# Virtuozzo

## Virtuozzo Hybrid Infrastructure 4.7

Migration Guide for VMware

2/16/2022

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## About this guide

This guide explains how to migrate virtual machines using Acronis Cyber Cloud.

You will need to log in to the portal at https://cloud.acronis.com with your account.

## Deploying the Acronis Agent for VMware from an OVF Template

Before you proceed to deploy one or more agents, take note of the following:

#### • Agent system requirements.

By default, a virtual appliance is assigned 4 GB of RAM and 2 vCPUs, which is optimal and sufficient for most operations. It is recommended, however, to let an agent have 8 GB of RAM and 4 vCPUs to improve backup performance if the backup traffic exceeds 100 MB/s (in 10 Gbps networks, for example).

As for storage, appliance virtual disks occupy no more than 6 GB. Thick or thin disk format does not matter as it does not affect the appliance performance.

#### • The number of agents.

Even though one virtual appliance can protect the entire vSphere environment, the best practice is to deploy one virtual appliance per vSphere cluster (or per host, if there are no clusters). This makes for faster backups because the appliance can attach the backed-up disks by using the HotAdd transport and therefore direct the backup traffic from one local disk to another. You can use both the virtual appliance and Acronis Agent for VMware for Windows at the same time, as long as they are connected to the same vCenter Server or different ESXi hosts. Avoid connecting one agent to an ESXi directly and another to the vCenter Server which manages this ESXi.

It is not recommended to use locally attached storage (i.e. storing backups on virtual disks added to the virtual appliance) if you have more than one agent.

#### • Disable automatic DRS for the agents.

If the virtual appliance is deployed to a vSphere cluster, be sure to disable automatic vMotion for it. In the cluster DRS settings, enable individual virtual machine automation levels, and then set **Automation** level for the virtual appliance to **Disabled**.

## Creating an Appliance with the Acronis Agent for VMware

To create an appliance with the Acronis Agent for VMware from an OVF template, do the following:

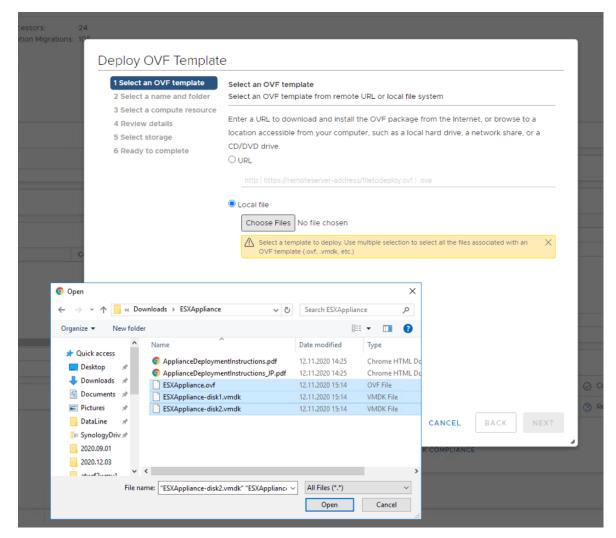
 In Acronis Cyber Cloud, click All devices > Add > VMware ESXi > Virtual Appliance (OVF). The archived template will be downloaded to your machine.

Virtuozzo Cyber Cloud	All devices	Add devices	×
Manage account	<b>Q</b> Search	Ø	
🕢 dashboard 🛛 5	☐ Type Name ↑	Windows only	
		WORKSTATIONS	
All devices		<b>11 6</b>	
		Windows Mac	
Machines with agents			
VMware		SERVERS	
Virtuozzo Hybrid Infrastructure	test-VM-01	<b>π</b> Δ	
Virtuozzo Migration Demo	test-VM-01	Windows	
Unmanaged machines			
Data protection map			
Powered by Acronis AnyData Engine		Virtuozzo Hybrid Infrastructure	

- 2. Unpack the archive. It will contain an OVF file and two VMDK files.
- 3. Make sure that these files can be accessed from the machine running the vSphere Client.
- 4. Start the vSphere Client and log on to the vCenter Server.
- In the vSphere Client, click **Deploy OVF Template** in the **Actions** menu. The corresponding wizard will open.

vm	vSphere Client	Menu 🗸	Q Searc	n in all environm	ients						
۵	2 9 9	🗂 Clu	ster AC	TIONS 🗸							
V 🗗 vcs	sa.home.local	Summary	Monitor	Configure	Permissions	Hosts	VMs	Datastores	Networks	Updates	
	Datacenter		Total P	rocessors:	24						
~ [	Actions - Cluster		1.100	Motion Migratio							
	[ 1 Add Hosts		4								
	🛱 🔠 New Virtual Machi	ine									
	료 😂 New Resource Po	ol									
	🖞 🎲 Deploy OVF Tem	plate	>								
	8 New vApp		Objects								^
	E Storage		• center			Datacente	r				
	Host Profiles		•								
	Edit Default VM Co	ompatibility	НА								~
	G S→ Assign License										
	E Settings										^
	Move To		Tag		Category			Descriptio	n		
	Rename										^
	E Tags & Custom At	tributes	•								
	d Add Permission										
	Alarms		·								
	d 🗙 Delete									No items to displ	ay
	E vsan		Remove								
	Update Manager		esources								~
1											

6. On wizard step #1, select all three files of the template.



7. On wizard step #2, type in a name and choose a location for the appliance.

1 Select an OVF template	Select a name and folder
2 Select a name and folder 3 Select a compute resource	Specify a unique name and target location
4 Review details	Virtual machine name: ESXAppliance
5 Select storage	
6 Ready to complete	Select a location for the virtual machine.
	V 🗗 vcsa.home.local
	> 📑 Datacenter

8. On wizard step #3, choose a destination compute resource.

<ul> <li>1 Select an OVF template</li> <li>2 Select a name and folder</li> </ul>	
<ul><li>3 Select a compute resour</li><li>4 Review details</li><li>5 Select storage</li></ul>	Cluster
6 Ready to complete	
	Compatibility
	✓ Compatibility checks succeeded.

9. On wizard step #4, review the template details.

1 Select an OVF template 2 Select a name and folder 3 Select a compute resource		ails.
4 Review details 5 Select storage 6 Select networks	The OVF package security risk. Revie	e contains advanced configuration options, which might pose a ew the advanced configuration options below. Click next to ced configuration options.
7 Ready to complete	Publisher	No certificate present
	Description	{AB53A0F1-AD54-480f-80BB-FC72DC41DF53}
	Download size	411.2 MB
	Size on disk	800.7 MB (thin provisioned)
		9.0 GB (thick provisioned)
	Extra configuration	disk.EnableUUID = TRUE virtualHW.productCompatibility = hosted

10. On wizard step #5, select storage for the appliance. If possible, select a shared datastore. The disk format, thick or thin, does not matter as it does not affect the appliance performance.

Ine (Requires Key Capacity 34.91 TB	Provisioned	r) ore Default Free	~
	Datast Provisioned	ore Default	~
	Provisioned		~
		Free	
34.91 TB			Тур
	24.72 TB	22.28 TB	NF 1
911.3 GB	688.93 GB	505.92 GB	NF
911.3 GB	517.13 GB	590.12 GB	NF
_			•
cceeded			
	sii.3 GB		

11. On wizard step #6, select networks for the appliance. The agent will require an Internet connection to register in the cloud.

<ul> <li>1 Select an OVF template</li> <li>2 Select a name and folder</li> </ul>	Select networks Select a destination network for each source network.					
<ul> <li>3 Select a compute resource</li> <li>4 Review details</li> </ul>	Source Network	T Destination Network	т			
5 Select storage	bridged	Servers	× 4			
6 Select networks			1 items			
7 Ready to complete	IP Allocation Settings					
	IP allocation:	Static - Manual				
	IP protocol:	IPv4				

12. On wizard step #7, click **Finish** to create the appliance.

<ul> <li>1 Select an OVF template</li> <li>2 Select a name and folder</li> </ul>	Ready to complete Click Finish to start creatio	n.
<ul> <li>3 Select a compute resource</li> <li>4 Review details</li> </ul>		
✓ 5 Select storage	Provisioning type	Deploy from template
<ul> <li>6 Select networks</li> <li>7 Ready to complete</li> </ul>	Name	ESXAppliance
7 Ready to complete	Template name	ESXAppliance
	Download size	411.2 MB
	Size on disk	800.7 MB
	Folder	Datacenter
	Resource	Cluster
	Storage mapping	1
	All disks	Datastore: vm; Format: Thin provision
	Network mapping	1
	bridged	Servers
	IP allocation settings	
	IP protocol	IPV4
	IP allocation	Static - Manual

## Configuring the Acronis Agent for VMware

After creating the agent appliance, start it. In the vSphere Client, open **Inventory**, right-click the appliance name, and then select **Power > Power On**. Select the **Console** tab.

The console to the appliance virtual machine will open.

📌 VZ_ESXAppliance - VM	Iware Remote Console	_		×
VMware Remote Console	▼	≫ 📮		6
Agent for VMware	(Virtual Appliance)			×
Agent for VI	Nware (Virtual Appliance)			
Specify the requir web console.	red parameters below. After the agent is configured, the virtual machine	es will appe	ar in	the
Agent status:	The agent is connected to vCenter/ESX(I) server '1			
AGENT OPTIONS				
vCenter/ESX(i):	Connected Server name/IP: 1 User name: attractor@vsphere.local	Cha	ange.	
Management Server	Registered Server name/IP: https://us5-cloud.acronis.com User name: Head Street	Cha	ange.	
eth0	Address type: Assigned by DHCP IP address: 1	Cha	ange.	
VIRTUAL MACHINE				
Name:	1	Cha	ange.	
(i) About	Turn	Off F	Rebo	ot EN-US

Configure the agent as follows:

- 1. (Optional) Configure a proxy server if you have one in your network:
  - a. Start the command shell by pressing CTRL+SHIFT+F2 while in the virtual appliance UI.
  - b. Edit the following section in the file /etc/Acronis/Global.config:

If the section is missing, copy and paste it to the file inside the <registry name="Global">...</registry> tag.

- c. Replace ADDRESS with your proxy server host name or IP address and PORT with the port number.
- d. If your proxy server requires authentication, replace LOGIN and PASSWORD with the proxy server credentials. Otherwise, delete these lines.

e. Locate (or create) the env section in the file /opt/acronis/etc/aakore.yaml and add the following lines to it:

```
http-proxy: LOGIN:PASSWORD@ADDRESS:PORT
https-proxy: LOGIN:PASSWORD@ADDRESS:PORT
```

- f. Replace LOGIN and PASSWORD with the proxy server credentials, and ADDRESS:PORT with the address and port number of the proxy server.
- g. Reboot the appliance with reboot.
- 2. The agent's network connection will be configured automatically via DHCP. To change the default configuration, under **AGENT OPTIONS**, in **eth0**, click **Change** and specify the desired network settings.

📌 VZ_ESXApplia	ance - VMware Remote	Console			_		;	×
VMware Remote	Console 🔻 📘 👻	4 (C)		;	≫ 📮			5
Agent for \	Network				×		$\rightarrow$	<
Agent f	Configure the net	vork interfaces available	on the virtual machine with	the agent				
0	eth0		eth0					
Specify th web cons			Network adapter:		e	ar in	the	
Agent sta			VLAN ID:					
			Hardware address:	00:50:56:97:2F:F4	-			1
AGENT OPTIC			Status:	Connected				
vCenter/E			Media type:	10 Gbps Full-Duplex	-	ange		
V Crenten L			<ul> <li>Auto configuration</li> </ul>			ange		
			DHCP:	Used				
Managerr			IP address:		n	ange		
Server			Subnet mask:					
- #- 0			Default gateways:					
eth0			DNS suffix:			ange		
			DNS servers:	1		-		
VIRTUAL MAC								
	+ Add VLAN	- Remove VLAN	WINS servers:					
Name:				OK Cancel		ange		
(i) About						Rebo	ot	ר
							EN-	US

3. Under **AGENT OPTIONS**, in **vCenter/ESX(i)**, click **Change** and specify the vCenter Server name or IP address. The agent will be able to back up and recover any virtual machines managed by the vCenter Server.

If you do not use a vCenter Server, specify the name or IP address of the ESXi host whose virtual machines you want to back up and recover. Normally, backups run faster when the agent backs up virtual machines located on its own host.

Specify the credentials that the agent will use to connect to the vCenter Server or ESXi. It is recommended to use an account that has the Administrator role assigned. Otherwise, provide an account with the necessary privileges on the vCenter Server or ESXi.

₩ VZ_ESXApplia	nce - VMware Remote Console			- (	n x
VMware Remote	Console 🕶 📔 👻 🛱 🔁			» 🗛 E	5
	бы вернуться к компьютеру, нажм				×
Agent f	Connections	Appliance)		×	
Specify th web cons	Specify the ESX(i) server and	credentials for remote	connection to Agent for VMware	ear	in the
Agent sta	ESX(I) Server	ESX(i) Server			
AGENT OPTIC		Specify an ESX(	i) server and the access credentials	-	
vCenter/E		Server name/IP:		han	<del>%</del>
Manager Server		User name: Password:	Check connection	i nan	ge
eth0				han	ge
VIRTUAL MAC			OK Cancel		qe
() About			Turn Off	Re	boot EN-US

Click **Check connection** to ensure the access credentials are correct.

#### 4. Under AGENT OPTIONS, in Management Server, click Change.

In **Server name/IP**, select **Cloud**. The software will display the Cyber Protection service address. Do not change this address unless instructed otherwise.

In **User name** and **Password**, specify the user name and password for the Cyber Protection service. The agent and the virtual machines managed by the agent will be registered under this account.

Server n User nar     User name:       Management Server     Register Server n User nar   Password:	rameters below. After the agent is configured, the virtual machines will appear in the virtual machine	Agent for VMware			
Agent status:       The agent       Register agent       X         AGENT OPTIONS       Server name/IP:       Cloud • https://us5-cloud.acronis.com       Change         vCenter/ESX(I):       Connect Server name/IP:       Cloud • https://us5-cloud.acronis.com       Change         Management Server       Register Server name:       Password:       Change         eth0       Address       OK       Cancel	ress OK Cancel	Agent for VI	Mware (	Virtual Appliance)	
Agent status:       The agent       Register agent       X         AGENT OPTIONS       Server name/IP:       Server name/IP:         VCenter/ESX(0):       Connect Server name:       Ittps://us5-cloud.acronis.com       Change         Management Server       Register Server name:       Password:       Server         eth0       Address       OK       Cancel	Register agent     ×     /.       Server name/IP:     Cloud • https://us5-cloud.acronis.com     Change       User name:     •       Ister     Password:     Change       ress     OK     Cancel		ed paramet	ers below. After the agent is configured, the virtual machine	es will appear in the
vCenter/ESX():     Connect Server name/IP:       VCenter/ESX():     Connect Server name/IP:       Management Server     Register Server name/IP:       Management Server name/IP:     Password:       Management Server name/IP:     Password:       Management Server name/IP:     Change       Management Server name/IP:     Password:       Management Server name/IP:     Change       Management Server name/IP:     Password:       Management Server name/IP:     Change	Cloud       https://us5-cloud.acronis.com       Change         User name:       Change         ister       Password:       Change         ress       OK       Cancel		The agent i		
vCenter/ESX(i):     Connect Server n User nar     User name: VServer n Server n User nar     Change Change       Management Server     Register Server n User nar     Password: OK     Change	nect ver n user name: rnar Password: rnar Password: Change Change Change Change	AGENT OPTIONS		Server name/IP:	
Server n User nar     User name:       Management Server     Register Server n User nar       Management Server     Register Server n User nar       Management Server     Register Server n User nar       Management Server     Register Server n User nar       Management Server     Management Server n User nar       Management Server     Management Server n User nar       OK     Cancel	rer n User name: r nar Password: ress OK Cancel Change	vCenter/ESX(i);	Connect	Cloud + https://us5-cloud.acronis.com	Change
Management Server     Register Server na User nar     Password:       eth0     Address     OK     Change	Password: ress OK Cancel Change	roenten Eox(i).	Server n	User name:	onungem
Server     Server n       User nar       eth0       Address       OK       Change	ress OK Cancel Change			Kanalaan ahaa ahaa ahaa ahaa ahaa ahaa ah	
eth0 Address OK Cancel Change	ress OK Cancel Change			Password:	Sange
OK Cancel	OK Cancel		User nar		
		eth0	Address	OK Cancel	Change
			IP addre		
VIRTUAL MACHINE		VIRTUAL MACHINE			
Name: 1-0-1-0-VA-F8F9 Change		j) About		Turn	Off Reboot

5. Under **VIRTUAL MACHINE**, in **Time zone**, click **Change**. Select the time zone of your location to ensure that the scheduled operations run at the appropriate time.

VZ_ESXAppliance - \	/Mware Remote Console	- 0
Mware Remote Conso	le ▼      ▼ 母 [□]	» 🔒 🖨 🖨
Agent for VMwa	re (Virtual Appliance)	
Agent for V	/Mware (Virtual Appliance)	
web console.	uired parameters below. After the agent is configured, the virtual mach	ines will appear in the
Agent status:	The agent is connected to vCenter/ESX(i) server '1	
Management Server	Registered Server name/IP: https://us5-cloud.acronis.com User name: k	Change
eth0	Address type: Assigned by DHCP IP address: 1	Change
VIRTUAL MACHINE		
Name:	1.2.1.0VA-E8E9	Change
Time:	Tuesday, December 22, 2020 12:59:00 PM	
Time zone:	(UTC+03:00) Moscow, St. Petersburg, Volgograd (RTZ 2)	Change
i) About	Ти	rn Off Reboot

6. Optionally, you can attach an additional disk to the virtual appliance so the Acronis Agent for VMware can back up to this locally attached storage.

Add the disk by editing the settings of the virtual machine and click **Refresh**. The **Create storage** link will become available. Click this link, select the disk, and then specify a label for it.

## Deploying the Agent for Virtuozzo Hybrid Infrastructure from a QCOW2 Template

Such an appliance is a pre-configured virtual machine that you deploy in Virtuozzo Hybrid Infrastructure. It contains a protection agent that enables you to administer cyber protection of all virtual machines in a Virtuozzo Hybrid Infrastructure cluster.

Before you proceed to deploy one or more agents, take note of the following:

#### • Agent system requirements.

When deploying the agent virtual appliance(s), you can choose between different predefined combinations of vCPUs and RAM, i.e. flavors. You can also create your own flavors. The medium flavor with 2 vCPUs and 4 GB of RAM is optimal and sufficient for most operations. It is recommended, however, to let an agent have 8 GB of RAM and 4 vCPUs to improve backup performance if the backup traffic exceeds 100 MB/s (in 10 Gbps networks, for example).

#### • The number of agents.

Even though one agent can protect the entire cluster, you can deploy more if you need to distribute the backup traffic bandwidth load.

If you have more than one agent in a cluster, the virtual machines are automatically evenly distributed between the agents, so that each agent manages an equal number of machines. Automatic redistribution takes place when a load imbalance among the agents reaches 20%. This may happen, for example, when a machine or an agent is added or removed. For example, you may realize that you need more agents to help with throughput and deploy an additional virtual appliance to the cluster. The management server will assign the most appropriate machines to the new agent. The load on older agents will be reduced. When you remove an agent from the management server, the machines assigned to the agent are distributed among the remaining agents. This, however, will not happen if an agent gets corrupted or is deleted manually from a Virtuozzo Hybrid Infrastructure node. Redistribution will start only after you remove such an agent from the Cyber Protection web interface.

You can view the result of the automatic distribution:

- In the **Agent** column for each virtual machine in the **All devices** section
- In the Assigned virtual machines section of the Details panel when an agent is selected in Settings > Agents
- Limitations
  - ° Virtuozzo Hybrid Infrastructure appliances cannot be deployed remotely.
  - ° Application-aware backup of virtual machines is not supported.

### Configuring Networks in Virtuozzo Hybrid Infrastructure

Before deploying and configuring the virtual appliance, you need to configure networks in Virtuozzo Hybrid Infrastructure.

The network requirements for the agent are:

- The virtual appliance requires at least two network adapters. The actual number may vary depending on the network architecture.
- The virtual appliance must be connected to Virtuozzo networks with the following network traffic types: **Compute API**, **VM Backup**, **ABGW Public**, **VM Public**.

For more information about configuring the networks, see Requirements for the compute cluster and Network requirements and recommendations sections in the Virtuozzo Hybrid Infrastructure documentation.

## Configuring User Accounts in Virtuozzo Hybrid Infrastructure

To configure the agent appliance, you need a Virtuozzo Hybrid Infrastructure user account. This account must have the Administrator role in the **Default** domain. For more information about users, refer to the Virtuozzo Hybrid Infrastructure documentation. Grant this account access to all projects in the **Default** domain.

To do this, run the following script in the Virtuozzo Hybrid Infrastructure cluster via the OpenStack Command-Line Interface. For more information on how to connect to this interface, refer to the Virtuozzo Hybrid Infrastructure documentation.

```
# su - vstoradmin
# kolla-ansible post-deploy
# exit
# . /etc/kolla/admin-openrc.sh
# openstack --insecure user set --project admin --project-domain Default --domain
Default USERNAME
# openstack --insecure role add --domain Default --user USERNAME --user-domain Default
compute --inherited
```

Here, USERNAME is the Virtuozzo Hybrid Infrastructure account with the Administrator role in the **Default** domain. The virtual appliance will use this account in order to back up and restore the virtual machines in any child project under the **Default** domain.

Replace **Default** with the name of another domain to manage backups for virtual machines in that domain.

## Creating an Appliance with the Agent for Virtuozzo Hybrid Infrastructure

To create an appliance with the Agent for Virtuozzo Hybrid Infrastructure from a QCOW2 template, do the following:

- 1. Log in to your Cyber Protection account.
- 2. Click **Devices** > **All devices** > **Add** > **Virtuozzo Hybrid Infrastructure**. The ZIP archive will be downloaded to your machine. Unpack it to get the QCOW2 template.
- 3. Log in to your Virtuozzo Hybrid Infrastructure account.
- 4. Add the QCOW2 image file to the Virtuozzo Hybrid Infrastructure compute cluster:
  - a. On the **Compute > Virtual machines > Images** tab, click **Add image**.

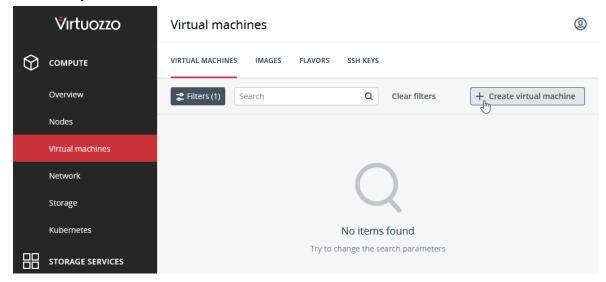
	Virtuozzo	Virtual machines @
$\bigcirc$	СОМРИТЕ	VIRTUAL MACHINES IMAGES FLAVORS SSH KEYS
	Overview	Filters (1)     Search     Q     Clear filters     + Add image
	Nodes	
	Virtual machines	
	Network	$\bigcirc$
	Storage	Q
	Kubernetes	No items found
	STORAGE SERVICES	Try to change the search parameters

b. In the **Add image** window, click **Browse**, and then select the QCOW2 file.

c. Specify the image name, select the **Generic Linux** OS type, and then click **Add**.

Add image	$\times$
Image file VHIAppliance.qcow2	Browse
Name VHIAppliance.qcow2	
Select OS distribution Generic Linux	~
Share between all projects	
	Cancel Add

5. In the **Compute > Virtual machines > Virtual machines** tab, click **Create virtual machine**.



A window will open where you will need to specify a name for the new virtual machine.

- 6. In **Deploy from**, choose **Image**.
- 7. In the **Images** window, select the QCOW2 image file of the appliance, and then click **Done**.

#### Images

VHI	Appliance X	:						
Nam	e ↓	Туре	Min. volu	OS t	ype	Placements		Size
<b>-</b>	VHIAppliance.qcow2	Templa	te 8	8 GiB	Generic Linux	_		674 MiE
						C	ancel	Done

Х

- 8. In the **Volumes** window, do not add any volumes. The volume that is added automatically for the system disk is sufficient.
- In the Flavor window, choose a desired combination of vCPUs and RAM, and then click Done.
   See the agent system requirements in "Deploying the Agent for Virtuozzo Hybrid Infrastructure from a QCOW2 Template" (p. 19).
- In the Network interfaces window, click Add, select a public virtual network, and then click Add. It will appear in the Network interfaces list.
   If you use a setup with more than one physical network (and thus with more than one public virtual network), repeat this step and select the virtual networks that you need.
- 11. Click **Done**.
- 12. Back in the **Create virtual machine** window, click **Deploy** to create and boot the virtual machine.

## Configuring the Agent for Virtuozzo Hybrid Infrastructure

After creating the agent appliance, you need to configure it so that it can reach both the Virtuozzo Hybrid Infrastructure cluster that it will protect and the Cyber Protection cloud service.

To configure the virtual appliance:

- 1. Log in to your Virtuozzo Hybrid Infrastructure account.
- 2. On the **Compute** > **Virtual machines** > **Virtual Machines** tab, select the virtual machine that you created. Then, click **Console**.

	Virtuozzo	Virtual machines	VHI_APP		×
¢ (	COMPUTE	VIRTUAL MACHINES	E Console C Reboot O Shut	down 🗲 Hard reboot 🛈 Power off \cdots	
	Dverview	VHI_APP	Overview	Monitoring	
N	lodes	Name 🕈			
Vi	/irtual machines	VHI_APP	Details		
N	letwork				
St	itorage		Status	Active	
	Cubernetes		Node	myhost.example.local	
			Creation time	August 9, 2021 3:23 PM	
s.	TORAGE SERVICES		SSH key	Not specified	

The console to the appliance virtual machine will open.

_APP / Console		Send keys 💲	Select action 💲 🛛 🗗
· Agent for Virtuoz	zo Hybrid Infrastructure		
Agent for V	/irtuozzo Hybrid Infrastructure		
Specify the required web console. Agent status:	uired parameters below. After the agent is configured, the To connect the agent to the Virtuozzo Hybrid Infrastru		
AGENT OPTIONS	access credentials.		
Virtuozzo Hybrid Infrastructure:	Specify the Virtuozzo Hybrid Infrastructure cluster a credentials.	address and the access	Change
Management Server	Specify Management Server and the access creder	ntials.	Change
eth0	Address type: Assigned by DHCP IP address: 172.16.51.154		Change
VIRTUAL MACHINE			
Name:	host-172-16-51-154		Change
(i) About		Turn Off	Reboot EN-US

3. Configure the network interfaces of the appliance. There may be one or more interfaces to configure, it depends on the number of virtual networks that the appliance uses. Ensure that automatically assigned DHCP addresses (if any) are valid within the networks that your virtual machine uses, or assign them manually.

VHI_APP / Console			Send keys 🗘	Select action 💲 🛛 🗗
· Agent for \	· Network		×	
Agent f	Configure the network interfaces available	e on the virtual machine with	h the agent	
	eth0	eth0		
Specify th web cons		Network adapter:		ear in the
Agent sta		VLAN ID:		rver and its
		Hardware address:	FA:16:3E:EF:3E:63	
AGENT OPTIC		Status:	Connected	
		Media type:	Use Auto-Negotiation 🔹	
Virtuozzo		<ul> <li>Auto configuration</li> </ul>		hange
Hybrid Infrastruc		DHCP:	Used	
Managem		IP address:	172.16.51.154	hange
Server		Subnet mask:	255.255.255.0	
eth0		Default gateways:	172.16.51.1	hange
		DNS suffix:		
		DNS servers:	10.30.0.25	
VIRTUAL MAC				
Name:	+ Add VLAN - Remove VLAN	WINS servers:		hange
Traine.			OK Cancel	
(i) About				Reboot
. About				EN-US

- 4. Specify the Virtuozzo cluster address and credentials:
  - The DNS name or IP address of the Virtuozzo Hybrid Infrastructure cluster. This is the address of the cluster's management node. The default port 5000 will be automatically set. If you use a different port, specify it manually.
  - In the **User domain name** field, specify your domain in Virtuozzo Hybrid Infrastructure. For example, **Default**. The domain name is case-sensitive.
  - In the **User name** and **Password** fields, enter the credentials for the Virtuozzo Hybrid Infrastructure user account with the **Administrator** role in the specified domain. For more information about users, roles, and domains, refer to the Virtuozzo Hybrid Infrastructure

documentation.

VHI_APP / Console     Send keys 	2
Agent for Virtuozzo Hybrid Infrastructure	
Specify the Virtuozzo Hybrid Infrastructure cluster address and credentials for remote connection ear in the to Agent for Virtuozzo Hybrid Infrastructure.	
Virtuozzo Hybrid Infrastruc       Virtuozzo Hybrid Infrastructure cluster.         AGENT OPTIC       Specify the Virtuozzo Hybrid Infrastructure cluster address and the access credentials.	
Virtuozzo Hybrid Infrastruc Managerry User name:	
Managem Server eth0 User name: Password: Check connection	
VIRTUAL MAC	
Name:     OK     Cancel     nange       (i) About     Turn Off     Reboot	

5. Specify the Cyber Protection management server address and credentials for accessing it.

VHI_APP / Console			Send keys 💲	Select action 💲 🗗	]
· Agent for Virtuozz Agent for Vi		<sup>structure</sup> Hybrid Infrastructure		×	
Specify the requir web console. Agent status:	red parameter	rs below. After the agent is configured, the Register agent		· · · · · · · · · · · · · · · · · · ·	
AGENT OPTIONS		Server name/IP: Cloud • https://cloud.acronis.com			
Virtuozzo Hybrid Infrastructure:	Specify t credentia	User name:	nd the access	Change	
Management Server	Specify N	Password:		Change	
eth0	Address IP addre	OK Cance	1	Change	
VIRTUAL MACHINE	_				
Name:	host-172-16	ò-51-154		Change	
(i) About			Turn Off	Reboot EN-US	

## **Migrating Virtual Machines**

Migrating virtual machines from VMware vSphere to Virtuozzo Hybrid Infrastructure involves two major steps:

- 1. Backup the virtual machines.
- 2. Recover them to Virtuozzo Hybrid Infrastructure.

These steps are described in detail in the next sections.

## **Backing Up Virtual Machines**

To backup virtual machines, you will need to:

- Remove VMware Tools and install Virtuozzo Guest Tools in the virtual machines.
- Create a protection plan with the **Backup** module enabled. It is a set of rules that specify how the given data will be protected on a given machine. A protection plan can be applied to multiple machines at the time of its creation, or later.

To create the first protection plan with the **Backup** module enabled, select the machines that you want to back up and click **Protect**.

The software will display protection plans that are applied to the machine. If the machine does not have any plans assigned to it, you will see the default protection plan that can be applied. You can adjust the settings as needed and apply this plan or create a new one.

To create a new plan:

1. Click Create plan. Enable the Backup module and unroll the settings.

<b>Virtuozzo</b> Cyber Cloud	VMware > All virtual m	aci test-V	/M-01		×
Manage account	<b>Q</b> Search	All vir	← Back to applied protection plans		
🕜 dashboard 🛛 🚺	Type Name ↑ —	test	New protection plan (1)	Cancel	ate
		Ф	Backup Entire machine to Cloud storage, Monday to Fri	day at 05:45 PM	~
All devices	✓      ✓	Ŧ	What to back up	Entire machine	~
Machines with agents		♪	Where to back up	Cloud storage	
VMware		Ŕ	Schedule	Monday to Friday at 05:45 PM	0
Virtuozzo Hybrid Infrastructure		Ē	How long to keep	Monthly: 6 months Weekly: 4 weeks Daily: 7 days	
Virtuozzo Migration Demo	5	المحما	Encryption		0
Unmanaged machines	P	Ŀ	Application backup	Disabled	0
Data protection map		()	Backup options	Change	
	P	E⊋	Disaster recovery		>
Powered by Acronis AnyData Engine	<b>P</b>	-0	Recovery server: auto, Cloud network infrastruc	iture: auto	

2. (Optional) To modify the protection plan name, click the default name.

- 3. (Optional) To modify the **Backup** module parameters, click the corresponding setting of the protection plan panel.
- 4. (Optional) To modify the backup options, click **Change** next to them.
- 5. Click **Create**.

To apply an existing protection plan:

1. Select the machines that you want to back up and click **Protect**. If a common protection plan is already applied to the selected machines, click **Add** plan. The software will display the previously created protection plans.

<b>Virtuozzo</b> Cyber Cloud	VMware > All virtual ma	d test-	VM-01		×
Manage account	<b>Q</b> Search	All vir	Applied protection plan: 1	ŧ	Add plan
🕜 DASHBOARD 🛛 🚺	Type Name↑ -	test	New protection plan		
		Ð			
All devices	test-VM-01	۲	Backup Entire machine to Cloud storage, Monday to Friday at 06:30 PM	0	>
Machines with agents		\$			
VMware					
Virtuozzo Hybrid	<b>1</b>	Ð			
Infrastructure Virtuozzo Migration Demo					
Unmanaged machines		G			
Data protection map		Ŭ			
	••••••••••••••••••••••••••••••••••••	()			
		E⊋			
Powered by Acronis AnyData Engine					

2. Select a protection plan to apply.

3. Click **Apply** and wait until the backup procedure is complete.

Virtuozzo Cyber Cloud	VMware	> All virtual machines		(+	Add	= # 0 @
Manage account	<b>Q</b> Search			Selected: 1 / Loaded: 25 /	Total: 25	All virtual machines Protect group
🕜 DASHBOARD 🚺	Type N	ame ↑	Account	Status 3	La 🗘	test-VM-01
	- 🖪 💘			🚫 Not protected	Never	Protect
All devices	🚽 📭 te	est-VM-01		🛛 ок 🛛 🙎	Dec 22 0	Disaster recovery
Machines with agents	- 🖪 🗮			🚫 Not protected	Never	
VMware	- 🖪 🎽			Not protected	Never	Recovery
Virtuozzo Hybrid	<b>B</b>			🚫 Not protected	Never	Replication
Infrastructure	- 🖪 🗮			Not protected	Never	Details
Virtuozzo Migration Demo	R 🔁 🗮	and the state of the	tanna como marce	🚫 Not protected	Never	bud.
Unmanaged machines	- 🕒 🗮			🚫 Not protected	Never	Activities
Data protection map	- 🕒		Statement of the second	🚫 Not protected	Never	() Alerts
	- 🕒		ani Karetnikowi met	🚫 Not protected	Never	
Powered by Acronis AnyData Engine	e w		Y <del>uri Karetnikov (karet.</del>	Not protected	Never	Add to group

### **Recovering Virtual Machines**

To complete migration, virtual machines need to be recovered from their backups to the desired location.

One prerequisite is that a virtual machine must be stopped during recovery. By default, the software stops the machine without a prompt. When the recovery is completed, you have to start the machine manually. You can change the default behavior by using the VM power management recovery option (**Recovery** options > **VM power management**).

To recover a VM to a desired location:

- 1. Do one of the following:
  - Select a backed-up machine, click **Recovery**, and then select a recovery point.

Virtuozzo Cyber Cloud	VMware > All virtual n	nachines		+ Add	3 8 0 0
Manage account	<b>Q</b> Search		Selected: 1 / Loaded:		All virtual machines
DASHBOARD 5	Type Name↑ -	Account	Status	La 🗘	test-VM-01
			🚫 Not protected	Never	Protect
All devices	✓ 🔁 test-VM-01		🕑 ОК	Dec 22 0	Disaster recovery
Machines with agents			🚫 Not protected	Never	Recovery
VMware			🚫 Not protected	Never	Kelovery
Virtuozzo Hybrid			🚫 Not protected	Never	Replication
Infrastructure			Not protected	Never	Details
Virtuozzo Migration Demo	<b>1</b>	Y REAL PROPERTY AND A REAL	🚫 Not protected	Never	bend
Unmanaged machines	<b>D V</b>	<u>Vuri Karataikov (karat.</u>	Not protected	Never	Activities
Data protection map	•		🚫 Not protected	Never	( Alerts
	•		Not protected	Never	Add to group
Powered by Acronis AnyData Engine		YE	🚫 Not protected	Never	L⊕ waa to group

- Select a recovery point on the **Backup storage** tab.
- 2. Click **Recover** > **Entire machine**.

Virtuozzo Cyber Cloud		×
Manage account	Q Search All vir Storage:	
Dashboard 5	Type Name 1 Dackup	Delete all
	Ba	:kup plan: New protection plan
All devices	Cest-Vivion	ntents: Virtual machine :kup type: Full
Machines with agents		RECOVER RUN AS VM
VMware	20	Entire machine
Virtuozzo Hybrid		Files/folders
Infrastructure		
Virtuozzo Migration Demo		
Unmanaged machines		
Data protection map		
Powered by Acronis ApyData Engine https://us5-cloud.acronis.com/ui/#		

By default, the software automatically selects the original machine as the target machine.

<b>Virtuozzo</b> Cyber Cloud	VMware > All virtual mach	test-VM-01 ⑦ ×
Manage account	Q Search	RECOVER TO
🕢 dashboard 🛛  🛐	Type Name ↑	Virtual machine
		TARGET MACHINE Press "Original" to Select target machine
All devices	test-VM-01	VM SETTINGS Memory: 2.00 GB Vfrual processors: 1
Machines with agents		Network adapters: 1
VMware		START RECOVERY OPTIONS
Virtuozzo Hybrid Infrastructure		
Virtuozzo Migration Demo		
Ŭ		
Unmanaged machines		
Data protection map		
PLANS		
Powered by Acronis AnyData Engine		

To recover to another virtual machine, click **Target machine**, and then do the following:

- a. Select the hypervisor **Virtuozzo Hybrid Infrastructure**.
- b. Select whether to recover to a new or existing machine.
- c. Select the storage, domain, project and specify the new machine name, or select an existing target machine.

<b>Virtuozzo</b> Cyber Cloud	UMware $ ightarrow$ All virtual mac	Select target machine X
Manage account	Q Search	Virtuozzo Hybrid Infrastructure V Select "Virtuozzo Hybrid Infrastructure"
🕝 DASHBOARD 🛛 🖻	☐ Type Name ↑ —	New machine     Select "New machine"     Existing machine
		Storage-Cluster Select Storage
All devices	test-VM-01	Default
Machines with agents		admin
VMware		+ TestDomain
Virtuozzo Hybrid		
Infrastructure		
Virtuozzo Migration Demo		
Unmanaged machines		
Data protection map		Machine name:
	-	test-VM-01
Powered by Acronis AnyData Engine		OK Cancel

d. Click **OK**.

- 3. Setup up the additional recovery options if needed.
- 4. Click Start recovery.

۷II	r <b>tuozzo</b> Cyber Cloud	≡	VMwa	re 🔿 🛛 All virtual maci	test-VM-01	?	×
		<b>Q</b> 5	earch		RECOVER TO		
(	DASHBOARD 5		Туре —	Name ↑	Virtual machine TARGET MACHINE		
Ę	DEVICES		Þ		test-VM-01 on vhi-01.vstoragedomain New		
	All devices	×	Þ	test-VM-01	DISK MAPPING DIsk 1 $\rightarrow$ default, 16.0 GB		
	Machines with agents		ц.		VM SETTINGS Flavor type: medium		
			to		Network adapters: 1		
	Virtuozzo Hybrid Infrastructure		Fo.		START RECOVERY		
	Virtuozzo Migration Demo		fo				
			5		1		
	Unmanaged machines		Þ	Citerature -			
			þ	Effectes			
đ	PLANS		Þ	651.03m8			
Р			Þ	win2012			

5. When recovering to an existing virtual machine, confirm that you want to overwrite the disks.

The recovery progress is shown on the **Activities** tab.

Virtuozzo Cyber Cloud 🗧 VMware 🔿 All virtual mac		Activity details		×				
		Q 3			0		:43 PM — 06:51 PM (7 min) covering virtual machine	
$\bigcirc$	DASHBOARD 5		Type _	Name 🕈		Sta	atus: Succeeded arted by: Recommended art time: Dec 22, 2020, 06:43:59 PM	
Ģ	DEVICES		Φ			Fir Du	lish time: Dec 22, 2020, 06:51:18 PM iration: 7 min	
	All devices	>	þ	test-VM-01	A		properties	
	Machines with agents		5			0	06:44:09 PM — 06:51:18 PM Recovering the entire virtual machine	
			5			0	06:44:09 PM — 06:44:29 PM Preparing for recovery of virtual machine	
	Virtuozzo Hybrid		Fo	-		<ul> <li>O6:44:30 PM — 06:44:45 PM Creating new virtual machine</li> </ul>		
	Infrastructure		5					
	Virtuozzo Migration Demo		5			0	06:44:45 PM 06:49:56 PM Recovering virtual machine disks	
	Unmanaged machines		Þ			0	06:49:56 PM — 06:51:18 PM	
	Data protection map	-			Fixing virtual machine bootability			
ф	PLANS		Ģ	V				
Pot	wered by Acronis AnyData Engine		þ					

After a successful migration, you will see your VM in Virtuozzo Hybrid Infrastructure.

Virtuozzo	Virtual machines				0
	VIRTUAL MACHINES IMAGES	FLAVORS SSH KEYS			
🚱 сомрите	<b>☆</b> Filters Search	٩		+ Create virte	ual machine
Overview	Name 1	Status $\downarrow$ IP address	vCPUs 🔱	RAM 🔱	s 🗘
Nodes	test-VM-01	Shut down	2	4 GIB	0
Virtual machines	VHI_VAPP	Active	1	2 GiB	8
Network					
Storage					
STORAGE SERVICES					
တ္သို SETTINGS					
Storage-Cluster 🔗					