Virtual AirDefense Services Platform Installation Guide



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Installation Guide

1 Introduction

This document provides step-by-step instructions on how to install the Virtual AirDefense Services Platform 9.0.3 on a virtual platform.

Document Conventions

The following graphical alerts are used in this document to indicate notable situations:



NOTE This symbol indicates something of special interest or importance to the reader. Failure to read the note will not result in physical harm to the reader, equipment or data.



CAUTION This symbol indicates that if this information is ignored, the possibility of data or material damage may occur.



WARNING! This symbol indicates that if this information is ignored the possibility that serious personal injury may occur.

2 Prerequisites

ADSP supports the following virtualization platform:

- Xen Hypervisor 4.1.x
- Xen Cloud Platform (XCP) 1.6
- VMWare vSphere 5.0 (ESXi)

An ADSP Platform licence is required to unlock the ADSP functionality on the virtual platforms.

The following CPU, memory and hard disk configuration is required for installation of ADSP on virtual platforms to support appropriate network devices:

Platform Category	vCPUs for ADSP VM (on Intel 2.33GHz Xeon or equivalent)	Memory for ADSP VM	Hard Disk for ADSP VM	Scanning Sensors	RadioShare non scanning	Network Devices	Active WLAN Devices	Total WLAN Devices
Advanced	16	36GB	2x1TB	1700	2550	14,875	68,000	306,000
High-End	8	8GB	2x500GB	850	1275	8925	34,000	191,250
Mid-Level	4	4GB	2x250GB	425	637	4165	17,000	76,500
Entry-Level	2	2GB	1x250GB	85	85	595	3400	15,300



NOTE In a multi-VM environment, over allocation of CPUs to other VMs could potentially impact performance of ADSP VM.



NOTE Higher sensor count will cause forensic analysis to take longer to run.

3 Installing ADSP on a Virtual Platform

This section covers ADSP installation on different virtual platforms. Each platform installation is discussed in separate subsections:

- 1. Install ADSP on VMWare
- 2. Install ADSP on Xen Cloud Platform (XCP)
- 3. Install ADSP on Xen Hypervisor.

Depending on the platform that you want to install ADSP on, you must download one file for VMWare and Xen Cloud Platform, or two files for Xen Hypervisor:

- AD-VM-adsp-9-0-3-23-dvd.ova (VMWare)
- AD-VM-adsp-9-0-3-23-dvd.xva (Xen Cloud Platform)
- AD-VM-adsp-9-0-3-23-dvd.gz and AD-VM-adsp-9-0-3-23-dvd.xm (Xen Hypervisor).

The four files can be downloaded at the Motorola Solutions Support Center http://supportcentral.motorola.com/ .

3.1 Install ADSP on VMWare

Follow these steps to install ADSP on VMWare:

- 1. Install VMWare ESXi Version 5.0.x Host. Follow the VMWare instructions located at https://my.vmware.com/web/vmware/evalcenter?p=vmware-vsphere51-ent.
- Install vSphere Client 5.0.x to install and manage ADSP virtual machine running on a VMWare ESXi host. Follow the vSphere Client instructions located at <u>https://my.vmware.com/web/vmware/evalcenter?p=vmware-vsphere51-ent</u>.
- 3. Double-click the VMWare vSphere Client icon on your desktop to access the VMWare vSphere server.

🖉 VMware vSphere Clie	nt 🔀
vmware [.] VMware vSphere Client	
To directly manage a singl To manage multiple hosts, vCenter Server. IP address / Name: User name: Password:	e host, enter the IP address or host name. enter the IP address or name of a 172.17.12.166
	Login Close Help

4. Log in with your user name and password; then, click Login.

🖉 172.17.0.166 - vSphere Clie	# 172.17.0.166 - Aphene Client				
File Edit Vew Inventory Administration	Pile EdR View Inventory Adversionation Plugins Help				
	wentary 🕨 👹 Inventory				
8 8					
× 3 172.17.0.166	localhost.quairdefense.com VPhware 1523, 5.0.0, 465012				
	Getting Started Summary Netual Machines Discource Allocation Perfor	mancel, Configuation, Local Lears & Gouper, Vientis, Versionional,			
		close tab 🗵 🔛			
	What is a Host?				
	A host is a computer that uses withakatation software, such as ESN or ESN, for trun withail machines, hosts provide the CPU and memory resources that withail machines use and give virtual machines access to storage and network connectivity.	Virtual Machines			
	You can add a virtual machine to a host by creating a new one or by deploying a virtual appliance.	Red			
	The easiest way to add a virtual machine is to deploy a virtual appliance. A virtual appliance is a pre-built virtual machine with an operating system and software already installed. A new virtual machine will need an operating system installed on R, such as Windows Or Linux.				
		vigitere Clent			
	Basic Tasks				
	At Depley from VA Marketplace				
	at Create a new virtual machine	Explore Further			
		1 Learn about vSphere			
		Manage multiple hosts, eliminate downtime, load			
		1 Evaluate villabere			
Recent Tasks		Name, Taget or Status contains: Core ×			
Name Target	Status Details Initiated by Requested 9	tart TL			
Taska		her.			

5. Select File > Deploy OVF Template.



The Deploy OVF Template window is displayed.



6. Click **Browse** and navigate to the location where you downloaded the file images.

7. Select the VMWare image (AD-VM-adsp-9-0-3-23-dvd.ova) and click **Open**. Then, click **Next**.

🛃 Deploy OVF Template				
OVF Template Details Verify OVF template details	i.			
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	Product: Version: Vendor: Publisher: Download size: Size on disk: Description:	QA-adsp-shell No certificate present 1.5 GB 2.6 GB (thin provisioned) 16.5 GB (thick provisioned)		
Help			< Back Next >	Cancel

8. Verify the OVF template details and then click **Next**.

🛃 Deploy OVF Template		
Name and Location Specify a name and loca	tion for the deployed template	
Source OVF Temolate Details Name and Location Storage Disk Format Ready to Complete	Name: CAradopishe The name can contain up to 80 characters and it must be unique within the inventory folder.	
Help	< Back Next >	Cancel

9. Enter a VM name and then click **Next**.

🖨 Deploy OVF Template						
Storage Where do you want to stor	e the virtual machine file	537				
Source	Select a destination st	Select a destination storage for the virtual machine files:				
OVF Template Details Name and Location	Name	Drive Type	Capacity Provis	sioned Free	туре	Thin Prov
Storage	datastore1	Non-SSD	926.50 GB 535.1	7 GB 407.94 G	B VMFS5	Supporte
Disk Format Ready to Complete	ti datastore2	Non-SSD	931.25 GB 975.0	0 MB 930.30 G	B VMFSS	Supporte
	<					>
	Disable Storage Disable Storage Disable Storage Disable Storage Disable Disabl	RS for this virtual r	nachine			
	Name	Drive Type	Capacity Provision	ed Free	Туре	Thin Provis
	<					>
Help				< Back Nex	t >	Cancel

10. Select a datastore and then click **Next**.

🛃 Deploy OVF Template				
Disk Format In which format do you wa	int to store the virtual disks?			
Source OVF Template Details Name and Location Storage Disk Format Ready to Complete	Datastore: Available space (GB): Thick Provision Lazy Zero Thick Provision Eager Zero Thin Provision	datastore1 407.9 ved roed		
Help			< Back Next >	Cancel

11. Select **Disk Format** and then click **Next**.

🛃 Deploy OVF Template		
Ready to Complete Are these the options yo	u want to use?	
Source OVF: Template Details Name and Location Storage Disk Format Ready to Complete	When you click Finish, the deploy Deployment settings: OVF file: Download size: Size on disk: Name: Host/Cluster: Datastore: Disk provisioning: Network Mapping:	ment task will be started. C:\Documents and Settings\MZheng\My Documents\down 1.5 GB QA-adsp-shell localhost.qaairdefense.com datastore1 Thick Provision Lazy Zeroed "VM Network" to "VM Network"
	Power on after deployment	
Help		< Back Finish Cancel

12. Deselect Power on after deployment if selected and then click Finish to deploy VM.



13. Wait until the **Deployment Completed Successfully** dialog box displays. This could take several minutes to hours depending on the location (local or internet) of the ADSP image being deployed.



- **NOTE** If you receive a deployment error (see screenshot below), download *zlib1.dll* from the Motorola Solutions Support Center <u>http://supportcentral.motorola.com/</u> and copy to:
 - *C:\Windows* for Windows XP and Windows 7, 32-bit *C:Windows\SysWOW64* for Windows 7, 64-bit.



14. Click Close.

15. Right-click on the VM and then select Edit Settings.



The following window is displayed.

🛃 Test ADSP VM - Virtual Mach	ine Properties		
Hardware Options Resources			Virtual Machine Version: 7
		Memory Config	guration
Show All Devices	Add Remove	255 G8 🖂	Memory Size: 1 + GB -
Hardware	Summary	128 (28	
Memory	1024 MB	120 30 1	Maximum recommended for this auest OS: 255 GB.
CPUs CPUs	1	64 GB-	Mavimum recommended for best
I Video card	Video card	32 68	 performance: 36800 MB.
WMCI device	Restricted		Default recommended for this
SCSI controller 0	Paravirtual	16 GB-	 guest OS: 2 GB.
Hard disk 1 CD/040 drive 1	OD-ROM 1	8 68 -	Minimum recommended for this
Network adapter 1	VM Network		guest 05: 512 Mb.
Eloppy drive 1	Floopy 1	4 G8 H	
		2 68	
		1 GB	
		512 MB	
		254 MP	
		230 110	
		128 MB	
		64 MB	
		0112	
		32 MB	
		16 MB	
		8 MB	
		4 MB	
,			
Help			OK Cancel

- 16. Set **Memory**, **CPUs** and hard disk size as specified in Section 2 based on the network devices and clients to be supported by ADSP.
- 17. Click **OK**.



18. Right-click on the ADSP VM and then select **Power > Power On**.

- 19. Double-click the VM, then select the **Console** tab, and wait for login prompt. While waiting, ADSP VM configures automatically.
- 20. When login prompt displays, log into ADSP and configure just like you would any ADSP appliance.



NOTE If you lose control of the cursor, press **Ctrl-Alt** to regain control.

3.2 Install ADSP on Xen Cloud Platform (XCP)

Follow these steps to install ADSP on the Xen Cloud platform:

- 1. Installl Xen Cloud Platform 1.6 following Xen instructions. Follow the Xen instructions located at <u>http://www.xen.org/download/xcp/index.html</u>.
- 2. Install Citrix Xen Center to manage Xen Cloud Platform. Follow the Citrix instructions located at http://support.citrix.com/article/CTX118531.
- 3. Double-click the Xen Center icon on your desktop.

4. Select **ADD a server**.

🖲 Add New	Server	? 🗙
Enter the hos your user log	t name or IP address of the server you want to add and in credentials for that server.	
Server:	l	~
User login cr	edentials	
User name:	root	
Password:		
	Add	ncel

5. Enter Xen Cloud server IP address on which ADSP VM is to be deployed, along with username and password. Then, click **Add**.



6. Right-click on the Xen Cloud server and select Import.



After selecting Import, the following window is displayed.

8 Import	
Accate the file you w	ant to import ()
Import Source	Enter the pathname of an exported VM or template, an OVF/OVA package or a virtual hard disk image file or click Browse to find the file you want.
Location	
Storage	Filename: Browse
Networking	
Finish	
CITRIX.	
	< Previous Next > Cancel

- 7. Click **Browse** and navigate to the location where you downloaded the ADSP images.
- 8. Select the Xen Cloud Platform image (AD-VM-adsp-9-0-3-23-dvd.xva) and click **Open**.

9. Click Next.

🖲 Import XVA.			
🕵 Select the location where the imported VM will be placed 🕜			
Import Source Home Server Storage	Click on a server to nominate it as the home server for the imported VM or for any new VMs to be based on the imported template. The home server will be used by default to start up the VM and to provide resources such as local storage. Click on a pool if you do not want to nominate a home server: the most suitable available server will be used.		
Networking Finish	Kensrv-QAXCP61 Stensrv_Nedk1.5 Disconnected		
CITRIX	Add New Server		
	< Previous Next > Cancel		

- 10. Select (highlight) a server for **Home Server**. The selected server will be used by default to start up the VM and to provide resources such as local storage.
- 11. Click Next.
- 12. Click **Next** for **Storage** and select storage.

13. Click Import.

Import XVA		
Select target storage		0
Import Source Home Server	Select a storage repository where virtual disks for the new VM will be stored with the stored storage 1777.4 GB free of 1818 GB	
Storage		
Networking		
Finish		
CITRIX.		
	< Previous Import >	Cancel

This could take several minutes to hours depending on the location (local or internet) of the ADSP image being imported.

14. Select (highlight) a virtual network interface for **Networking** and then click **Next**.

🛞 Import XVA	
Review the import se	ettings 🕜
Import Source Home Server Storage	All the necessary information has been collected and the wizard is ready to import using the settings shown below. Please review these settings and click Previous if you need to go back and make any changes, otherwise click Finish to import and close this wizard. Import may take several minutes.
Networking	VM name: ADSP
Partiso	Target: Xensr-QAXCP61 Storage: Local storage Network: Network 1
	Automatically start new VMs To have your new VM(s) start up as soon as the import process is complete select this checkbox. Start VM(s) after import
CITRIX.	
	< Previous Finish Cancel

- The Vew Pool Server VM Storage Templates Tools Window Help 🕒 Back 🔹 😋 Forward 🕞 🔯 Add New Server 🗆 👹 New Pool 🛅 New Storage 🛅 New VM 🗏 🥹 Shut Down 🛞 Reboot 🕕 V No System Alerts • D rv-QAXCP61 Server View neral | Memory | Storage | Neb orking NDCs Console Perfo nce Users Logs 01 DATEP61 Overview lenker ALC:NO. ADSP Search Options • AD5P Disks (avg / max KBs) CPU Usage Used Memory Network (avg / max KBs) Address Name B Kensrv-QAXOP61 Default instal of 2 21% of 8 CF 9276 of 16375 MB 3902/7800 172.17.12.167 16 A05P Kensry_Nick1.5 10 405P-903-23-4gb-31 erver Tools not instal 21% of 1 CPU To A05P903-21_XenCloud-4G8-44 Kountu Precise Pangsiin 12.04 (64-b... ing Localisio < (.... paring to Import VM
- 15. Review the import settings, uncheck Start VM(s) after import and then click Finish.

Wait for import to finish (see area on bottom, right-side of window). This could take several minutes to hours depending on the location (local or internet) of the ADSP image being imported.

16. Right-click the ADSP VM and then select **Properties**.

🛞 'AD	SP-903-22-4gb' Properties		
	General ADSP-903-22-4gb	🗟 General	
8	Custom Fields <none></none>	XenCenter provides several methods for labeling and organizing your resources. By using features such as folders and tags you can quickly group and manage resources across your connected servers.	
	CPU 2 VCPU(s)	Name: A05P-903-23-4gb	
2	Boot Options Boot order: DVD-Drive, Hard	Description:	1
	HA is not available on standal	Exiden discus	
	None defined	Tag: Chone>	il
	Xensrv-QAXOP61	🕞 Edit taas	
	None Advanced Options		
	Optimize for general use		
			-
		OK Cancel	

- 17. Change the VM name.
- 18. Select CPUs as specified in Section 2 based on the network devices and clients to be supported by ADSP, and then click **OK**.

19. Return to the Xen Center and select the **Memory** tab.

* XenCenter				
Back + C Forward - 1 Add New	s Templates Toom Window Prep Server 💱 New Pool 📆 New Sorage 📜 New VH 🎯 Statt 🛞 Reboot 🕕 Superiol	Sentenn Alertus. 7		
Views: Server View	ADSP on 'Xensey-QAXEP61'	Logged in as: Local root account		
Search D	General Memory Storage Networking Console Performance Snapshots Logs			
Xencenter Xensry-Q410761 Kensry-Q410761	Memory			
ADSP-903-22-4gb	10 AD9			
ADSP-903-23-4gb-31 ADSP903-21_/tenCloud-4G8-44 AUSp103-21_/tenCloud-4G8-44	0 MB 256 MB 512 MB 766 MB 1224 MB Menory	Edt		
 Uburbs Precise Progen 12.0 Uccetto di utorage Tocetto di utorage Tocetto di utorage Tocetto di utorage Add9+003-20-483 Add9+003-20-495-21 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-22 Add9+003-20-495-24 Add9+003-24-49 Add9+003-49 Add9+03-49 Add9+03-49 Add9+03-49				

20. Click the Edit button.

🖲 Memory Settings 🔹 💽 🔀			
Set a fixed memory for this VM, or set a memory range and allow the VM's memory allocation to be adjusted automatically.			
⊙ Set a fixed memory of 2048 MB			
 Automatically allocate memory within this range: 			
0 MB 512 MB 1024 MB 1536 MB 2048 MB			
Minimum memory 2048 (*) MB Maximum memory 2048 (*) MB			
A memory range cannot be set for this VM.			

21. Set the memory as specified in Section 2 based on the network devices and clients to be supported by ADSP, and then click **OK**.

- 22. Select the **Storage** tab and then double-click on the virtual disk.
- 23. Select Size and Location.

8 'AD	SP-0' Properties		2 🔀
	General ADSP-0	Size and Location	
	ACOP-0 Custom Fields ditore> Size and location 100 GB, Local storage ADSP-903-22-4gb Device 0, (Read / Write)	You can increase the size of your disk is more space is available for your VM. Reducing the size of your disk is not supported Size: 100.000 C GB Location: "Local storage"	
			ncel

- 24. Set the disk size as specified in Section 2 based on the network devices and clients to be supported by ADSP, and then click **OK**.
- 25. Right-click on the ADSP VM and select Start.
- 26. Go to the **Console** and wait for login prompt.
- 27. Log into ADSP and configure just like you would any ADSP appliance.

3.3 Install ADSP on Xen Hypervisor

Follow these steps to install ADSP on the Xen Hypervisor:

- 1. Install Xen Hypervisor 4.x. Follow the Xen instructions located at http://wiki.xen.org/wiki/Xen_Overview .
- 2. SCP the disk image (AD-VM-adsp-9-0-3-23-dvd.gz) configuration file (AD-VM-adsp-9-0-3-23-dvd.xm) to a location on your Xen server. Let's assume that the location is: /var/lib/libvirt/images.
- 3. Unzip the disk image using the following command: gunzip AD-VM-adsp-9-0-3-23-dvd.gz.

4. Go to /var/lib/libvirt/images and edit the configuration file: vi AD-VM-adsp-9-0-3-23-dvd.xm.



- Change the line beginning with disk to point to your the location of your ADSP image: disk = [file:/var/lib/libvirt/images/adsp-disk,hda,w]
- 6. Change the values for **name**, **maxmem**, **memory**, and **maxvcpus** to match your criteria. Refer to Section 2 for the recommended resource configuration for ADSP.
- 7. Create an ADSP VM from the new configuration file:

xm new AD-VM-adsp-9-0-3-23-dvd.xm

8. Start the ADSP VM:

xm start adsp-903-01082013



NOTE The VM name is the same as the one you specified in the configuration file.

9. The ADSP Console can be started with the following command:

xm console <*ADSP* VM name>

10. Log into Virtual ADSP and configure just like you would any ADSP appliance.

4 Support and Sales

Motorola Solutions Support Center

If you have a problem with your installation, contact support for your region. Support and issue resolution is provided for products under warranty or that are covered by a Motorola Solutions Services agreement. Contact information and web self-service is available by visiting <u>http://supportcentral.motorola.com/</u>.

When contacting support, please provide the virtual platform on which ADSP is installed and version number.

Motorola Solutions responds to calls by email or telephone within the time limits set forth in support agreements. If you purchased your business product from a Motorola Solutions business partner, contact that business partner for support.

Customer Support Website

Motorola Solutions Support Website, located at <u>http://supportcentral.motorola.com/</u> provides information and online assistance including software downloads, product manuals, and support contact information.

Manuals

http://supportcentral.motorola.com/support/product/manuals.do





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