

Avocent® MP1000VA Management Platform Virtual Appliance

Installation/Deployment Guide

The information contained in this document is subject to change without notice and may not be suitable for all applications. While every precaution has been taken to ensure the accuracy and completeness of this document, Vertiv assumes no responsibility and disclaims all liability for damages result from use of this information or for any errors or omissions.

Refer to local regulations and building codes relating to the application, installation, and operation of this product. The consulting engineer, installer, and/or end user is responsible for compliance with all applicable laws and regulations relation to the application, installation, and operation of this product.

The products covered by this instruction manual are manufactured and/or sold by Vertiv. This document is the property of Vertiv and contains confidential and proprietary information owned by Vertiv. Any copying, use, or disclosure of it without the written permission of Vertiv is strictly prohibited.

Names of companies and products are trademarks or registered trademarks of the respective companies. Any questions regarding usage of trademark names should be directed to the original manufacturer.

Technical Support Site

If you encounter any installation or operational issues with your product, check the pertinent section of this manual to see if the issue can be resolved by following outlined procedures.

Visit https://www.vertiv.com/en-us/support/ for additional assistance.

TABLE OF CONTENTS

1 Getting Started	1
1.1 Virtualization Platforms	1
2 Installing the Virtual Appliance	3
3 Deploying the Virtual Appliance	5
3.1 Hardware Requirements	5
3.2 Microsoft Hyper-V Hypervisor 2019	5
3.2.1 Prerequisite	5
3.2.2 Deployment	5
3.3 VMware vCenter Server 7.0	5
3.3.1 Deployment	5
3.4 VMware vSphere Hypervisor (ESXi) 7.0	4
3.4.1 Deployment	4
3.4.2 Troubleshooting for missing NVRAM disk image	31
4 Assigning an IP Address	3
5 Next Steps	7

This page intentionally left blank

1 Getting Started

Once you have read the information outlined in the Vertiv[™] Avocent[®] MP1000VA Management Platform Virtual Appliance Getting Started Guide, you should complete the procedures in this document to gain access to the Avocent MP1000VA Management Platform Virtual Appliance (VA) web User Interface (UI), where target devices are launched and managed.

This guide describes the virtualization platforms supported by the Avocent MP1000VA Management Platform Virtual Appliance and provides installation, deployment and network configuration instructions for the VA.

1.1 Virtualization Platforms

The VA can be deployed on any of the following virtualization platforms:

- Microsoft Hyper-V Hypervisor 2019
- VMware vCenter Server 7.0
- VMware vSphere Hypervisor (ESXi) 7.0

Before continuing, ensure you have installed one of these virtualization platforms to deploy the management platform VA. If you have not, please see the installation instructions for the appropriate platform on the corresponding website:

- VMware: Server Management Software vCenter | VMware
- Hyper-V: Install the Hyper-V role on Windows Server | Microsoft Learn

This page intentionally left blank

2 Installing the Virtual Appliance

NOTE: Vertiv distributes the Avocent MP1000VA Management Platform Virtual Appliance as an Open Virtual Appliance (OVA) disk image for VMware and as a Virtual Hard Disk v2 (VHDX) disk image for Hyper-V.

To install the VA:

- 1. From Vertiv.com, type MP1000 into the search bar and press Enter.
- 2. Click Vertiv[™] Avocent[®] MP1000VA Management Platform Virtual Appliance.
- 3. Scroll down and click the Documents & Downloads tab.
- 4. Under the Software heading, click *Vertiv™ Avocent® MP1000 Software Downloads*.
- 5. For Hyper-V, download the latest version of the VHDX file from the Software Download column.

NOTE: The VHDX disk image must be unzipped after downloading. Ensure you have adequate space available to support the uncompressed file (more than 20 GB). For more information, see Prerequisite on page 5.

-or-

For VMware, download the latest version of the OVA file from the Software Download column.

NOTE: Ensure you review the accompanying Release Notes for any updates or troubleshooting procedures regarding the software.

6. The VA is now installed and ready for deployment. Proceed to the next section for deployment instructions.

This page intentionally left blank

3 Deploying the Virtual Appliance

To begin the deployment process, review the hardware requirements, then navigate to the appropriate section for your chosen virtualization platform for further instructions.

3.1 Hardware Requirements

Before continuing, ensure the following hardware resources have been provisioned:

CAUTION: Avoid oversubscribing the host server's resources. When possible, use resources preserved for the Avocent MP1000VA Management Platform Virtual Appliance.

- Suitable processors, such as:
 - Intel Xeon Scalable Generation 1+ 6-Core+,
 - Intel Xeon Processor E5-1650 v4, 6C/12T @ 3.6GHz (4.0GHz),
 - Intel Xeon Silver 4309Y, 8C/8T @ 2.8GHz (3.6GHz),
 - AMD EPYC 72F3 [8C/16T @ 3.7GHz (4.1GHz)],
 - Or processors of equivalent or higher quality
- 4x vCPU
- 16 GB memory
- 1 TB storage

3.2 Microsoft Hyper-V Hypervisor 2019

3.2.1 Prerequisite

Prior to deployment, the VHDX disk image must be unzipped.

To prepare the VHDX disk image for deployment:

- 1. After downloading the VHDX disk image, move the .zip file to the Hyper-V server and use Windows Explorer to extract the VHDX file from the .zip file.
- 2. Move the extracted VHDX file to the location where the new Virtual Machine (VM) disk image will reside (the deployment location) and proceed to the next section of this guide for deployment instructions.

3.2.2 Deployment

To deploy the VA:

- 1. Using an account with administrator or Hyper-V management privileges, log into a remote desktop on the Windows 2019 server where Hyper-V is installed.
- 2. Open the Hyper-V Manager application.

3. Under the Hyper-V Manager node in the left-hand sidebar, right-click on the connected hypervisor (*HSVTST-HYPERV* in the following example) and select *New-Virtual Machine*.

Figure 3.1 Hyper-V Manager Screen

Hyper-V Manager							
File Action View Help							
← → 2 □ □ 2 □							
Hyper-V Manager	Virtual Machines						
HSVISI-HYPERV	Nama	Charter	CBUUManaa	Antineed Mensee	Unting	Charles	Configurati
		Duate	CF0 Usage	Assigned Memory	optime 05.00.07.10	Judius	conngurau
		Running	0%	2134 MB	25.03:07:13		5.0
		Burning	0%	4300 MID	25.03.07.06		5.0
		Pupping	0%	2770 MP	25.03.07.01		5.0
		Running	0%	2874 MB	21.04.42.07		9.0
		Bunning	0%	1892 MB	25.03.10.43		5.0
		Off	0.0	1002 110	20.00.10.40		9.0
		Running	0%	1670 MB	6.19:58:20		9.0
		Running	0%	816 MB	25.03:07:46		5.0
		Running	0%	696 MB	25.03:07:49		9.0
		Running	0%	1134 MB	25.03:07:49		5.0
		Off					9.0
		Running	0%	8192 MB	4.19:54:50		9.0
		Running	0%	16000 MB	1.01:51:28		9.0
		Off					9.0
		Running	0%	16000 MB	25.03:07:53		9.0
		Off					9.0
		Running	1%	16024 MB	25.03:07:55		9.0
		Running	0%	854 MB	25.03:07:48		9.0
		Running	0%	2304 MB	25.03:07:45		5.0
		Off					5.0
		Running	0%	778 MB	25.03:07:47		9.0
		Running	0%	788 MB	25.03:07:47		9.0
		Running	0%	2048 MB	25.03:07:45		9.0
		Running	U%	1378 MB	4.20:25:45		9.0

4. When the New Virtual Machine Wizard opens, select *Specify Name and Location*, then enter the name and storage location for the VM.

Figure 3.2 Specify Name and Location Screen

🖳 New Virtual Machine Wiza	rd	Х	
Specify Nam 💴	e and Location		
Before You Begin Choose a name and location for this virtual machine. Specify Name and Location The name is displayed in Hyper-V Manager. We recommend that you use a name that helps identify this virtual machine, such as the name of the guest operating system or workload. Specify Generation Name: Vertiv Avocent MP 1000VA Assign Memory You can create a folder or use an existing folder to store the virtual machine. If you don't s folder, the virtual machine is stored in the default folder configured for this server. Installation Options Store the virtual machine in a different location			
Summary	Location: D:\VMs\ Browse ▲ If you plan to take checkpoints of this virtual machine, select a location that has enough free space. Checkpoints include virtual machine data and may require a large amount of space. Previous Next > Finish Cancel		

5. Click Next.

6. In the Specify Generation section of the Wizard, click the Generation 2 radio button and click Next.

NOTE: The Generation 1 option is not supported.

Figure 3.3 Specify Generation Screen

🖳 New Virtual Machine Wizar	rd X							
Specify Generation								
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	 Choose the generation of this virtual machine. Generation 1 This virtual machine generation supports 32-bit and 64-bit guest operating systems and provides virtual hardware which has been available in all previous versions of Hyper-V. Generation 2 This virtual machine generation provides support for newer virtualization features, has UEFI-based firmware, and requires a supported 64-bit guest operating system. Once a virtual machine has been created, you cannot change its generation. 							
	< Previous Next > Finish Cancel							

7. In the Assign Memory section of the Wizard, enter 16384 MB (or greater) in the Startup memory field.



🖳 New Virtual Machine Wizar	d	×
🐸 Assign Memo	ry	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Specify the amount of memory to allocate to this virtual machine. You can specify an amount from 32 MB through 12582912 MB. To improve performance, specify more than the minimum amount recommended for the operating system. Startup memory: 16384 MB Use Dynamic Memory for this virtual machine. When you decide how much memory to assign to a virtual machine, consider how you intend to use the virtual machine and the operating system that it will run.	
	< Previous Next > Finish Cancel	

- 8. Leave the Use Dynamic Memory for this virtual machine checkbox unchecked (disabled) and click Next.
- 9. In the Configure Networking section of the Wizard, use the Connection drop-down menu to select the Hyper-V network to which you wish to connect.

Figure 3.5 Configure Networking Screen

🖳 New Virtual Machine Wiza	ard	×
🖳 Configure N	etworking	
Before You Begin Specify Name and Location Specify Generation Assign Memory Configure Networking Connect Virtual Hard Disk Installation Options Summary	Each new virtual machine includes a network adapter. You can configure the network adapter to use virtual switch, or it can remain disconnected. Connection:	ea
	< Previous Next > Finish Cancel	

10. Click Next.

11. In the Connect Virtual Hard Disk section of the Wizard, click the radio button for the Use an existing virtual hard disk option and click *Browse*.

Figure 3.6 Connect Virtual Hard Disk Screen

🖳 New Virtual Machine Wizi	ard	×
Connect Vir	tual Hard Disk	
Before You Begin Specify Name and Location Specify Generation Assign Memory	A virtual machine requires storage so that you can install an operating system. You can specify the storage now or configure it later by modifying the virtual machine's properties. O Create a virtual hard disk Use this option to create a VHDX dynamically expanding virtual hard disk.	
Configure Networking Connect Virtual Hard Disk Summary	Name: Vertiv Avocent MP 1000VA.vhdx Location: D:\VMs\ Browse Size: 127 GB (Maximum: 64 TB)	
	Use an existing virtual hard disk Use this option to attach an existing VHDX virtual hard disk. Location: MP1000VA 3.33.3\vApp-PROD-3.33.3.vhdx Browse	
	 Attach a virtual hard disk later Use this option to skip this step now and attach an existing virtual hard disk later. 	
	< Previous Next > Finish Cancel	

12. Browse to and select the extracted VHDX disk image (the image/file you extracted in Prerequisite on page 5).

13. Click Next.

14. In the Summary section of the Wizard, review the Description box and click *Finish* to confirm the details and create the VM.

Figure 3.7 Summary Screen

🖳 New Virtual Machine Wiza	ard	×
Completing	the New Virtual Machine Wizard	
Before You Begin Specify Name and Location Specify Generation	You have successfully completed the New Virtual Machine Wizard. You are about to create the following virtual machine. Description:	
Assign Memory Configure Networking Connect Virtual Hard Disk	Name: Vertiv Avocent MP1000VA Generation: Generation 2 Memory: 16384 MB Network: Image: Second	
Summary	Hard Disk: WP 1000VA 3.33.3\vApp-PROD-3.33.3.vhdx (VHDX, dynamically expanding)	
	To create the virtual machine and dose the wizard, dick Finish.	
	< Previous Next > Finish Cancel	

A progress bar appears to provide the status. When the VM creation process completes, the new VM appears in the Hyper-V Manager list.

15. In the Hyper-V Manager node in the left-hand sidebar, right-click on the new VM and select Settings.

- 16. In the Settings menu, select Security under the Hardware section.
- 17. By default, Secure Boot is enabled. Click the Enable Secure Boot checkbox to disable that option.

NOTE: Secure Boot must be disabled for the VA to boot on Hyper-V. Hyper-V uses Vertiv custom keys and does not support custom Secure Boot keys.

Figure 3.8 Security Screen

rtiv Avocent MP1000VA	
Hardware	Security
Add Hardware	
Firmware	Secure Boot
Boot from Hard Drive	Use Secure Boot to help prevent unauthorized code from running at boot time (recommended)
Security	
Secure Boot disabled	Enable Secure Boot
Memory	Template:
16384 MB	Microsoft Windows
Processor	
1 Virtual processor	Encryption Support
SCSI Controller	
🛨 🚃 Hard Drive	Enable Trusted Platform Module
vApp-PROD-3.33.3.vhdx	A Trusted Platform Module (TPM) is a special purpose microprocessor which
Network Adapter	provides cryptographic services to a compute platform.
System Test Network 10.207.	Encrypt state and virtual machine migration traffic
Management	
I Name	Encryption support requires a key protector (KP) configuration for the virtual
Vertiv Avocent MP1000VA	KP that allows running the virtual machine on this host.
Some services offered	
Chadrasiata	Security Policy
Production	Specify additional protection options for the virtual machine.
Smart Paging File Location	Enable Shielding
D:\VMs	
Automatic Start Action	i riis arrects additional settings.
Restart if previously running	Learn more about virtual machine security
Automatic Stop Action	
Save	

18. In the left-hand sidebar, select *Processor* and click the arrows in the Number of virtual processors field to increase the value to 4.

/erti	v Avocent MP1000VA 🛛 🗸 🗸	< ▶ 0
	Hardware Add Hardware Firmware	Processor — You can modify the number of virtual processors based on the number of processors on the physical computer. You can also modify other resource control settings.
	Security Secure Boot disabled	Number of virtual processors:
	Memory	Resource control
	16384 MB	You can use resource controls to balance resources among virtual machines.
± [4 Virtual processors	Virtual machine reserve (percentage): 0
- <	SCSI Controller	Percent of total system resources: 0
E	Hard Drive vApp-PROD-3.33.3.vhdx	Virtual machine limit (percentage): 100
9 [Network Adapter System Test Network 10.207.18.x	Percent of total system resources: 6
2	Anagement Name Vertiv Avocent MP1000VA	Relative weight: 100
	Integration Services Some services offered	
đ	Checkpoints Production	
2	Smart Paging File Location D:\VMs	
8	Automatic Start Action Restart if previously running	
÷	Automatic Stop Action Save	

Figure 3.9 Processor Screen

- 19. Under the Management section in the left-hand sidebar, select Integration Services.
- 20. In the Services list, click the Guest services checkbox to select this option.

Figure 3.10 Integration Services Screen

Vertiv Avocent MP1000VA Add Hardware Firmware Boot from Hard Drive Security Secure Boot disabled Memory 16384 MB Processor 4 Virtual processors St SCSI Controller Hard Drive VAPP-PROP-3.33.3.vhdx Mane Vertiv Avocent MP 1000VA Mane Vertiv Avocent MP 1000VA Integration Services Mane Vertiv Avocent MP 1000VA Integration Services Mane Vertiv Avocent MP 1000VA Integration Services Mane Vertiv Avocent MP 1000VA
★ Hardware ▲ Add Hardware ■ Firmware Boot from Hard Drive ◆ Security Secure Boot disabled ■ Memory 16384 MB ■ Processor ④ Virtual processors ■ Hard Drive ● XCSI Controller ● Hard Drive ∨ App-PROD-3.33.3.vhdx ■ Name Vertiv Avocent MP 1000VA ● Integration Services Add Hardware ■ Name Vertiv Avocent MP 1000VA ● Checkpoints Production ■ Smart Paging File Location D:\/Ws
Automatic Start Action Restart if previously running Automatic Stop Action Save Click "OK" to save

- 21. Click OK to save all settings.
- 22. After the settings are saved, right-click the VM again and select *Start*. The Avocent MP1000VA Management Platform Virtual Appliance will start and its status will change to *Running*.

NOTE: If the VM fails to boot, verify that Secure Boot is disabled.

3.3 VMware vCenter Server 7.0

3.3.1 Deployment

NOTE: You must have administrator permissions to import, create, and/or configure a Virtual Machine (VM) and to deploy an Open Virtualization Format (OVF).

To deploy the VA:

1. From the vSphere web UI, log in with administrator permissions.

Figure 3.11 VMware vSphere Client Home Page

vm vSphere Client Menu v					
C C	MomoCenter Actions - Summary Monitor Configure Permissions Hosts & Clusters VMs Dat Hosts & 4 Virtual Machines 24 Clusters: 0 Datastores: 0 Custom Attributes Arebute Edt.	tastores Networks U	Updates	Category	Cruy Pres 350 0 Pr Deel 18 18 Ore; Ceparity 55 11 Ore Meniny First 12 0 0 Uses (18 18 00) Ceparity 55 11 Ore Mening First 12 0 0 Uses (18 18 00) Ceparity 35 11 Ore Deel 18 18 00 Ceparity 85 11 Ore Deel 18 10 Ore; First 10 0 Ceparity 85 11 Ore Deel 18 10 Ore; First 10 0 Ceparity 85 11 Ore Deel 18 10 Ore; First 10 0 Ceparity 85 11 Ore; Deel 18 10 Ore; First 10 0 Ceparity 85 11 Ore; Deel 18 10 Ore; No times to display
	Update Manager Host Baseline Compliance ② Compliant (never checked)				•
Recent Tasks Alarms					*
Task Name ~ Target	✓ Status ✓ Ir	nitiator v G	Queued For v Start T	Time v Completion 1	Time V Server ↑ V
					^
All					More Tasks

2. In the left- hand sidebar, right-click a data center and select Deploy OVF Template.

Figure 3.12 Deploy OVF Template

vm vSphe	ere Client	Menu 🗸	Q Search
	8	<u>9</u>	🗈 M
v 🗗 syobeteéste	est-downsysbe	system	Summa
> 📑 MomoCe	enter	Actions - MomoCenter	
	t /	Add Host	٩ ٩
	1 III	lew Cluster	
	1	lew Folder	•
	C	Distributed Switch	► 0
	10 T	New Virtual Machine.	
	10	Deploy OV	e
	S	itorage	•
	E	dit Default VM Comp	patibility
	62 N	ligrate VMs to Anoth	ner Net
	Ν	Nove To	
	F	Rename	
	г	ags & Custom Attrib	utes 🕨
	A	Add Permission	
	A	Alarms	Þ
	×	Delete	
	L	Jpdate Manager	Þ

3. From the Select an OVF template tab, click the URL radio button to enter a URL for a remote OVA/OVF repository.

-or-

Click the Local file radio button to browse to a local file on your computer.

Figure 3.13 Select an OVF Template Screen

2 Select a name and folder Select a compute resource 3 Select a compute resource Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive. 6 Ready to complete Image: CD/DVD drive. Image: URL Image: Mathematical the transform the internet of the transform the internet. 1 CD/DVD drive. Image: CD/DVD drive. Image: Complete Image: CD/DVD drive. Image: Choose Files No file chosen	1 Select an OVF template	Select an OVF template							
3 Select a compute resource 4 Review details 5 Select storage 6 Ready to complete 6 Ready to complete Internet of the server	2 Select a name and folder	Select an OVF template from remote URL or local file system							
4 Review details Enter a URL to download and install the OVF package from the Internet, or browse to a location accessible from your computer, such as a local hard drive, a network share, or a CD/DVD drive. 6 Ready to complete Image: CD/DVD drive. Image: Image: Our complete Image: CD/DVD drive. Image: Image: Our complete Image: CD/DVD drive. Image: Image: Image: Image: Our complete Image: Image: Image: CD/DVD drive. Image:	3 Select a compute resource								
5 Select storage 6 Ready to complete 0 URL http https://remoteserver-address/filetodeploy.ovf .ova 0 Local file Choose Files No file chosen	4 Review details	Enter a URL to download and install the OVF package from the Internet, or browse to a							
6 Ready to complete CD/DVD drive. URL http https://remoteserver-address/filetodeploy.ovf .ova CLocal file Choose Files No file chosen	5 Select storage	location accessible from your computer, such as a local hard drive, a network share, or a							
URL http https://remoteserver-address/filetodeploy.ovf .ova O Local file Choose Files No file chosen	6 Ready to complete	CD/DVD drive.							
http https://remoteserver-address/filetodeploy.ovf .ova O Local file Choose Files No file chosen		O URL							
O Local file Choose Files No file chosen		http https://remoteserver-address/filetodeploy.ovf .ova							
Choose Files No file chosen		O Local file							
		Choose Files No file chosen							

- 4. Click Next.
- 5. From the Select a name and folder tab, enter a unique name for the VM.

Figure 3.14 Select a Maine and Location Scree	Figure 3.14	Select a Name and Lo	cation Scree
---	-------------	----------------------	--------------

1 Select an OVF template 2 Select a name and folder	Select a name and fold Specify a unique name	er and target location		
3 Select a compute resource 4 Review details	Virtual machine name:	MP1000VA_vSphere_demo		
5 Select storage				
6 Ready to complete	Select a location for the	e virtual machine.		
	systetséstetses 🕒 🗸	systemetration		
	> 📑 MomoCenter			

6. Select a location for the VM, then click Next.

7. From the Select a compute resource tab, select a compute resource the VM can support, then click Next.



1 Select an OVF template 2 Select a name and folder	Select a compute resource Select the destination compute resource for this operation
4 Review details5 Select storage6 Ready to complete	 MomoCenter 8025369662238 8025369662238 8025369662238 8025369662238 802536966238
	Compatibility Compatibility checks succeeded.

8. From the Review details tab, verify the details in the provided table, then click *Next*.



 1 Select an OVF template 2 Select a name and folder 	Review details Verify the templa	ate details.				
4 Review details						
5 Select storage	Publisher	No certificate present				
6 Select networks 7 Ready to complete	Description	this is a base template used for creation of OVF for distribution of the MP1000VA Virtual Appliance.				
	Download size	1.5 GB				
	Size on disk	2.1 GB (thin provisioned)				
		40.0 GB (thick provisioned)				
	Extra configuration	nvram = ovf:/file/file2				

9. From the Select storage tab, use the drop-down menus to select the virtual disk format and VM storage policy.

Figure 3.17 Se	lect Storage	Screen
----------------	--------------	--------

 2 Select a name and folder 3 Select a compute resource 	Select storage Select the storage for the configuration and disk files								
4 Review details	Encrypt this virtual machine	•							
5 Select storage 6 Select networks	Select virtual disk format:	Thin	Provision	~					
7 Ready to complete	VM Storage Policy:	Datastore Default v							
	Name	Capacity	Provisioned	Free	Тур				
	tertual disk feutral	458.25 GB	414.53 GB	203.91 GB	VN				
	tertual disic feutrat	465.5 GB	369.66 GB	95.84 GB	VN				
	tärtualdisikleutriat	465.5 GB	424.68 GB	102.23 GB	٧N				
	4								
	Compatibility								
	 Compatibility checks succeeded. 								

10. Select a data store to store the VM's hard drive and configuration files, then click Next.

11. From the Select networks tab, use the table to map the VM network to the desired destination network.

NOTE: By default, the VM attempts to obtain an IP address via DHCP upon boot.

Figure 3.18 Select Networks Screen

 1 Select an OVF template 2 Select a name and folder 2 Select a compute recourse 	Select networks Select a destination network for ea	ach sourc	e netwo	rk.			
4 Review details	Source Network	т	Desti	nation Network		т	
5 Select storage	VM Network		VM	Network		\sim	*
6 Select networks 7 Ready to complete						1 items	5
	IP Allocation Settings						
	IP allocation:	S	Static - M	lanual			
	IP protocol:	IF	Pv4				
				CANCEL	ВАСК	NE	×1

12. Click Next.

13. From the Ready to complete tab, review the deployment details and click *Finish*.

Figure 3.19 Ready to Complete Screen

elect an OVF template elect a name and folder	Ready to complete Click Finish to start crea	tion.					
elect a compute resourc eview details	e						
elect storage	Provisioning type	Deploy OVF From Remote URL					
elect networks	Name	Name MP1000VA_vSphere_demo					
eady to complete	Template name	ADIADWERD VAVSDER MUKAA					
	Download size	1.5 GB					
	Size on disk	2.1 GB					
	Folder	MomoCenter					
	Resource	23 22123 22					
	Storage mapping	1					
	All disks	Datastore: datastore1; Format: Thin provision					
	Network mapping	1					
	VM Network	VM Network					
	IP allocation settings						
	IP protocol	IPV4					
	IP allocation	Static - Manual					

14. If you wish to monitor the deployment progress, expand the Recent Tasks panel at the bottom of the vSphere client.

Figure 3.20 Recent Tasks Panel

Recent Tasks Alarms											*					
Task Name	~	Target ~	\$	Status		~	Initiator	~	Queued For V		Start Time	~	Completion Time	/	Server 🕇	~
Deploy OVF template		MP1000VA			0%	۲	ENGINEERING.NET/vpxd-e		99 ms		08/01/2022, 10:47:30 AM				photon-machine.systemtes.	*
Import OVF package		ADX_MP10C0VAX			0%	0	engineering.net\Administr		110 ms		08/01/2022, 10:47:14 AM				photon-machine.systemtes.	

Figure 3.21 VM Summary with Import Completion Status

vmware" esxi"							I Help	🗸 I 🔍 Search 🕞
T Navigator	1 localhost.hsvhwtest.com - Virtual Machines							
✓ ☐ Host Manage Monitor	Create / Register VM SConsole Power Virtual machine	on 📱 Power off 🔢 Suspend 🥂 Refi	esh 👶 Actions	 Quest OS 	v He	sst name	- Host CPU	Q Search
Restant Markings			4.00.00	0		and the solution of the	24.181-	4.000
Storage		e Normal	4.00 GB	CentOS 8 (64-bit)	101	canosciocadoman	21 MHz	1.47 GB
A Networking		C Normal	4.00 00	Centop 8 (64-bit)		calificationali	20 Mile	4.00 00
		o Normal	4.00 GB	CentOS 8 (64-bit)	101	canosciocaldoman	33 MHz	4.00 GB
	B Doview_Dev_Centos_s	C Normal	4.00 GB	Centos a (64-bit)	101	canosciocaldoman	19 MHz	937 MB
		e Normal	4.00 GB	CentOS 8 (64-01)	101 000000 0000 000 000	canosciocadoman	22 MHZ	\$34 MD
	D B TEOT WINDOWS Comm	e Normal	4.00 GB	Microsoft Windows	Server 2022 (64-bit) 01	14200411	TO MITZ	4.07 06
	CL. B TEST_WIN2022_Server	e Normal	4.08 GB	Microsoft Windows	Server 2022 (64-bit) Un	1known	20 MHZ	4.06 GB
		• Roma	4.00 GB	Nicrosoft Windows	Server 2022 (04-bit) 01	IN DOM I	13 MPZ	4.07 GB
	Disview_DEV_win2022_server	o Normal	4.08 GB	Wicrosoft Windows	Server 2022 (64-bit) Un	1known	10 MHZ	4.06 GB
	C. B DSVIew_rest_win2022_server	e Normal	4.00 GB	Others Lines (0.4 bit)	Server 2022 (64-bit) 01	1kaowii	A MILE	4.00 GB
	LL Bimprocova	🕑 Normai	Unknown	Other Linux (64-bit) Ur	1known	0 MH2	0 MB
	Quick filters v							11 items "
	Recent tasks							
	Task ~	Target ~	Initiator ~	Queued ~	Started	✓ Result ▲	~	Completed • ·
	Power On VM	🚳 mp1000va	reat	05/20/2022 05:59:37	05/26/2022 05:59:37	Completed successfully		05/25/2022 05:59:39
	Upload disk - vertiv-ads-mp1000va-disk1.vmdk (1 of 1)	mp1000va	reat	05/25/2022 09:35:53	05/26/2022 09:35:53	Completed successfully		05/25/2022 11:00:32
	Import VApp	Resources	reat	05/25/2022 04:34:51	05/26/2022 04:34:51	Completed successfully		06/26/2022 06:59:38
	Create VM	mp1000va		05/25/2022 04:34:51	05/26/2022 04:34:51	Completed successfully		05/25/2022 04:34:51

- 15. Once deployment is complete, locate the new VM under your chosen compute resource in the left-hand sidebar.
- 16. Click the VM name.
- 17. The VM appears in the main panel. Click the *Power On* button to start the VM.

Figure 3.22 VM Details

vm vSphere Client Menu V	Q Search in all environments			NEERING.NET V
VSphere Client Menu V Image: Sphere Client Menu V Image: Sphere Client Image: Sphere Client V Image: Sphere Client Image: Sphere Client <	Search in all environments WP1000VA_Thud_3.12.5-66 Summary Monitor Configure Permissions Guest OS: Other 4 x or lait Compatibility: ESX 67 and lat VMware Tocost: Not running, volume and DNS Name: Launch Web Console Launch Remote Console	■	C O' Administrator@ENGP	CPU USAGE 3.6 GHz ■ CPU USAGE 3.6 GHz ■ Storage USAGE 56.15 GB
	VM Hardware		Notes Test deployment for documentatic Edit Notes	^
	Hard disk 1 40.04 GB	so menory active	Custom Attributes	~
	Network adapter 1 VM Netwo Video card 4 MB	k (connected)	VM Storage Policies	~
	VMCI device	ut far the visit of eaching access visit in interface		
	Other Additional	Hardware		
	Compatibility ESXI 6.7 ar Edit Settings	d later (VM version 14)		
	Related Objects	^		
	Host Accessor	Work		
Recent Tasks Alarms				*

NOTE: The Notes section can be edited via the prompt dialogue that appears when you first connect to the CLI.

3.4 VMware vSphere Hypervisor (ESXi) 7.0

3.4.1 Deployment

NOTE: You must have administrator permissions to import, create, and/or configure a Virtual Machine (VM) and to deploy an Open Virtualization Format (OVF).

To deploy the VA:

1. From the vSphere web UI, log in with administrator permissions.

Figure 3.23 VMware vSphere Hypervisor (ESXi) 7.0 VM Summary

vmware: ESXi							Help - Q Search -
1 Navigator	🕤 localhost.tastwitvat.com - Virtual Machines						
✓ ☐ Host Manage	😭 Create / Register VM 📔 🛒 Console 📔 🕨	Power on 🗧 Power off 🔢 Suspend 🩋 Refresh	💠 Actions				Q Search
Monitor	Virtual machine	~ Status	 Used space 	- Guest OS -	Host name	✓ Host CPU	✓ Host memory ✓
🔹 🚰 Virtual Machines 👘 🚺	. B DEV_CentOS_8	🖉 Normal	4.08 GB	CentOS 8 (64-bit)	localhost.localdomain	21 MHz	1.47 GB
) 🗐 Storage 📃 2	TEST_CentOS_8	Normal	4.08 GB	CentOS 8 (64-bit)	localhost.localdomain	29 MHz	4.05 GB
> 🧕 Networking 👘 🚺 🚺	API_CentOS_8	Normal	4.08 GB	CentOS 8 (64-bit)	localhost.localdomain	33 MHz	4.06 GB
	DSView_DEV_CentOS_8	Normal	4.08 GB	CentOS 8 (64-bit)	localhost.localdomain	19 MHz	937 MB
	B DSView_Test_CentOS_8	Normal	4.08 GB	CentOS 8 (64-bit)	localhost.localdomain	22 MHz	934 MB
	BEV_Win2022_Server	Normal	4.08 GB	Microsoft Windows Server 2022 (64-bit)	Unknown	18 MHz	4.07 GB
	TEST_Win2022_Server	Normal	4.08 GB	Microsoft Windows Server 2022 (64-bit)	Unknown	20 MHz	4.06 GB
	API_Win2022_Server	Normal	4.08 GB	Microsoft Windows Server 2022 (64-bit)	Unknown	13 MHz	4.07 GB
	DSView_DEV_Win2022_Server	Normal	4.08 GB	Microsoft Windows Server 2022 (64-bit)	Unknown	16 MHz	4.06 GB
	DSView_Test_Win2022_Server	📀 Normal	4.08 GB	Microsoft Windows Server 2022 (64-bit)	Unknown	19 MHz	4.06 GB
	Quick filters v						10 items J
	Recent tasks	Turch	tu Ourunt	01-1-1	D		ini Associate d
	Task	✓ Target ✓ Initia	itor v Queued	 Started 	✓ Result ▲		✓ Completed ▼

2. Click the Create / Register VM button.

3. From the Select creation type tab, click Deploy a virtual machine from an OVF or OVA file.

Figure 3.24 Select Creation Type Screen



- 4. From the Select OVF and VMDK files tab, locate the Avocent MP1000VA Management Platform Virtual Appliance software you downloaded in Installing the Virtual Appliance on page 3.
- 5. Upload the software file to the ESXi host server.
- 6. If you do not wish to use the default name, enter a new name for the VM.
- 7. Click Next.

Figure 3.25 Select OVF and VMDK Files Screen

🔁 New virtual machine - mp1000va	
 1 Select creation type 2 Select OVF and VMDK files 3 Select storage 	Select OVF and VMDK files Select the OVF and VMDK files or OVA for the VM you would like to deploy
4 License agreements 5 Deployment options 6 Additional settings 7 Ready to complete	Enter a name for the virtual machine. mp1000va Virtual machine names can contain up to 80 characters and they must be unique within each ESXi instance.
7 Ready to complete	× m vertiv-mp1000va.ova
vm ware [®]	
	Back Next Finish Cancel

8. From the Select storage tab, select a data store for the VM's hard drive and configuration files, then click Next.

Figure 3.26 Select Storage Screen

 1 steet creation type 2 steet OVF and VMDK files 3 steet storage 4 Deployment options 5 Ready to complete Standard Persistent Memory Steet a datastore for the virtual machine's configuration files and all of its' virtual disks. Name	New virtual machine - adx-mp1000	lva										
 2 Select Vor and VMDK files 3 Select storage 4 Deployment options 5 Ready to complete Select a datastore for the virtual machine's configuration files and all of its' virtual disks. Name Capacity Free Type Thin pro Access Isos 1.42 TB 1.39 TB VMFS6 Supported Single VMs 3.64 TB 3.57 TB VMFS6 Supported Single 2 item 	1 Select creation type	Select storage										
3 Deployment options 5 Ready to complete Standard Persistent Memory Select a datastore for the virtual machine's configuration files and all of its' virtual disks. Name Capacity Free Type Thin pro + Access Access isos 1.42 TB 1.39 TB VMFS6 Supported Single VMs 3.64 TB 3.57 TB VMFS6 Supported Single 2 item 2 Compose Standard Standard Standard Standard Standard	2 Select OVF and VMDK files	Select the storage type and da	tastore									
Name	3 Select storage 4 Deployment options 5 Ready to complete	Standard Persistent Mer Select a datastore for the virt	mory tual machine's c	onfiguration	files	s and all of i	its' v	irtual disks				
isos 1.42 TB 1.39 TB VMFS6 Supported Single VMs 3.64 TB 3.57 TB VMFS6 Supported Single 2 item		Name	~	Capacity	~	Free	~	Туре	~	Thin pro \sim	Access	~
VMs 3.64 TB 3.57 TB VMFS6 Supported Single 2 item		isos		1.42 TB		1.39 TB		VMFS6		Supported	Single	
2 item		VMs		3.64 TB		3.57 TB		VMFS6		Supported	Single	
vmware.											2 i	tems
vm ware [®]												
	vm ware [®]											

9. From the Deployment options tab, use the drop-down menu to select the VM network to map to the adapter.

NOTE: By default, the VM attempts to obtain an IP address via DHCP upon boot.

- 10. Select either the Thin or Thick radio button for disk provisioning.
- 11. Check the Power on automatically box, then click Next.

Figure 3.27 Deployment Options Screen

🐿 New virtual machine - adx-mp1000v	а						
 ✓ 1 Select creation type ✓ 2 Select OVF and VMDK files ✓ 3 Select storage 	Deployment options Select deployment options						
4 Deployment options 5 Ready to complete	Network mappings	VM Network	VM Network				~
	Disk provisioning	Thin O Thie	ck				
	Power on automatically						
vm ware [®]							
				Back	Next	Finish	Cancel

12. From the Ready to complete tab, verify your deployment options, then click *Finish*. The deployment process begins immediately.



Figure 3.28 Ready to Complete Screen

🔁 New virtual machine - mp1000va		
 1 Select creation type 2 Select OVF and VMDK files 3 Select storage 	Ready to complete Review your settings selection before finit	shing the wizard
 4 Deployment options 5 Ready to complete 	Product VM Name	Vertiv-MP1000VA
	Files	vertiv-mp1000va-disk1.vmdk
	Datastore Provisioning type	VMs
	Network mappings	VM Network: VM Network
	Guest OS Name	Unknown
	Do not refresh your brows	er while this VM is being deployed.
vm ware [®]		
		Back Next Finish Cancel

CAUTION: If you receive the error message A required disk image was missing, do NOT continue. For troubleshooting information, proceed to the next section.

13. If you wish to monitor the deployment progress, expand the Recent tasks panel at the bottom of the client.

Figure 3.29 Recent Tasks Panel

😰 Recent tasks	Recent tasks					
Task v	Target ~	Initiator ~	Queued ~	Started ~	Result 🔺 🗸 🗸	Completed • ~
Upload disk - vertiv-mp1000va-disk1.vmdk (1 of 1)	🞒 mp1000va	root	05/26/2022 09:35:53	05/26/2022 09:35:53	S	Running 80 %
Create VM	imp1000va		05/28/2022 04:34:51	05/26/2022 04:34:51	Completed successfully	05/26/2022 04:34:51
Import VApp	Resources	root	05/28/2022 04:34:51	05/25/2022 04:34:51		Running 80 %

- 14. Once deployment is complete, locate the new VM in the left-hand sidebar.
- 15. Click the VM name.
- 16. The VM appears in the main panel. Click the *Power On* button to start the VM.

Figure 3.30 VM Details After Starting

VMWare" ESXi"								Help +	Q Search -
Ta Navigator	🔁 mp1000va								
Control Manage Montor Control Contro Control Control Control Control Control	🖉 Console 🗱 Monitor 🄌 Powe	r on Shud down III Suspend O Restart mp1000743 Gover 0.5 Compatibility Viruse Table CPUs Mamory	Cat C Refresh Construct (64-540) CONst Linux (64-540) EDIX 67 Vehal machine Yes 4 16 GB	ns				^ 	OMHZ
	→ General Information				+ Hardware Cor	nfiguration			
	Networking				+ 🖬 CPU		4 vCPUs		
	► m VMware Tools	VMware Tools is not managed by vSphere			Memory		16 GB		
	► I Storage	1 disk			+ 🛄 Hard disk 1		26.03 GB		
	Notes	Vertiv™ Avocent® MP1000VA	/	Edit notes	• IN Network ad	lapter 1	VM Network (Connected)		
					• IN Network ad	lapter 2	VM Network (Connected)		
	· Performance summary last hour				+ 🜉 Video card		4 MB		
		● Cor ● Cor	isumed host CPU Ready isumed host memory		+ 📴 Others		Additional Hardware		
	200			5	* Resource Cor	nsumption			
				Onst	Consumed	host CPU	0 MHz		
	2 m			o Internet	Consumed	host memory	0 MB		
	8		_	host	Active gues	st memory	0 MB		
	2 40			men	+ 🗐 Storage				
	§ 20		M	ony (c	Provisioned	ł	26.03 GB		
	2 T		1.11	m					
	S Necent tasks	. Trent		Outward		Charlest	Denth -		
	Reserved and the	 Target Resetted as 	 Initiator 	CORRECT CORRECT	~	- Statled	 Result * 	Comp	
	Lininged disk - vertik-ment000vau/isikt vm/k (1 of 1)	Ri metolova	1001	05/20/2022 00:06	57	05/20/2022 00:06:57		05203	2022 11:00:32
	Import VApp	Resources	reot	05/26/2022 04:34	51	05/26/2022 04:34:51	Completed successfully	05/28/2	2022 05:59:36
	Create VM	B mp1000va		05/26/2022 04:34	51	05/28/2022 04:34:51	Completed successfully	05/26/2	1022 04:34:51
			·	-			······		

3.4.2 Troubleshooting for missing NVRAM disk image

If you are importing an OVA image file into the VMware standalone ESXi host, you may receive an error message indicating a required disk image is missing after clicking *Finish* on the Ready to complete screen.

NOTE: The following screenshot examples use OVA file version 3.17.8. The procedures are the same regardless of the version number.

Figure	3.31	Error	Message
	····		

智 New virtual machine - Vertiv_MP1000VA							
✓ 1 Select creation type	A required disk image was mis	sing.	×				
 2 Select OVF and VMDK files 3 Select storage 	Review your settings selection before fini	shing the wizard					
 ✓ 4 Deployment options 							
5 Ready to complete	Product MP1000VA_PROD_TEMPLATE						
	VM Name	Vertiv_MP1000VA					
	Files	AvocentVirtualAppliance3.17.8_GA-disk1.vmdk					
	Datastore VMs						
	Provisioning type	Thin					
	Network mappings	VM Network: VM Network					
vm ware*	Do not refresh your brows	er while this VM is being deployed.					
		Back Next Finish	Cancel				

This message indicates you are missing a required NVRAM file. The deployment can still complete successfully without the NVRAM file; however, Secure Boot cannot be validated and the VA will boot into the EFI BIOS. Please refer to the following procedure.

To resolve a missing NVRAM file on ESXi OVA import:

- Using a TAR file extractor application (such as WinZip or 7Zip), extract the NVRAM file from the OVA archive and place it into the same folder as the OVA file. The extracted file will be the AvocentADXVirtualAppliance<VERSION>-file1.nvram file.
- 2. From the deployment screen, click *Back* until you are in the Select OVF and VMDK files tab.

3. In the Select OVF and VMDK files tab, drop the OVA and NVRAM file into the blue file drop box.

Figure 3.32 Upload the NVRAM File

🔁 New virtual machine - OVA_Deploy	Test
 1 Select creation type 2 Select OVF and VMDK files 3 Select storage 	Select OVF and VMDK files Select the OVF and VMDK files or OVA for the VM you would like to deploy
4 License agreements 5 Deployment options 6 Additional settings 7 Ready to complete	Enter a name for the virtual machine. OVA_Deploy_Test Virtual machine names can contain up to 80 characters and they must be unique within each ESXi instance.
	 AvocentVirtualAppliance3.17.8.ova AvocentVirtualAppliance3.17.8_GA-file1.nvram
vm ware*	
	Back Next Finish Cancel

4. Click Next until the Ready to complete screen appears.

NOTE: Do not select *Finish* until all settings are verified.

5. Click *Finish*. This successfully deploys the .nvram file and enables the Secure Boot feature used when the virtual appliance is booted.

4 Assigning an IP Address

Once the Avocent MP1000VA Management Platform Virtual Appliance is deployed, an IP address must be assigned. The management platform uses an IP address to uniquely identify itself to IP-based target devices. By default, an IP address is obtained via DHCP. You can also manually configure a static IP address.



CAUTION: The Avocent MP1000VA Management Platform Virtual Appliance only supports one virtual network interface. Additional interfaces will not be recognized by the application and may cause adverse effects, depending on the DHCP client/route metrics.

Initially, the Avocent MP1000VA Management Platform Virtual Appliance must be accessed via the Command Line Interface (CLI) to update your password. Once you log in with your new credentials, you can view the DHCP-assigned IP address or configure a static IP address. You will then use this IP address to access the web UI. See the following procedures to configure the network.

To view the DHCP-assigned IP address or to configure a static IP address:

NOTE: When the VA initially boots, it may take time for the services to start before the CLI responds. If a *Still Starting* message appears, wait for it to clear before proceeding.

1. From the CLI, login using **admin** as the username and password. You are prompted to change the password.

Figure 4.1 Obsidian Login Screen



2. Enter 1 to select the Show/Configure Network Settings option.

Figure 4.2 Show/Configure Network Settings

```
Options:
```

- 0 Exit the CLI
- 1 Show/Configure Network Settings
- 2 Show Thermal and Power Data
- 3 Show/Configure Chassis
- 4 Show/Configure Manager
- 5 Change Admin Password
- 6 Require Admin Password Change on Next Login
- 7 Update Firmware
- 8 Reset to Factory Defaults
- 9 Shutdown
- 10 Reboot
- 11 Diagnostics
 - 3. Enter 1 to select the eth0 option.



```
:: ∕network
Options:
0 Return to the Root Menu
1 eth0 172.17.243.5
Select an option:
/network> 1
:: /network/eth0
Interface ID : eth0
Enabled : True
MAC Address : 00:15:5d:38:01:00
DHCP or Static : DHCP
IP Address : 172.17.243.5
Prefix Length : 20
Gateway
               : 172.17.240.1
Options:
.. Back to Network Interfaces
0 Return to the Root Menu
1 Use DHCP
2 Configure Static Address
Select an option:
/network/eth0> _
```

NOTE: The DHCP-assigned IP address appears once this option is selected. Access the web UI by entering **https://** and the IP address into a web browser.

NOTE: If you cannot log into the web UI, the time settings may be incorrect. Ensure you are on a network with a reachable NTP server or set the time manually. For more information, see the Vertiv[™] Avocent[®] MP1000 Management Platform User Guide.

- 4. To assign a static IP address, enter **2** to select the Configure Static Address option, then follow the on-screen prompts to configure the IP, subnet and gateway.
- 5. Enter **O** (zero) to select the Return to the Root Menu option.

Figure 4.4 Return to the Root Menu



6. Open a web browser and type https:// and the static IP address to access the web UI.

For information on configuring your network from the web UI, see the Vertiv[™] Avocent[®] MP1000 Management Platform User Guide.

This page intentionally left blank

5 Next Steps

With the completion of this guide, the VA has been installed, deployed and assigned an IP address. However, you cannot launch any target sessions until you obtain your licenses for the management platform and target devices.

To learn how to obtain your licenses and configure the web UI, refer to the Vertiv[™] Avocent[®] MP1000 Management Platform User Guide, which can be found on the <u>Vertiv[™] Avocent[®] MP1000 Management Platform Virtual Appliance</u> product page under the *Documents & Downloads* tab. This page intentionally left blank

Connect with Vertiv on Social Media



https://www.facebook.com/vertiv/



https://www.instagram.com/vertiv/

https://www.linkedin.com/company/vertiv/

 \mathbb{X} https://www.twitter.com/Vertiv/



Vertiv.com | Vertiv Headquarters, 505 N Cleveland Ave, Westerville, OH 43082 USA

©2023 Vertiv Group Corp. All rights reserved. Vertiv[™] and the Vertiv logo are trademarks or registered trademarks of Vertiv Group Corp. All other names and logos referred to are trade names, trademarks or registered trademarks of their respective owners. While every precaution has been taken to ensure accuracy and completeness here, Vertiv Group Corp. assumes no responsibility, and disclaims all liability, for damages resulting from use of this information or for any errors or omissions.