Install OpenVPN Server Virtual Machine (VM) on Hyper-V

Last Modified on 05/01/2020 9:24 pm EDT

Installing an Open VPN Server Virtual Machine is necessary to support remote phones (see OpenVPN Server Overview). This article outlines the process.

NOTE: Though it is possible to install this VM under Window Server core with the Hyper-V role installed or Hyper-V Server itself, this article will not cover that. These instructions are written with the understanding that...

- 1. The vast majority of PCs used to host this OpenVPN virtual machine will run Windows 10 as their OS and thus have access to GUI tools.
- If the intended target is on a Hyper-V enabled server without a GUI that the administrator of said server will understand how to accomplish the task of importing the VM using the outline of the info given below.

If you need instructions on installing the OpenVPN server on VMWare, go here: Install OpenVPN Server Virtual Machine (VM)

Pre-Requisites

- Windows 8.1 Pro / Windows 10 Pro or supported Windows Server edition with the Hyper-V role installed.
 - It is recommended that the virtual machine be allocated the following resources:
 - Minimum 1 procoessor core
 - 2 GB RAM
 - 20 GB hard drive space
 - Copy of OpenVPN-HyperV.zip downloaded and extracted to your Hyper-V PC's desktop.

Configuration:

Login to Windows and launch the Hyper-V Manager (Right click and choose Run as administrator).

Verify / Create the 'Virtual Switch':

Before we begin to import the OpenVPN VM to Hyper-V, we must first ensure that a proper Virtual switch exists to connect it to.

1. In the far right pane, open 'Virtual Switch Manager...'



2. Now, either verify or create a new virtual network switch that is configured as an 'External network' and assigned to a physical NIC as shown below. If your virtual switch is NOT named 'Hyper-V Switch', make a note of the name as when you import the VM later it will throw an error about this switch missing; but you can simply attach whatever name you verify / create here.

E Virtual Switch Manager for ELITE8300	
★ Virtual Switches Image: Second System Image: Second System	Image: Name: Hyper-V Switch Notes:
00-13-3D4 A4 A-00 to 00-13-3D4	Connection type What do you want to connect this virtual switch to? © External network: Intel(R) 82579LM Gigabit Network Connection Mallow management operating system to share this network adapted and the system to share the system of t
	Internal network Private network VLAN ID Enable virtual LAN identification for management operating system The VLAN identifier specifies the virtual LAN that the management oper system will use for all network communications through this network add setting does not affect virtual machine networking. 2

Import the Virtual Machine (VM):

1. Again, in the far right pane, choose 'Import Virtual Machine...'



2. The wizard will start & will walk you through importing the machine. Step 1 is to browse for the folder containing the OpenVPN Hyper-V machine files. If you unzipped it to your desktop, the path below is correct, only replacing the 'user' with your username.

NOTE: Depending on your zip application, when you unzip the file to your desktop, it may do so to an OpenVPN-HyperV folder, which then contains another OpenVPN-HyperV folder; the latter is the folder you need to select.



3. Next, you should see the name of the VM, OpenVPN-HyperV.

M Import Virtual Machine					
Select Virtual Machine					
Before You Begin	Select the virtual machine to import:				
Locate Folder	Name	Date Created			
Select Virtual Machine	OpenVPN-HyperV	4/17/2020 2:47:33			
Choose Import Type		,,			
Summary					

4. In this step, it is recommended that you 'Copy the virtual machine (create a new unique ID)'.

Minport Virtual Machine				
Choose Impo	ort Type			
Before You Begin Locate Folder Select Virtual Machine	Choose the type of import to perform: O Register the virtual machine in-place (use the existing unique ID) O Restore the virtual machine (use the existing unique ID)			
Choose Import Type	 Copy the virtual machine (create a new unique ID) 			
Summary				

5. This screen shows where the VM itself will be stored. Unless you have a specific reason to do so, just accept the defaults presented and continue.

Import Virtual Machine	
Choose Fold	ers for Virtual Machine Files
Before You Begin Locate Folder Select Virtual Machine Choose Import Type	You can specify new or existing folders to store the virtual machine files. Otherwise, the wimports the files to default Hyper-V folders on this computer, or to folders specified in the vimachine configuration.
Choose Destination Choose Storage Folders Summary	C:\ProgramData\Microsoft\Windows\Hyper-V\ Checkpoint store: C:\ProgramData\Microsoft\Windows\Hyper-V\ Smart Paging folder: C:\ProgramData\Microsoft\Windows\Hyper-V\

6. This screen shows where the virtual hard disk (.vhdx) file will be stored. Again, unless you have a specific reason to change this, accept the default & continue.

Mart Virtual Machine					
Choose Folde	ers to Store Virtual Hard Disks				
Before You Begin Locate Folder Select Virtual Machine Choose Import Type Choose Destination Choose Storage Folders Summary	Where do you want to store the imported virtual hard disks for this virtual machine? Location: C:\Users\Public\Documents\Hyper-V\Virtual Hard Disks\				

7. On the 'Completing Import Wizard' screen, just confirm all the setting you've chosen.

Machine					
Completing I	mport Wizard				
Before You Begin Locate Folder	You are about to perform the following Description:	operation.			
Select Virtual Machine	Virtual Machine:	OpenVPN-HyperV			
Choose Import Type	Import file:	C:\Users\User\Desktop\OpenVPN-HyperV\OpenVPI			
Choose Destination	Import Type:	Restore (keep ID)			
Choose Storage Folders	Virtual machine configuration folder:	C:\ProgramData\Microsoft\Windows\Hyper-V\			
Summary	Checkpoint folder: Smart Paging file store: Virtual hard disk destination folder:	C: \ProgramData \Microsoft \Windows \Hyper-V \ C: \ProgramData \Microsoft \Windows \Hyper-V \ C: \Users \Public \Documents \Hyper-V \Virtual Hard D			

8. If you did not get an error when importing your VM, please continue to 'Starting / Configuring the OpenVPN server' below. If you did get an error, the virtual switch for the VM needs to be configured. Select the VM in the middle pane of the Hyper-V Manager, then in the right hand pane, select 'Settings...'

Оре	OpenVPN-HyperV				
-	Connect				
	Settings				
ల	Start				
-	Checkpoint				
-	Move				
ß	Export				
∎Į	Rename				
×	Delete				
?	Help				

9. Select 'Network Adapter' and in the 'Virtual switch' dropdown box, select the name of the virtual switch from 'Verify / Create the Virtual switch': step 2 and then apply it.

,	enVPN-HyperV ~	3 ∢ ►
	Hardware	Network Adapter
	Add Hardware	
	BIOS	Specify the configuration of the network adapter or remove the network ada
	Boot from CD	Virtual switch:
	Security	Hyper-V Switch 🗸 🗸
1	Key Storage Drive disabled	VLAN ID
Me Me	mory	Enable virtual LAN identification
	ore MB	
1	Virtual processor	The VLAN identifier specifies the virtual LAN that this virtual machine will u
	E Controller 0	network communications through this network adapter.
(F)	Hard Drive	2
	OpenVPN.vhdx	
🗐 ID	E Controller 1	Bandwidth Management
	DVD Drive	Enable bandwidth management
	None	
🔄 SCSI	Controller	Specify how this network adapter utilizes network bandwidth. Both Minim Bandwidth and Maximum Bandwidth are measured in Menabits per second
🖗 Netw	ork Adapter	bandwidur and Maximum bandwidur are measured in Megabits per second
Hyper	-V Switch	Minimum bandwidth: 0 Mbps
🛱 СОМ	1	Maximum bandwidth: 0 Mbps
Nor	le	
	12	To leave the minimum or maximum unrestricted, specify 0 as the value
	e atta Driva	
None	le Drive	To remove the network adapter from this virtual machine, click Remove.
Managem	ent	
I Nam	e	
Оре	enVPN-HyperV	network-based installation of the guest operating system or when integrating
🗂 Int	egration Services	services are not installed in the guest operating system.
Son	ne services offered	
Cheo	ckpoints	
Sta	andard	
Sn C	Nart Paging File Location	

Starting / Configuring the OpenVPN server:

 In the Hyper-V Manager, double click on the VM to bring up the connection window. Click Start.

.	Оре	nVPN-Hy	perV on El	ITE830	0 - Virtua	l Machine	Connection			×
Fi	le	Action	Media	View	Help					
Ba	٢		() II		د 🛐	🔛 🛃				
				The	virtual n	nachine '	OpenVPN-HyperV' is tu	rned off		
				Tos	tart the vi	rtual machi	ne, select 'Start' from the Actio	n menu		
							Start			
Stat	us: C	Off								

2. Select the 'openvpn' user as below and login with the default password, Vertical4VoIP!

CentOS release 6.10 (Final)				
openvpn				
Password:				
Cancel Log In				

3. Once logged in, go to System -> Preferences ->Network Connections.



 In the window that opens, there should be a single Wired connection listed, select this and click 'Edit...'



 Here, click on 'IPv4 Settings'. Set the Method to 'Manual', then set the Address, Netmask (can be entered as the bitmask (24) or traditionally, 255.255.255.0), the Gateway, and DNS server(s) and click 'Apply'.

B	Editing Auto et	:h3	×
Connection name: A	uto eth3		
 Connect automatica Available to all user 	ally rs		
Wired 802.1x Securit	ty IPv4 Settings	IPv6 Setting	s
Method: Manual			\$
Addresses			
Address N	letmask Gatewa	у 🦳	Add
192.168.205.35 2	4 192.168	.205.254	Delete
DNS servers:	192.168.205.254		
Search domains:			
DHCP client ID:			
Require IPv4 ac	dressing for this	connection to	complete
		R	outes
		Cancel	Apply

6. You will be prompted to authenticate (as the root user); the default password is the same as the

openvpn user's.

e,	Auth	enticate ×	¢		
	System policy prevents modification of system settings				
	An application is attempting to perform an action that requires privileges. Authentication as the super user is required to perform this action.				
	Password for root:				
þ Detai	Is	Cancel Authenticate			

Next steps...

Continue on with Choosing OpenVPN Server Method