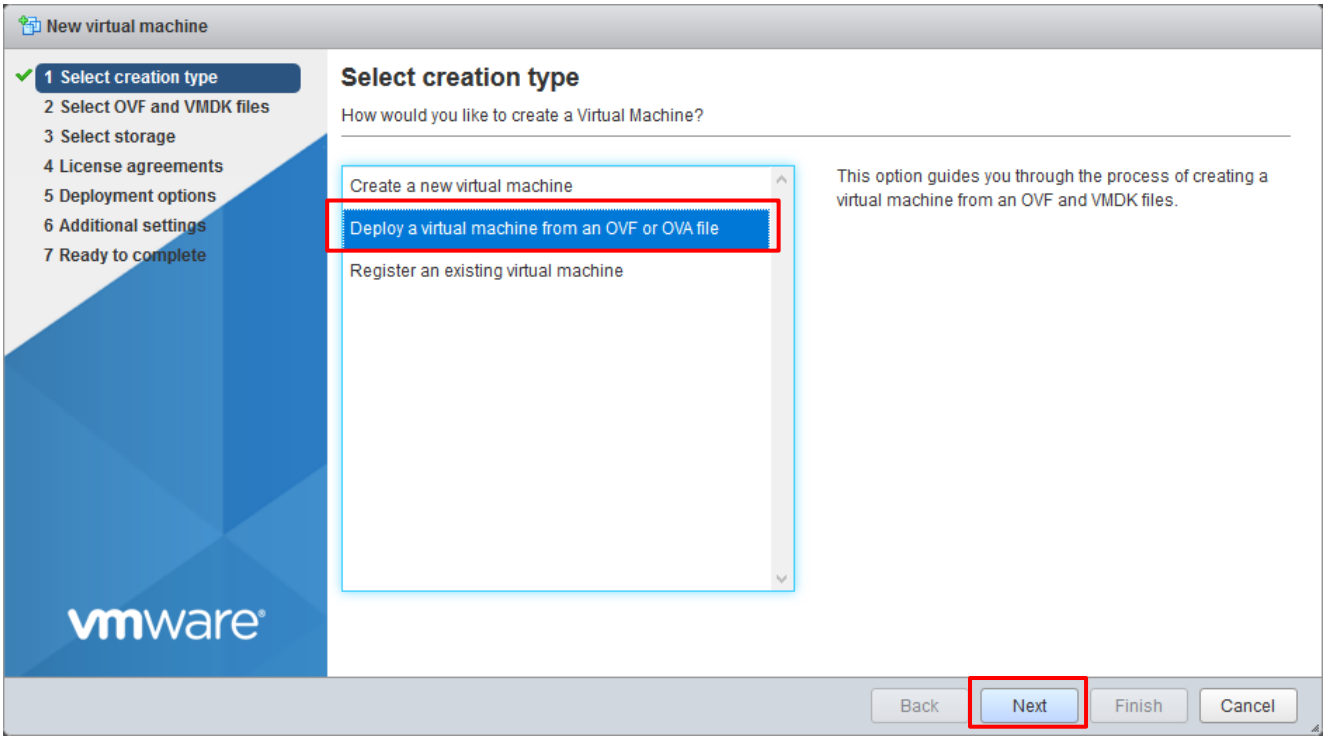
(1) Open a browser and enter https://<VMware IP>, user name, and password. Click “Login.”



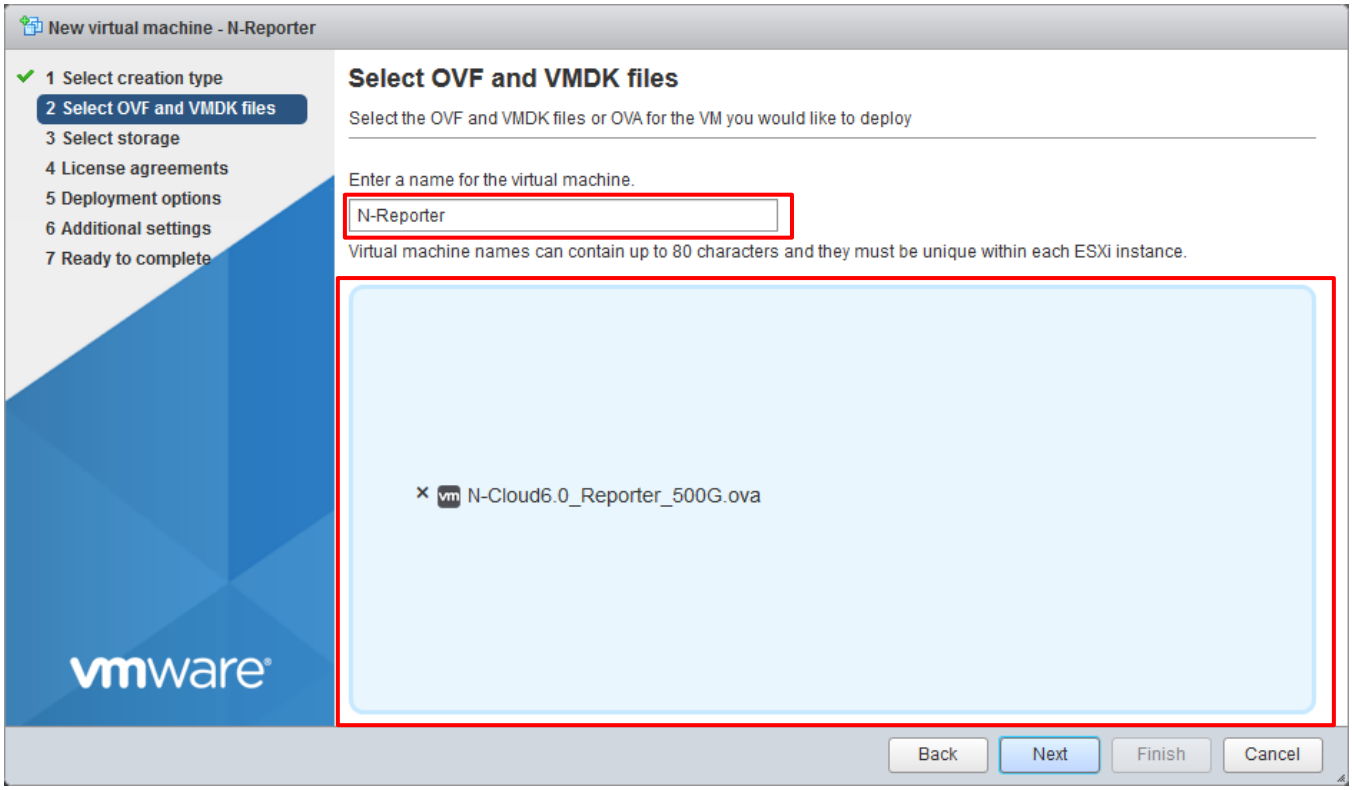
(2) Click “Create/Register VM.”



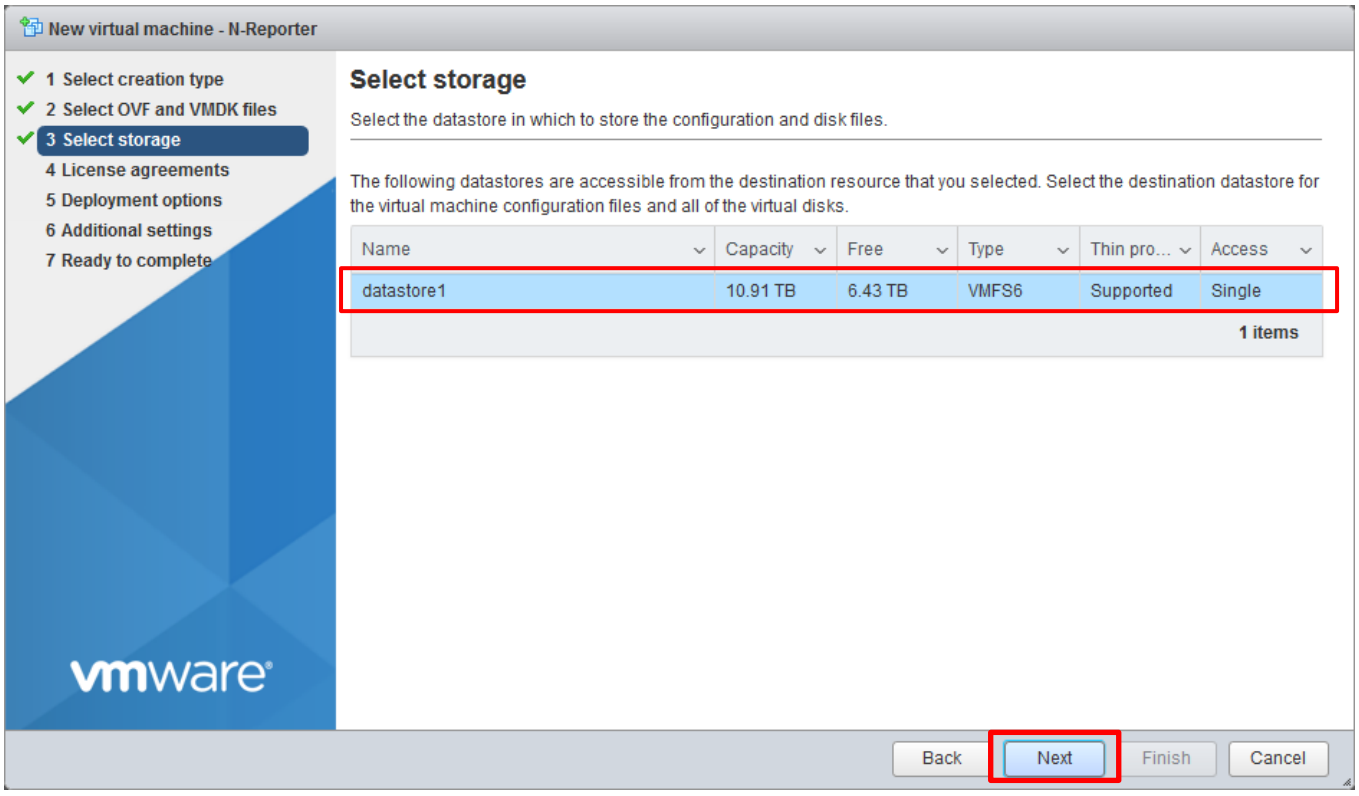
(3) Select “Deploy a virtual machine from an OVF or OVA file” and click “Next.”



(4) Enter a name for the virtual machine and click the N-Reporter OVA file. Click “Next.”

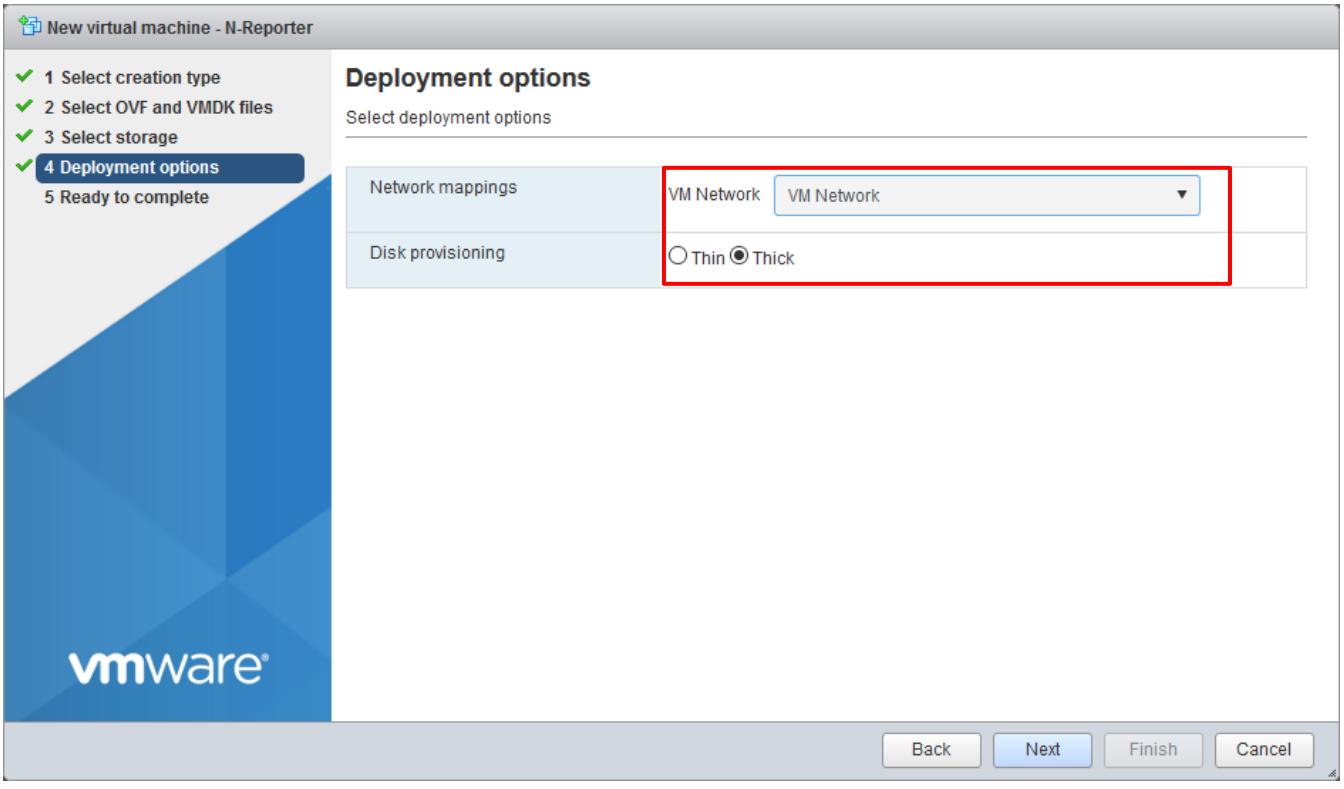


(5) Select a datastore and click “Next.”



(6) Select the network of the virtual machine and click “Thick” for “Disk provisioning.” Click “Next.”

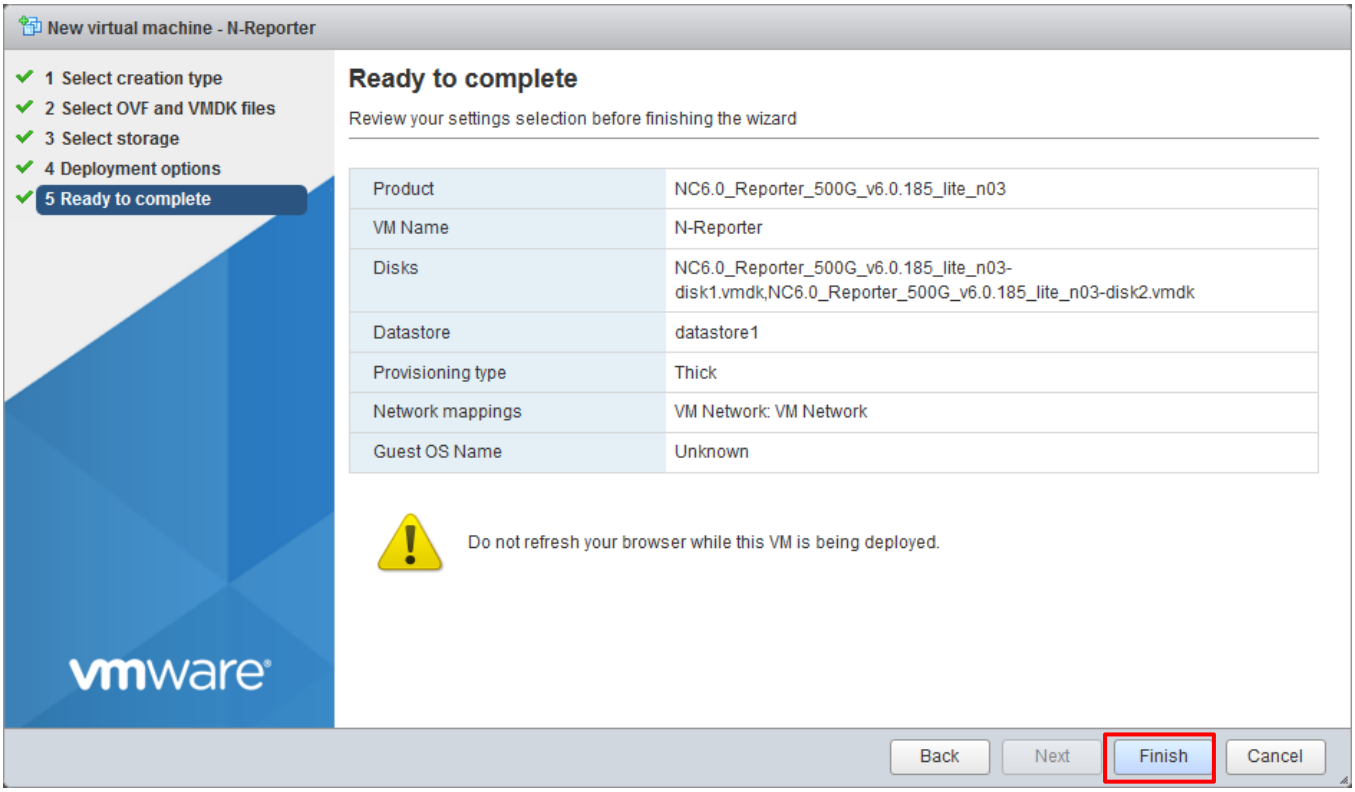
Select “Thick” for the virtual machine to have the space it required. (Note 4)



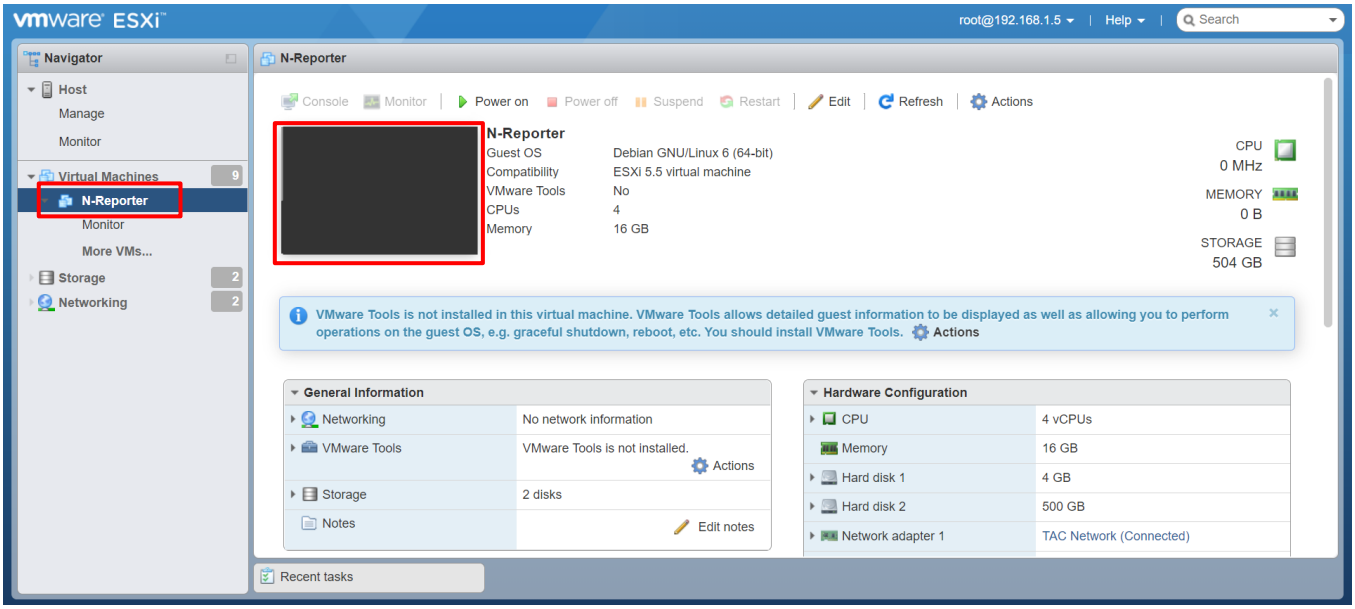
Note 4: Please do not select “Thin.” When the datastore N-Reporter virtual machine in is

full, N-Reporter will not be able to operate and will lose data.

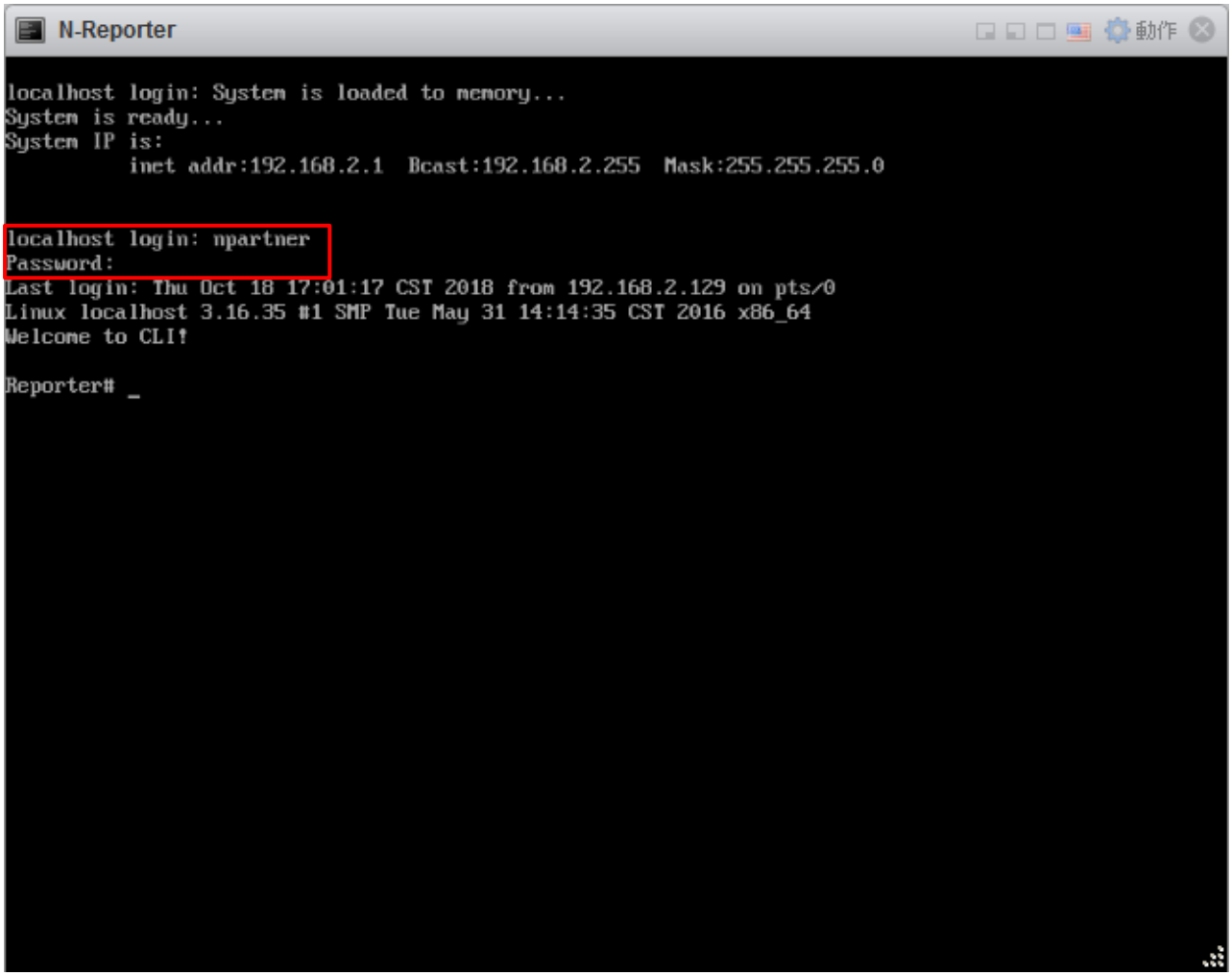
(7) Check the settings and click “Finish” to start deploying.



(8) Then, click “N-Reporter” and click the square as the picture below.



(9) Log in CLI. The default account/password is npartner/npartner.



(10) Check the settings of N-Reporter.

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Reporter# show configure
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```
Reporter# show configure
######### Current configuration #########
hostname Reporter
https-only on
interface eth0 192.168.2.1 255.255.255.0 gw 192.168.2.253
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntpdate tick.stdtime.gov.tw
######### End ########
```

(11) Change N-Reporter IP address.

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
```

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
######### Current configuration #########
hostname Reporter
https-only on
interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntpdate tick.stdtime.gov.tw
######### End ########
```

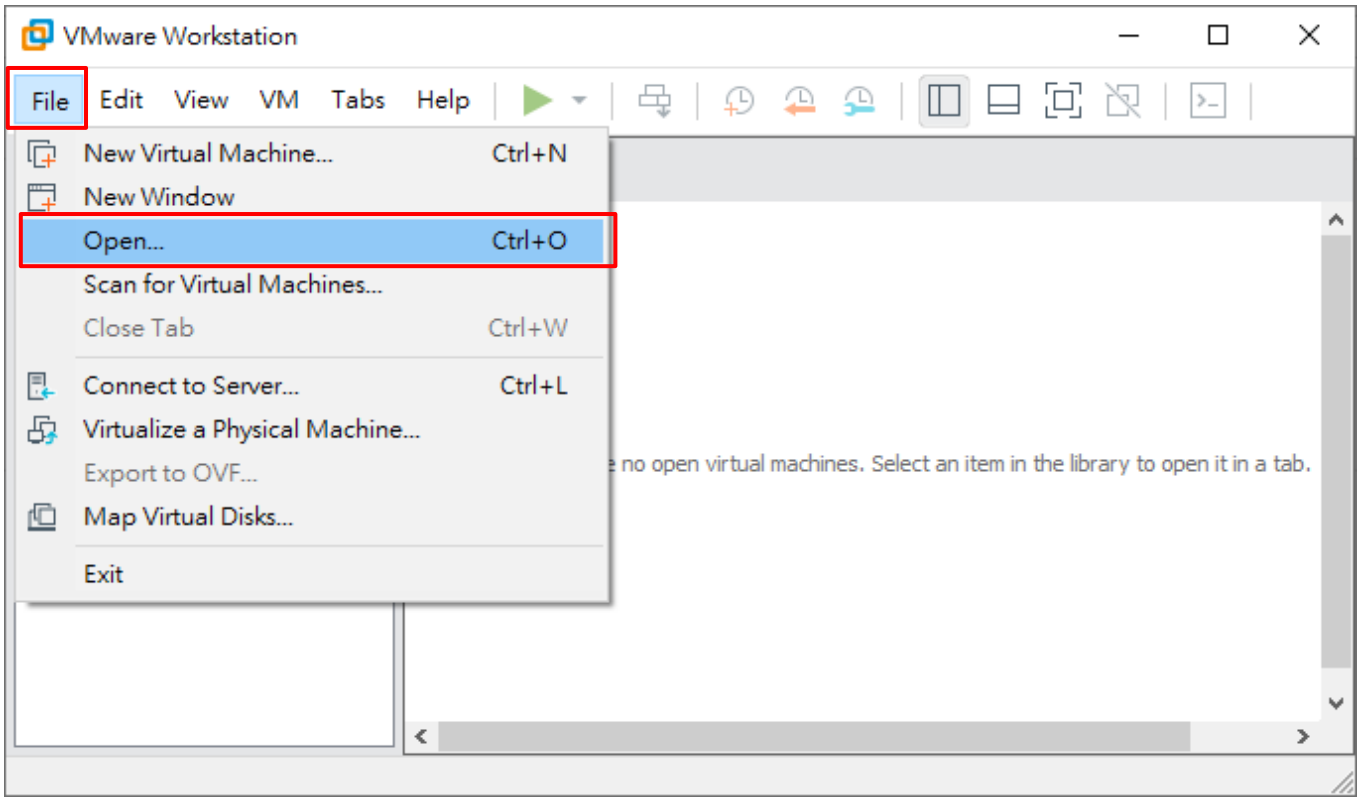
IP setting: interface [interface] [N-Reporter_IP] [subnet_mask] gw [gateway_IP]

Please enter N-Reporter's IP address as the red part above.

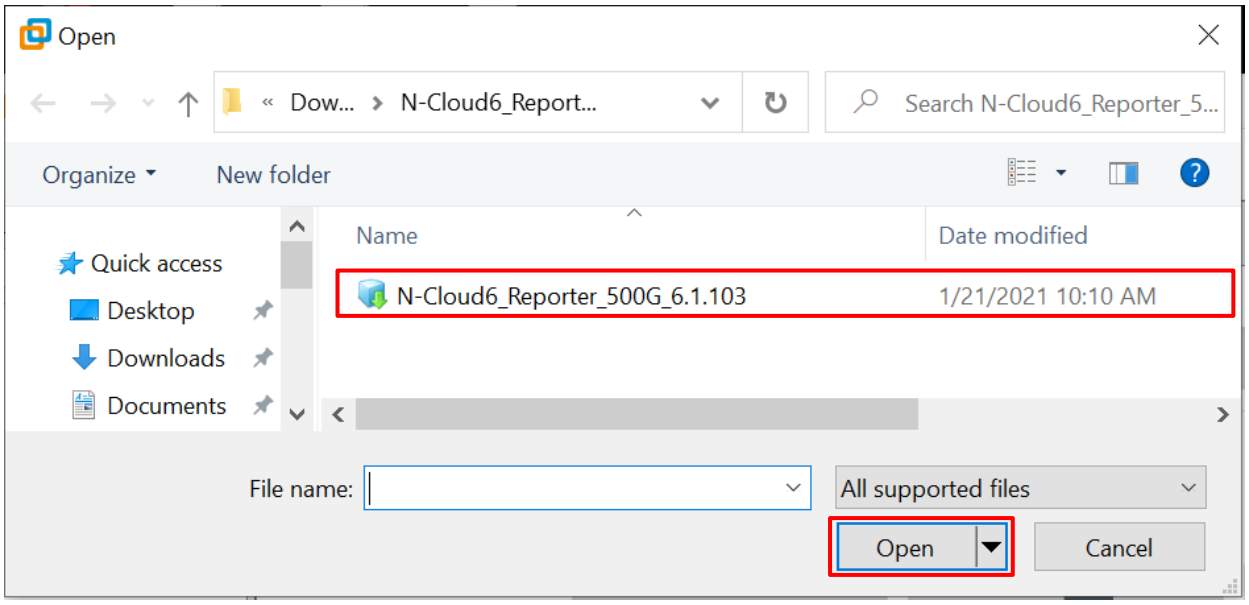
3.3 VMware Workstation

(1) Open “VMware Workstation.”

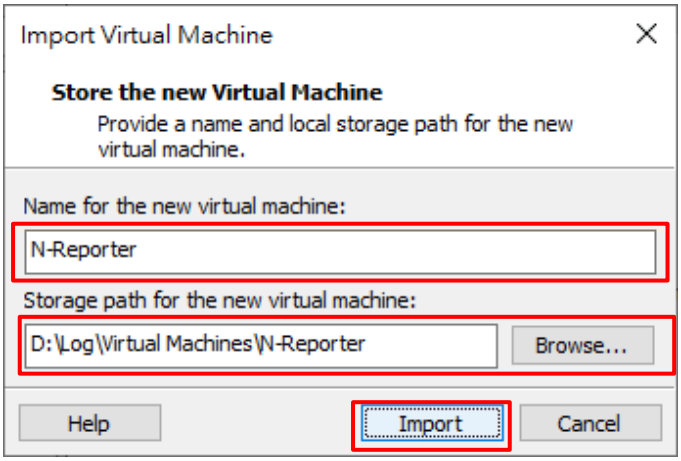
(2) Click “File→ Open….”



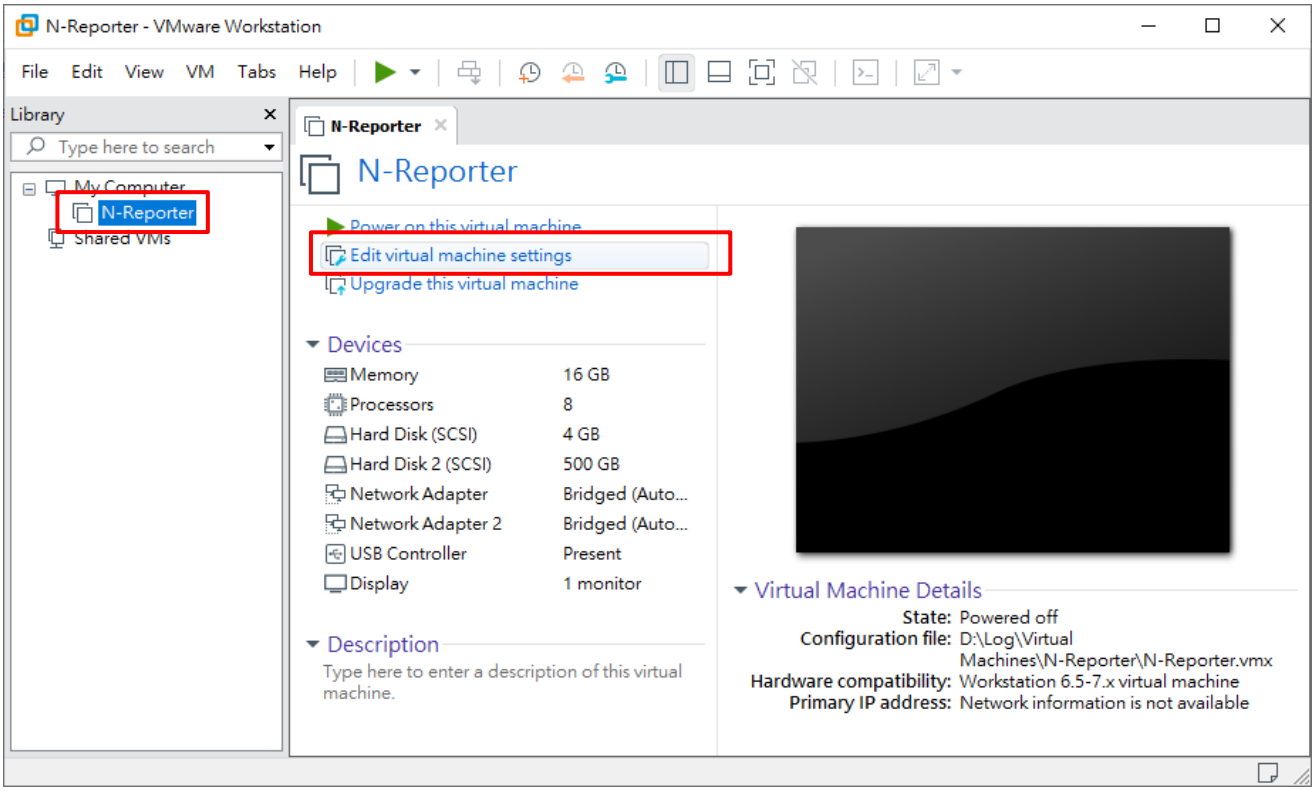
(3) Select the N-Reporter OVA file and click “Open.”



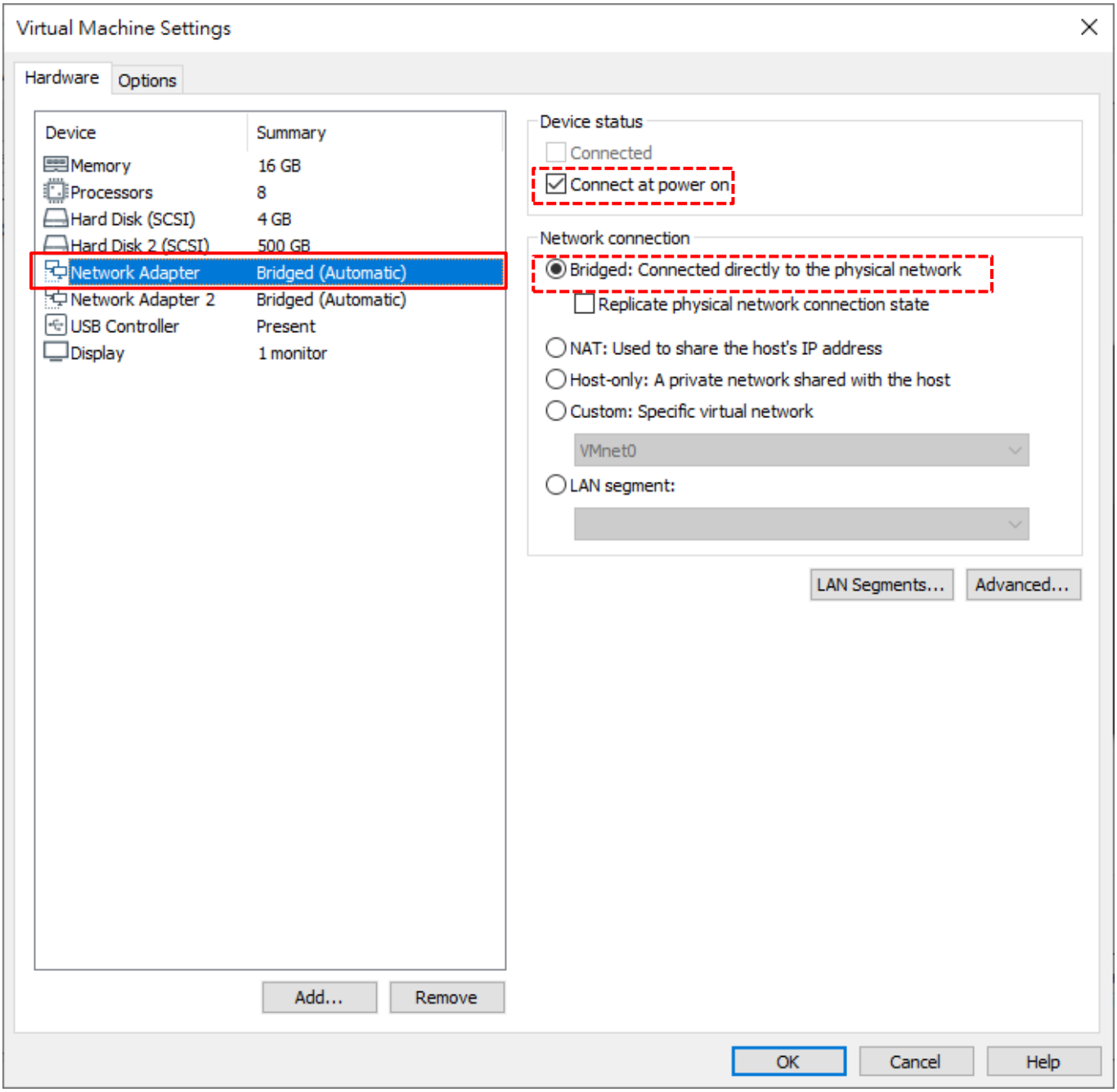
(4) Enter a name for the virtual machine and select a storage path. Click “Import.”



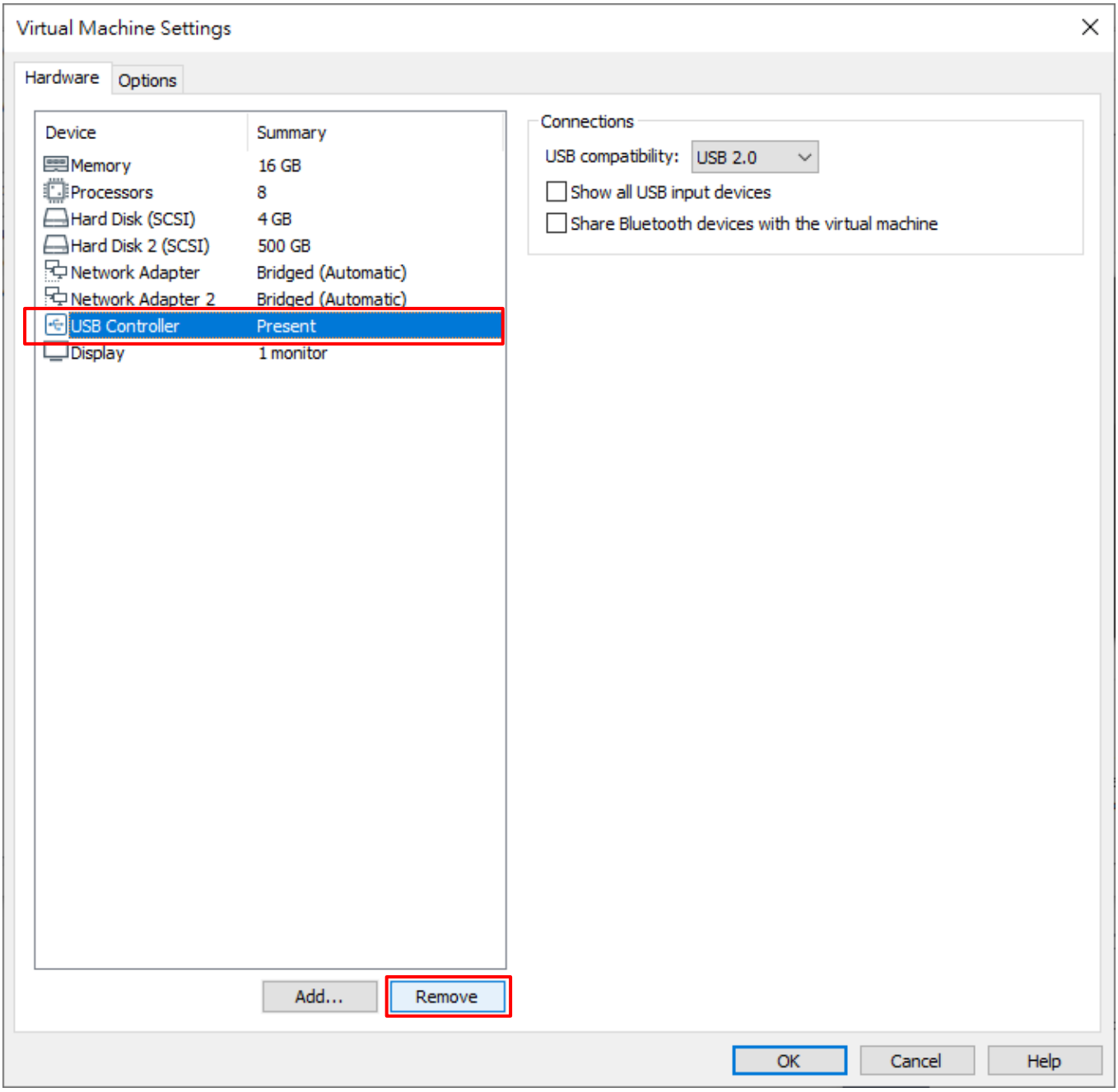
(5) Select N-Reporter virtual machine and click “Edit virtual machine settings.”



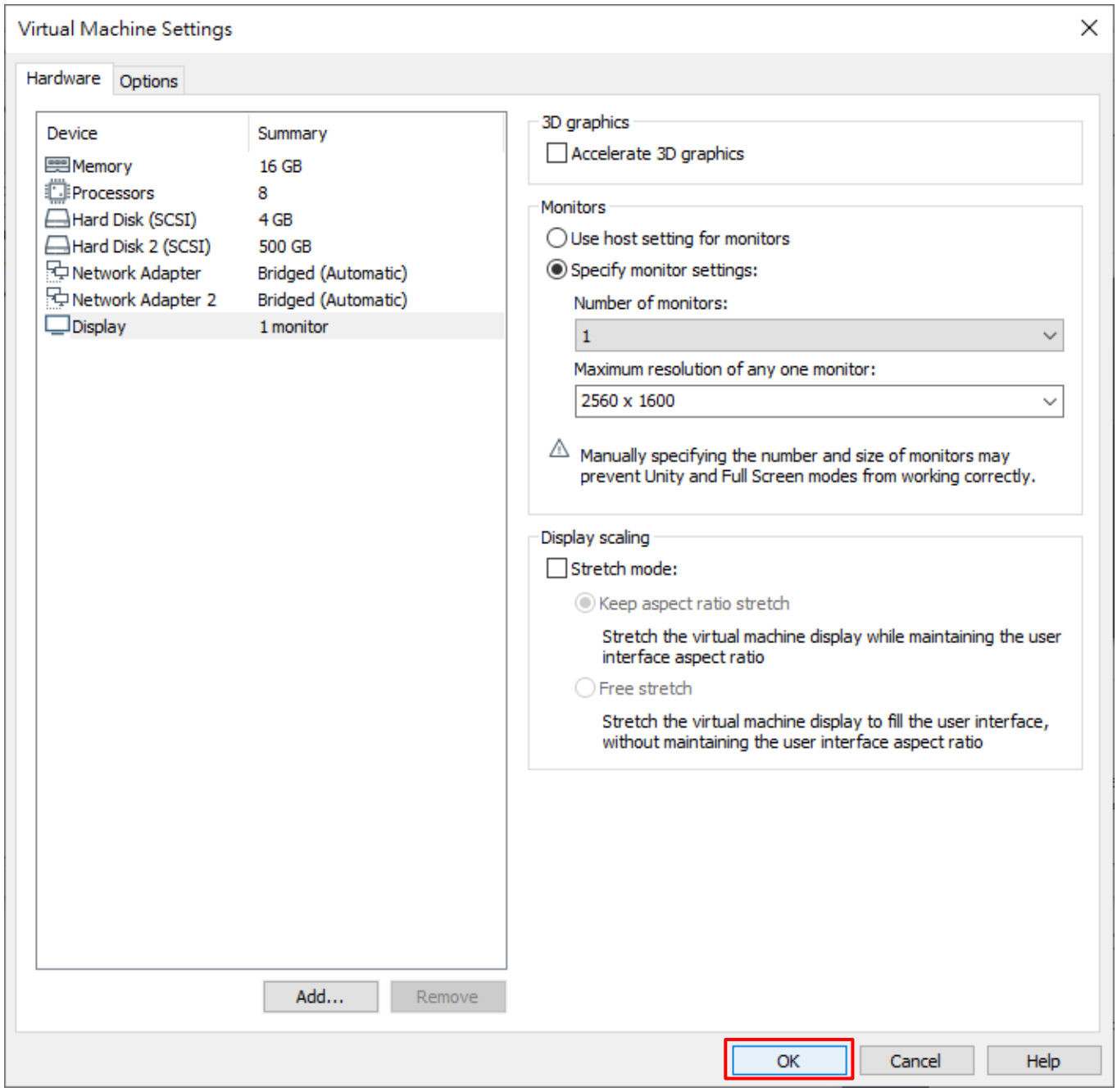
(6) Select “Network Adapter.” Select “Connect at power on” and “Bridged.”



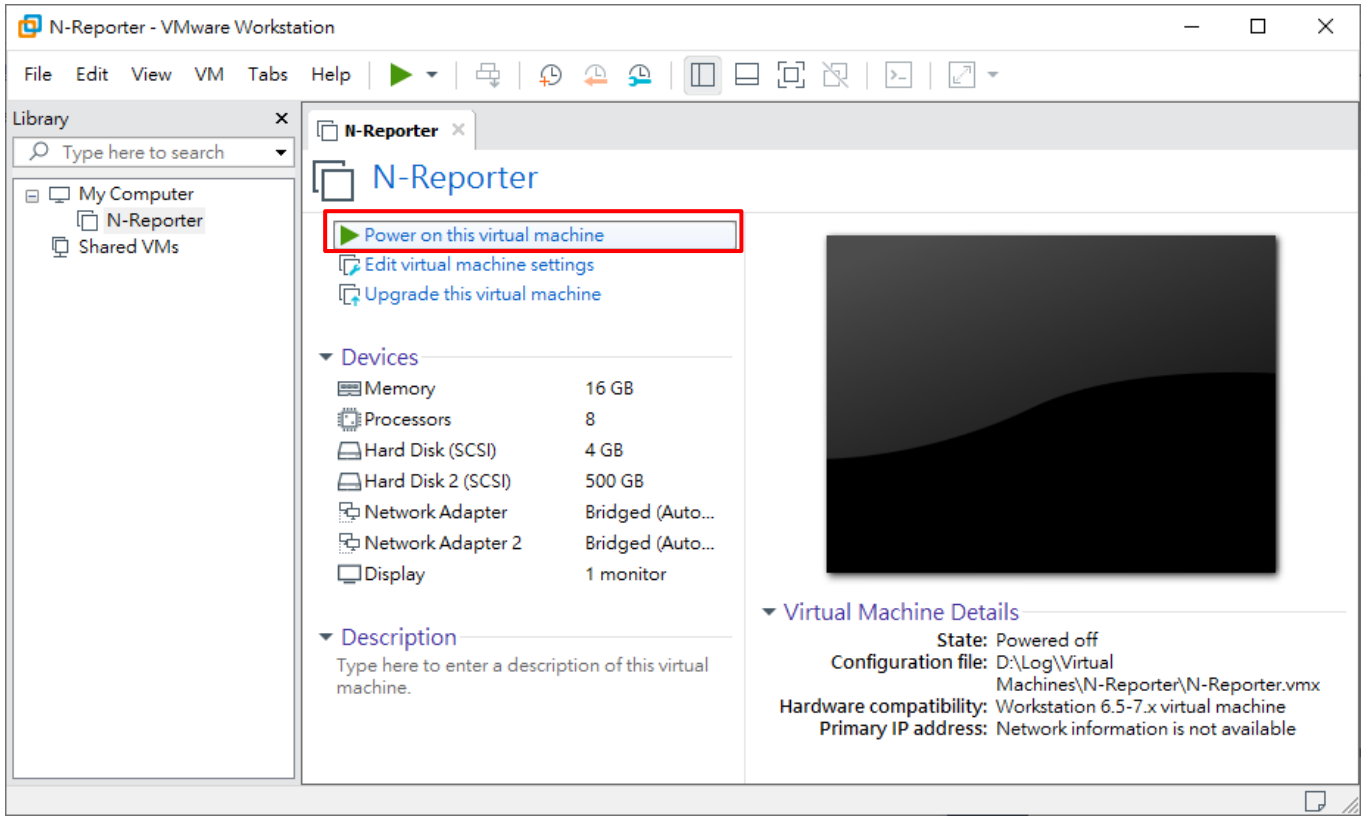
(7) Select “USB Controller” and click “Remove.”



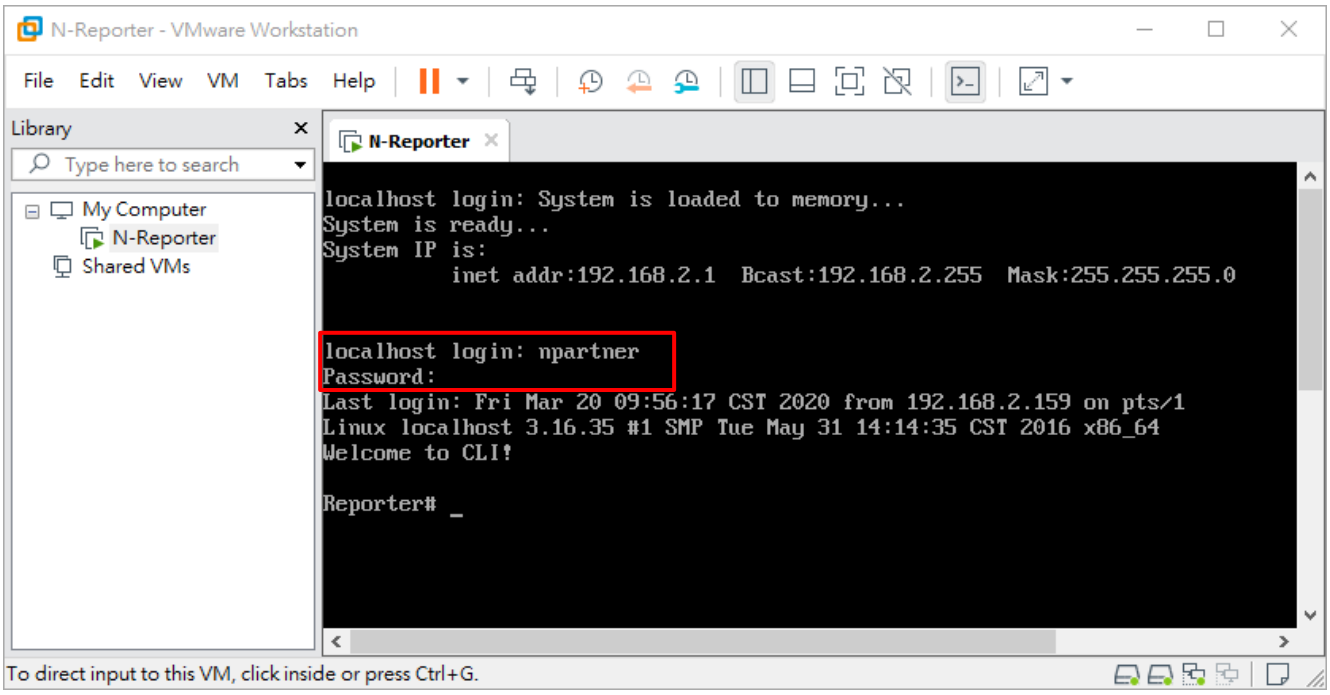
(8) Click “OK.”



(9) Click “Power on this virtual machine.”



(10) Log in CLI. The default account/password is npartner/npartner.



(11) Check the settings of N-Reporter.

```
Reporter# show configure
```

```
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.2.1 255.255.255.0 gw 192.168.2.253
######## End #######
Reporter# _
```

(12) Change N-Reporter IP address.

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
```

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
######## End #######
Reporter#
```

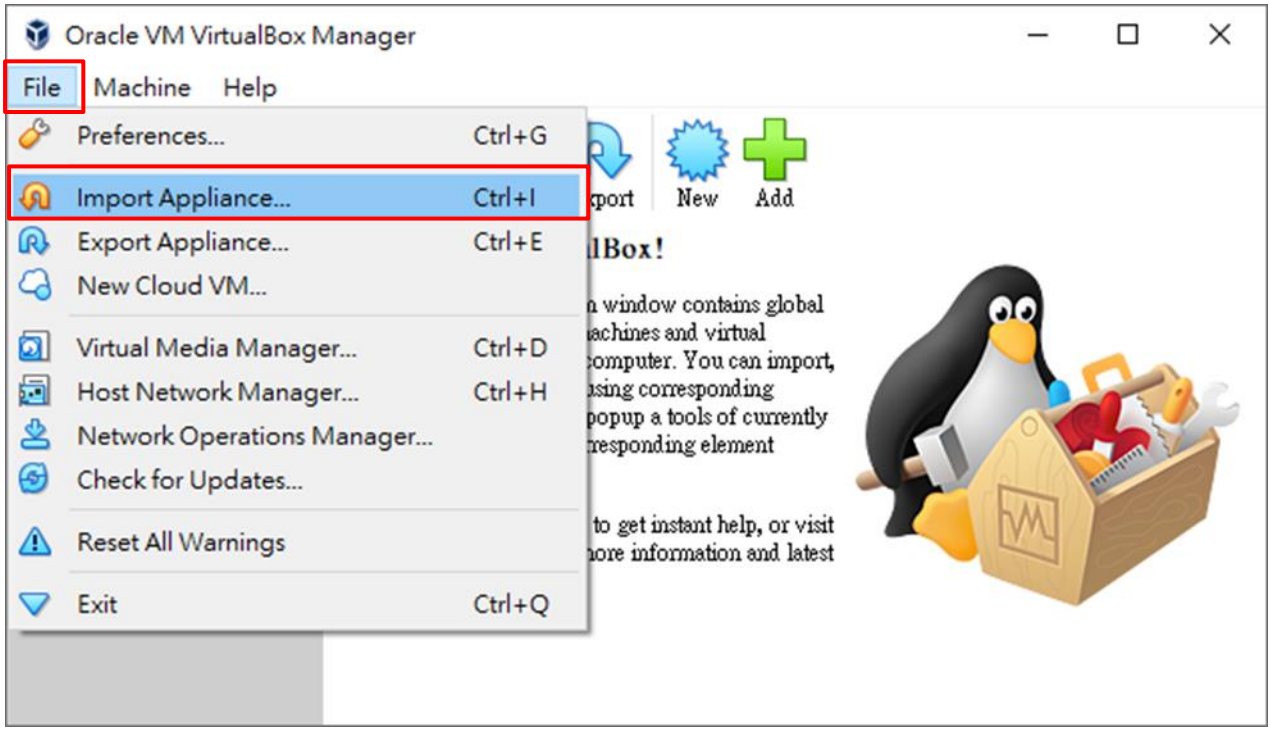
IP setting: interface [interface] [N-Reporter_IP] [subnet_mask] gw [gateway_IP]

Please enter N-Reporter's IP address as the red part above.

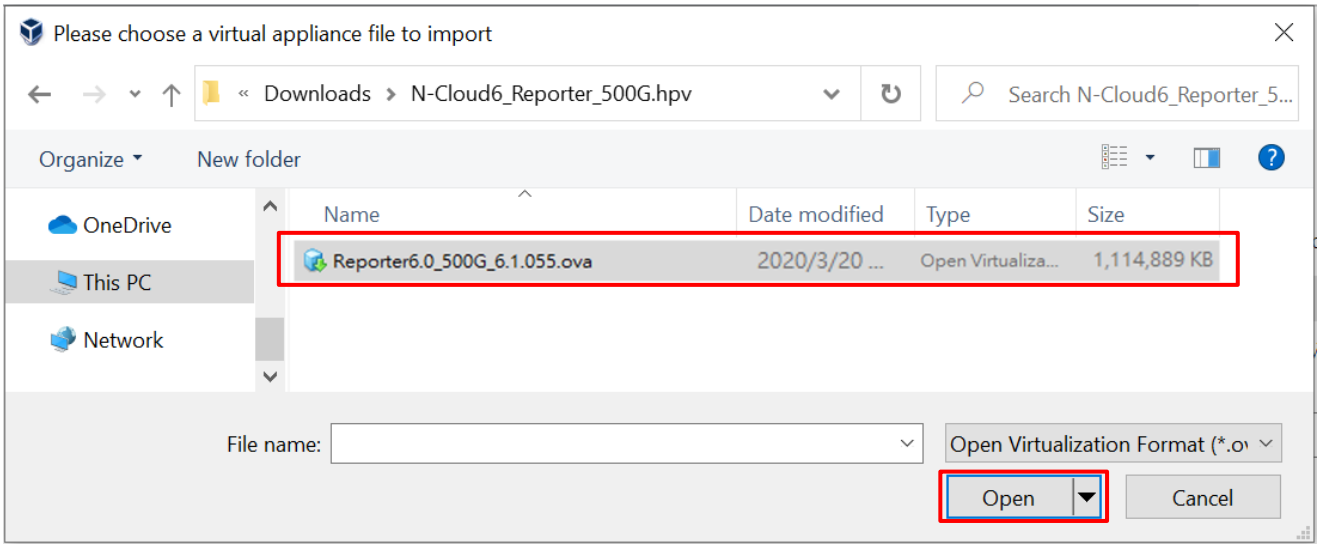
3.4 VirtualBox

(1) Open “Oracle VM VirtualBox.”

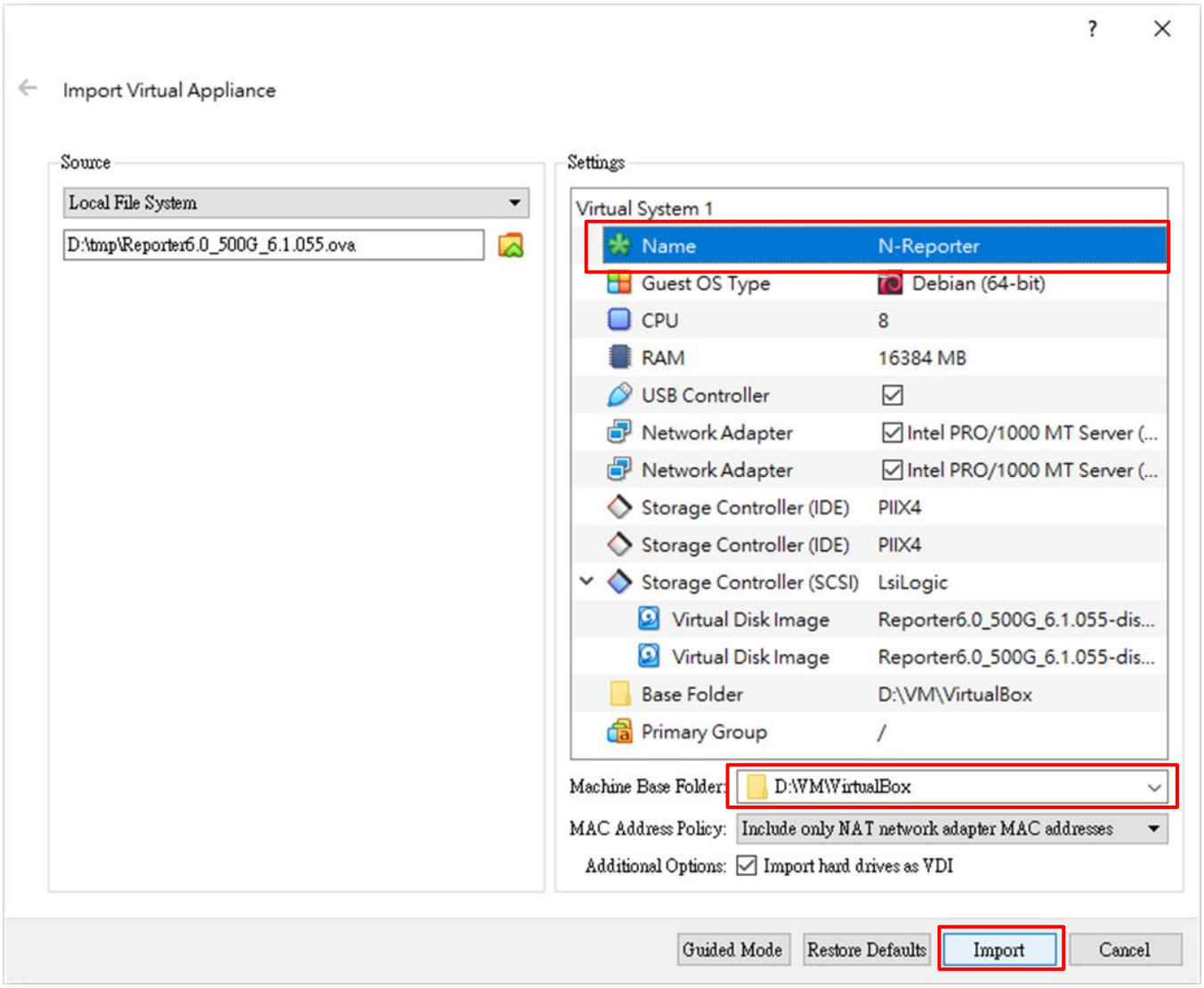
(2) Click “File→ Import Appliance...”



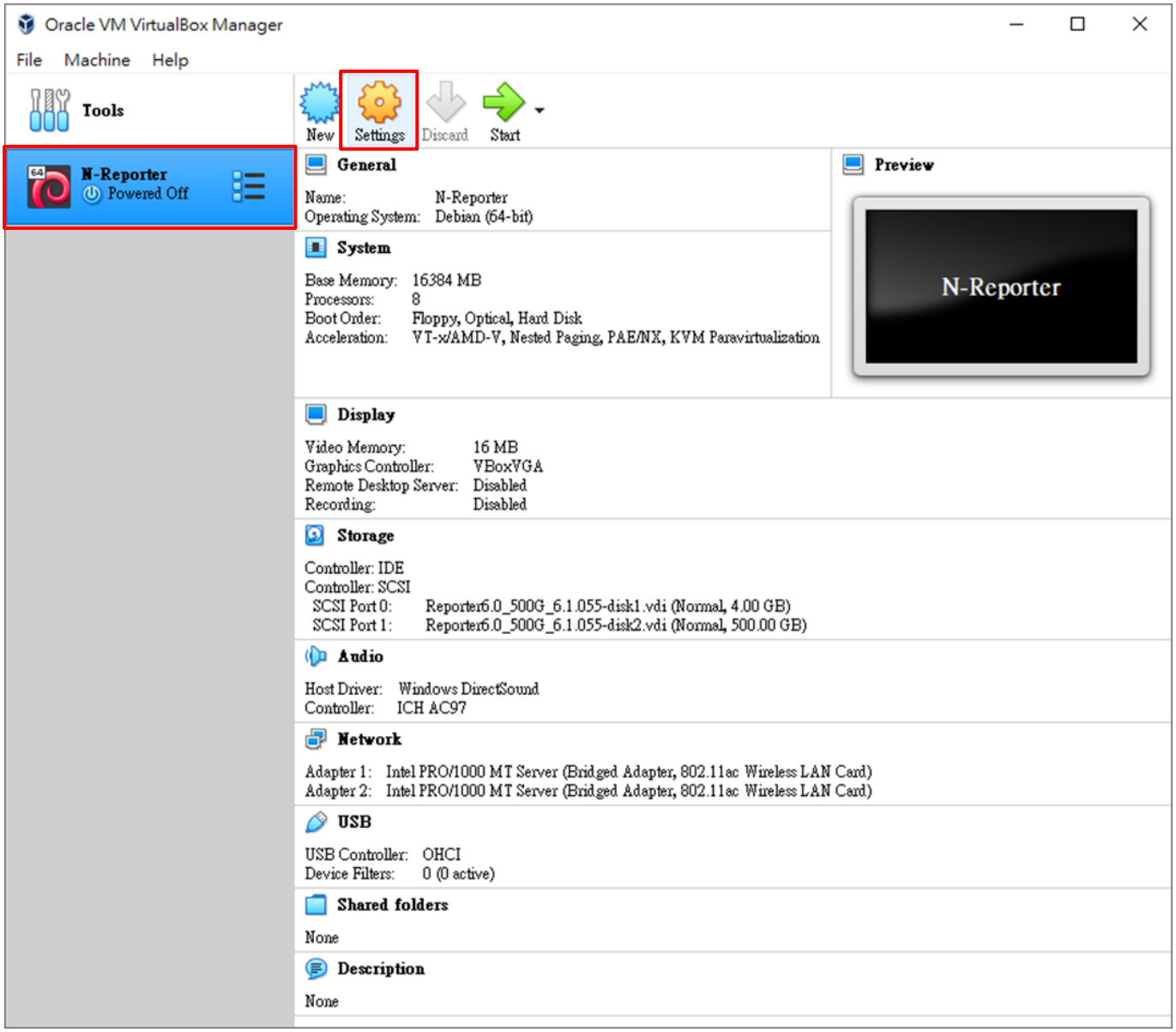
(3) Select the N-Reporter OVA file and click “Open.”



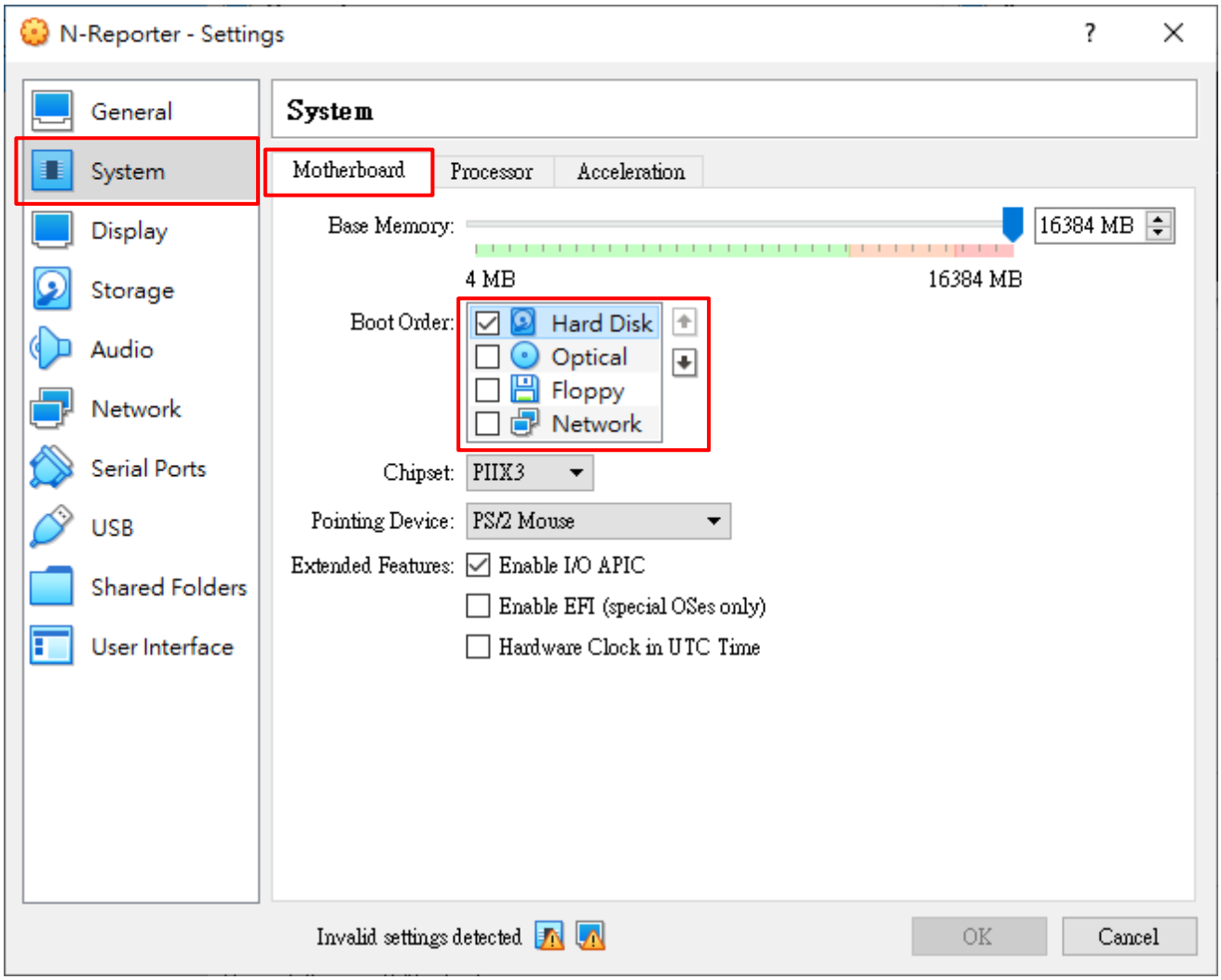
(4) Enter a name for the virtual machine and select a path. Click ““Import.



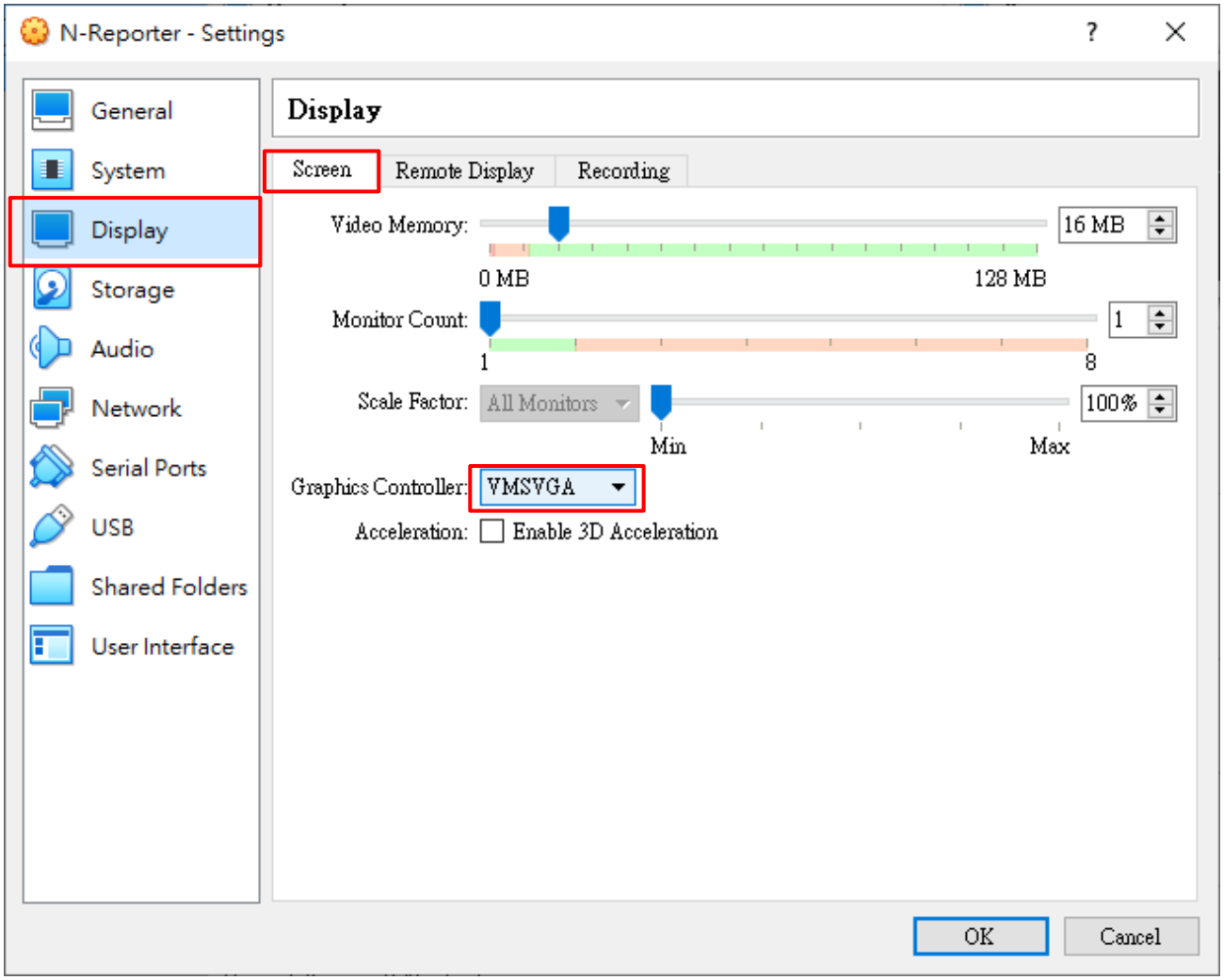
(5) Select N-Reporter VM and click “Settings.”



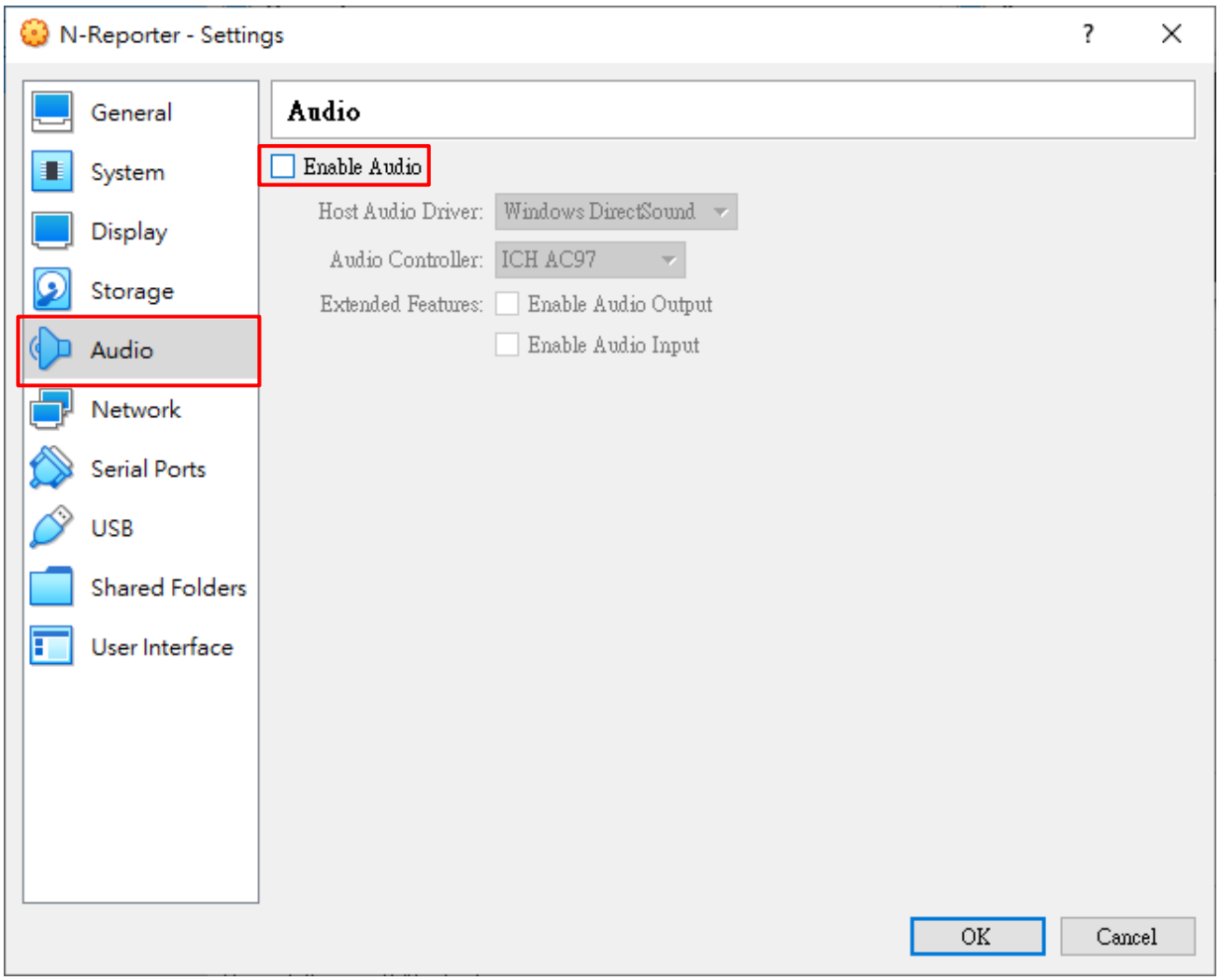
(6) Click “System,” click “Motherboard” and select “Hard Disk” in “Boot Order.”



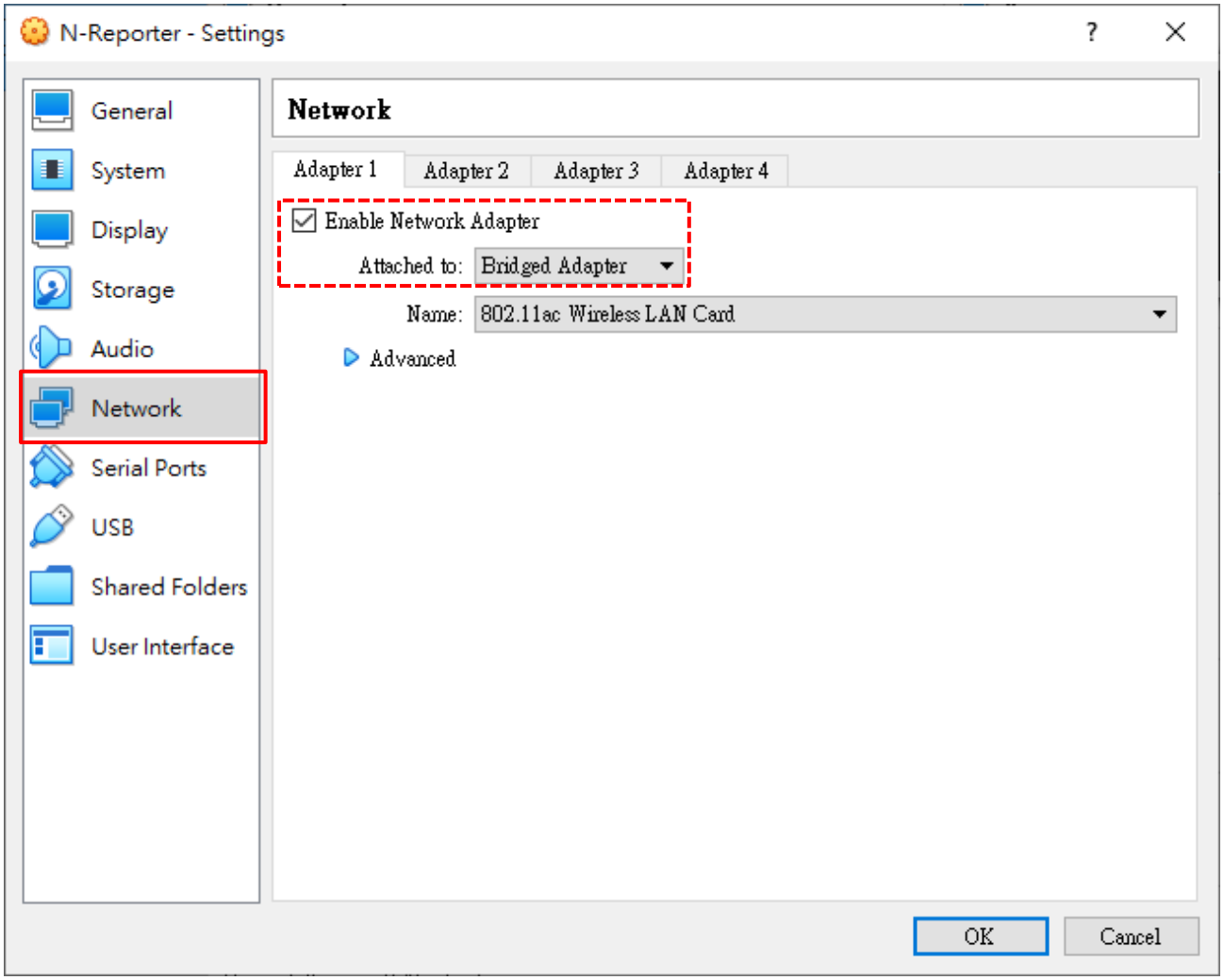
(7) Go to “Display,” click “Screen” and select “VMSVGA.”



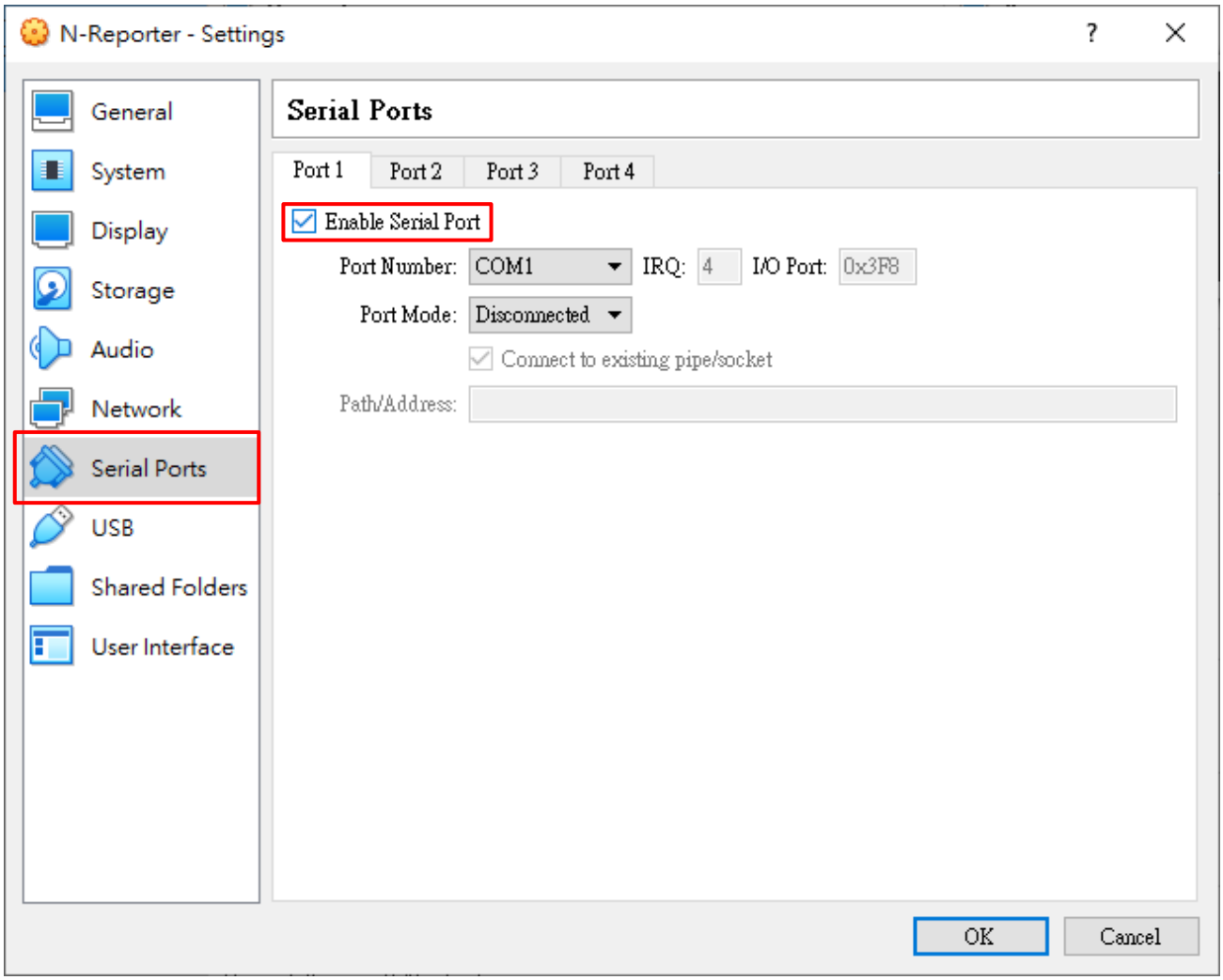
(8) Go to “Audio” and uncheck “Enable Audio.”



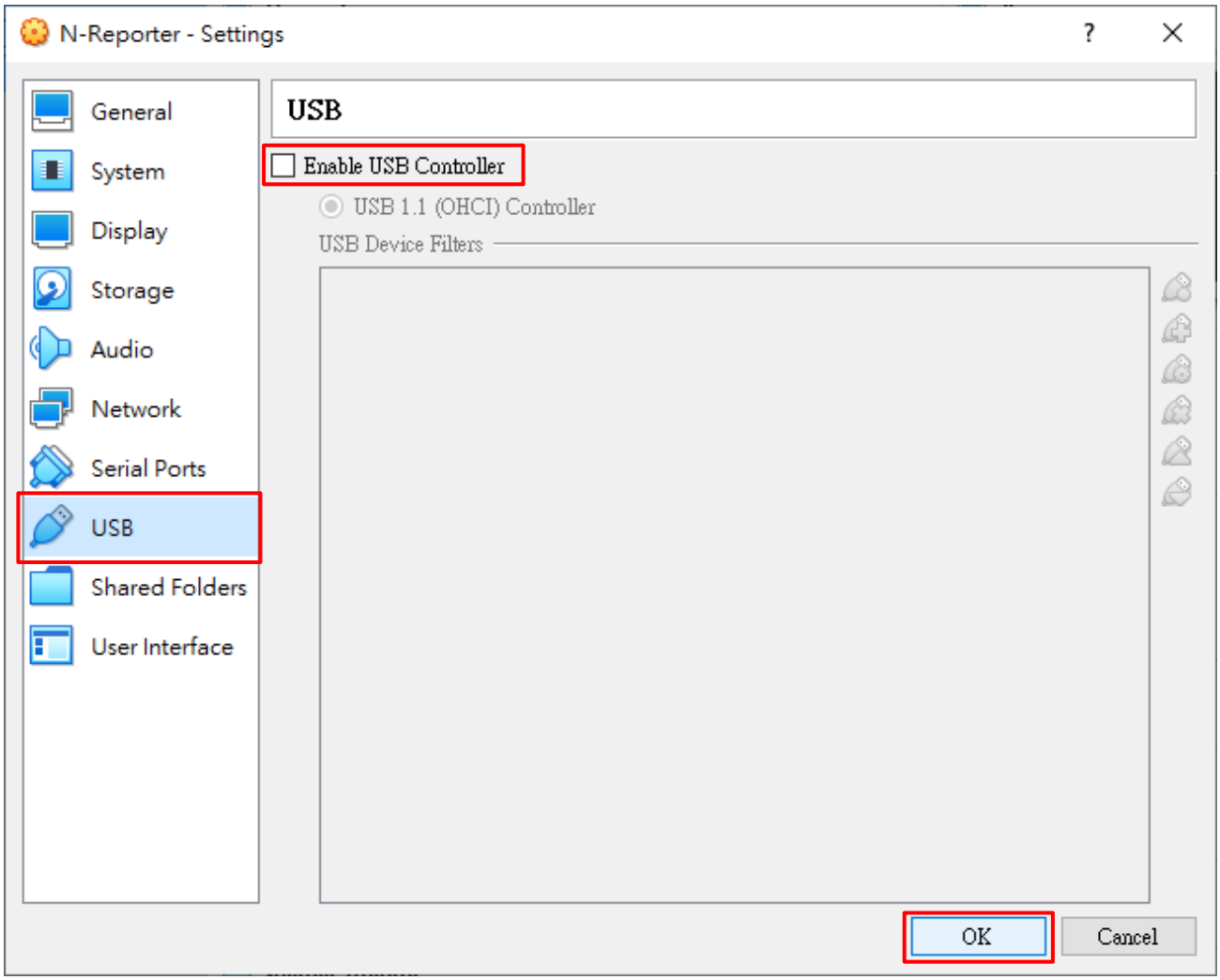
(9) Go to “Network,” check “Enable Network Adapter” and select “Bridged Adapter.”



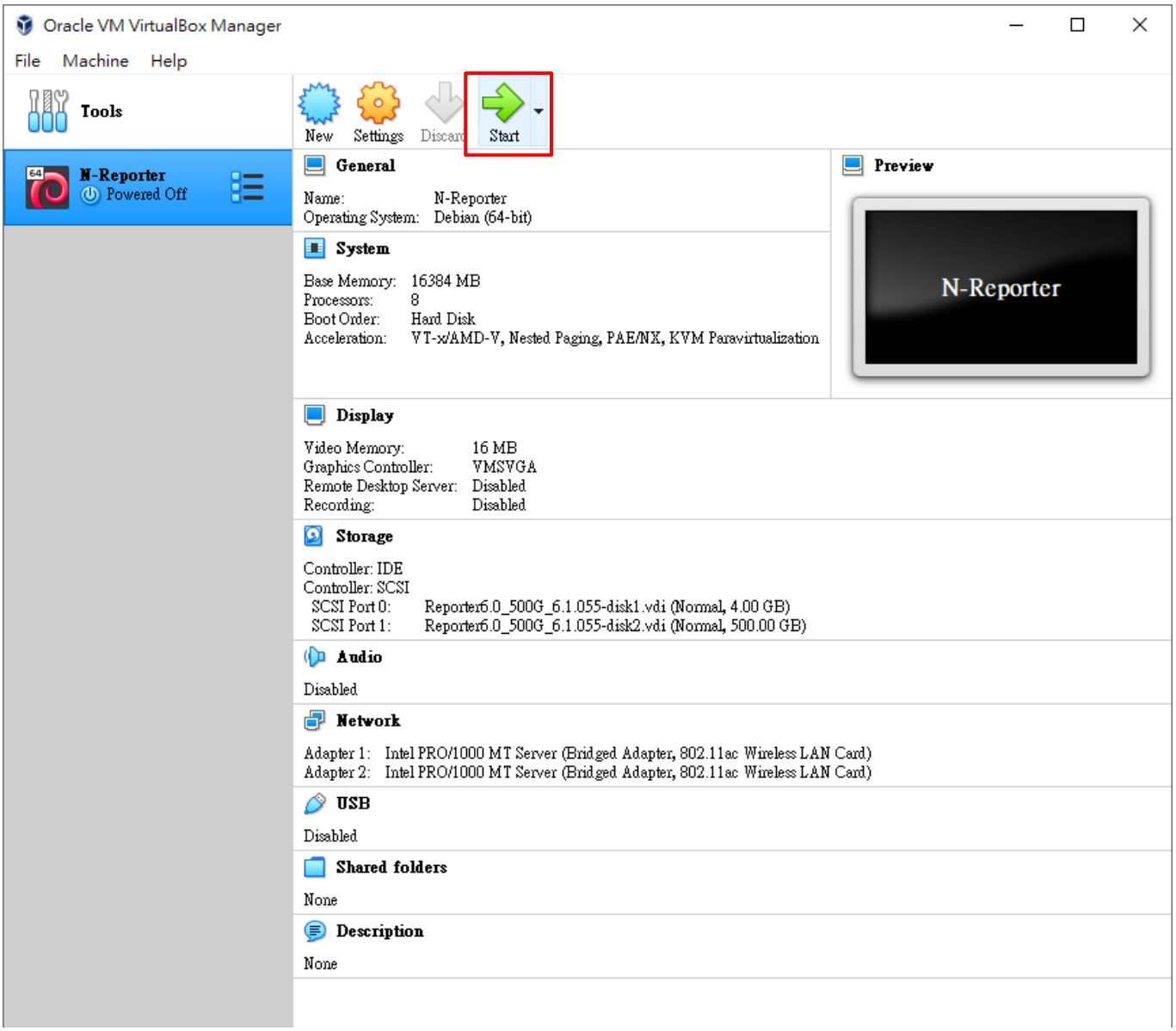
(10) Go to “Serial Ports” and check “Enable Serial Port.”



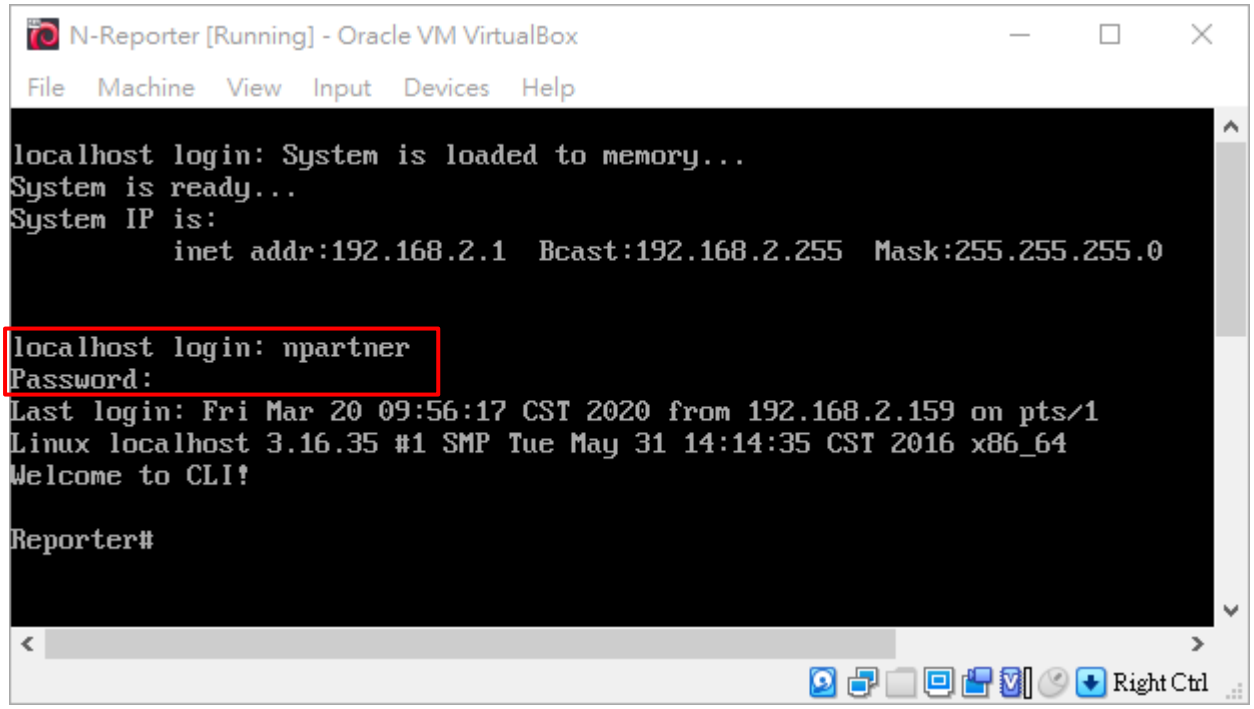
(11) Go to “USB,” uncheck “Enable USB Controller,” and click “OK.”



(12) Click “Start.”



(13) Log in CLI. The default account/password is npartner/npartner.



(14) Check the settings of N-Reporter.

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Reporter# show configure
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```
Reporter# show configure
######### Current configuration #########
hostname Reporter
https-only on
interface eth0 192.168.2.1 255.255.255.0 gw 192.168.2.253
######### End ########
Reporter#
```

(15) Change N-Reporter IP address.

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
```

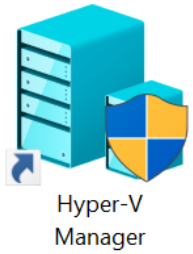
```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
######### Current configuration #########
hostname Reporter
https-only on
interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
######### End ########
Reporter#
```

IP setting: interface [interface] [N-Reporter_IP] [subnet_mask] gw [gateway_IP]

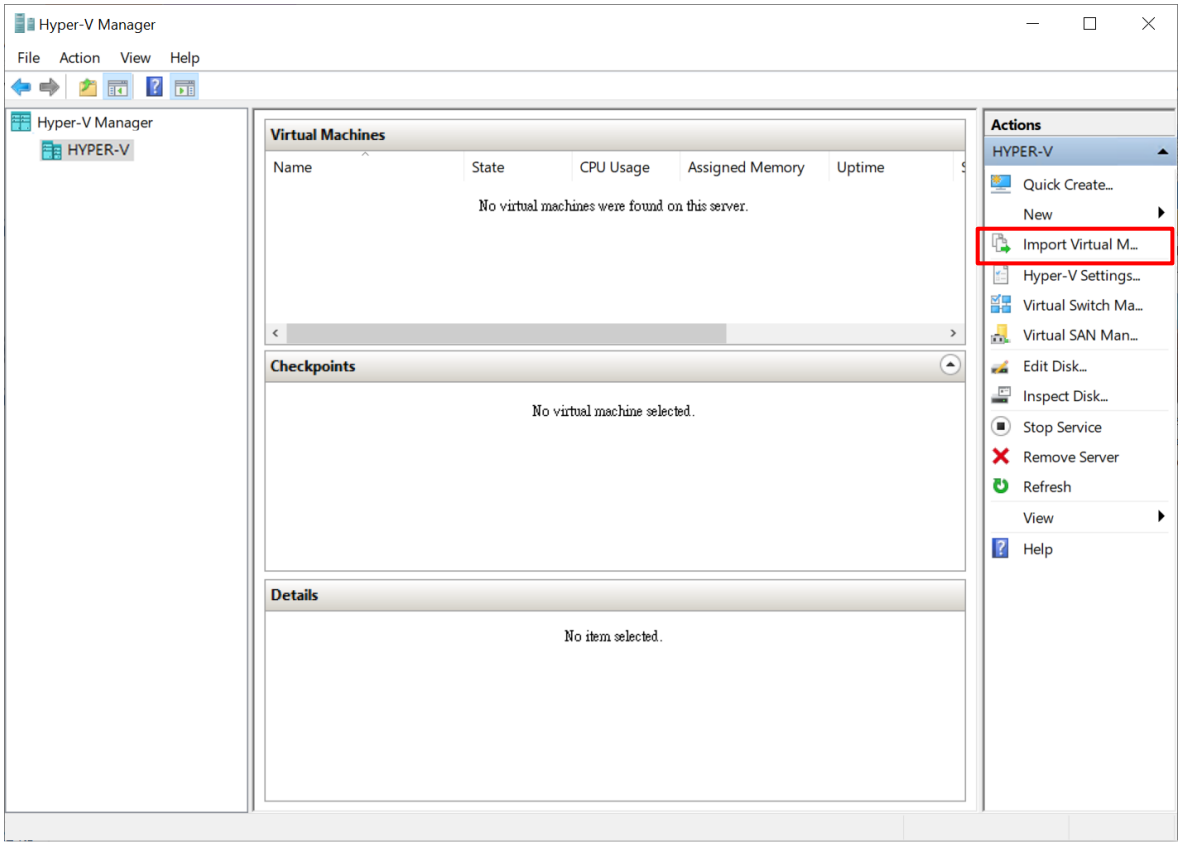
Please enter N-Reporter's IP address as the red part above.

3.5 Hyper-V

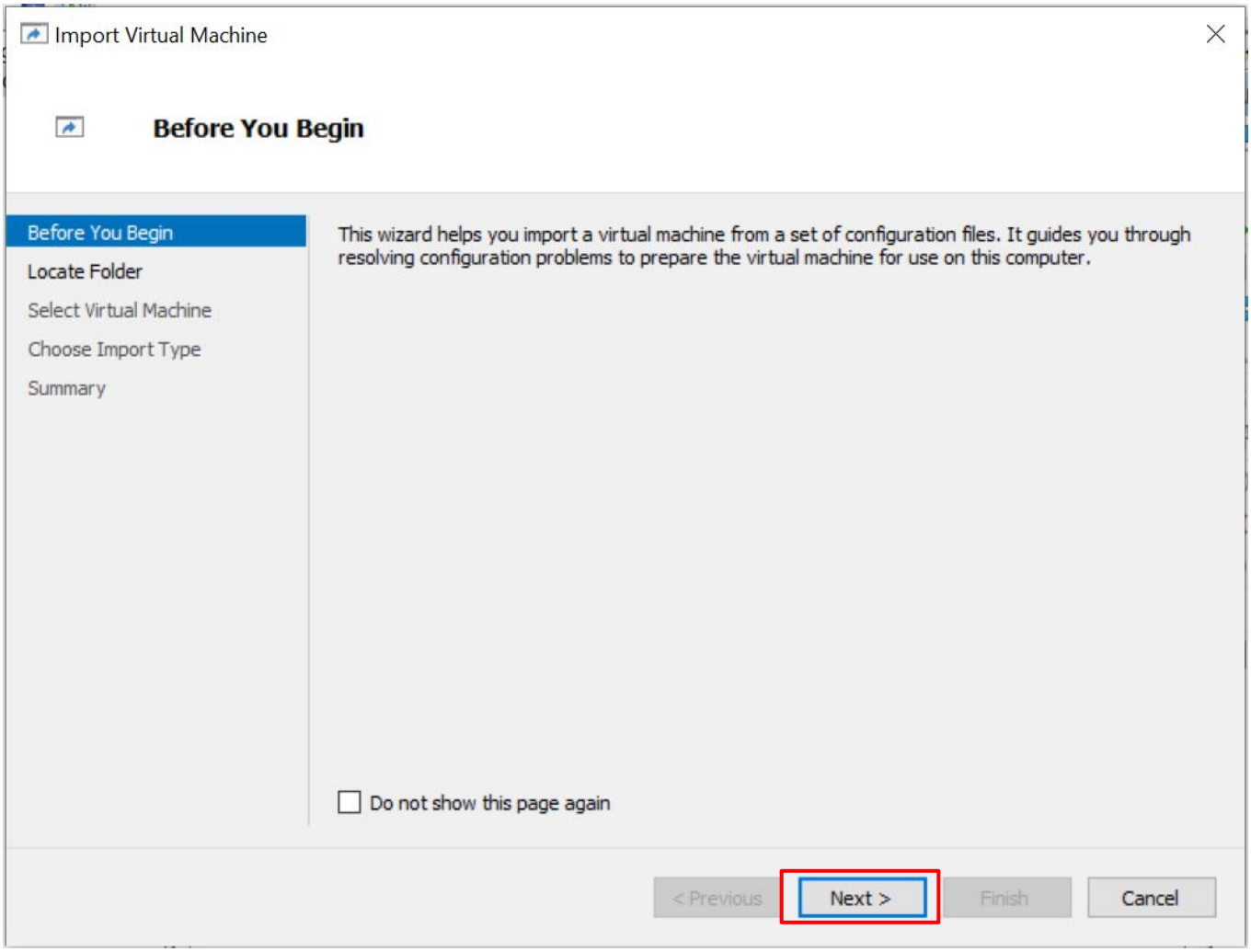
(1) Open “Hyper-V Manager.”



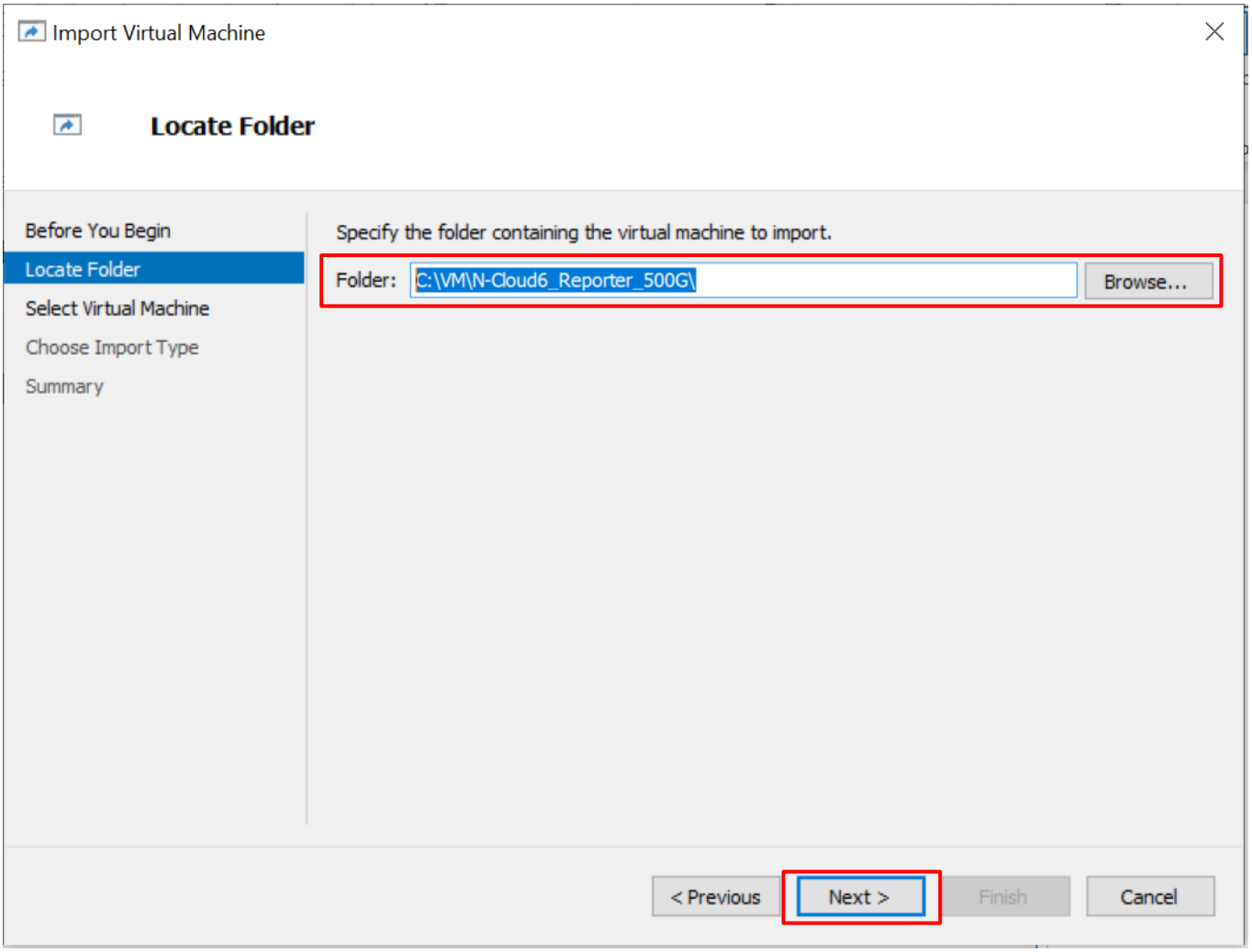
(2) Click “Import Virtual Machine.”



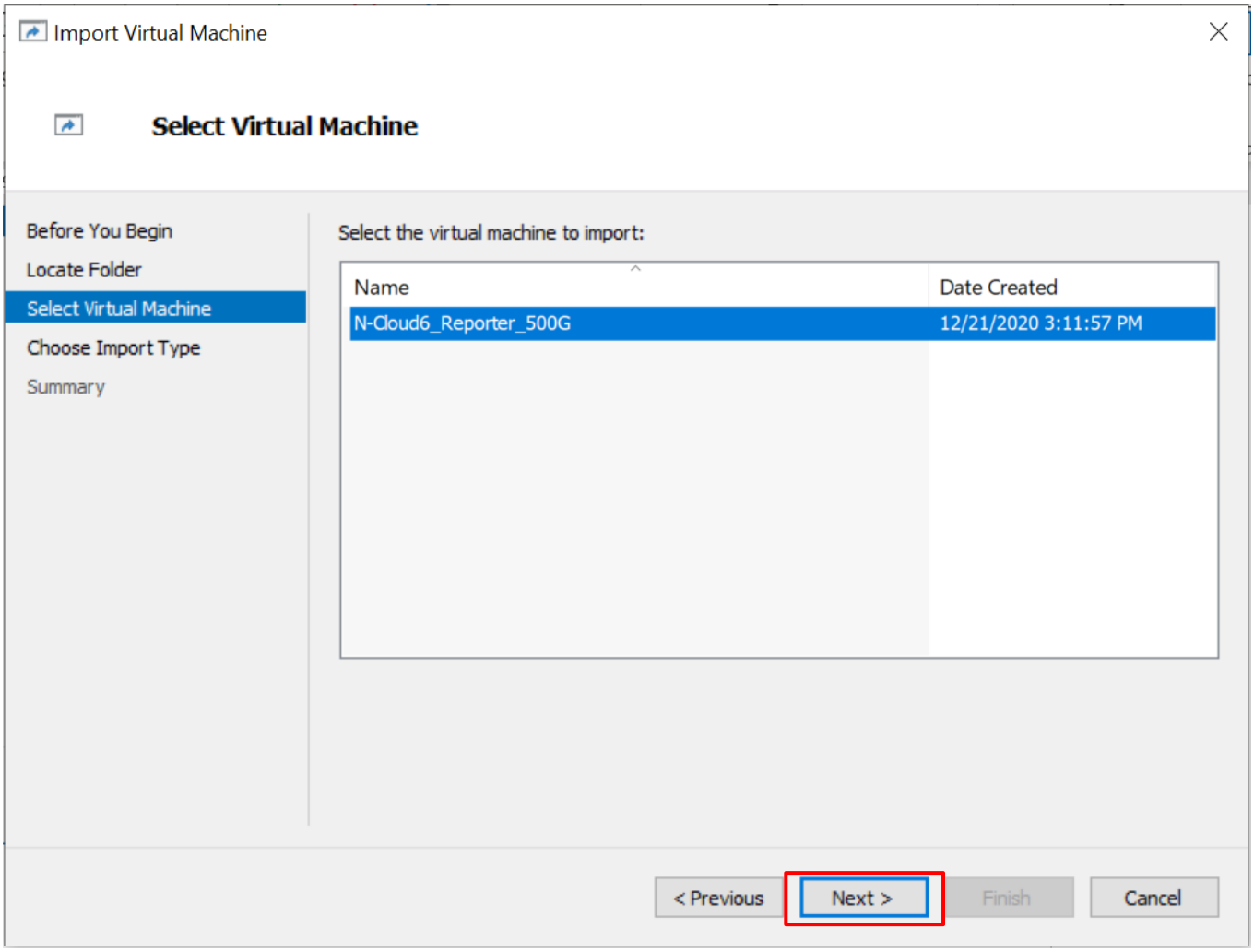
(3) Click “Next.”



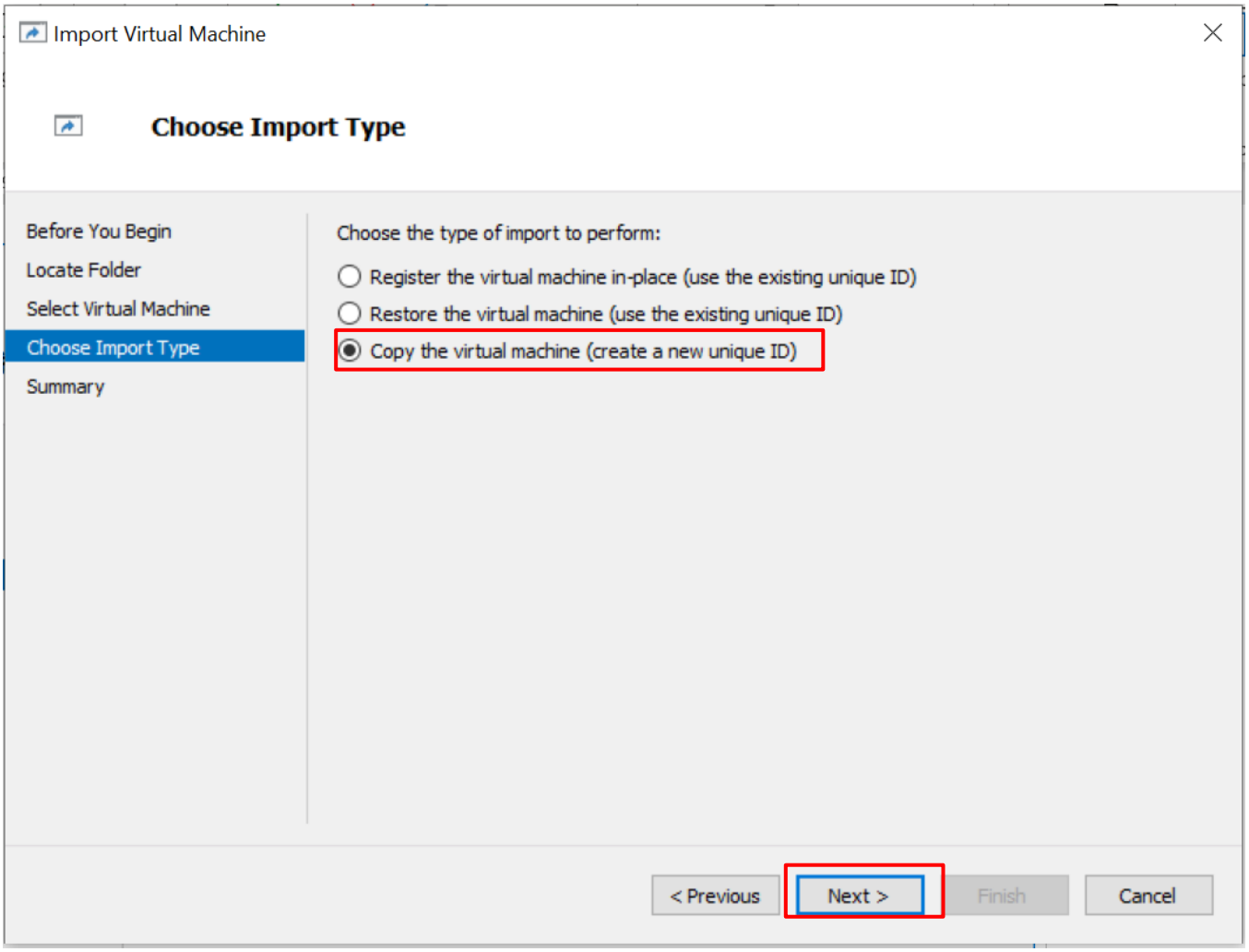
(4) Click “Browse” and select the folder to import. Click “Next.”



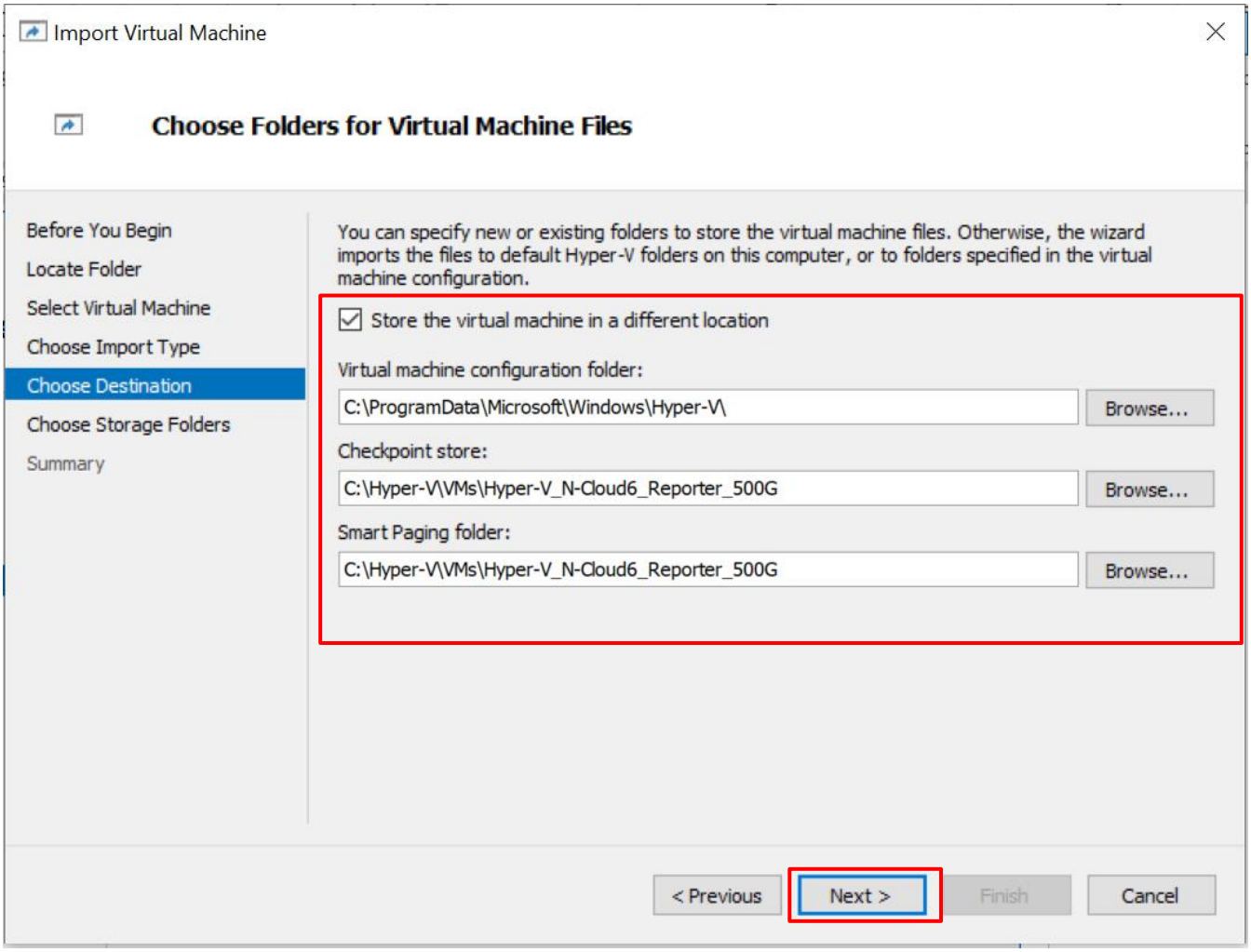
(5) Check the virtual machine and click “Next.”



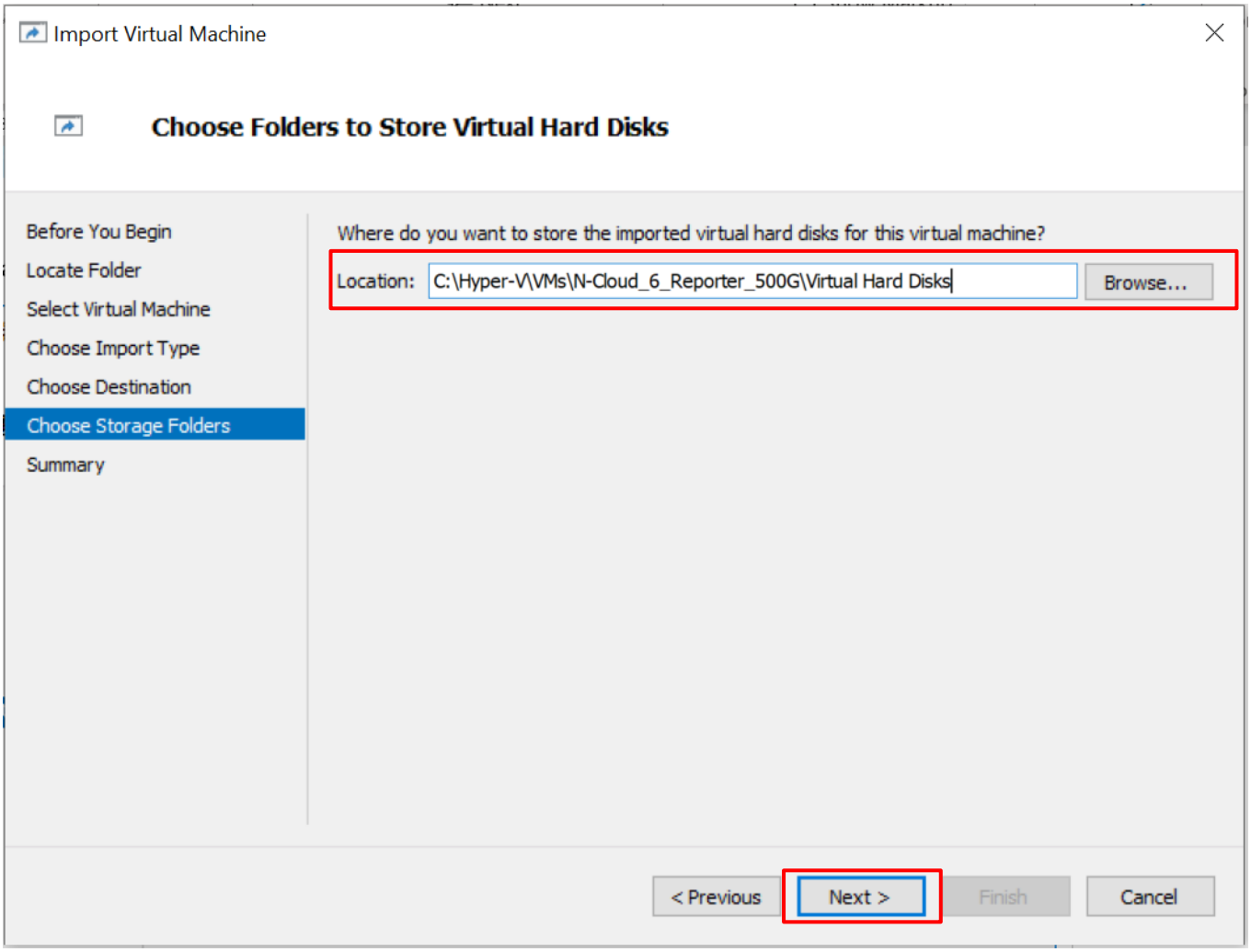
(6) Select “Copy the virtual machine” and click “Next.”



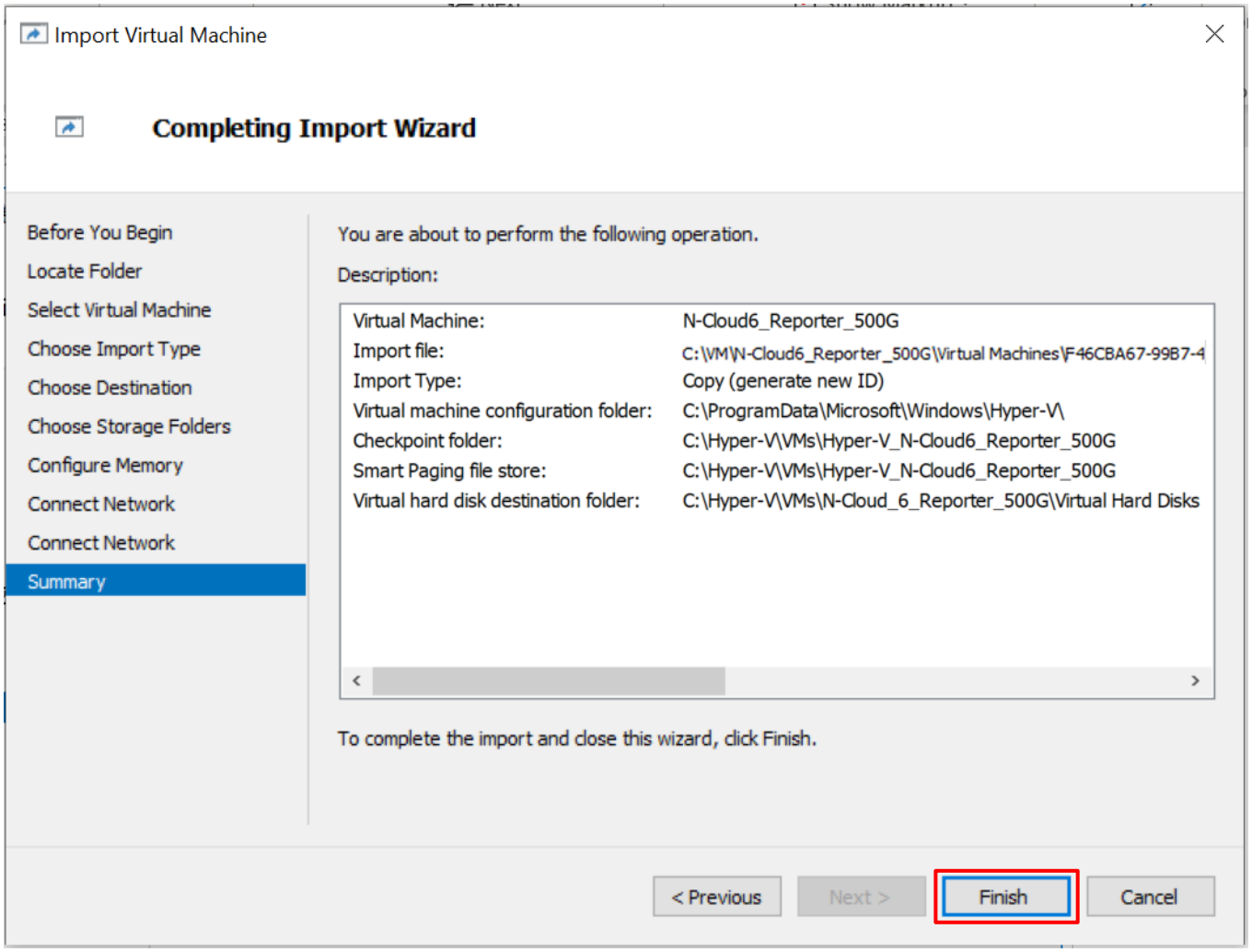
(7) Select paths for the virtual machine and click “Next.”



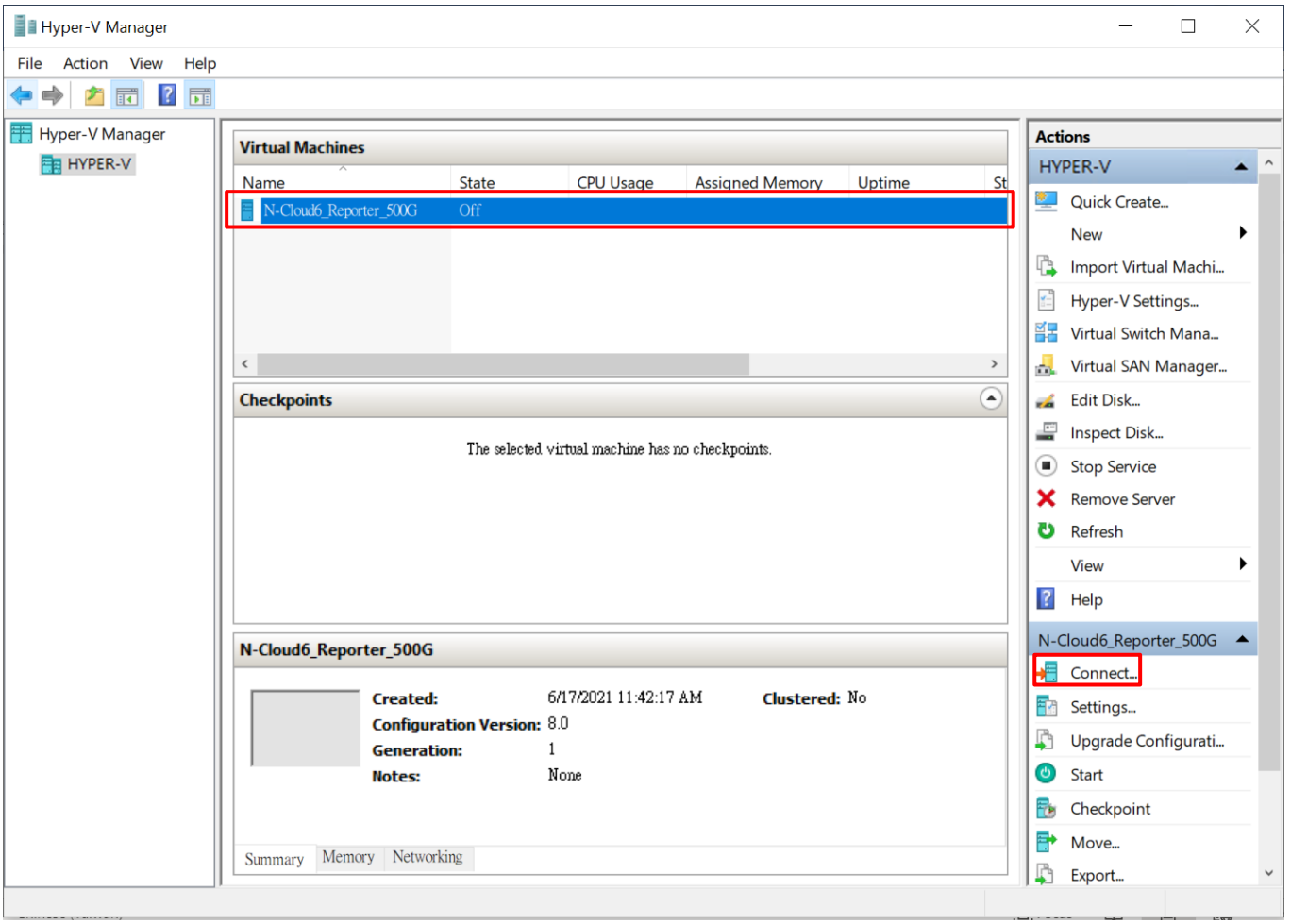
(8) Select a path for the virtual hard disks and click “Next.”



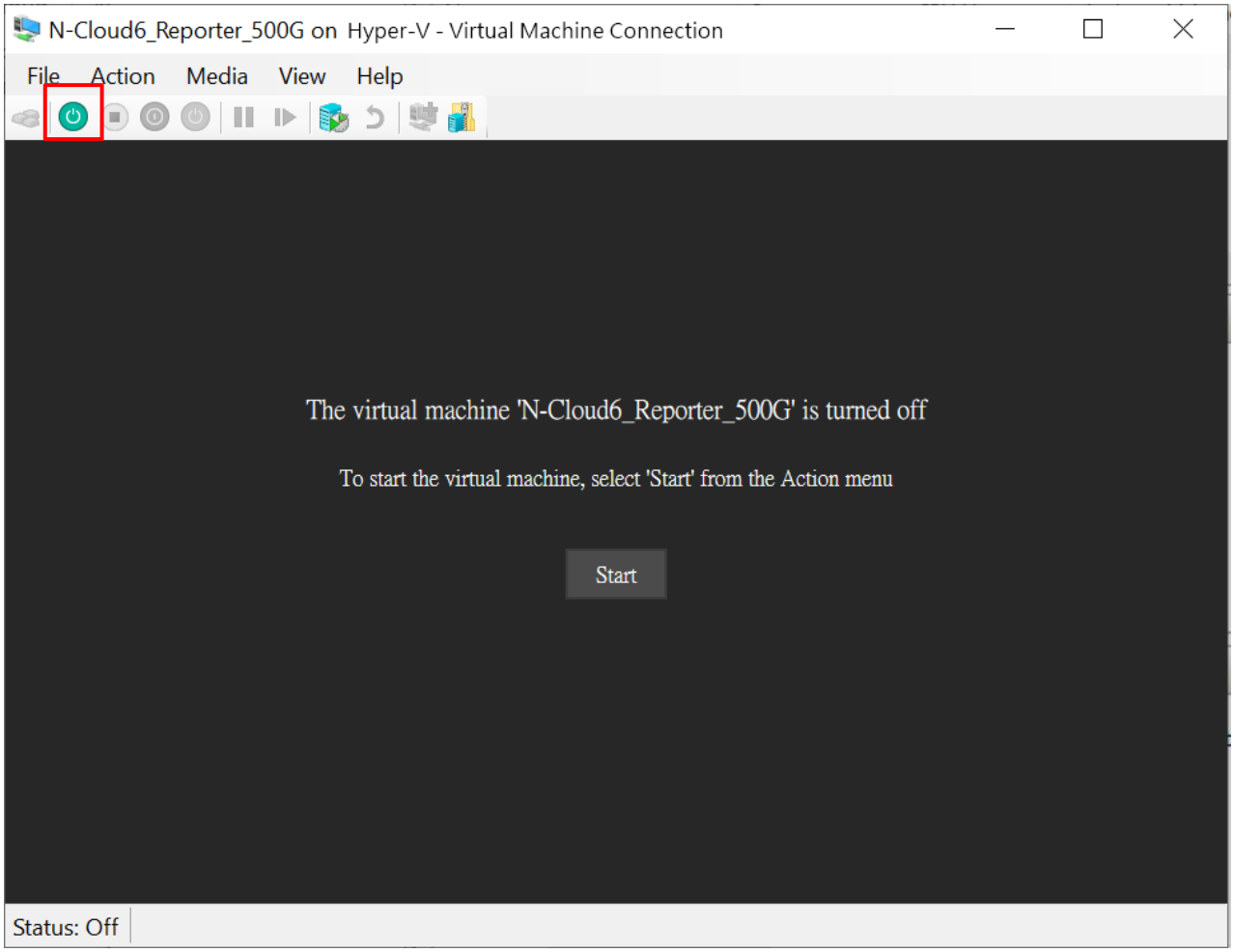
(9) Click “Finish.”



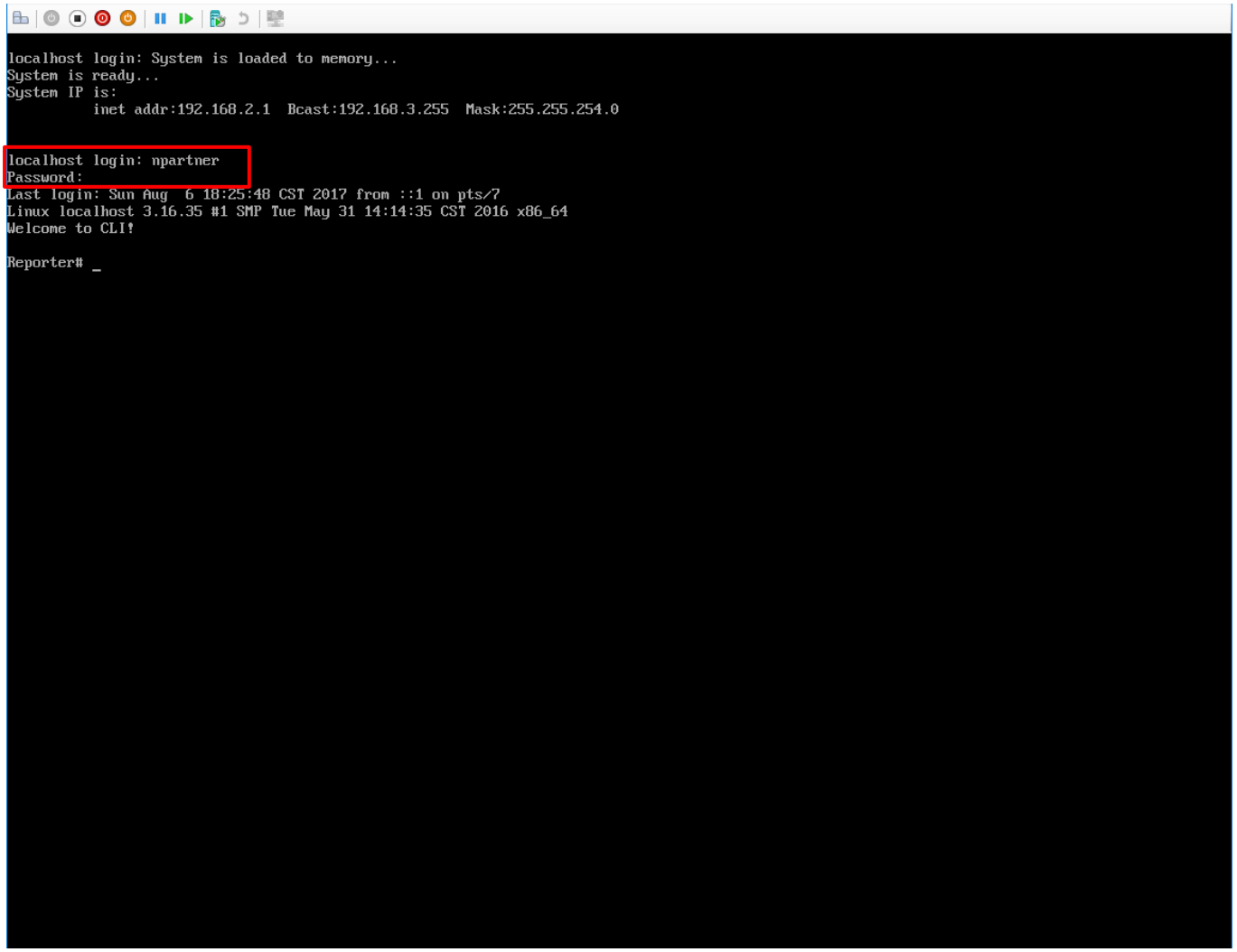
(10) Select N-Reporter VM and click “Connect.”



(11) Click “Start.”



(12) Log in CLI. The default account/password is npartner/npartner.



(13) Check the settings of N-Reporter.

```
Reporter# show configure
```

```
Reporter# show configure
######### Current configuration #########
hostname Reporter
https-only on
interface eth0 192.168.2.1 255.255.254.0 gw 192.168.3.254
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntpdate tock.stdtime.gov.tw
######### End ########
```

(14) Change N-Reporter IP address.

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
```

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
Reporter(config)# exit
Reporter# show configure
######### Current configuration #########
hostname Reporter
https-only on
interface eth0 192.168.2.128 255.255.255.0 gw 192.168.2.253
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntpdate tock.stdtime.gov.tw
######### End ########
```

IP setting: interface [interface] [N-Reporter_IP] [subnet_mask] gw [gateway_IP]

Please enter N-Reporter's IP address as the red part above.

3.6 KVM

Please set as the following steps to send N-Reporter OVA file to KVM Server.

(1) Check KVM version.

```
# /usr/libexec/qemu-kvm --version
```

```
[root@KVM ~]# /usr/libexec/qemu-kvm --version
QEMU emulator version 4.2.0 (qemu-kvm-4.2.0-48.module_el8.4.0+885+5e18b468.3)
Copyright (c) 2003-2019 Fabrice Bellard and the QEMU Project developers
[root@KVM ~]#
```

(2) Unzip OVA file.

```
# tar -xvf N-Cloud6_Reporter_500G_6.1.128.ova
```

```
[root@KVM ~]# tar -xvf N-Cloud6_Reporter_500G_6.1.128.ova
N-Cloud6_Reporter_500G_6.1.128.ovf
N-Cloud6_Reporter_500G_6.1.128.mf
N-Cloud6_Reporter_500G_6.1.128-disk1.vmdk
N-Cloud6_Reporter_500G_6.1.128-disk2.vmdk
N-Cloud6_Reporter_500G_6.1.128-file1.nvram
[root@KVM ~]#
```

(3) Transfer DOM vmdk file to qcow2 file.

```
# qemu-img convert -f vmdk N-Cloud6_Reporter_500G_6.1.128-disk1.vmdk -O qcow2 N-Reporter-disk1.qcow2
```

```
[root@KVM ~]# qemu-img convert -f vmdk N-Cloud6_Reporter_500G_6.1.128-disk1.vmdk -O qcow2 N-Reporter-disk1.qcow2
[root@KVM ~]#
```

(4) Check the format of the qcow2 file.

```
# qemu-img info N-Reporter-disk1.qcow2
```

```
[root@KVM ~]# qemu-img info N-Reporter-disk1.qcow2
image: N-Reporter-disk1.qcow2
file format: qcow2
virtual size: 4 GiB (4294967296 bytes)
disk size: 1.57 GiB
cluster_size: 65536
Format specific information:
    compat: 1.1
    lazy refcounts: false
    refcount bits: 16
    corrupt: false
[root@KVM ~]#
```

(5) View debian OS of the virtual machine.

```
# osinfo-query os | egrep -i debian
```

```
[root@KVM ~]# osinfo-query os | egrep -i debian
 debian1.1            | Debian GNU/Linux 1.1                | 1.1      | http://debian.org/debian/1.1
 debian1.2            | Debian GNU/Linux 1.2                | 1.2      | http://debian.org/debian/1.2
 debian1.3            | Debian GNU/Linux 1.3                | 1.3      | http://debian.org/debian/1.3
 debian10             | Debian 10                           | 10       | http://debian.org/debian/10
 debian2.0            | Debian GNU/Linux 2.0                | 2.0      | http://debian.org/debian/2.0
 debian2.1            | Debian GNU/Linux 2.1                | 2.1      | http://debian.org/debian/2.1
 debian2.2            | Debian GNU/Linux 2.2                | 2.2      | http://debian.org/debian/2.2
 debian3              | Debian GNU/Linux 3.0                | 3.0      | http://debian.org/debian/3
 debian3.1            | Debian GNU/Linux 3.1                | 3.1      | http://debian.org/debian/3.1
 debian4              | Debian GNU/Linux 4.0                | 4.0      | http://debian.org/debian/4
 debian5              | Debian GNU/Linux 5.0                | 5.0      | http://debian.org/debian/5
 debian6              | Debian 6.0                          | 6.0      | http://debian.org/debian/6
 debian7              | Debian 7                            | 7        | http://debian.org/debian/7
 debian8              | Debian 8                            | 8        | http://debian.org/debian/8
 debian9              | Debian 9                            | 9        | http://debian.org/debian/9
 debiantesting        | Debian testing                      | testing  | http://debian.org/debian/testing
[root@KVM ~]#
```

(6) Build N-Reporter.

```
# virt-install \
> --connect qemu:///system \
> --virt-type kvm \
> --name N-Reporter \
> --memory 32768 --vcpus 4 \
> --network network=default \
> --disk /var/lib/libvirt/images/N-Reporter-disk1.qcow2 \
> --import --os-variant debian8 \
> --noautoconsole --noreboot
```

```
[root@KVM ~]# virt-install \
> --connect qemu:///system \
> --virt-type kvm \
> --name N-Reporter \
> --memory 32768 --vcpus 4 \
> --network network=default \
> --disk /var/lib/libvirt/images/N-Reporter-disk1.qcow2 \
> --import --os-variant debian8 \
> --noautoconsole --noreboot

Starting install...
Domain creation completed.
You can restart your domain by running:
  virsh --connect qemu:///system start N-Reporter
[root@KVM ~]#
```

For the red parts above, please enter the name of the virtual machine, network name, and the path of the qcow2 file.

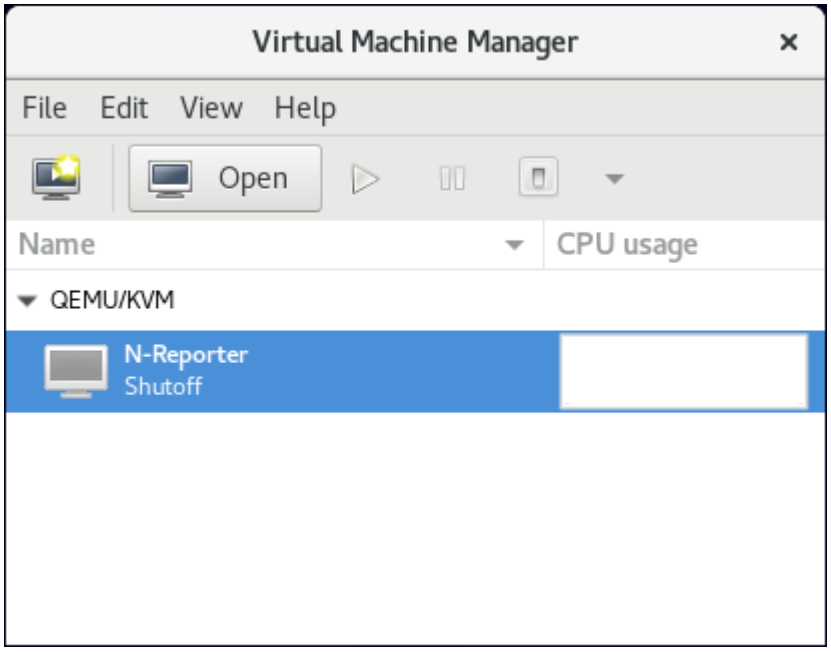
(7) View N-Reporter VM status.

```
# virsh list --all
```

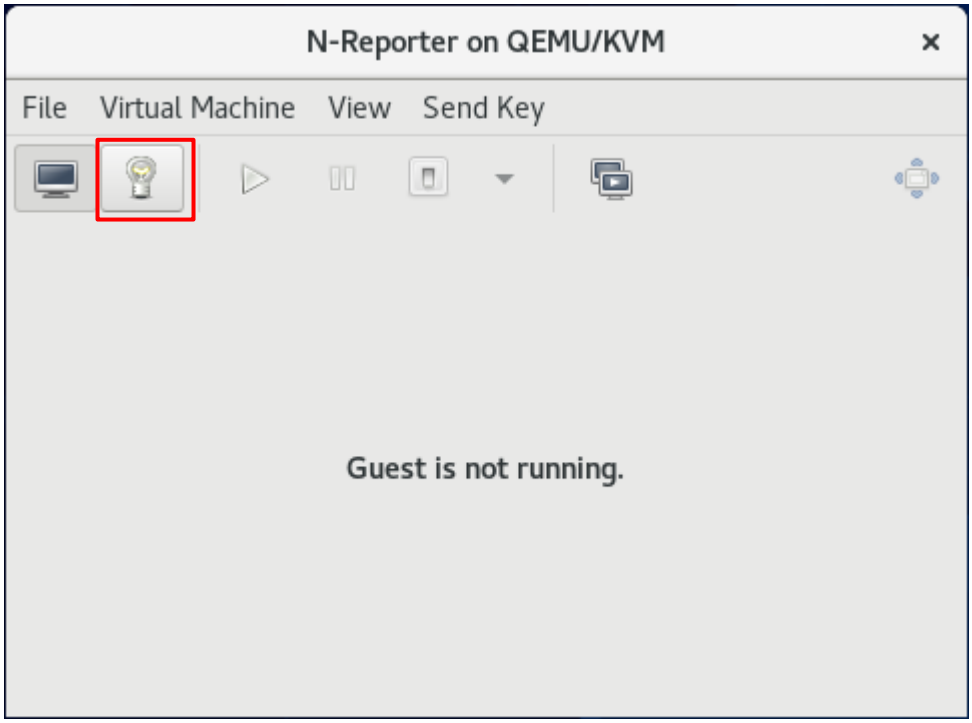
```
[root@KVM ~]# virsh list --all
 Id    Name                           State
----------------------------------------------------
 -     N-Reporter                     shut off

[root@KVM ~]#
```

(8) Open “Virtual Machine Manager.”

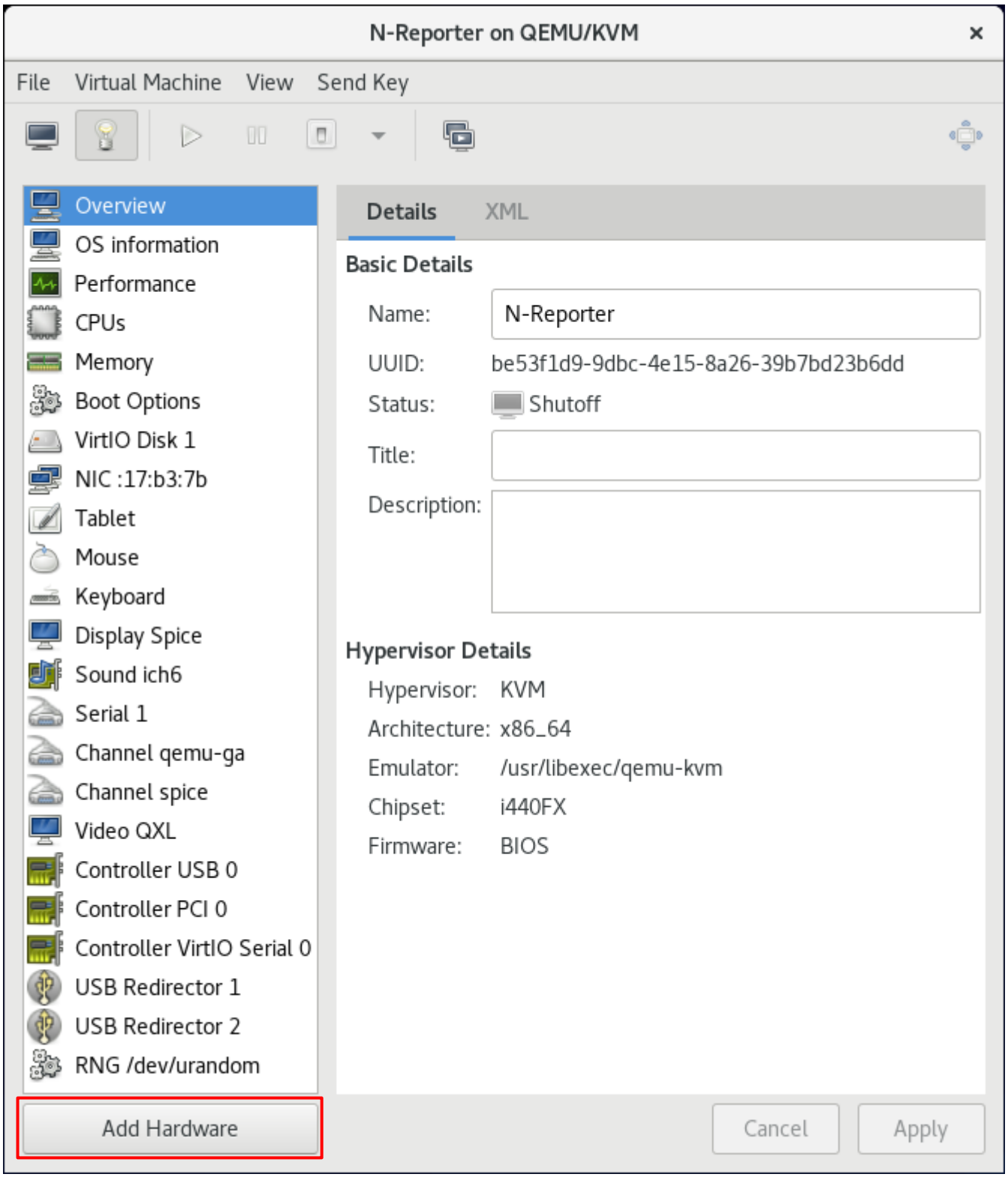
(9) Click “Open.”



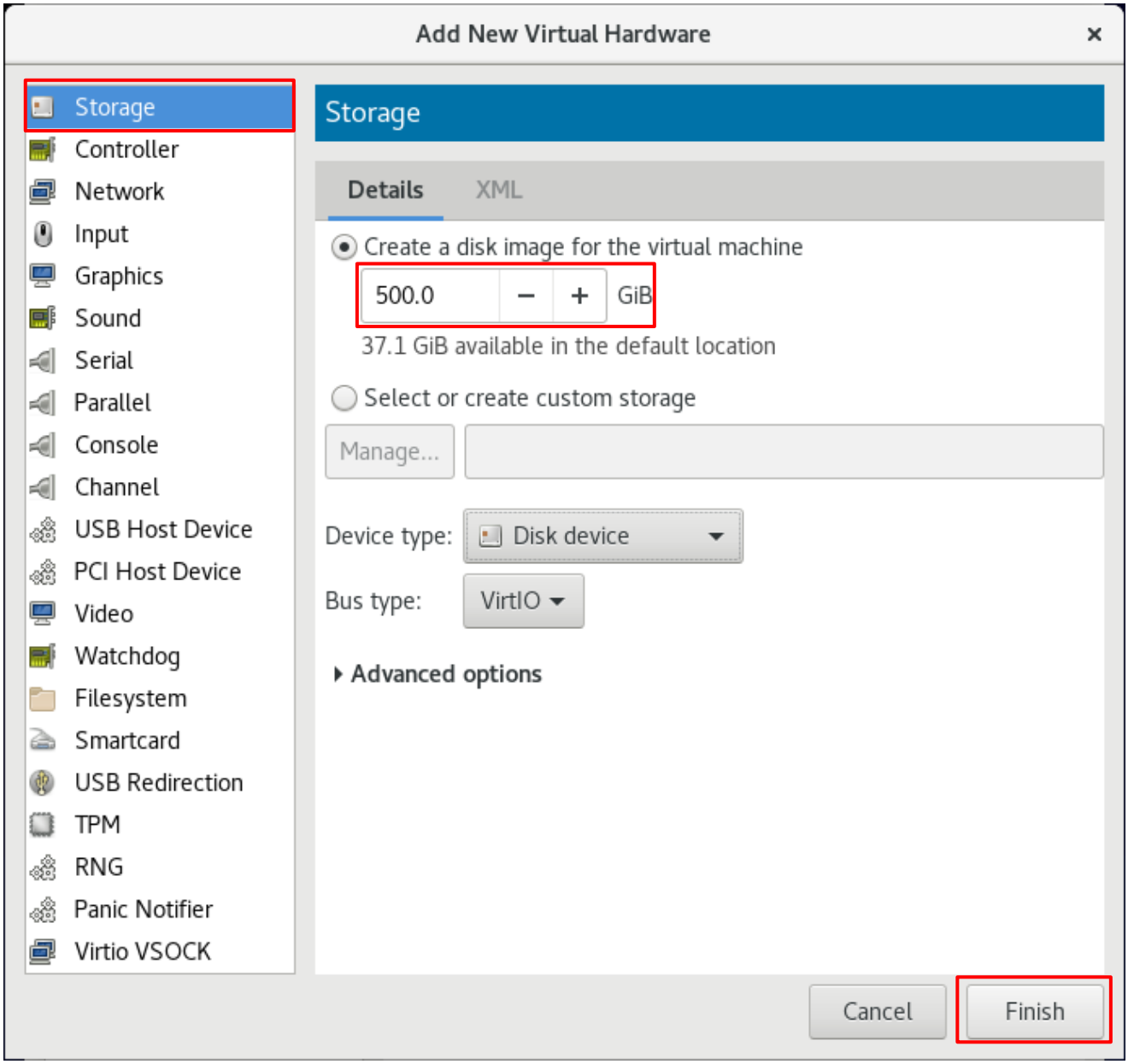
(10) Click  “virtual hardware details.”



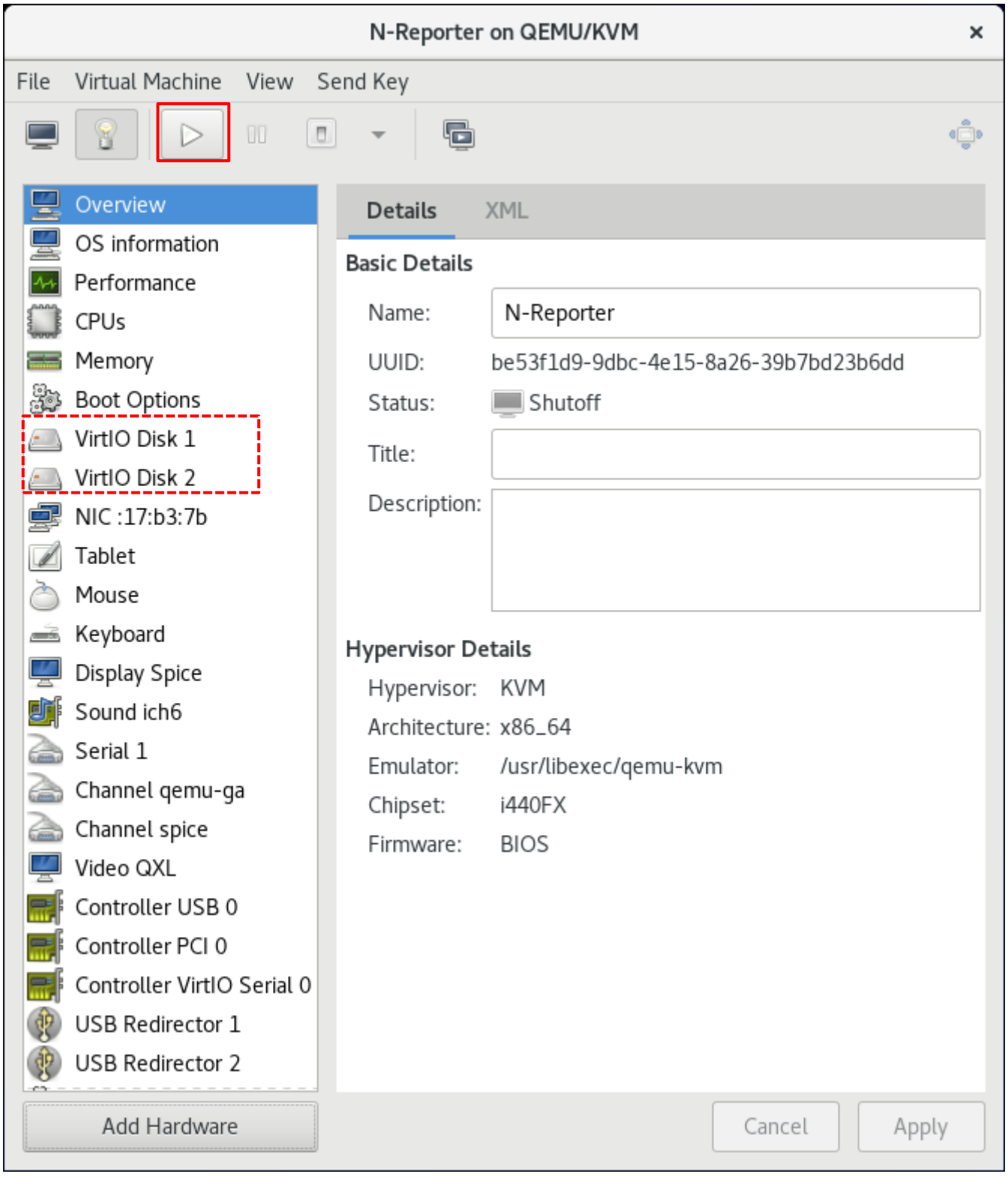
(11) Click “Add Hardware.”



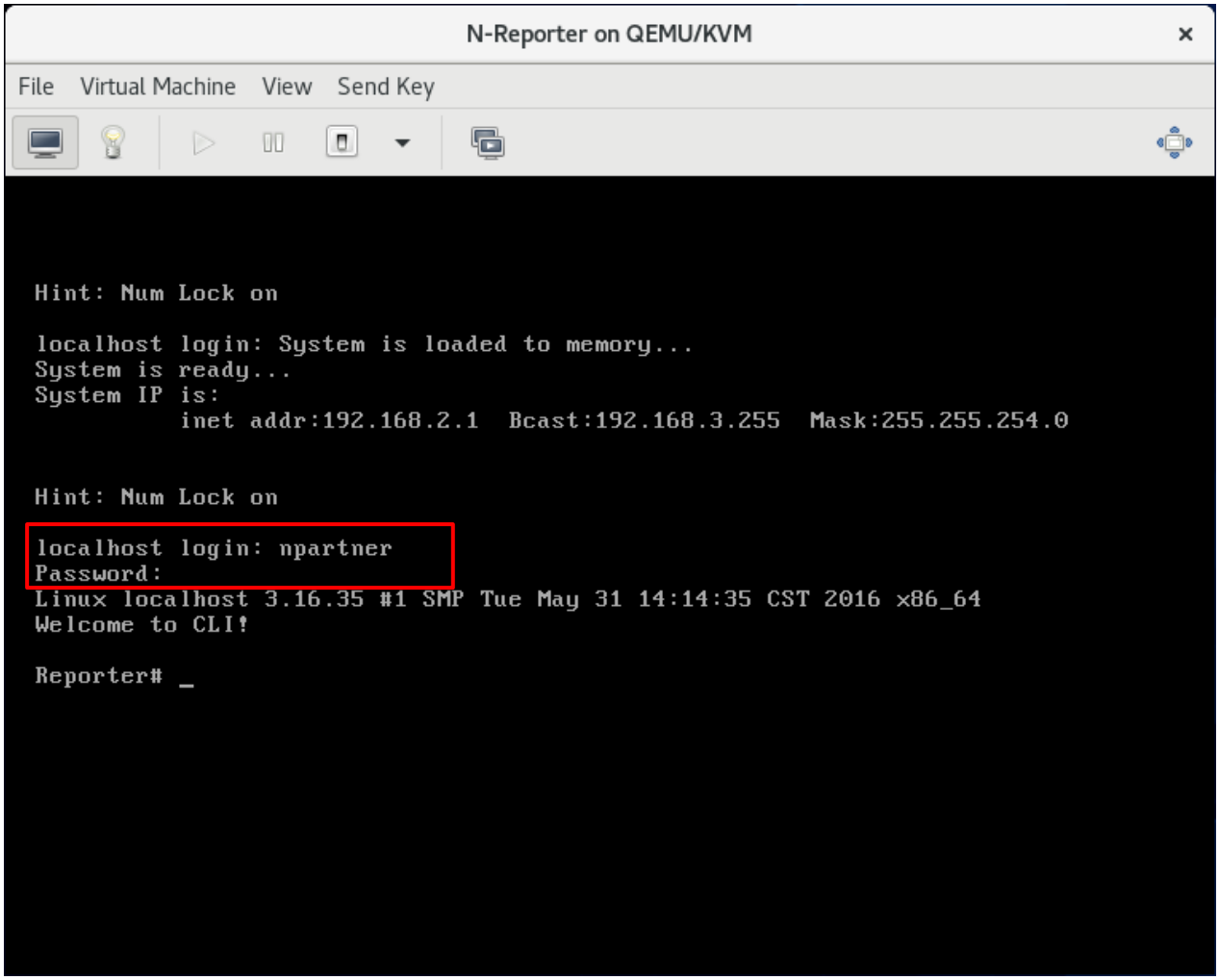
(12) Click “Storage,” set 500 GiB for storage, and click “Finish.”



(13) Two disks will show; click ▷ "Power on the virtual machine."



(14) Log in CLI. The default account/password is npartner/npartner.



(15) Check the settings of N-Reporter.

```
Reporter# show configure
```

```
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.2.1 255.255.254.0 gw 192.168.3.254
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntp server on tock.stdtime.gov.tw
######## End #######
Reporter# _
```

(16) Change N-Reporter IP address.

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.8.184 255.255.254.0 gw 192.168.9.254
Reporter(config)# exit
Reporter# show configure
```

```
Reporter# configure terminal
Reporter(config)# interface eth0 192.168.8.184 255.255.254.0 gw 192.168.9.254
Reporter(config)# exit
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.8.184 255.255.254.0 gw 192.168.9.254
ip dns1 168.95.1.1
ip dns2 8.8.8.8
ntp server on tock.stdtime.gov.tw
######## End #######
Reporter# _
```

IP setting: interface [interface] [N-Reporter_IP] [subnet_mask] gw [gateway_IP]

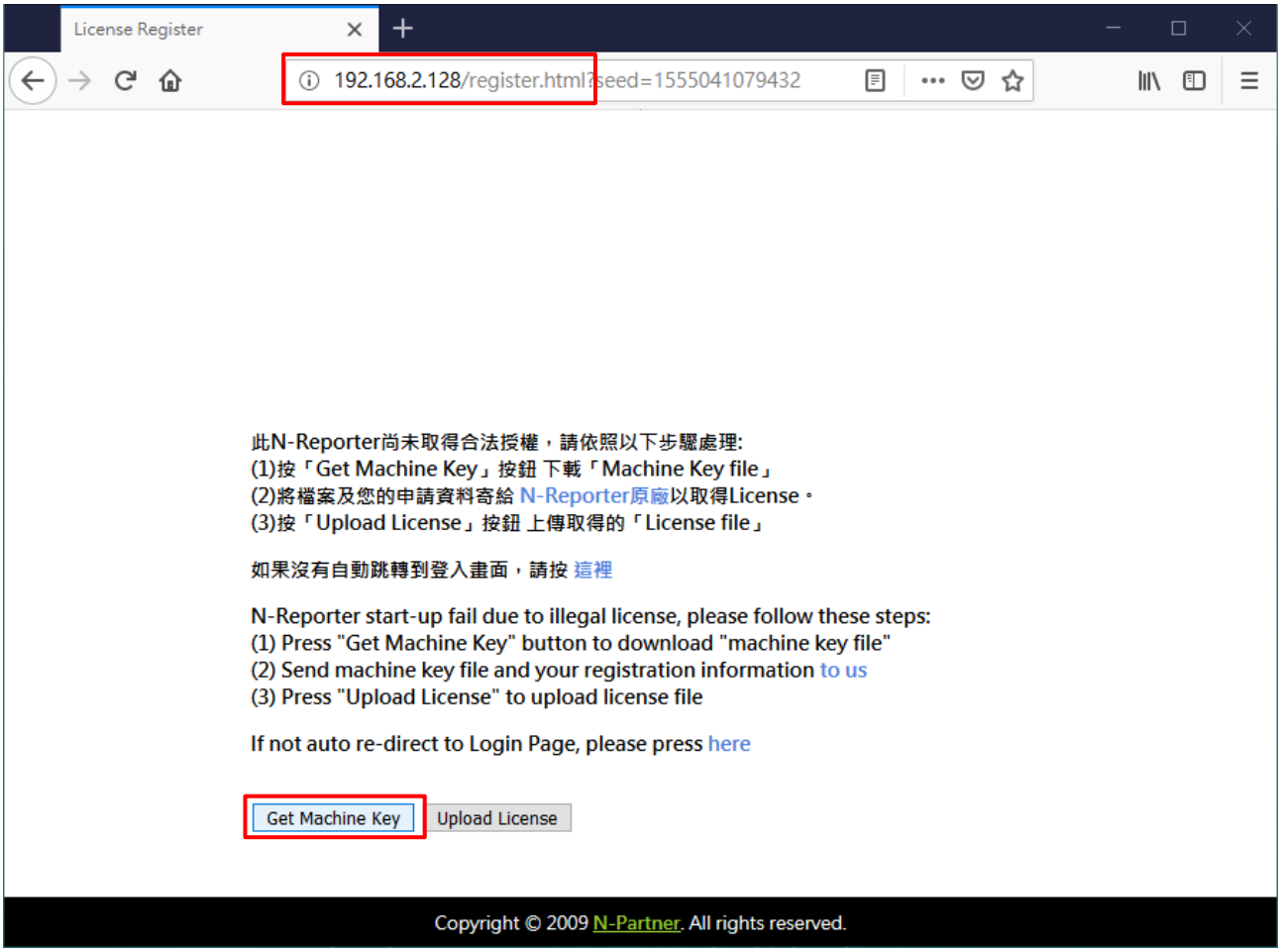
Please enter N-Reporter's IP address as the red part above.

(17) To add storage space, please format disk first.

4. Updating Process

4.1 License Update

(1) Open a browser and enter https://<*N-Reporter IP*> to connect to license register page. Click "Get Machine Key."



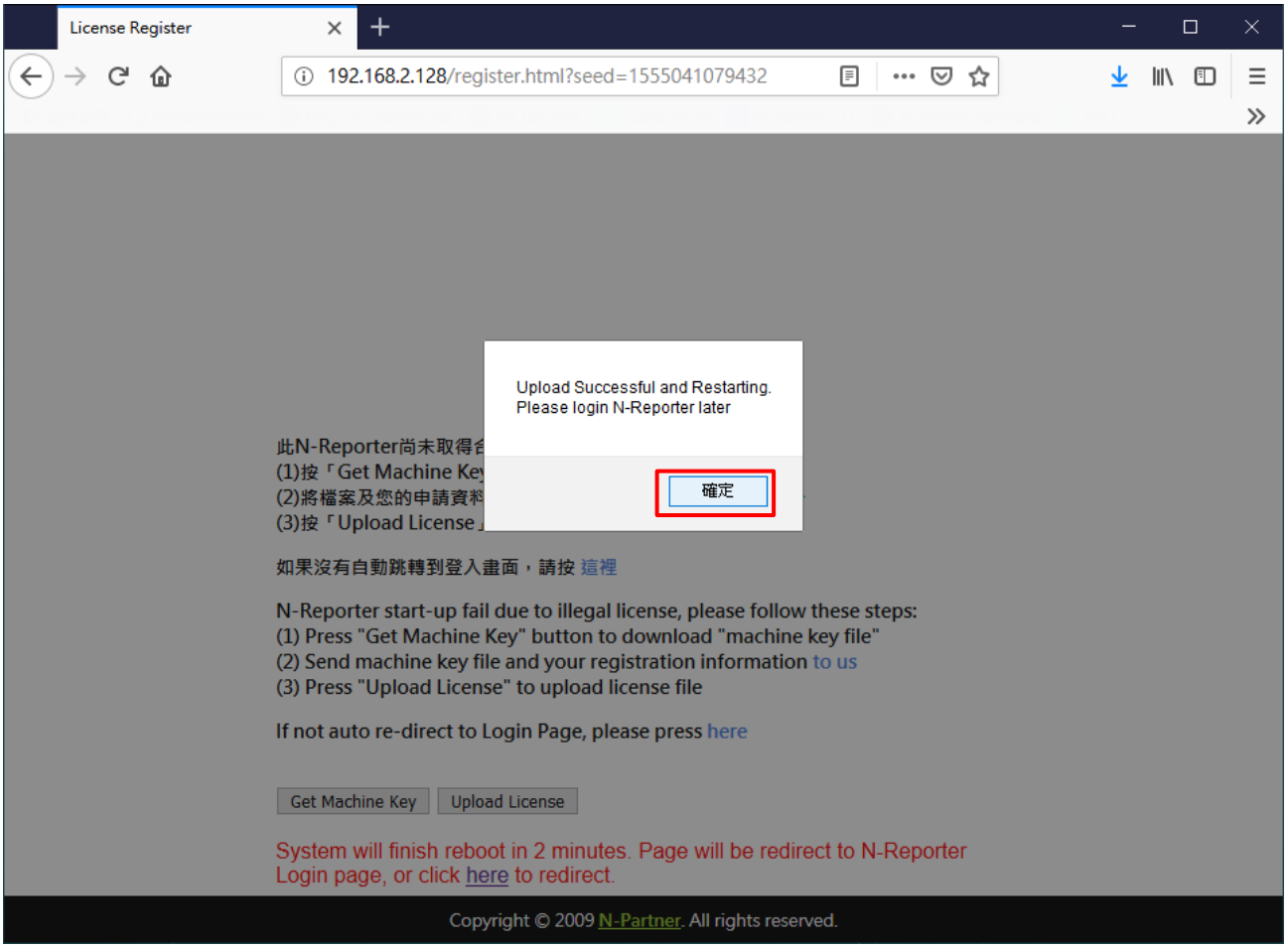
(2) Download machine.dat and send it to se@npartnertech.com .
Please write as the format below:

Email format
Subject: N-Reporter Demo License Application
Contents:
Organization:
Applicant:
Email:
Contact number:
Service dealer or SI firm: (Not necessary)
Note:

(3) After getting license.np, please go to https://<*N-Reporter IP*> again and click “Upload License.”

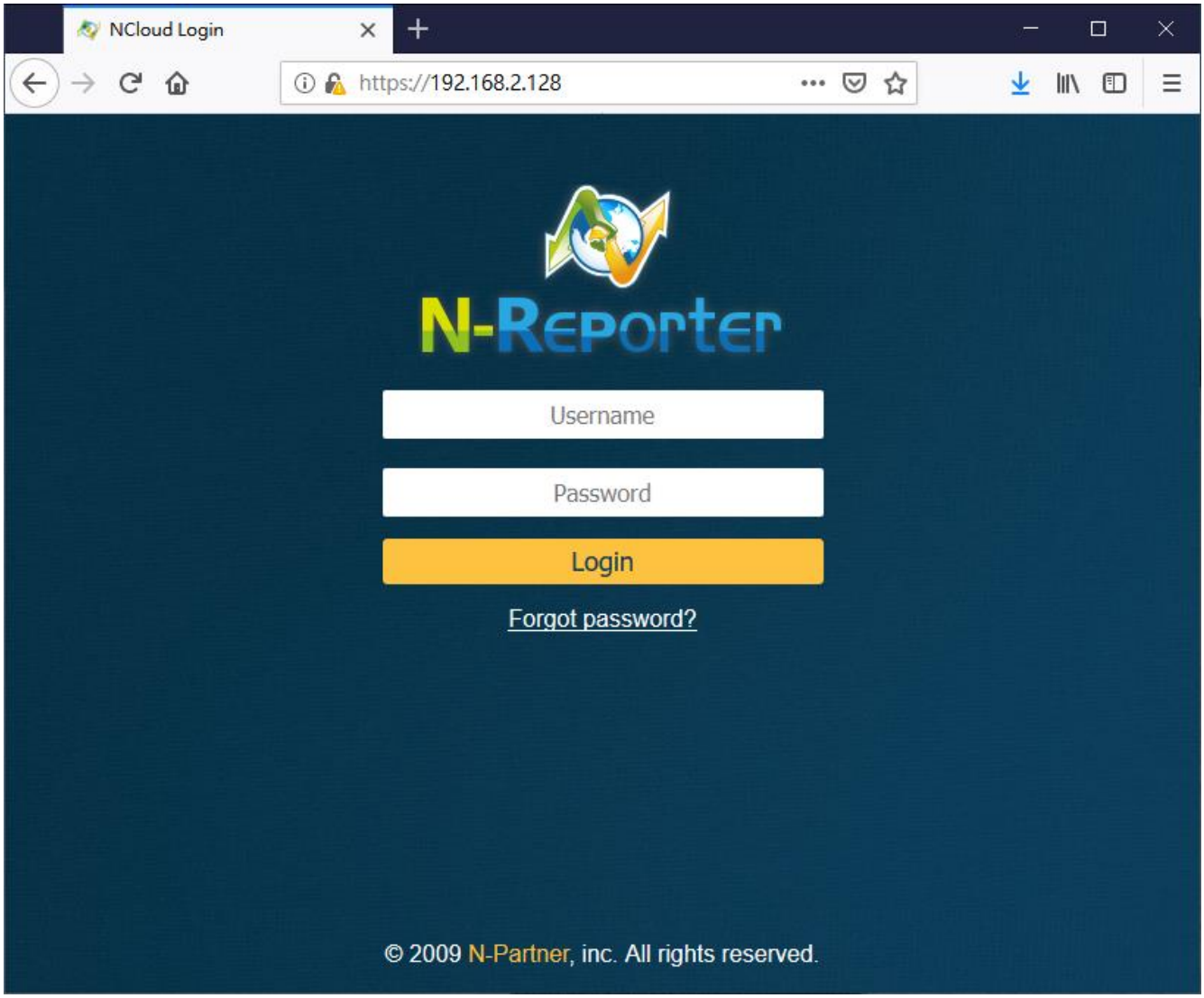
Click “Browse…” to select the license.np and click “Upload” to upload license file.

(4) The system will then reboot automatically.

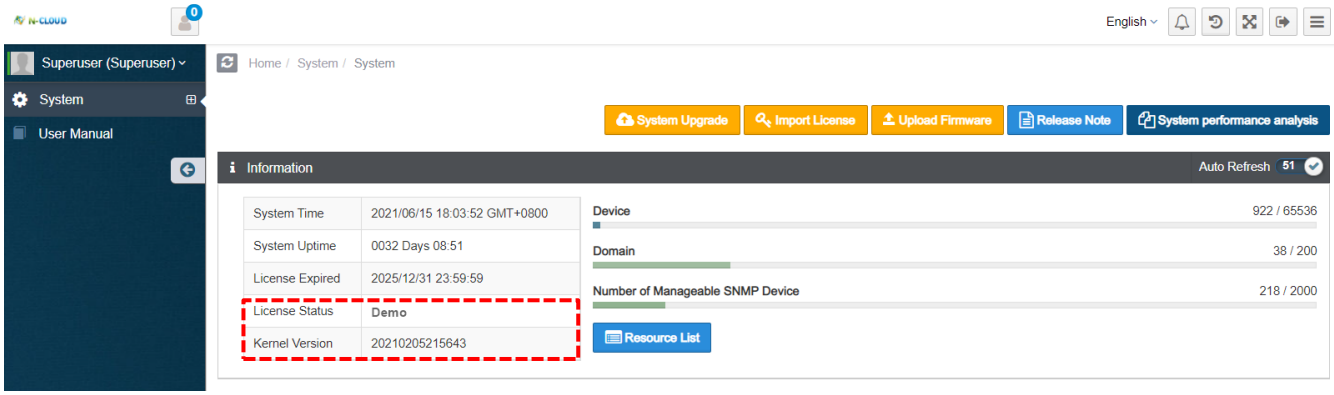


(5) After it reboots, connect to web login interface and log in N-Reporter backend.

The default front end account/password is admin/admin; the default backend account/password is superuser/admin.



(6) Check the current license status.

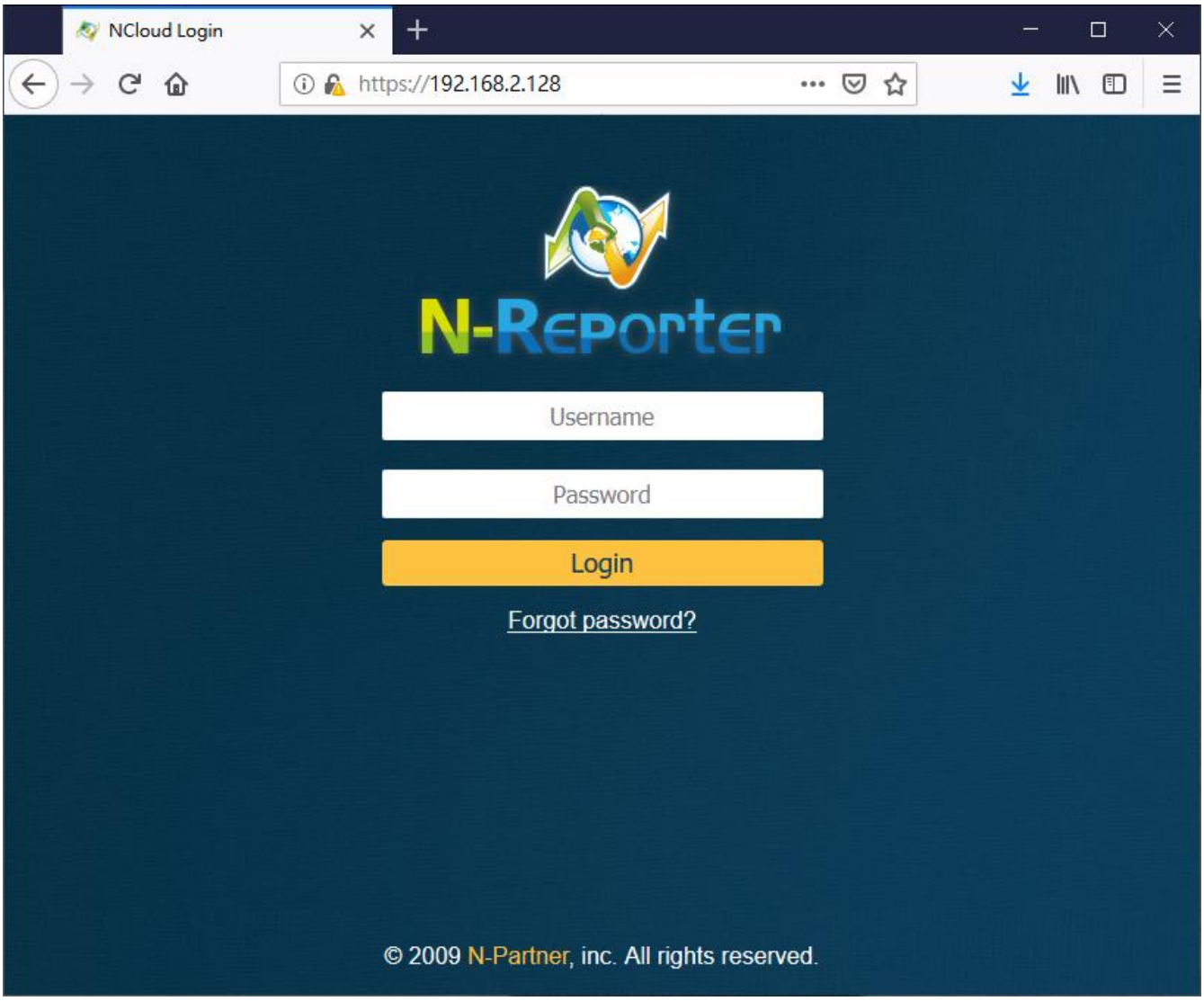


4.2 Firmware Upgrade

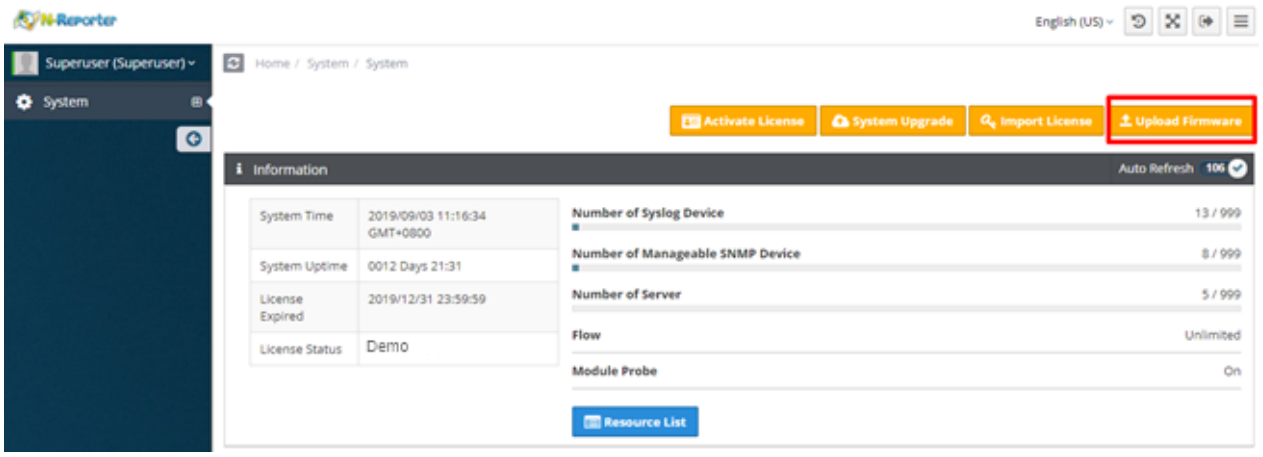
4.2.1 WEB

(1) Open a browser and go to https://<*N-Reporter IP*>. Log in N-Reporter backend.

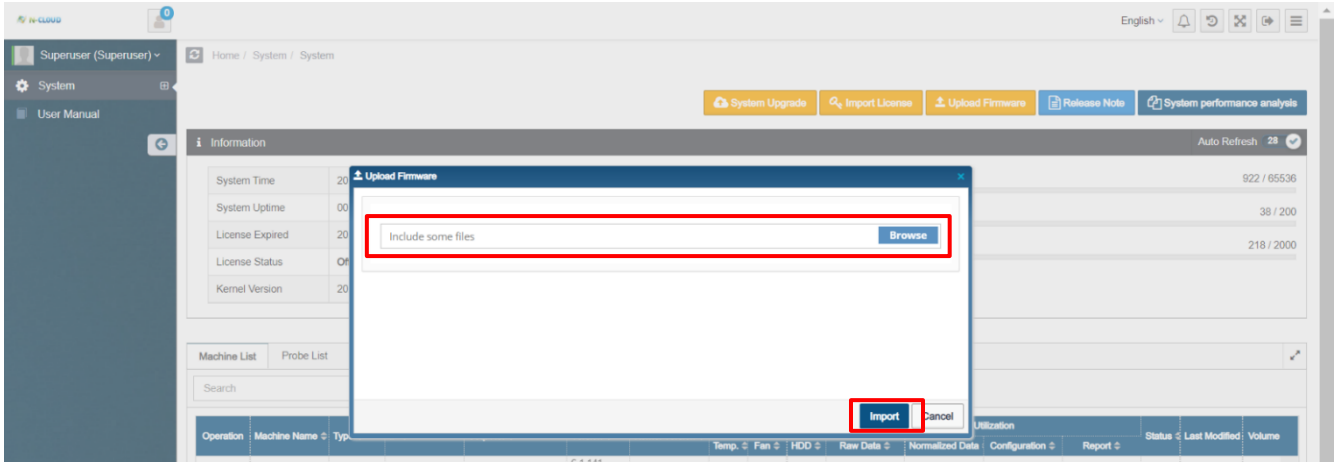
The default front end account/password is admin/admin; the default backend account/password is superuser/admin.



(2) Click “Upload Firmware” to upload the latest firmware.

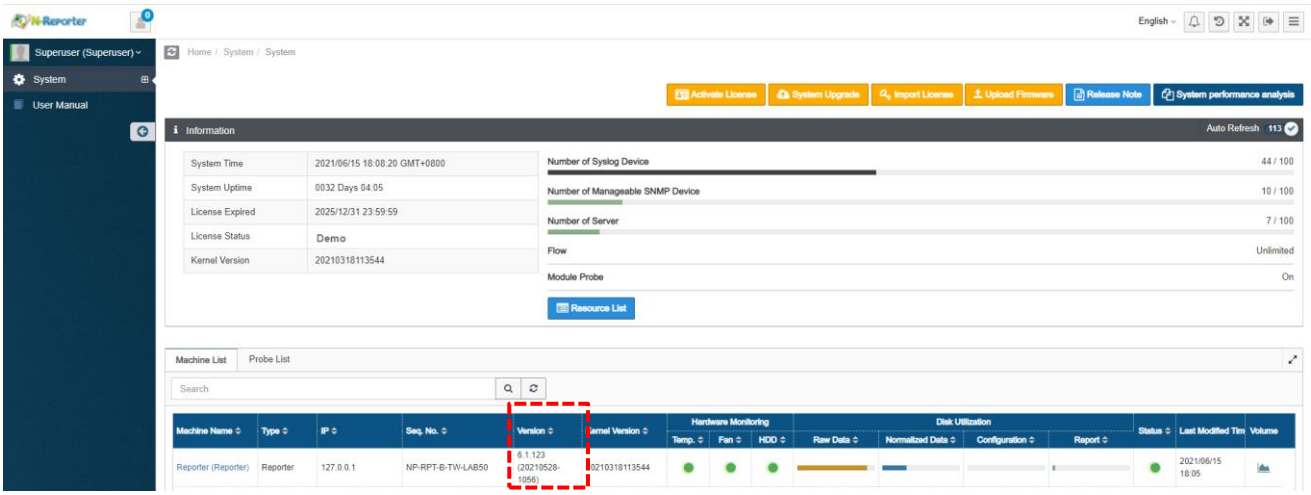


(3) Click “Browse,” select the firmware image and click “Import.”



(4) An “Image upload” window will pop up, and the system will reboot.

(5) Check the firmware version.



4.2.2 CLI

Connect to N-Reporter CLI with SSH tools, like Xshell or SecureCRT. Enter N-Reporter IP address and enter CLI account/password. The dafault account/password is npartner/npartner.

SSH Client without ZMODEM sending function, such as Putty, is not supported.

(1) View the current version.

```
Reporter# show version
```

```
Reporter# show version
Software version : 6.1.067 (20200730-1527)
NP Kernel version : 20200623190103
Serial number :
```

(2) Upgrade system image.

```
Reporter# system image upgrade
```

```
Reporter# system image upgrade
```

(3) Confirm system image upgrade. Enter “y.”

```
Current Version is [ncloud-6.1.067]. Do upgrade system image ? [n]/y y
```

(4) Check whether the SSH Client can use ZMODEM to transfer file. If it can, enter “y.”

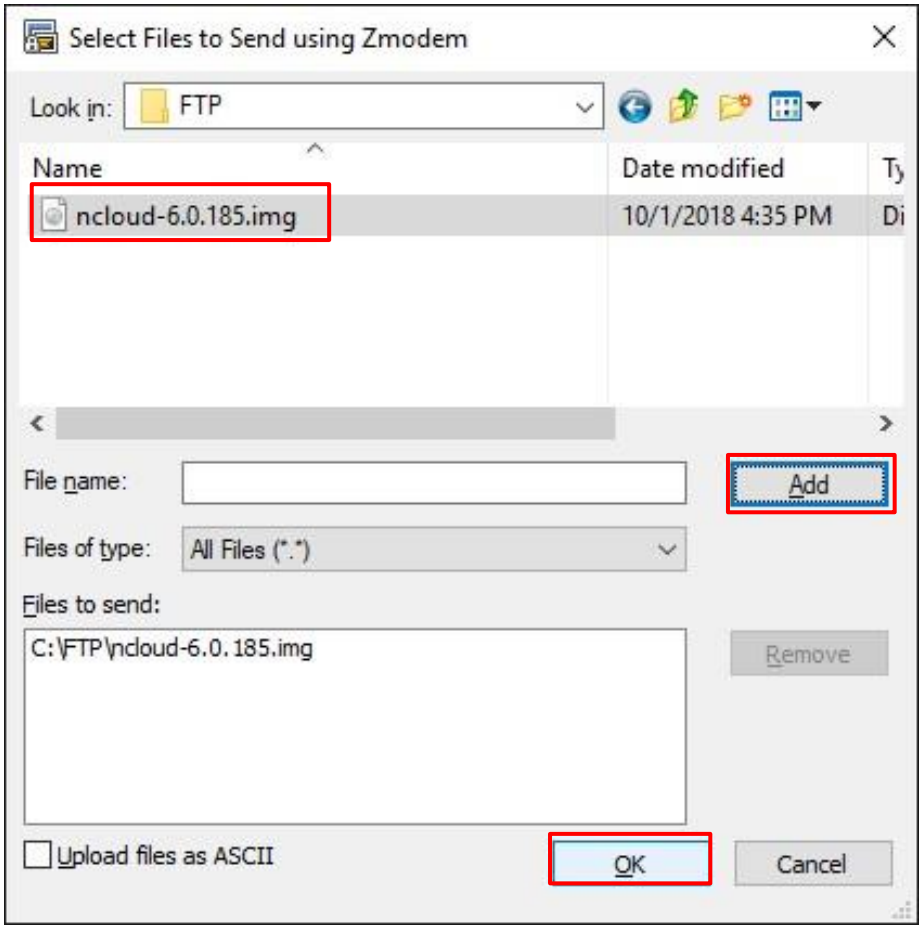
```
The transmission of image will use "ZMODEM" to transfer file. If you are using 'PUTTY' without "ZMODEM" support. Please press 'q' to quit.
Going to receive system image via zmodem. Please press y when ready. any key to abort. q to quit y
```

(5) If users use Xshell, enter “y.” Here, the client is SecureCRT, so enter “n.”

```
Do you using [XShell] as the termnal ? [y/N]n
```

If users use Xshell, please do enter “y” to transfer file.

(6) Select the firmware image, click “Add,” and click “OK.”



(7) The transferring message will show. If the image is uploaded, “Verifying upload image ... OK” will show.

```
If the terminal stop responding after transmission completed, Please press [Enter] 3 times for proceed the post process.

rz waiting to receive.
Starting zmodem transfer.  Press Ctrl+C to cancel.
Transferring ncloud-6.1.068.img...
  100%   40269 KB    3097 KB/sec    00:00:13       0 Errors


Verifying uploaded image ... OK
```

(8) View the current firmware version.

```
Reporter# show version
```

```
Reporter# show version
Software version : 6.1.068 (20200731-0939)
NP Kernel version : 20200623190103
Serial number :
```

(9) Check N-Reporter status.

```
Reporter# system check
```

4.3 Kernel Upgrade

Connect to N-Reporter CLI with SSH tools, like Xshell or SecureCRT. Enter N-Reporter IP address and enter CLI account/password. The dafault account/password is npartner/npartner.

SSH Client without ZMODEM sending function, such as Putty, is not supported.

(1) View the current kernel version.

```
Reporter# show version
```

```
Reporter# show version
Software version : 6.1.055 (20200326-1520)
NP Kernel version : 20190606154029
Serial number :
```

(2) Upgrade Kernel.

```
Reporter# system kernel upgrade
```

```
Reporter# system kernel upgrade
```

(3) Confirm Kernel upgrade. Enter “y.”

```
Current Version is [20190606154029]. Do upgrade kernel ? [n]/y y
```

(4) Check whether the SSH Client can use ZMODEM to transfer file. If it can, enter “y.”

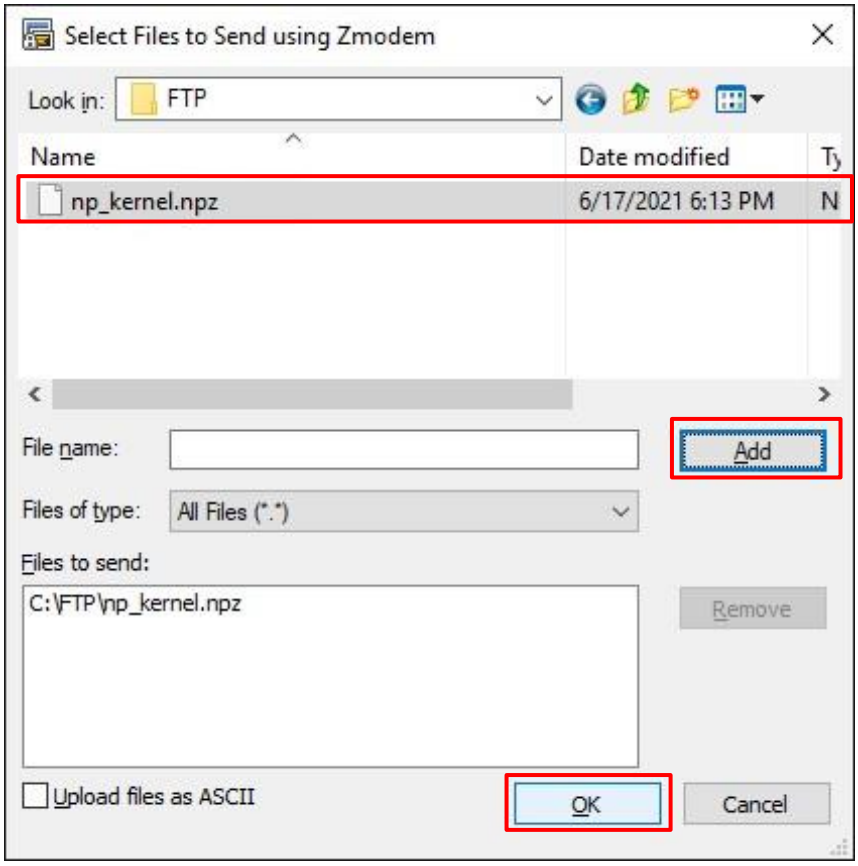
```
The transmission of kernel will use "ZMODEM" to transfer file. If you are using 'PUTTY' without "ZMODEM" support. Please press 'q' to quit.
Going to receive kernel via ZMODEM. Please press y when ready. any key to abort. q to quit y
```

(5) If users use Xshell, enter “y.” Here, the client is SecureCRT, so enter “n.”

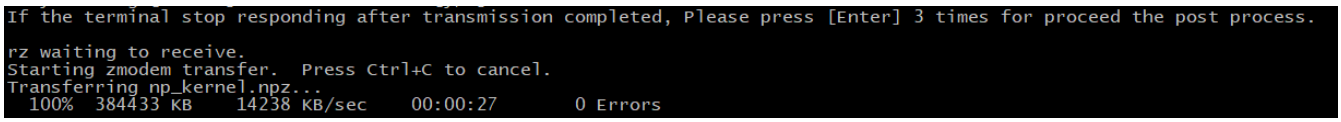
```
Do you using [XShell] as the termnal ? [y/N]n
```

If users use Xshell, please do enter “y” to transfer file.

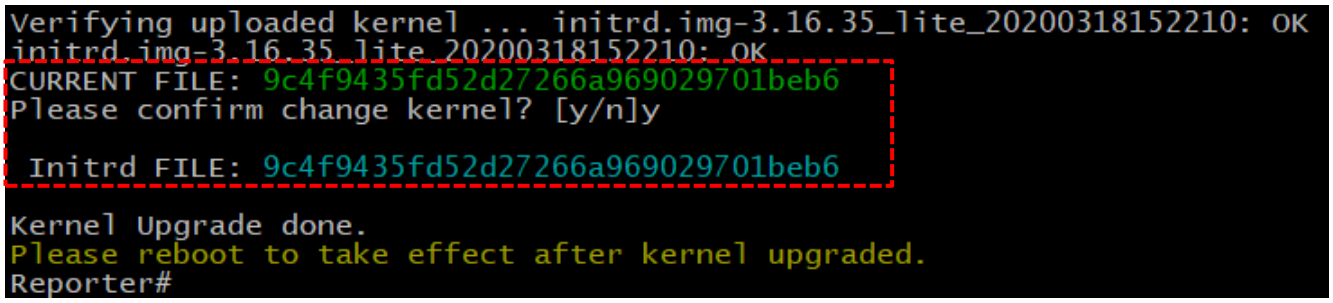
(6) Select file “np_Kernel.npz,” click “Add,” and click “OK.”



(7) The transferring message will show.



(8) Check if “CURRENT FILE” and “Initrd FILE” are the same. If they are, enter “y.” “Kernel Upgrade done” will show.



(9) Check N-Reporter status.

```
Reporter# system check
```

After executing system check on 6.1.081 or later versions, if a message as the following picture shows, please contact N-Partner TAC.

(10) Reboot the system.

```
Reporter# reboot
```

```
Reporter# reboot
System prepare to reboot. Please wait a sceond...........OK.
```

(11) After rebooting, view the current firmware version.

```
Reporter# show version
```

```
Reporter# show version
Software version : 6.1.055 (20200326-1520)
NP Kernel version : 20200318152210
Serial number : NP-RPT-V-TW-AORNUKIZ
```

5.Activate N-Probe

5.1 N-Probe

Connect to N-Reporter/N-Cloud CLI with SSH tools, like Xshell, SecureCRT or Putty, and log in. The dafault account/password is npartner/npartner.

(1) View configuration file.

```
Reporter# show configure
```

```
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.1.184 255.255.248.0 gw 192.168.2.253
ip dns1 168.95.1.1
ntpdate tick.stdtime.gov.tw
######## End #######
Reporter#
```

(2) Enter cofiguring mode.

```
Reporter# configure terminal
```

(3) Set N-Probe “on.”

```
Reporter(config)# probe on
```

(4) Export Flow to the receiving IP and port of N-Reporter.

```
Reporter(config)# flow-export 192.168.2.77 9001
```

Please enter N-Reporter IP address as the red part above.

(5) Set Flow sampling rate; here, the system gets one sample for each packet.

```
Reporter(config)# flow-sampling 1
```

(6) Activate packet sniffering of IPv6 Flow traffic.

```
Reporter(config)# flow-ipv6 on
```

(7) Set the number of N-Probe sniffering interface; here, it’s 1.

```
Reporter(config)# probe interface 1
```

(8) Exit configuring mode.

```
Reporter(config)# exit
```

```
Reporter# configure terminal
Reporter(config)# probe on
Probe is ON
Reporter(config)# flow-export 192.168.2.77 9001
Reporter(config)# flow-sampling 1
Reporter(config)# flow-ipv6 on
Reporter(config)# probe interface 1
Reporter(config)# exit
```

(9) View the current configuration.

```
Reporter# show configure
```

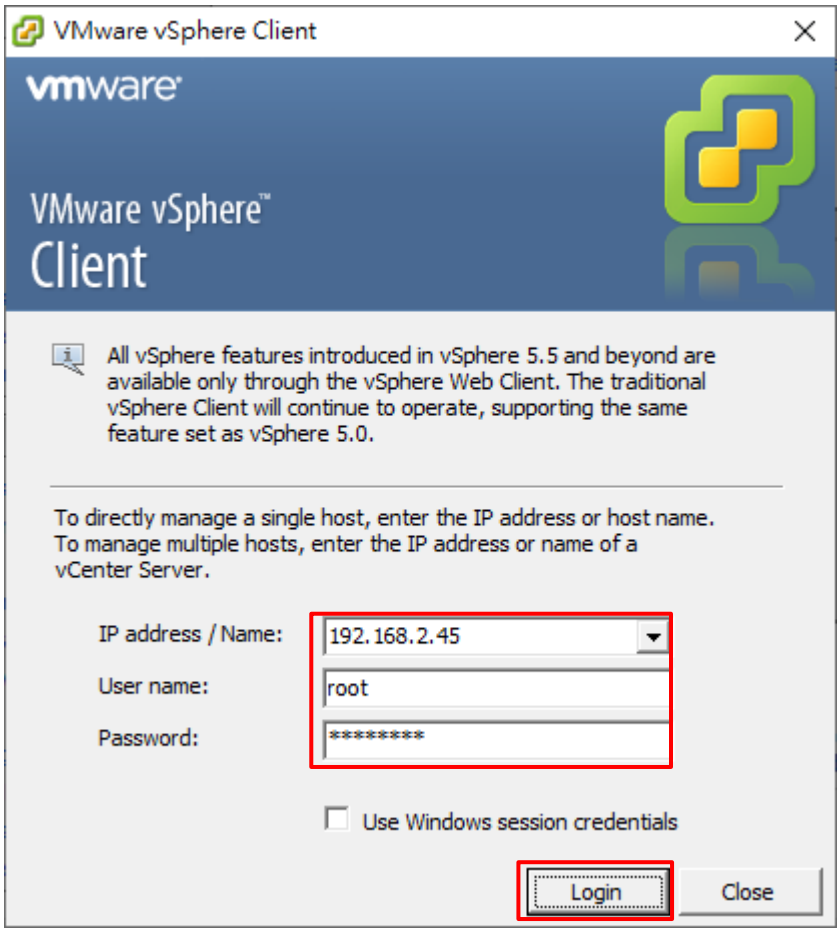
```
Reporter# show configure
######## Current configuration ########
hostname Reporter
https-only on
interface eth0 192.168.1.184 255.255.248.0 gw 192.168.2.253
ip dns1 168.95.1.1
ntpdate tick.stdtime.gov.tw
flow-export 192.168.2.77 9001
flow-sampling 1
probe interface 1
probe on
flow-ipv6 on
######## End #######
Reporter#
```

5.2 VMware ESXi Network

5.2.1 vSphere Client

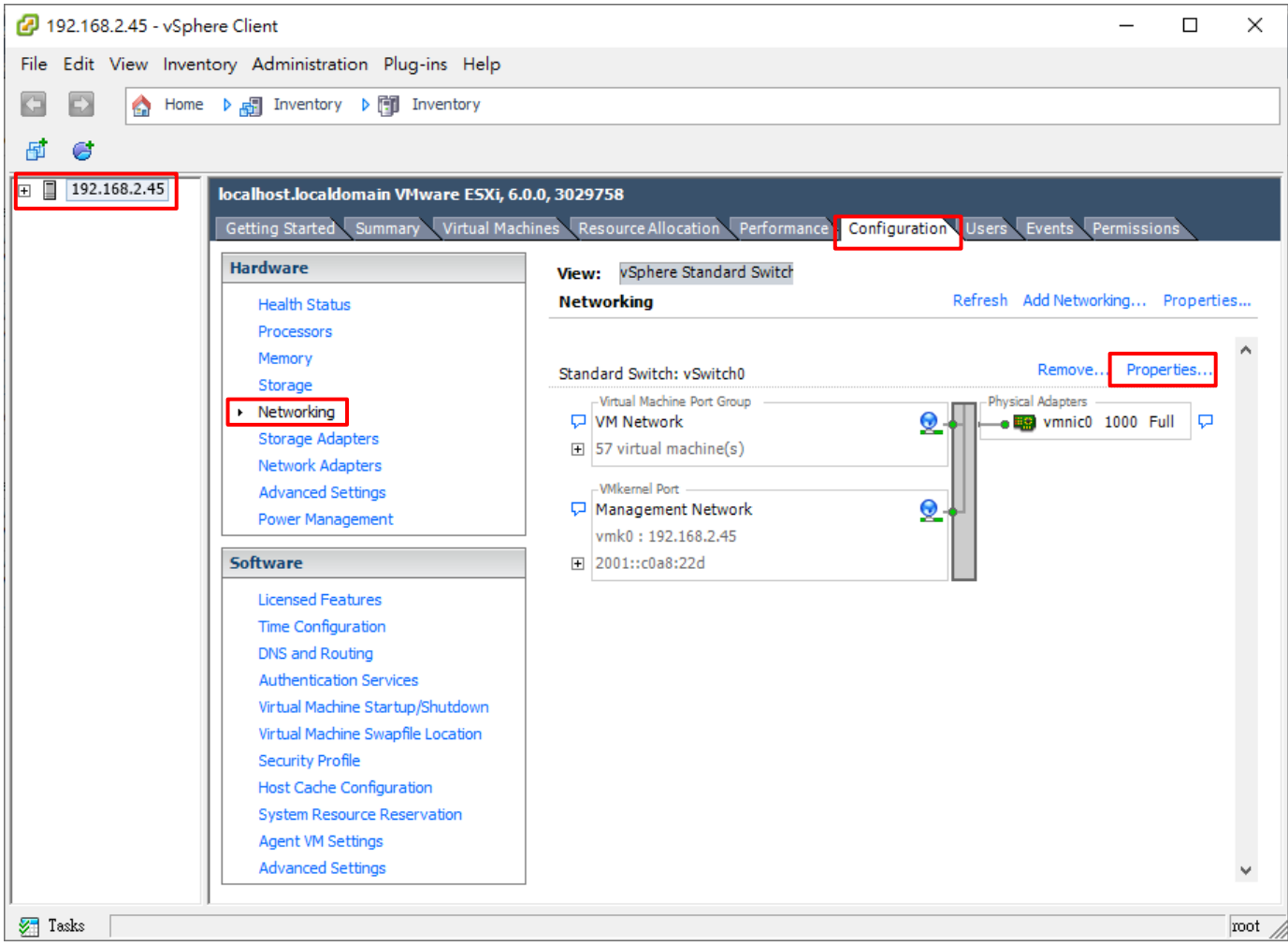
(1) Log in VMware ESXi.

Open “VMware vSphere Client,” enter VMware IP address, user name and password, and click “Login.”



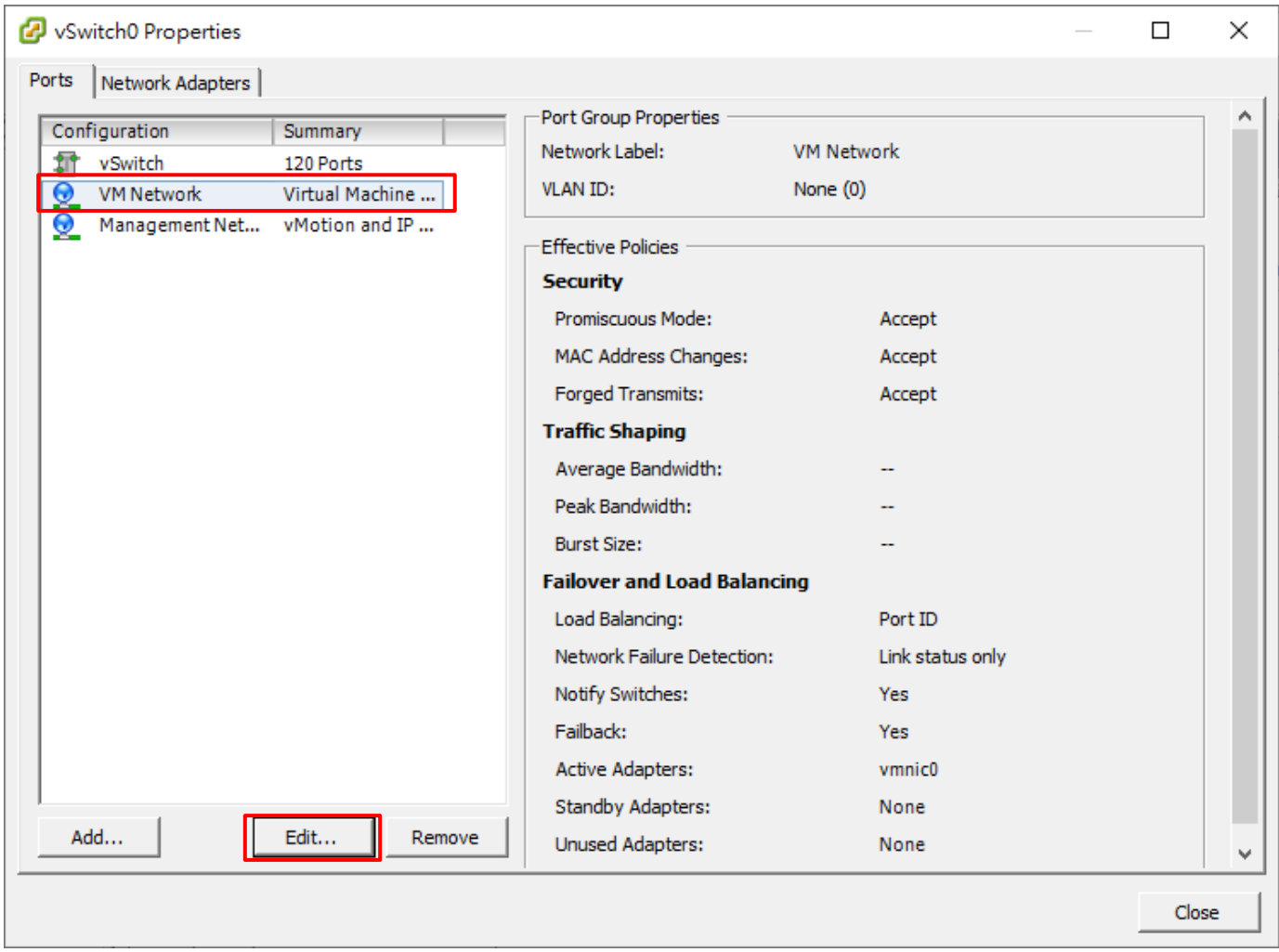
(2) Click the virtual machine.

Click “VMware ESXi host,” “Configuration,” “Networking,” and “vSwitch: ‘Properties’.”



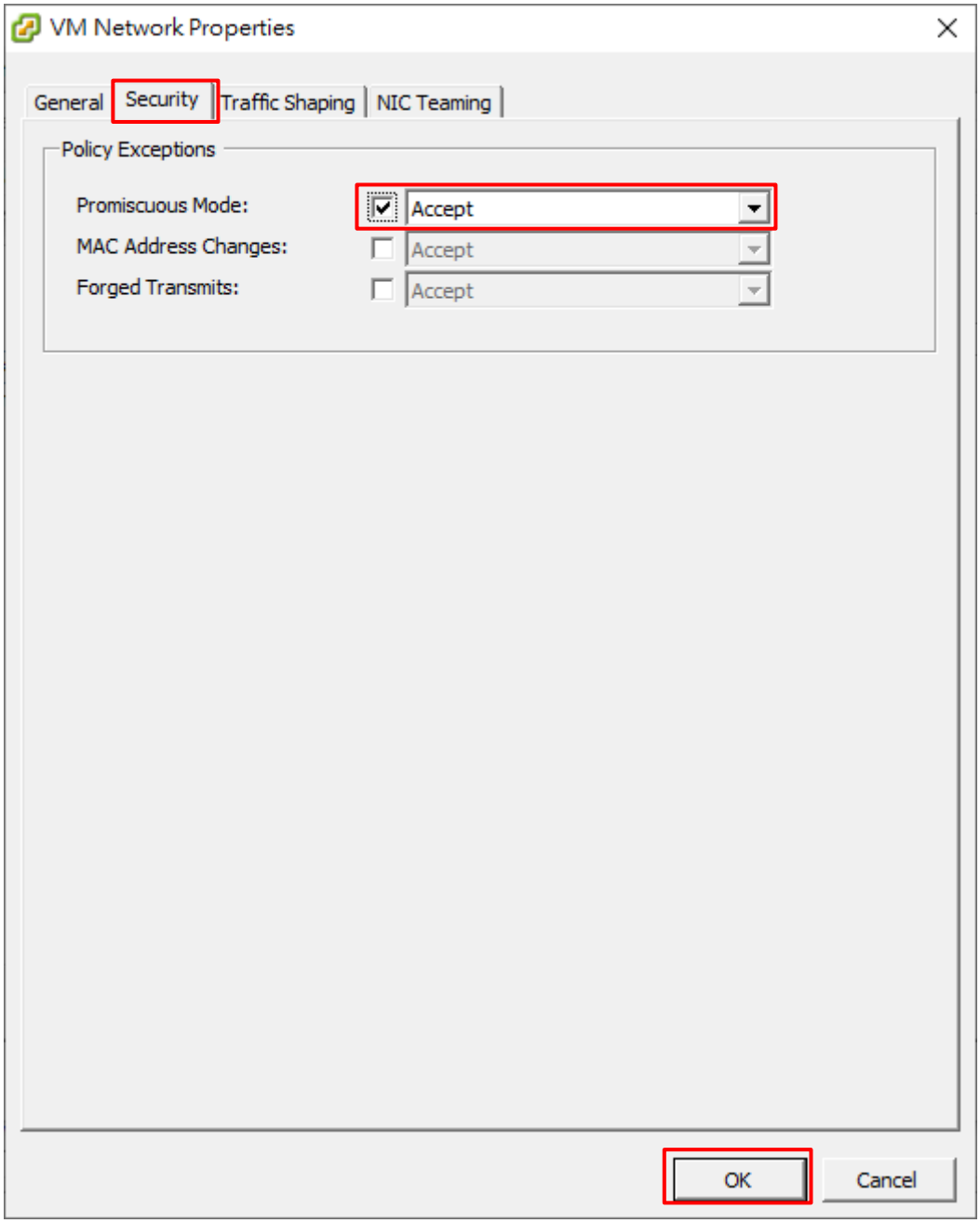
(3) Edit network settings.

Select “VM Network” and click “Edit.”



(4) Activate Promiscuous Mode.

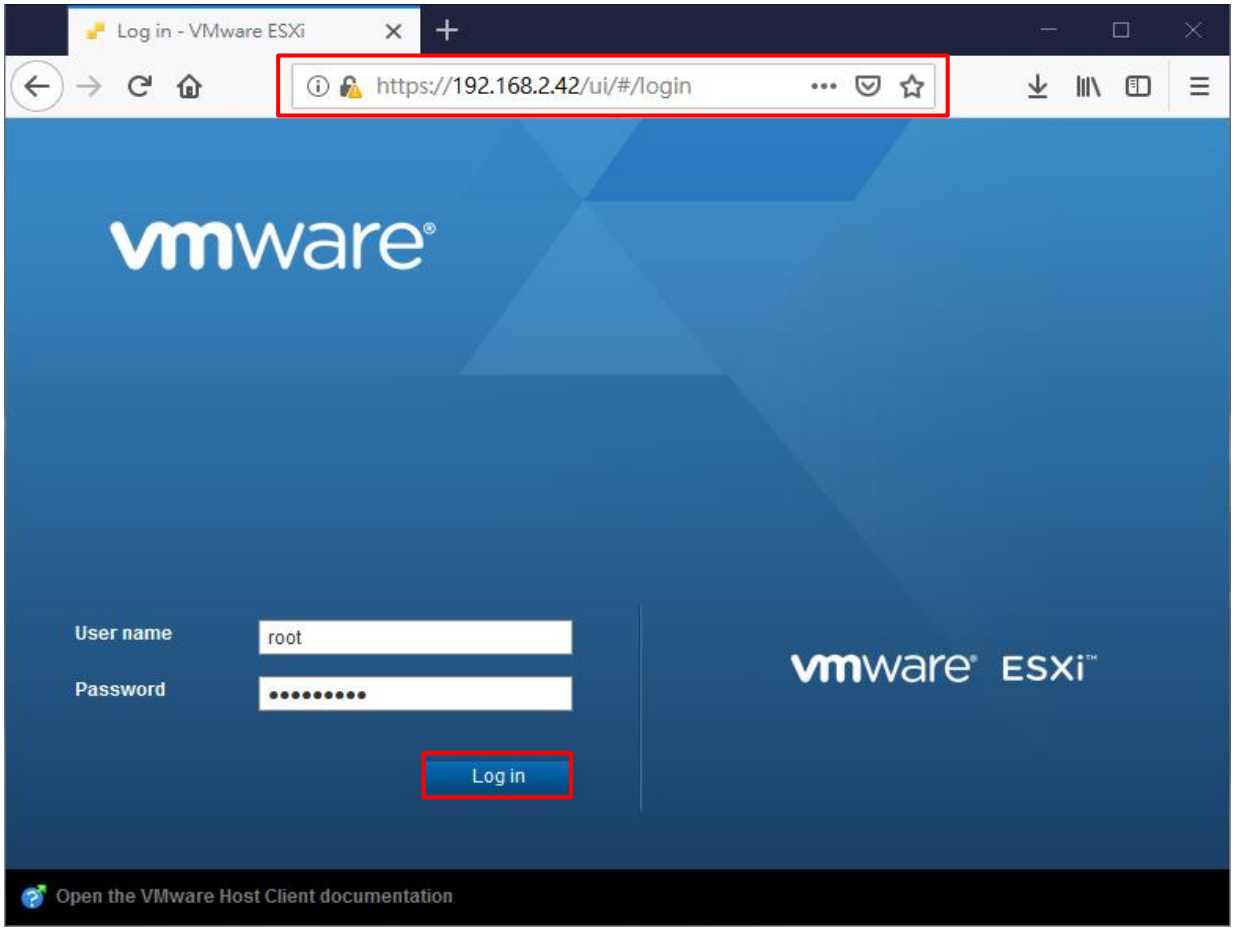
Go to “Security,” select “Promiscuous Mode:” and select “Accept.” Click “OK.”



5.2.2 vSphere Web Client

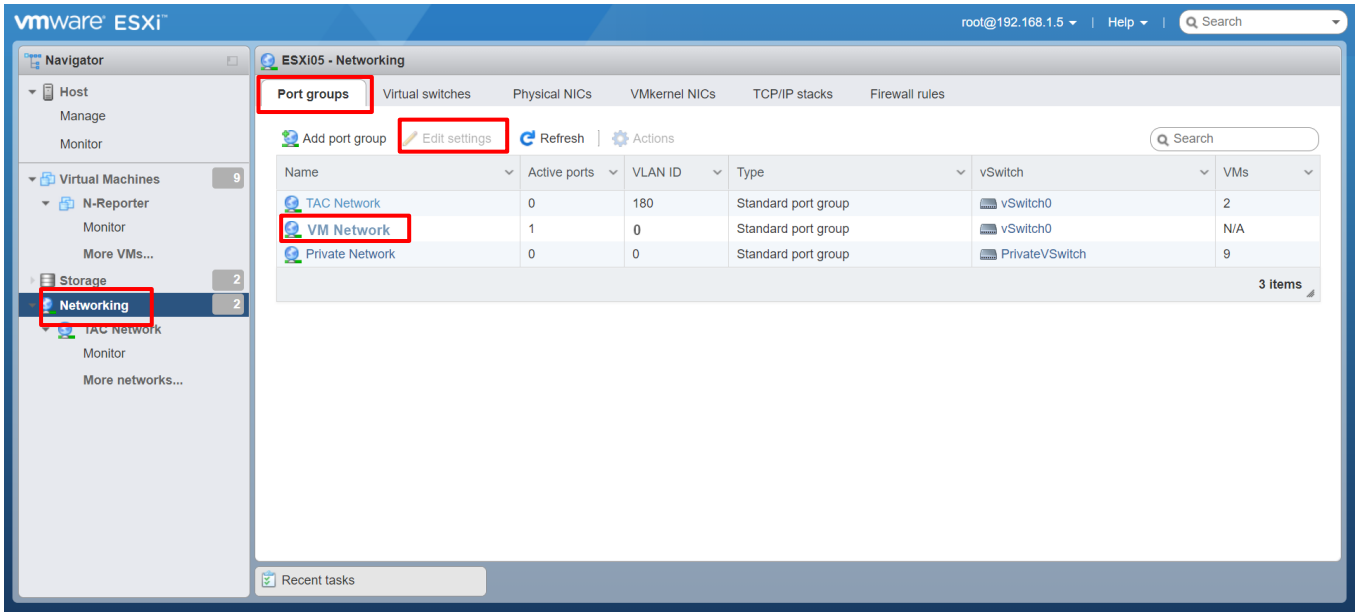
(1) Log in VMware ESXi.

Open a browser, go to https://<*VMware IP*>, and enter account/password. Click “Log in.”



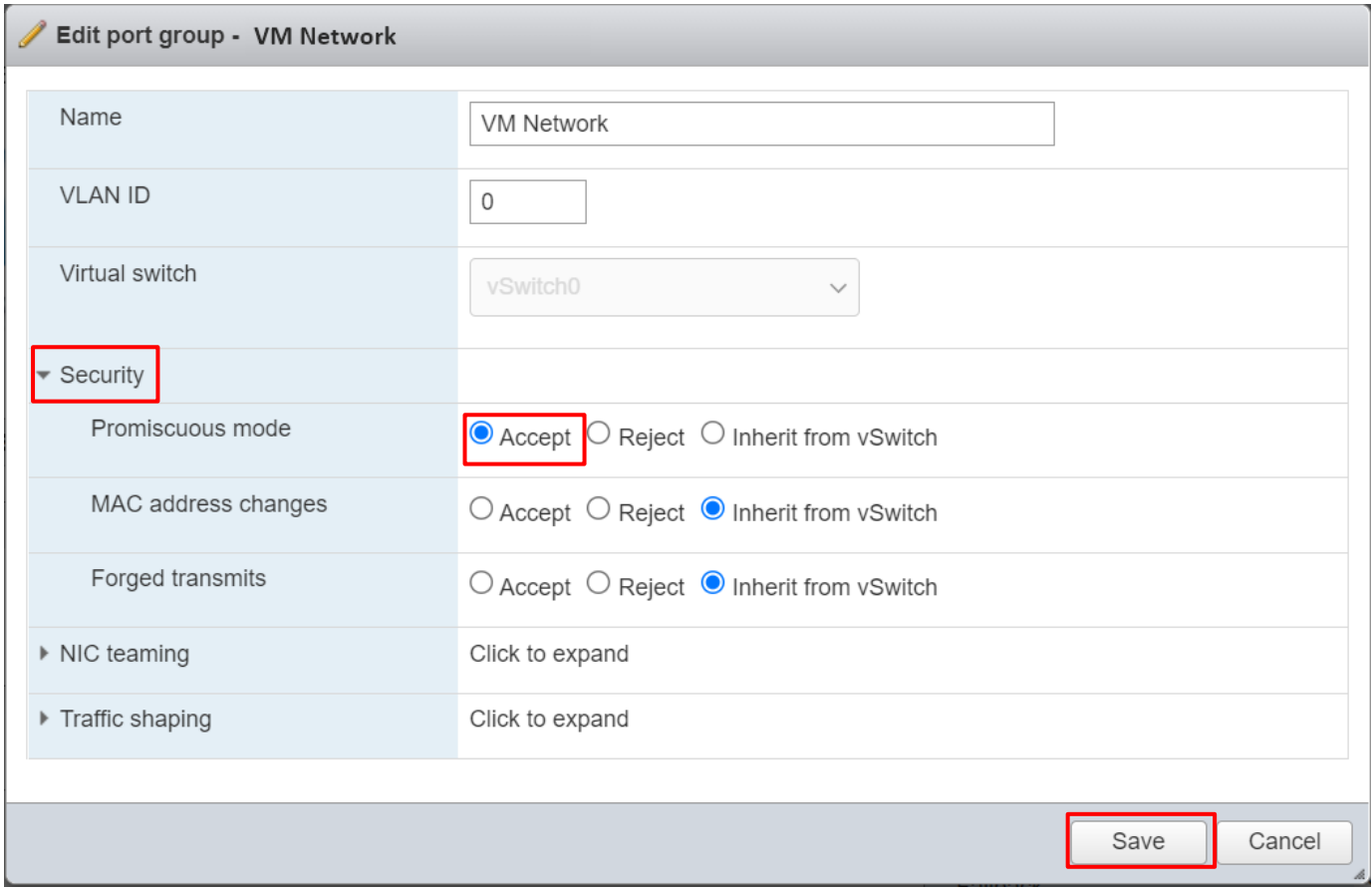
(2) Edit network settings.

Click “Networking,” “Port groups,” “VM Network” and “Edit settings.”



(3) Activate Promiscuous Mode.

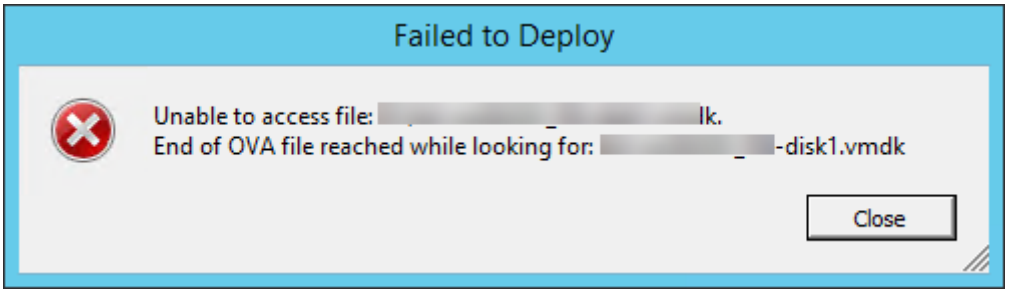
Unfold “Security,” select “Promiscuous Mode” and select “Accept.” Click “Save.”



6. Troubleshooting

6.1 End of OVA File Reached While Looking

When deploying OVA on ESXi, if there is an error message as follows, users can apply methods in this chapter to deploy OVA.



6.1.1 Use ESXi Web Client to Deploy OVA

Please refer to chapter 3.2 vSphere Web Client.

6.1.2 Use VMware OVF Tool to Deploy OVA

(1) Go to https://code.vmware.com/web/tool/4.3.0/ovf.

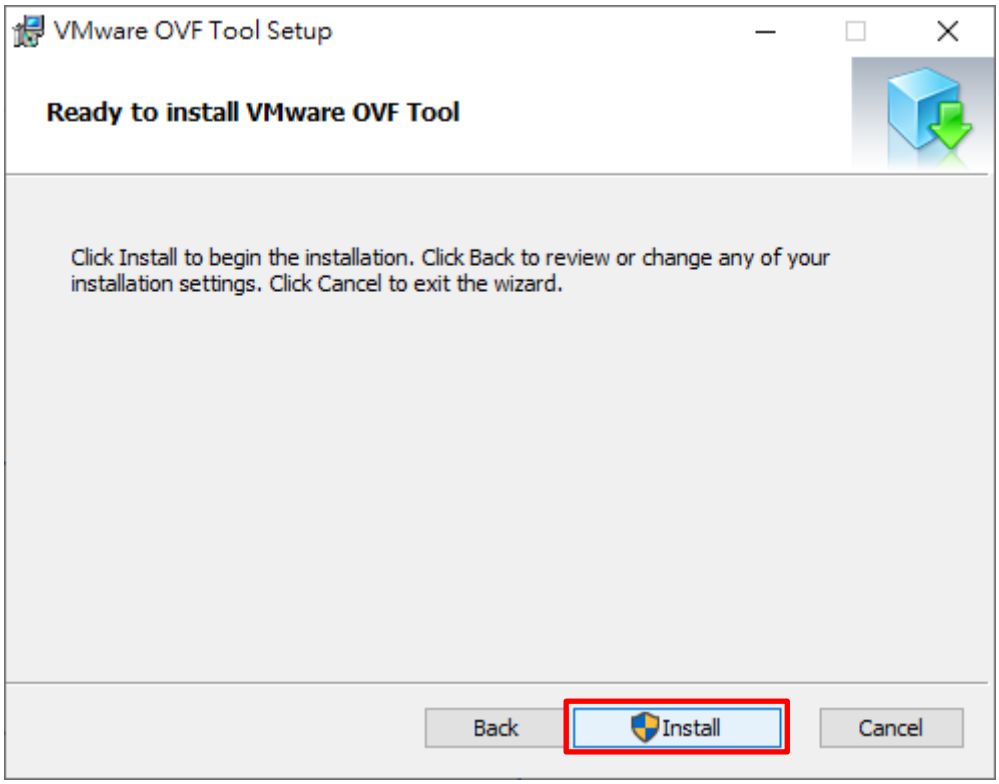
Download “VMware Open Virtualization Format Tool (ovftool)”; here, it’s ovftool - 4.3.0 Patch 1.

1 Downloads

Name	Version	Size	
Open Virtualization Format Tool (ovftool)	4.3.0		Download
Open Virtualization Format Tool (ovftool)	4.3.0 U1		Download
Open Virtualization Format Tool (ovftool)	4.3.0 U2		Download
Open Virtualization Format Tool (ovftool)	4.3.0 U3		Download
Open Virtualization Format Tool (ovftool) - 4.3.0 Patch 1	4.3.0 P01		Download

(2) Install OVF Tool.

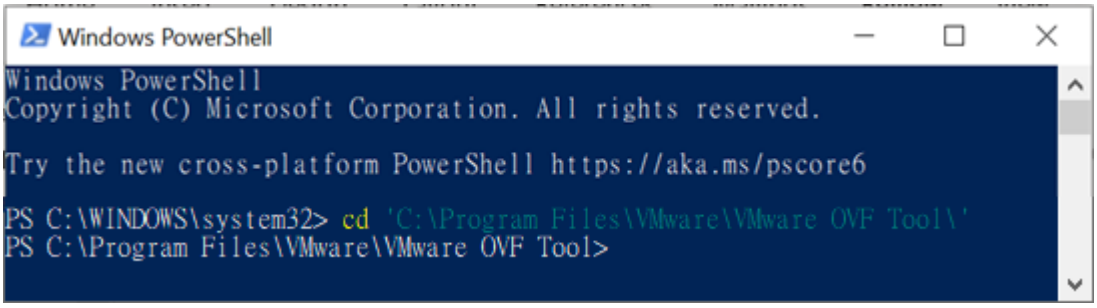
Click “VMware-ovftool-4.3.0-14746126-win.x86_64.msi” and follow the steps to install.



(3) Open “Windows PowerShell.”

(4) Go to VMware OVF Tool folder.

```
PS C:\> cd 'C:\Program Files\VMware\VMware OVF Tool\'
```



(5) Enter N-Reporter OVA commands with OVF Tool. Parameter: --name is the name of the VM, --diskMode is the disk format, and --datastore is the name of the datastore.

```
PS C:\> .\ovftool.exe --acceptAllEulas --noSSLVerify --name=N-Reporter --diskMode=thick --datastore=datastore1 –net  D:\N-Cloud6.0_Reporter_500G_v6.1.051_20191226.ova vi://root@192.168.2.46/
```

Enter VMware password

```
Username: root
Password: ********
```

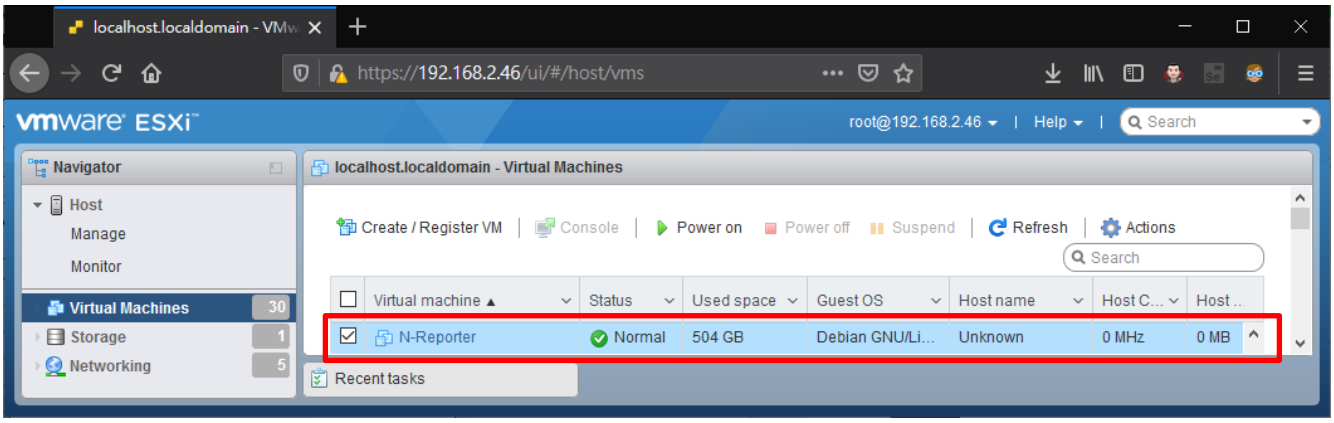
Enter N-Reporter OVA path and name as follows.

```
D:\N-Cloud6.0_Reporter_500G_v6.1.051_20191226.ova
```

Enter VMware account and IP address as follows.

```
vi://root@192.168.2.46/
```

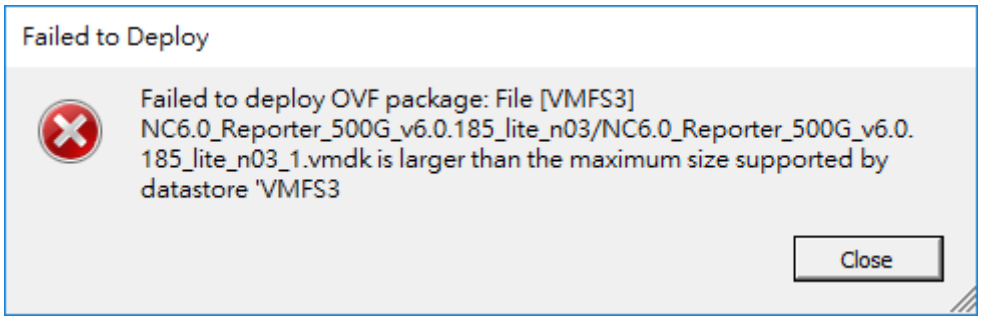
(6) Log in VMware ESXi, and there will be N-Reporter VM deployed with OVF Tool.



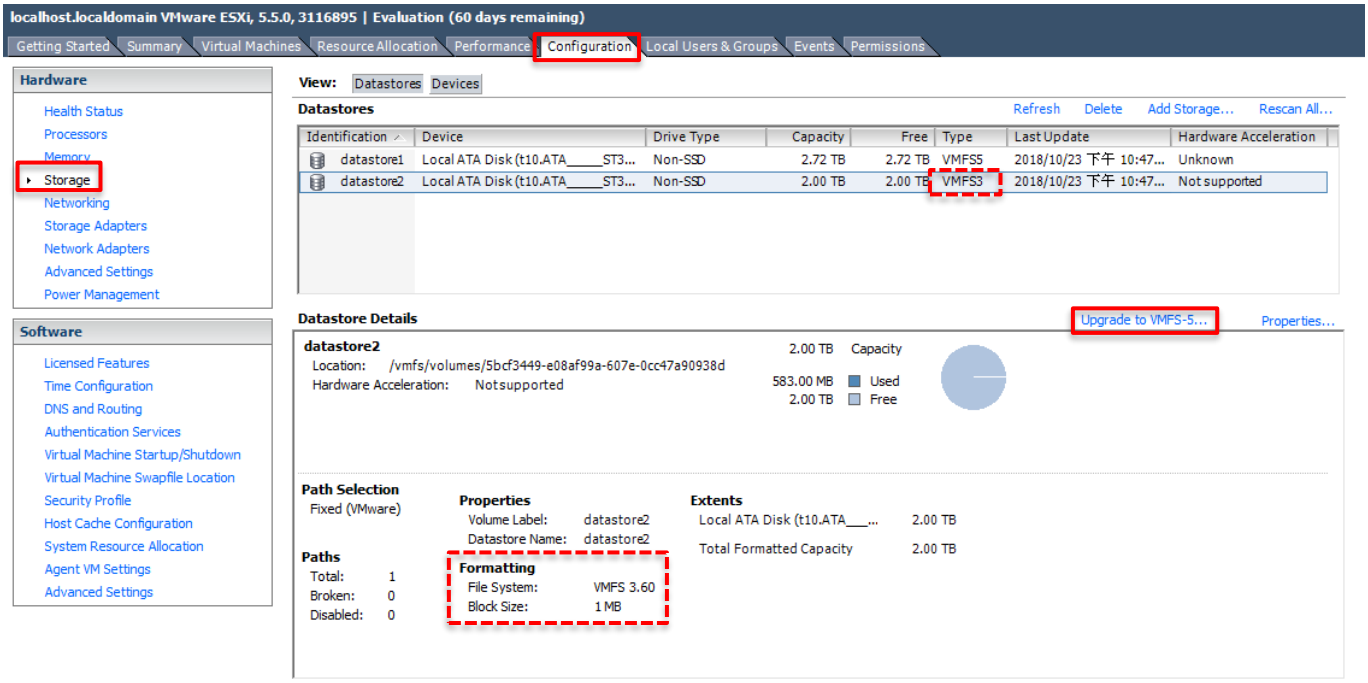
6.2 Larger than the Maximum Size Supported by Datastore

https://docs.vmware.com/en/VMware-vSphere/5.5/com.vmware.vsphere.storage.doc/GUID-D01AFDA9-B04D-4910-804B-0A1E73DA6BE4.html

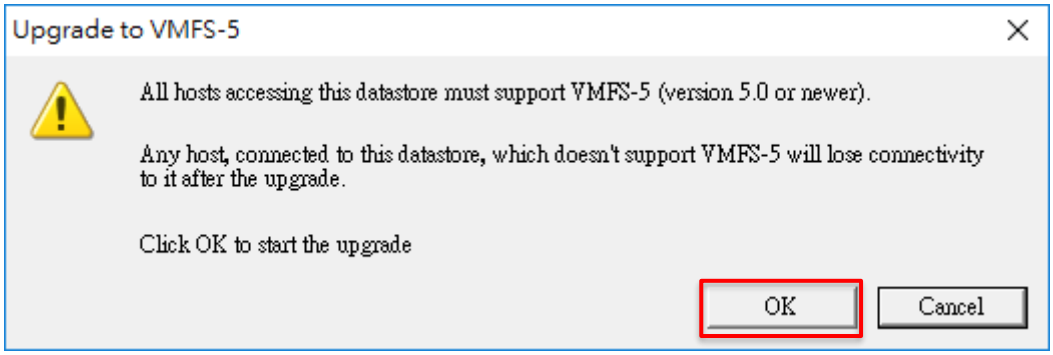
(1) The size exceeds the maximum amount of VMFS3.



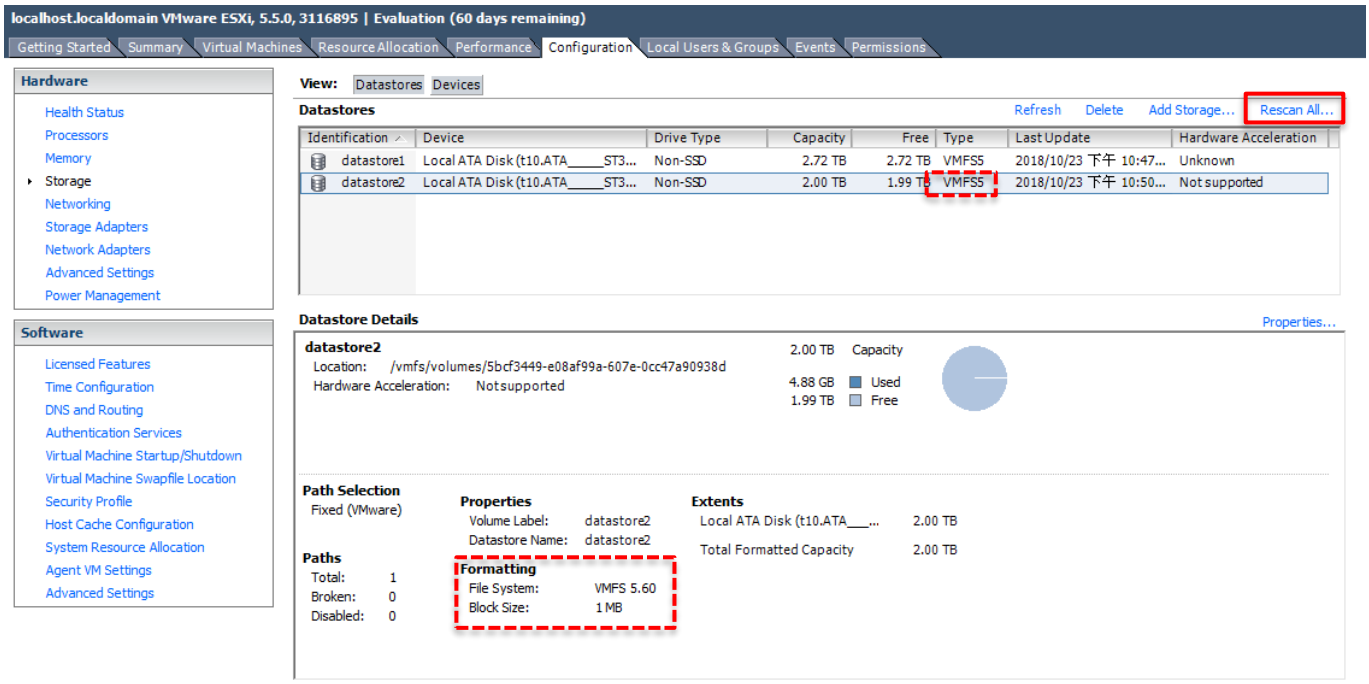
(2) Go to “Configuration” and click “Storage” and “Upgrade to VMFS-5….”



(3) Click “OK” to start upgrading.



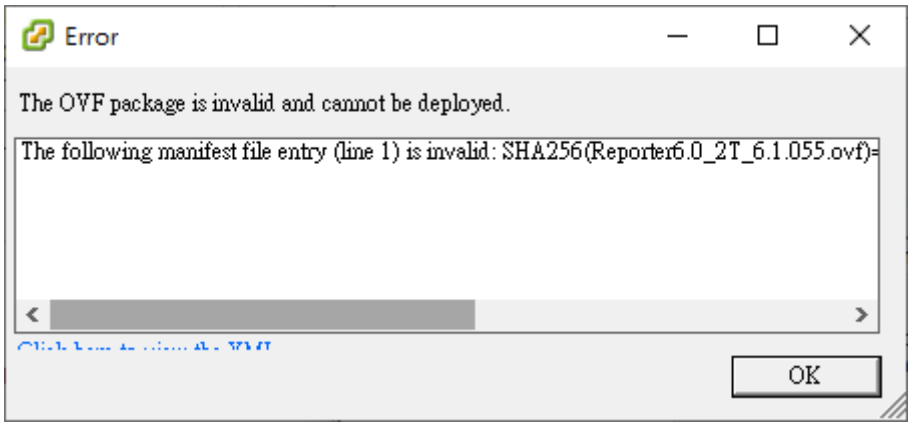
(4) Click “Rescan All” to check.



6.3 The OVF Package is Invalid and Cannot be Deployed

https://kb.vmware.com/s/article/2151537

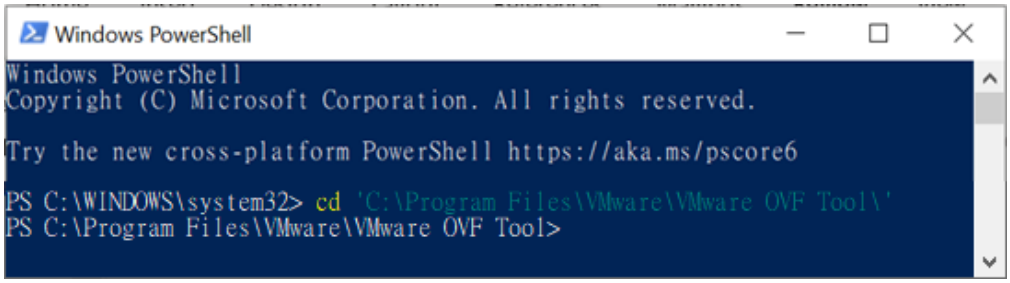
(1) vSphere Client doesn't support SHA256.



(2) Open "Windows PowerShell."

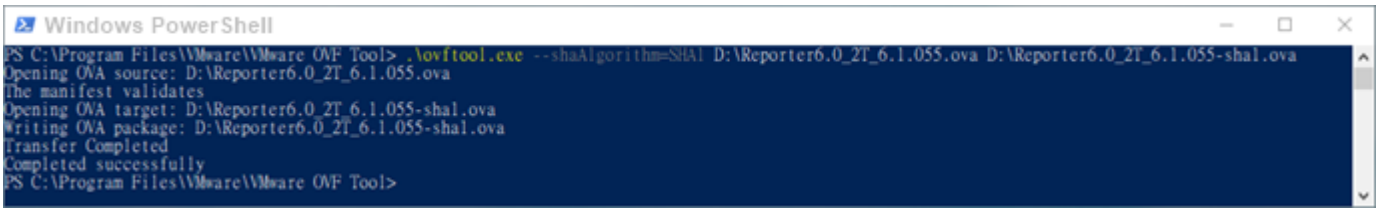
(3) Go to VMware OVF Tool folder.

```
PS C:\> cd 'C:\Program Files\VMware\VMware OVF Tool\'
```



(4) Set N-Reporter OVA from SHA256 to SHA1 with OVF Tool.

```
PS C:\> .\ovftool.exe --shaAlgorithm=SHA1 D:\Reporter6.0_2T_6.1.055.ova
D:\Reporter6.0_2T_6.1.055-sha1.ova
```



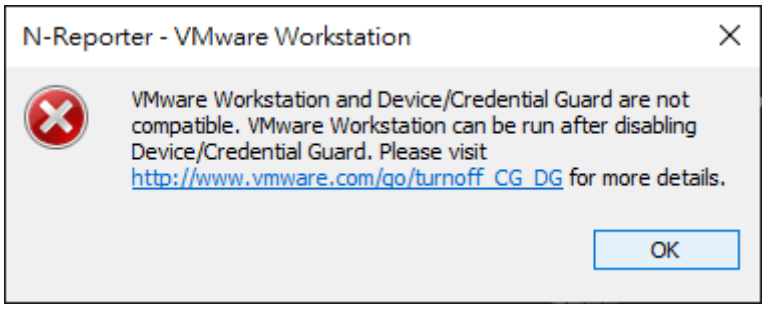
Enter N-Reporter OVA path and N-Reporter OVA destination path as follows.

```
D:\Reporter6.0_2T_6.1.055.ova D:\Reporter6.0_2T_6.1.055-sha1.ova
```

6.4 Workstation Device/Credential Guard not Compatible

https://kb.vmware.com/s/article/2146361

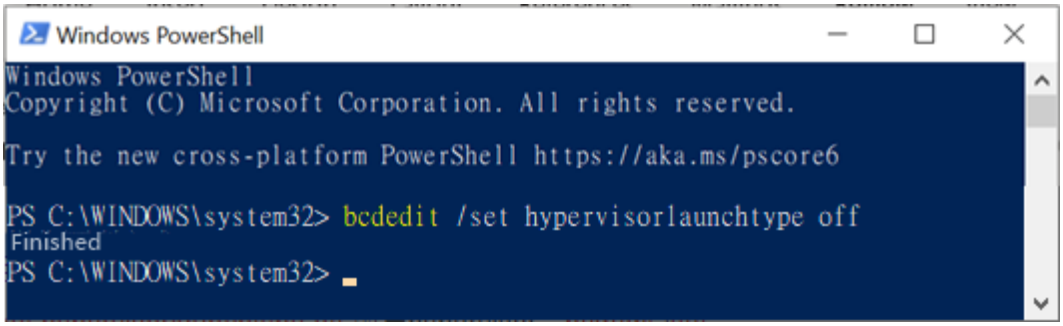
(1) It happens because Device Guard or Credential Guard is not compatible with VMware Workstation.



(2) Open “Windows PowerShell.”

(3) Set Hyper-V off.

```
PS C:\> bcdedit /set hypervisorlaunchtype off
```

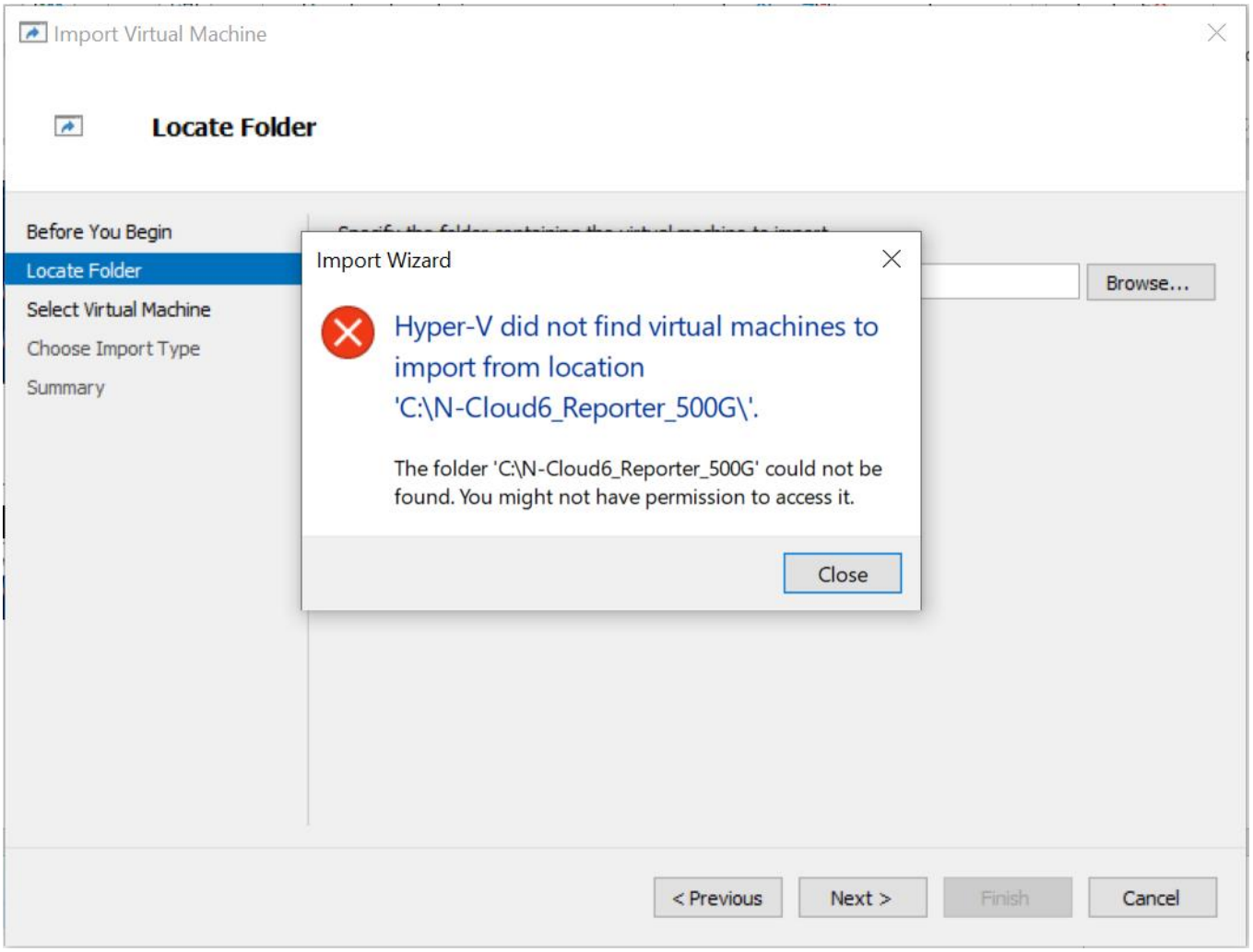


(4) Reboot.

```
PS C:\> Restart-Computer
```

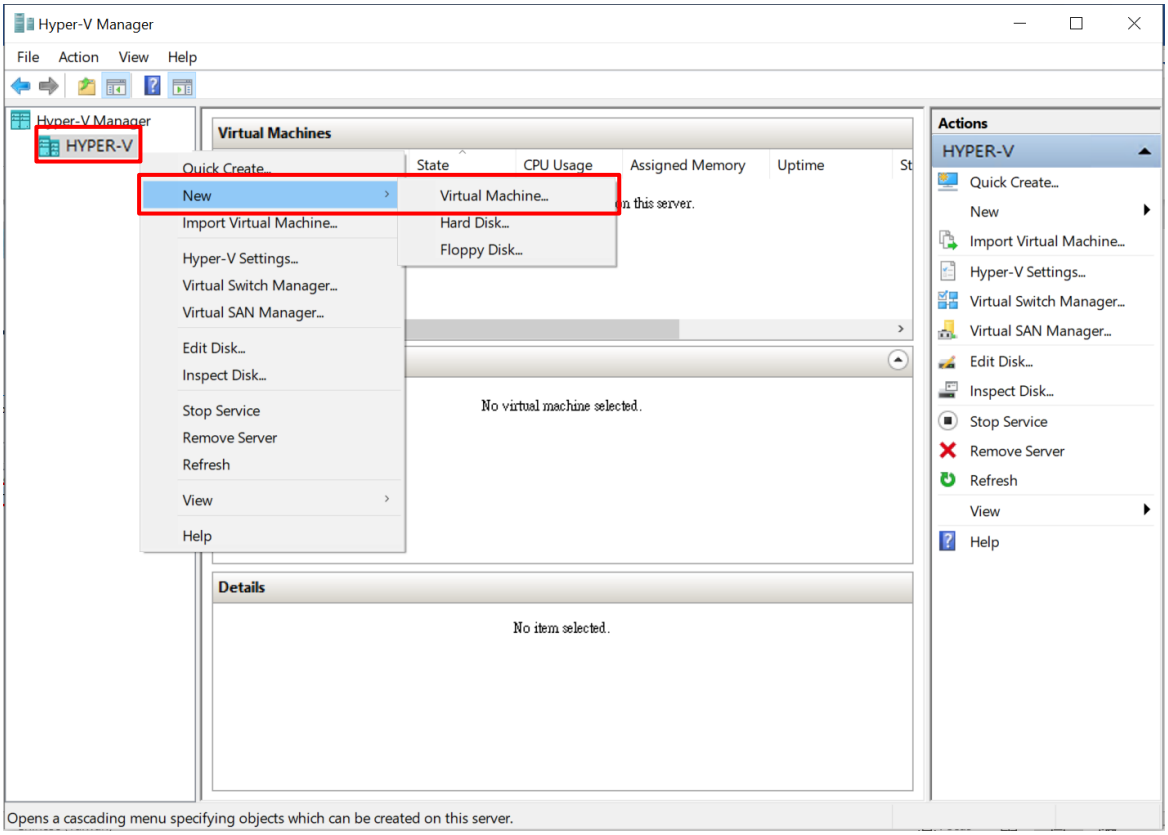
6.5 Hyper-V no Virtual Machine Files Found

If no virtual machine files are found while importing N-Reporter VM in Hyper-V, please follow the steps.

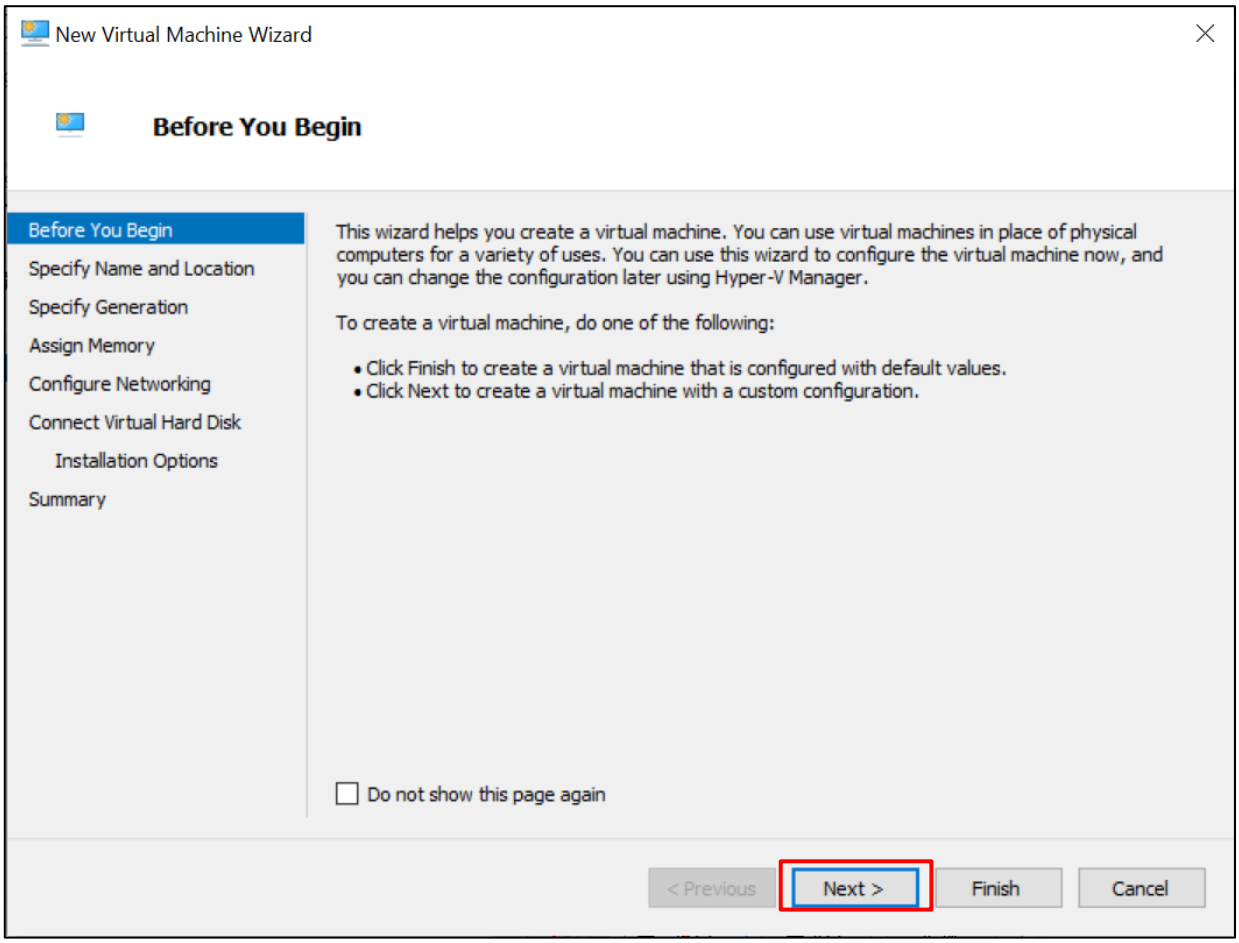


6.5.1 New Virtual Machine

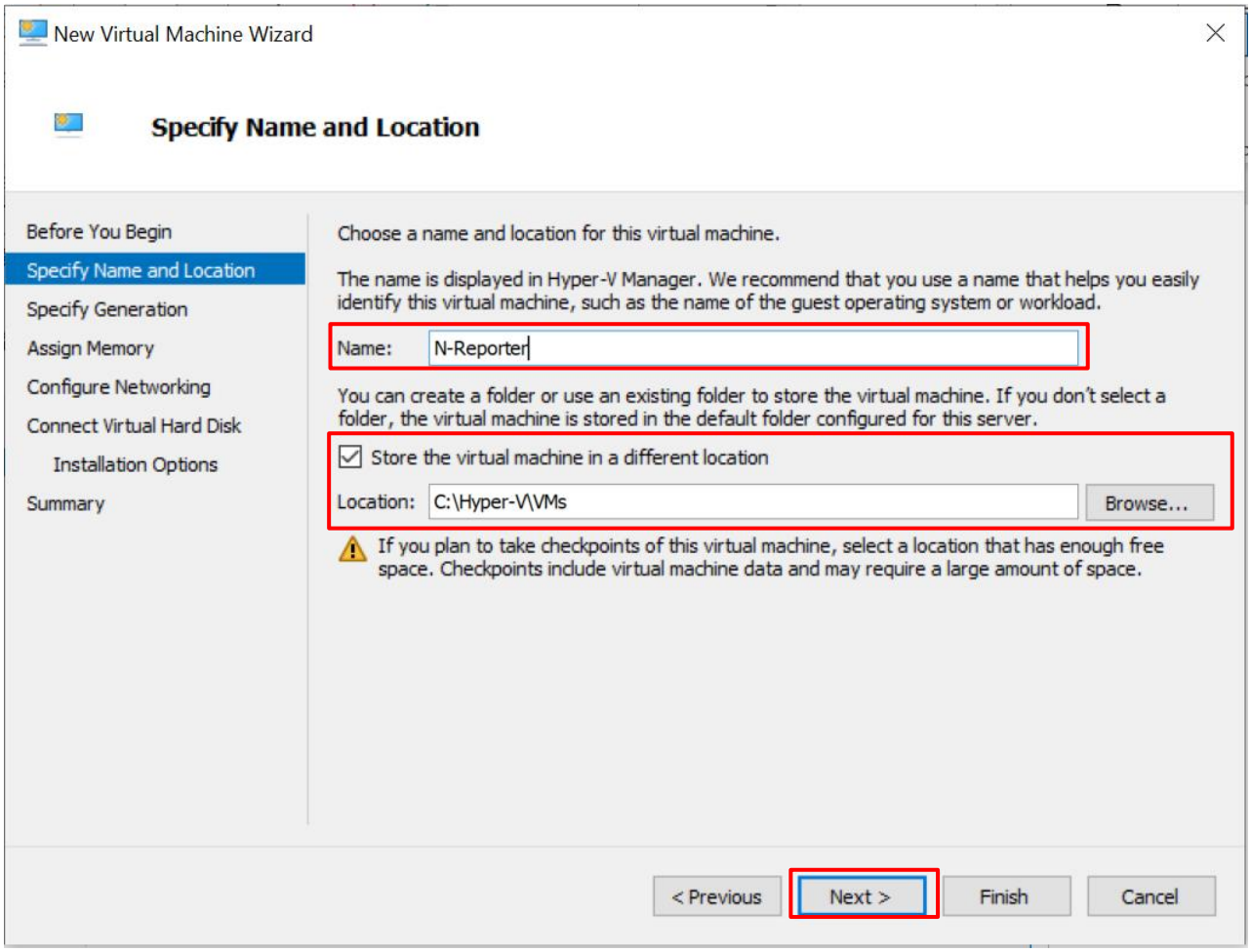
(1) Right-click on Hyper-V server and click “New” and “Virtual Machine….”



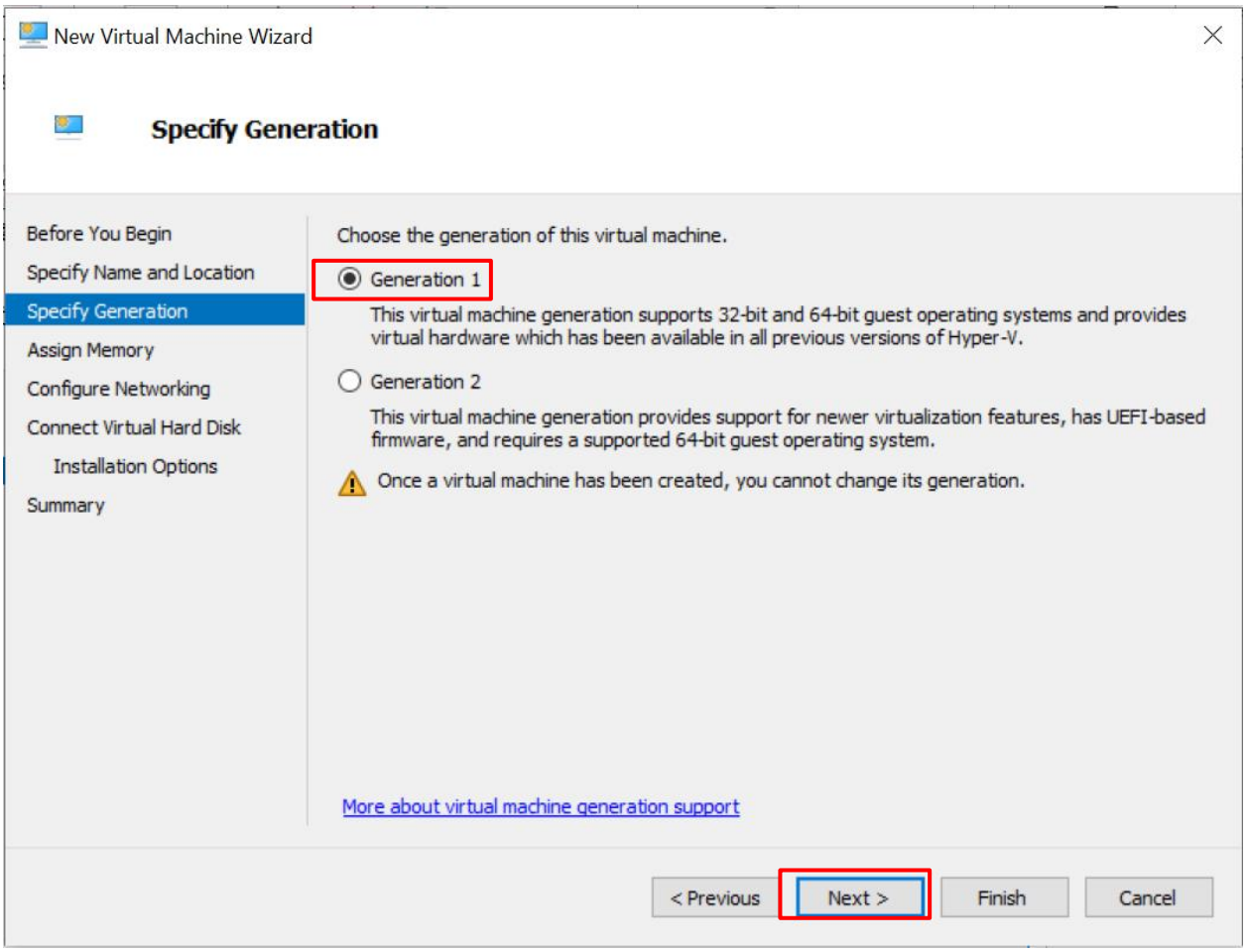
(2) Click “Next.”



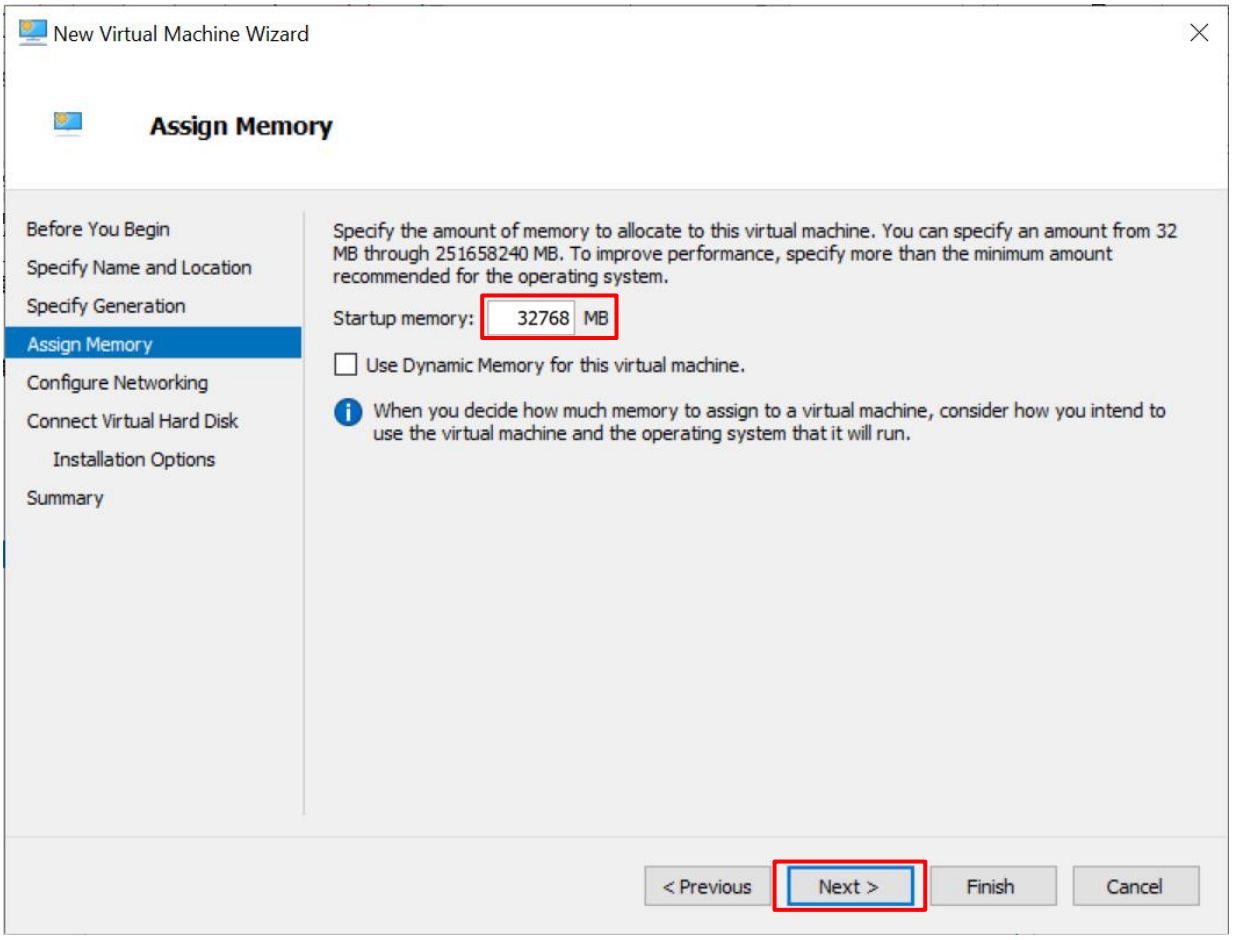
(3) Enter the name of the virtual machine and select a location for it. Click “Next.”



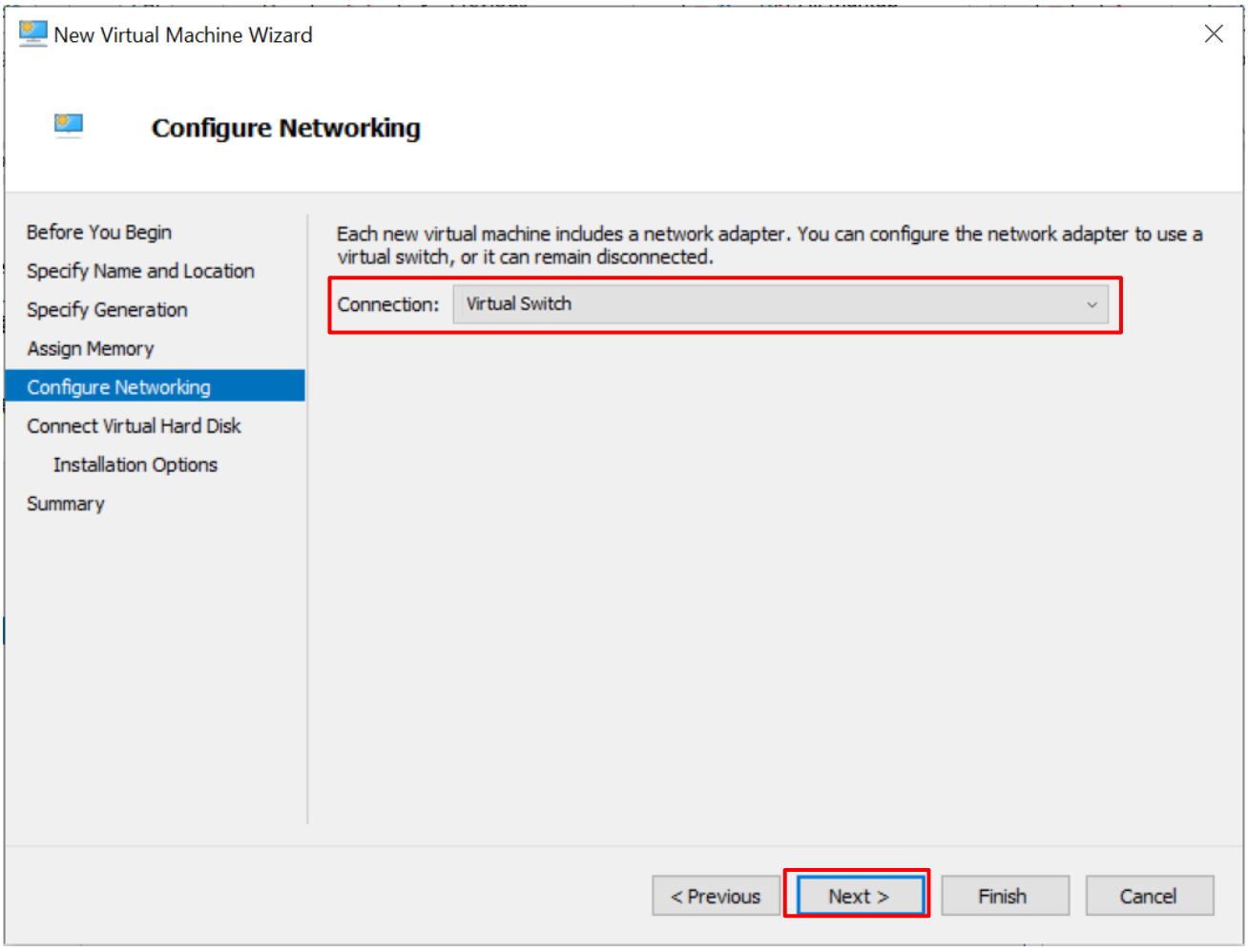
(4) Click “Generation 1” and click “Next.”



(5) Enter 32768 MB in “Startup memory” and click “Next.”

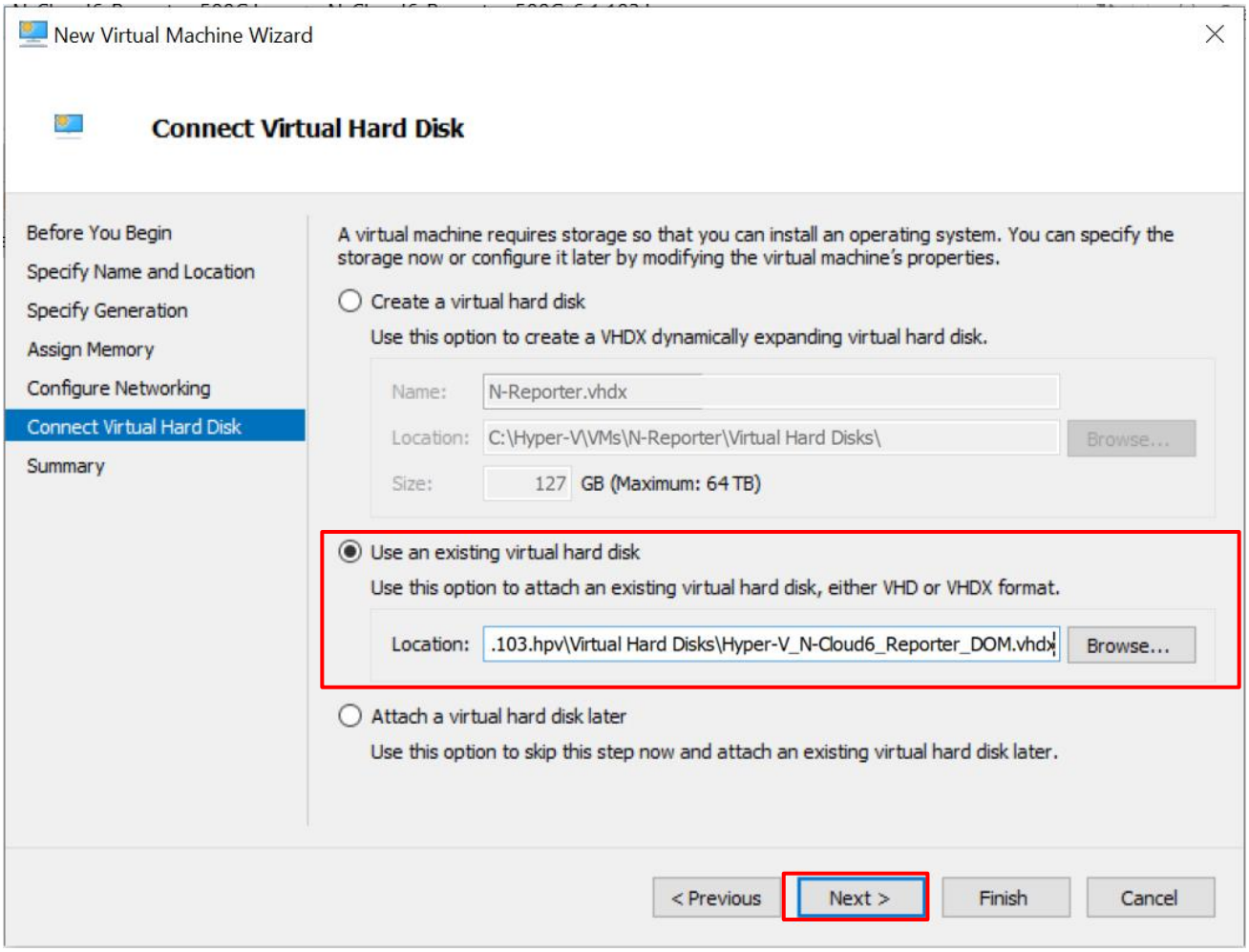


(6) Set to connect with “Viutual Switch” and click “Next.”

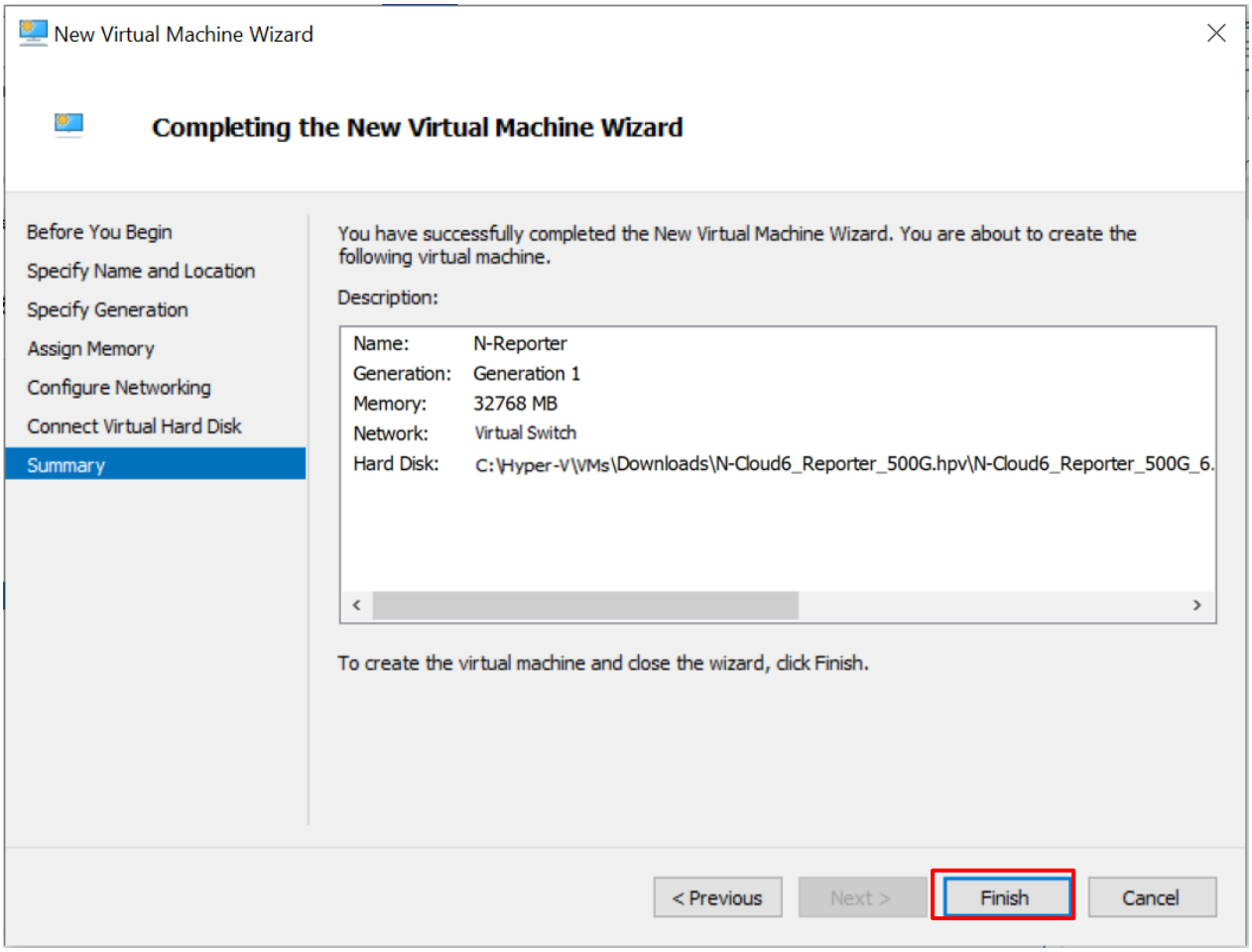


(7) Click “Use an existing virtual hard disk” and click “Browse…” to select N-Reporter_DOM.vhdx.

Click “Next.”

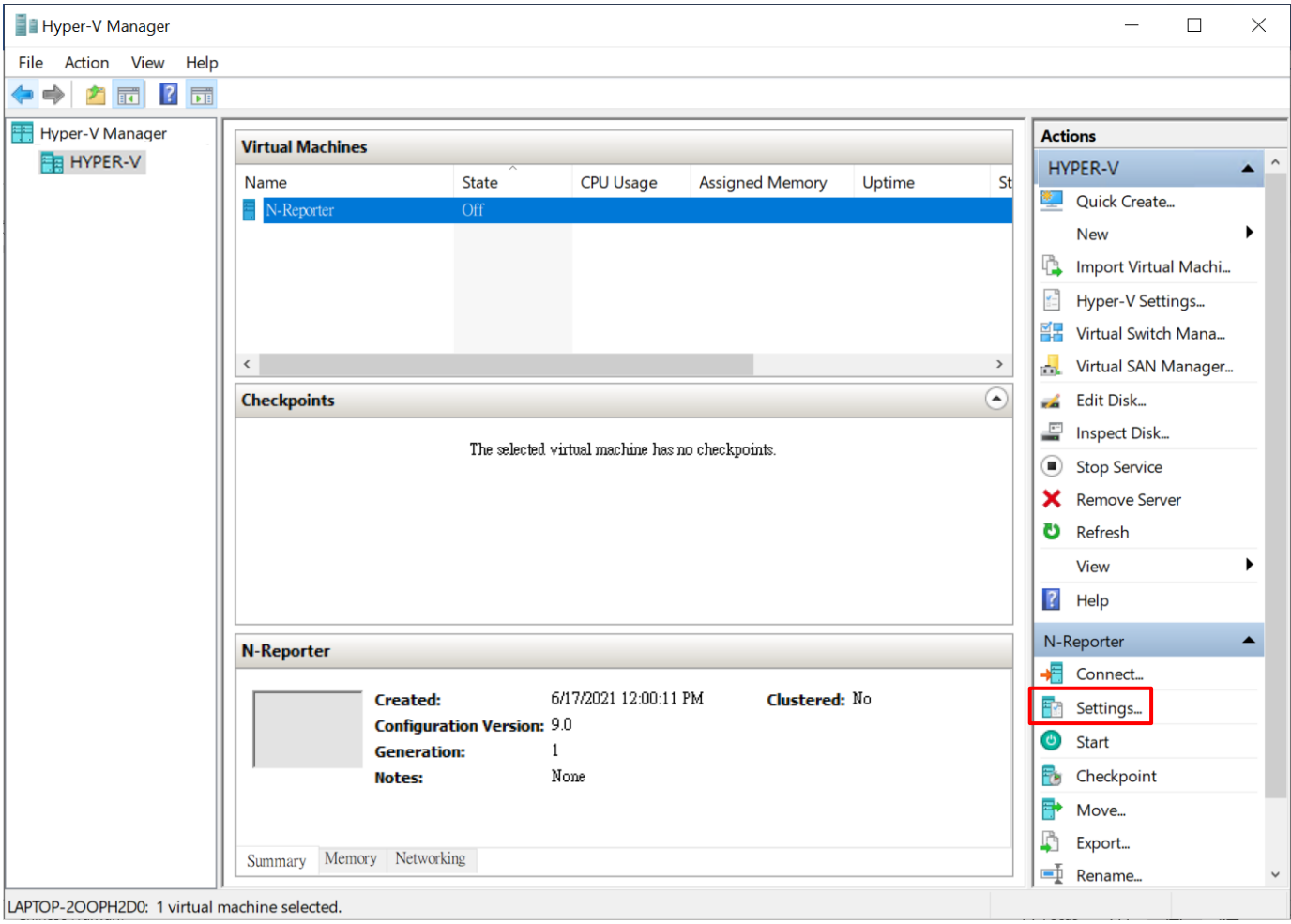


(8) Click “Finish.”

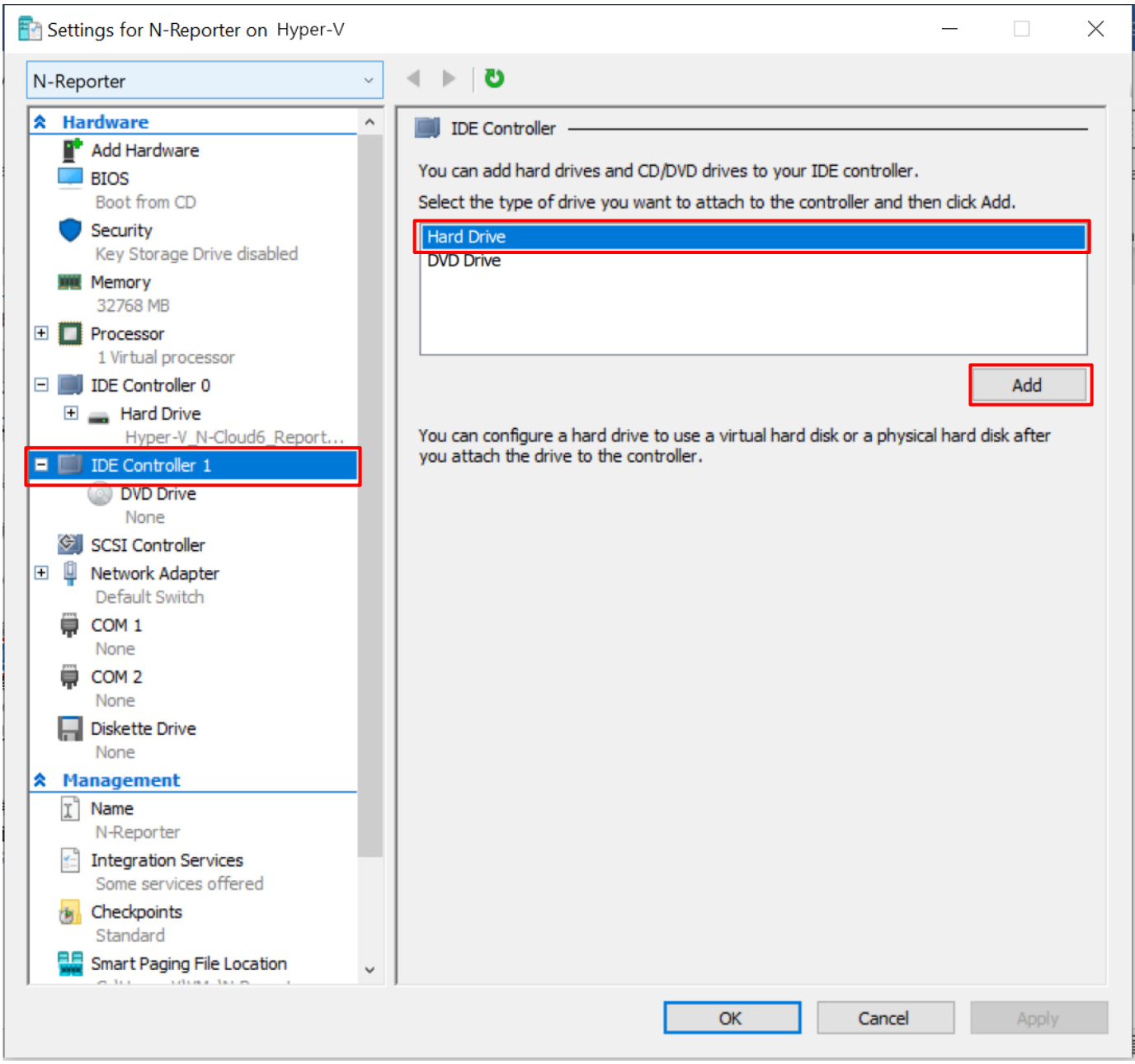


6.5.2 Add Hard Drive

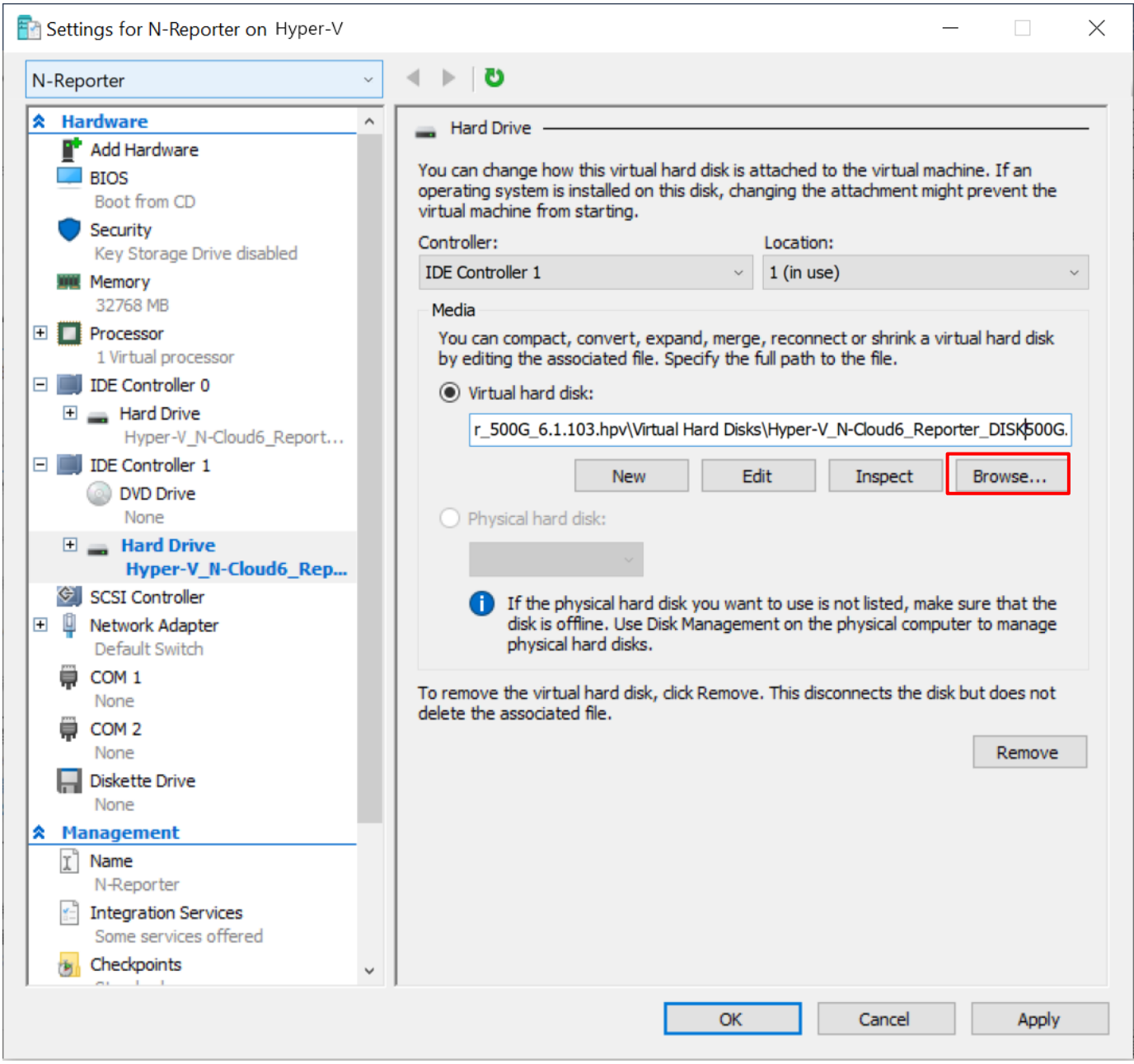
(1) Click “Settings….”



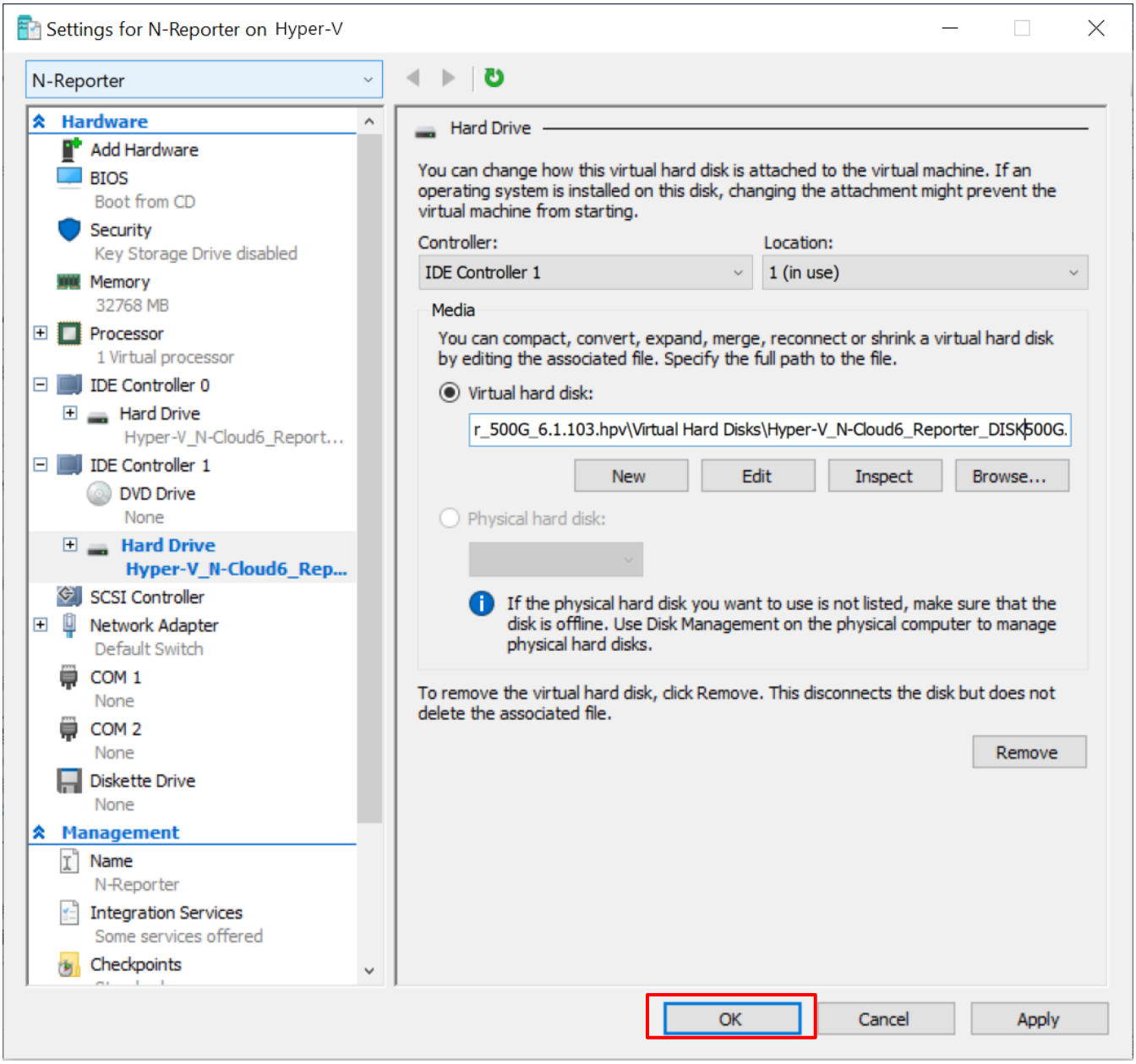
(2) Click “IDE Controller,” select “Hard Drive” and click “Add.”



(3) Click “Browse” and select N-Reporter_DISK.vhdx.



(4) Click “OK.”



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