

# Virtual AirDefense Services Platform Installation Guide



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# 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:

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

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

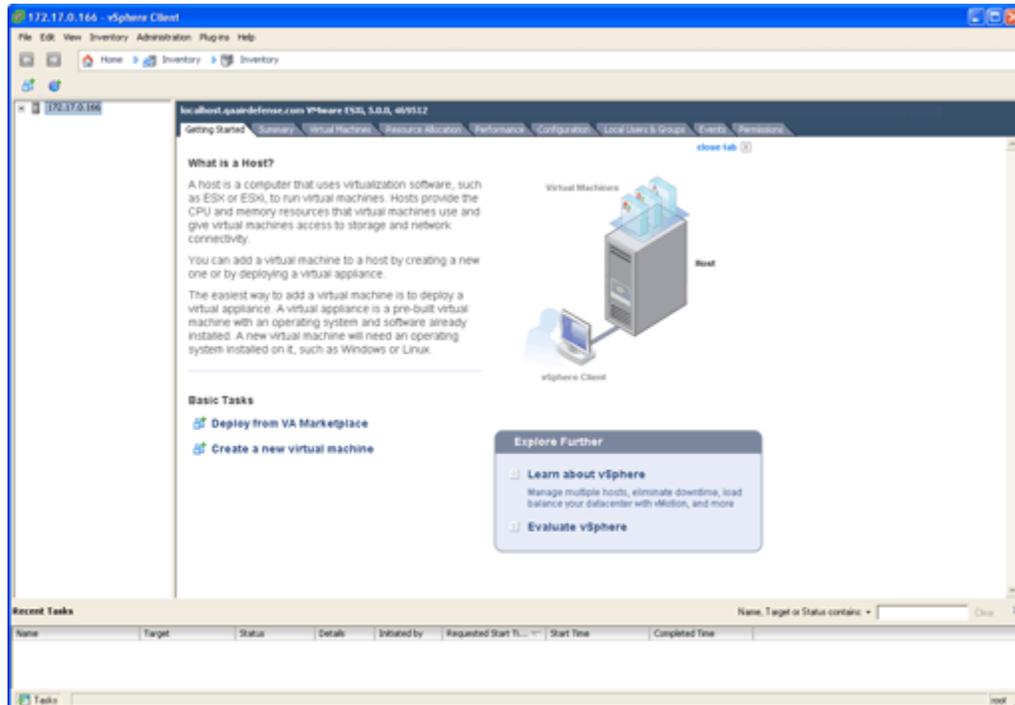
### 3.1 Install ADSP on VMWare

Follow these steps to install ADSP on VMWare:

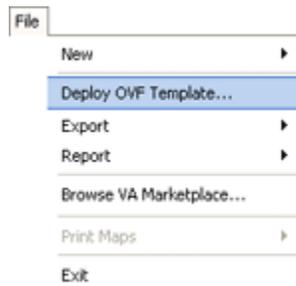
1. Install VMWare ESXi Version 5.0.x Host. Follow the VMWare instructions located at <https://my.vmware.com/web/vmware/evalcenter?p=vmware-vsphere51-ent>.
2. Install vSphere Client 5.0.x to install and manage ADSP virtual machine running on a VMWare ESXi host. Follow the vSphere Client instructions located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



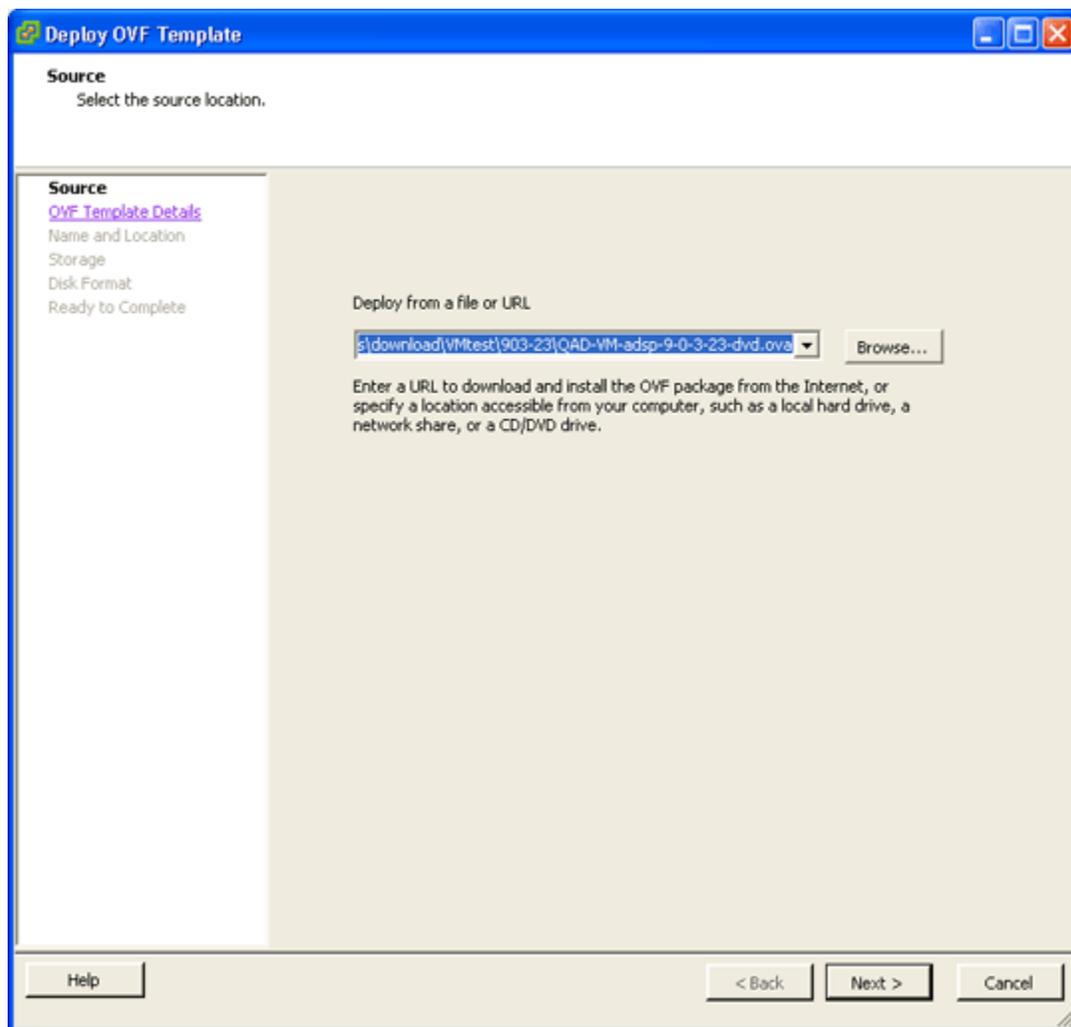
4. Log in with your user name and password; then, click **Login**.



5. Select **File > Deploy OVF Template**.

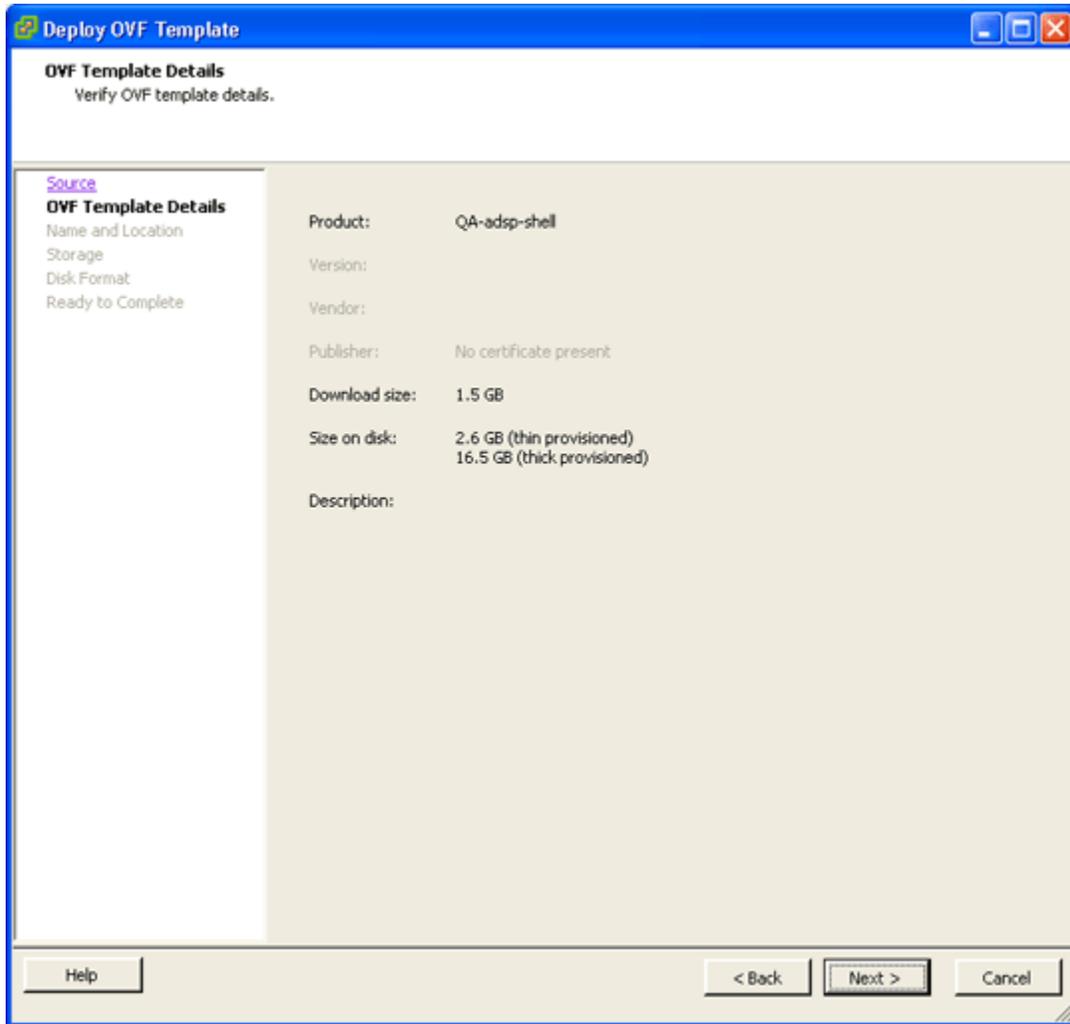


The **Deploy OVF Template** window is displayed.

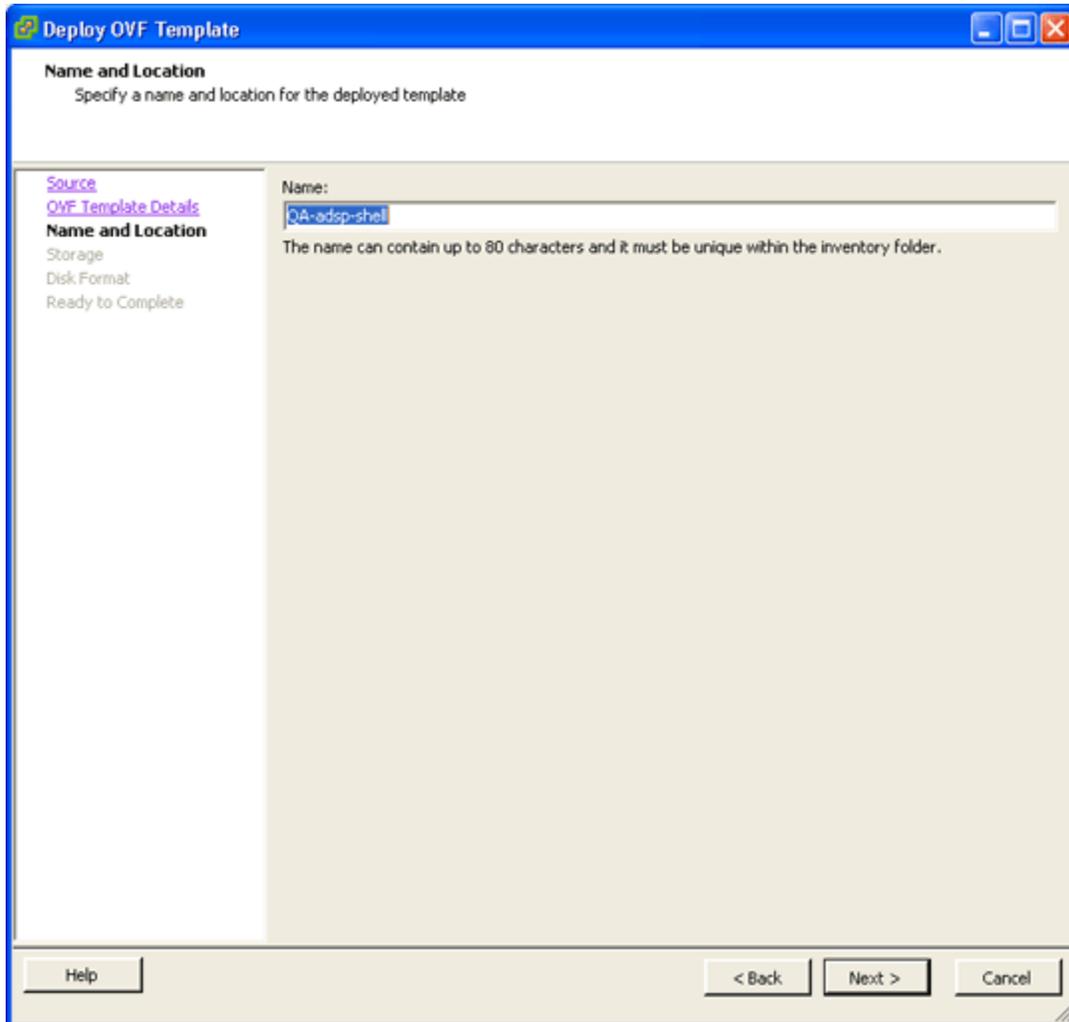


6. Click **Browse** and navigate to the location where you downloaded the file images.

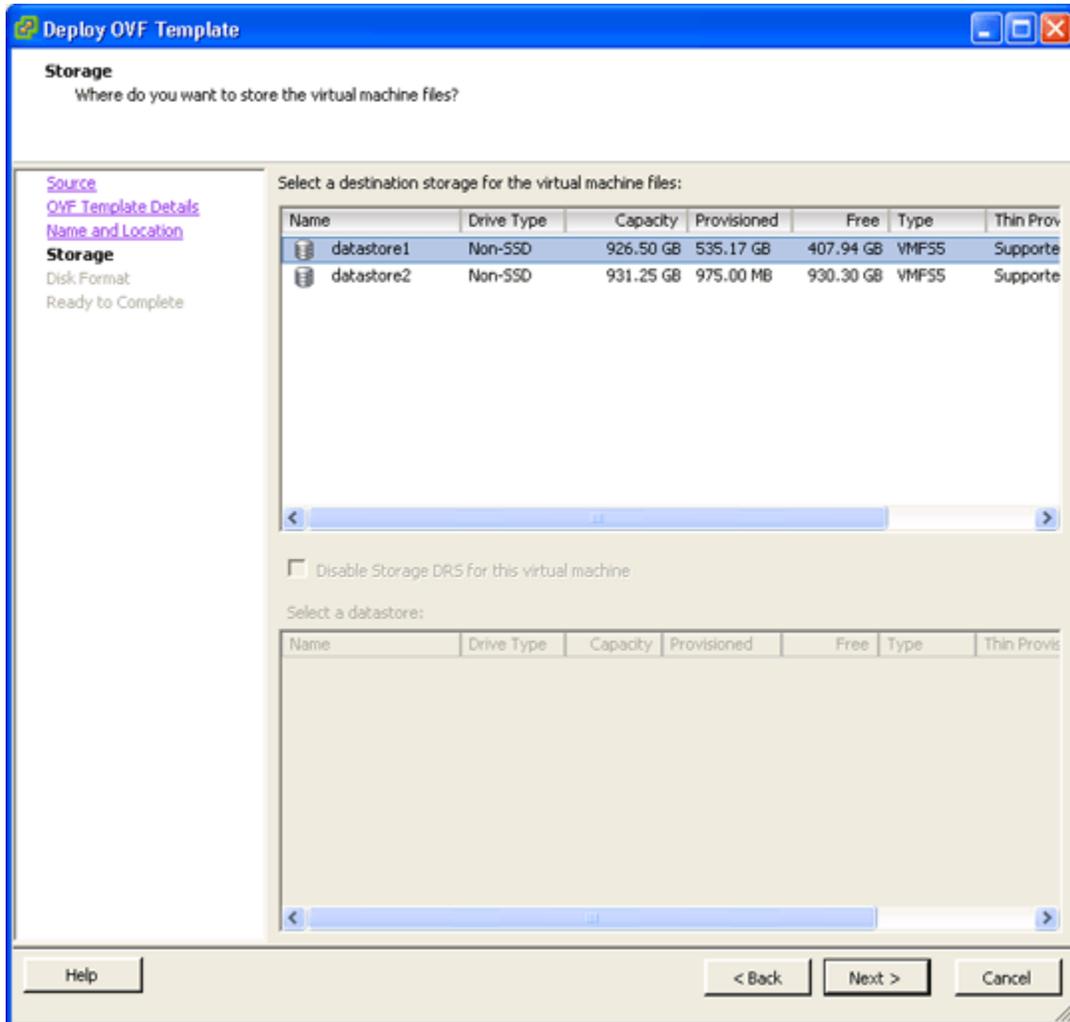
7. Select the VMWare image (AD-VM-adsp-9-0-3-23-dvd.ova) and click **Open**. Then, click **Next**.



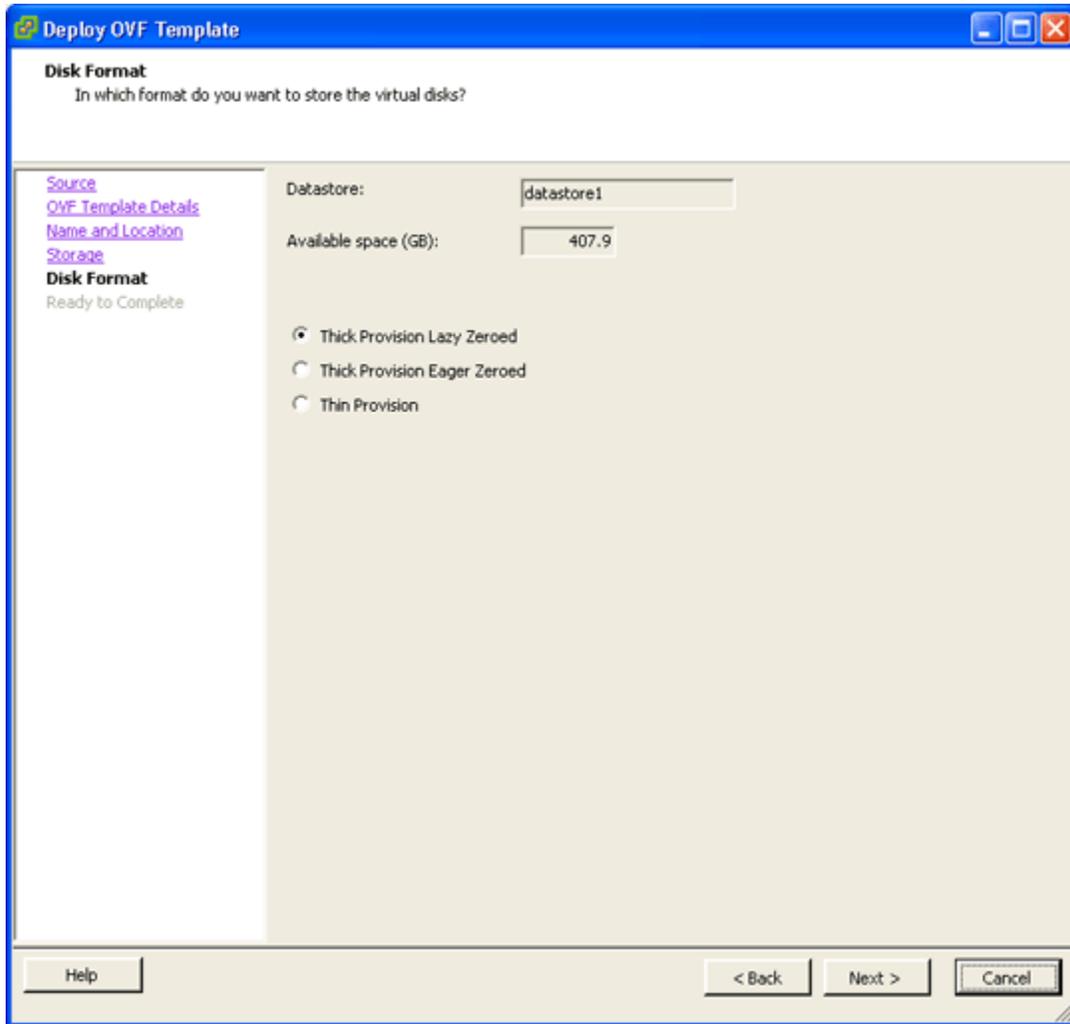
8. Verify the OVF template details and then click **Next**.



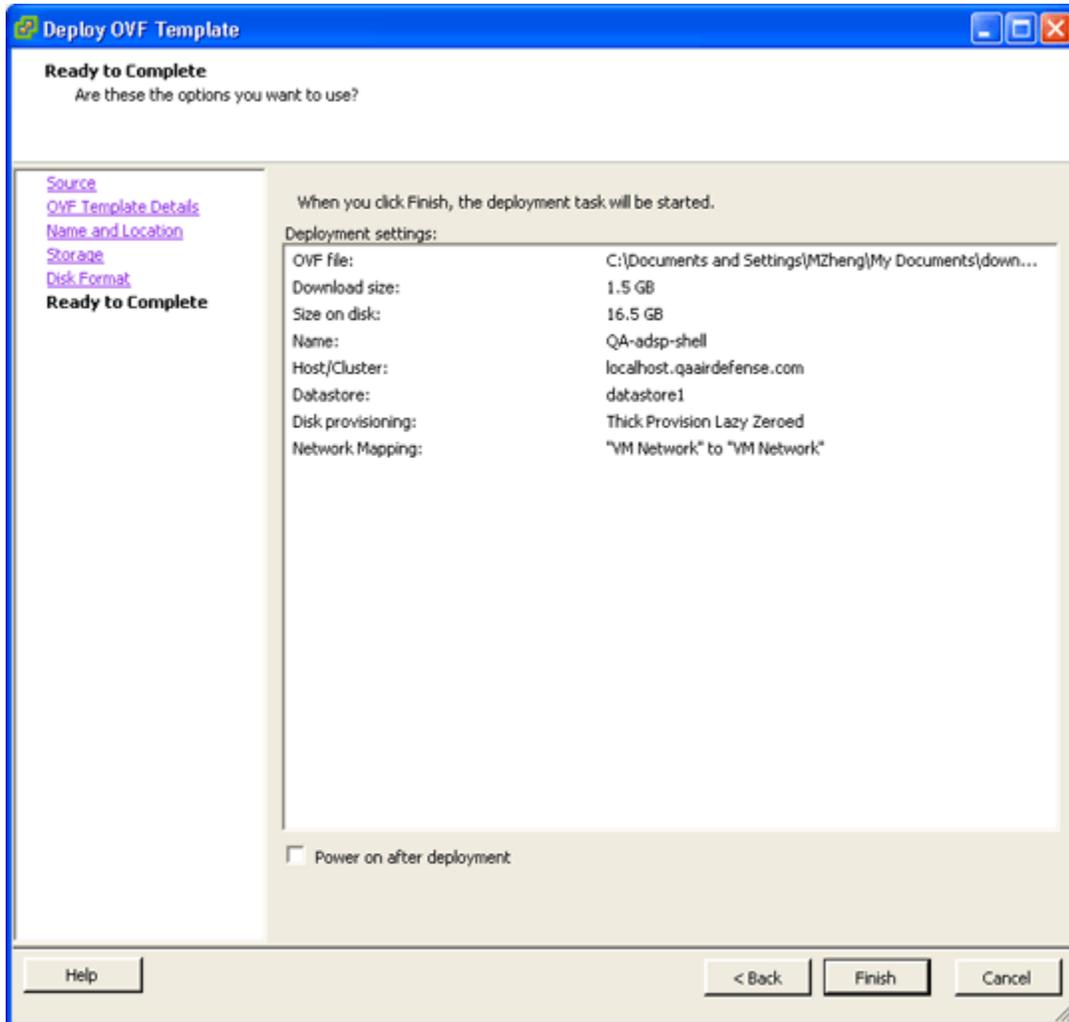
9. Enter a VM name and then click **Next**.



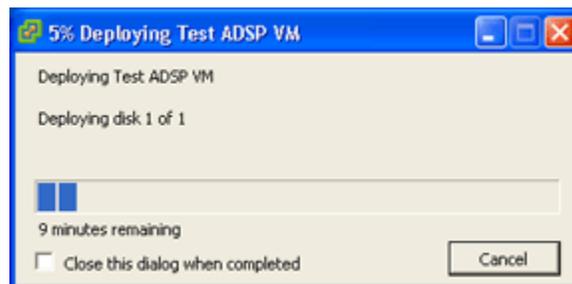
10. Select a datastore and then click **Next**.



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



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

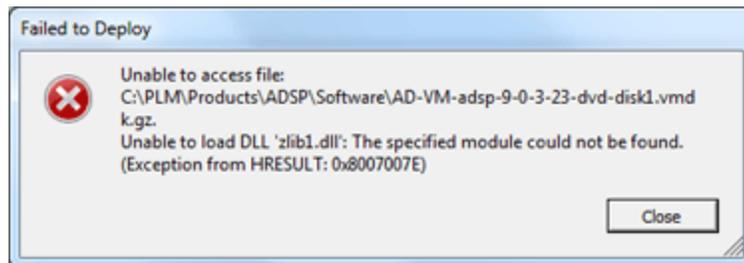


13. Wait until the **Deployment Completed Successfully** dialog box displays. This could take several minutes to hours depending on the location (local or internet) of the ADSP image being deployed.



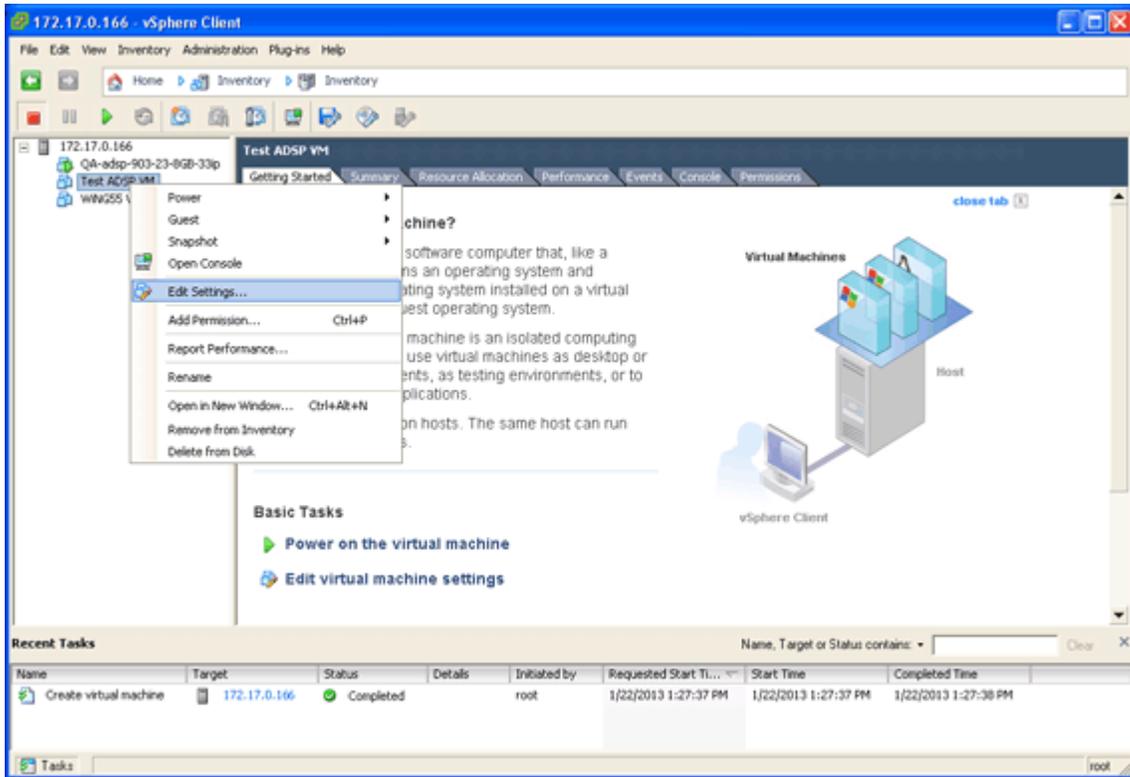
**NOTE** If you receive a deployment error (see screenshot below), download *zlib1.dll* from the Motorola Solutions Support Center <http://supportcentral.motorola.com/> and copy to:

- *C:\Windows\* for Windows XP and Windows 7, 32-bit
- *C:\Windows\SysWOW64* for Windows 7, 64-bit.

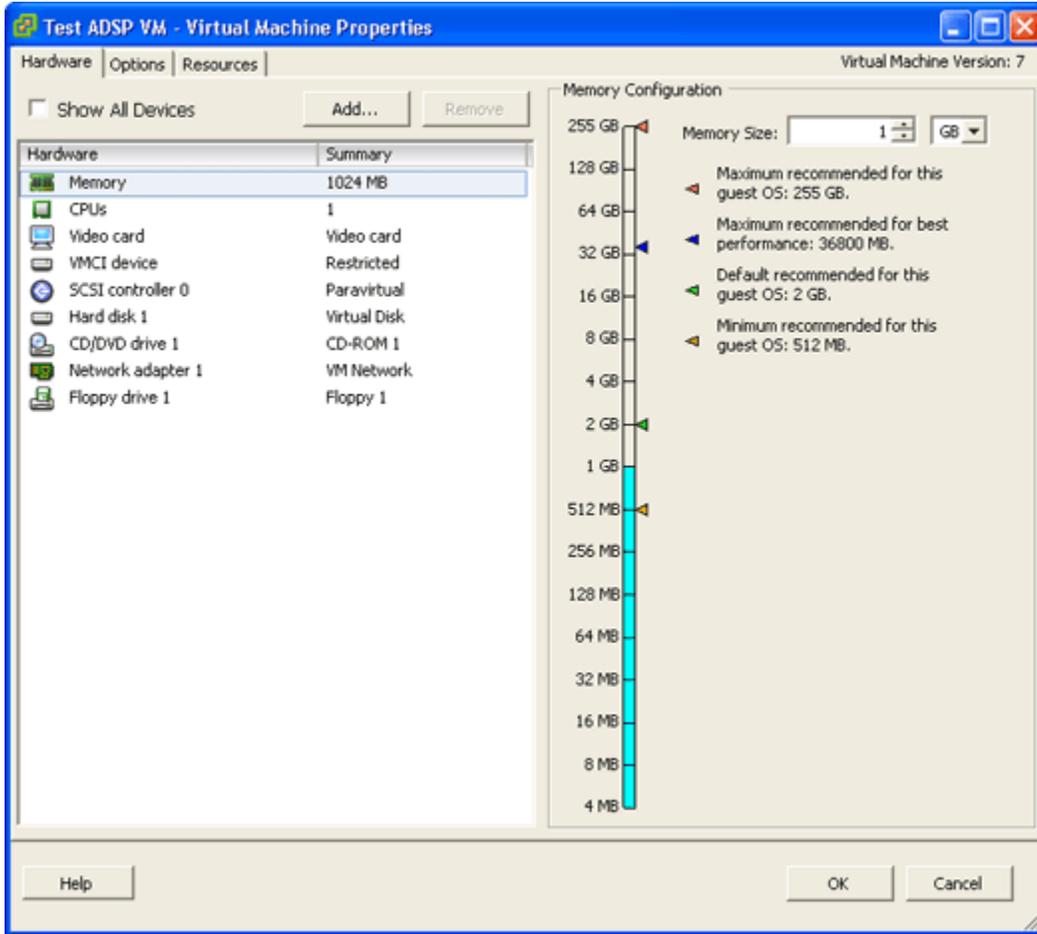


14. Click **Close**.

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

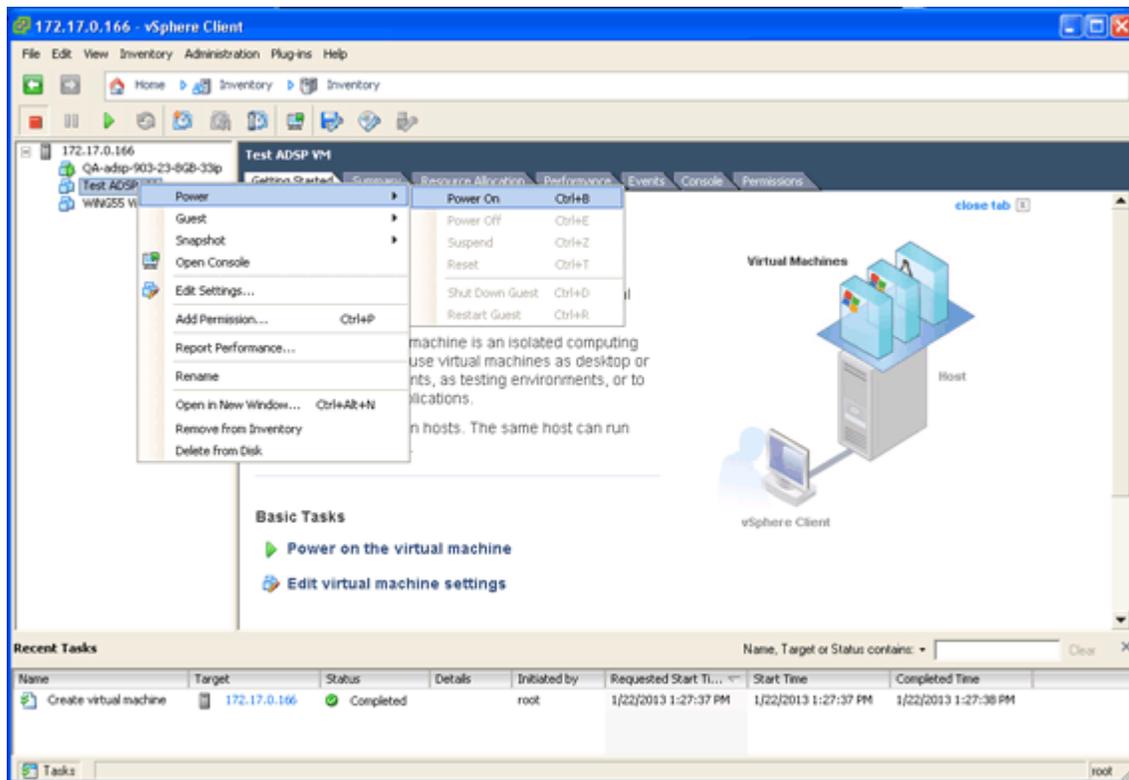


The following window is displayed.



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. Install Xen Cloud Platform 1.6 following Xen instructions. Follow the Xen instructions located at <http://www.xen.org/download/xcp/index.html>.
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 host name or IP address of the server you want to add and your user login credentials for that server.

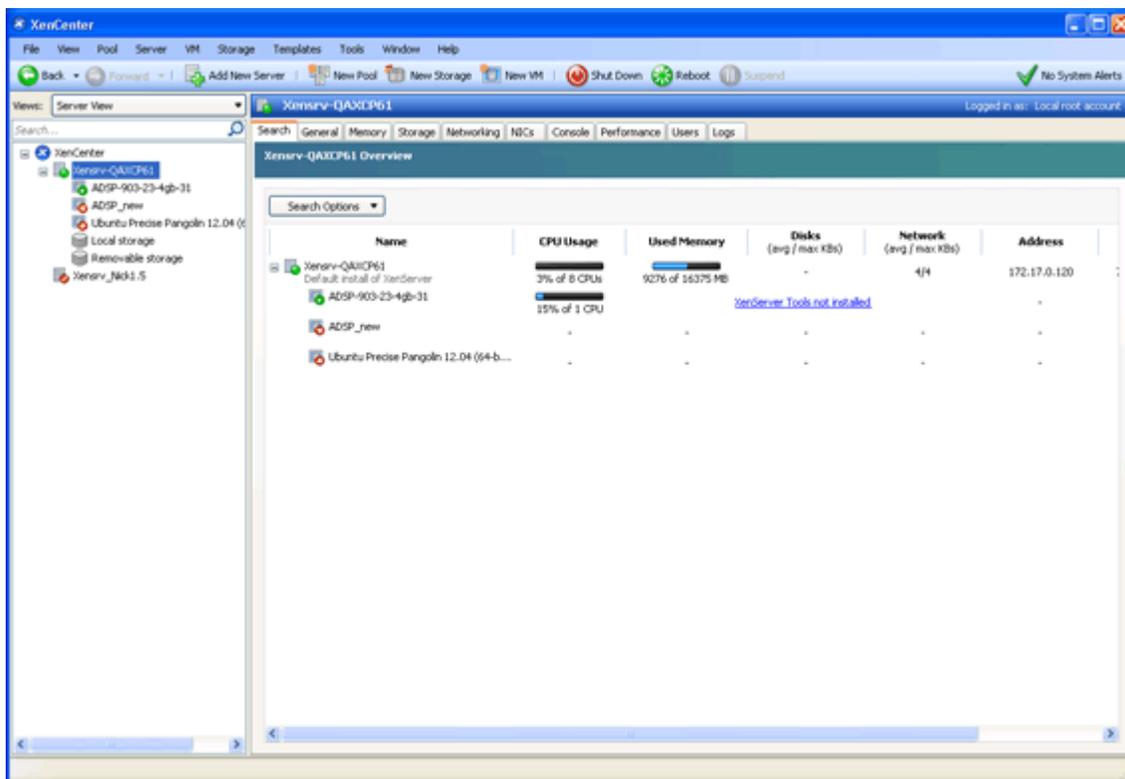
Server:

User login credentials

User name:

Password:

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



XenCenter

File View Pool Server VM Storage Templates Tools Window Help

Back Forward Add New Server New Pool New Storage New VM Shut Down Reboot Suspend No System Alerts

Views: Server View XenServer-QAACP61

Search General Memory Storage Networking NICs Console Performance Users Logs

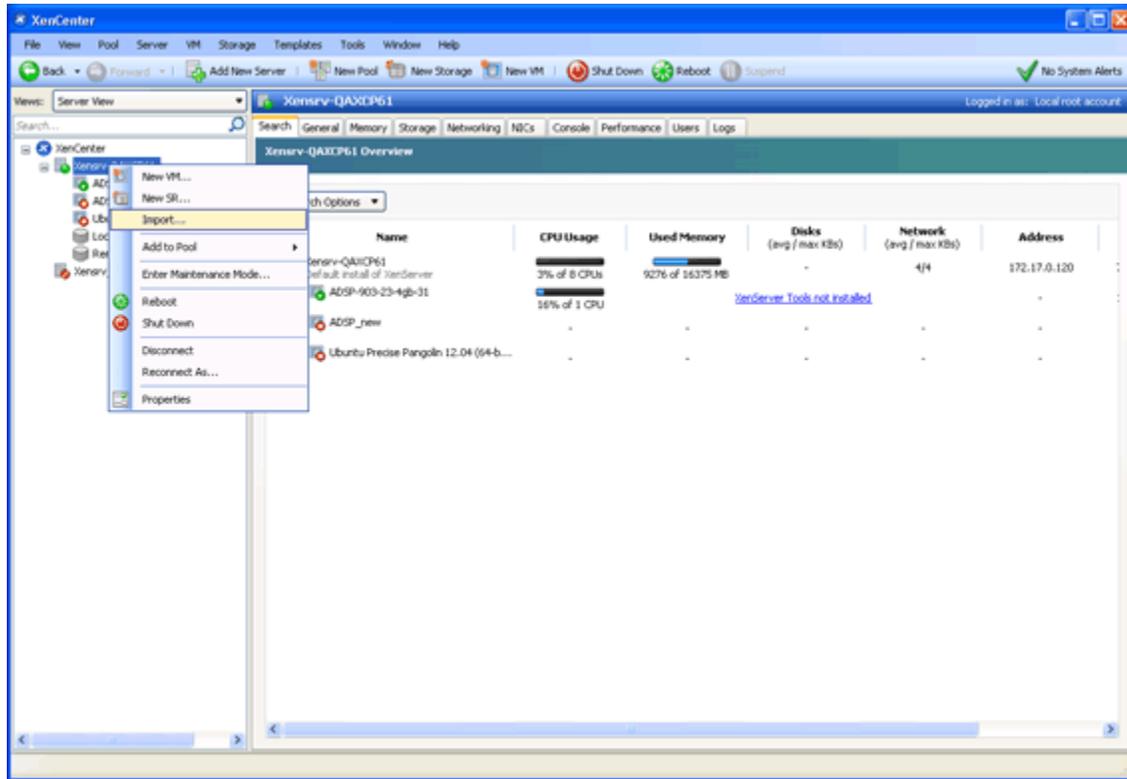
Logged in as: Local root account

XenServer-QAACP61 Overview

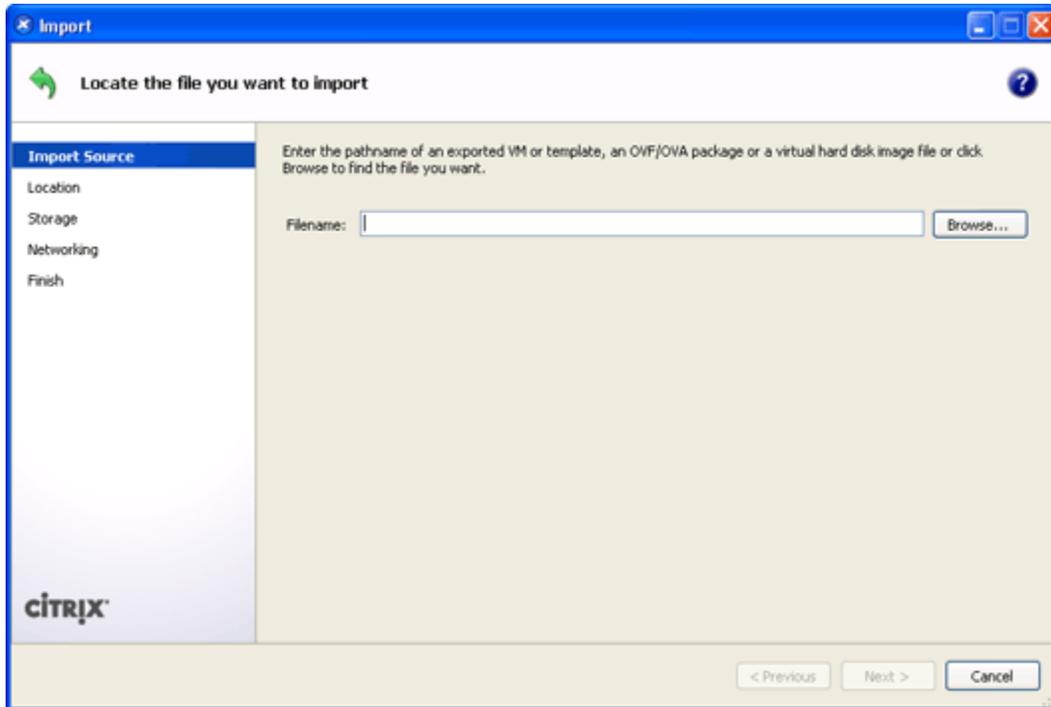
Search Options

Name	CPU Usage	Used Memory	Disks (avg / max KBs)	Network (avg / max KBs)	Address
XenServer-QAACP61 Default install of XenServer	3% of 8 CPUs	92% of 16375 MB	-	4/4	172.17.0.120
ADSP-903-23-4gb-31	15% of 1 CPU	-	<a href="#">XenServer Tools not installed</a>	-	-
ADSP_new	-	-	-	-	-
Ubuntu Precise Pangolin 12.04 (64-bit)	-	-	-	-	-

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

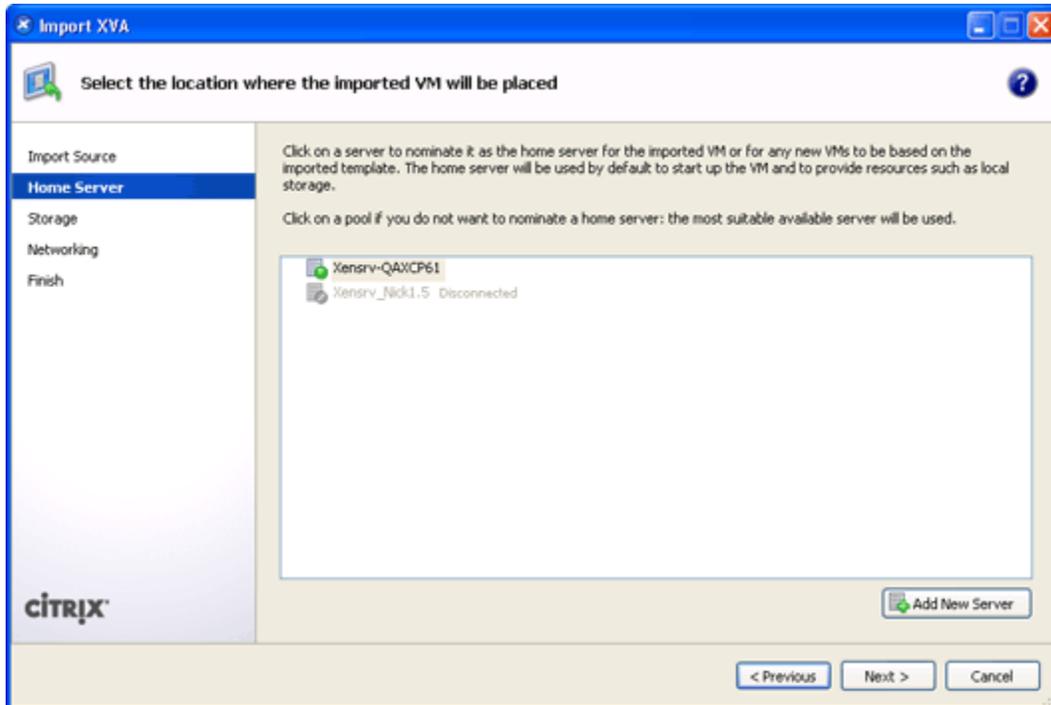


After selecting Import, the following window is displayed.



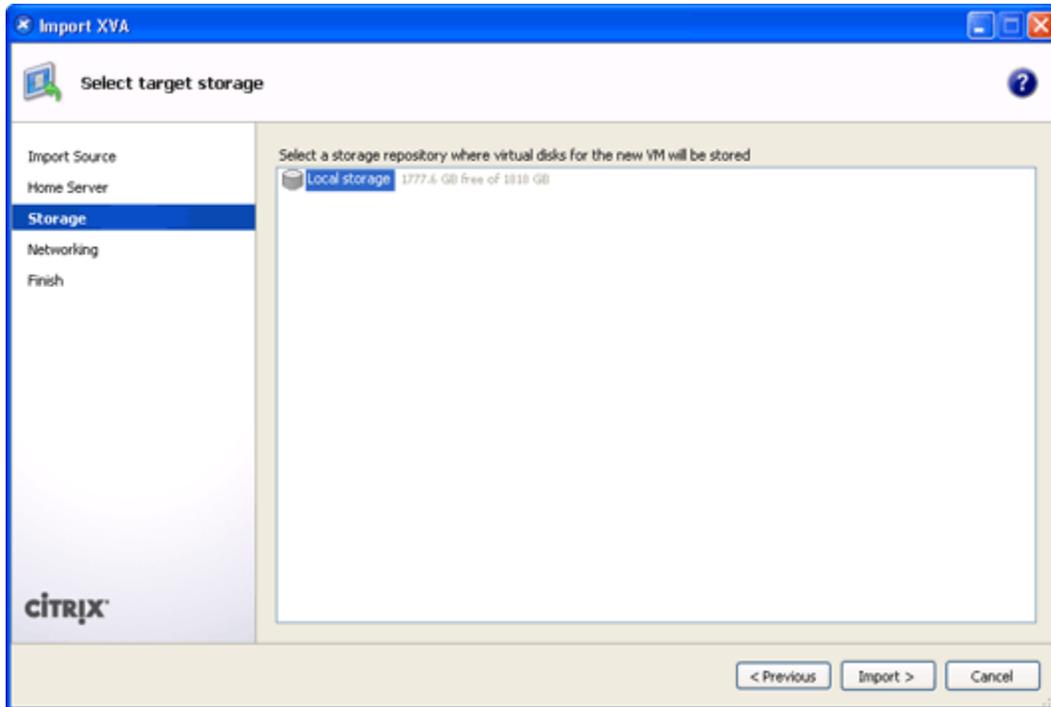
7. Click **Browse** and navigate to the location where you downloaded the ADSP images.
8. Select the Xen Cloud Platform image (AD-VM-adsp-9-0-3-23-dvd.xva) and click **Open**.

9. Click **Next**.



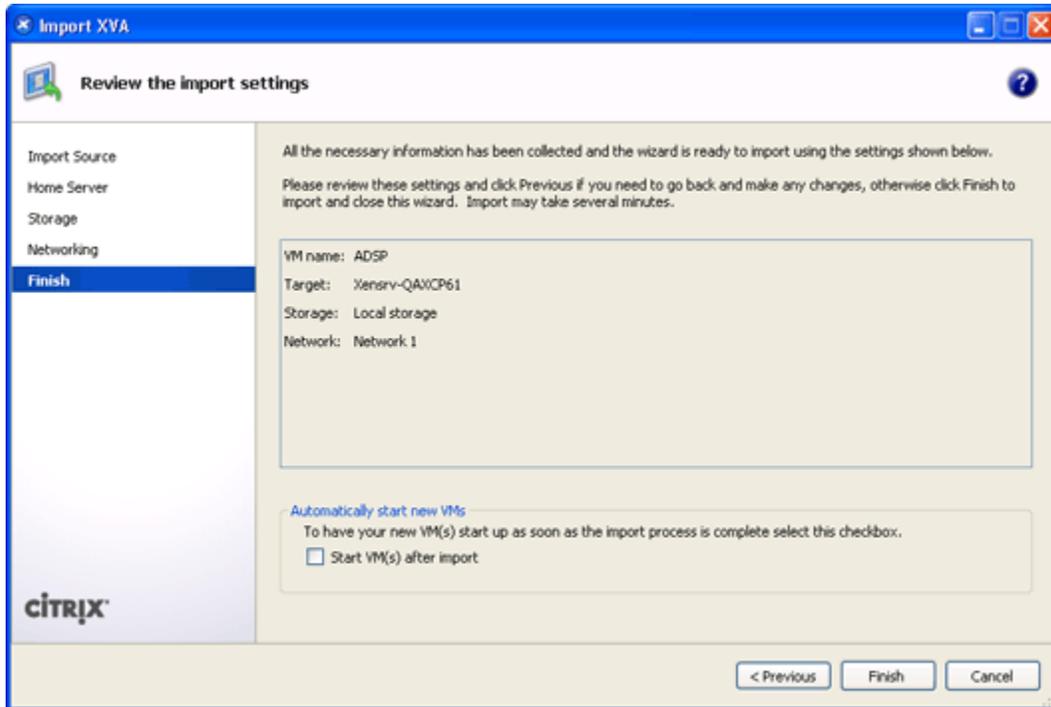
10. Select (highlight) a server for **Home Server**. The selected server will be used by default to start up the VM and to provide resources such as local storage.
11. Click **Next**.
12. Click **Next** for **Storage** and select storage.

13. Click **Import**.

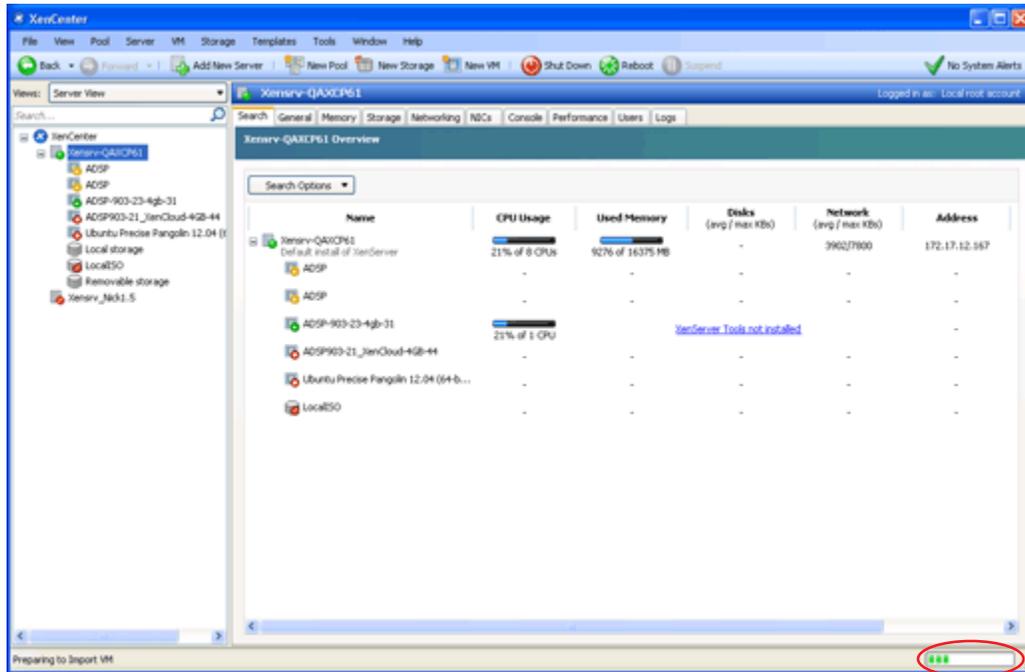


This could take several minutes to hours depending on the location (local or internet) of the ADSP image being imported.

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

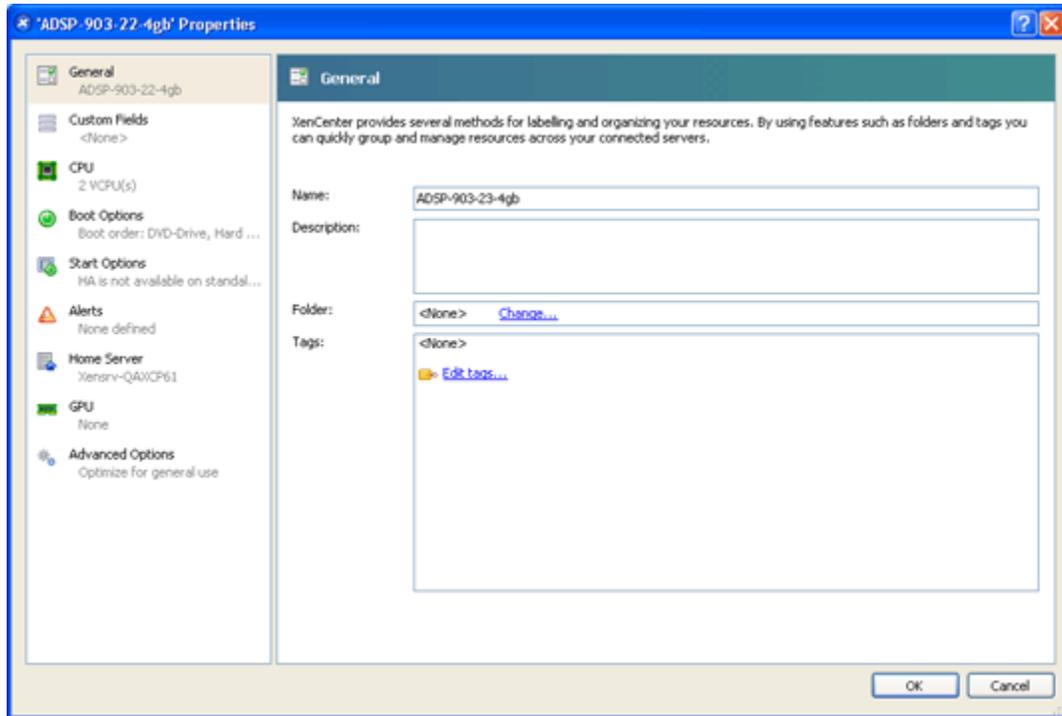


- Review the import settings, uncheck **Start VM(s) after import** and then click **Finish**.



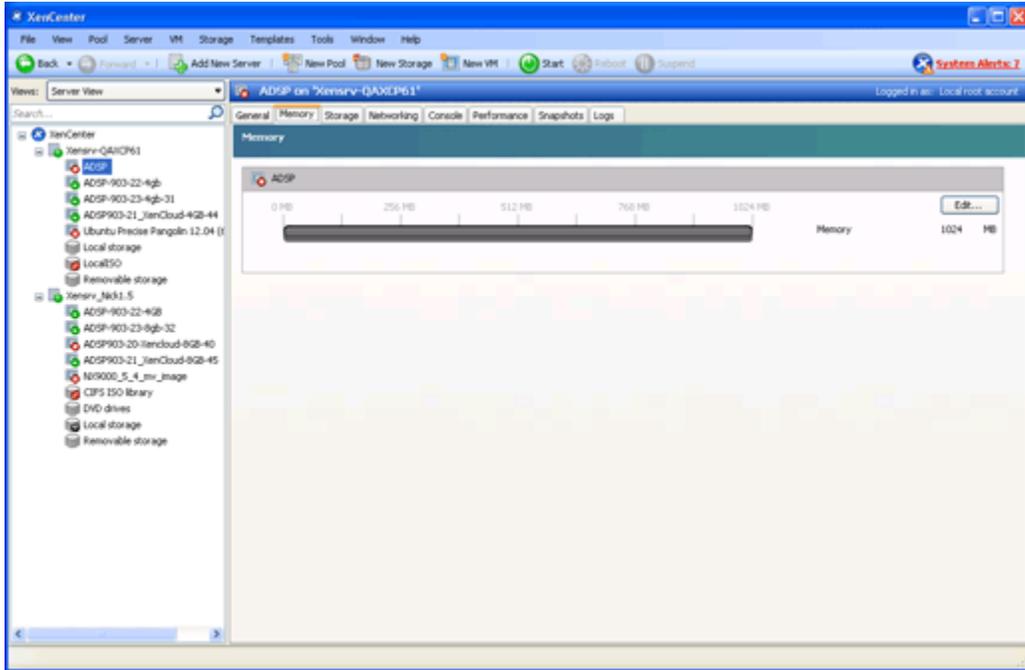
Wait for import to finish (see area on bottom, right-side of window). This could take several minutes to hours depending on the location (local or internet) of the ADSP image being imported.

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

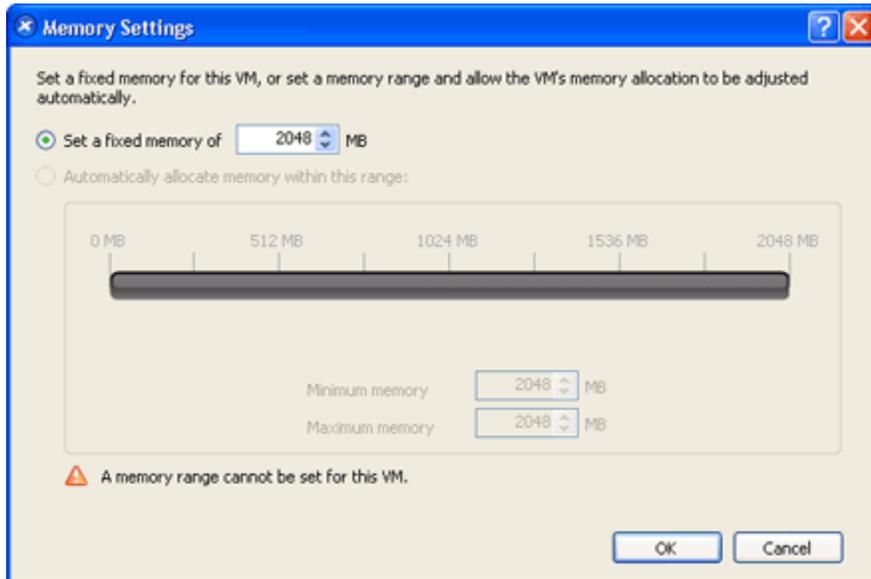


17. Change the VM name.
18. Select CPUs as specified in Section 2 based on the network devices and clients to be supported by ADSP, and then click **OK**.

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

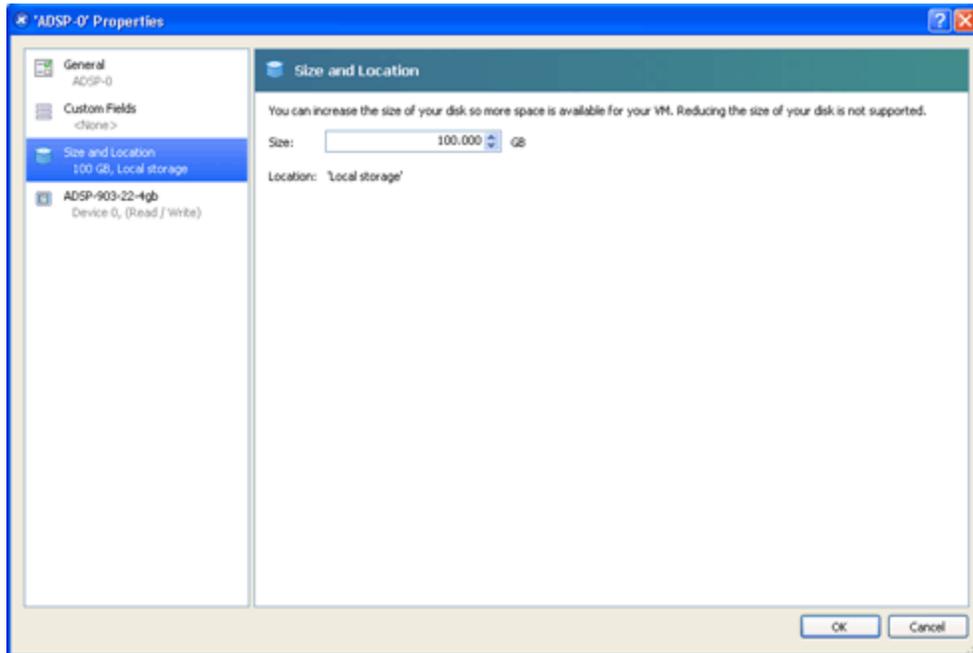


20. Click the **Edit** button.



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**.



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](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.xml) 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**.

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

```

name = "adsp-90323-8gb"
maxmem = 8192
memory = 8192
vcpus = 2
maxvcpus = 2
builder="hvm"
kernel="/usr/lib/xen-4.1/boot/hvmloader"
boot = "c"
pae = 1
acpi = 1
apic = 1
on_poweroff = "destroy"
on_reboot = "restart"
on_crash = "restart"
device_model = "/usr/lib/xen-4.1/bin/qemu-dm"
disk = [ "file:/var/lib/libvirt/images/adsp-disk,hda,w" ]
vif = [ "bridge=xenbr0,script=vif-bridge,type=netfront" ]
vfb = [ "type=vnc,vncunused=1,vnclisten=127.0.0.1,keymap=en-us" ]
xen_platform_pci=1
parallel = "none"
serial="pty"

```

- 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 ]**
- Change the values for **name**, **maxmem**, **memory**, and **maxvcpus** to match your criteria. Refer to Section 2 for the recommended resource configuration for ADSP.
- Create an ADSP VM from the new configuration file:  
**xm new AD-VM-adsp-9-0-3-23-dvd.xml**
- 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.
- The ADSP Console can be started with the following command:  
**xm console <ADSP VM name>**
- 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 <http://supportcentral.motorola.com/>.

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 <http://supportcentral.motorola.com/> 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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