

# Nested Virtualization\_RDP SSH

Last updated by | Sagar Yele | Jun 3, 2025 at 7:40 PM GMT+5:30

## Tags

[cw.How-To](#) [cw.RDP-SSH](#)

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## Summary

This article explains how to create a nested environment in Azure to recover a VM when all other recovery options have been exhausted and you need full console access for troubleshooting.

## References

### Public References

- [Nested Virtualization in Azure](#)
- [Introducing the new Dv3 and Ev3 VM sizes](#)

### Internal References

- For a video on how to create this environment, refer to [Hyper-V in Azure VMs - Nested Virtualization](#)

### Customer Enablement

- Manual: [Troubleshoot a problem Azure VM by using nested virtualization in Azure](#)
- Automatic: [Repair a Windows VM by using the Azure Virtual Machine repair commands](#)

### Instructions

Azure support teams do not directly support the nested environment itself. We support the host VM as with any other VM. However, if there are issues building or using the nested environment, support is provided by Windows Devices and Deployment, as this is a standard Hyper-V role.

### Nested Virtualization using az vm repair and CLI

1. Go to the Azure portal.
2. Open Cloud Shell to start a CLI session.

ms.portal.azure.com/#blade/HubsExtension/BrowseResourceBlade/resourceType/Microsoft.Compute%2FVirtualMachines

Microsoft Azure (Preview) Report a bug

Virtual machines ×

Subscriptions: 2 of 9 selected – Don't see a subscription? Open Directory + Subscription settings

Filter by name... 2 subscriptions All resource groups All types All locations All tags No grouping

19 items

Name	Type	Status	Resource group	Location	Size	Managed by	Subscription
VM1	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM2	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM3	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM4	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM5	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM6	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM7	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM8	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM9	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM10	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM11	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM12	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM13	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM14	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM15	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM16	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM17	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM18	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1
VM19	Virtual machine	Running (Unlocked)	RG1	East US	Standard_B1ms	Rescue VM	Subscription 1

PowerShell ① ? ✖

Requesting a Cloud Shell. Succeeded.  
Connecting terminal...

MOTD: Modules installed with 'Install-Module' are persisted across sessions

VERBOSE: Authenticating to Azure ...  
VERBOSE: Building your Azure drive ...  
PS /home/genesis> █

3. Run the following commands:

```
az account set -s <SubscriptionID>
az extension add -n vm-repair
az vm repair create -g <ResourceGroupName> -n <VMName> --enable-nested --verbose
```

#### Note:

- Replace <ResourceGroupName> and <VMName> with the details of the broken VM.
- When prompted, enter the login credentials. The rescue VM will be deployed in a separate VNet/subnet. To ensure remote access, select **Yes** when asked to assign a Public IP address.

4. Wait for the rescue VM to be created. This process automatically attaches a copy of the affected disk as a data disk. A new resource group will be created; note the name of the new resource group and the rescue VM for use in later steps.
5. At this point, you can work on your VM as you would with any on-premises VM. Perform any troubleshooting or mitigation steps as needed.
6. Once troubleshooting is complete, swap the fixed OS disk (currently attached to the rescue VM) with the broken disk attached to the original VM. Run the following command:

```
az vm repair restore -g <ResourceGroupName> -n <VMName> --verbose
```



**Note:**

- Replace <ResourceGroupName> and <VMName> with the details of the broken VM.

## Manually Create Rescue VM and Provide IP to Hyper-V VM to Test RDP Connectivity

### Step 1: Snapshot the Broken Disk

1. Go to **Azure Portal > Disks** and select the broken VM's OS disk.

The screenshot shows two main windows from the Azure portal:

- Compute infrastructure | Virtual machines** (Left Window):
  - Search bar and navigation icons.
  - Virtual machines** tab selected (highlighted with a red box and labeled 1).
  - Message: "You are viewing a new version of Browse experience. Some features may be missing. Click here to access the old experience."
  - Table of virtual machines:
 

	Name ↑	...
<input type="checkbox"/>	<b>broken-vm</b> (highlighted with a red box and labeled 2)	...
<input type="checkbox"/>	webServer	...
  - Other menu items: Overview, All resources, Infrastructure, Virtual Machine Scale Set (VMSS), Compute Fleet, Disks + images, Capacity + placement, Related services, Monitoring + Policy, Help.
- broken-vm | Disks** (Right Window):
  - Search bar and navigation icons.
  - OS disk** section:
 

LUN	Disk name	Storage type
0	<b>broken-vm_OsDisk_1_2a025l</b> (highlighted with a red box and labeled 4)	Standard HDD LRS
  - Data disks** section:
 

LUN	Disk name	Storage type
<i>No data disks attached</i>		
  - Buttons: Refresh, Additional settings, Feedback.

2. Click **Create Snapshot**.

The screenshot shows the Azure portal interface for managing a disk named 'broken-vm\_OsDisk\_1'. The top navigation bar includes links for Home, Compute infrastructure, Virtual machines, broken-vm, Disks, and a search bar. Below the navigation is a toolbar with options: Create VM, Create VM image version, Create snapshot (which is highlighted with a red box), Delete, Refresh, and Give feedback.

**Overview** (selected) and **Essentials** tabs are visible. The Essentials tab displays the following disk properties:

Property	Value
Resource group ( <a href="#">move</a> )	: TESTAZURE-RG
Disk state	: Attached
Last ownership update time	: 5/31/2025, 11:17:18 AM
Location	: South Central US
Subscription ( <a href="#">move</a> )	: MCAPS-Support-REQ-74064-2024-riaguila
Subscription ID	: 0bc45583-c594-43c5-be5d-6a2285841972
Time created	: 5/31/2025, 11:17:18 AM
Tags ( <a href="#">edit</a> )	: Add tags
Disk size	: 127 GiB
Storage type	: Standard HDD LRS
Managed by	: broken-vm
Operating system	: Windows
Max shares	: 0
Availability zone	: No infrastructure redundancy required
Security type	: Standard

3. Set the name to Snapshot-BrokenDisk .

4. Set the type to **Full**, storage to **Standard HDD** or **Premium**, and use the same resource group as the rescue VM.

## Create snapshot

### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ

MCAPS-Support-REQ-74064-2024-riaguila



Resource group \* ⓘ

TESTAZURE-RG



[Create new](#)

### Instance details

Name \*

Snapshot-BrokenDisk



Region ⓘ

(US) South Central US



Snapshot type \* ⓘ

**Incremental:** Save on storage costs by making a partial copy of the disk based on the difference between the last snapshot.

**Full:** Make a complete read-only copy of the selected disk.

Source type ⓘ

Disk



Source subscription ⓘ

MCAPS-Support-REQ-74064-2024-riaguila



Source disk ⓘ

broken-vm\_OsDisk\_1\_2a025b5058454a5ca6173629bd2a31cf



Security type ⓘ

Standard



VM generation ⓘ

Generation 1

Generation 2

VM architecture ⓘ

x64

Arm64

5. Click **Create**.

Storage type \* ⓘ

Standard HDD (zone-redundant storage)



## Step

1. Go to **Snapshots** and select **Snapshot-BrokenDisk**,

The screenshot shows the Microsoft Azure (Preview) interface. At the top, there's a navigation bar with 'Review + create' (highlighted by a red box), '< Previous' and 'Next : Encryption >', and a 'Report a bug' button. Below the navigation bar is a search bar containing 'snapshots'. The main content area shows a 'Snapshot-BrokenDisk' item with a 'Snapshot' icon. On the right, there's a 'Services' sidebar with tabs for 'All', 'Services (1)', 'Marketplace (2)', and 'More (4)'. A red box highlights the 'Solutions' link under the 'Services' tab. At the bottom of the screen, there are buttons for 'Create disk', 'Create VM image version', 'Copy snapshot', and 'Solutions' (also highlighted by a red box).

2. Click **Create Disk**.

The screenshot shows the 'Snapshot-BrokenDisk' overview page. On the left, there's a sidebar with links: 'Overview' (highlighted by a red box), 'Activity log', 'Access control (IAM)', 'Tags', 'Diagnose and solve problems', 'Resource visualizer', 'Settings', 'Automation', and 'Help'. The main content area shows resource details: Resource group (TESTAZURE-RG), Location (South Central US), Subscription (MCAPS-Support-REQ-74064-2024-riaguila), Subscription ID (0bc45583-c594-43c5-be5d-6a2285841972), Snapshot state (Unattached), and Tags (Add tags). At the bottom, there are buttons for 'Get started' and 'Properties' (highlighted by a red box). The top navigation bar includes a 'Search' bar, a 'Create disk' button (highlighted by a red box), 'Create VM image version', 'Copy snapshot', 'Delete', and 'Refresh'.

3. Name the disk `RecoveredDisk` and ensure it is in the same region and resource group as the rescue VM.

## Create a managed disk

Basics    Encryption    Networking    Advanced    Tags    Review + create

Select the disk type and size needed for your workload. Azure disks are designed for 99.999% availability. Azure managed disks encrypt your data at rest, by default, using Storage Service Encryption. [Learn more about disks.](#)

### Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ MCAPS-Support-REQ-74064-2024-riaguila

Resource group \* ⓘ TESTAZURE-RG

[Create new](#)

### Disk details

Disk name \* ⓘ RecoveredDisk

Region ⓘ (US) South Central US

Availability zone No infrastructure redundancy required

Source type ⓘ Snapshot

Source subscription ⓘ MCAPS-Support-REQ-74064-2024-riaguila

Source snapshot ⓘ Snapshot-BrokenDisk

OS type ⓘ  Windows

Security type ⓘ Standard

VM generation ⓘ  Generation 2

VM architecture ⓘ  x64

Size \* ⓘ 127 GiB  
Standard HDD LRS  
[Change size](#)

4. Click **Create**.

---

## Step

1. In the **Basics** tab, provide the following values:



- **Image:** Windows Server 2019 or 2022
- **Security Type:** Standard (disable Trusted Launch)
- **Size:** Use a nested virtualization-supported size (e.g., Standard\_D4s\_v3)

# Create a virtual machine

**⚠️** Changing Basic options may reset selections you have made. Review all options prior to creating the virtual machine.

Help me create a low cost VM Help me create a VM optimized for high availability Help me choose the right VM size for my workload

Basics Disks Networking Management Monitoring Advanced Tags Review + create

Create a virtual machine that runs Linux or Windows. Select an image from Azure marketplace or use your own customized image. Complete the Basics tab then Review + create to provision a virtual machine with default parameters or review each tab for full customization. [Learn more](#)

## Project details

Select the subscription to manage deployed resources and costs. Use resource groups like folders to organize and manage all your resources.

Subscription \* ⓘ

MCAPS-Support-REQ-74064-2024-riaguila

Resource group \* ⓘ

TESTAZURE-RG

[Create new](#)

## Instance details

Virtual machine name \* ⓘ

RescueVM

Region \* ⓘ

(US) South Central US

Availability options ⓘ

No infrastructure redundancy required

Security type ⓘ

Standard

Image \* ⓘ

Windows Server 2022 Datacenter - x64 Gen2

[See all images](#) | [Configure VM generation](#)

This image is compatible with additional security features. [Click here to swap to the Trusted launch security type.](#)

VM architecture ⓘ

Arm64

x64

Arm64 is not supported with the selected image.



Run with Azure Spot discount ⓘ



**Note:**

Ensure the security type is set to **Standard**. The default security type is **Trusted Launch**, which does not support nested virtualization. If Trusted Launch is enabled, you will receive an error when adding server roles:

The size you've selected is supported by higher storage performance with NVMe enabled. [Learn more](#)

[See all sizes](#)

DESTINATION SERVER  
rescue

## Select server roles

Before You Begin  
Installation Type  
Server Selection  
**Server Roles**  
Features  
Confirmation  
Results

Select one or more roles to install on the selected server.

**Add Roles and Features Wizard**

### Validation Results

The validation process found problems on the server to which you want to install features. The selected features are not compatible with the current configuration of your selected server. Click OK to select different features.

Validation Results	Server
	rescue

Hyper-V cannot be installed because virtualization support is not enabled in the BIOS.

OK

Remote Desktop Services  
Volume Activation Services  
Web Server (IIS)

&lt; Previous

Next &gt;

Install

Cancel

2. In the **Disks** tab, under **Data disk for RescueVM**, select **Attach existing disk**.

## Create a virtual machine

 Help me create a low cost VM  Help me create a VM optimized for high availability  Help me choose the right VM size for my workload

Basics  Disks Networking Management Monitoring Advanced Tags Review + create

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

### VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host 



 Encryption at host is not registered for the selected subscription. [Learn more](#)

### OS disk

OS disk size 

Image default (127 GiB) 

OS disk type \* 

Standard HDD (locally-redundant storage) 

The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

Delete with VM 



Key management 

Platform-managed key 

Enable Ultra Disk compatibility 



### Data disks for RescueVM

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM 
	Create and attach a new disk		Attach an existing disk 		

 Advanced

Select the disk you created from the broken OS disk:

---

Azure VMs have one operating system disk and a temporary disk for short-term storage. You can attach additional data disks. The size of the VM determines the type of storage you can use and the number of data disks allowed. [Learn more](#)

### VM disk encryption

Azure disk storage encryption automatically encrypts your data stored on Azure managed disks (OS and data disks) at rest by default when persisting it to the cloud.

Encryption at host

i Encryption at host is not registered for the selected subscription. [Learn more](#)

### OS disk

OS disk size

Image default (127 GiB)



OS disk type \*

Standard HDD (locally-redundant storage)



The selected VM size supports premium disks. We recommend Premium SSD for high IOPS workloads. Virtual machines with Premium SSD disks qualify for the 99.9% connectivity SLA.

Delete with VM

Key management

Platform-managed key



Enable Ultra Disk compatibility



### Data disks for RescueVM

You can add and configure additional data disks for your virtual machine or attach existing disks. This VM also comes with a temporary disk.

LUN	Name	Size (GiB)	Disk type	Host caching	Delete with VM <input type="radio"/>
0	Select an existin... <input type="button" value="▼"/>			None <input type="button" value="▼"/>	<input type="checkbox"/>
<b>Create and attach data disks</b>					
webServer-DiskCopy-20250302204201					
size: 127 account type: Standard_LRS disk shares used: 0 of 1					
webServer-DiskCopy-20250302235934					
size: 127 account type: Standard_LRS disk shares used: 0 of 1					
broken-vm-DiskCopy-20250531174243					
size: 127 account type: Standard_LRS disk shares used: 0 of 1					
RecoveredDisk					

3. Select the appropriate virtual network and leave other values as default if desired.

4. Click **Create**.

#### Step 4: Access the Disk

1. RDP to the RescueVM.

2. Use **Disk Management** to bring the disk online and assign a drive letter if not assigned automatically.

Disk Management

File Action View Help

Volume Layout Type File System Status Capacity Free Sp... % Free

(Disk 0 partition 3) Simple Basic Healthy (E... 99 MB 99 MB 100 %  
(Disk 1 partition 3) Simple Basic Healthy (E... 99 MB 99 MB 100 %  
Windows (C:) Simple Basic NTFS Healthy (B... 126.45 GB 114.60 GB 91 %

Disk 0  
Basic  
126.99 GB  
Online

450 MB 99 MB Windows (C:)  
126.45 GB NTFS  
Healthy (EFI System )  
Healthy (Boot, Page File, Crash Dump, Basic Data Partition)

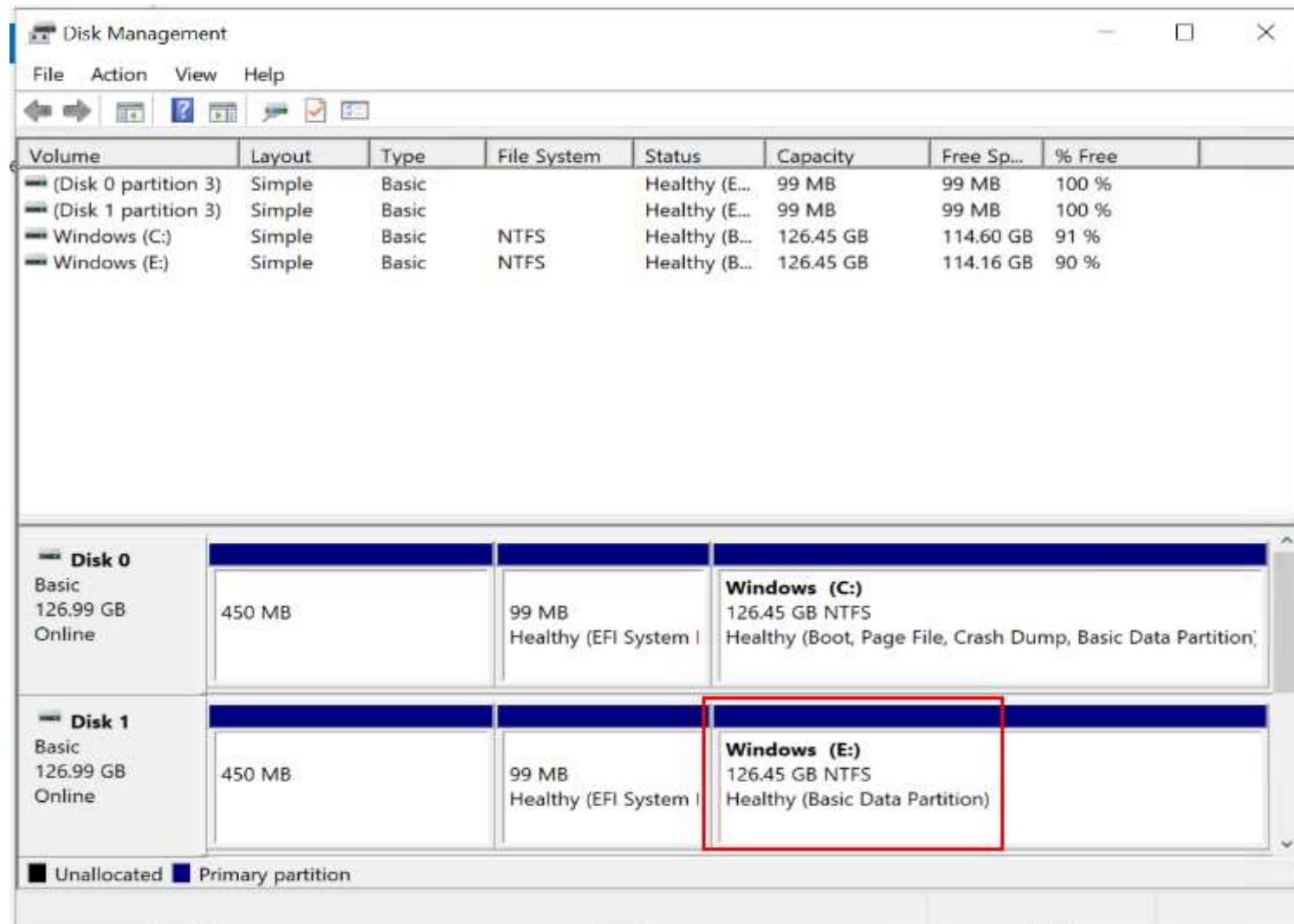
Disk 1  
Basic  
126.99 GB  
Offline ⓘ

Online Properties Help

99 MB 126.45 GB  
Healthy (EFI System )

Unallocated Primary Partition

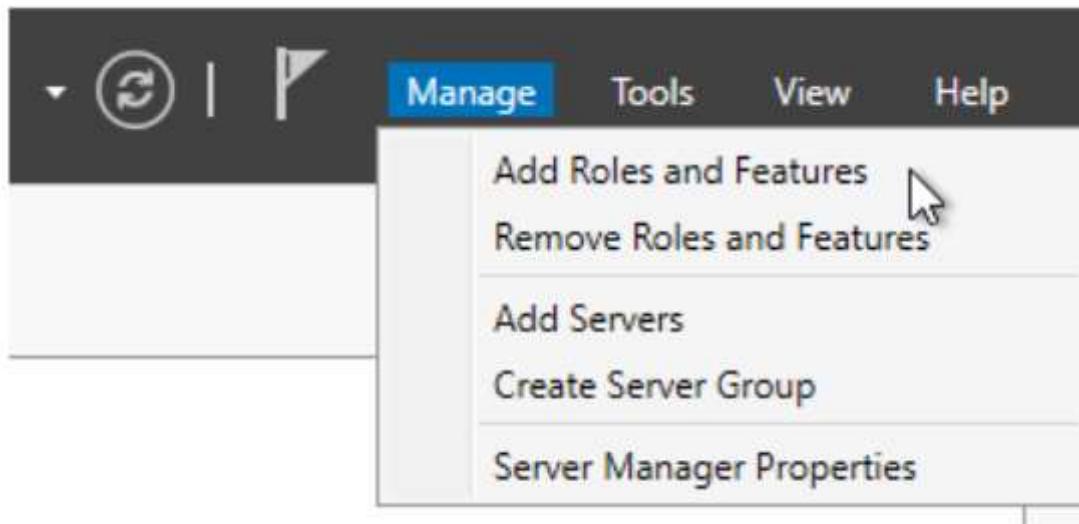
Volume	Layout	Type	File System	Status	Capacity	Free Sp...	% Free
(Disk 0 partition 3)	Simple	Basic		Healthy (E...)	99 MB	99 MB	100 %
(Disk 1 partition 3)	Simple	Basic		Healthy (E...)	99 MB	99 MB	100 %
Windows (C:)	Simple	Basic	NTFS	Healthy (B...)	126.45 GB	114.60 GB	91 %



3. Recover or troubleshoot data as needed. If you require access to the guest OS via nested virtualization, continue to Step 5.

#### Step 5: Install Hyper-V on the Rescue VM

1. In **Server Manager**, select **Manage > Add Roles and Features**.



2. For **Installation Type**, select **Role-based or feature-based installation**.

The screenshot shows the 'Add Roles and Features Wizard' window. The title bar says 'Add Roles and Features Wizard'. The left sidebar has steps: 'Before You Begin', 'Installation Type' (selected), 'Server Selection', 'Server Roles', 'Features', 'Confirmation', and 'Results'. The main content area is titled 'Select installation type'. It says: 'Select the installation type. You can install roles and features on a running physical computer or virtual machine, or on an offline virtual hard disk (VHD).'. There are two radio button options: ' Role-based or feature-based installation' (selected) which describes adding roles, role services, and features to a single server; and ' Remote Desktop Services installation' which describes installing required role services for Virtual Desktop Infrastructure (VDI) to create a virtual machine-based or session-based desktop deployment. In the top right corner, it says 'DESTINATION SERVER RecoveryVM'.

3. Ensure the Rescue VM is selected.

## Select destination server

DESTINATION SERVER  
RecoveryVM[Before You Begin](#)[Installation Type](#)[Server Selection](#)[Server Roles](#)[Features](#)[Confirmation](#)[Results](#)

Select a server or a virtual hard disk on which to install roles and features.

- Select a server from the server pool
- Select a virtual hard disk

## Server Pool

Filter:		
Name	IP Address	Operating System
RecoveryVM	10.1.2.5	Microsoft Windows Server 2016 Datacenter

4. Select the **Hyper-V** role.

## Select server roles

Before You Begin

Installation Type

Server Selection

Server Roles

Features

Confirmation

Results

Select one or more roles to install on the selected server.

### Roles

- Active Directory Certificate Services
- Active Directory Domain Services
- Active Directory Federation Services
- Active Directory Lightweight Directory Services
- Active Directory Rights Management Services
- Device Health Attestation
- DHCP Server
- DNS Server
- Fax Server
- File and Storage Services (1 of 12 installed)
  - Host Guardian Service
  - Hyper-V
  - MultiPoint Services
  - Network Controller
  - Network Policy and Access Services
  - Print and Document Services
  - Remote Access
  - Remote Desktop Services
  - Volume Activation Services
  - Web Server (IIS)

## Add features that are required for Hyper-V?

The following tools are required to manage this feature, but do not have to be installed on the same server.

- ▲ Remote Server Administration Tools
  - ▲ Role Administration Tools
  - ▲ Hyper-V Management Tools
    - [Tools] Hyper-V Module for Windows PowerShell
    - [Tools] Hyper-V GUI Management Tools

Include management tools (if applicable)

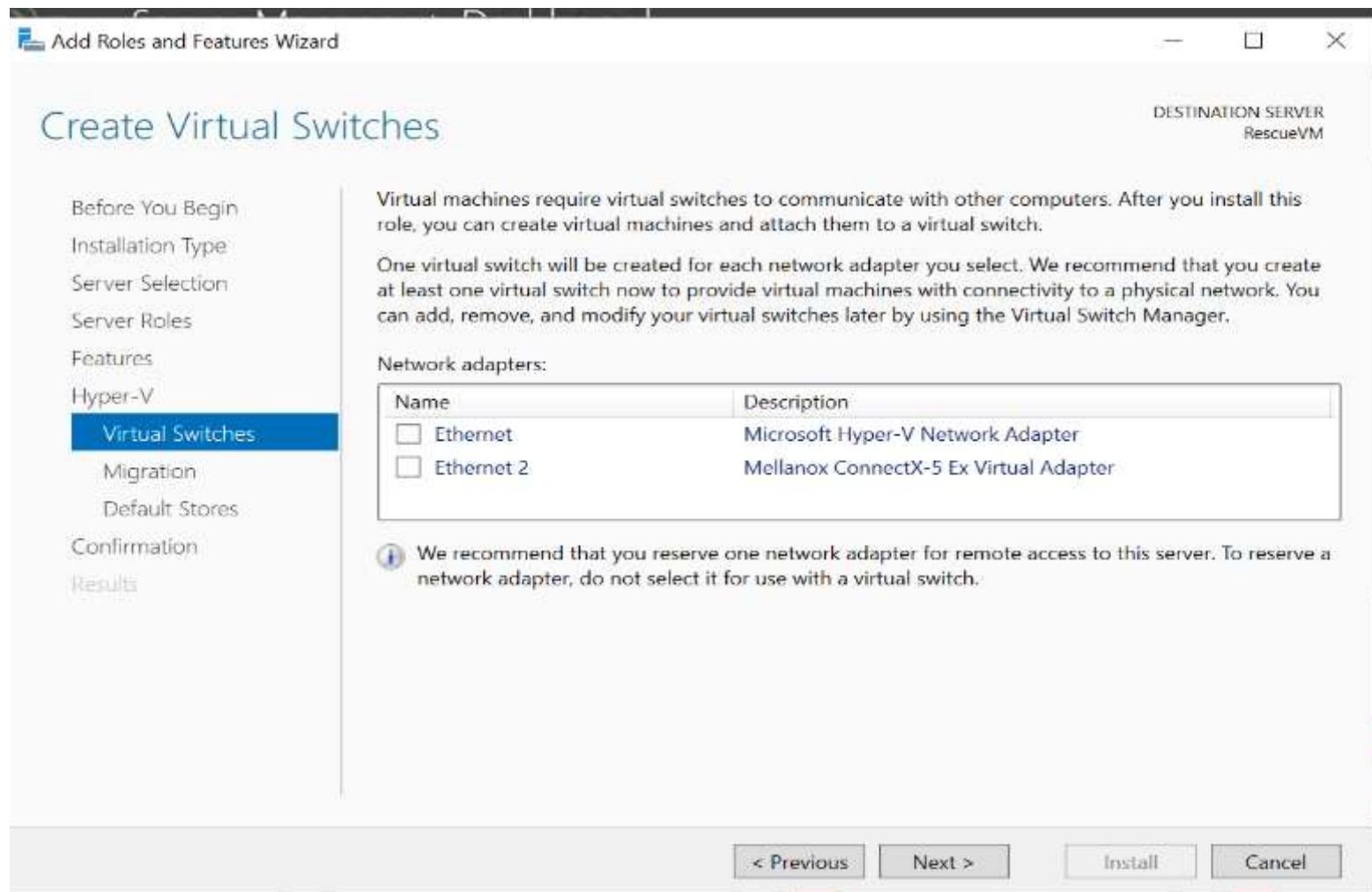
Add Features

Cancel



5. Click **Next** on the Features screen.

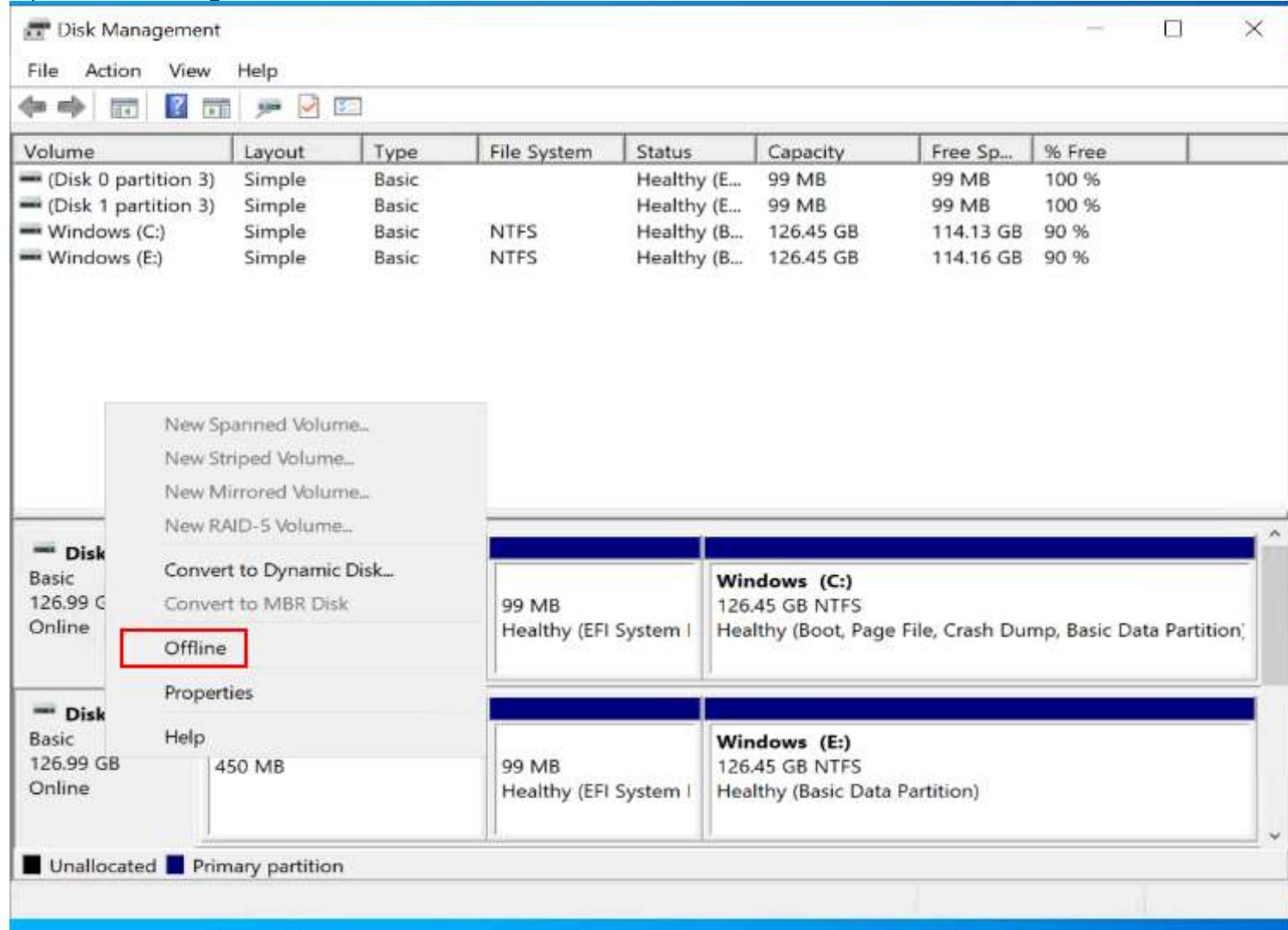
6. On the **Virtual Switches** screen, click **Next**.



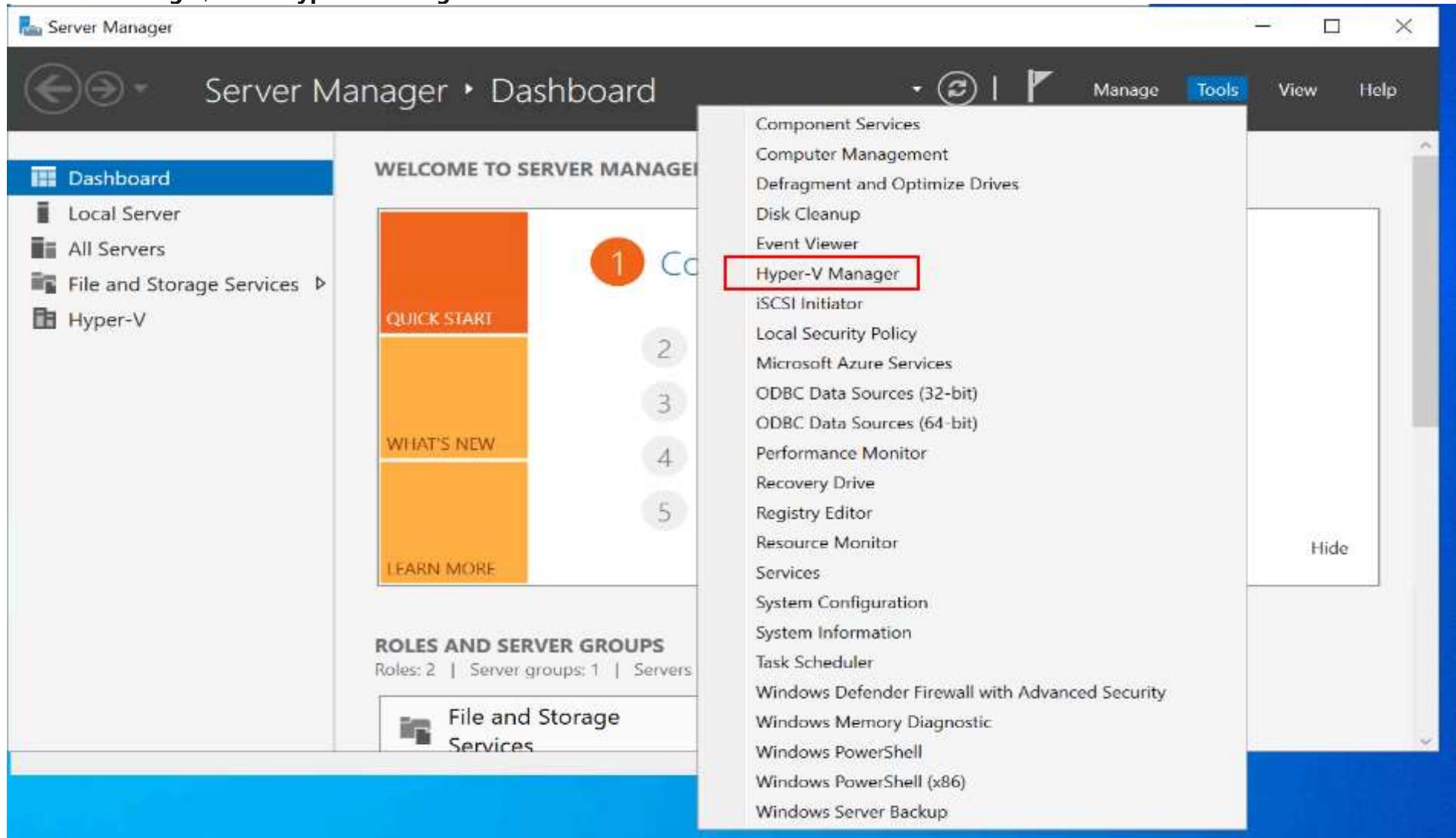
7. On the **Migration** page, click **Next**.
8. On the **Default Stores** page, click **Next**.
9. Check the box to restart the server automatically if required.
10. Click **Install**.
11. Allow the server to install the Hyper-V role. This process may take a few minutes and the server will reboot automatically. You can monitor the reboot using the **Boot Diagnostics** tab in the Azure Portal.

## Step 6: Create the Hyper-V VM in Hyper-V Manager

1. Open **Disk Management** and ensure the VHD of the broken VM is set to **Offline**.

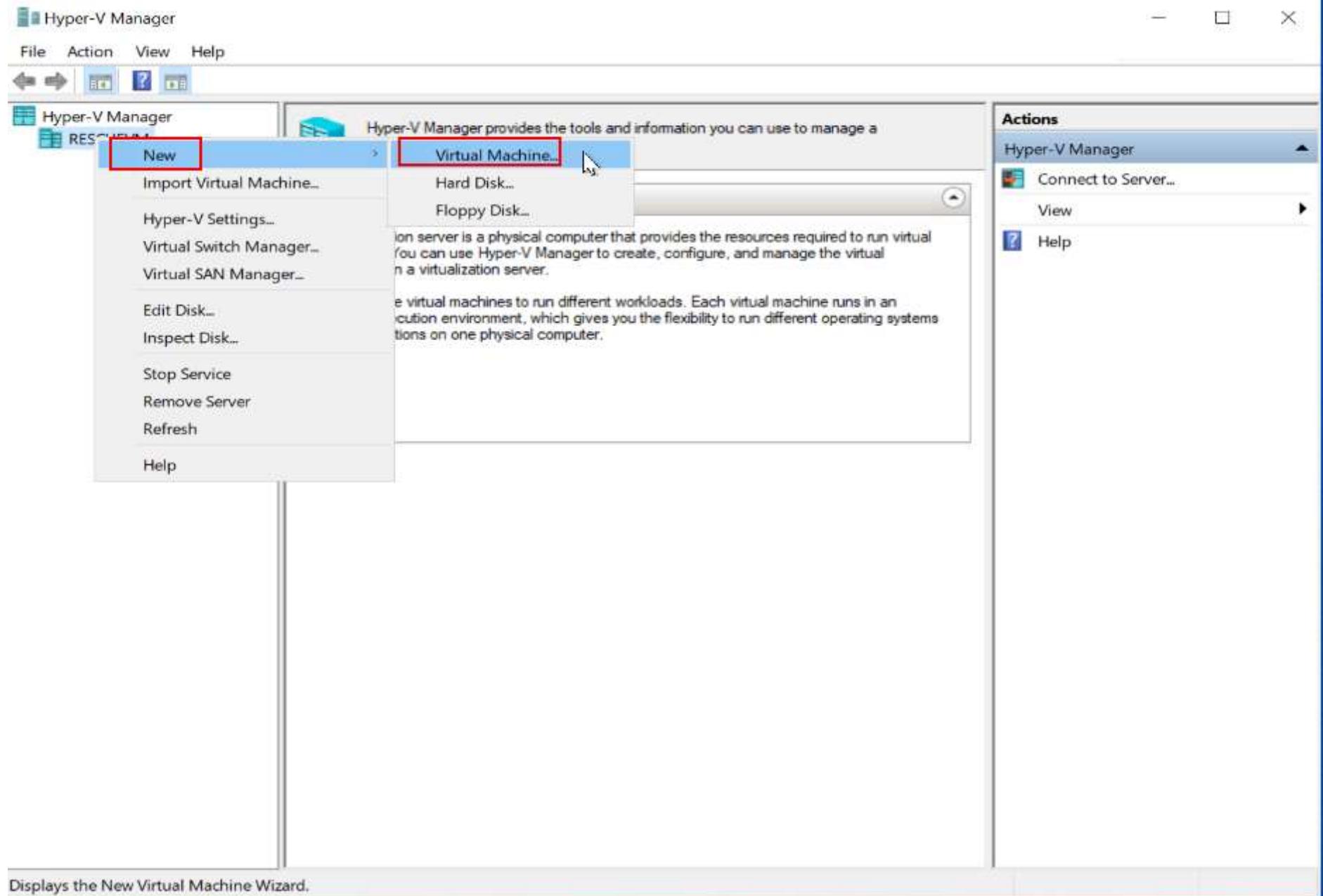


2. In **Server Manager**, select **Hyper-V Manager**.



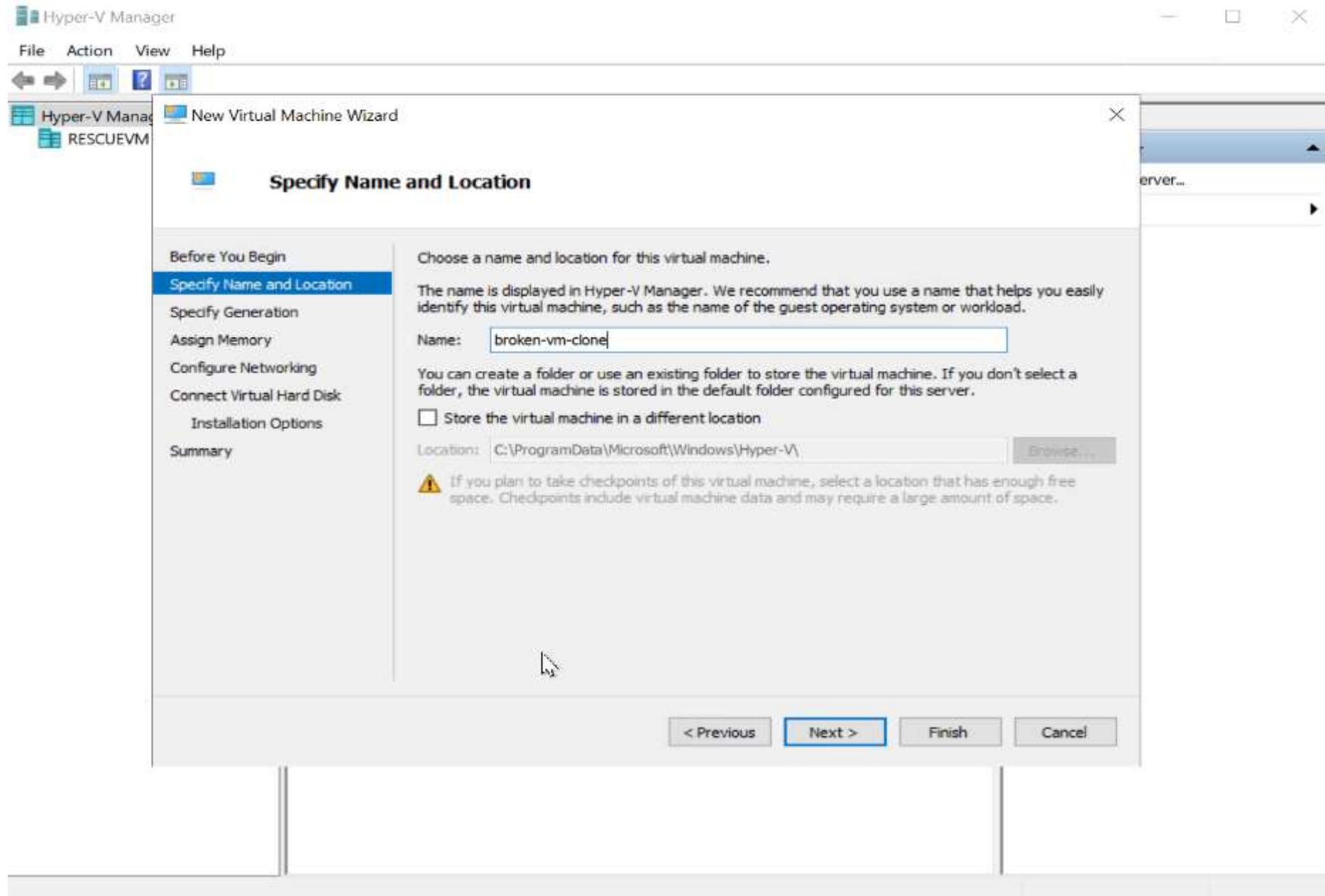
3. Right-click on the server and select **Hyper-V Manager**.

4. In Hyper-V Manager, right-click on the rescue VM and select **New > Virtual Machine**, then click **Next**.



Displays the New Virtual Machine Wizard.

5. Name the virtual machine and click **Next**.



6. Select the generation that matches the source VM. In this example, select **Generation 2**.



### Virtual machine

Computer name

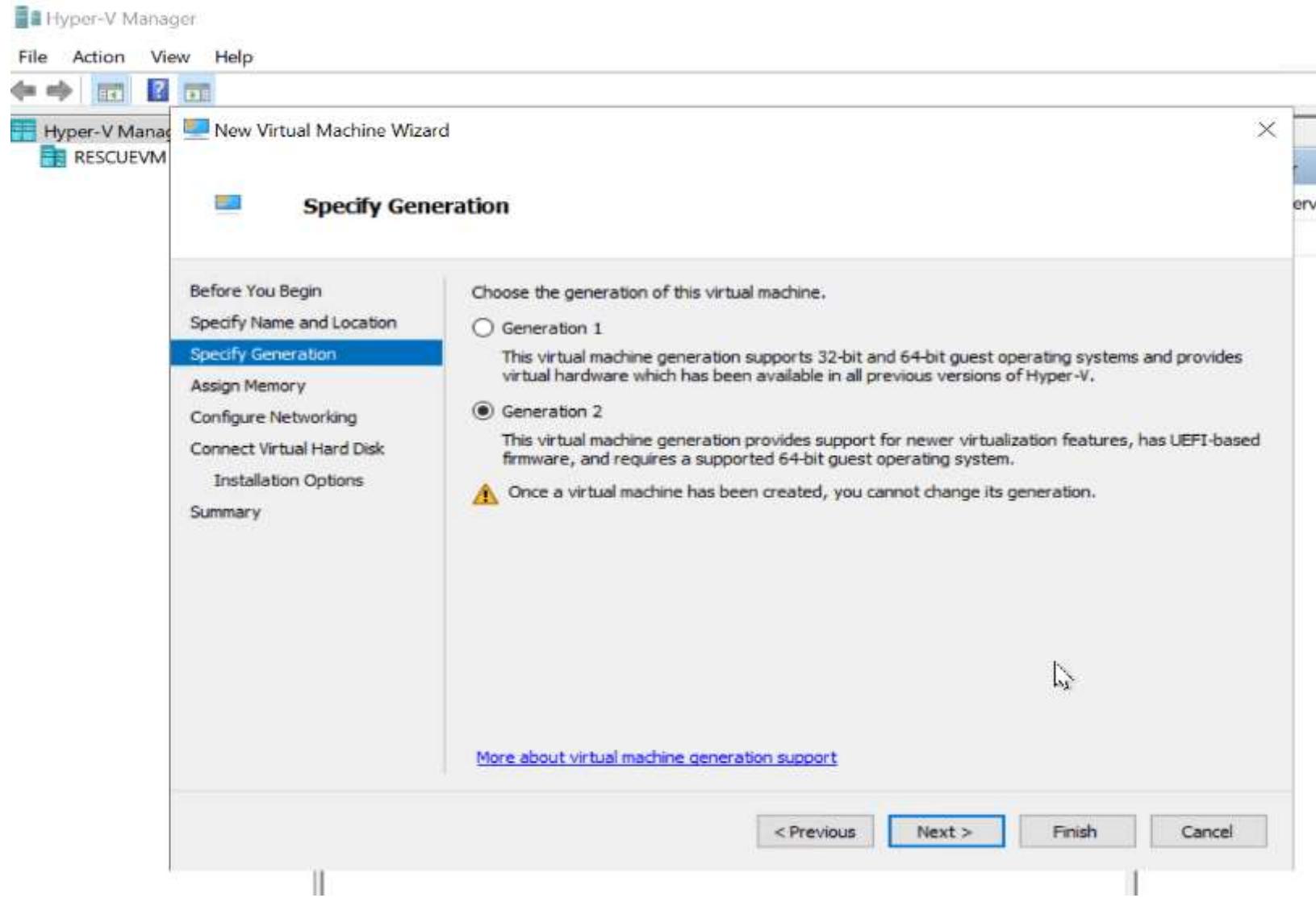
broken-vm

Operating system

Windows (Windows Server 2022 Datacenter)

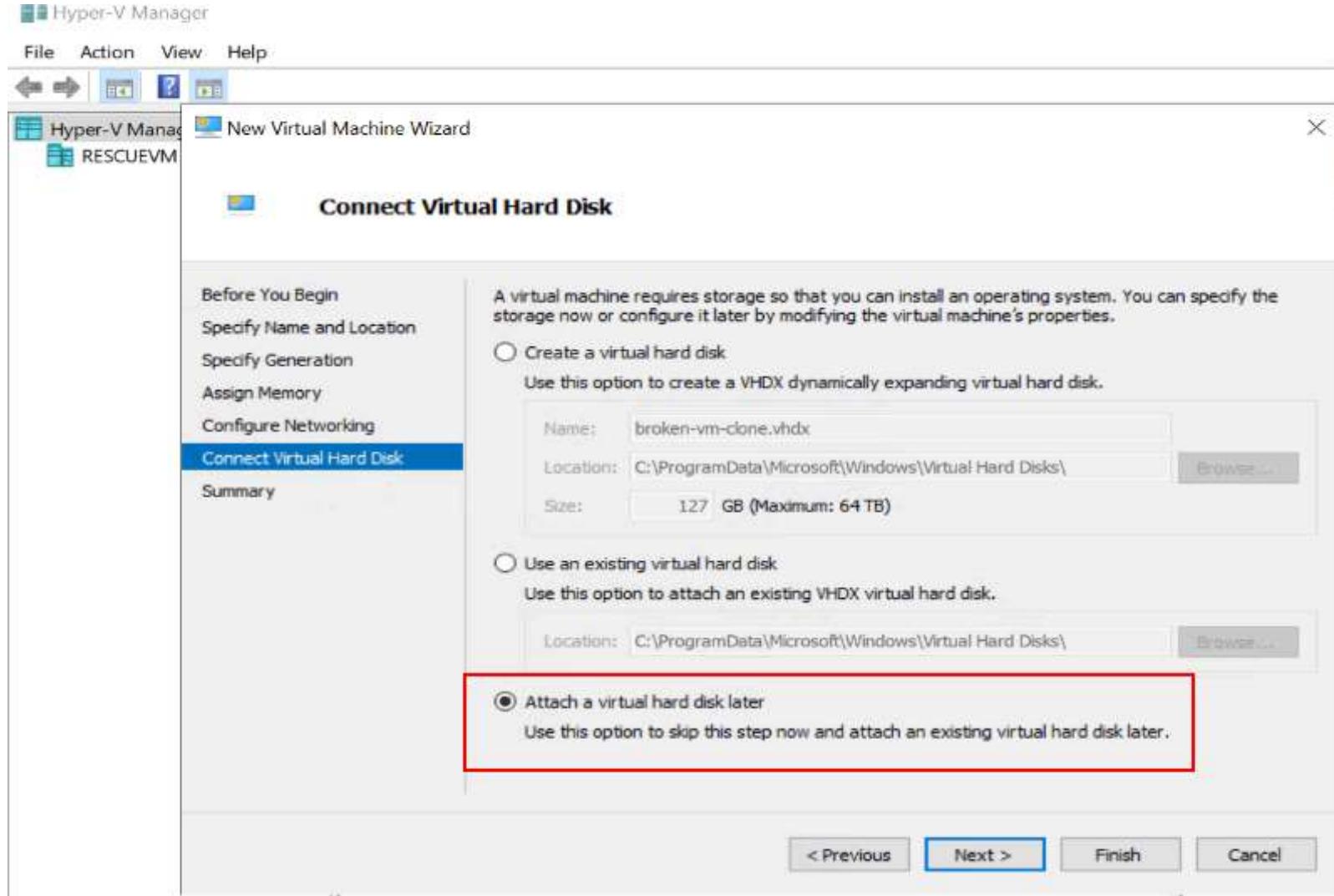
VM generation

V2



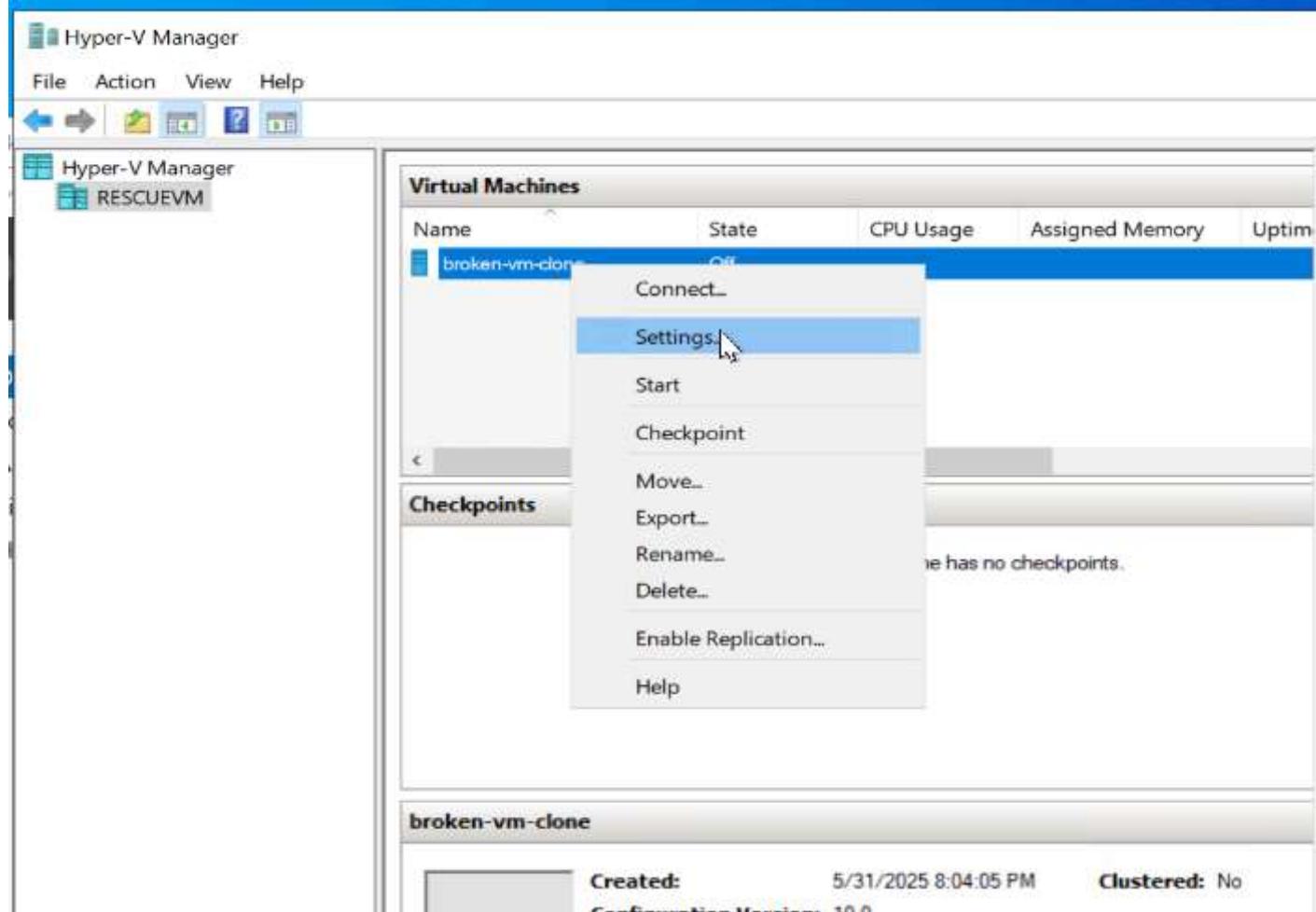
7. Leave the startup memory at **4096 MB** unless your VM requires more.
8. In the **Configure Networking** step, leave the connection as **Not connected**.

9. Choose **Attach a virtual hard disk later**.



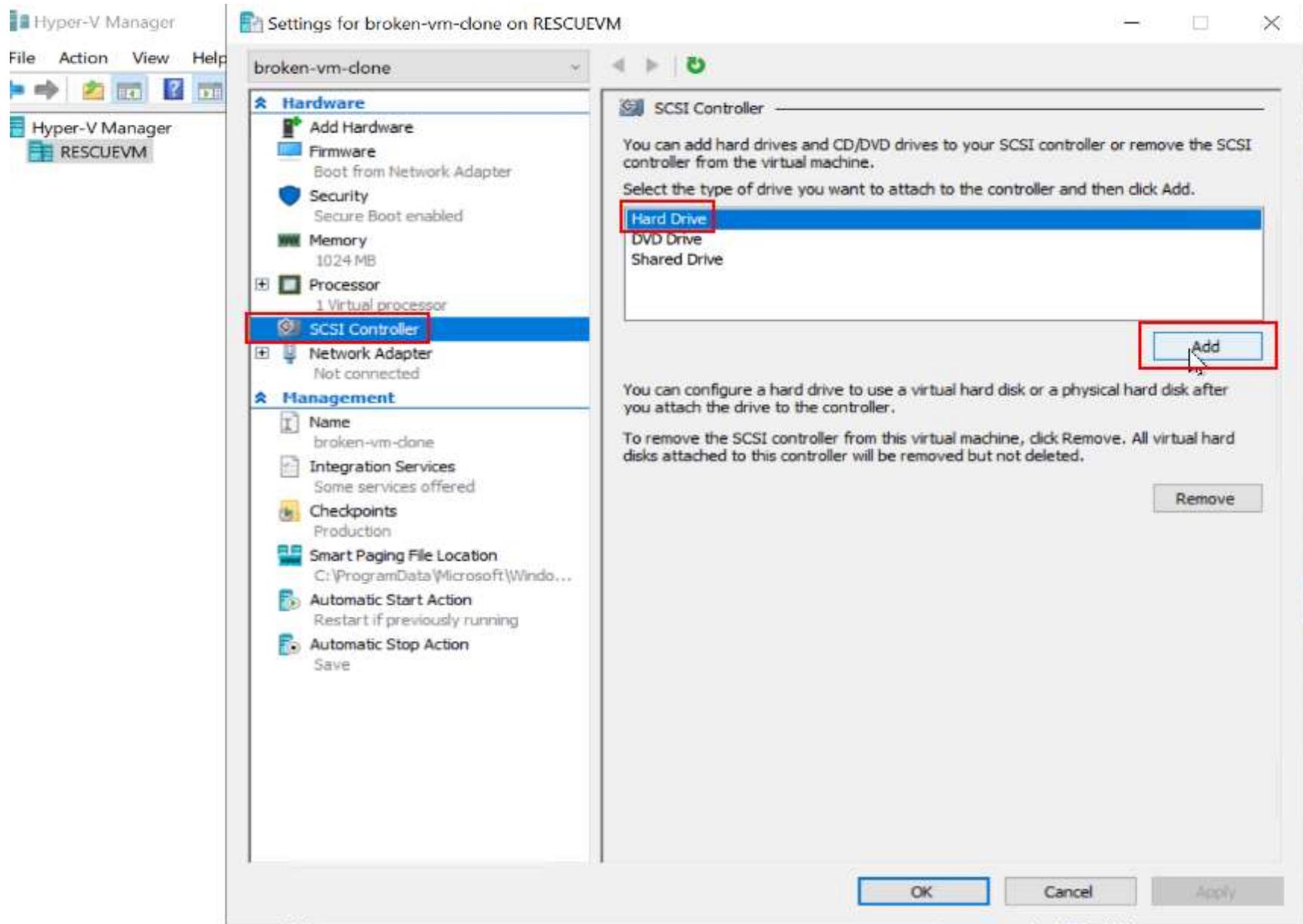
10. Click **Finish** to create the VM.

11. Right-click on the VM you just created and select **Settings**.



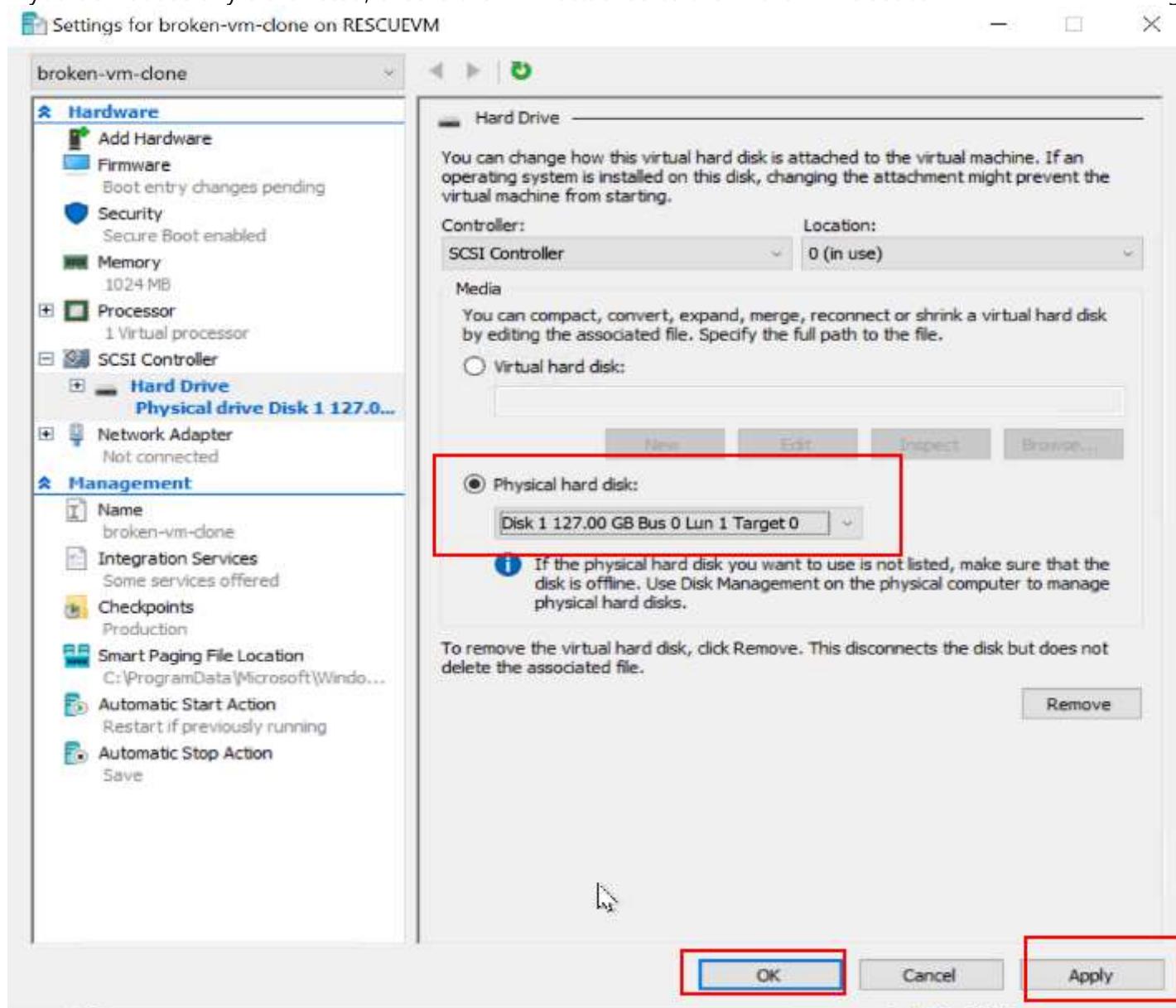
12. Select **SCSI Controller** for a Gen 2 VM (or **IDE Controller** if Gen 1).

13. Select **Hard Drive** and click **Add**.



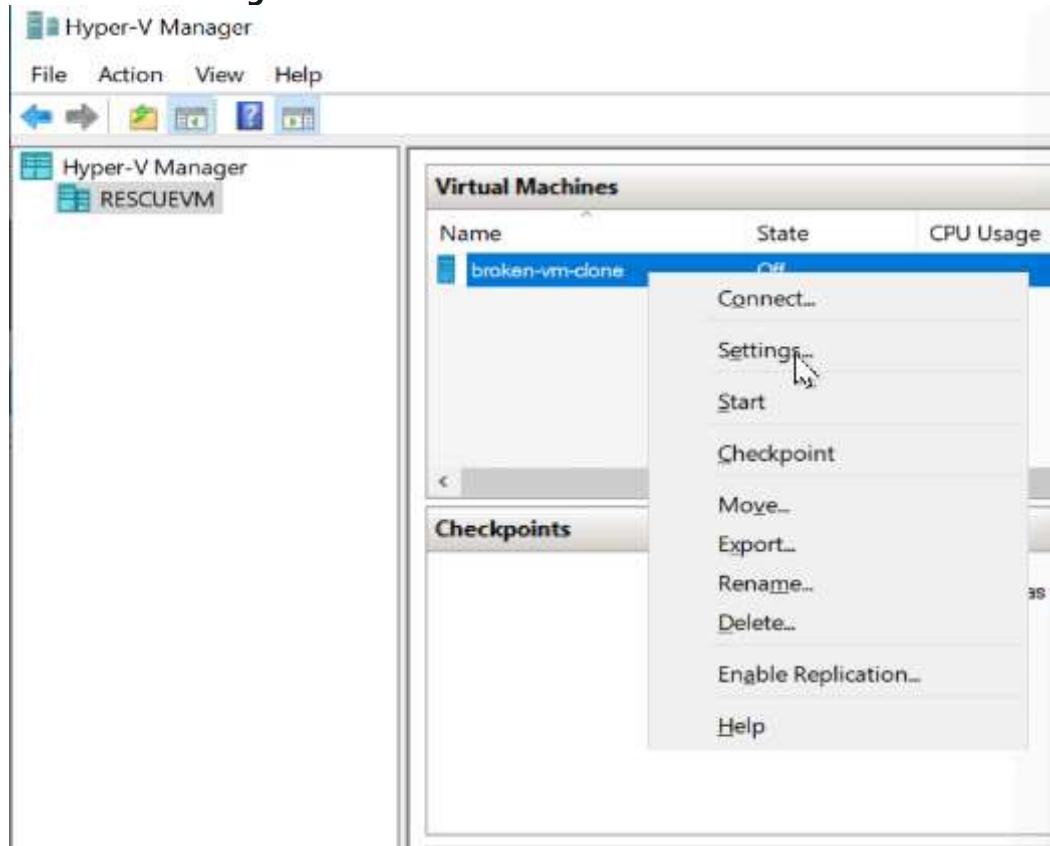
14. Under **Physical Hard Disk**, select the VHD of the broken VM that you attached to the Azure VM.

15. If you do not see any disks listed, ensure the VHD attached to the Azure VM is set to **Offline** in Disk Management on the rescue VM.

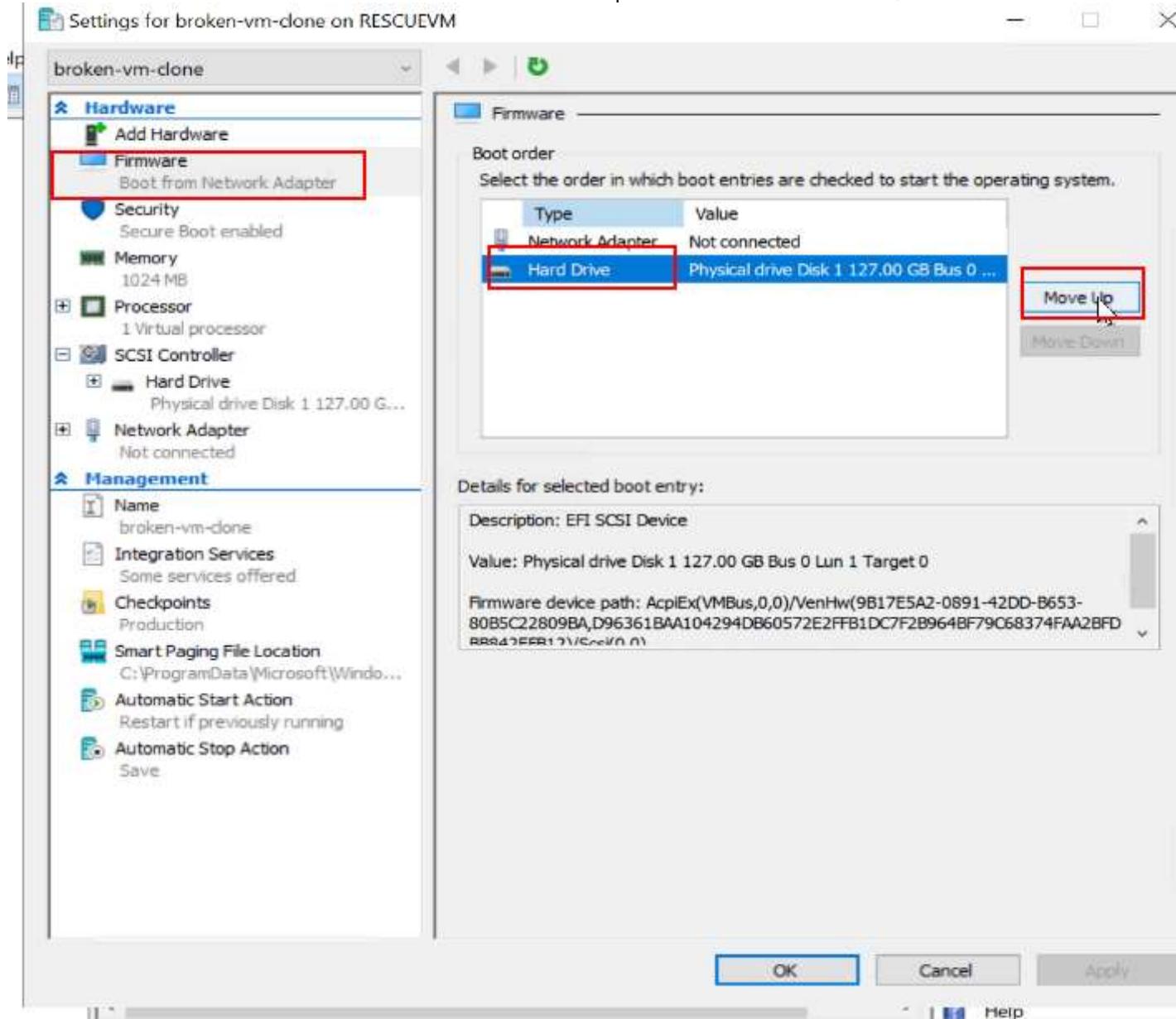


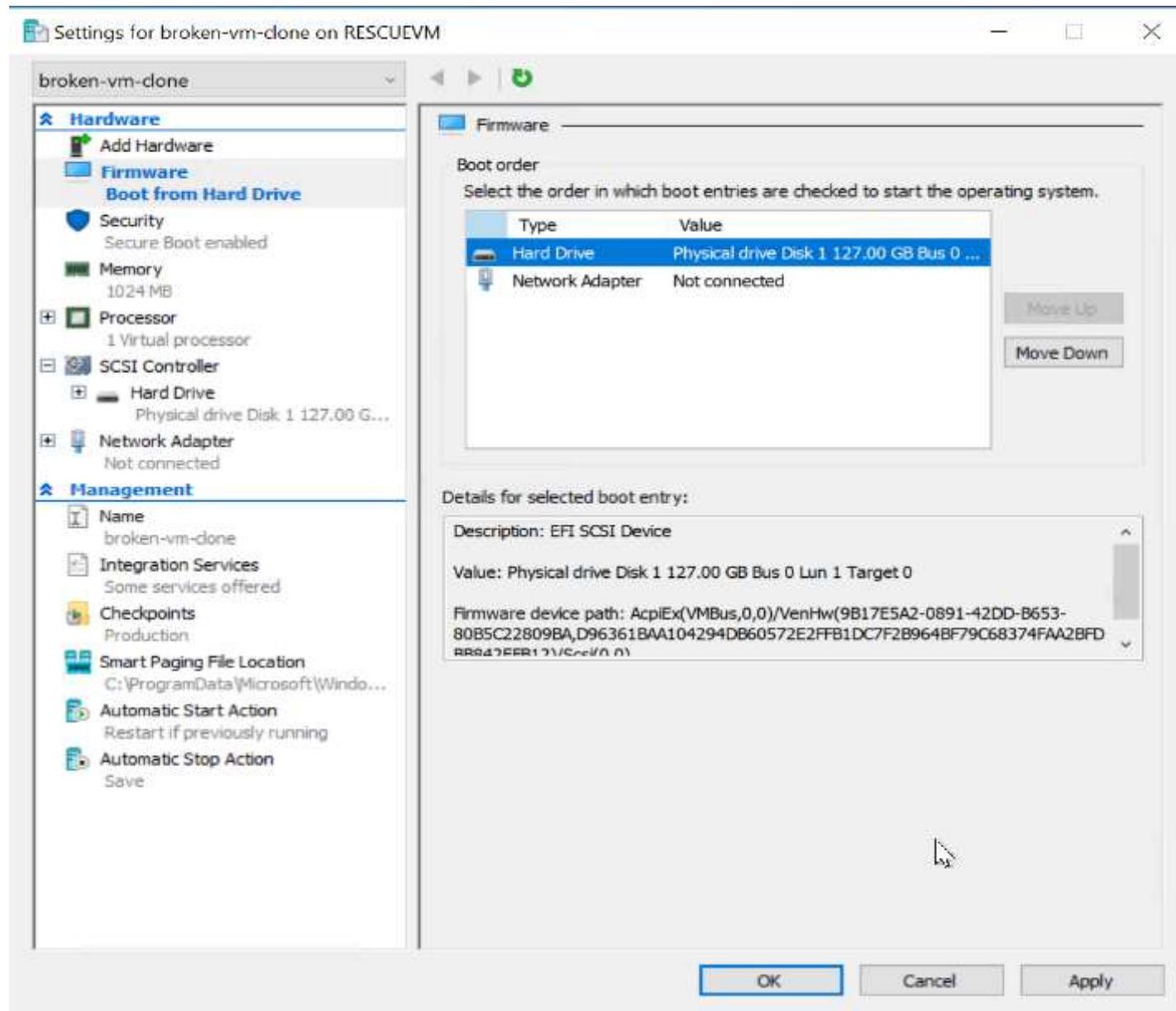
16. Click **Apply** and **OK**.

17. Go back to **Settings**:



18. In the **Firmware** section, ensure **Hard Drive** is at the top of the boot order. If not, select it and click **Move Up**.





Click **Apply** and **OK** to save the changes.

19. Double-click on the VM and click **Start**.

At this point, you are ready to work on your VM as you would with any on-premises VM. You can now proceed with any troubleshooting or mitigation steps as needed.

## Step 7 (Optional): Hyper-V DHCP Setup

If you need to test RDP connectivity from the Rescue VM to the Hyper-V VM, follow these steps to create a virtual switch, install the DHCP role on the Rescue VM, configure an IP scope, and connect the Hyper-V VM to the newly created virtual switch.

### 1. Create a Virtual Switch

Connect to the Rescue VM, open an administrative PowerShell session, and run:

```
New-VMswitch -Name "DHCPRescueSwitch" -SwitchType Internal
```

### 2. Assign a Static IP to the Host Interface

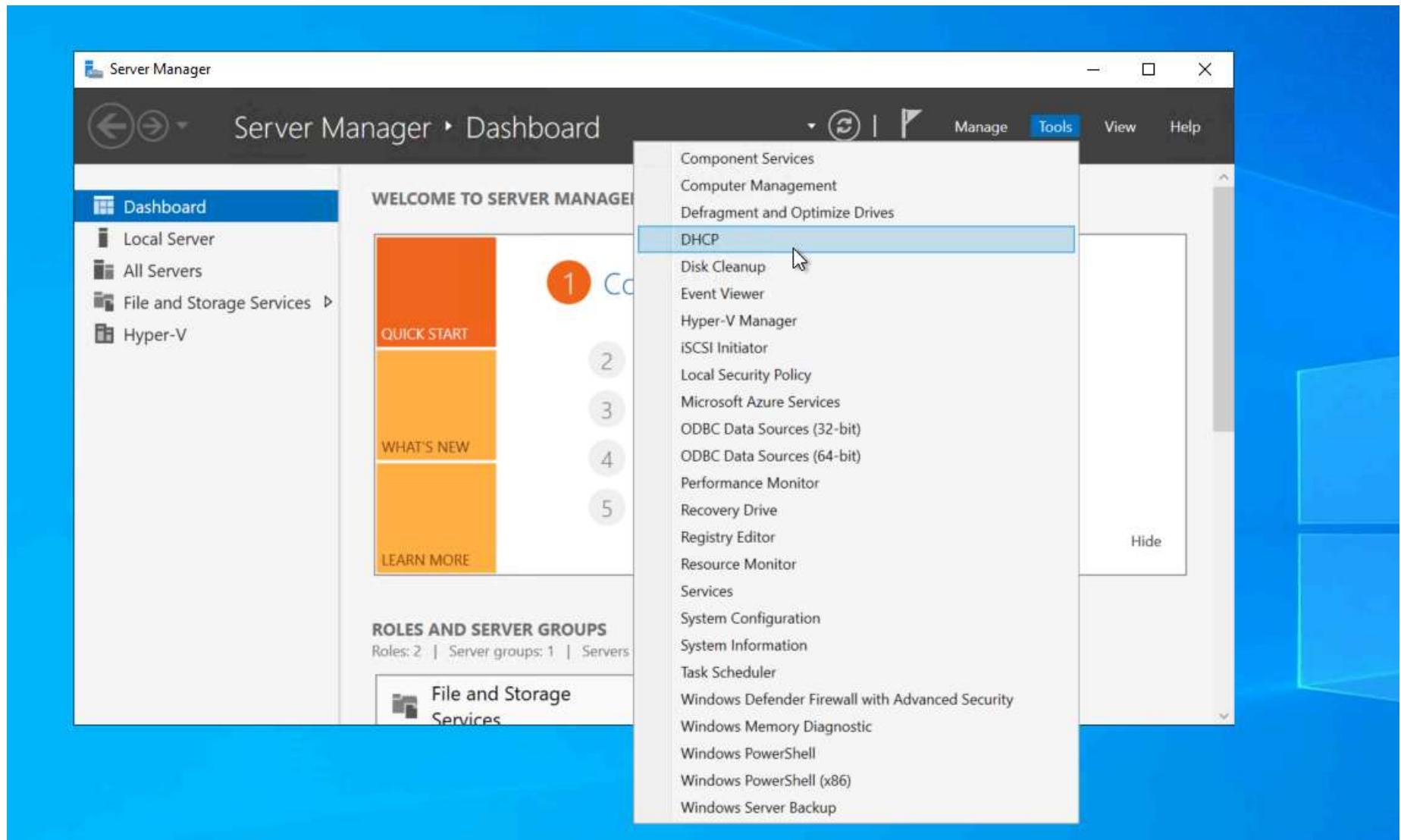
```
New-NetIPAddress -IPAddress 192.168.100.1 -PrefixLength 24 -InterfaceAlias "vEthernet (DHCPRescueSwitch)"
```

### 3. Install the DHCP Server Role on the Rescue VM (Windows Server only)

```
Install-WindowsFeature -Name DHCP -IncludeManagementTools
```

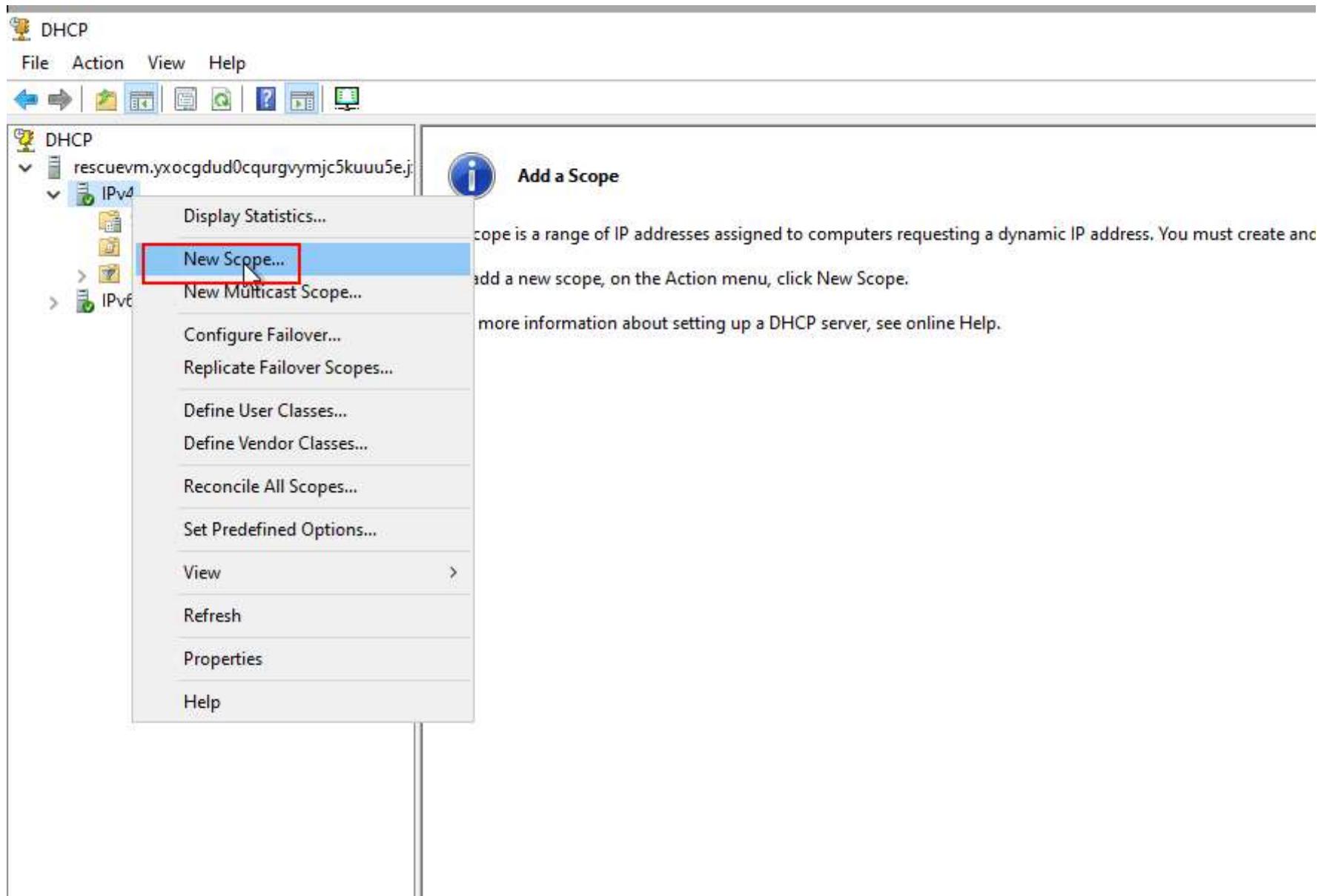
### 4. Configure the DHCP Scope

- Open **Server Manager** on the Rescue VM.
- Go to **Tools > DHCP**.



## 5. Create a New Scope

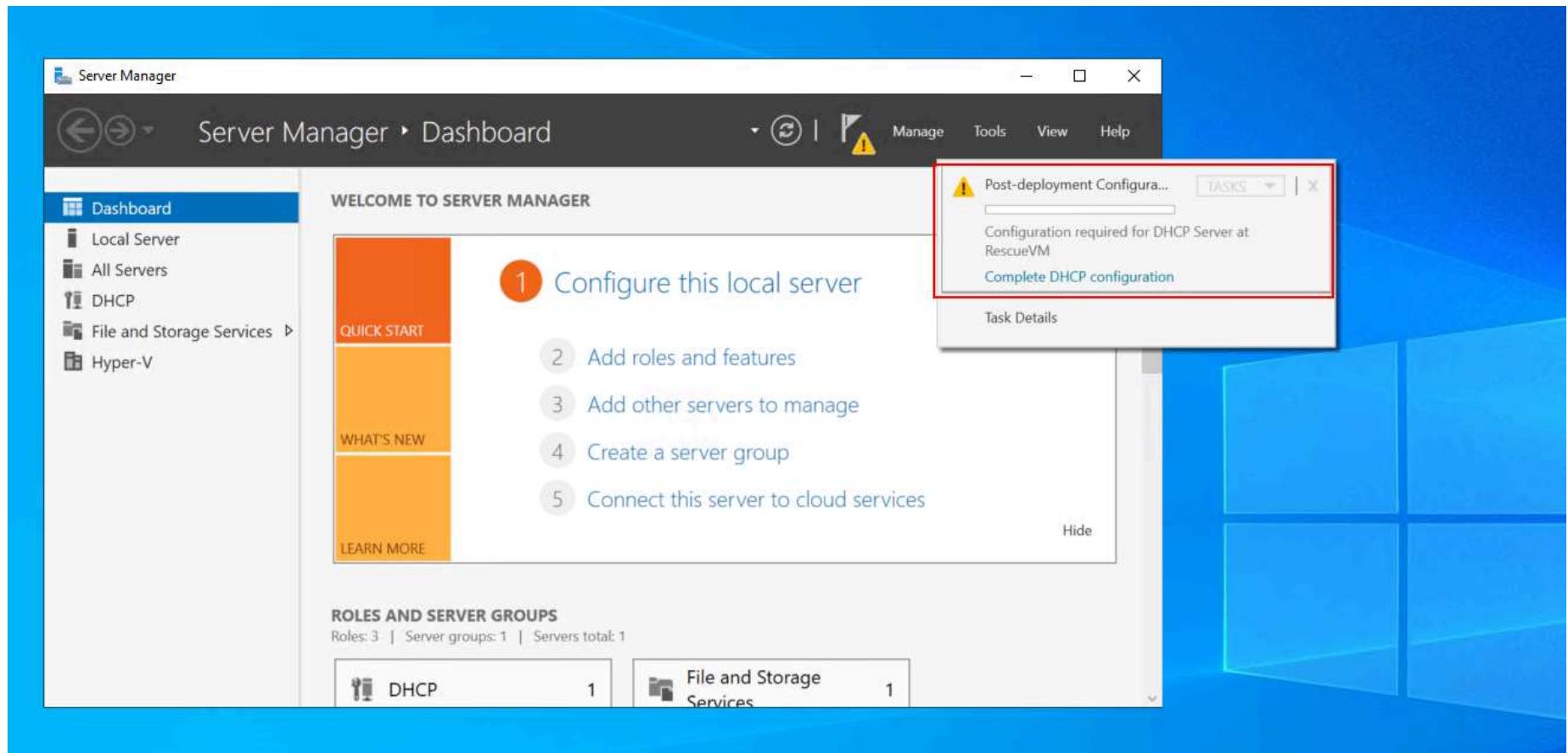
- Select your server, expand **IPv4**, right-click **IPv4**, and select **New Scope**.

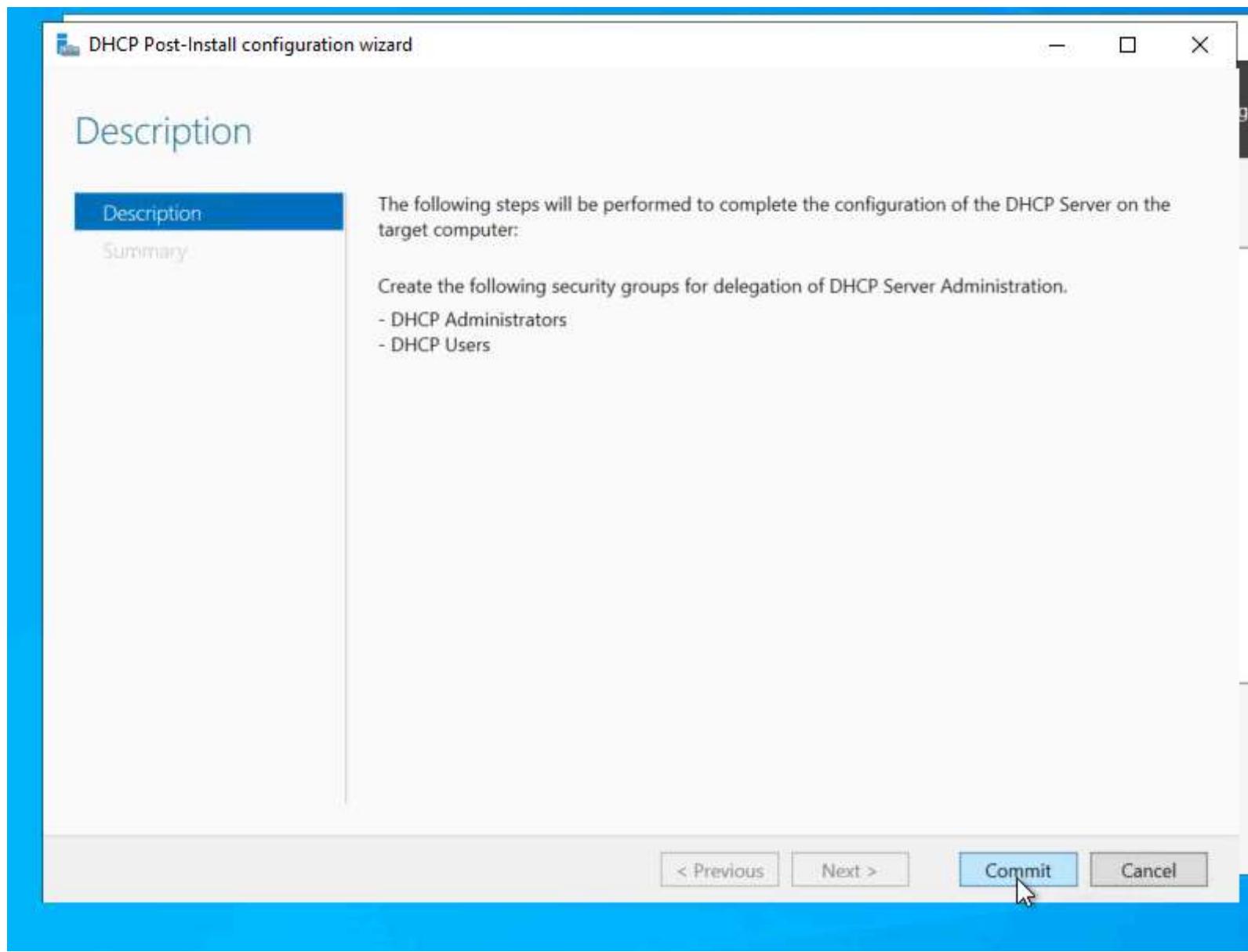


## 6. Define Scope Settings

- **Scope Name:**
  - Name: TestScope
  - Description: (leave blank)
- **IP Address Range:**

- Start IP address: 192.168.100.10
  - End IP address: 192.168.100.100
  - Length: 24
  - Subnet mask: 255.255.255.0
- **Exclusions and Lease Duration:** Leave as default.
  - **Configure DHCP Options:** Select **Yes, I want to configure these options now.**
  - **Router (Default Gateway):** Enter 192.168.100.1 and click **Add**.
  - **Domain Name and DNS Server:** If an address like 168.63.129.16 is listed, select it and click **Remove**.
  - **WINS Servers:** Leave as is.
7. Finish the configuration by going to **Server Manager** and clicking on the yellow alert, then selecting **Complete DHCP configuration**:

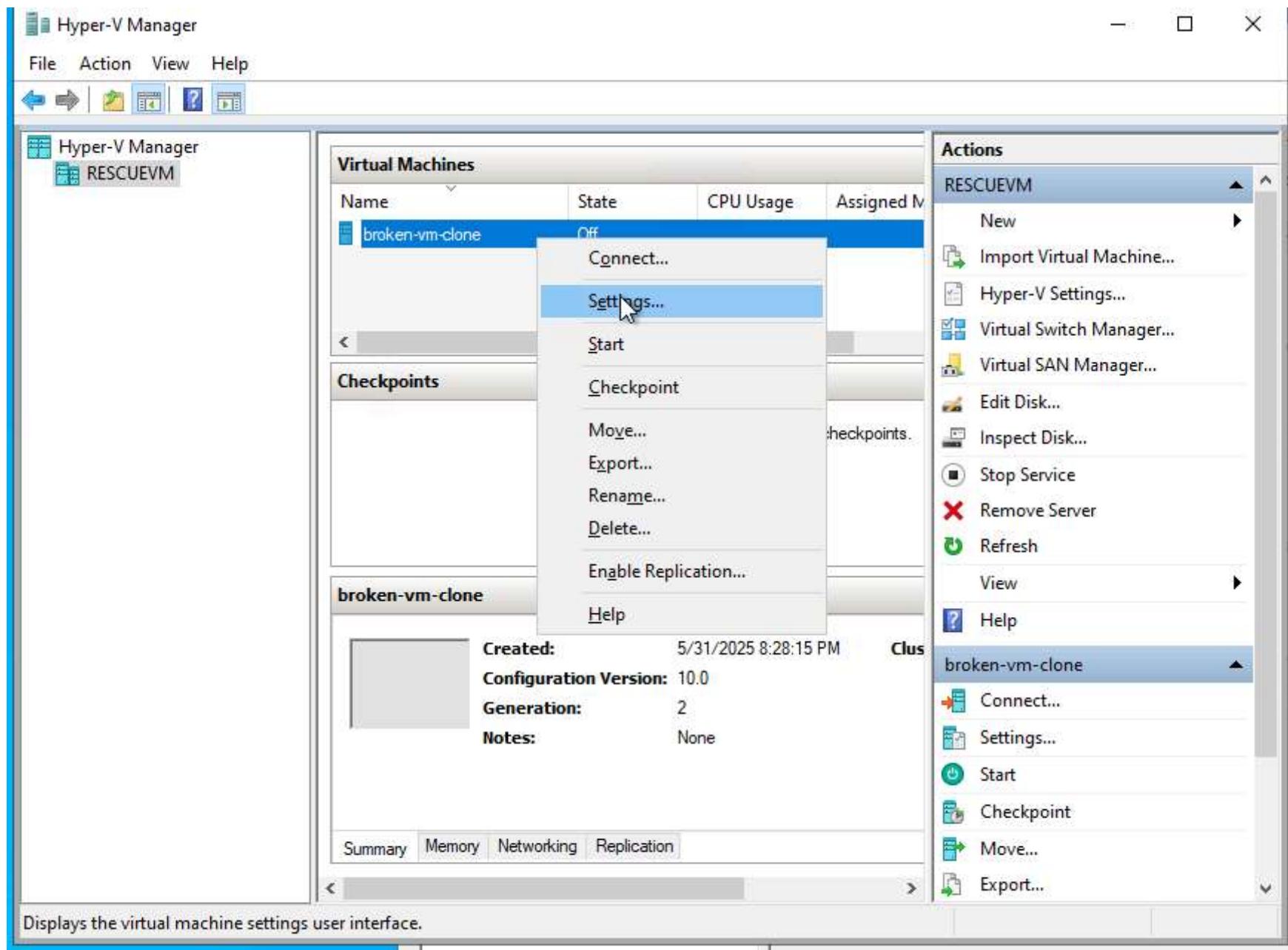




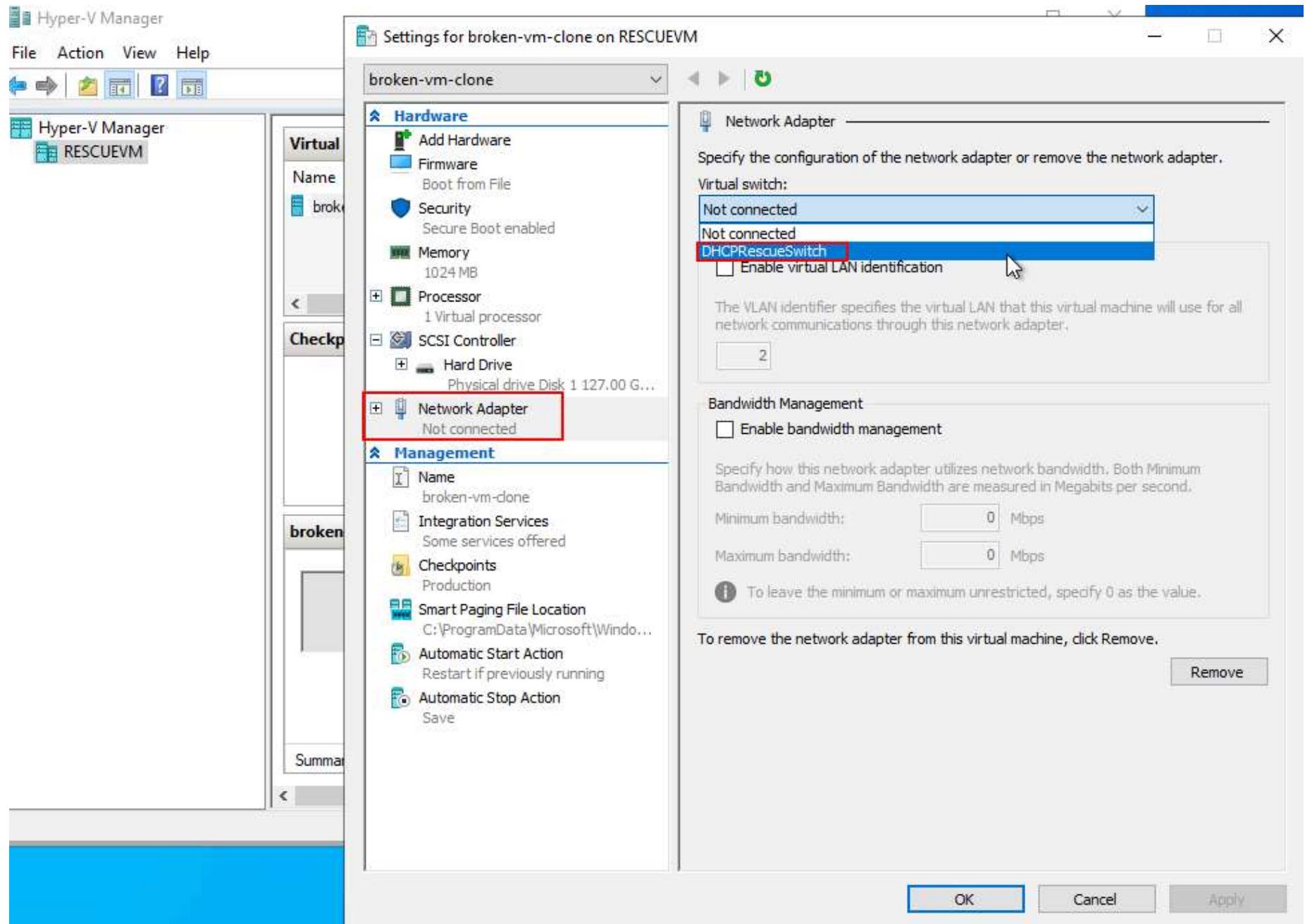
**8. Assign the Virtual Switch to the Hyper-V VM:**

Ensure the Hyper-V VM is turned off.

**9. Right-click on the Hyper-V VM and select **Settings**:**



10. Select **Network Adapter**, and under **Virtual Switch**, choose the switch you recently created:



Click **Apply** and **OK** to save the changes.

11. Power on the Hyper-V VM and check if an IP address has been assigned:

Inside the Hyper-V VM, run `ipconfig`. You should see one of the IP addresses from the DHCP scope you created on the rescue VM:

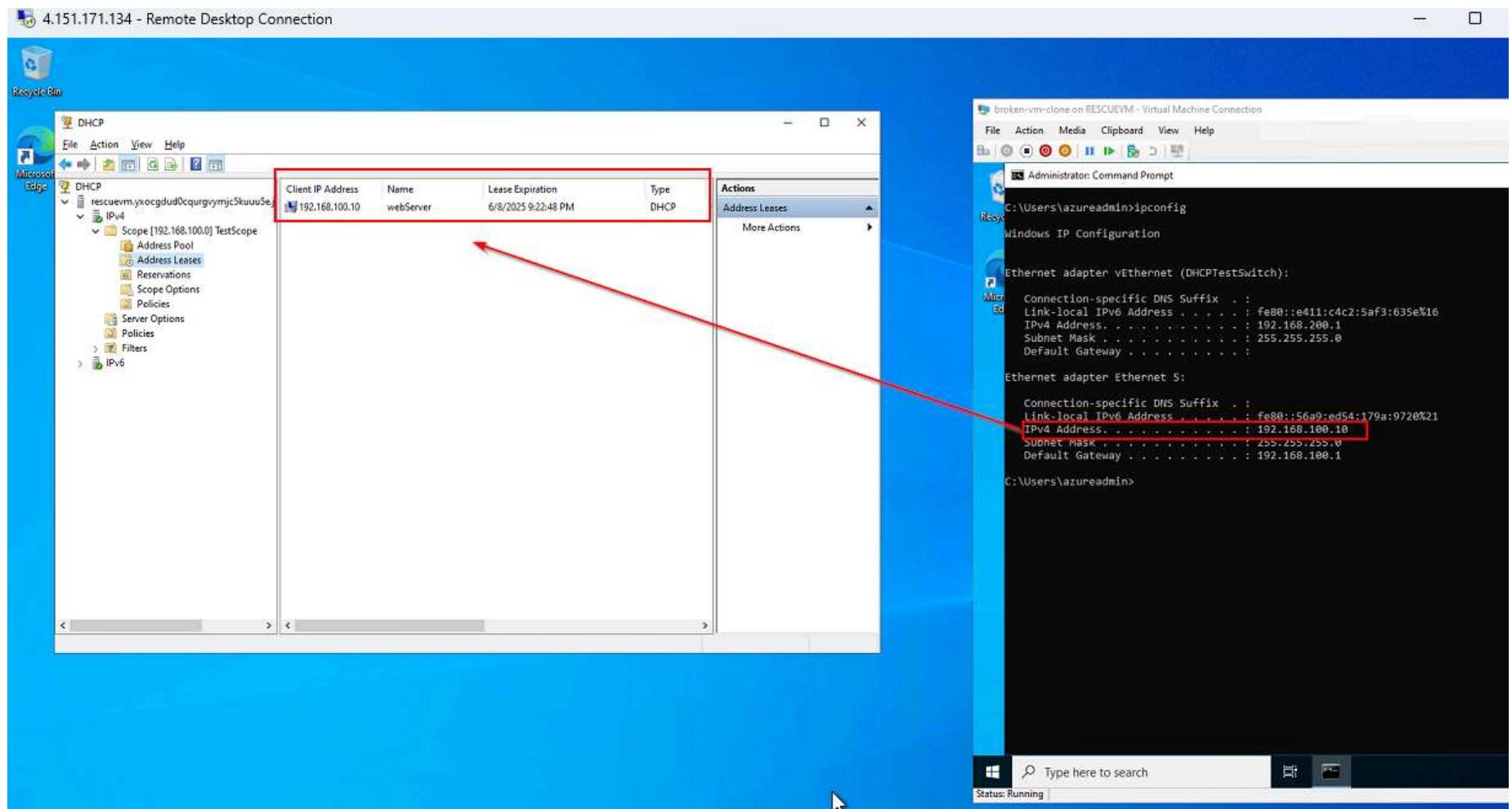
```
broken-vm-clone on RESCUEVM - Virtual Machine Connection:
File Action Media Clipboard View Help
Administrator: Command Prompt
C:\Users\azureadmin>ipconfig
Windows IP Configuration

Ethernet adapter vEthernet (DHCPTestSwitch):
  Connection-specific DNS Suffix . :
  Link-local IPv6 Address . . . . . : fe80::e411:c4c2:5af3:635e%16
  IPv4 Address . . . . . : 192.168.200.1
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . . :

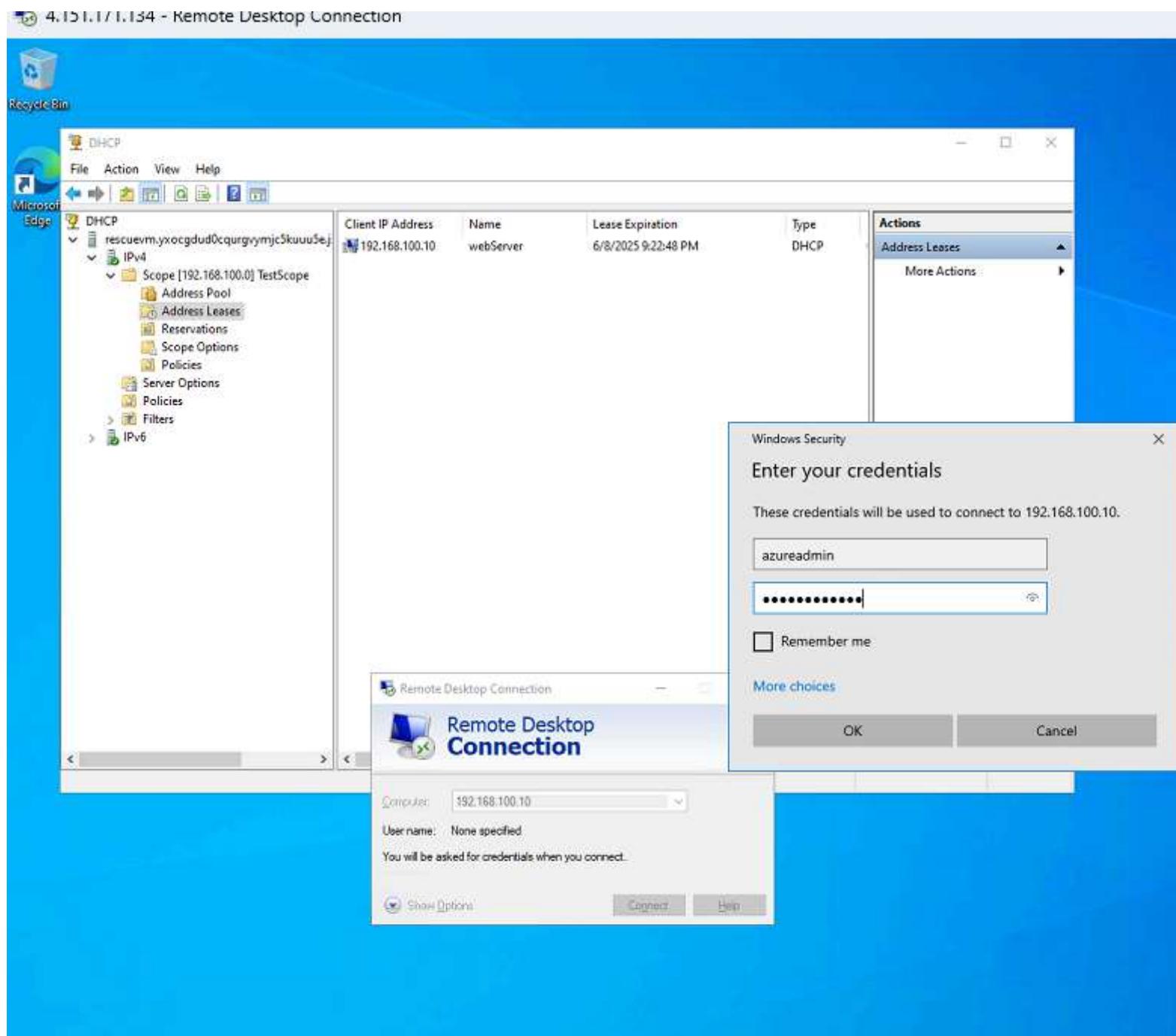
Ethernet adapter Ethernet 5:
  Connection-specific DNS Suffix . :
  Link-local IPv6 Address . . . . . : fe80::56a9:ed54:179a:9720%21
  IPv4 Address . . . . . : 192.168.100.10
  Subnet Mask . . . . . : 255.255.255.0
  Default Gateway . . . . . : 192.168.100.1

C:\Users\azureadmin>
```

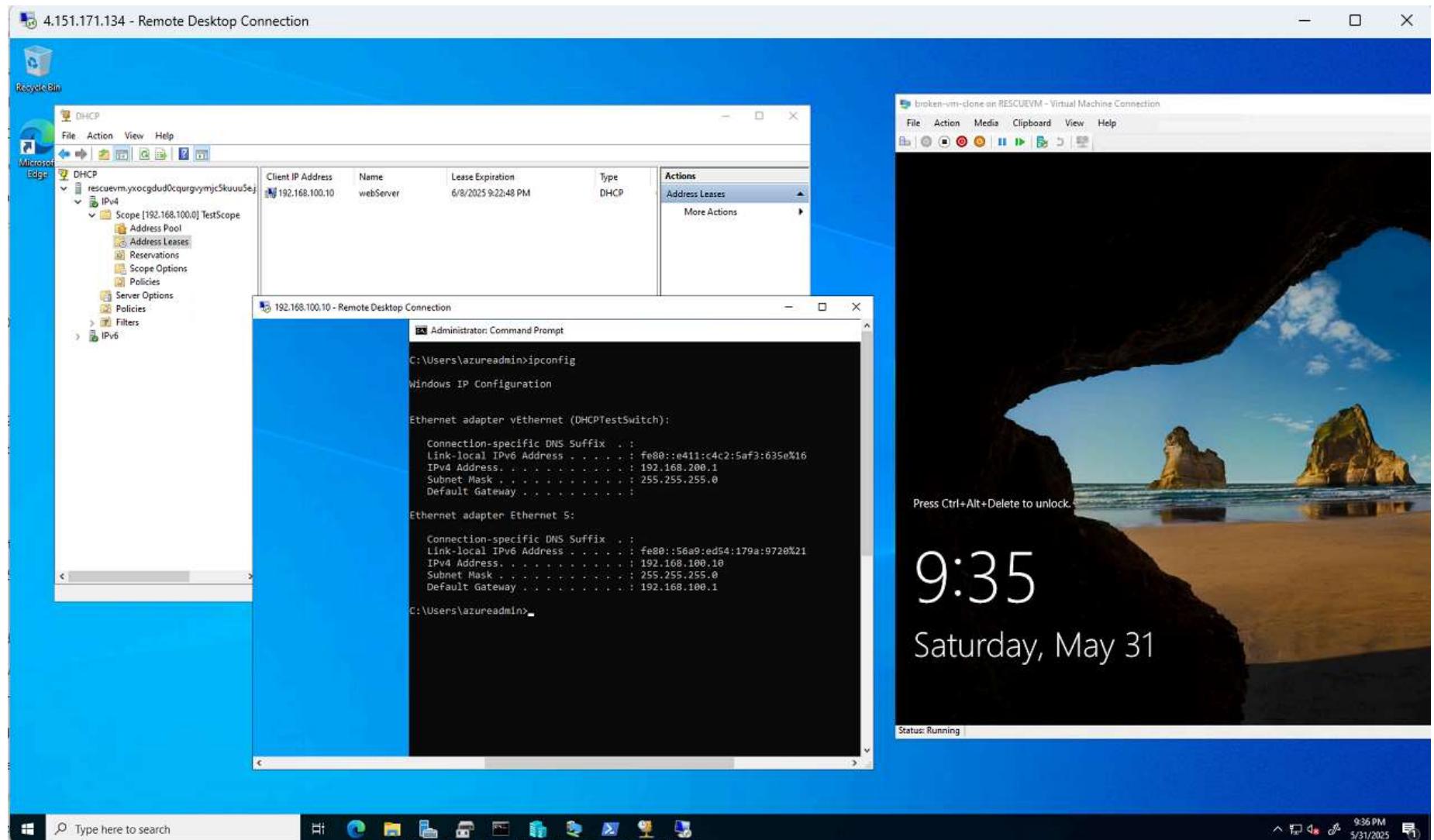
You can also verify the assigned IP address in the rescue VM under **Address Leases** for the DHCP scope:



12. Now, try to RDP to the Hyper-V VM from the rescue VM:



You should now have a remote desktop connection:



## Step 8: Swap Broken OS Disk with Fixed Disk

1. Once you have the VM back online, shut down the nested VM in Hyper-V Manager.
2. In the Azure Portal, select the Rescue VM, then go to **Disks**.
3. Detach the now fixed VHD from the Rescue VM.

RescueVM | Disks ⋮ X

Virtual machine

Search Refresh | Additional settings | Feedback | Troubleshoot

OS disk

Swap OS disk

Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...	Encryption ⓘ	Host caching ⓘ
RescueVM_disk1_778af315d47e4dce9e4dbce71f94b638	Standard HDD LRS	127	500	60	SSE with PMK	Read/write

Data disks

Filter by name

Showing 1 of 1 attached data disks

+ Create and attach a new disk Attach existing disks

LUN ⓘ	Disk name	Storage type	Size (GiB)	Max IOPS	Max throughput (...	Encryption ⓘ	Host caching ⓘ
0	websvrdisk-clone	Standard HDD LRS	127	500	60	SSE with PMK	None

Edit icon

# RescueVM | Disks

Virtual machine

 Search[Refresh](#)[Additional settings](#)[Feedback](#)[Troubleshoot](#)[Overview](#)[Activity log](#)[Access control \(IAM\)](#)[Tags](#)[Diagnose and solve problems](#)[Resource visualizer](#)[Connect](#)[Connect](#)[Bastion](#)[Windows Admin Center](#)[Networking](#)[Network settings](#)[Load balancing](#)[Application security groups](#)[Network manager](#)[Settings](#)[Disks](#)[Extensions + applications](#)

## OS disk

[Swap OS disk](#)

Disk name	Storage type
RescueVM_disk1_778af315d47e4dce9e4dbce71f94b638	Standard HDD LRS

## Data disks

 Filter by name

Showing 0 of 0 attached data disks

[+ Create and attach a new disk](#)[🔗 Attach existing disks](#)

LUN	Disk name	Storage type
-----	-----------	--------------

No data disks attached

4. Replace the OS disk used by the faulty VM:

- Go to the broken VM, then to **Disks**, and select **Swap OS disk**.

The screenshot shows the Azure portal interface for managing a virtual machine named "broken-vm". The left sidebar contains navigation links for Overview, Activity log, Access control (IAM), Tags, Diagnose and solve problems, Resource visualizer, Connect (with options for Connect and Bastion), and Networking (with options for Network settings, Load balancing, and Application security groups). The main content area is titled "broken-vm | Disks" and displays the "OS disk" section. A red box highlights the "Swap OS disk" button, which is currently being clicked by a cursor. Below this, a table lists a single data disk: "broken-vm\_OsDisk\_1\_2a025b5058454a5ca6173629bd2a31cf", with storage type "Standard HDD LRS" and size "127 GiB". The "Data disks" section shows "Showing 0 of 0 attached data disks" and includes buttons for "Create and attach a new disk" and "Attach existing disks".

Disk name	Storage type	Size (GiB)
broken-vm_OsDisk_1_2a025b5058454a5ca6173629bd2a31cf	Standard HDD LRS	127

**Data disks**

Showing 0 of 0 attached data disks

+ Create and attach a new disk    Attach existing disks

LUN	Disk name	Storage type	Size (GiB)
No data disks attached			

- Select the fixed disk, type the VM name, and click **OK**.

## Swap OS Disk ...

Swap the OS disk for a backup disk or another disk for VM troubleshooting, [Learn more](#).

Choose disk \*

Select an existing disk

### All disks

webServer-DiskCopy-20250302204201

size: 127 GiB, account type: Standard HDD LRS, resource group: TEST-CUSTOMFQDN-RG, disk shares ...

webServer-DiskCopy-20250302235934

size: 127 GiB, account type: Standard HDD LRS, resource group: TEST-CUSTOMFQDN-RG, disk shares ...

broken-vm-DiskCopy-20250531174243

size: 127 GiB, account type: Standard HDD LRS, resource group: TESTAZURE-RG, disk shares used 0 of ...

### Disks in resource group 'TESTAZURE-RG'

broken-vm-DiskCopy-20250531174243

size: 127 GiB, account type: Standard HDD LRS, disk shares used 0 of 1 

## Swap OS Disk

...

Swap the OS disk for a backup disk or another disk for VM troubleshooting. [Learn more.](#)

Choose disk \*

broken-vm-DiskCopy-20250531174243



⚠ This VM will be stopped (deallocated) and the OS disk will be replaced. Any existing data on the OS disk will be lost.

Confirm you want to swap the OS disk for this VM by entering the name of the vm 'broken-vm'

broken-vm



## Cred

### ▼ Cli

If the customer requests a credit refund for the extra work involved in creating the nested environment for troubleshooting, follow this process:



1. Open a problem ticket to Billing with the following details in the issue description area:

- **Product:** Azure Billing
- **Support topic:** Credit request / Help with credit request for a scenario not listed
- **Issue description:**

Subscription ID for the affected subscription:  
Services affected (SQL Server, Virtual Machine):  
Instance ID:  
VM Size:  
Problem description:  
Cause:  
Effect:  
Issue start (in UTC):  
Issue end (in UTC):



## Need additional help or have feedback?

<i>To engage the Azure RDP-SSH SMEs...</i>	<i>To provide feedback on this page...</i>	<i>To provide kudos on this page...</i>
<p>If you are in the <b>OneVM team</b> then reach out to the <a href="#">RDP-SSH SMEs</a> AVA channel via Teams.</p> <p>If you are a <b>VM Delivery Partner</b> then follow your team's process for swarming or ask your TA.</p> <p>Make sure to use the <a href="#">Ava process</a> for faster assistance.</p>	<p>Use the <a href="#">RDP-SSH Feedback</a> form to submit detailed feedback on improvements or new content ideas for RDP-SSH.</p> <p><b>Please note</b> the link to the page is required when submitting feedback on existing pages!</p> <p>If it is a new content idea, please put N/A in the Wiki Page Link.</p>	<p>Use the <a href="#">RDP-SSH Kudos</a> form to submit kudos on the page. Kudos will help us improve our wiki content overall!</p> <p><b>Please note</b> the link to the page is required when submitting kudos!</p>