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Acronis Cloud Migration

Version 9.1

Getting Started Guide

REVISION: 11/10/2021

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1 Summary

Acronis Cloud Migration quickly, easily and noninvasively migrates virtual machines to private, public and hybrid cloud environments. Built on a non-intrusive, agentless architecture, Acronis Cloud Migration enables automated migrations of virtual machines to Hyper-V, AWS and Azure. Any operating system that runs on Hyper-V can be converted, including virtual machines running Windows/Windows Server, RedHat, CentOS, and SUSE. Our low cost, ease of use, and agentless deployment model ensures that you complete your migration project on time and under budget.

2 System requirements

2.1 Supported conversion source systems

VMware vSphere ESXi

- vSphere ESXi 6.7
- vSphere ESXi 6.5
- vSphere ESXi 6.0
- vSphere ESXi 5.5
- vSphere ESXi 5.1
- vSphere ESXi 5.0
- vSphere ESXi 4.1

Guest VM

• Any ESXi supported guest OS

Hyper-V host

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows 8 Professional with the Hyper-V role enabled
- Microsoft Windows 8.1 Professional with the Hyper-V role enabled
- Microsoft Windows 10 Enterprise with the Hyper-V role enabled
- Microsoft Windows 10 Professional with the Hyper-V role enabled
- Microsoft Windows 10 Education with the Hyper-V role enabled

Guest VM

• Any Hyper-V supported guest OS

2.2 Supported conversion target systems

Hyper-V host

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows Server 2008 R2 SP1
- Microsoft Windows 8 Professional with the Hyper-V role enabled
- Microsoft Windows 8.1 Professional with the Hyper-V role enabled

- Microsoft Windows 10 Enterprise with the Hyper-V role enabled
- Microsoft Windows 10 Professional with the Hyper-V role enabled
- Microsoft Windows 10 Education with the Hyper-V role enabled

2.3 Supported conversion target cloud systems

- Amazon Web Services (AWS)
- Microsoft Azure

2.4 Installation supported systems

Windows

- Microsoft Windows Server 2019
- Microsoft Windows Server 2016
- Microsoft Windows Server 2012 R2
- Microsoft Windows Server 2012
- Microsoft Windows 8 Professional
- Microsoft Windows 8.1 Professional
- Microsoft Windows 10 Enterprise
- Microsoft Windows 10 Professional
- Microsoft Windows 10 Education

3 Installation

To install Acronis Cloud Migration:

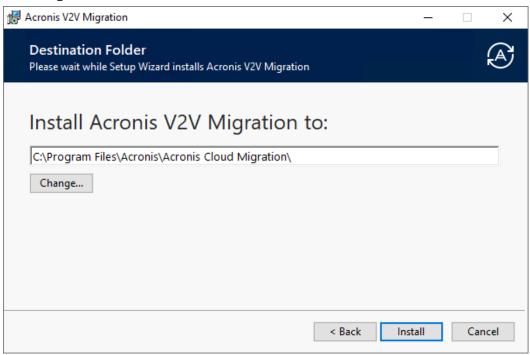
1. Run the .msi file that you got with the product installation package. The setup wizard will open. Click **Next** on the first page:

Acronis V2V Migration	_	
Acronis V2V Migration Setup Wizard		Ø
Welcome to the Setup Wizard		
The Setup Wizard allows you to change the way Acronis V2V Migration features are installed on your computer or to remove it from your computer.		
Click Next to continue or Finish to exit the Setup Wizard		
< Back Ne	ext >	Finish
~ DALK	AL 2	1 11 11511

2. Read and accept the Acronis software license agreement. Click **Next**:

😹 Acronis V2V Migration —	×
End-User Agreement	Ø
DATE OF LAST UPDATE: 20 February 2020 ACRONIS SOFTWARE LICENSE AGREEMENT THIS SOFTWARE LICENSE AGREEMENT ("AGREEMENT" OR "EULA") GOVERNS THE USE OF THE ACRONIS SOFTWARE ("SOFTWARE"). ACRONIS INTERNATIONAL GMBH ("ACRONIS" OR "LICENSOR") IS WILLING TO LICENSE THE SOFTWARE TO YOU AS AN INDIVIDUAL OR LEGAL ENTITY ("LICENSEE" OR "YOU"), AND IF APPLICABLE TO YOUR SOFTWARE LICENSE, TO PROVIDE YOU WITH SUPPORT AND MAINTENANCE SERVICES ("SERVICES"), PROVIDED, AND ONLY ON THE CONDITION THAT, YOU ACCEPT AND AGREE TO COMPLY WITH ALL OF THE TERMS AND CONDITIONS OF THIS AGREEMENT. THIS ACREEMENT APPLIES TO ANY UPDATES OR SERVICES FOR THE SOFTWARE OR I accept the terms in the License Agreement	
Print < Back Next > Fir	nish

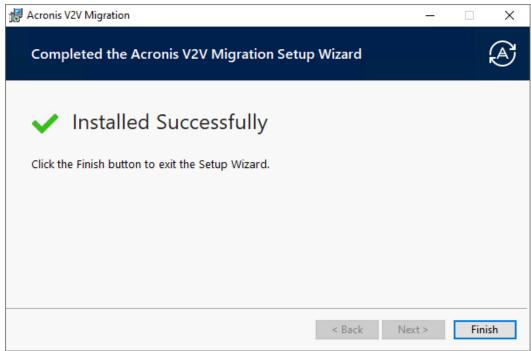
3. Set the folder to install the product to. The default path is C:\Program Files\Acronis\Acronis Cloud Migration. Click **Install**:



4. During the installation you will be prompted to enter the license in the case the full version of the product is being installed. The corresponding dialog box will appear on the screen. Copy and paste the license content from .txt license file and click **OK**:

Acronis	License 2	X
0	License file not found If you have valid license file paste its content below and click 'OK' button.	
AAAAo/ x9e5rAc LdKOs0	wpmsBOutE8qAGe4/VBHwAAAGCr4WBBSYkAAAEAAADoAwAAAQ AAAAAAAAAAAAAAAAKhLeyKNS/pPoAWZP/QigKGRLR2xVsURKyW6 cGhGGHGHHs6kfV2yvQAKZXfEMeAX6qeF62SNRUaruF2428Kb NK/Bdfgdggfhghjgjhkjhkjhzj203yRQxOTO1wMTIF8DG7qg9MDm3wml 3FXTYhTQOrzTRii8K5S2Dn8lH+tlsg==	
<u>Buy lic</u>	OK Cancel	

5. Click **Finish** at the end of the installation process to exit the setup wizard:



4 vSphere ESXi to Hyper-V conversion wizard

The **Select platform** page is where the platforms to/from which the conversion is done are selected. Select **VMware ESXi** as a source and **Microsoft Hyper-V** as a target. Click **Next**.

Convert Virtual Machine Wizard		×
Acronis Cloud N	Migration	Ø
Select Platform	Select Platform Please select source and target platforms	Acronis
	SELECT SOURCE PLATFORM	Cloud Manager
	VMware ESXi ~	#1
	SELECT TARGET PLATFORM	Hybrid Cloud Management Platform
	Microsoft Hyper-V ~	for Microsoft Azure and Hyper-V Download Now
	< Previous Next > Finish Cancel	

The **Select source** page is where the IP address or the host name of ESXi host is entered along with the user credentials to connect to the specified host. Virtual machines(s) can be selected directly from the VMware host. You can browse multiple hosts and their VMs by connecting to a vCenter Server. Please note that the best performance with the least impact to network resources is achieved by connecting directly to a VMware host and not through vCenter.

Convert Virtual Machine Wizard		×
Acronis Cloud	Migration	æ
Select Platform		
Select Source >	Select Source This wizard will automatically convert virtual machine(s) hosted on VMware infrastructure to virtual machine(s) that is compatible	Acronis
Select VM(s)	with Microsoft virtualization and deploy it to Hyper-V host.	Cloud Manager
VM Configuration	To select virtual machine(s) directly from VMware host, enter IP address or host name. To browse multiple hosts and select virtual machine(s), enter the IP address or name of vCenter Server.	
Select Disks	the readdress of name of vicencer server.	#1 Hybrid Cloud
Select Host	IP address/Name: 192.168.0.11	Management
Host Resources	User Name: admin	Platform for Microsoft Azure
Temporary Path	Password:	and Hyper-V
Summary		
		Download Now
	< Previous Next > Finish Cancel	

On the **Select VM(s)** page select the host(s) and virtual machines for conversion. The current state of the VMs is displayed on the right hand side.

Convert Virtual Machine Wizard				×
Acronis Cloud	Migration			Ø
Select Platform	Select Virtual Mac	hine(s)		
Select Source	Select the virtual machine(s) t			
Select VM(s)	Available hosts:			Acronis Cloud Manager
VM Configuration				
Select Disks				#1
Select Host	Convertible machines: (multiple s			Hybrid Cloud Management
Host Resources	Name TmpVM CloudMigrationDev Consolidation	Operating System Microsoft Windows XP Professional (64-bit) Microsoft Windows Server 2016 (64-bit) Microsoft Windows Server 2016 (64-bit)		Platform for Microsoft Azure and Hyper-V
Temporary Path	Consolidation Decomposition Decompo	Microsoft Windows Server 2016 (64-bit) Microsoft Windows XP Professional (64-bit) Microsoft Windows XP Professional (64-bit)		
Summary	TestWindows8_16Gb	Microsoft Windows 8 x (54-bit) Microsoft Windows Server 2016 (54-bit)	~	Download Now
	< Previous	Next > Finish Car	icel	

The **VM configuration** page allows you to modify the selected VM's settings.

Convert Virtual Machine Wizard		×
Acronis Cloud	Migration	æ
Select Platform	Virtual Machine(s) Configuration	
Select Source	Review new virtual machine(s) configuration	Acronis
Select VM(s)	Select for review TestWindowsXP2Gb ~	Cloud Security
VM Configuration >	Name TestWindowsXP2Gb	
Select Disks	Generation:	#1 Hybrid Cloud
Select Host	Hardware Resources Number of processors: 1 The Static memory: 256	Management Platform
Host Resources	Automatic Start Action The action to be taken when the host is started: Startup delay:	for Microsoft Azure and Hyper-V
Temporary Path	None	
Summary	Automatic Stop Action The action to be taken when the host is shutdown: Turn Off virtual machine	Download Now
	< Previous Next > Finish Cancel	

The **Select disks** page allows you to choose VM's virtual disks for conversion.

Convert Virtual Machine Wizard		×
Acronis Cloud I	Migration	A
Select Platform	Calast Diala	
Select Source	Select Disks Select drives to convert	Acronis
Select VM(s)	Select for review TestWindowsXP2Gb ~	Cloud Security
VM Configuration	Controllers:	
Select Disks	IDE 0 IDE 1 SCSI controller 0	#1 Hybrid Cloud
Select Host	Drives:	Management Platform
Host Resources	✓ Hard disk 1 (Capacity 2097152 Kb) ✓ Hard disk 2 (Capacity 12288 Kb)	for Microsoft Azure and Hyper-V
Temporary Path	Hard disk 3 (Capacity 12288 Kb)	
Summary		
		Download Now
	< Previous Next > Finish Cancel	

The **Select host** page allows you to select the target Hyper-V server or cluster. A list of available hosts and clusters ranked by their available resources are displayed to assist in the selection of the target.

Convert Virtual Machine Wizard					×
Acronis Cloud	Migration				Ø
Select Platform	Select Ho	ct			
Select Source		V host for the virtu	ual machine(s)		Acronis
Select VM(s)	Target Hyper-V h	ost name or IP addre	255:		Cloud Security
VM Configuration	158.250.19.20		~	Assess	
Select Disks			alble resources and the virt	ual	#1 Hybrid Cloud
Select Host >	machine(s) requir Rating	Name	Operating System	Avail. Stora	Management
Host Resources	****	158.250.19.20	Microsoft Windows S	1,371,894 MB	for Microsoft Azure and Hyper-V
Temporary Path					ана пурек-у
Summary					
					Download Now
		< Previous N	ext > Finish	Cancel	

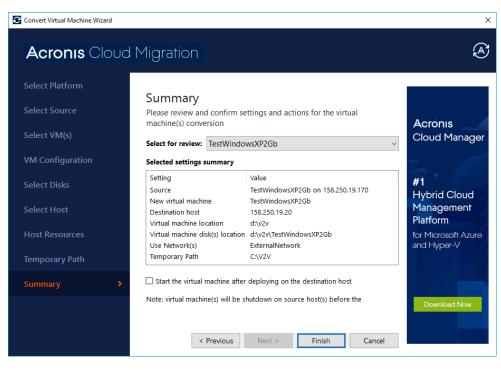
The **Host resources** page verifies resource availability for migration destination.

Convert Virtual Machine Wizard				×
Acronis Cloud I	Migration			Ø
Select Platform	Lis et Dese			
Select Source	Host Reso Specify host reso	UICES ources to use for new virtual mac	hine	Acronis
Select VM(s)	Selected Host:	158.250.19.20		Cloud Manager
VM Configuration	Select for review Virtual Machine P	TestWindowsXP2Gb Paths	~	
Select Disks	Store virtual m	achine in this location:	Browse	#1 Hybrid Cloud
Select Host	Store virtual m	achine hard disk(s) in this location:	browsem	Hybrid Cloud Management
Host Resources	d:\v2v\TestV ✓ vHDX disk	VindowsXP2Gb (s) format	Browse	Platform for Microsoft Azure
Temporary Path	Virtual Networks Specify which v	rirtual network(s) to use for the virtua	I machine:	and Hyper-V
Summary	Virtual Netwo		Connection Type Private	Download Now
	<	Previous Next > Fi	inish Cancel	

The **Temporary path** page allows you to configure where the VM is copied to as a part of the conversion process.

Convert Virtual Machine Wizard					×
Acronis Cloud	Migration				Ø
Select Platform					
Select Source	Temporar		or the conversio	D Drocess	
	Specify locarie		of the conversion	n process	Acronis
Select VM(s)			ace to store temp doubled if your de		Cloud Manager
VM Configuration	virtual disk is sto	red on the same	drive.)		
Select Disks	Select the volume	that you would lil	ke to use:		#1
Select Host	Rating	Volume C:	Disk Size	Available Free Space	Hybrid Cloud Management
	****	D:	482 GB	75 GB	Platform
Host Resources	****	E:	495 GB	445 GB	for Microsoft Azure and Hyper-V
Temporary Path					
Summary	Name of tempora	ary			
	C:\V2V			Change	Download Now
		< Previous	Next >	Finish Cancel	

The **Summary** page shows the settings defined by the wizard before starting the conversion process.



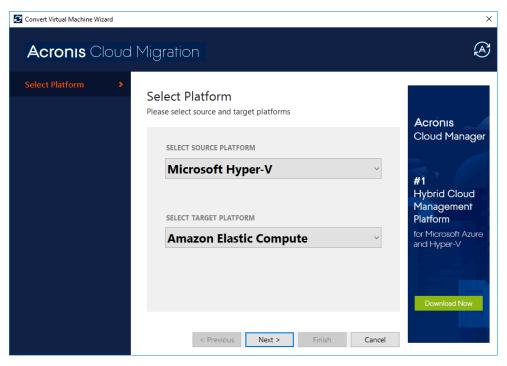
4.1 Hyper-V conversion process

- 1. The VM is shutdown and then its configuration settings are remapped from VMware (.vmx) to Hyper-V (.xml) including the name, memory, virtual networks, virtual disks, etc. set in the wizard.
- 2. The VM's hard disk is copied to a temporary location from the VMware (.vmdk) to the Hyper-V (.vhd/x) format. This includes the OS and data disks.
- 3. A new VM is created on Hyper-V by combining the configuration file and disk.

5 AWS conversion wizard

5.1 Hyper-V to AWS conversion wizard - connecting to Hyper-V host and selecting VMs

On the **Select platform** page select**Microsoft Hyper-V** as a source and **Amazon Elastic Compute** as a target.



On the **Select source** page enter the IP address or the host name of the Hyper-V host along with the user credentials to connect to the specified host.

Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		æ
Select Platform	Select Sou		
Select Source	This wizard will a	utomatically convert virtual machine hosted on	Anninus
Select VM(s)	2 C C C C C C C C C C C C C C C C C C C	cture to virtual machine that is compatible with ation and deploy it to EC2 Amazon Web Service.	Acronis Cloud Manager
Export Options	To select virtual ma	chine directly from Hyper-V host, enter IP	
Amazon Credentials			#1
AWS Configuration	IP address/Name	158.250.19.20	Hybrid Cloud Management
Select Disks	User Name	V2V_user	Platform for Microsoft Azure
Temporary Path	Password	•••••	and Hyper-V
Summary			
			Download Now
	<	Previous Next > Finish Cancel	

The **Select VM(s)** page lists the available generation 1 virtual machines for conversion. The user can select one or more virtual machines.

E Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		æ
Select Platform			
	Select Virtual Machine		
Select Source	Select the virtual machine(s) that you w	ould like to convert	
Select VM(s)	Convertible machines: (multiple selection)		Acronis Cloud Security
Europet Options	Name	State	^
Export Options	🗆 🖶 TestWindowsXP2Gb	Off	
Amazon Credentials	🗆 🖶 TestWindowsXP2Gb	Off	#1
Amazon credentiais	🗆 🖶 VM_Monitor	Off	Hybrid Cloud
AWS Configuration	🗹 🖶 WindowsXP	Off	Management
/into configuration	🗆 🛱 LinuxMonitoringAgentEnv	Off	Platform
Select Disks	🗆 🖶 TestWindowsXP2Gb	Off	for Microsoft Azure
	🗆 🖶 VM_tmp_Agent	Off	and Hyper-V
Temporary Path	🗆 🖶 TestWindowsXP2Gb	Off	
1 9	🗆 🖶 TestWindowsXP2Gb	Off	
Summary	🗆 🖶 VM_tmp_Monitor	Off	
,	🗆 🖶 TestWindowsXP2Gb	Off	¥
	Only generation 1 VMs are available for this	type of conversion.	Download Now
	< Previous Next >	Finish	Cancel

- VHDX/VHD virtual disk conversions are supported.
- Amazon Elastic Compute (EC2) does not support second generation VMs (with EFI and GPT).
- If the selected virtual machines are on they will automatically be turned off before the conversion starts.

The **Export options** page allows to configure whether snapshot has to be created during the conversion process. Using snapshot will let VM to be kept powered on, but will take additional space on the disc.

Convert Virtual Machine Wizard				×
Acronis Cloud	Migration			A
Select Platform	-			
Select Source	Export Option Specify export option			Acronis
Select VM(s)	Select for review:	WindowsXP	~	Cloud Manager
Export Options >		Create Snapshot		In C
Amazon Credentials		Snapshot's using allows to keep virtual n powered on but requires additional disk		#1 Hybrid Cloud
AWS Configuration	Store snapshot in th	is location:		Management
	D:\Temp		Browse	Platform
Select Disks				for Microsoft Azure and Hyper-V
Temporary Path				
Summary				Download Now
	< Prev	vious Next > Finish	Cancel	

5.2 vSphere ESXi to AWS conversion wizard - connecting to VMware host and selecting VMs

On the **Select platform** page select**VMware ESXi** as a source and **Amazon Elastic Compute** as a target.

Convert Virtual Machine Wizard		×
Acronis Cloud Mig	gration	æ
	elect Platform ease select source and target platforms	Acronis Cloud Security
	SELECT SOURCE PLATFORM VMware ESXi SELECT TARGET PLATFORM	#1 Hybrid Cloud Management Platform
	Amazon Elastic Compute ~	for Microsoft Azure and Hyper-V Download Now
	< Previous Next > Finish Cancel	

On the **Select source** page enter the IP address or the host name of the ESXi host along with the user credentials to connect to the specified host.

Convert Virtual Machine Wizard			×
Acronis Cloud i	Migration		æ
Select Platform	Select Sou		
Select Source >	This wizard will a on VMware infras	rce utomatically convert virtual machine(s) hosted structure to virtual machine(s) that is compatible b Services and deploy it to Amazon Elastic	Acronis Cloud Security
Amazon Credentials AWS Configuration	host name. To brow	chine(s) directly from VMware host, enter IP address or vse multiple hosts and select virtual machine(s), enter ame of vCenter Server.	#1
Select Disks	IP address/Name:	192.168.0.11	Hybrid Cloud Management
Temporary Path	User Name: Password:	admin	Platform for Microsoft Azure and Hyper-V
Summary		Use Windows session credentials Previous Next > Finish Cancel	Download Now

On the **Select VM(s)** page select the host(s) and virtual machines for conversion. The current state of the VMs is displayed on the right hand side.

Convert Virtual Machine Wizard				×
Acronis Cloud	Migration			A
Select Platform	Select Virtual Mac	hine(s)		
Select Source		that you would like to convert	0.0	ronis
Select VM(s)	Available hosts:			oud Security
Amazon Credentials				
AWS Configuration			#1	brid Cloud
Select Disks	Convertible machines: (multiple s	election)	Ma	nagement
Temporary Path Summary	Name → TmpVM → CoudMigrationDev → Consolidation → TestWindows/P200MbEmpty → TestWindows/P20b → TestWi	Operating System Microsoft Windows XP Professional (64-bit) Microsoft Windows Server 2016 (64-bit) Microsoft Windows XP Professional (64-bit) Microsoft Windows XP Professional (64-bit) Microsoft Windows 8 x (64-bit) Microsoft Windows 8 x (64-bit) Microsoft Windows Server 2016 (64-bit)	for h and	form Microsoft Azure Hyper-V Download Now
	< Previous	Next > Finish Car	icel	

5.3 Conversion to Amazon Web Services (AWS)

On the **Amazon credentials** page select the desired conversion target region for Amazon Elastic Compute and provide their AWS access key ID and AWS secret key.

Convert Virtual Machine Wizard				×
Acronis Cloud	Migration			S
Select Platform				
Select Source	Amazon Cred Specify AWS Region a			Acronis
Select VM(s)	Select Region:	The Asia Pacific (Tokyo)	~	Cloud Manager
Export Options	AWS Access Key ID:	AKIAJEZOBUDYSS7AJBUA		I.
Amazon Credentials >	AWS Secret Key:	•••••	•••••	#1
AWS Configuration				Hybrid Cloud Management Platform
Select Disks				for Microsoft Azure
Temporary Path				and Hyper-V
Summary				
				Download Now
	< Previo	Next > Finish	Cancel	

Please note that each region is isolated from the others. There is a fixed list of regions for Amazon Web Services based on what was available at the time of the release. Access keys (access key IDs and secret access keys) for your AWS account are required before performing conversions.

To get the access keys:

- Use your AWS account email address and password to sign in to the AWS Management Console. If you previously signed in to the console with IAM user credentials, your browser might open your IAM user sign-in page. You can't use the IAM user sign-in page to sign in with your AWS account credentials. Instead, choose Sign-in using root account credentials to go to the AWS account sign-in page.
- 2. In the top right of the console, choose your account name or number. Then choose **My security credentials**.
- 3. Choose Continue to security credentials.
- 4. Expand the Access keys (access key ID and secret access key) section.
- 5. Choose **Create new access key**. Then choose **Download key file** to save the access key ID and secret access key to a file on your computer. After you close the dialog box, you can't retrieve this secret access key again.

Convert Virtual Machine Wizard				Х
Acronis Cloud	d Migration			Ø
Select Platform	Amazon Con	figuration		
Select Source	Review import config			A
Select VM(s)	Select S3 Bucket:	Select bucket smitakabucket		Acronis Cloud Manager
Export Options	Select for review:	SmithHyperVImport	~	
Amazon Credentials	Name	SmithHyperVImport		#1 Hybrid Cloud
AWS Configuration	Instance Type:	C1Medium	~	
Select Disks	Migrate network ad	dapters		for Microsoft Azure
Temporary Path	Subnet:	subnet-0d1af526	~	, and Hyper-V
Summary	Network adapter		MAC address 00:15:5D:00:76:04	
				Download Now
	< Prev	vious Next >	Finish Cancel	

On the **AWS configuration** page set the VM storage, name, instance type and network adapter:

Select S3 bucket (Amazon Simple Storage Service)

Please select an Amazon S3 bucket from the list or type in a new bucket name. The selected

virtual machine's disk images will be uploaded to this bucket and will be stored there.

Select for review

Please select the virtual machine from the drop down menu to configure it. If desired, modify

the name of S3 bucket item and instance type in the **Name** field. If the item already exists in the S3 bucket with the same name, it will be replaced.

Instance type

The instance type represents the configuration of Amazon Elastic Compute instances such as

processor type and number of vCPUs, memory size, storage, network and GPU options etc.

Migrate network adapters

If you want to add network adapters from the source virtual machine, select the **Migrate network adapters** checkbox, and then select the subnet and network adapters. If you select the default network adapter, the virtual instance will be created. Subnets are managed in the Amazon networking & content delivery service. On the **Select disks** page select controllers and disks for conversion:

Convert Virtual Machine Wizard		×
Acronis Cloud	Migration	æ
Select Platform		
Select Source	Select Disks Select drives to convert	Acronis
Select VM(s)	Select for review SmithHyperVImport ~	Cloud Manager
Export Options	Controllers:	z. 🧹
Amazon Credentials	IDE Controller 0 IDE Controller 1	#1 Hybrid Cloud
AWS Configuration	Drives:	Management Platform
Select Disks	Hard Disk Image (Capacity 10096640 Kb)	for Microsoft Azure and Hyper-V
Temporary Path		
Summary		
		Download Now
	< Previous Next > Finish Cancel	

On the **Temporary path** page specify the folder to store temporary files during the conversion process. You will need about 9860 MB of free space. This space should be doubled if your destination VM virtual disk is stored on the same drive.

Convert Virtual Machine Wizard					×
Acronis Cloud	Migration				Ø
Select Platform	-	5.4			
Select Source	Temporar Specify local re	-	for the conversio	n process	Acronis
Select VM(s)			ace to store temp doubled if your de		Cloud Security
Export Options		ored on the same			
Amazon Credentials	Select the volume	that you would li	ike to use:		#1 Hybrid Cloud
AWS Configuration	Rating	Volume C:	Disk Size 223 GB	Available Free Space 187 GB	Management
Select Disks	☆☆☆☆☆ <mark>☆☆☆☆☆</mark>	D: E:	9 GB 922 GB	9 GB 720 GB	for Microsoft Azure
Temporary Path	****	R	447 GB	426 GB	and Hyper-V
Summary	Name of tempor	ary			
	F:\V2V			Change	Download Now
		< Previous	Next >	Finish Cancel	

On the **Summary** page review and confirm settings and actions to start the conversion process.

Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		Ø
Select Platform			
	Summary		
Select Source	Please review and machine(s) convers	confirm settings and actions for the virtual sion	Acronis
Select VM(s)	Select for review:	SmithHyperVImport	Cloud Manager
Export Options	Selected settings su	immary	
Amazon Credentials	Setting Source New virtual machine	Value SmithHyperVImport on betaserver SmithHyperVImport	#1 Hybrid Cloud
AWS Configuration	S3 Bucket EC2 Instance Type	smitakabucket C1Medium	Management Platform
Select Disks			for Microsoft Azure and Hyper-V
Temporary Path			
Summary >	Note: virtual machine conversion	e(s) will be shutdown on source host(s) before the	
			Download Now
	< P	revious Next > Finish Cancel	

5.4 AWS conversion process

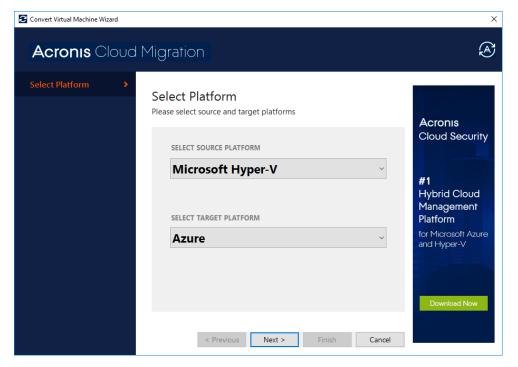
The conversion process consists of the following stages:

- 1. Uploading all disk image files to the S3 Storage service. After this operation, the files will be available in the bucket unless deleted.
- 2. Conversion of the files and creation of Amazon AWS EC2 Images. Images will be available in Elastic Compute service in section IMAGES/AMIs.
- 3. Creation and starting of the EC2 instances for each AMI. Those will be available for management in Elastic Compute service INSTANCES/Instances.

6 Microsoft Azure conversion wizard

6.1 Hyper-V to Azure conversion wizard - connecting to Hyper-V host and selecting VMs

On the **Select platform** page select**Microsoft Hyper-V** as a source and **Azure** as a target.



On the **Select source** page enter the IP address or the host name of the Hyper-V host along with the user credentials to connect to the specified host.

Convert Virtual Machine Wizard		×
Acronis Cloud	Migration	Ø
Select Platform		
Select Source >	Select Source This wizard will automatically convert virtual machine hosted on	
Select VM(s)	Hyper-V infrastructure to virtual machine that is compatible with Azure virtualization and deploy it to Azure Web Service.	Acronis Cloud Security
Export Options	To select virtual machine directly from Hyper-V host, enter IP	
Azure Connection		#1 Hybrid Cloud
Azure Subscription	IP address/Name 158.250.19.20	Management
Azure Configuration	User Name V2V_user	for Microsoft Azure
Azure Resources	Password ••••••	and Hyper-V
Select Disks		
Summary		Download Now
	< Previous Next > Finish Cancel	

The **Select VM(s)** page lists the available generation 1 virtual machines for conversion. The user can select one or more virtual machines.

Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		Ø
Select Platform			
	Select Virtual Machine		
Select Source	Select the virtual machine(s) that you w	ould like to convert	
Select VM(s)	Convertible machines: (multiple selection)		Acronis Cloud Manager
Export Options	Name	State	^
Export Options	🗹 🖶 TestWindowsXP2Gb	Off	In the second second
Azure Connection	🗆 🛱 TestWindowsXP2Gb	Off	#1
Azure connection	🗆 🖶 VM_Monitor	Off	Hybrid Cloud
Azure Subscription	🗆 🖶 WindowsXP	Off	Management
vizare oubsenption	🗆 🖶 LinuxMonitoringAgentEnv	Off	Platform
Azure Configuration	🗆 🖶 TestWindowsXP2Gb	Off	for Microsoft Azure
5	🗆 🖶 VM_tmp_Agent	Off	and Hyper-V
Azure Resources	TestWindowsXP2Gb	Off	
	🗆 🖶 TestWindowsXP2Gb	Off	
Select Disks	WM_tmp_Monitor	Off	
	🗆 🖶 TestWindowsXP2Gb	Off	~
Summary	Only generation 1 VMs are available for this	type of conversion.	Download Now
	< Previous Next >	Finish Ca	ncel
	Next 2		

- VHDX/VHD virtual disk conversions are supported.
- Azure supports only generation 1 VMs that are in the VHD file format and have a fixed sized disk.
- If the selected virtual machines are on they will automatically be turned off before the conversion starts.

The **Export options** page allows to configure whether snapshot has to be created during the conversion process. Using snapshot will let VM to be kept powered on, but will take additional space on the disc.

Convert Virtual Machine Wizard				×
Acronis Clouc	l Migration			A
Select Platform	F 10.1			
Select Source	Export Option Specify export option			Acronis
Select VM(s)	Select for review:	TestWindowsXP2Gb	~	Cloud Security
Export Options >		Create Snapshot		
Azure Connection		Snapshot's using allows to keep virtual mach powered on but requires additional disk spac		#1
Azure Subscription	Store snapshot in t		Browse	Hybrid Cloud Management Platform
Azure Configuration	Difficinity		, on och	for Microsoft Azure
Azure Resources				and Hyper-V
Select Disks				
Summary				Download Now
	< Pre	vious Next > Finish	Cancel	

6.2 vSphere ESXi to Azure conversion wizard - connecting to VMware host and selecting VMs

On the **Select platform** page select**VMware ESXi** as a source and **Azure** as a target.

Convert Virtual Machine Wizard		×
Acronis Cloud I	Migration	A
Select Platform >	Select Platform Please select source and target platforms SELECT SOURCE PLATFORM VMware ESXi SELECT TARGET PLATFORM Azure Cancel	Acronis Cloud Manager #1 Hybrid Cloud Management Platform for Microsoft Azure and Hyper-V

On the **Select source** page enter the IP address or the host name of the ESXi host along with the user credentials to connect to the specified host.

Convert Virtual Machine Wizard		×
Acronis Cloud	Migration	Ø
Select Platform	Select Source	
Select Source >	This wizard will automatically convert virtual machine(s) hosted	A and and
Select VM(s)	on VMware infrastructure to virtual machine that is compatible with Azure virtualization and deploy it to Azure Web Service.	Acronis Cloud Manager
Azure Connection	To select virtual machine(s) directly from V/Mware host, enter IP address or host name. To browse multiple hosts and select virtual machine(s), enter	I. 🥖
Azure Subscription	the IP address or name of vCenter Server.	#1 Hybrid Cloud
Azure Configuration	IP address/Name: 192.168.0.11	Management
Azure Resources	User Name: admin	Platform for Microsoft Azure
Select Disks	Password:	and Hyper-V
Temporary Path		
Summary		Download Now
	< Previous Next > Finish Cancel	

On the **Select VM(s)** page select the host(s) and virtual machines for conversion. The current state of the VMs is displayed on the right hand side.

Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		Ð
Select Platform	Select Virtual Mac	hine(s)	
Select Source		hat you would like to convert	Anninus
Select VM(s)	Available hosts:		Acronis Cloud Manager
Azure Connection			I. 6
Azure Subscription			#1 Hybrid Cloud
Azure Configuration	Convertible machines: (multiple s		Management Platform
Azure Resources	Name TmpVM CoudMigrationDev CoudMigrationDev	Operating System Microsoft Windows XP Professional (64-bit) Microsoft Windows Server 2016 (64-bit) Microsoft Windows Server 2016 (64-bit)	for Microsoft Azure and Hyper-V
Select Disks	TestWindowsXP200MbEmpty TestWindowsXP2Gb	Microsoft Windows Server 2016 (64-bit) Microsoft Windows XP Professional (64-bit) Microsoft Windows XP Professional (64-bit)	
Temporary Path	TestWindows8_16Gb	Microsoft Windows 8x (64-bit) Microsoft Windows Server 2016 (64-bit)	·
Summary	٢		> Download Now
	< Previous	Next > Finish Can	ncel

6.3 Conversion to Microsoft Azure

On the **Azure connection** page specify the Azure connection details.

Convert Virtual Machine Wizard					×
Acronis Cloud	Migration	l			A
Select Platform	Azure Cor	un esti e u			
Select Source		re connection details			Acronis
Select VM(s)	Tenant Name:	mytenant.onmicrosoft.co	om		Cloud Manager
Export Options	Client ID:	xxxxxxxxxxxxxxxxxxxxxxxxxxx	000000000000000000000000000000000000000		In C
Azure Connection >	Client Secret:	<u>,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>	/УУУУУУУУУУУУУУУУ		#1 Hybrid Cloud
Azure Subscription					Management
Azure Configuration					for Microsoft Azure and Hyper-V
Azure Resources					
Select Disks					
Summary					Download Now
		< Previous Next >	Finish	Cancel	

On the **Azure subscription** page select the Azure subscription.

Convert Virtual Machine Wizard		×
Acronis Clouc	Migration	Ø
Select Platform		
Select Source	Azure Subscription Select the Azure subscription	Acronis
Select VM(s)	Subscriptions: Pay-As-You-Go	Cloud Security
Export Options		
Azure Connection		#1 Hybrid Cloud
Azure Subscription		Management Platform
Azure Configuration		for Microsoft Azure
Azure Resources		and Hyper-V
Select Disks		
Summary		Download Now
	< Previous Next > Finis	h Cancel

Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		S
Select Platform			
Select Source	Azure Config Specify the Azure con		Acronis
Select VM(s)	Resource group:	myresourcegroup	Cloud Security
Export Options	Storage account:	myresourcegroupdisks888	~
Azure Connection	Storage Key:	key1	✓ #1 Hybrid Cloud
Azure Subscription			Management
Azure Configuration >			Platform for Microsoft Azure and Hyper-V
Azure Resources			
Select Disks			
Summary			Download Now
	< Previ	ious Next > Finish Cancel	

On the **Azure configuration** page specify the Azure configuration details

On the **Azure resources** page review the import configuration.

Convert Virtual Machine Wizard				×
Acronis Cloud	Migration			Ø
Select Platform	Azure Resource	25		
Select Source	Review import configur			Acronis
Select VM(s)	Select for review:	TestWindowsXP2Gb	~	Cloud Security
Export Options	Virtual machine name:	TestWindowsXP2Gb		
Azure Connection	Storage Container:	eastus	~	#1 Hybrid Cloud
Azure Subscription	Virtual machine size:	Standard_B1Is	~	Management Platform
Azure Configuration	Platform:	Windows	~	for Microsoft Azure
Azure Resources	Virtual network:	vnet7c488412eea8	~	and Hyper-V
Select Disks	Subnet:	subnet1	~	
	Network interface:	nicnewvmc9d3676722	~	Download Now
Summary				
	< Previou	us Next > Finish	Cancel	

On the **Select disks** page select controllers and disks for conversion:

Convert Virtual Machine Wizard		×
Acronis Cloud	Migration	Ø
Select Platform		
Select Source	Select Disks Select drives to convert	Acronis
Select VM(s)	Select for review TestWindowsXP2Gb	 Cloud Manager
Export Options	Controllers:	
Azure Connection	IDE Controller 0 IDE Controller 1 SCSI Controller	#1 Hybrid Cloud
Azure Subscription	Drives:	Management Platform
Azure Configuration	☑ Hard Disk Image (Capacity 16384 Kb) ☑ Hard Disk Image (Capacity 16384 Kb)	for Microsoft Azure and Hyper-V
Azure Resources		
Select Disks		
Summary		Download Now
	< Previous Next > Finish	Cancel

[for VMware ESXi only] On the **Temporary path** page specify the folder to store temporary files during the conversion process. You will need about 9860 MB of free space. This space should be doubled if your destination VM virtual disk is stored on the same drive.

Convert Virtual Machine Wizard					×
Acronis Cloud	Migration				Ø
Select Platform	Temporar	v Dath			
Select Source		-	or the conversion	n process	Acronis
Select VM(s)			ace to store temp		Cloud Security
Azure Connection	virtual disk is sto		doubled if your de drive.)	estination vivi	
Azure Subscription	Select the volume	that you would li	ke to use:		#1 Hybrid Cloud
Azure Configuration	Rating	Volume C:	Disk Size 223 GB	Available Free Space 187 GB	Management
Azure Resources	****** *******	D: E: F:	9 GB 922 GB 447 GB	9 GB 720 GB 426 GB	for Microsoft Azure and Hyper-V
Select Disks			447 00	420 00	
Temporary Path	Name of tempora	ary		Change	
Summary				Chungem	Download Now
		< Previous	Next >	Finish Cancel	

On the **Summary** page review the summary and confirm the beginning of the conversion process.

Convert Virtual Machine Wizard			×
Acronis Cloud	Migration		Ø
Select Platform	_		
Select Source Select VM(s)	machine(s) conversion		Acronis Cloud Security
Export Options	Select for review: Te: Selected settings sum		
Azure Connection	Setting Storage Container:	Value eastus	#1 Hybrid Cloud
Azure Subscription	Operating System: VM Size: Network Interface:	Windows Standard_B1ls nicnewvmc9d3676722	Management Platform
Azure Configuration			for Microsoft Azure and Hyper-V
Azure Resources	N set suide set and shine (a)) will be shutdown on source host(s) before the	
Select Disks	Note: Virtual machine(s)) will be shutdown on source nosi(s) before the	
Summary >			Download Now
	< Pre	vious Next > Finish Cancel	

7 Acronis Cloud Migration PowerShell cmdlets

Note

This functionality is only available in the full (paid) edition of Acronis Cloud Migration.

7.1 VMware to Hyper-V conversion

7.1.1 Invocation

- 1. Open PowerShell Window.
- 2. Execute the following command to load the snapin:

PS C:\Users\Administrator>Add-PSSnapin 59v2v

3. Use theConvert-VM cmdlet to perform conversion.

Once conversions succeed, theConvert-VMcmdlet will pass the Virtual Machine Id and Hyper-V ComputerName to the pipeline, so you could use it later to configure VM.

7.1.2 Getting offline help

To list supported options use the following cmdlet:

```
PS C:\Users\Administrator> Get-Help Convert-VM -full
```

7.1.3 Supported options

Mandatory parameters:

- -s <string> Source ESX/ESXi server.
- -sp <string> Source host admin password.
- -su <string> Source host admin login.
- -sv <string> Source VM name to convert.

Optional parameters:

- -t <string> Destination Hyper-V host (defaults to local host).
- -tp <string> Hyper-V host admin pass.
- -tu <string> Hyper-V host admin login.
- -tv <string> Destination VM name (defaults to source name).
- -cpu <int> Override number of CPUs to value (1-4).
- -mem <int> Override memory size to value MB (1-32768).
- -net <string> Connect VM to specified virtual network.
- -vhd Use vhd disk format (vhdx is default).
- -start <int> Override automatic startup action (0 None, 1 Restart, 2 Always).

- -delay <int> Override automatic startup delay to value seconds.
- -stop <int> Override automatic shutdown action (0 Turn Off, 1 Save, 2 Shutdown).
- -vhdpath <string> Store VM disk files at specified path.
- -vmpath <string> Store VM files at specified path.
- -temp <string> Use specified path as temporary location.
- -shutdown Automatically shutdown source VM prior to conversion.
- -startup Automatically start destination VM after conversion.

Example 1 - converting VM:

To perform a conversion using PowerShell, specify the source (VMware ESX/ESXi) host name, credentials and VM name to convert with the destination (Hyper-V) host. Use additional options to specify information to the converter, such as amount of RAM to assign, name of virtual network to connect to, and so on. It's strongly suggested to manually shutdown source VMs before proceeding with conversions to avoid data loss and VMware license limitations.

PS C:\Users\Administrator> Convert-VM -verbose -s esxi_host -su root -sp <password> -sv <VM_for_conversion_name> -t <Win-target_host> -tu Administrator -tp <adm-password> -tv <VM_for_conversion_name> -net <vSwitch_name> -start 2 -stop 0 -delay 60 -cpu 2 -mem 256

Example 2 - processing result using pipeline:

Running VM conversion from ESXi host and passing the resulting object down to pipeline. Verbose flag turned on.

```
PS C:\Users\Administrator> Convert-VM -verbose -s <esxi_host> -su root -sp <password> -
sv <VM_for_conversion_name> -t <Win-target_host> -tu Administrator -tp <adm-password> -
tv <VM_for_conversion_name> -net <vSwitch_name> | Get-VM Acronis Cloud Migration 9.1.1,
part of Acronis Migration Kit.
```

7.1.4 Conversion process

- VERBOSE: (1%) Connecting to 192.168.0.100 VMware host
- VERBOSE: (10%) Connecting to <Win-target_host> Hyper-V host
- VERBOSE: (20%) Getting '<VM_for_conversion_name>' VM information
- VERBOSE: (30%) Starting conversion
- VERBOSE: (40%) Examining Source and Target
- VERBOSE: (50%) Preparing Temporary Path
- VERBOSE: (60%) Starting disks conversion
- VERBOSE: (70%) Conversion...
- VERBOSE: (80%) Conversion completed
- VERBOSE: (85%) Cleaning up Temporary Path

VERBOSE: (90%) Creating Generation 2 VM

VERBOSE: (100%) Done

Virtual machine 'VM_For_Conversion_Name' (137EF963-522D-44B0-8101-E420896FA84C) has been converted.

Name State CPUUsage(%) MemoryAssigned(M) Uptime Status

---- ----- ------

VM_For_Conversion_Name Off 0 0 00:00:00 Operating normally

7.2 Hyper-V to Microsoft Azure conversion

Two Acronis Cloud Migration cmdlets are to deal with migration to Microsoft Azure Classic and Mirosoft Azure Resource Manager type deployments.

7.2.1 Requirements

- 1. Acronis Cloud Migration needs to be installed on the Hyper-V server to access guest virtual hard disks.
- 2. Azure-powershell 1.7.0 or later needs to be installed (https://github.com/Azure/azure-powershell/releases/download/v1.7.0-August2016/azure-powershell.1.7.0.msi).
- 3. .Net Framework 4.5 needs to be installed.

7.2.2 Syntax

Import-VMDisks -OS <string> -Container <uri> -StorageKey <string> -Source <string> [-VM <IPersistentVM>] Import-VMDisksRM -OS <OperatingSystemTypes> {Windows | Linux} -Container <uri> -StorageKey <string> -Source <string> [-VM <PSVirtualMachine>]

Parameters:

 -0S - Operating System Type (Windows on Linux) of the Hyper-V guest Container - Full Uri of container used to store imported virtual hard disk of the Azure Storage Account,

e.g. https://<storage_account>.blob.core.windows.net/vhds/.

- -StorageKey Key used to Access Storage Account.
- -Source Hyper-V host name.

While exporting disk drives first IDE drive will be assigned as OS disk, while remaining as data disks.

7.2.3 Using with Microsoft Azure Classic

- 1. Preparation you need to be registered on Microsoft Azure, with an active subscription. You should have created Azure Storage Account (classic) using the azure portal (portal.azure.com)
- 2. Start powershell and load snap-in Add-PSSnapin 59v2v.

- a. To login to Azure type Add-AzureAccount.
- b. If you have multiple subscriptions choose correct one with Select-AzureSubscription -SubscriptionId <Subscription-Id>.
- d. Creating Azure VM using local Hyper-V guest disks (please shutdown guest prior to conversion!). In the example below *CentOS 7* guest is uploaded to **Azure (Northern Europe)** (storage container is created if it does not exists), new VM (<new_azure_vm_name>) and corresponding service (<azure_service_name>) are created, also public access to SSH and HTTP ports are allowed:

```
New-AzureVMConfig -Name <new_azure_vm_name> -InstanceSize Small -
AvailabilitySetName 'RDGW' -DiskName 'CentOS7' Import-VMDisks -Container
"https://<storage_account>.blob.core.windows.net/centos7/" -StorageKey
$StorageKey.Primary -Source "CentOS 7" -OS Linux | Add-AzureEndpoint -Protocol tcp
-LocalPort 22 -PublicPort 22 -Name 'SSH' | Add-AzureEndpoint -Protocol tcp -
LocalPort 80 -PublicPort 80 -Name 'HTTP' | New-AzureVM -Location 'Northern Europe'
-ServiceName <azure_service_name> -Verbose
```

Once this command succeeds, you will be able to establish ssh connection and navigate to http://<azure_service_name>.cloudapp.net/

3. Complete.

7.2.4 Using with Mirosoft Azure Resource Manager

- 1. Preparation: you need to be registered on Azure, with an active subscription.
 - a. You should have created Azure Storage Account (Resource Manager) using Azure portal (portal.azure.com). Be sure to select *General purpose* as a *Storage Account type* (vs *Blob storage*), the later does not work with page blobs.
 - b. At least one virtual network and subnet should be configured with Azure portal. In the sample below those are called *RMVNET/RMVSUBNET*
- 2. Start powershell and load snap-in

Add-PSSnapin 59v2v

a. To login to Azure type

Login-AzureRmAccount

or

Login-AzureRmAccount -SubscriptionId <Subscription-Id>

to select subscription.

b. Create network interface for the new VM (skip this step if you have it already)

\$Subnet = Get-AzureRmVirtualNetwork -Name 'RMVNET' -ResourceGroupName <rm_
resource_group> | Get-AzureRmVirtualNetworkSubnetConfig -Name RMSUBNET NewAzureRmNetworkInterface -Name RMNIC_1 -ResourceGroupName <rm_resource_group> Location 'North Europe' -SubnetId SubnetID.Id

c. Export storage account keys and NIC ids

\$StorageKey = Get-AzureRmStorageAccountKey -Name <rm_storage_account> ResourceGroupName <rm_resource_group> \$NIC = Get-AzureRmNetworkInterface -Name
RMNIC_1 -ResourceGroupName <rm_resource_group>

d. Creating Azure VM using local Hyper-V guest disks (please shutdown guest prior to conversion!). In the example below *testing* guest is uploaded to **Azure (Northern Europe)** (storage container is created if it does not exists), new VM (<new_azure_vm_name>) is created:

New-AzureRmVMConfig -VMName <new_azure_vm_name> -VMSize "Standard_A1" | Import-VMDisksRM -Container "https://<rm_storage_account>.blob.core.windows.net/testing/" -StorageKey \$StorageKey.Key1 -Source testing -OS Linux -Verbose | Add-AzureRmVMNetworkInterface -Id \$NIC.Id | New-AzureRmVM -Location "Northern Europe" -ResourceGroupName <rm_resource_group>

7.2.5 Troubleshooting

If you receive an error during installation, please check if requirements are met.

- 1. If you receive a *Forbidden* error message from Azure during upload, then check if you selected storage keys correctly.
- 2. If you receive a *Bad request* error message from Azure during upload, then check storage account type to be *general purpose*.
- 3. If you receive a *Not found* error message from Azure during upload, then check if you specified the storage account url correctly.