Virtuozzo

Virtuozzo Hybrid Infrastructure 5.0

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	Q Search	Ø	
Dashboard 5	Type Name ↑	Windows only	
		WORKSTATIONS	
		11	
Ail devices		Windows Mac	
Machines with agents			
VMware		SERVERS	
Virtuozzo Hybrid Infrastructure	test-VM-01	1 A	
Virtuozzo Migration Demo	test-VM-01	Windows Linux	
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	299	🗂 Clu	ster AC	TIONS 🗸							
V 🗗 vcs	a.home.local	Summary	Monitor	Configure	Permissions	Hosts	VMs	Datastores	Networks	Updates	
~ 🗈 I	Datacenter		Total P	rocessors:	24						
~ [Actions - Cluster		Total v	Motion Migratio	ns: 105						
	🚺 🚹 Add Hosts		4								
	ំ 🏠 New Virtual Mach	ine									
	🖉 💝 New Resource Po	ol									
	🖞 🎁 Deploy OVF Tem	plate	>								
	器 New vApp		Dbjects								^
	E Storage	,	• center			Datacenter	r				
	Host Profiles	,	•								
	E Edit Default VM C	ompatibility	НА								~
	ଘ ਯ→ Assign License										
	E Settings										^
	Move To		Tag		Category			Descriptio	n		
	Rename										^
	Tags & Custom At	ttributes 🔹	•								
	Add Permission										
	Alarms	,	•								
	🖞 🗙 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	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.

 1 Select an OVF template 2 Select a name and folder 	Select a compute resource Select the destination compute resource for this operation
3 Select a compute resour 4 Review details 5 Select storage	Datacenter 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	Review details Verify the template details	ails.
4 Review details 5 Select storage 6 Select networks	The OVF package security risk. Revie accept the advance	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.

2 Select a name and folder	Select storage Select the storage for th	e configuration and c	disk files		
3 Select a compute resource 4 Review details	Encrypt this virtual m	achine (Requires Key	/ Management Serve		
6 Select networks	Select virtual disk format	-	Thin Provision	\sim	
7 Ready to complete	VM Storage Policy:		Datast	ore Default	~
	Name	Capacity	Provisioned	Free	Тур
	🗐 vm	34.91 TB	24.72 TB	22.28 TB	NF 1
	🗐 vol2	911.3 GB	688.93 GB	505.92 GB	NF
	🗐 vol3	911.3 GB	517.13 GB	590.12 GB	NF
	 Compatibility 				•
	 Compatibility ✓ Compatibility check 	s succeeded.			

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

 1 Select an OVF template 2 Select a name and folder 	Select networks Select a destination network for each source network.					
 3 Select a compute resource 4 Review details 	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.

 1 Select an OVF template 2 Select a name and folder 	Ready to complete Click Finish to start creatio	n.
 3 Select a compute resource 4 Review details 		
✓ 5 Select storage	Provisioning type	Deploy from template
 6 Select networks 7 Ready to complete 	Name	ESXAppliance
7 Ready to complete	Template name	ESXAppliance
	Download size	411.2 MB
	Size on disk	800.7 MB
	Folder Datacenter	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.

PVZ_ESXAppliance - VN	Aware Remote Console	_	
VMware Remote Console	- 母 □	≫ 📮	
Agent for VMware	e (Virtual Appliance)		×
Agent for V	Mware (Virtual Appliance)		
Specify the requi web console.	red parameters below. After the agent is configured, the virtual machin	nes will appea	ir in the
Agent status:	The agent is connected to vCenter/ESX(i) server '1		
AGENT OPTIONS			
vCenter/ESX(i):	Connected Server name/IP: 1	Cha	nge
Management Server	Registered Server name/IP: https://us5-cloud.acronis.com User name: k	Cha	nge
eth0	Address type: Assigned by DHCP IP address: 1	Char	nge
VIRTUAL MACHINE			
Name:	1VA-F8F9	Cha	nge
(i) About	Turr	n Off 🛛 🛛 R	eboot 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:

<key name="HttpProxy"></key>
<value name="Enabled" type="Tdword">"1"</value>
<value name="Host" type="TString">"ADDRESS"</value>
<value name="Port" type="Tdword">"PORT"</value>
<value name="Login" type="TString">"LOGIN"</value>
<value name="Password" type="TString">"PASSWORD"</value>

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				×			<
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	arın	the	
Agent sta			VLAN ID:					
			Hardware address:	00:50:56:97:2F:F4	-			1
AGENT OPTIC			Status:	Connected				
vCenter/F			Media type:	10 Gbps Full-Duplex	· .	ande		
V Crenten L			 Auto configuration 		1	ange		
			DHCP:	Used				
Managerr			IP address:	RECTAINED BOOK	- 1×	ange		
Server			Subnet mask:					
- #- 0			Default gateways:					
ethu			DNS suffix:			ange.		
			DNS servers:			-		
VIRTUAL MAC								
	+ Add VLAN	- Remove VLAN	WINS servers:					
Name:				OK Cancel	ר ר	ange		
(i) About						Rebo	ot	٦
							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.

<mark>₩</mark> VZ_ESXApplia	ance - VMware Remote Console			-		×
VMware Remote	Console 🕶 📘 👻 🔁			≫ 📮		- 5
Agent 410	бы вернуться к компьютеру, нажм	ите Ctrl+Alt.				×
Agent f	Connections	Appliance)		×		
Specify th web cons	Specify the ESX(i) server and	credentials for remote	connection to Agent for VMware	е	ar in t	he
Agent sta	ESX(i) Server	ESX(i) Server				
AGENT OPTIC		Specify an ESX(i) server and the access credentials			
vCenter/E		Server name/IP:	1	na	ange	<u>ک</u>
Managerr Server		User name: Password:	Check connection	1	ange.	a .
eth0				na 	ange.	
VIRTUAL MAC			OK Cancel		ande	
() About			Turn Off	F	Rebo	ot 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.

Agent for VMware (Virtual Appliance) Specify the required parameters below. After the agent is configured, the virtual machines will appear in the web console. Agent status: The agent Agent status: The agent Register agent Register agent AGENT OPTIONS Server name/IP: VCenter/ESX(0): Connect Server n Cloud User name: Vertue name: VServer Password: Password: Change OK Cancel VIRTUAL MACHINE Virtual Machine	Agent for VMwa Specify the required pa web console. Agent status: The a Agent options vCenter/ESX(i): Cor Ser Use Management Reg Server Ser	are (Virtua arameters belo gent Regis Serve Cloud Ver n User r	el Appl w. After th ter agent r name/IP	liance) ne agent is cor neter (50) (0 - neter (50) (0 -) (0 -	nfigured, the	virtual mad	hines will appe	ear in the
Specify the required parameters below. After the agent is configured, the virtual machines will appear in the web console. Agent status: The agent Agent status: The agent Agent options Server name/IP: vCenter/ESX(): Connect Server name: User name: User name: VServer name: Password: Password: Change OK Cancel VIRTUAL MACHINE	Specify the required pa web console. Agent status: The a AGENT OPTIONS VCenter/ESX(i): Cor Ser Use Management Reg Server Ser	arameters belo gent Regis Serve Cloud ver n User r	w. After th ter agent r name/IP	ne agent is cor 	nfigured, the	virtual mac	hines will appe	ear in th
Agent status: The agent AGENT OPTIONS Server name/IP: VCenter/ESX(): Connect Server name: User name: User name: Wanagement Server Register Server name: User name: Password: OK Cancel Change	web console. Agent status: The a AGENT OPTIONS VCenter/ESX(I): Cor Ser Use Management Reg Server Ser	gent Regis Serve Cloud ver n User r	r name/IP	: : :ttps://us5-cloi		× 10'.		
AGENT OPTIONS Server name/IP: Cloud https://us5-cloud.acronis.com Change VCenter/ESX(): Connect Server name: User name: Change Management Server name: Register Server name: Password: Change eth0 Address IP addre OK Cancel Change	AGENT OPTIONS VCenter/ESX(i): Cor Ser Use Management Reg Server Ser	Cloud onnect ver n User n er nar	r name/IP	: https://us5-clou				
vCenter/ESX(i): Connect Server na User nar Cloud https://us5-cloud.acronis.com Change Management Server na Server na User nar Register Password: Password: Change eth0 Address IP addre OK Cancel Change	vCenter/ESX(i): Cor Ser Use Management Reg Server Ser	Cloud ver n User i er nar	hame.	nttps://us5-clou				
Viername: User name: User name: User name: Viser name	Management Reg Server Ser	vern Useri ernar	name'	-	ud.acronis.co	m	Ch	ande
Management Server Server n User nar eth0 Address IP addre OK Cancel Change VIRTUAL MACHINE	Management Reg Server Ser	JETICAL	ane.				011	angen
Management Server Register Server n User nar Password: Cancel Change eth0 Address IP addre OK Cancel Change virtual Machine Virtual Machine Virtual Machine Virtual Machine	Management Reg Server Ser							
eth0 Address OK Cancel Change		gisten Passv ver n	vord:					ange
eth0 Address OK Cancel Change IP addre VIRTUAL MACHINE	Use	ernar						
	eth0 Add	dress		ок	Cance		Ch	ange
VIRTUAL MACHINE	IP a	addre						
	VIRTUAL MACHINE							
	DAbout					. т	urn 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 - V	Mware Remote Console	- 0
Mware Remote Conso	e ▼ ▼ 母 [□]	» 🔒 🖨 🖨
Agent for VMwa	e (Virtual Appliance)	
Agent for V	'Mware (Virtual Appliance)	
Specify the required web console.	ired parameters below. After the agent is configured, the virtual mach	nines 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	Change
Time:	Tuesday, December 22, 2020 12:59:00 PM	
Time zone:	(UTC+03:00) Moscow, St. Petersburg, Volgograd (RTZ 2)	Change
D About	т	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
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

VHIAppliance	<				
Name 🧅	Type Min. vo	olu OS type	e Pl	lacements	Size
VHIAppliance.qcow2	Template	8 GiB G	eneric Linux	_	674 MiB
				Cancel	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		×
Θ	СОМРИТЕ	VIRTUAL MACHINES	E Console & Reboot & Shut o	down 🗲 Hard reboot 🛈 Power off 😶	
(Overview	VHI_APP	Overview	Monitoring	
1	Nodes	Name 🕈			
N	Virtual machines	VHI_APP	Details		
I	Network				
5	Storage		Status	Active	
,	Kubernetes		Node	myhost.example.local	
пп			Creation time	August 9, 2021 3:23 PM	
	STORAGE SERVICES		SSH key	Not specified	

The console to the appliance virtual machine will open.

P / Console		Send keys 💲	Select action 💲 🛛 🕄
Agent for Virtuoz	zo Hybrid Infrastructure		×
Agent for \	/irtuozzo Hybrid Infrastructure		
Specify the required web console.	uired parameters below. After the agent is configured, t	he virtual machines will a	ppear in the
Agent status:	To connect the agent to the Virtuozzo Hybrid Infrastru access credentials.	ucture server, specify the	server and its
AGENT OPTIONS			
Virtuozzo Hybrid Infrastructure:	Specify the Virtuozzo Hybrid Infrastructure cluster a credentials.	address and the access	Change
Management Server	Specify Management Server and the access crede	entials.	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

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	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		Auto configuration		hange
Hybrid		DHCP:	Used	
Managen		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				
Namer	+Add VLAN - Remove VLAN	WINS servers:		100.00
Name.			OK Cancel	lange
() About			Calicer	Dahaat
				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 💲	Select action 💲 🛛 🗗				
Agent for Agent f	Agent for Virtuozzo Hybrid Infrastructure							
Specify th web cons Agent sta	Specify the Virtuozzo Hybrid Ir to Agent for Virtuozzo Hybrid I	nfrastructure cluster address and cred nfrastructure.	entials for remote connection	ear in the				
AGENT OPTIC	Virtuozzo Hybrid Infrastruc	Virtuozzo Hybrid Infrastructure Specify the Virtuozzo Hybrid address and the access cred	e cluster. Infrastructure cluster ientials.					
Virtuozzo Hybrid Infrastruc		Server name/IP: User domain name:		nange				
Managen Server eth0		Password: Check of	connection	hange				
VIRTUAL MAC								
Name:			OK Cancel	Reboot				
Name:			OK Cancel	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 Virtuozzo Hybrid Infrastructure Agent for Virtuozzo Hybrid Infrastructure Specify the required parameters below. After the agent is configured, the virtual machines will appear web console. Agent status: To connect the agent of the deleter of the deleter of the deleter of the deleter of the server access creder Register agent						
Specify the requir web console. Agent status:							
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.

Virtuozzo Cyber Cloud	VMware > All virtual mac	test-VI	M-01		×
Manage account	Q Search	All vir	- Back to applied protection plans		
🕜 dashboard 🛛 🚺	Type Name ↑ -	test	New protection plan (1)	Cancel	ate
		Ð	Backup	riday at 05:45 PM	~
All devices	test-VM-01	۲	What to back up	Entire machine	~
Machines with agents		♪	Where to back up	Cloud storage	
VMware		_	Schedule	Monday to Friday at 05:45 PM	0
Virtuozzo Hybrid Infrastructure			How long to keep	Monthly: 6 months Weekly: 4 weeks Daily: 7 days	
Virtuozzo Migration Demo	F 6		Encryption		0
Unmanaged machines	ē	Ŀ	Application backup	Disabled	0
Data protection map	•	()	Backup options	Change	
PLANS		Ea	Disaster recovery		<u>,</u>
Powered by Acronis AnyData Engine	P	-++)	Recovery server: auto, Cloud network infrastru	ucture: 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.

∛ırtuozzo Cyber Cloud	VMware > All virtual ma	d test-	VM-01 ×
Manage account	Q Search	All vir	Applied protection plan: 1 🕒 Add plan
🕜 dashboard 🛛 🚺	Type Name↑ —	test	New protection plan
		Ð	
All devices	test-VM-01	۲	Backup Sentire machine to Cloud storage, Monday to Friday at 06:30 PM
Machines with agents			
VMware		~	
Virtuozzo Hybrid		Ð	
Intrastructure	F6 ****	E	
virtuozzo Migration Demo		62.51	
Unmanaged machines	D	Ŀ	
Data protection map		()	
		B	
Powered by Acronis AnyData Engine		L⊕	

2. Select a protection plan to apply.

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

Virtuozzo Cyber Cloud		> All virtual machines			- Add	8 8 7 9
Manage account	Q Search			Selected: 1 / Loaded: 25	/ Total: 25	All virtual machines
🕜 dashboard 🛛 🚺	Туре	Name 🕈	Account	Status 3	La 🗘	test-VM-01
	_ 🖪 🕴			🚫 Not protected	Never	Protect
All devices	1 🖳	test-VM-01		🛛 ок 🛛 🙎	Dec 22	Disaster
Machines with agents	- 🖪 🕴			🚫 Not protected	Never	
VMware	- 6			🚫 Not protected	Never	Recovery
Virtuozzo Hybrid	5			🚫 Not protected	Never	Replication
Infrastructure	- Fo			🚫 Not protected	Never	Details
	- F		Tan Malechinde (namec	🚫 Not protected	Never	
	P			🚫 Not protected	Never	L Activities
	•			🚫 Not protected	Never	() Alerts
PLANS	•		Nati Karatojkov (karat	🚫 Not protected	Never	
Powered by Acronis AnyData Engine	P	W	Y uri Karetnikev (karet. .	Not protected	Never	

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 machine	25		+ Add	8 8 0 8
Manage account	Q Search		Selected: 1 / Loaded:	25 / Total: 25	All virtual machines
🕜 dashboard 🛛 🚺	Type Name ↑ —	Account	Status	La 🗘	test-VM-01
			🚫 Not protected	Never	Protect
All devices	✓ 🛄 test-VM-01		🕑 ОК	Dec 22 (Disaster
Machines with agents			🚫 Not protected	Never	
VMware		Variation of the state of the state	🚫 Not protected	Vever	Recovery
Virtuozzo Hybrid	- 💀 🦇		🚫 Not protected	Never	Replication
Infrastructure	- F		🚫 Not protected	Never	Details
Virtuozzo Migration Demo		Y	🚫 Not protected	Never	Lad - the
		Vuri Karatoikov (karat	🚫 Not protected	Never	Activities
Data protection map	[1] [2]		🚫 Not protected	Never	() Alerts
		V	Not protected	Never	🛱 Add to group
Powered by Acronis AnyData Engine		Y	🚫 Not protected	Never	L⊕ Add to group

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

Virtuozzo Cyber Cloud	VMware > All virtual mac	test-VM-01	×
Manage account	Q Search	All vir Storage to testion	More ways to recover
ashboard s	Type Name ↑ _	test	ۍ ش
		Backup plan: New protection plan Size: 580 MB	
All devices	test-VM-01	Contents: Virtual machine Backup type: Full	
Machines with agents			
VMware		2 Entire machine	
Virtuozzo Hybrid Infrastructure		Files/folders	
Virtuozzo Migration Demo			
Unmanaged machines		G	
Data protection map		0	
D PLANS		Fa	
Powered by Acronis ApyData Engine https://us5-cloud.acronis.com/ui/#		цФ	

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

∛ırt	uozzo Cyber Cloud	Ξ	VMwa	are > All virtual maci	test-VM-01	?	×
		Q	Search		RECOVER TO		
\odot	DASHBOARD 5		Type _	Name 🛧	Virtual machine TARGET MACHINE Press "Origi	inal" t	io
₽	DEVICES		ē	CCDW02015	test-VM-01 on 1	mach	ine
-	All devices	~	æ	test-VM-01	VM SETTINGS Memory: 2.00 GB Virtual progressors: 1		
	Machines with agents		Г <mark>с</mark>		Network adapters: 1		
	VMware		Ч.	Vitens	START RECOVERY		
	Virtuozzo Hybrid		Б	*****			
	Infrastructure		₽ <mark>0</mark>				
	VIRTUOZZO MIGRATION DEMO		F.				
	Unmanaged machines		Ð	-			
			Ð	V15-02			
þ	PLANS		ē				
Pot			ē	Concertaine			

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.

Virtuozzo Cyber Cloud		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.

∛ır	tuozzo Cyber Cloud	≡	VMwa	re 🔿 🛛 All virtual maci	test-VM-01	?	×
		Q s	earch		RECOVER TO		
	DASHBOARD 5		Туре —	Name ↑	Virtual machine TARGET MACHINE		
	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		Ч.		VM SETTINGS Flavor type-medium		
			fo		Network adapters: 1		
	Virtuozzo Hybrid		÷	Tokousina			
	Infrastructure		5				
	virtuozzo Migration Demo		5		1		
	Unmanaged machines		Þ				
			Þ				
þ	PLANS		Ģ	C51.0398			
Po			Ð	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.

Vir	tuozzo Cyber Cloud	Ξ	VMwa	re > All virtual maci	Ac	tivi	ty details	×
		Q 3			0	06 Re	:43 PM — 06:51 PM (7 min) covering virtual machine	
\bigcirc	DASHBOARD 5		Type _	Name 🕇		Sta Sta	atus: Succeeded arted by: Recommended	
Ģ	DEVICES		Φ			Fir	ish time: Dec 22, 2020, 06:51:18 PM iration: 7 min	
	All devices	>	þ	test-VM-01		All	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	terration and the second				
	Infrastructure		5	With Cont		~	06:44:30 PM — 06:44:45 PM Creating new virtual machine	
	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	
			Ð				Fixing virtual machine bootability	
ф	PLANS		ē	V				
Pot	wered by Acronis AnyData Engine		Ģ					

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

	Virtuozzo	Virtual machines					(9
Æ		VIRTUAL MACHINES IMAGES	FLAVORS SSH KEYS					
\heartsuit	COMPUTE	Search	Q			+ Create virtu	al machine	
	Overview	Name 🕇	Status 🔱	IP address	vCPUs 🧅	RAM 🔸	s	¢
	Nodes	C test-VM-01	Shut down		2	4 GIB	0	
	Virtual machines	VHI_VAPP	Active		1	2 GiB	8	
	Network							
	Storage							
88	STORAGE SERVICES							
പ്പ	INFRASTRUCTURE							
ŝ	SETTINGS							
Stor	age-Cluster 🥑							