

Windows Server 2019 Hyper-V Cluster using PetaSAN

Version 1.0



Revision History

Date	Version	Description
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Contents

1.	Purpose	.3
2.	Pre-requisites	.3
3.	Network setup	.3
4.	Active Directory Setup	.4
	4.1 Setup the AD Server	.4
	4.2 Joining the AD Server	.6
5.	Configuring node roles	.8
6.	Connecting the PetaSAN disks	10
7.	Validating the cluster	10
8.	Cluster Creation	13
9.	Creating Virtual Machines	17



1. Purpose

The purpose of this guide is to show how to create a Windows 2019 Hyper-V Cluster using Clustered Shared Volumes (CSV) stored on PetaSAN. In this setup, virtual machines are stored directly by Hyper-V on the CSV volumes. Using shared storage provides high availability for the virtual machines and support s more advanced features such as live migration.

This guide does not cover storing the virtual machines on a Scale Out File Server, which will be covered in a different document.

2. Pre-requisites

This guide assumes the reader has followed the Quick Start guide and has deployed a working PetaSAN cluster. We will be using the same subnet assignments as given in the Quick Start example.

Additionally this guide requires:

- 2 x Windows Server 2019 named hyperv-1 and hyperv-2 with 4 physical interfaces. These will act as our 2 Hyper-V servers
- 1 x Windows Server 2019 named AD with 1 physical interface This will act as our Active Directory server. We will also use it for central cluster management of the Hyper-V nodes.

3. Network setup

The Windows servers used in this guide are configured with the following IP addresses

	AD	hyperv-1	hyperv-2
Management	10.0.1.50	10.0.1.51	10.0.1.52
Gateway	10.0.1.1	10.0.1.1	10.0.1.1
iSCSI 1		10.0.2.51	10.0.2.52
iSCSI 2		10.0.3.51	10.0.3.52
VM switch		10.0.6.51	10.0.6.52

> Note: Subnets 10.0.4.0 & 10.0.5.0 are assigned to the PetaSAN backend networks.



4. Active Directory Setup

4.1 Setup the AD Server

On the designated node for AD, add the role "Active Directory Domain Services" and reboot



After reboot, select "Promote the server to a domain controller"





In the configuration wizard choose "Add a new forest" and enter the domain name "demo.local"

b	Active Directory Domain Services (Configuration Wizard	_ D X
Deployment Configuration Domain Controller Options Additional Options Paths Review Options Prerequisites Check Installation Results	Active Directory Domain Services (iguration Select the deployment operation Add a <u>d</u> omain controller to an existin Add a new domain to an <u>existing</u> for Add a new forest Specify the domain information for this is <u>R</u> oot domain name:	Configuration Wizard	TARGET SERVER ad
	More about deployment configurations	evious Next > Instal	Cancel

Enter the password

Τ.	Active Directory Domain Services (Configuration Wizard	_ 🗆 X		
Domain Controlle	r Options		TARGET SERVER ad		
Deployment Configuration Domain Controller Options DNS Options Additional Options Paths Review Options Prerequisites Check Installation Results	Select functional level of the new forest Forest functional level: Domain functional level: Specify domain controller capabilities Domain Name System (DNS) server Global Catalog (GC) Read only domain controller (RODC) Type the Directory Services Restore Mod Password: Confirm password:	and root domain Windows Server 2012 R2 Windows Server 2012 R2 Windows Server 2012 R2 Example (DSRM) password Example (DSRM) Example			
< Previous Next > Install Cancel					

Reboot system when done.



4.2 Joining the AD Server

On both hyperv-1 and hyperv-2 nodes, edit the DNS setting to point to the AD server



Then in "Server Manager -> Local Server" click on "WORKGROUP" in the "Domain" field.

Server Manager + Local Server Image Local Server Dashboard PROPERTIES For hyperv-1 TASKS All Servers Computer name hyperv-1 Last installed updates Never Windows Storage Services > Windows Firewall Public On Remote management Enabled Utcomputer name Windows Error Reporting Off Windows Firewall Public On Remote Desktop Disabled Utcomputer name Windows Error Reporting Off Remote Desktop Disabled Utcomputer name Utcomputer name Utcomputer name Utcomputer name Never Windows Firewall Public On Windows Error Reporting Off Image Not computer name Remote Desktop Disabled Utcomputer name Utcomputer name Utcomputer name Not particle Operating system version Microsoft Windows Server 2012 R2 Standard Processors Intel(R) Vertures If events 36 total Image Image Image It events 36 total Image Image Image Image It events 36 total Image Image Image Image It					Server Manager			
Dashboard PROPERTIES For hyperv-1 TASKS Local Server All Servers Computer name hyperv-1 Last installed updates Never All Servers File and Storage Services P Vindows Firevall Public: On Windows Error Reporting Off Remote management Enabled Customer Experience Improvement Program Not particulated NIC Tearning Disabled Time zone (UTC-0) Ethernet1 100.251, IPv6 enabled Product ID Net act Ethernet2 100.351, IPv6 enabled Product ID Net act Operating system version Microsoft Windows Server 2012 R2 Standard Processors Intel(R) I events [36 total If If TASKS Intel(R) Filter If If If Intel(R) Intel(R) I events [36 total If If Intel(R) Intel(R) Intel(R) I events [36 total If If If Intel(R) Intel(R) Intel(R) I events [36 total If If If If If If Server Name ID	€∋∙	Server M	lanager • Loc	al Serve	r	• ②	<u>M</u> anage <u>T</u> oo	ls <u>V</u> iew <u>H</u> e
Local Server All Servers File and Storage Services File and Storage Services Windows Firewall Public: On Windows Error Reporting Off Remote management Enabled Uncome Desktop Disabled Uncome Desktop Disabled Ethernet1 10.0.151, IPv6 enabled Ethernet2 10.0.351, IPv6 enabled Ethernet3 10.0.651, IPv6 enabled Ethernet3 Operating system version Microsoft Windows Server 2012 R2 Standard Processors Intel(R) Events All events 36 total Filter Bit Processors Intel(R) Events All events 36 total Tasks Server Name ID Server Name ID </th <th>Dashboard</th> <th></th> <th>PROPERTIES For hyperv-1</th> <th>5</th> <th></th> <th></th> <th></th> <th>TASKS 💌</th>	Dashboard		PROPERTIES For hyperv-1	5				TASKS 💌
Windows Firewall Public: On Windows Error Reporting Off Remote management Enabled Customer Experience Improvement Program Not par Remote Desktop Disabled IE Enhanced Security Configuration On NIC Tearning Disabled Time zone (UTC-0) Ethernet0 100.1.51, IPv6 enabled Product ID Not act Ethernet1 100.2.51, IPv6 enabled Ethernet2 100.3.51, IPv6 enabled Ethernet2 100.3.51, IPv6 enabled Ethernet3 Intel(R) VMerce In:	Local Server All Servers File and Stora	age Services ▷	Computer name Workgroup	hy <u>W</u>	/perv-1 <u>ORKGROUP</u> 人	Last instal Windows Last check	led updates Update ted for updates	Never Not cor Never
Operating system version Microsoft Windows Server 2012 R2 Standard Processors Intel(R) Landware information VMAures for VMAures Vision Distance Intel/Reference Intel/Reference EVENTS All events 36 total TASKS Intel/Reference Intel/Reference Filter P Image: Task Server Name ID Serverity Source Log Date and Time HYPERV-1 1014 Error Microsoft-Windows-Security-SPP Application 10/1/2016 11:06:54 AM			Windows Firewall Remote manageme Remote Desktop NIC Teaming Ethernet0 Ethernet1 Ethernet2 Ethernet3	Pi Er D 10 10 10 10	ublic: On habled isabled J.0.1.51, IPv6 enabled J.0.2.51, IPv6 enabled J.0.3.51, IPv6 enabled J.0.6.51, IPv6 enabled	Windows Customer IE Enhanc Time zone Product IE	Error Reporting Experience Improvement Pro ed Security Configuration	Off Igram Not par On (UTC-0(Not act
EVENTS TASKS All events 36 total TASKS Filter P Image: Text of the second sec			Operating system v	ersion M	icrosoft Windows Server 2012 R2 Standar Hunse Lee Mitture Victure Distrement	d Processor	5 5	Intel(R) V
Filter P III Severity Source Log Date and Time HYPERV-1 1014 Error Microsoft-Windows-Security-SPP Application 10/1/2016 11:06:54 AM			EVENTS All events 36 total					TASKS 💌
Server Name ID Seventy Source Log Date and Time HYPERV-1 1014 Error Microsoft-Windows-Security-SPP Application 10/1/2016 11:06:54 AM			Filter		▼ (ii) ▼ (ii) Q			$\overline{\mathbf{v}}$
HYPERV-1 1014 Error Microsoft-Windows-Security-SPP Application 10/1/2016 11:06:54 AM HYPERV-1 8200 Error Microsoft-Windows-Security-SPP Application 10/1/2016 11:06:54 AM			Server Name HYPERV-1 HYPERV-1 HYPERV-1	ID Seven 1014 Error 1014 Error 8200 Error	ty Source Microsoft-Windows-Security-SPP Microsoft-Windows-Security-SPP Microsoft-Windows-Security-SPP	Log Application Application Application	Date and Time 10/1/2016 11:06:54 AM 10/1/2016 11:06:54 AM 10/1/2016 11:06:54 AM	~

Windows Server Hyper-V Cluster using PetaSAN

Page 6 of 18



In "System Properties", click "Change..."

	System Properties X
Computer Name Hardwa	are Advanced Remote
Windows uses on the network	the following information to identify your computer k.
Computer description:	
	For example: "IIS Production Server" or "Accounting Server".
Full computer name:	hyperv-1
Workgroup:	WORKGROUP
To rename this computer workgroup, click Change	or change its domain or Change
	OK Cancel Apply

Enter "demo.local" in the domain field

Computer Name/Domain Changes	х
You can change the name and the membership of this computer. Changes might affect access to network resource	es.
Computer name: hyperv-1	
Full computer name: hyperv-1	
More	
Member of	
Domain:	
demo.local	
O Workgroup:	
WORKGROUP	
OK	

Enter the AD password

Windows S	Windows Security ×				
Comp	Computer Name/Domain Changes				
Enter the to join th	Enter the name and password of an account with permission to join the domain.				
8	administrator				
	•••••				
	Domain: demo.local				
More ch	oices				
	ОК	Cancel			

This should be all for joining the domain, please repeat the same steps for hyperv-2.



5. Configuring node roles

On all three nodes we need to add the "Hyper-V" role and the "Failover Clustering" feature. We are adding these to the AD server since we are using it as a central location to manage the Hyper-V nodes. However there is a slight difference when setting up the AD server, we need not specify a network interface for use by the VM network since we will not be running any VMs on that node.

a	Add Roles and Features Wizard					
Select server roles	;	DESTINATION SERVER ad.demo.local				
Before You Begin Installation Type Server Selection Server Roles Features Hyper-V Virtual Switches Migration Default Stores Confirmation Results	Select one or more roles to install on the selected server. Roles Active Directory Certificate Services Active Directory Domain Services (Installed) Active Directory Federation Services Active Directory Rights Management Services Active Directory Rights Management Services Application Server DHCP Server DHCP Server Not Server (Installed) Fax Server Remote Access Remote Access Kervet	Description Hyper-V provides the services that you can use to create and manage virtual machines and their resources. Each virtual machine is a virtualized computer system that operates in an isolated execution environment. This allows you to run multiple operating systems simultaneously.				
Add Roles and Features Wizard Add Roles And Features Wizard						
Select features		DESTINATION SERVER ad.demo.local				
Before You Begin Installation Type Server Selection Server Roles Features Hyper-V Virtual Switches Migration Default Stores Confirmation Results	Select one or more features to install on the selected server. Features I I.NET Framework 3.5 Features I I.NET Framework 4.5 Features (2 of 7 installed) B Background Intelligent Transfer Service (BITS) BitLocker Drive Encryption BitLocker Drive Encryption BitLocker Network Unlock BranchCache Client for NFS Data Center Bridging Direct Play Enhanced Storage Failover Clustering G Group Policy Management (Installed) IIS Hostable Web Core Ink and Handwriting Services <	Description Failover Clustering allows multiple servers to work together to provide high availability of server roles. Failover Clustering is often used for file Services, virtual machines, database applications, and mail applications.				



On hyperv-1 and hyper-v2 nodes specify the interface to use for the VM traffic. As discussed earlier, we reserved our fourth interface (Ethernet3) specifically for that purpose.

B	Add Role	es and Features Wizard		x I
Create Virtual Sw Before You Begin Installation Type Server Selection Server Roles Features	Switches Virtual machines require virtual switches to communicate with other computers. After y role, you can create virtual machines and attach them to a virtual switch. One virtual switch will be created for each network adapter you select. We recommend at least one virtual switch now to provide virtual machines with connectivity to a physic can add, remove, and modify your virtual switches later by using the Virtual Switch Mai Network adapters:			erver b.local his reate . You
Hyper-V Virtual Switches Migration	Network adapters:	Description Intel(R) 82574L Gigabit Network Conne Intel(R) PRO/1000 MT Network Connec	ection ction	
Default Stores Confirmation Results	We recommend that network adapter, do	III you reserve one network adapter for remote access t not select it for use with a virtual switch.	to this server. To res	>
		< Previous Next >	Install Can	cel

In contrast, our AD server has one interface, keep it unchecked.

2	Add Role	es and Features Wizard	_ D X	
Create Virtual Sv	vitches		DESTINATION SERVER ad.demo.local	
Before You Begin Virtual machines require virtual switches to communicate with other computers. After you install role, you can create virtual machines and attach them to a virtual switch. Installation Type One virtual switch will be created for each network adapter you select. We recommend that you at least one virtual switch now to provide virtual machines with connectivity to a physical network can add premyer and modify your virtual switches later by using the Virtual Switch Manager.				
Features Hyper-V	Network adapters:	Description		
Virtual Switches Migration Default Stores	Ethernet0	Intel(R) 82574L Gigabit Network	Connection	
Confirmation Results	(j) We recommend that network adapter, do	you reserve one network adapter for remote a not select it for use with a virtual switch.	ccess to this server. To reserve a	
	1	< Previous Next >	Install Cancel	

Reboot each node when done.



6. Connecting the PetaSAN disks

We need to create 2 disks in PetaSAN:

- 1. Disk1: 100TB x 4 paths with CHAP authentication. This will serve as the main data store for the Hyper-V virtual machines.
- 2. Disk2: 1G x 4 paths with CHAP authentication. This will serve as a quorum disk; this is used by Windows Clustered Shared Volumes (CSV) to control concurrent access to the first disk from multiple machines.

We need to connect to these 2 disks from both hyperv-1 and hyperv-2 servers. Please refer to *Connecting to PetaSAN from Windows 2019 using MPIO* guide for step by step instructions.

Note that initializing and formatting the disks should be done once from one node only, for example from hyperv-1.

7. Validating the cluster

As discussed earlier, we selected to use our AD server as the machine we use for cluster management. Before we create our cluster, we should let Windows validate it first by running a couple of tests.

On the AD server open the "Failover Cluster Manager"



Windows Server Hyper-V Cluster using PetaSAN

Page 10 of 18



Next click on "Validate Configuration"

ailover Cluster Manager			T
Create failover clusters, validate your failover clusters.	hardware for potential failover clusters, and	d perform configuration changes to	
 Overview 			
A failover cluster is a set of independer clustered servers (called nodes) are co node begins to provide services. This p	nt computers that work together to increase nnected by physical cables and by software process is known as failover.	the availability of server roles. The e. If one of the nodes fails, another	
 Clusters 			
Name	Role Status	Node Status	
	No items found.		
 Management 			
To begin to use failover clustering, first steps are complete, you can manage th running Windows Server 2012 R2, Win	validate your hardware configuration, and t he cluster. Managing a cluster can include c dows Server 2012, or Windows Server 200	then create a cluster. After these copying roles to it from a cluster 18 R2.	
Validate Configuration			
Connect to Cluster			

In the validation wizard, add both hyperv-1 and hyperv-2

N	Valio	date a Configuration Wizard	x
Select Se	ervers or a Cluster		
Before You Begin Select Servers or a Cluster	To validate a set of serve To test an existing cluster	rs, add the names of all the servers. , add the name of the cluster or one of its nodes.	
Testing Options Confirmation Validating Summary	Enter name: Selected servers:	hyperv-1.demo.local hyperv-2.demo.local	Browse Add Remove
		< Previous Next >	Cancel



Next choose to run all tests

- M	Validate a Configuration Wizard
Testing (Options
Before You Begin	Choose between running all tests or running selected tests.
Select Servers or a Cluster	The tests examine the Cluster Configuration, Hyper-V Configuration, Inventory, Network, Storage, and System Configuration.
Testing Options Confirmation	Microsoft supports a cluster solution only if the complete configuration (servers, network, and storage) can pass all tests in this wizard. In addition, all hardware components in the cluster solution must be "Certified
Validating	tor Windows Server 2012 R2."
Summary	
	 Run <u>al</u> tests (recommended)
	O Run only tests I <u>s</u> elect
	More about cluster validation tests
	< Previous Next > Cancel

The wizard will take a couple of minutes to run various tests; these include many important storage failover and validation tests for our PetaSAN disks.

Ø		Validate a Configuration Wizard		x
Validating	9			
Before You Begin Select Servers or a	The following v amount of time.	alidation tests are running. Depending on the test select	iion, this may take a significant	
Cluster	Progress	Test	Result]
Testing Options	100%	Validate Disk Arbitration	The test passed.	1
	100%	Validate Disk Failover	The test passed.	
Confirmation	100%	Validate File System	The test passed.	
Validating	100%	Validate Microsoft MPIO-based disks	The test passed.	
Summary	100%	Validate Multiple Arbitration	The test passed.	
	100%	Validate SCSI device Vital Product Data (VPD)	The test passed.	
	100%	Validate SCSI-3 Persistent Reservation	The test passed.	
	0%	Validate Simultaneous Failover	Taking Test Disk 1 off	-
	100%	Validate Storage Spaces Remistert Reconvision	The test proved >	-
	Test is currently	/ running.		
			Cancel	



Once completed, the wizard displays a cluster validation report.



If all is good, leave the "Create the cluster now using the validated nodes" checked and click on the "Finish" button.

8. Cluster Creation

After successful validation, the create cluster wizard is displayed





Enter the cluster name, for example "Hyper-V Cluster"

We need to assign an IP address for the cluster, in our example enter IP 10.0.1.100

a	Create Cluster Wizard		
Access P	oint for Adminis	stering the Cluster	
Before You Begin Select Servers Access Point for Administering the Cluster Confirmation	Type the name you Cluster N <u>a</u> me: () The NetBIOS na	want to use when administering the cluster. Hyper-V-Cluster ame is limited to 15 characters. All networks were configured automatically.	
Creating New Cluster Summary		Networks Address Image: 10.0.0.0/24 10.0.1.100	
		< Previous Next > Cance	1

Click "Next"

- 1		Create Cluster Wizard	x
Confirma	tion		
Before You Begin Select Servers	You are ready to creat The wizard will create	e a cluster. your cluster with the following settings:	
Access Point for Administering the Cluster Confirmation Creating New Cluster Summary	Cluster: Node: Node: IP Address:	Hyper-V-Cluster hyperv-2.demo.local hyperv-1.demo.local 10.0.1.100	< ~
	✓ Add all eligible stor. To continue, click Next	age to the cluster. t.	
		< <u>P</u> revious <u>N</u> ext > (Cancel



Click "Next", then "Finish"

4		Create Cluster Wizard	×
Summary			
Before You Begin Select Servers	You have succ	essfully completed the Create Cluster Wizard.	
Administering the Cluster		Create Cluster	~
Confirmation			
Creating New Cluster	Cluster:	Hyper-V-Cluster	
Summary	Node:	hyperv-2.demo.local	
	Node:	hyperv-1.demo.local	
	Quorum:	Node and Disk Majority (Cluster Disk 1)	
	IP Address:	10.0.1.100	
	To view the report crea To close this wizard, cli	ited by the wizard, click View Report. ck Finish.	<u>V</u> iew Report
			<u>F</u> inish

Once the cluster is created, go to Storage -> Disks

Right click on the 100 TB disk add select "Add to Cluster Shared Volumes"

灎		1	Failover Cluster M	/lanag	jer				
File Action View Help									
♦ ♦ 2									
謝 Failover Cluster Mapager	Disks (2)							Act	tions
▲ Wer-V-Cluster.demo.local	Disks (2)					0			
Roles	Jeanun					~			SKS -
Nodes	Name	Status	Assigned To		Owner Node	Disk Number Ca	pacity Inform	at	Add D
Disks	Cluster Disk 1	Online	Disk Witness in Quo	orum	hyperv-1	2	1.00 GB	3	Move 🕨
Pools	Cluster Disk 2	(Unline	Available Storage	Z R	ring Online		100 18	1	View 🕨
Networks					ake Offline			Q	Refresh
題 Cluster Events			6	10 No	dd to Cluster Shar	red Volumes		?	Help
			L	#	formation Datails			CI	uster 🔺
			1	9 9] ()	how Critical Event	e		1	Bring
			ŧ		tow Antions	3			Take
			-		fore Actions		•		Add t
			6	🗙 Re	emove				Infor
				🛐 Pr	roperties				Show
									More
									Note V
	<								Kemo
	🗸 🛄 Cluster Disk	2							Prope
								2	Help
	Volumes (1)							-1	
	New Volume (E:)							
	NTFS 100.0 T	B free of 100.0 TB							
							Activate Windo	ws	
							Go to System in Con	trol Pa	nel to
							activate Windows.		
Disks: Cluster Disk 2									
	- 39a							D 4.	4:12 PM
							▲ HØ	61 VØ	10/1/2016



On the bottom pane, the 100 TB disk volume will change from NTFS to CSVFS (Clustered Shared Volume File System), this allows the volume to be used by many Hyper-V nodes concurrently. Notice too that it is now accessible as "C:\ClusterStorage\Volume1".

趨			Failover Cluster Manag	ger				-	D X
File Action View Help									
🗢 🄿 🙎 🖬 🚺									
🍓 Failover Cluster Manager	Disks (2)							Act	ions
▲ Hyper-V-Cluster.demo.local	Search					P Queries	· ·	Di	sks 🔺
Nodes	Name	Status	Assigned To	Owner Node	Disk Number	Capacity	Informat	\$	Add D
🛛 📇 Storage	📇 Cluster Disk 1	Online	Disk Witness in Quorum	hyperv-1	2		1.00 GB	3	Move 🕨
Disks	Cluster Disk 2	Online	Cluster Shared Volume	hyperv-2	1		100 TB	=	View 🕨
Pools									Refresh
Cluster Events									Hala
									нер
								Clu	ister 🔺
								1	Bring
									Take
								8	Infor
								8	Show
									Move 🕨
									More 🕨
	<						>	-	Remo
	575m								Prope
	👻 者 Cluster Dis	ik 2						?	Help
	Volumon (1)								
	volumes (1)								
	New Volume	(C:\ClusterStorag	e\Volume1)						
	CSVFS 100.	0 TB free of 100.0	ТВ						
						Activa	te Window	Į.	
						Go to Sy	stem in Contro	Pa	nel to
						activate	Windows.		
Disks: Cluster Disk 2									
	- 35							0	4:14 PM
							- 😼 🖫	0	10/1/2016

Our next step is to create virtual machines, storing them on "C:\ClusterStorage\Volume1"



9. Creating Virtual Machines

Right click on "Roles" -> "Virtual Machines..." -> "New Virtual Machine..."

뷒		Failover Cluster Manager	- 🗆 X
File Action View Help			
🗢 🔿 🔰 🖬 👔			
💐 Failover Cluster Manager	Roles (0)		Actions
⊿ Hyper-V-Cluster.demo.local	Search	P Queries V II V	Roles 🔺
Rol Configure Role		Outrus Tupo Outror Node Pratty Information	🦣 Confi
A 🔓 Sto Virtual Machin	es 🕨	New Virtual Machine	Virtua •
Create Empty F	Role	New Hard Disk	Creat
View	Þ		View
Clu Refresh			Refresh
Help			Help
	*	No items found.	
		Go to System in Contro activate Windows.	Panel to
Creates a virtual machine in the nod	e specified.		
		- R 🖗	4:15 PM 10/1/2016

Select which hyper-v node that will (initially) house the new VM. Choose hyperv-1.

Ne	ew Virtual Machine	x
Select the target cluste	er node for Virtual Machine cr	eation.
Look for:		
🔎 Search		Cl <u>e</u> ar
Cluster nodes:		
Name	Status	
hyperv-1	🕑 Up	
hyperv-2	🕐 Up	
	01	
	OK	Cancel
		.::



Check the "Store the virtual machine in a different location" and specify our "C:\ClusterStorage\Volume1" clustered volume.

30	New Virtual Machine Wizard
Specify Name	e and Location
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	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: vm1-demo 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: C:\ClusterStorage\volume1\ M 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.
	<u>Next</u> > <u>Einish</u> Cancel

Follow the wizard to complete the creation process. The new virtual machine will initially run on hyperv-1 as we had specified but in case of node failure it will be picked up by other nodes in the cluster (in our case hyperv-2). We can also perform live migration to transfer the virtual machine from one Hyper-V node to another.