

Microsoft Hyper-V Hypervisor Virtual Machine Install Guide

This document serves as a guide on how to install and configure Wanos on a production Hyper-V system. Administrators are encouraged to read and to get familiarized with the product before deploying Wanos in production. The install guide focuses on a default Bridge Deployment.

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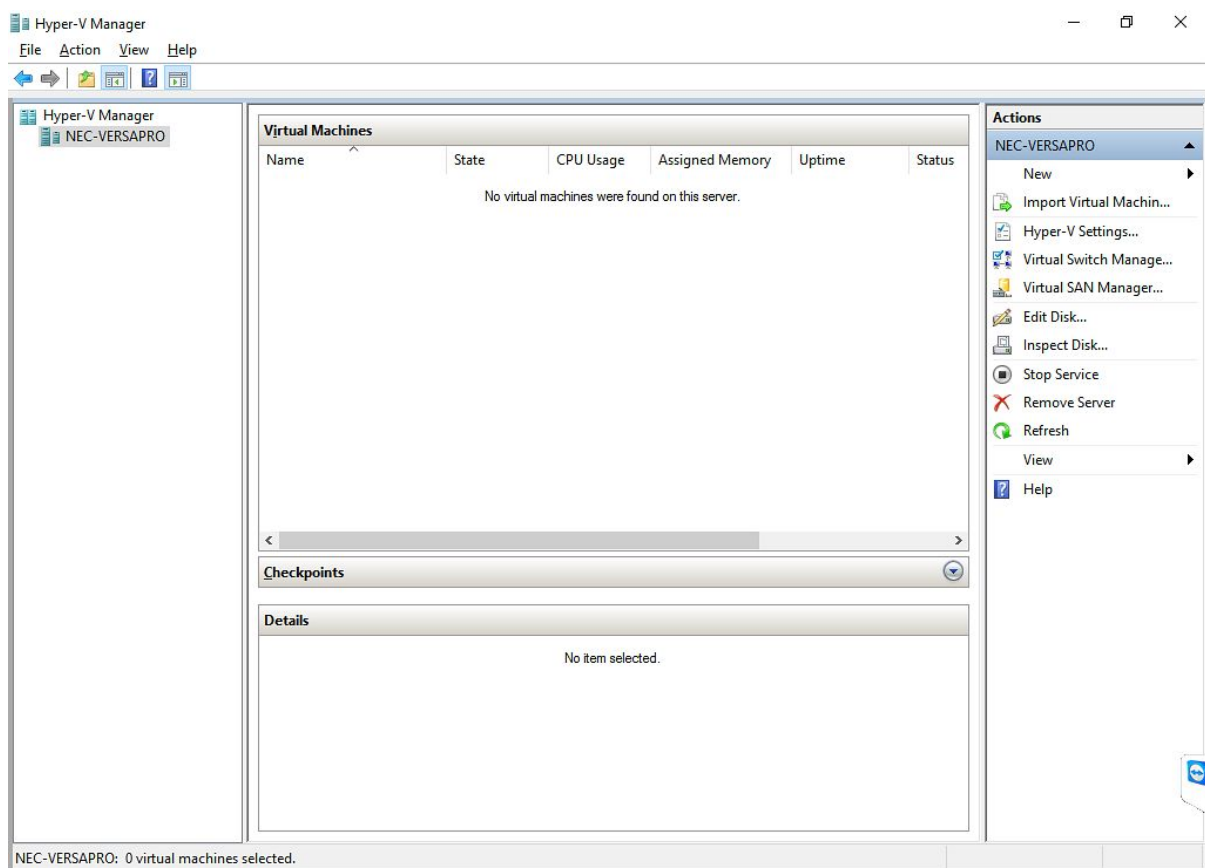
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Virtual Switch

This section tackles the configuration of the Virtual Switch in Hyper-V. Two virtual switches are required for one Wanos Appliance. **WAN_Link** and **Server_LAN** will be used as an example.

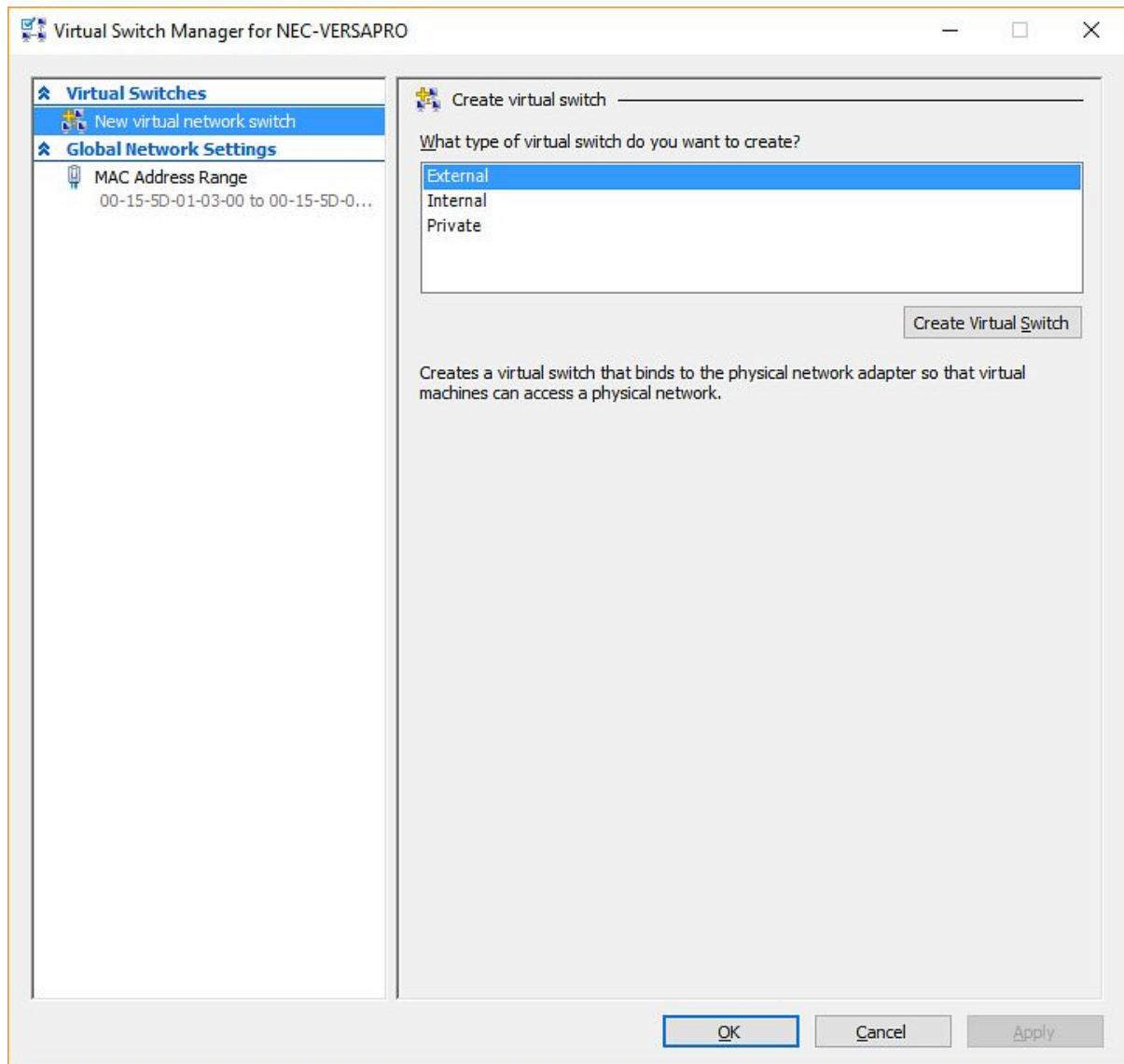


Screenshot of the Hyper-V Manager

To get started, click **Virtual Switch Manager** found in the **Actions** Pane.

WAN_Link

Create a new virtual switch by selecting **External** and clicking on **Create Virtual Switch** button.



Screenshot of the Virtual Switch Manager.

Select **External network** and choose the appropriate LAN Adapter. Make sure to leave **Allow management operating system to share this network adapter** checkbox selected. Click the **Apply** button to commit the changes.

Server_LAN

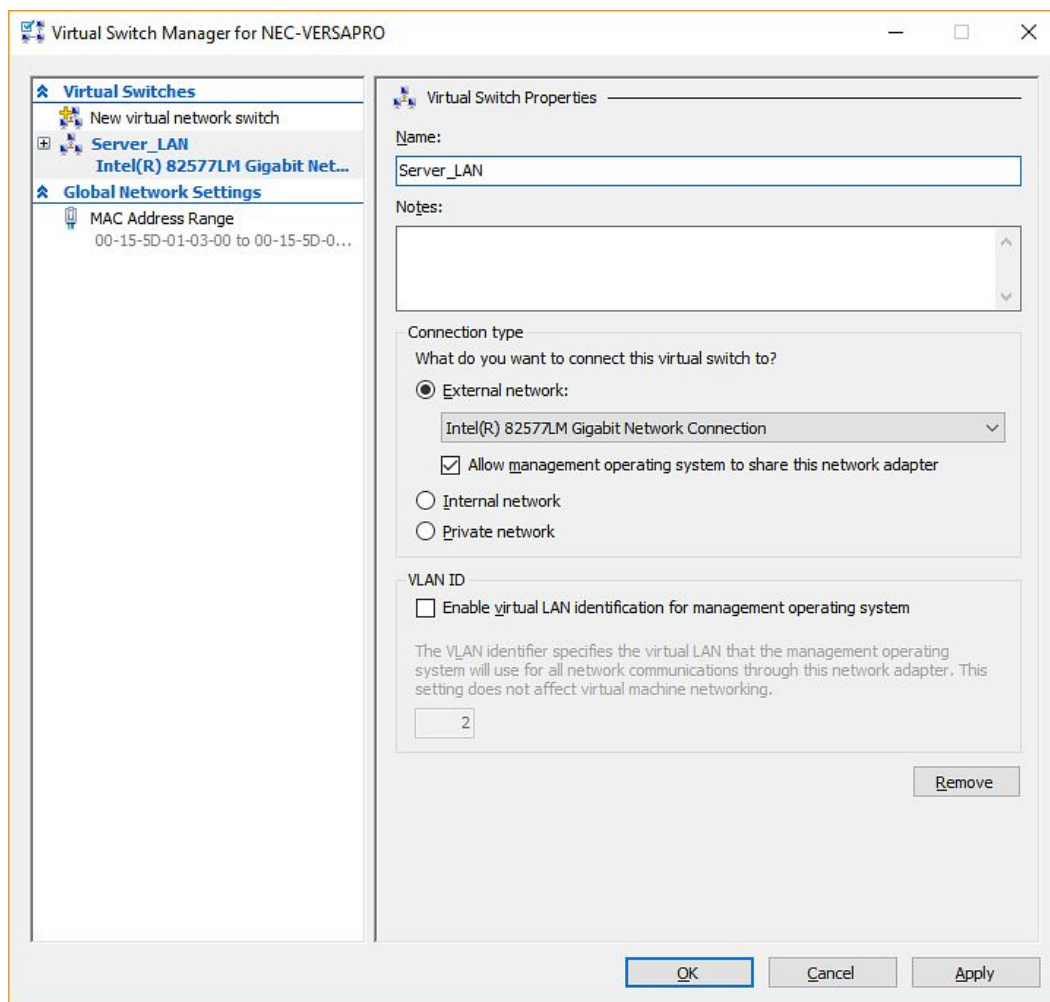
Repeat the steps outlined in WAN_Link using the following information. Select **External** and select the interface connecting to the physical LAN where the physical servers or workstations are connected to.

Alternatively, when connecting to virtual servers on the same Hyper-V host, select **Internal** to connect to the virtual server network.

For example, connecting to the physical LAN network:

Type of Virtual Switch: **External**

Name: **Server_LAN**



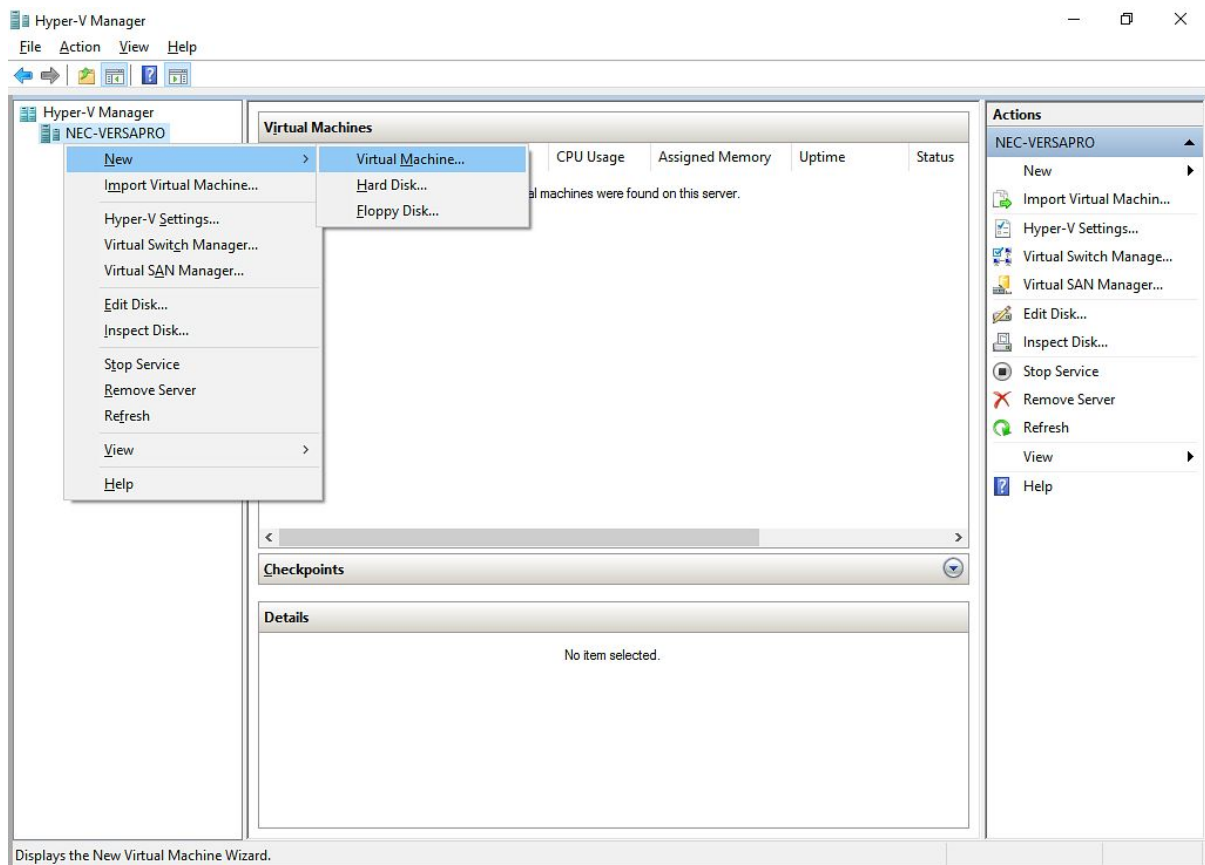
Screenshot of the Virtual Switch Properties window.

Import Wanos Appliance

After downloading the **Virtual Appliance VHD**, decompress the zip file to extract the VHD file into a directory of your choice (e.g. Downloads).

Using Wanos on a production environment requires at least two deployments of the appliance.

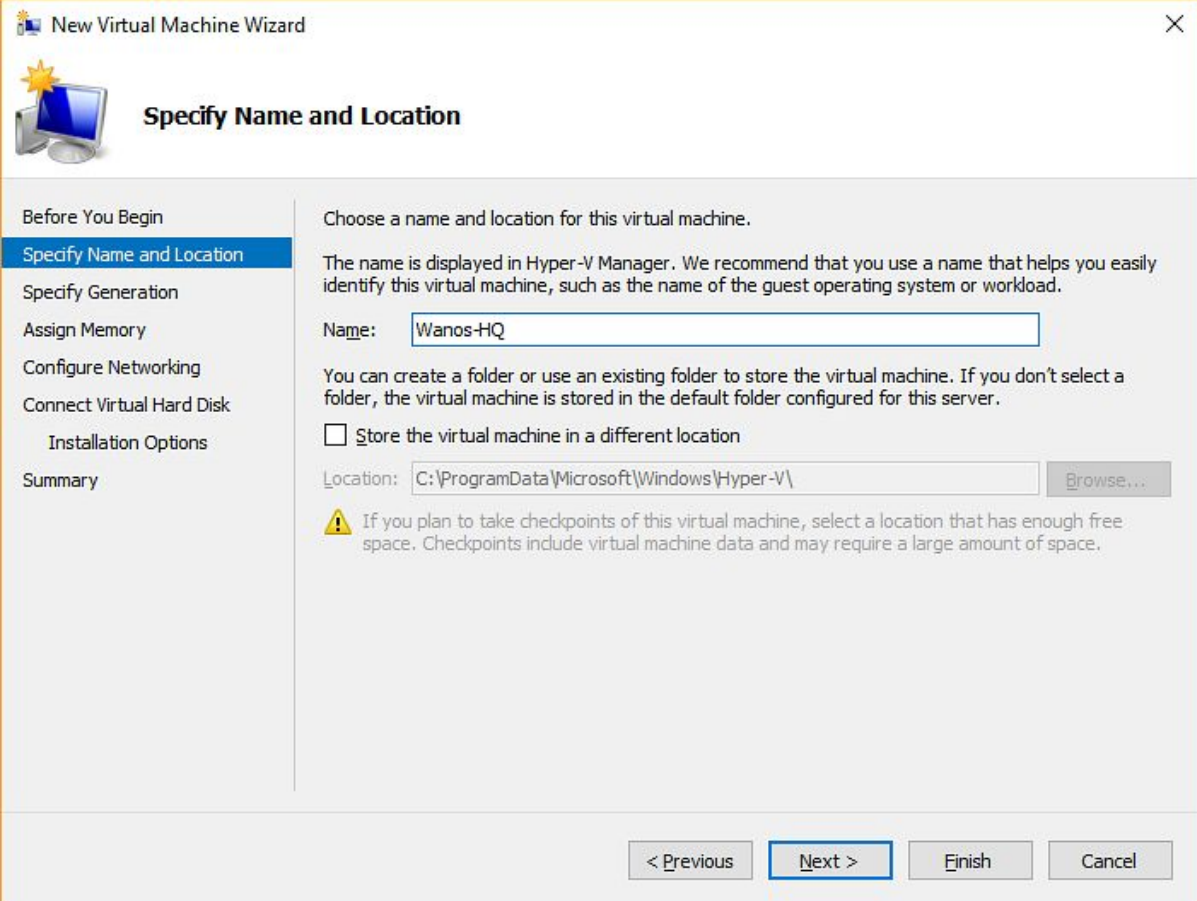
To get started, select **Action** (or right click on the **Server**) > **New** > **Virtual Machine** on the Hyper-V Manager window.



Screenshot of Hyper-V Manager when creating a new virtual machine.

Wanos-HQ

Set the **Name** to **Wanos-HQ**. The admin can manually *Store the virtual machine in a different location*. Click **Next** to continue.



The screenshot shows the 'New Virtual Machine Wizard' dialog box, specifically the 'Specify Name and Location' step. The window title is 'New Virtual Machine Wizard' and it has a close button (X) in the top right corner. The main title of the step is 'Specify Name and Location'. On the left side, there is a navigation pane with the following steps: 'Before You Begin', 'Specify Name and Location' (which is currently selected and highlighted in blue), 'Specify Generation', 'Assign Memory', 'Configure Networking', 'Connect Virtual Hard Disk', 'Installation Options', and 'Summary'. The main area of the dialog contains the following text and controls:

Choose a name and location for this virtual machine.


The name is displayed in Hyper-V Manager. We recommend that you use a name that helps you easily identify this virtual machine, such as the name of the guest operating system or workload.

Name:

You can create a folder or use an existing folder to store the virtual machine. If you don't select a folder, the virtual machine is stored in the default folder configured for this server.

Store the virtual machine in a different location

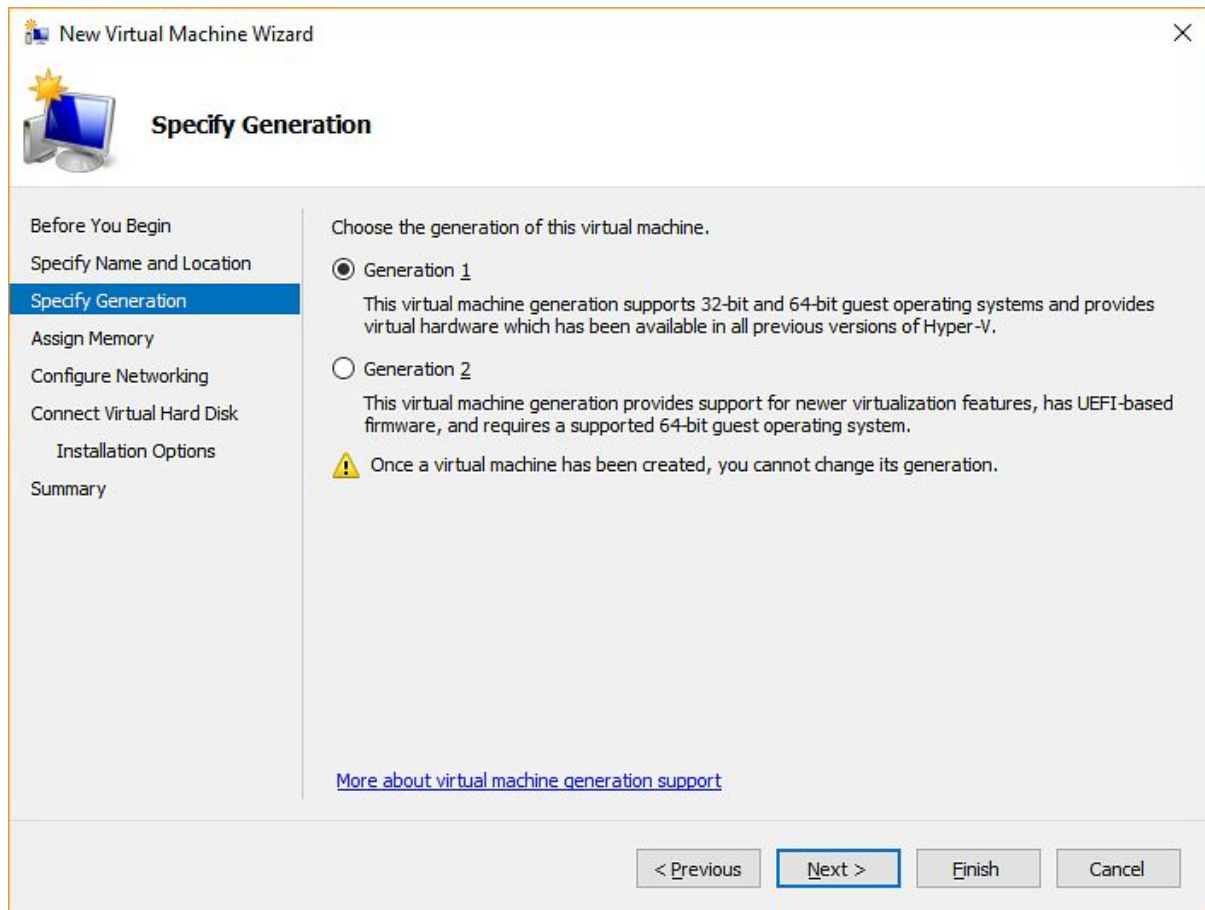
Location:

 If you plan to take checkpoints of this virtual machine, select a location that has enough free space. Checkpoints include virtual machine data and may require a large amount of space.

At the bottom of the dialog, there are four buttons: '< Previous', 'Next >' (which is highlighted with a blue border), 'Finish', and 'Cancel'.

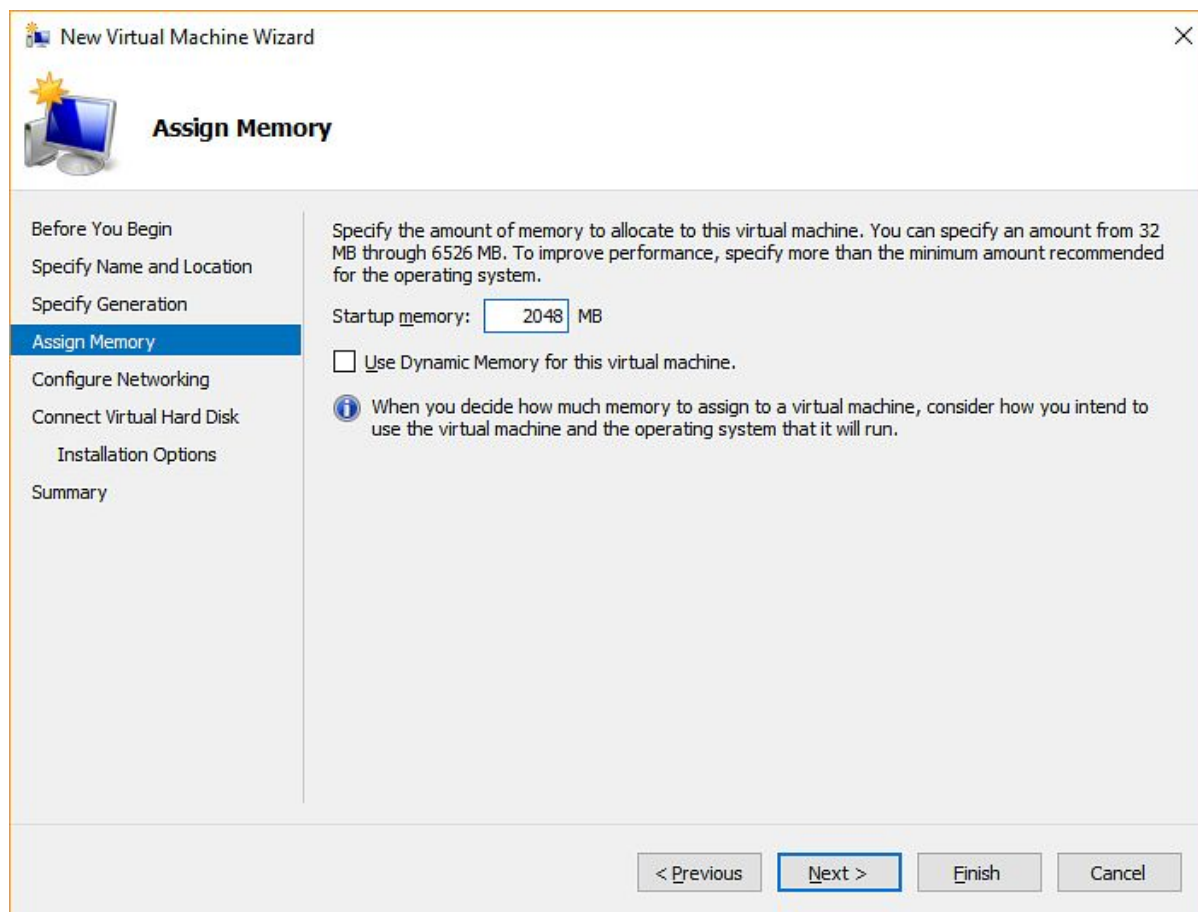
Screenshot of setting up a new virtual machine prompting for Name and Location.

Leave the option **Generation 1** selected. Click **Next** continue.



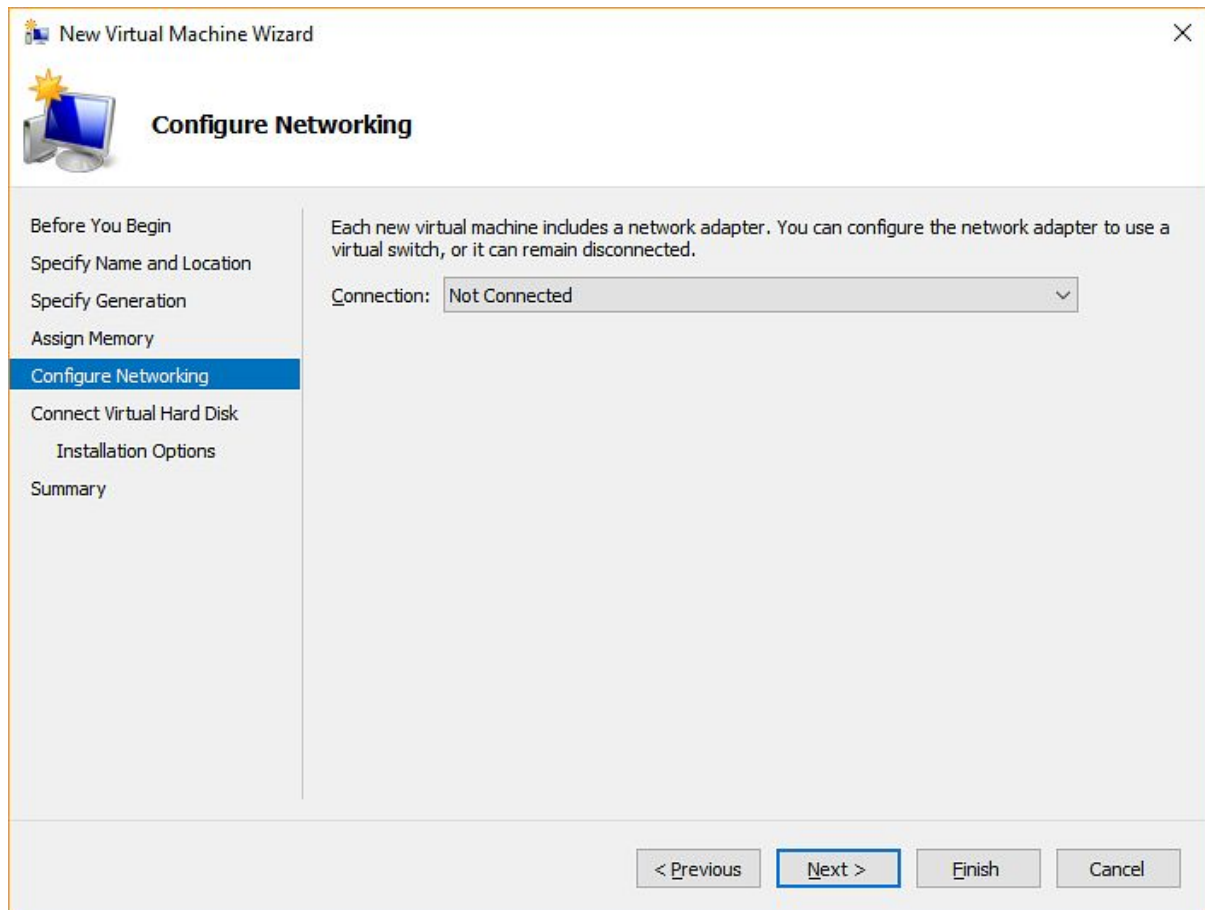
Screenshot prompting what generation of virtual machine to use.

Set the **Startup memory** to **2048 MB** and **uncheck Use Dynamic Memory** for this **virtual machine**. Click **Next** to continue.



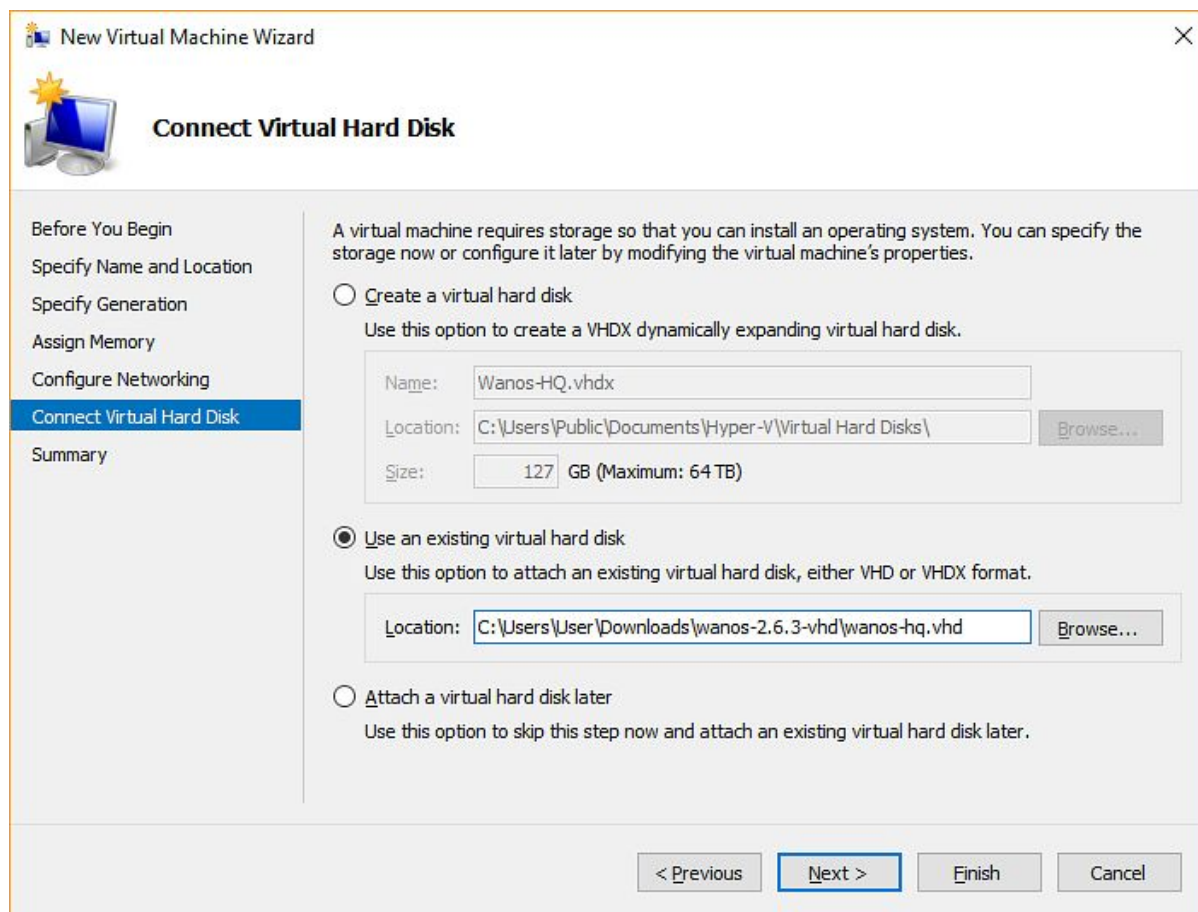
Screenshot prompting to set the Startup memory and the option to use Dynamic memory.

Leave **Connection** as **Not Connected**. Click **Next** to continue.



Screenshot prompting what Network Adapter to use for this virtual machine.

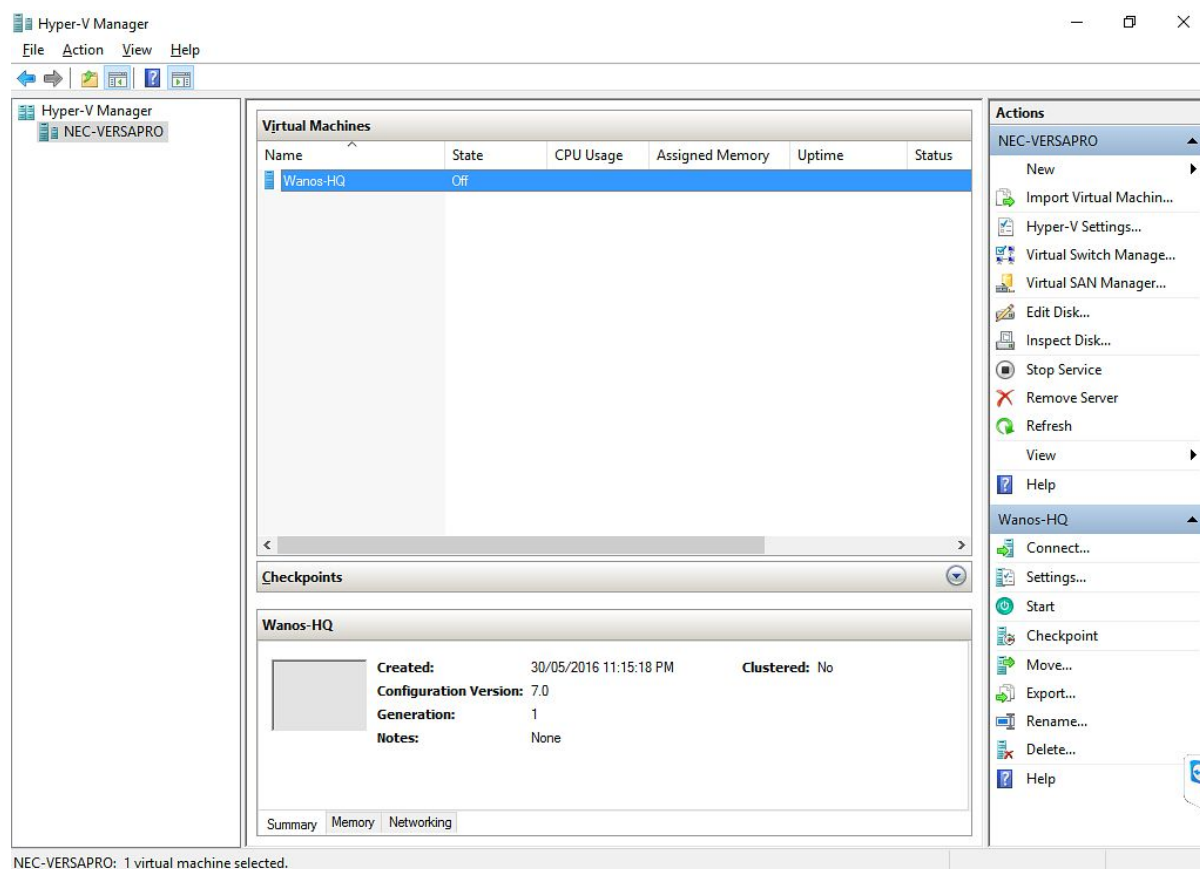
Choose **Use an existing virtual hard disk**, Click **Browse** to navigate the extracted Wanos VHD file and click **Next** to continue.



Screenshot prompting to specify the Virtual Hard Disk to use.

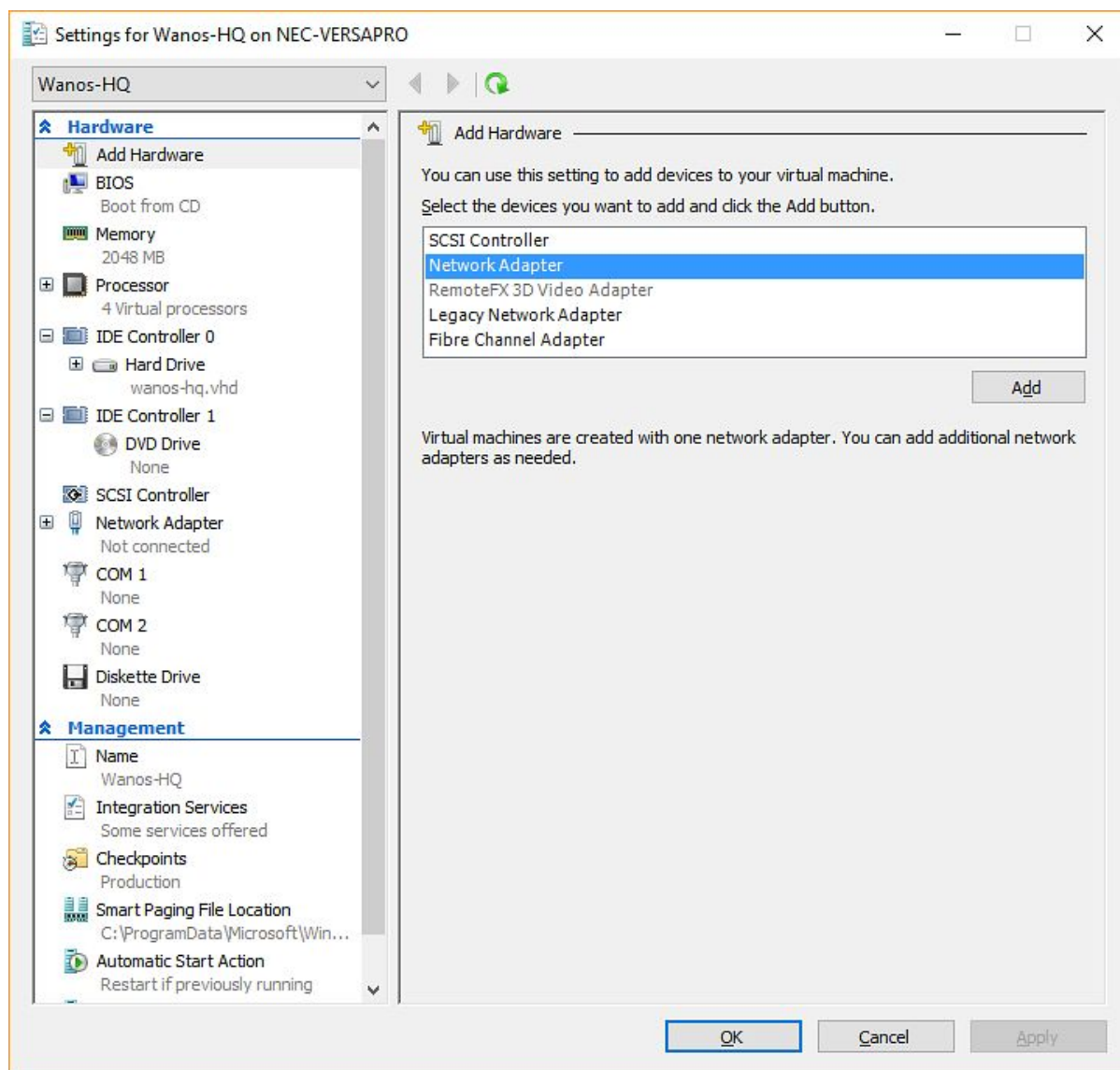
Click **Finish**.

Additional settings are required to configure the virtual machine. Select **Wanos-HQ** in the Virtual Machines list and click **Settings**.



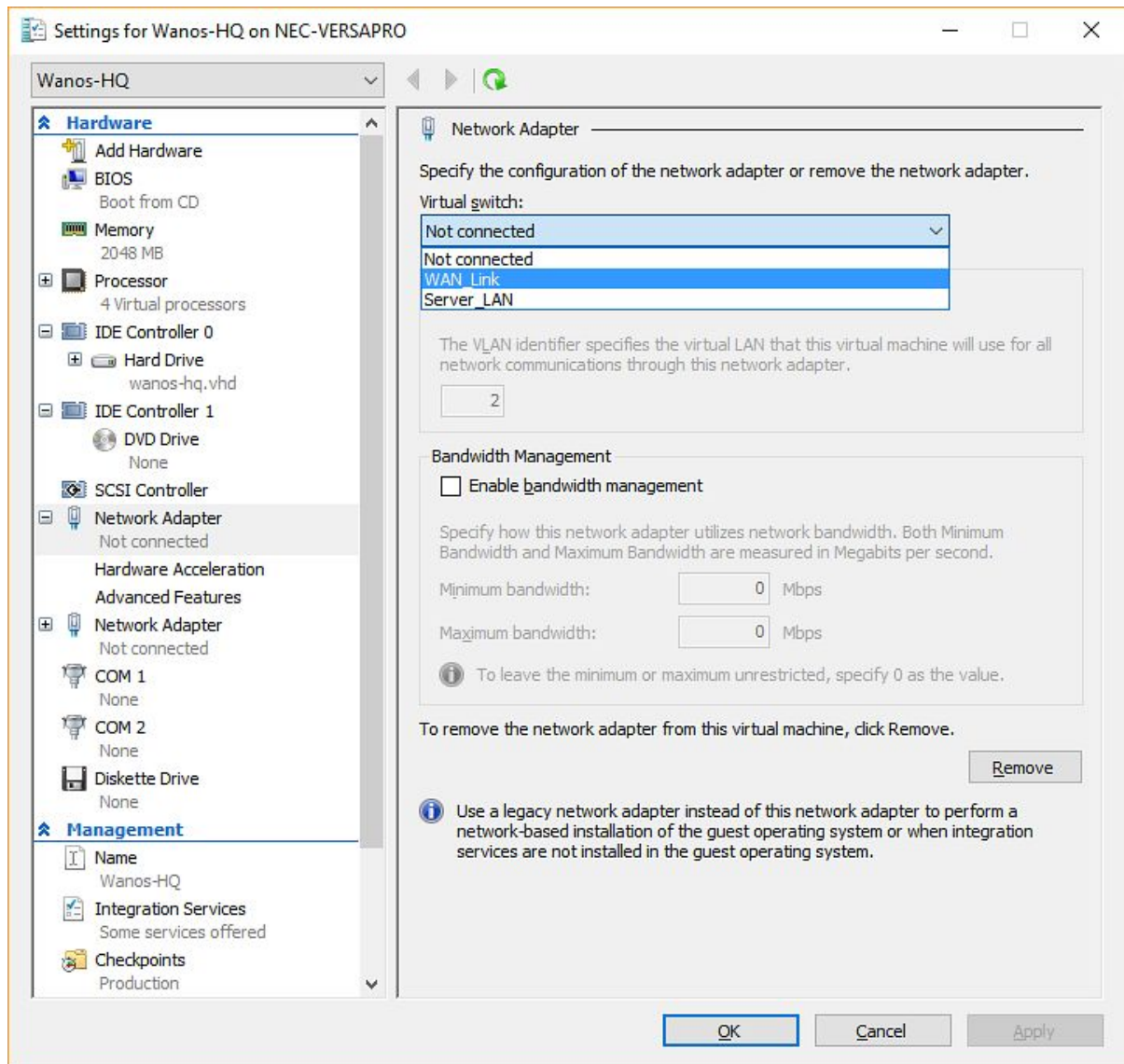
Screenshot of the Hyper-V Manager with the created virtual machine.

Select **Add Hardware** and choose **Network Adapter**. Click the **Add** button.



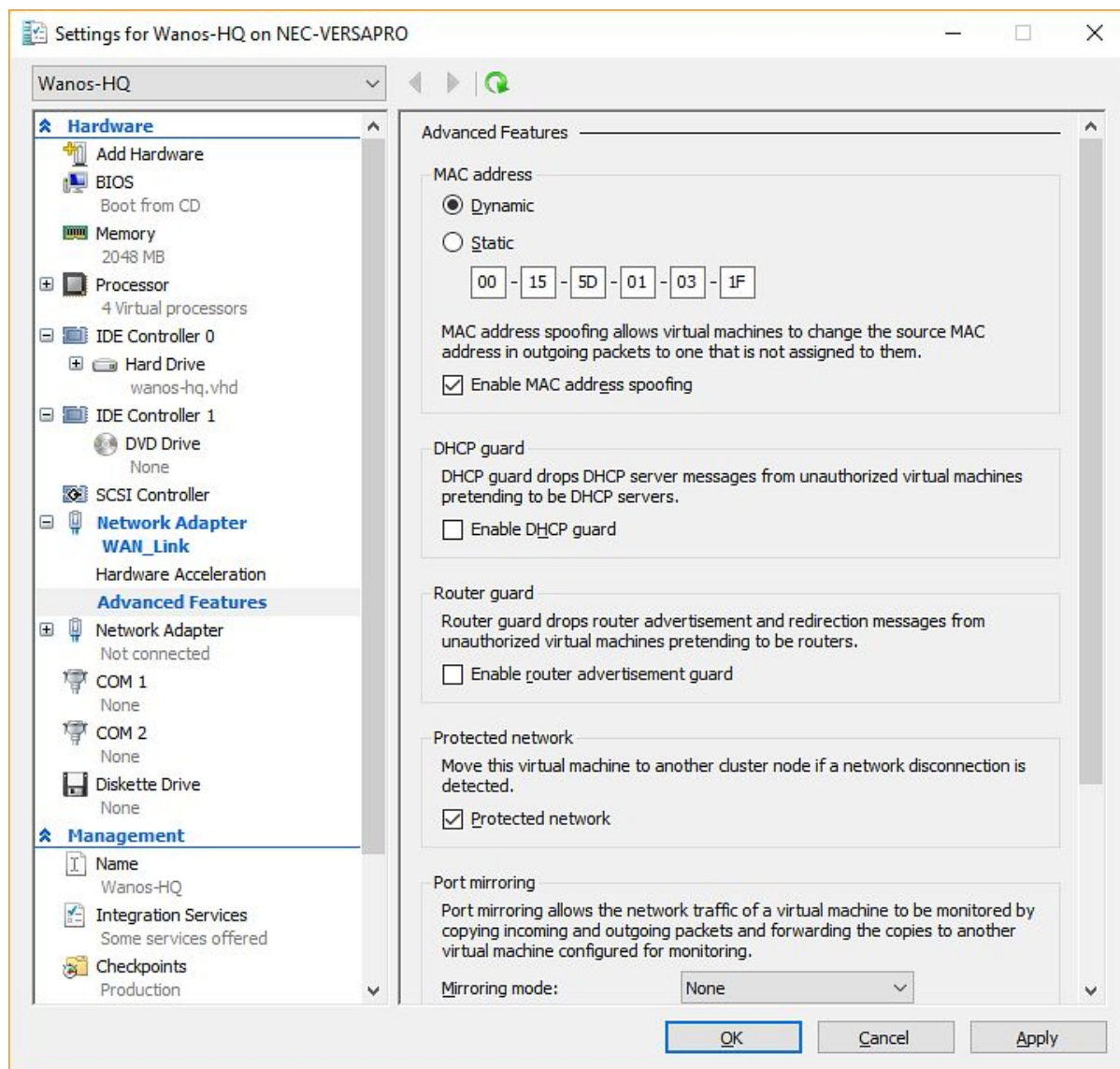
Screenshot of the Settings window for Adding Hardware.

Select the first Network Adapter and set the Virtual switch to **WAN_Link**.



Screenshot of the Settings window for Configuring Network Adapter.

Click the Expand (+) button then select **Advanced Features**. Put a checkmark under **Enable MAC address spoofing**.



Screenshot of the Settings window to configure the Advanced Properties of a Network Adapter.

Select the second **Network Adapter** and choose **Server_LAN** as the Virtual Switch. Click the Expand (+) button, select **Advanced Features** and mark **Enable MAC address spoofing**. Click the **Apply** then the **OK** button to save all the changes.

Summary Steps

This section is the summary of what was configured.

Name: Wanos-HQ

Generation: Generation 1

Startup Memory: 2048 MB

Dynamic Memory: unchecked

Virtual Disk: Use an existing virtual hard disk

Add Hardware: Add Network Adapters (Avoid Legacy adapters)

Network Adapter Advanced Features: Enable MAC address spoofing

wan0 Connection: Connect wan0 to the router or firewall

lan0 Connection: Connect lan0 to the virtual or physical LAN

Follow the steps outlined in [Wanos-HQ](#) to deploy Wanos in other locations or offices.

Adjust the parameters based on the deployment strategy across different sites.

IP Configuration

At this point, Wanos is installed and configured on Microsoft's Hyper-V. If the network is on the default 192.168.1.0/24 subnet the admin can proceed to access the UI using the default IP Address. Alternatively to configure the IP Address from the command line, the following steps can be used.

Log into Wanos-HQ using this username and password:

Username: **tc**

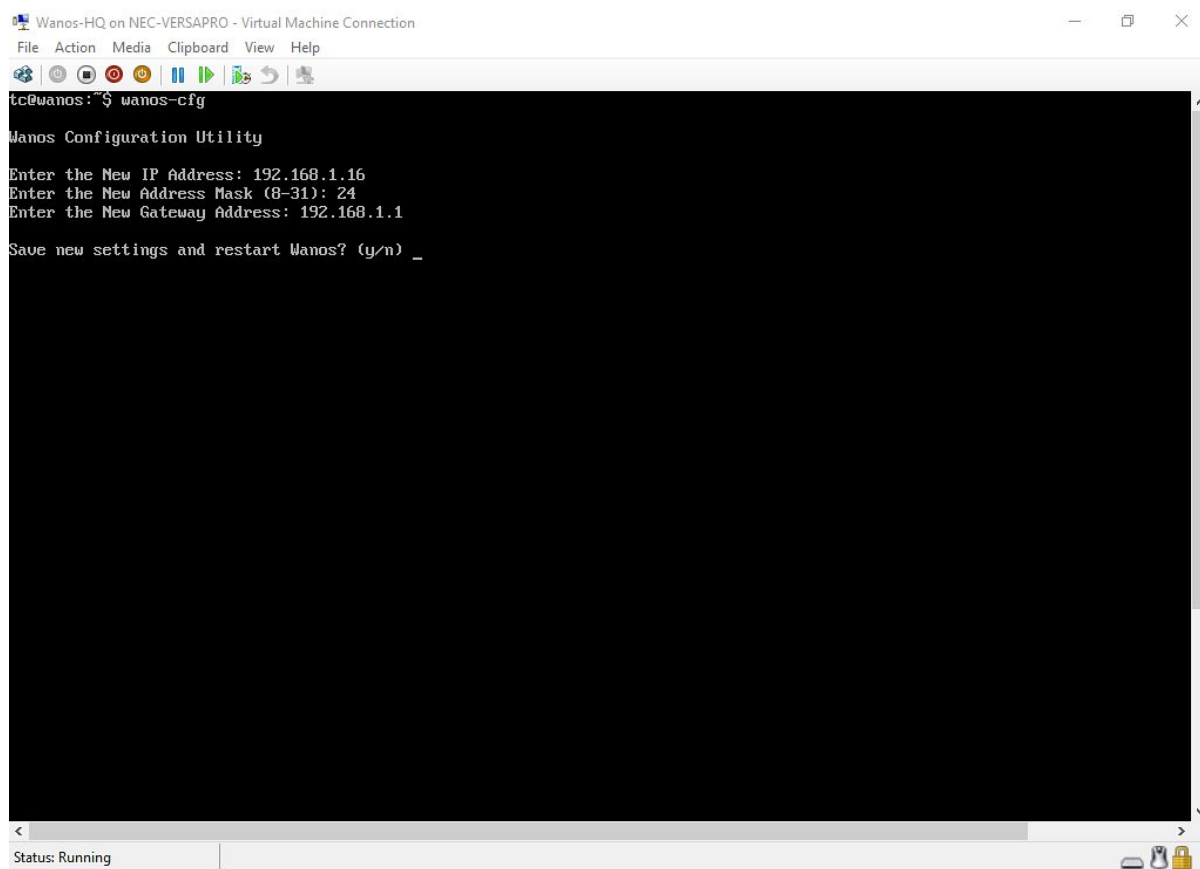
Password: **ChangeM3**

Run the 'wanos-cfg' command line utility from the terminal.

Set the IP Address, Network Mask and Gateway Address. Press **Y** to save the settings or **N** to discard the information.

By default, Wanos uses the following information:

IP Address	192.168.1.200
Network Mask	24
Gateway Address	192.168.1.1



A screenshot showing the wanos-cfg utility on Microsoft Hyper-V.

Update Software

Ensure to run the latest Wanos version. A step-by-step [wanos update process](#) guide is available.