



Oracle VM Templates for E-Business Suite: Deployment Guide

December 2009



Oracle VM Templates for Oracle E-Business Suite: Deployment Guide

Copyright © 2009, Oracle and/or its affiliates. All rights reserved

Trademark Notice

Oracle is a registered trademark of Oracle Corporation and/or its affiliates. Other names may be trademarks of their respective owners.

License Restrictions Warranty/Consequential Damages Disclaimer

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

Warranty Disclaimer

The information contained here in is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

Restricted Rights Notice

If this software or related documentation is delivered to the U.S. Government or any one licensing it on behalf of the U.S. Government, the following notice is applicable:

U.S. GOVERNMENT RIGHTS

Programs, software, databases, and related documentation and technical data delivered to U.S. Government customers are “commercial computer software” or “commercial technical data” pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, duplication, disclosure, modification, and adaptation shall be subject to the restrictions and license terms set forth in the applicable Government contract, and, to the extent applicable by the terms of the Government contract, the additional rights set forth in FAR52.227-19, Commercial Computer Software License (December2007). Oracle USA, Inc., 500 Oracle Parkway, Redwood City, CA 94065.

Hazardous Applications Notice

This software is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications which may create a risk of personal injury. If you use this software in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy and other measures to ensure the safe use of this software. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software in dangerous applications.

Third Party Content, Products, and Services Disclaimer

This software and documentation may provide access to or information on content, products and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third party content, products and services. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third party content, products or services.

Contents

About this Document	4
Understanding this Documentation.....	4
Audience.....	4
Typographical Conventions and Visual Cues.....	4
Products.....	5
Related Information.....	5
Comments and Suggestions.....	6
Chapter 1. Preparing to Deploy	7
Understanding OracleVM and the E-Business Suite Deployment.....	7
Planning the E-Business Suite Template Deployment.....	8
Reviewing the Oracle VM Setup.....	10
Obtaining E-Business Suite Templates from Oracle E-Delivery.....	11
Chapter 2. Deploying the E-Business Suite Templates	14
Importing OracleVM for E-Business Suite Templates	14
Creating OracleVM for E-Business Suite Virtual Machines.....	19
Starting the OracleVM for E-Business Suite Virtual Machines.....	24
Understanding the Virtual Machine Initialization.....	24
Starting the E-Business Suite Database Virtual Machine.....	24
Starting the E-Business Suite Apps Virtual Machine.....	26
Using the E-Business Suite Installation.....	27
Configuring E-Business Suite.....	28
Troubleshooting.....	28
Managing the Virtual Environment Lifecycle.....	29
Understanding Virtual Machine Management.....	29
Saving Virtual Machines as Templates.....	29
Using the E-Business Suite Configuration Script.....	30
Resetting E-Business Suite Virtual Machines.....	30

About this Document

This preface discusses:

- Understanding this Documentation
- Audience
- Typographical Conventions and Visual Cues
- Products
- Related Information
- Comments and Suggestions

Understanding this Documentation

This documentation is designed to guide you through the deployment of the Oracle ® VM templates for Oracle E-Business Suite Release 12.1.1. It is not a substitute for the documentation provided for Oracle ® VM Server or Oracle ® VM Manager.

Audience

This documentation is intended for individuals responsible for deploying templates for Oracle E-Business Suite with Oracle VM Manager and Oracle VM Server. You should have a basic understanding of virtual machines. You should have a basic understanding of the E-Business Suite system.

Typographical Conventions and Visual Cues

To help you locate and understand information easily, the following conventions are used in this documentation:

Convention	Description
Monospace	Indicates a program or other code, such as scripts that you run during the installation. Monospace is also used for messages that you may receive during the install process.
<i>Italics</i>	Indicates field values, emphasis and book-length publication titles. Italics is also used to refer to words as words or letters as letters, as in the following example: Enter the letter <i>O</i> . Italics are also used to indicate user-supplied information. For example, the term domain is used as a placeholder for the actual domain name in the user's environment. When two such placeholders are used together, they may be set apart with angle brackets.
Initial Caps	Fieldnames, commands, and processes are represented as they appear on the window, menu, or

	page.
lower case	File or directory names are represented in lower case, unless they appear otherwise on the interface.
Menu, Page	A comma (,) between menu and page references indicates that the page exists on the menu. For example, “Select Use, Process Definitions ” indicates that you can select the Process Definitions page from the Use menu.
Cross-references	Cross-references that begin with See refer you to additional documentation that will help you implement the task at hand. We highly recommend that you reference this documentation. Cross-references under the heading See Also refer you to additional documentation that has more information regarding the subject.
“” (quotation marks)	Indicate chapter titles in cross-references and words that are used differently from their intended meaning.
Note. Note text.	Text that begins with “Note.” indicates information that you should pay particular attention to as you work with your E-Business Suite system.
Important! Important note text.	A note that begins with Important! is crucial and includes information about what you need to do for the system to function properly.
Warning! Warning text.	A note that begins with Warning! contains critical configuration information or implementation considerations; for example, if there is a chance of losing or corrupting data. Pay close attention to warning messages.

Products

This documentation may refer to these products and product families:

- Oracle ® E-Business Suite
- Oracle® VM Manager
- Oracle® VM Server

See <http://www.oracle.com/us/products/applications/ebusiness/index.htm> for a list of Oracle E-Business Suite products.

Related Information

For information on Oracle E-Business Suite, see the documentation available at <http://www.oracle.com/technology/documentation/applications.html>

The following documentation is particularly relevant:

- Oracle Applications Installation Guide: Using Rapid Install. This document provides instructions for installing Applications E-Business Suite R12.
- Oracle Applications User's Guide. This document provides a high-level introduction to E-Business Suite technology and usage.

- Oracle Applications Concepts This document provides essential information about the setup, design, and implementation of your Oracle E-Business Suite.

For information on Oracle VM Manager and Oracle VM Server, see the documentation available at <http://www.oracle.com/technology/documentation/vm.html>

Comments and Suggestions

Your comments are important to us. We encourage you to tell us what you like, or what you would like changed about our documentation, Please send your suggestions to

appsdoc_us@Oracle.com

While we cannot guarantee to answer every email message, we will pay careful attention to your comments and suggestions. We are always improving our product communications for you.

CHAPTER 1

Preparing to Deploy

This chapter discusses:

- Understanding Oracle VM and the E-Business Suite Deployment
- Planning the E-Business Suite Template Deployment
- Reviewing the Oracle VM Setup
- Obtaining E-Business Suite Templates from Oracle E-Delivery

Understanding Oracle VM and the E-Business Suite Deployment

This section explains how to deploy the Oracle VM templates for Oracle E-Business Suite 12.1.

Oracle VM provides a fully equipped virtualization platform. Oracle VM templates enable you to deploy operating systems and application software such as Oracle E-Business Suite within an Oracle supported virtualization environment.

OVM templates serve as a starting point from which individual ready-to-run virtual machines can be created. Templates are seeded with a particular full software stack from OS to technology to applications, and are configured for a designated function. An OVM template consists of a configuration file and one or more disk images. The disk images contain the operating system and software application upon which the template has been built.

Oracle E-Business Suite Release 12.1.1 deployment requires two Oracle VM templates:

- Oracle E-Business Suite Release 12.1.1 Vision Demo Database Tier template
- Oracle E-Business Suite Release 12.1.1 Application Tier template

Both of the above templates contain two disk images: an OEL 5.3 system image (6GB) and either an Oracle E-Business Suite Release 12.1 database tier node installation with Vision demo database (250 GB) or an Oracle E-Business Suite Release 12.1 application tier node installation (50 GB) image.

Before deploying the E-Business Suite templates, you must install Oracle VM Server and Oracle VM Manager. The hardware and software requirements for this deployment are the same as those for Oracle VM Server and Oracle VM Manager. For more details see section titled Reviewing the OracleVM Setup.

The deployment requires users with the following roles:

- Oracle VM Administrator

The Oracle VM Administrator is responsible for management of the Oracle VM server pool and user accounts, including the user accounts for the E-Business Suite domain and installation administrators. The Oracle VM Administrator is authorized to create virtual machines and assign hardware resources to a virtual machine. The Oracle VM administrator should have root access on the Oracle VM Server machine.

- E-Business Suite Domain and Installation Administrators

The users managing the E-Business Suite environment should be familiar with E-Business Suite software administration. The user can be local to the virtual machine or a domain user. This user only has access to the resources assigned by the Oracle VM Administrator.

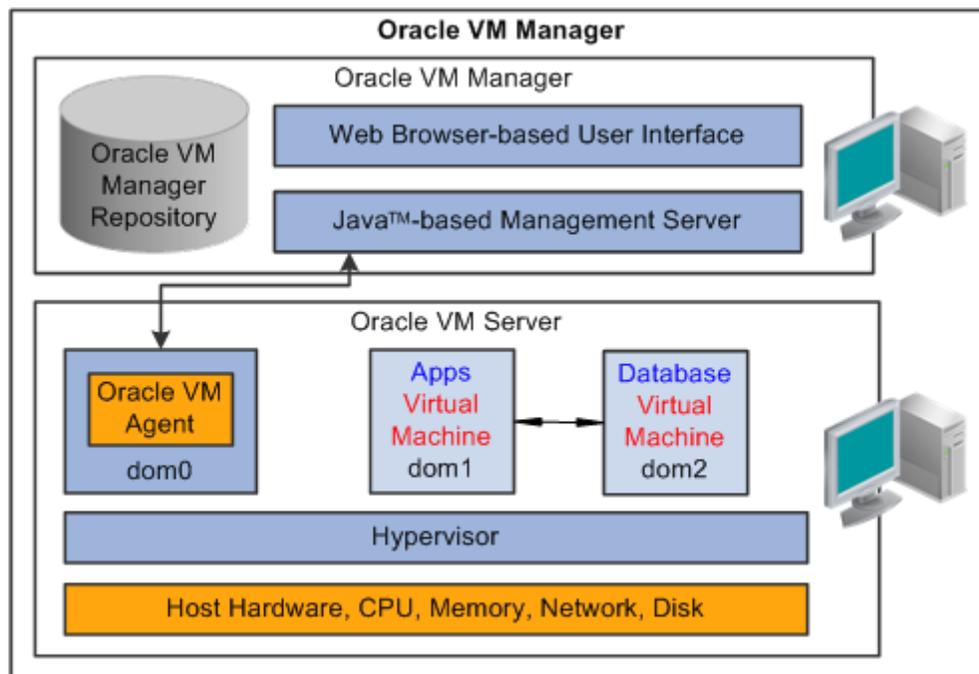
While these are listed as separate roles, both sets of skills are needed to complete the deployment process in very close coordination.

Task 1-1: Planning the E-Business Suite Template Deployment

The following diagram shows a sample Oracle VM architecture with the Oracle VM templates for E-Business Suite deployed. In this case, both Oracle E-Business Suite templates are deployed in a single server pool on a single Oracle VM server, but other server pool configurations are possible. A server pool is an autonomous region that contains one or more Oracle VM Servers.

See *Oracle VM Manager User's Guide*, "Overview of Oracle VM Manager"

The following diagram shows the Oracle VM architecture with deployed E-Business templates. The components represented in the following diagram are defined below the diagram:



Sample Oracle VM architecture with deployed E-Business Suite templates

- Oracle VM Manager

The Oracle VM Manager is a web application that provides the user interface to manage Oracle VM Server, virtual machines, and resources.

- Oracle VM Server

The Oracle VM Server is a self-contained virtualization environment designed to provide a lightweight, secure, server-based platform to run virtual machines. Oracle VM Server is based on an updated version of the underlying Xen hypervisor technology, and includes Oracle VM Agent.

- Oracle VM Agent

The Oracle VM Agent is installed with Oracle VM Server. It communicates with Oracle VM Manager to manage virtual machines.

- dom0

This is an abbreviation for domain zero, which is the management domain with privileged access.

- domU

Each domU (dom1, dom2) is an unprivileged Oracle VM domain with no direct access to the hardware or device drivers. Each domU is started by Oracle VM Server (which itself is in dom0). In this example, each domain holds a single Oracle E-Business Suite virtual machine.

In planning the deployment, consider the following:

- Refer to the readme that comes with the E-Business Suite OVM templates for the required disk, memory, CPU.

For example, the minimum hardware requirements for hosting E-Business Suite 12.1.1 Vision templates on the Oracle VM Server are:

Oracle E-Business Suite DB Tier Template

- 250 GB of disk space
- 2 GB of RAM
- 1 virtual CPU

Oracle E-Business Suite Apps Tier Template

- 50 GB of disk space
- 1 GB of RAM
- 1 virtual CPU

However, this E-Business Suite installation is configured for demo purposes only. Oracle VM templates can be started with memory sizing as low as above but as more demand is put on the system by additional users / jobs being scheduled, integrations added etc. the greater the likelihood that the system will run out of resources. The VMs created from these templates can be tuned for better performance by following the guidelines that are provided in the E-Business Suite performance-related Knowledge Documents at support.oracle.com (for example My Oracle Support Knowledge Document 362851.1 titled *Guidelines to setup the JVM in Apps E-Business Suite 11i and R12*).

You will also need to plan for disk space for downloading and staging the templates. For 12.1.1 Vision templates, it totals ~340GB: 44 GB for the downloaded zipped files, and 300 GB for the unzipped templates. You might wish to stage the unzipped templates straight into the OVM server's stage area called the Seed Pool (the /OVS/seed_pool directory on an Oracle VM Server). Otherwise you can stage the templates on a file/web server, and have OVM later import them from there. For more information see the template readme.

- In addition to the Oracle VM components discussed above, a console utility is used to access and control the virtual machines. You can consult the Oracle VM documentation for information on downloading a plug-in, or use a VNC client of your own choosing. See *Oracle VM Manager User's Guide*, "Connecting to a Virtual Machine's Console."
- After setting up the virtual machines you will need to use a secure shell (SSH) client to log in to the virtual machines.
- Decide how to distribute the Oracle VM for E-Business Suite templates. The example in the previous section shows two templates in a single server and pool, but your environment may favor the database template on one server (or even server pool), and application template in another.
- It is possible to combine a deployed E-Business Suite template with a conventional installation. For example, if you deploy only an application template, you can connect it to a traditional, non-virtual database instance.
- The environment installed by the deployment of the E-Business Suite OVM templates can be used as a starting point that can subsequently be enhanced and tuned to fit the requirements of the target system. See *Deploying Oracle Applications E-Business Suite Templates*, "Managing the Virtual Environment Lifecycle."
- To avoid potential conflicts, the Oracle VM Administrator should keep careful record of the host names and IP addresses associated with the virtual machines.

Task 1-2: Reviewing the Oracle VM Setup

Before you begin the Oracle VM for E-Business Suite template deployment, the Oracle VM Administrator should have completed the following tasks:

- Downloaded the Oracle VM Server and Oracle VM Manager software from Oracle E-Delivery.
- Installed Oracle VM Server and Oracle VM Manager software.

See *Oracle VM Server Installation Guide*.

See *Oracle VM Manager Installation Guide*.

- Set up a server pool.

See *Oracle VM Manager User's Guide*, section 3.2 .

- Set up a server.

See *Oracle VM Manager User's Guide*, section 4.1.

- Recorded, and if necessary, communicated information such as hostnames, IP addresses, and other access information, to the user who will deploy the templates.

You should give due consideration to the best server pool configuration for your system. For example, you can create different virtual machines for the database and application templates, on different physical servers, and put them into the same server pool. The Oracle VM documentation includes guidance on designing your system.

See *Oracle VM Manager User's Guide*, "Managing Server Pools."

Task 1-3: Obtaining E-Business Suite Templates from Oracle E-Delivery

To obtain the Oracle VM templates for Oracle E-Business Suite:

1. Log in to the Oracle E-Delivery web site for Enterprise Linux and Oracle VM:
http://edelivery.oracle.com/EPD/GetUserInfo/get_form?caller=LinuxWelcome
2. On the Media Pack Search page, select Oracle VM templates from the Select a Product Pack dropdownlist.
3. Select the operating system you are running on from the Platform drop-down list, and click Go. The current list of E-Business Suite OVM templates is:
 - 2 node release 12.1.1 with Vision demo database on OEL 5.3:
 - 64-bit:
 - OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM
(Oracle E-Business Suite Release 12.1.1 Vision Database Tier Install X86)
 - OVM_EL5U3_X86_64_EBIZ12.1.1_APPS_VIS_PVM
(Oracle E-Business Suite Release 12.1.1 Application Tier Install X86)
 - 32-bit:
 - OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM
(Oracle E-Business Suite Release 12.1.1 Vision Database Tier Install X86)
 - OVM_EL5U3_X86_EBIZ12.1.1_APPS_VIS_PVM
(Oracle E-Business Suite Release 12.1.1 Application Tier Install X86)
4. Select the radio button for OracleVM templates for Oracle E-Business Suite media pack, and click Continue
5. Download all of the listed downloadable zip files and save them into a temporary directory. Although there might be only a few OVM templates, they are broken into a number of separate files so as to ease download.

For example, the Release 12.1.1 Vision Media Pack, there are two OVM templates:

- Oracle E-Business Suite R12.1.1 Vision Database with Oracle Enterprise Linux 5.3 (64-bit). This template is also referred to as the "database template".
- Oracle E-Business Suite R12.1.1 Application with Oracle Enterprise Linux 5.3 (64-bit). This

template is also referred to as the “application template”.

However, there are 11 downloadable zip files (the below example is for the EBS 12.1.1 Vision 32bit :

Database Tier Template Files:

```
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.0
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.1
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.2
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.3
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.4
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.5
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.6
OVM_EL5U3_X86_EBIZ12.1.1_DB_VIS_PVM.tgz.7
```

Application Tier Template Files:

```
OVM_EL5U3_X86_EBIZ12.1.1_APPS_VIS_PVM.tgz.0
OVM_EL5U3_X86_EBIZ12.1.1_APPS_VIS_PVM.tgz.1
OVM_EL5U3_X86_EBIZ12.1.1_APPS_VIS_PVM.tgz.2
```

6. There are two options to stage an Oracle VM template:

- Stage on the Oracle VM Server hard disk
- Stage on a remote site using HTTP or FTP

This document assumes that you have opted for the first one, and for it you need to create a directory for the templates on the Oracle VM Server, and move the templates / zip files into the directory:

`/OVS/seed_pool/TEMPLATE_NAME.`

Note. Follow the instructions given in the Readme file concerning the directory name. The Readme file is posted with the templates, and as such is more current than this documentation.

7. See the template Readme for information on how to extract the zip files and prepare for use.

For example for E-Business Suite R12.1.1 Vision 64-bit templates, you would first unzip the 11 downloaded zip files, which would create the .tgz files. You would then concatenate and extract the .tgz files. This step creates a directory with the name of the template, containing all the files for the template. For example:

```
# cd /OVS/seed_pool
# cat OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.0 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.1 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.2 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.3 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.4 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.5 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.6 \
OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM.tgz.7 | tar -xz
```

This will create the following directory structure:

```
/OVS/seed_pool/OVM_EL5U3_X86_64_EBIZ12.1.1_DB_VIS_PVM
|
|- System.img (OS image file)
|- ebs1211db.img (Oracle E-Biz 12.1.1 DB Tier image file)
|- vm.cfg (VM configuration file)
```

```
| - README.txt
```

Similarly, you would perform:

```
# cat OVM_EL5U3_X86_64_EBIZ12.1.1_APPS_VIS_PVM.tgz.0 \  
OVM_EL5U3_X86_64_EBIZ12.1.1_APPS_VIS_PVM.tgz.1 \  
OVM_EL5U3_X86_64_EBIZ12.1.1_APPS_VIS_PVM.tgz.2 | tar -xz
```

This will create the following directory structure:

```
/OVS/seed_pool/OVM_EL5U3_X86_64_EBIZ12.1.1_APPS_VIS_PVM  
|  
| - System.img (OS image file)  
| - ebs1211apps.img (Oracle E-Biz 12.1.1 Application Tier image file)  
| - vm.cfg (VM configuration file)  
| - README.txt
```

CHAPTER 2

Deploying the E-Business Suite Templates

This chapter discusses:

- Importing Oracle E-Business Suite Templates
- Creating Oracle E-Business Suite Virtual Machines
- Starting the Oracle E-Business Suite Virtual Machines
- Using the Oracle E-Business Suite OVM-Based Installation
- Configuring Oracle E-Business Suite
- Troubleshooting
- Managing the Virtual Environment Lifecycle

Task 2-1: Importing E-Business Suite Templates

There are several methods of importing virtual machine templates. This section assumes that you downloaded the Oracle VM for Oracle E-Business Suite templates from Oracle E-Delivery, extracted the two templates, and saved them in `/OVS/seed_pool/TEMPLATE_NAME` on the computer where you set up your Oracle VM server pool.

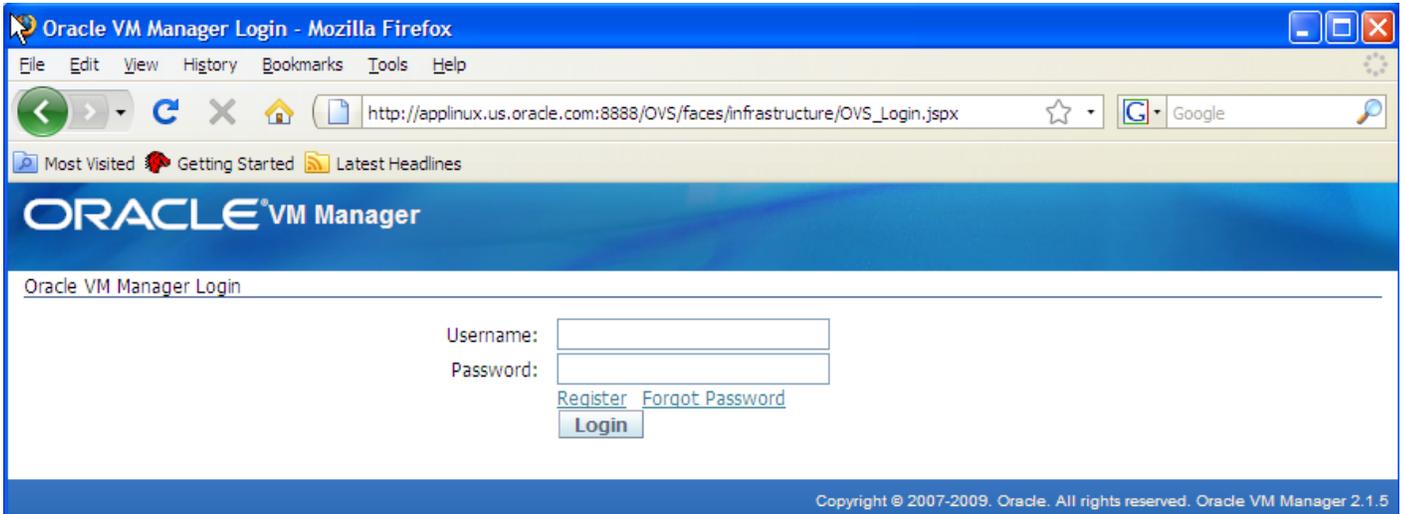
See previous section *Preparing to Deploy: Obtaining E-Business Suite Templates from Oracle E-Delivery*.

For other methods of importing templates, see the *Oracle VM Manager User's Guide*.

To import the virtual machine template that you downloaded previously, and register it in Oracle VM Manager:

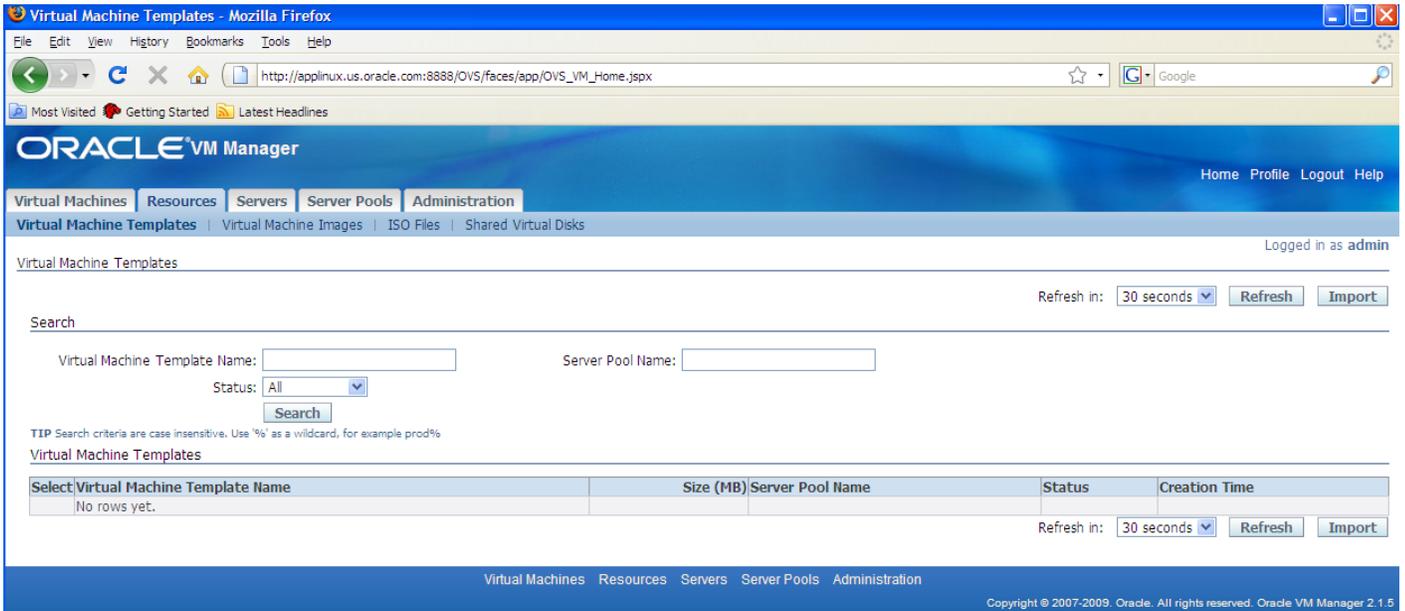
1. Launch the Oracle VM Manager in a browser and sign in.

Note. You can sign in with the Oracle VM role User to import templates and create virtual machines.



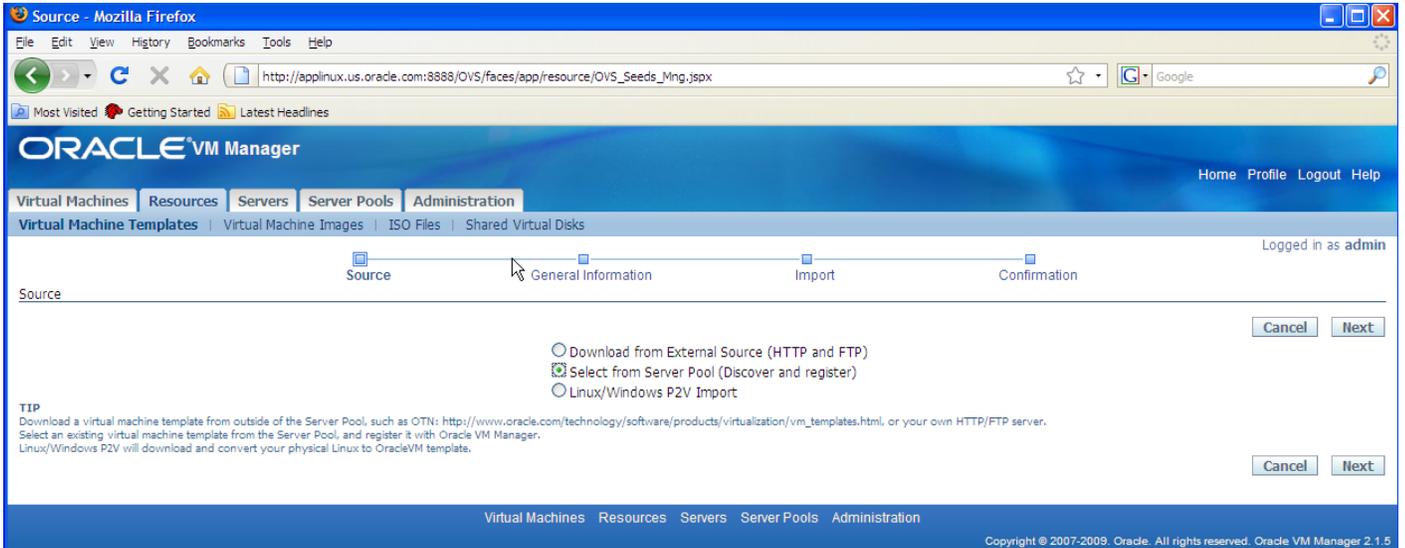
Oracle VM Manger Login

2. Select the Resources tab.



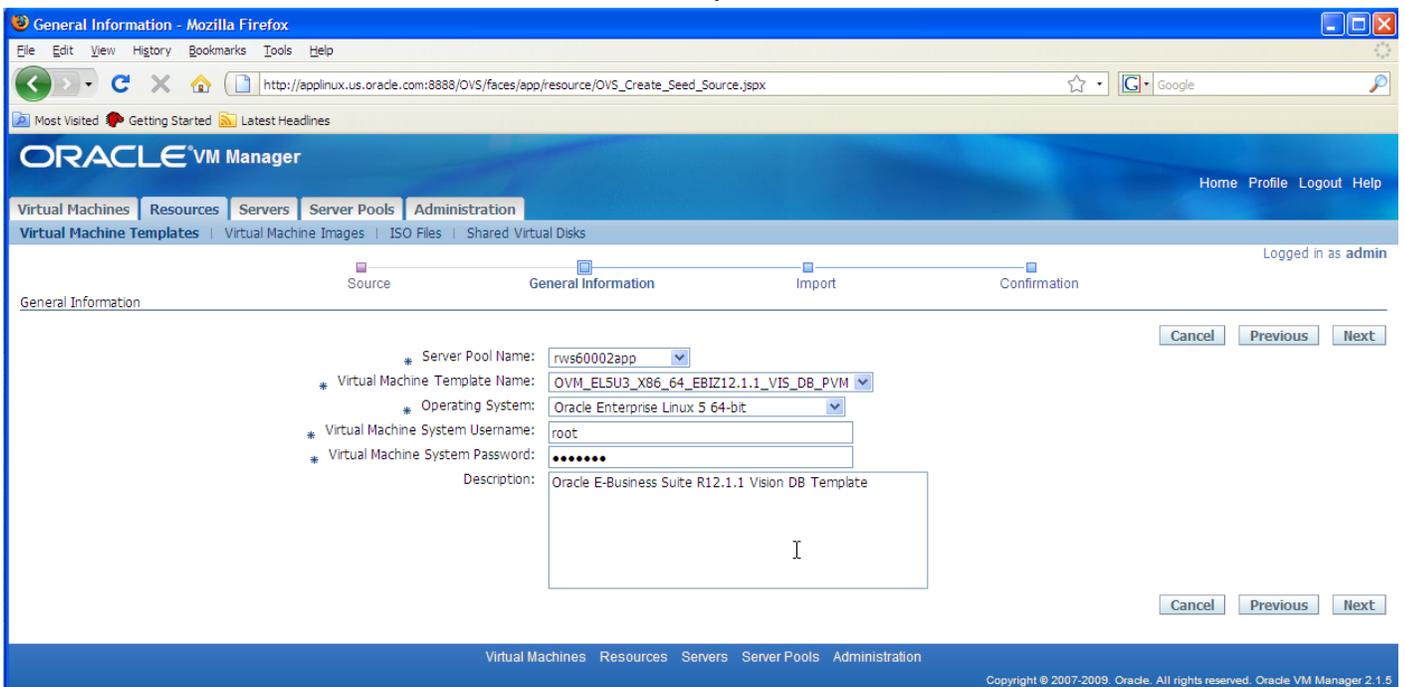
Oracle VM Manager Resources page

3. Click Virtual Machines Templates sub-tab, and then click the Import button.
4. Select the option Select from Server Pool (discover and register), and then click Next.



Specifying the virtual machine templates source

5. On the General Information page, enter or select the following general information:



General Information page

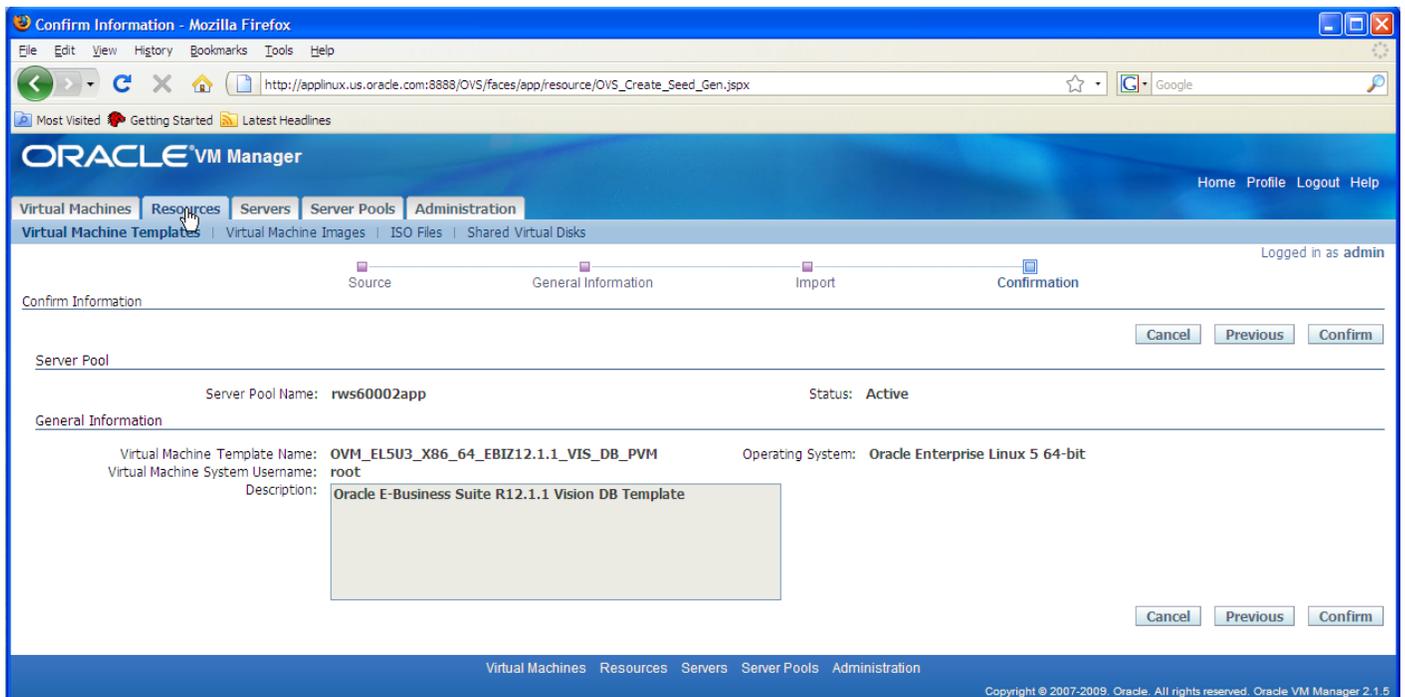
- **Server Pool Name**
Select the server pool on which the imported virtual machine template will be located.
- **Virtual Machine Template Name**
Select the virtual machine template to be imported.
- **Operating System**
Enter Oracle Enterprise Linux 5.3x 64-bit or 32-bit (depending on which E-Business Suite templates

you are using) as the guest operating system of the virtual machine template.

- **Virtual Machine System Username**
Enter the user name used to log in to the virtual machine after it is booted. In the example shown `root` is supplied as the user name.
- **Virtual Machine System Password**
Enter the Oracle VM template root account password: `ovsroot`.

Note. This is not the same as the console password that you choose in the next step to create the virtual machine. The Console Password is used to log in to the VM's console using a VNC client while the password chosen here is used to log in to the VM using SSH client sessions.

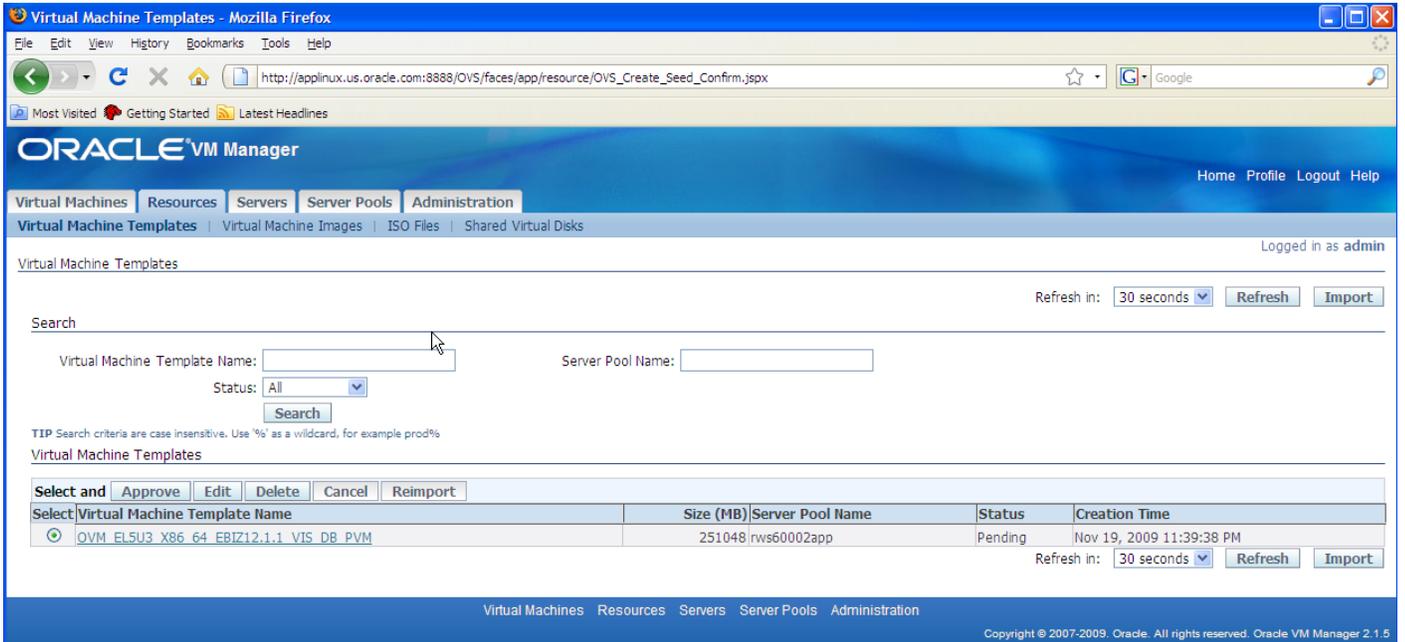
6. Click Next, and confirm the information you entered.



Confirm Information page

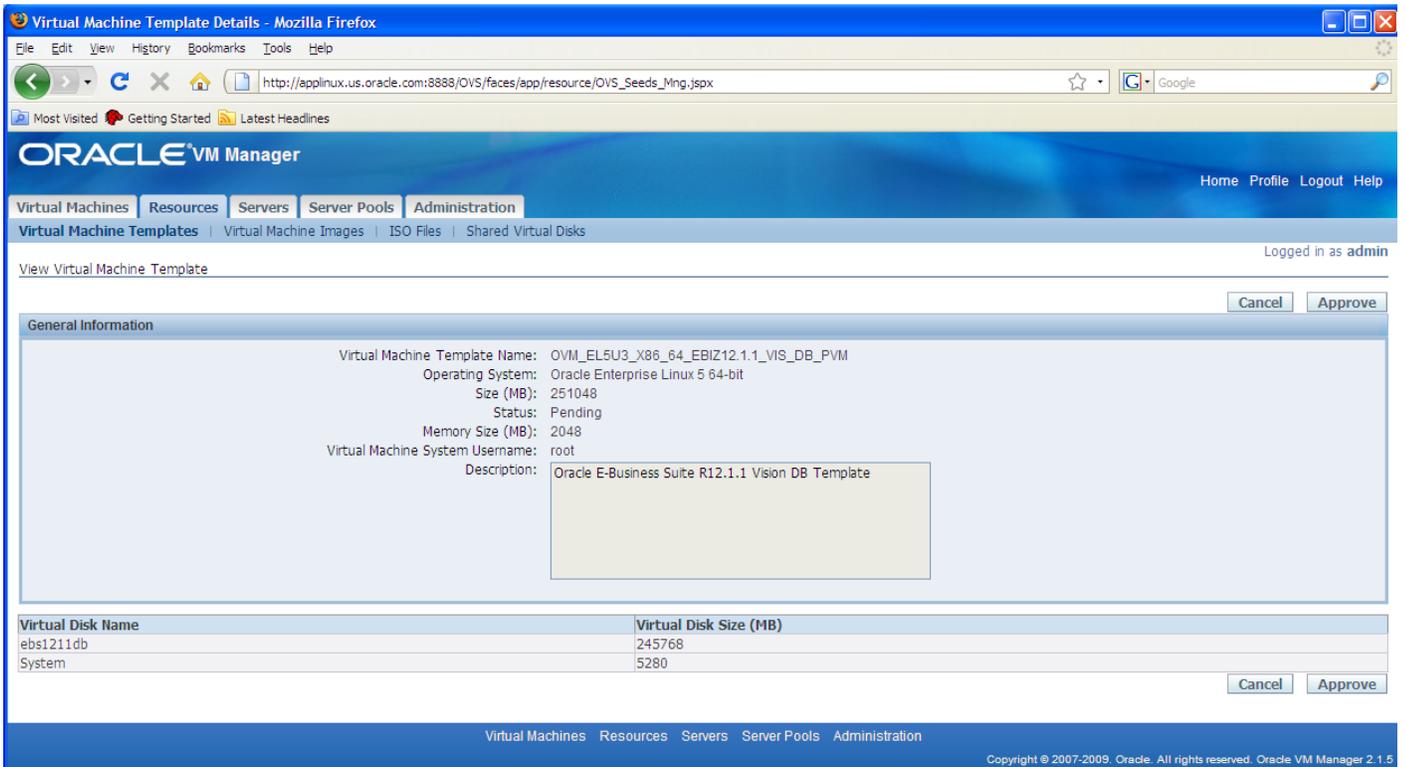
7. Click Confirm.

After importing, the status of the virtual machine template is Pending. You need to approve it to make it available for creating virtual machines.



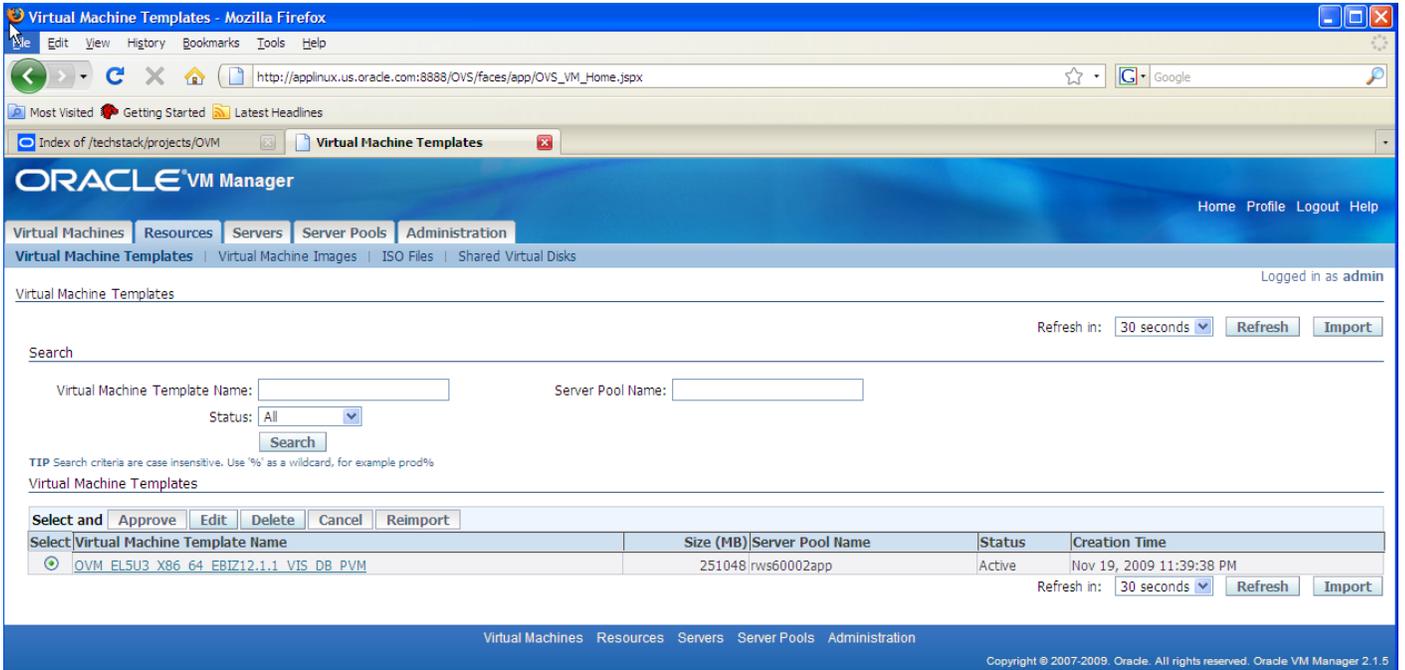
Virtual Machine Templates page

8. Select the template you want to approve, and click Approve. A page appears with information about the template.



View Virtual Machine Template page

9. Click Approve again.
The status changes to Active.

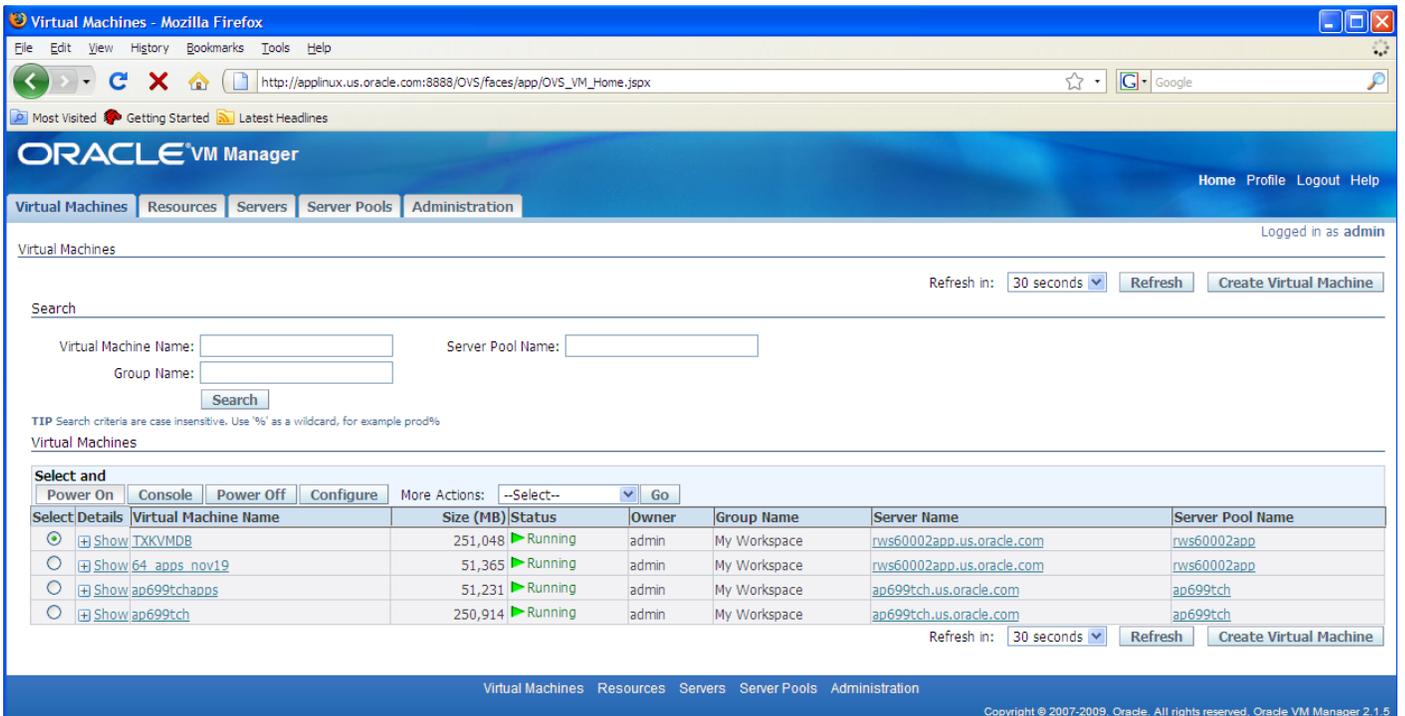


Virtual Machine Template page after approval

Task 2-2: Creating E-Business Suite Virtual Machines

This section assumes that you have imported the templates as described in the previous section, and are logged in to Oracle VM Manager. To create a virtual machine based on an Oracle VM for E-Business Suite template:

1. Select the Virtual Machines tab.

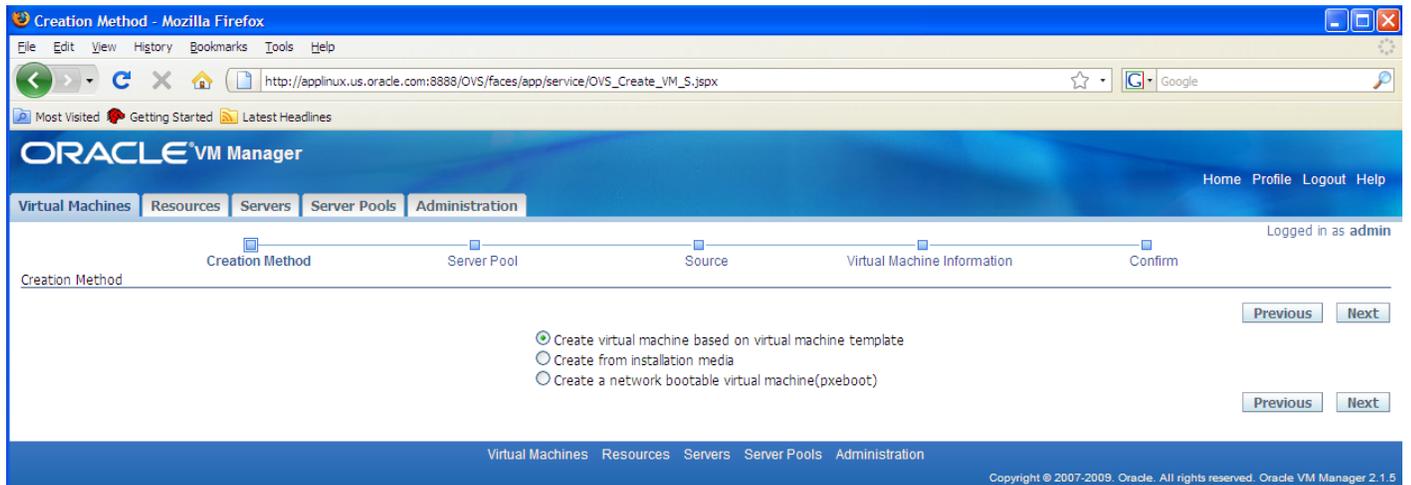


Oracle VM Manager Virtual Machines page

Copyright © 2009, Oracle and/or its affiliates. All rights reserved.

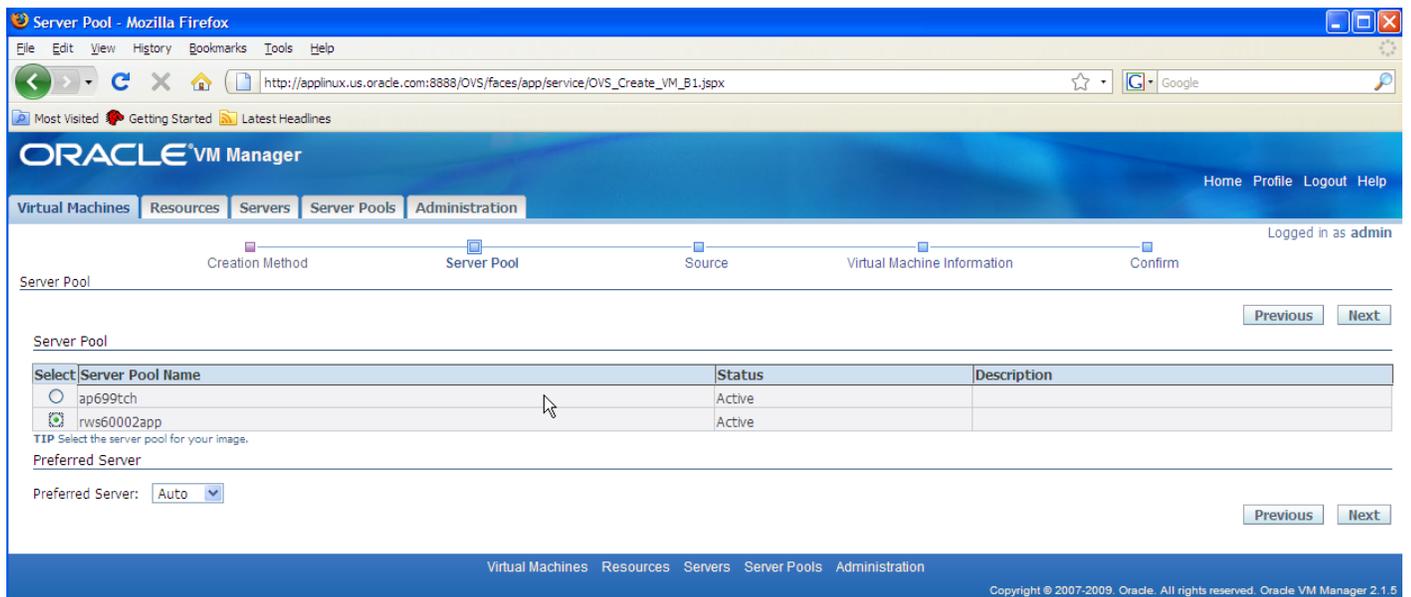
2. Click the Create Virtual Machine button.

3. Select the option Create virtual machine based on virtual machine template, and click Next.



Creation Method page

4. Select the server pool where the virtual machine is to be located. Accept the default Preferred Server option Auto, and click Next.



A preferred server is a Virtual Machine Server that provides resources such as memory, CPUs, virtual network interfaces (VIFs), and disk for the virtual machine. If you select only one Virtual Machine Server as the preferred server, the virtual machine then always starts from and runs on this server. If you select multiple preferred servers, each time the virtual machine starts, it will choose to run on the one with the maximum resources available (including memory and CPU).

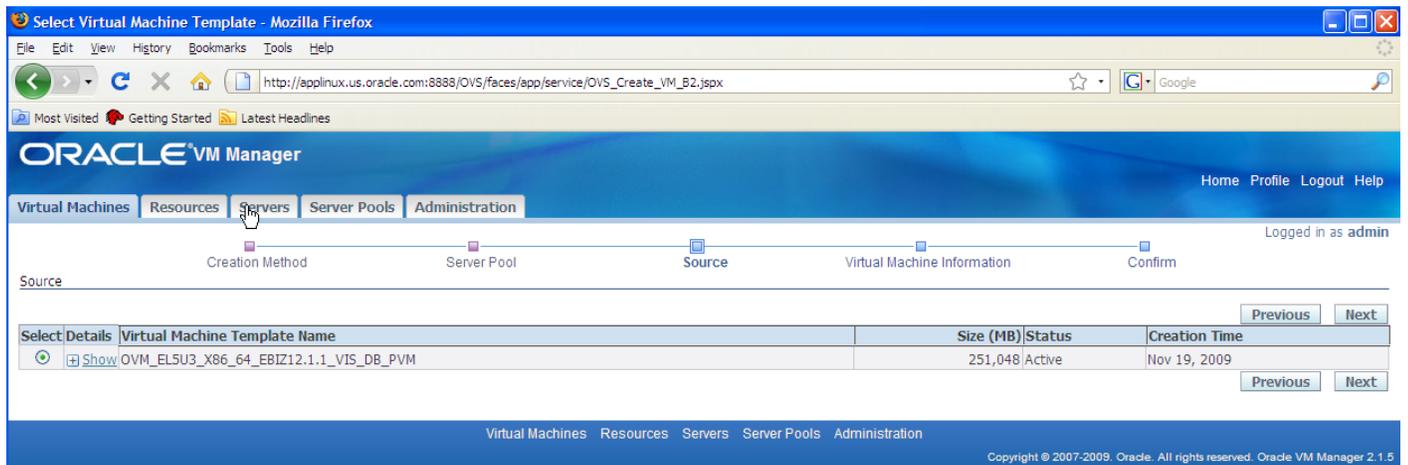
When creating a virtual machine, there are two ways to select a Virtual Machine Server for the virtual machine:

- **Auto:** In the Auto mode, when the virtual machine starts, Oracle VM automatically assigns a Virtual Machine Server with the maximum resources available to run the virtual machine. The virtual machine then runs on this Virtual Machine Server temporarily, until it is shut down.

- Manual: In the Manual mode, you select one or more Virtual Machine Servers as the preferred servers. The virtual machine then starts from and runs on the preferred server with the maximum resources available.

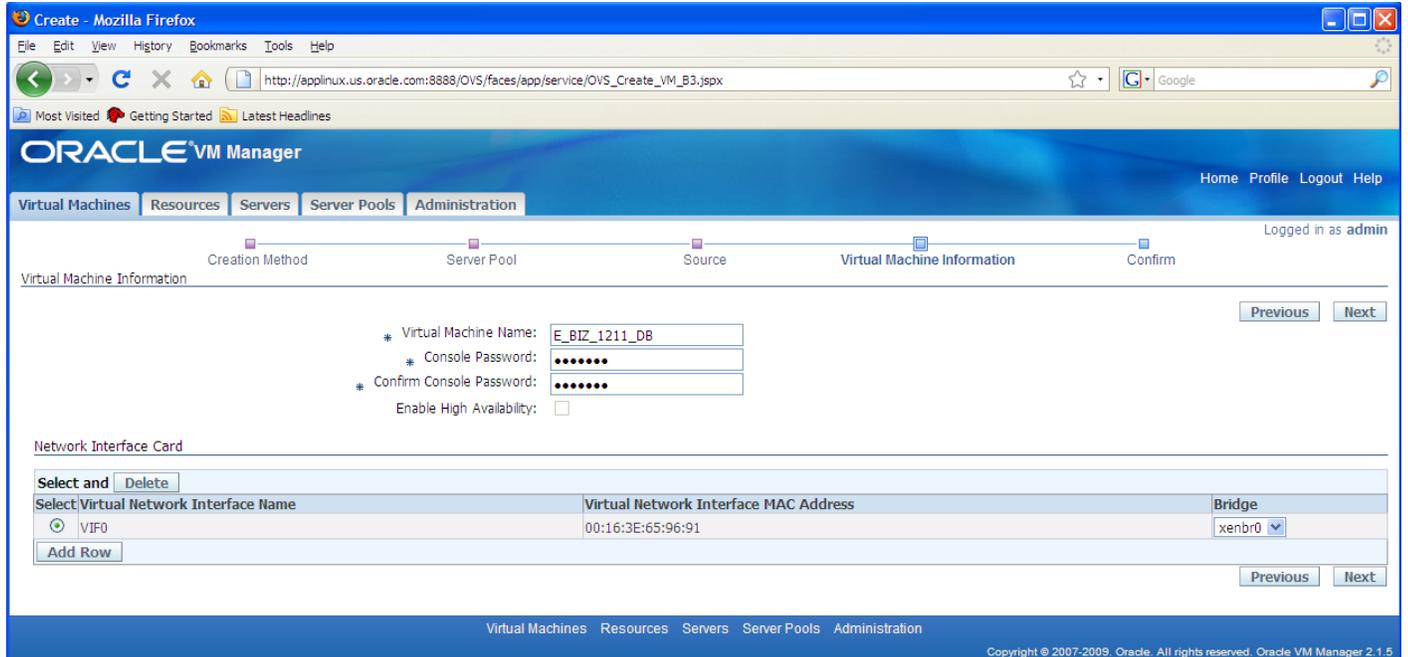
Note. If none of the preferred servers can provide sufficient resources, the virtual machine may fail to start.

- Select the template that you imported to use for this virtual machine, and then click Next.



Source selection page with selected template

- Enter the following information, and then click Next:



Virtual Machine Information page

- Virtual Machine Name

This name will be used as the name of the directory under `/OVS/running_pool/` where the files associated with this virtual machine are stored.

Note. The virtual machine name does not have to be the same as the name of the virtual machine host.

- Console Password

Enter the password to log in to the console, and enter it again to confirm the password. You use the connection through the console to access and start the virtual machine. This may be the console plug-in documented in the Oracle VM Manager User's guide, or another VNC client.

See *Oracle VM Manager User's Guide "Connecting to a Virtual Machine's Console."*

- Enable High Availability (Optional)

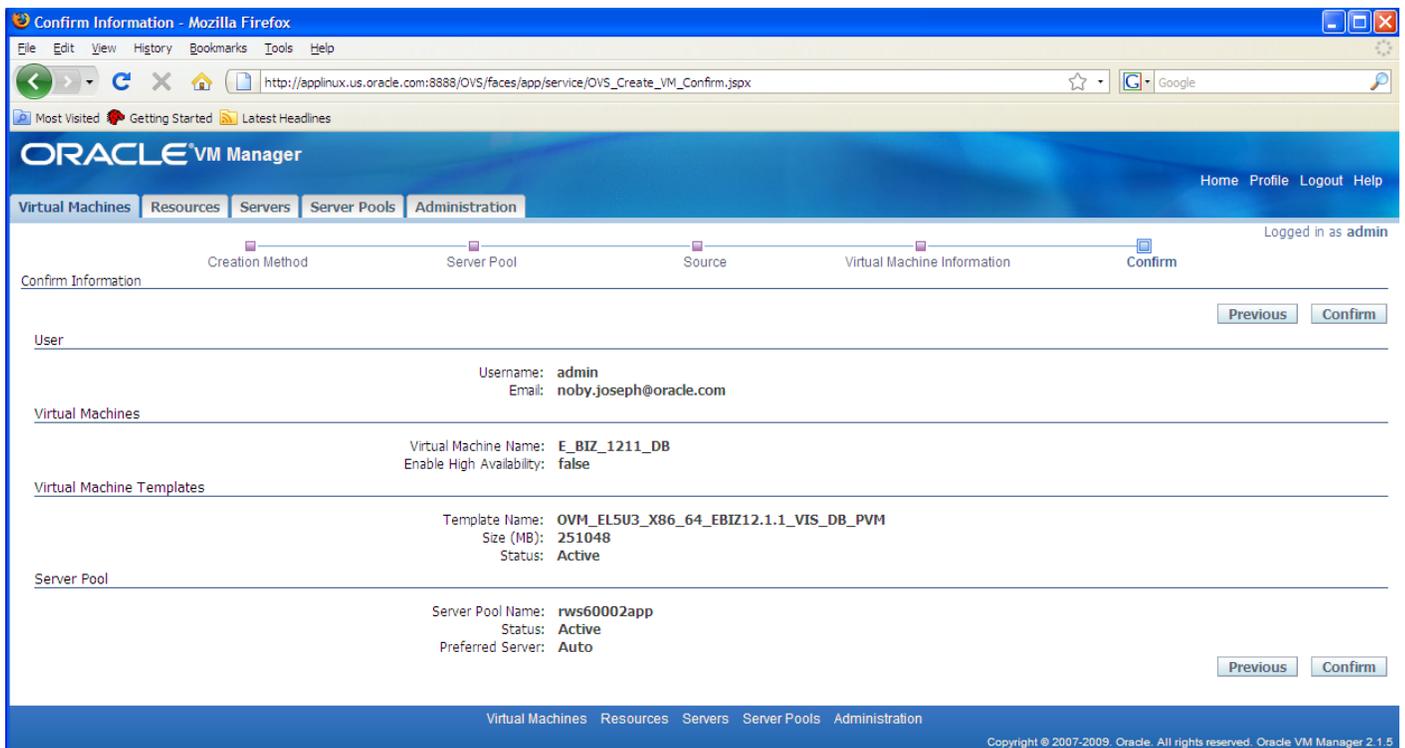
See *Oracle VM Manager User's Guide, Managing Server Pools, Enabling High Availability (HA).*

- Add Row

This is optional. Select this option to add more virtual network interfaces. By default, virtual network interfaces are named VIFO, VIF1, VIF2, and so on. You can rename them after creating the virtual machine.

See *Oracle VM Manager User's Guide, Managing Virtual Machines, Changing Configurations of a Virtual Machine.*

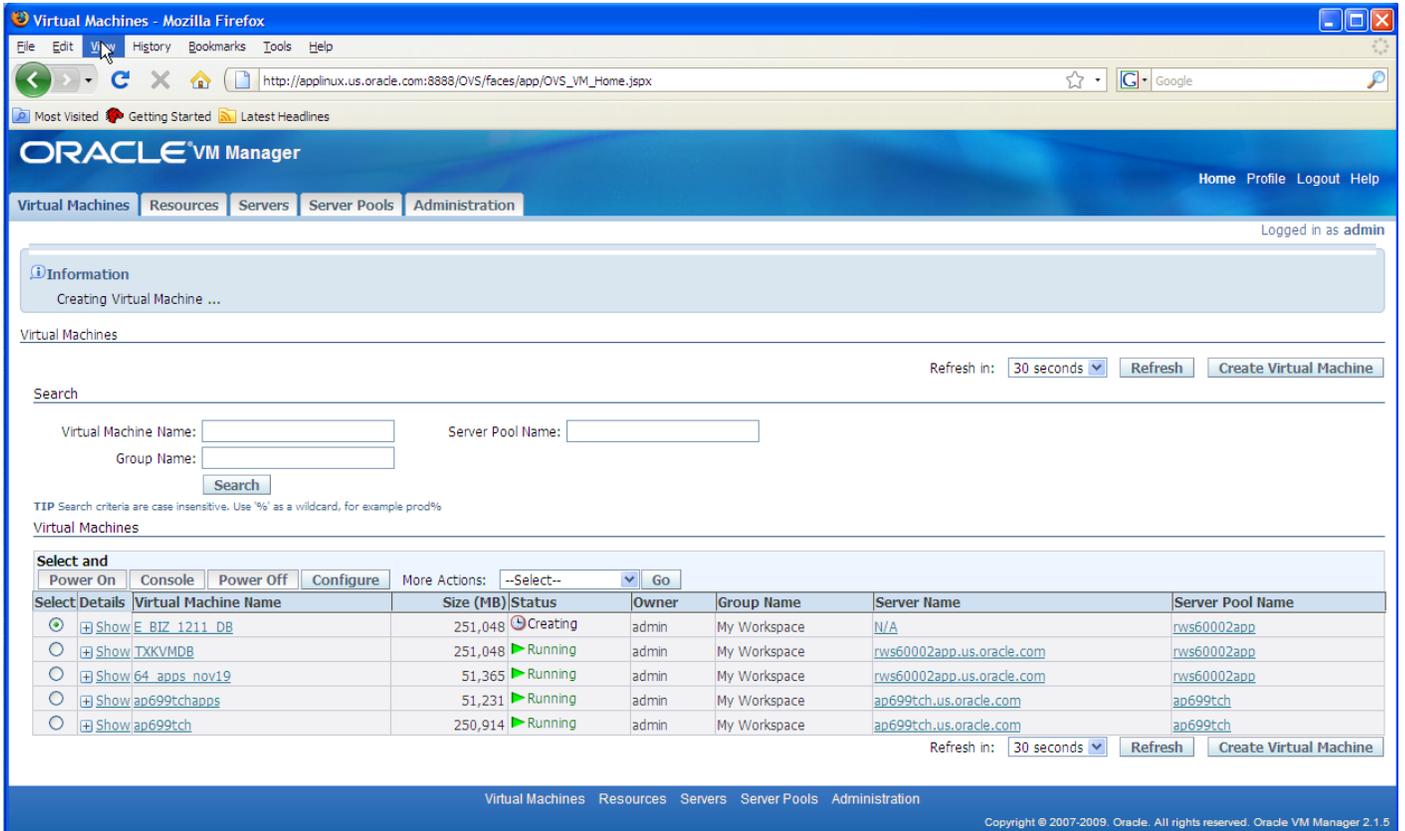
7. Confirm the virtual machine information, and click Confirm.



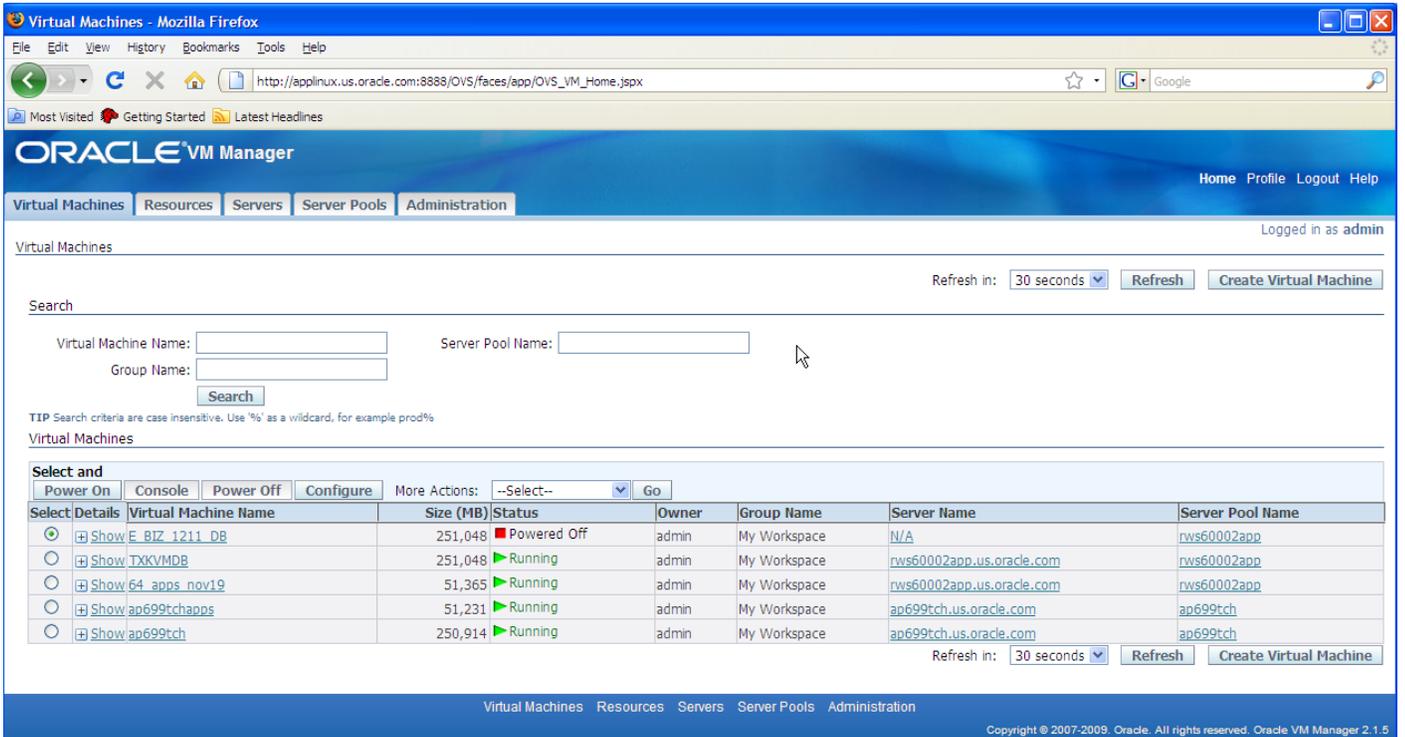
Confirm Information for the virtual machine

8. Click Refresh periodically until the status of the virtual machine changes from Creating to Powered Off.

The process of creating a virtual machine takes time. You can choose to refresh manually, or to refresh every 30 seconds.



Creating Virtual Machine page with virtual machine in Creating status



Creating Virtual Machine page with virtual machine in Powered Off status

9. If the status goes to Error, refer to the *Oracle VM Manager User's Guide*, Managing Virtual Machines, Error.

Task 2-3: Starting the Oracle VM for E-Business Suite Virtual Machines

This section discusses:

- Understanding the Virtual Machine Initialization
- Starting the E-Business Suite Database Virtual Machine
- Starting the E-Business Suite Apps Virtual Machine

Understanding the Virtual Machine Initialization

Start the virtual machines for each of the E-Business Suite templates. It is important that you start the virtual machines in the following order:

1. Oracle E-Business Suite Database Virtual Machine
2. Oracle E-Business Suite Apps Virtual Machine

After starting the virtual machines in Oracle VM Manager, log into each virtual machine via console to verify that the virtual machine creation was successful, and that it is accessible. At the end of the first VM boot, you will be prompted with a few configuration questions for the E-Business Suite installation. You must supply both network information, such as IP addresses, and information specific to the E-Business Suite installation, such as the database SID.

Be aware that if you supply incorrect network information in response to these prompts (such as IP address, hostname, DNS server IP, gateway and so on) the new virtual machine will not function, and you would need to create a fresh virtual machine or perform a machine configuration cleanup.

Task 2-3-1: Starting the E-Business Suite Database Virtual Machine

Starting a virtual machine is analogous to starting a computer by pressing the Power On button. Ensure that the virtual machine is powered off before you start it.

To start and initialize the E-Business Suite Database virtual machine:

1. Select the Virtual Machines tab.
2. On the Virtual Machines page, select the virtual machine that you created from the E-Business Suite DB template.
3. Click the Power On button.
4. Periodically, click the Refresh button until the virtual machine status changes from Initializing to Running. You can choose to refresh manually, or to refresh every 30 seconds.
5. Open your console application (for example, VNC client) and log into the virtual machine.
Log in using the console password you specified when importing the template.
6. There are several prompts asking for network-related information. You see the same network-related prompts when starting each of the virtual machines. The text in bold font indicate places that require user input:

```

Configuring Oracle E-Business Suite R12
Configuring network.
Static IP: 123.45.67.89
Netmask: 255.255.255.255
Default gateway IP: 12.345.678.9
DNS server IP: 123.45.678.90
Hostname: mydbhost.mydomain.com
Stopping network...
Shutting down interface eth0: [OK]
Shutting down loopback interface: [OK]

```

7. After the network configuration, you will be prompted for the E-Business Suite database node configuration. This is the same information that is requested during a db tier clone. Accept the default values by pressing enter for most of below questions, and set the SID:

```

Provide the values required for creation of the new Database Context file.
Target System Hostname (virtual or normal) [mydbhost]:
Target Instance is RAC (y/n) [n]
Target System Database Server Node [mydbhost]:
Target System Database SID: VIS
Target System Base Directory]: [/u01/E-BIZ/12.1.1/VIS] :
Target System utl_file_dir Directory List [/usr/tmp]:
Number of DATA_TOP's on the Target System [1]
Target System DATA_TOP Directory 1 [/u01/E-BIZ/12.1.1/VIS/db/apps_st/data]:
Target System RDBMS ORACLE_HOME Directory [/u01/E-
BIZ/12.1.1/VIS/db/tech_st/11.1.0]:

```

You must not change the value of the top level directory where the application is pre-installed: /u01/E-BIZ/12.1.1/VIS as the Target System Base Directory.

You should reset the Display and choose the port pool that will be used for this E-Business Suite Instance. This is the same port pool mechanism as in the Rapid Install, and must match between the database node and the application nodes. Once you choose a port pool, it will be validated for port availability.

```

Do you want to preserve the Display set to sourcehost:0.0 (y/n) [y] ? : n
Target system Display [mydbhost:0.0] :<press-enter>
Do you want the the target system to have the same port values as the source
system (y/n) [y]? : n
Enter the port pool to be used for the target system node [0-99]: 0

```

8. After you answer the configuration questions, the database post-clone actions will start (this might take a few minutes). On completion of this script, the boot-time actions are finished and the login prompt will appear. Login as oracle / oracle and check that the Vision database is available by using the ps command.

Task 2-3-2: Starting the E-Business Suite Apps Virtual Machine

Ensure that the database server is running before beginning this procedure.

To start the E-Business Suite Apps Virtual Machine:

1. Select the Virtual Machines tab.
2. On the Virtual Machines page, select the virtual machine that you created from the E-Business Suite Application template.
3. Click the Power On button.
4. Periodically, click the Refresh button until the virtual machine status changes from Initializing to Running. You can choose to refresh manually, or to refresh every 30 seconds.
5. Open your console application (for example, VNC client) and log into the virtual machine.

Log in using the console password you specified when importing the template.

6. There are several prompts asking for network-related information. You see the same network-related prompts when starting each of the virtual machines. The text in bold font indicate places that require user input:

```
Configuring Oracle E-Business Suite R12
Configuring network.
Static IP: 12.345.678.900
Netmask: 555.555.555.5
Default gateway IP: 12.345.678.9
DNS server IP: 123.45.678.90
Hostname: mydbhost.mydomain.com
Stopping network...
Shutting down interface eth0: [OK]
Shutting down loopback interface: [OK]
```

7. After the network configuration, you will be prompted for the E-Business Suite database node configuration. This is the same information that is requested during a db tier clone. Accept the default values by pressing `enter` for most of below questions, and provide the db host name and SID:

```
Provide the values required for creation of the new APPL_TOP Context file.
Target System Hostname (virtual or normal) [myappshost]:
Target System Database SID: VIS
Target System Database Server Node [mydbhost]: mydbhostname
Target System Base Directory [/u01/E-BIZ/12.1.1/VIS]
Target System Tools ORACLE_HOME Directory [/u01/E-
BIZ/12.1.1/VIS/apps/tech_st/10.1.2]:
Target System Web ORACLE_HOME Directory [/u01/E-
BIZ/12.1.1/VIS/apps/tech_st/10.1.3]:
Target System APPL_TOP Directory [/u01/E-BIZ/12.1.1/VIS/apps/apps_st/appl]:
Target System COMMON_TOP Directory [/u01/E-BIZ/12.1.1/VIS/apps/apps_st/comm]:
Target system base directory for instance homes [/u01/E-BIZ/12.1.1/VIS/inst]:
Target System Root Service [enabled]:
Target System Web Entry Point Services [enabled]:
Target System Web Application Services [enabled]:
Target System Batch Processing Services [enabled]:
Target System Other Services [disabled]:
```

You must not change the value of the top level directory where the application is pre-installed: /u01/E-BIZ/12.1.1/VIS as the Target System Base Directory.

You should reset the Display and choose the port pool that will be used for this E-Business Suite Instance. This is the same port pool mechanism as in the Rapid Install, and must match between the database node and the application nodes. Once you choose a port pool, it will be validated for port availability.

```
Do you want to preserve the Display set to sourcehost:0.0 (y/n) [y] ?: n
Target system Display [mydbhost:0.0]:<press-enter>
Do you want the target system to have the same port values as the source
system (y/n) [y]?: n

Enter the port pool to be used for the target system node [0-99]: 0

Checking the port pool 0
done: Port Pool 0 is free

Report file located at /u01/E-
BIZ/12.1.1/VIS/inst/myappshost_VIS/admin/out/portpool.lst
Complete port information available at /u01/E-
BIZ/12.1.1/VIS/inst/myappshost_VIS/admin/out/portpool.lst

UTL_FILE_DIR on database tier consists of the following directories.

1. /usr/tmp

Choose a value which will be set as APPLPTMP value on the target node [1]:1

Creating the new APPL_TOP Context file from :
/u01/E-BIZ/12.1.1/VIS/apps/apps_st/comn/clone/context/apps/adxmlctx.tmp

The new APPL_TOP context file has been created :
/u01/E-BIZ/12.1.1/VIS/apps/inst/<context_name>/appl/admin/<context_file_name>
```

Note. You can also connect to a traditional, non-virtual database by supplying the appropriate host name and SID (port pool has to match as well).

8. After you answer the configuration questions, the application tier post-clone actions will start (this might take a few minutes). On completion of this script, the boot-time actions are finished and the login prompt will appear. Login as `oracle / oracle` and check that the application tier processes are available by using the `adstrtal.sh status` command.

Task 2-4: Using the E-Business Suite Installation

The E-Business Suite installation deployed by the Oracle VM for E-Business Suite templates sets up an environment comprised of the following directories on the DB virtual machine owned by `oracle` user:

```
DB ORACLE_HOME : /u01/E-BIZ/12.1.1/VIS/db/tech_st/11.1.0
DBF Files : /u01/E-BIZ/12.1.1/VIS/db/apps_st/data
```

The E-Business Suite installation deployed by the Oracle VM for E-Business Suite templates sets up an environment comprised of the following directories on the Apps virtual machine owned by `oracle` user:

```
APPL_TOP      : /u01/E-BIZ/12.1.1/VIS/apps/apps_st/appl
COMMON_TOP    : /u01/E-BIZ/12.1.1/VIS/apps/apps_st/comn
TOOLS_ORACLE_HOME: /u01/E-BIZ/12.1.1/VIS/apps/tech_st/10.1.2
WEB_ORACLE_HOME  : /u01/E-BIZ/12.1.1/VIS/apps/tech_st/10.1.3
INSTANCE_HOME  : /u01/E-BIZ/12.1.1/VIS /inst
```

Task 2-5: Configuring Oracle E-Business Suite

The deployment of the E-Business suite templates provides an installation with a vision demo database. For additional information on post-installation steps, see the E-Business Suite documentation mentioned in the preface.

See "About this Document," Related Information.

As with any installation, it is a good idea to verify that the installation completed successfully, using your normal testing procedure. For information on installation verification, contact Oracle Global Customer Support.

Task 2-6: Troubleshooting

Here are some resources to use if you encounter a problem during the deployment of the Oracle VM for E-Business Suite templates:

- For problems with Oracle VM Manager and Oracle VM Server, read the troubleshooting sections in the user's guides: Oracle VM Manager User's Guide and Oracle VM Server User's Guide.
- For OVM information, read the `/var/log/oraclevm-template.log` file.

The `oraclevm-template.log` is a centralized log file that includes information about the Oracle VM initialization and the E-Business Suite deployment.

- For E-Business Suite – specific troubleshooting, see the Oracle E-Business Suite Installation Guide and the Concepts Manual.
- Verify that you have enough resources: disc space and memory on the machine that is running the Oracle VM Server. The database template requires 2GB memory, and application template requires 1GB memory.
- If you deployed the templates using more than one computer, make sure the network communication between the computers is functioning.
- Use the Oracle VM Manager for information on template status, as shown previously.

See *Importing E-Business Suite Templates*.

- If you are sure the templates are up and running, but the E-Business Suite log on window does not appear, try restarting the application and database tier processes.
- If nothing works, you may want to power off and then power on the virtual machine.

Task 2-7: Managing the Virtual Environment Lifecycle

This section discusses:

- Understanding Virtual Machine Management
- Saving Virtual Machines as Templates
- Using the Oracle E-Business Suite Configuration Script

Understanding Virtual Machine Management

After you create and initialize your E-Business suite virtual machine deployment, you may want to customize it and save the customized environment as template to share within your company. In general, the steps to follow in creating a template from a customized environment are:

- Set up the virtual machines using the original templates.
- Customize the environment.
See [Importing E-Business Suite Templates](#).
- Edit the configuration plugin script
See [Using the Oracle E-Business Suite configuration script](#)
- Issue commands to cleanup and restart the virtual machines using the modified configuration script
See [Resetting E-Business Suite Virtual Machines](#)
- Save the virtual machine as a new template

See Also

"Creating and Using Oracle VM Templates: The Fastest Way to Deploy Any Enterprise Software," Oracle VM website, <http://www.oracle.com/technologies/virtualization/docs/ovmtemplateoverview-whitepaper.pdf>

Task 2-7-1: Saving Virtual Machines as Templates

The virtual machines that you create from the E-Business Suite templates can actually be saved as customized templates. For example, you may create a virtual machine from the DB template, upgrade the Database to the latest certified version and then save the virtual machine as a new template. This new template can then be replicated throughout the organization. This means that you don't need to repeat the same customization steps each time you create a virtual machine. Instead it is possible to install software into a virtual machine or add specific configuration preferences and then save the virtual machine as a new template. This new template can be used to create any number of virtual machines.

There are a few things to keep in mind when saving a virtual machine as a template. When saving a virtual machine as a template you may want to install software into the virtual machine from which you will create the template. If you do so, you must make sure that the software that you have installed is virtualization safe. This means that the installation is not bound to the IP address or hostname through any configuration

Copyright © 2009, Oracle and/or its affiliates. All rights reserved. 29

files, database entries, and so on. When you save a virtual machine as a template the installed components must be host neutral, so that they will be able to run without any problems in new virtual machines that have different hostnames or IP addresses.

When saving an E-Business Suite virtual machine as a template you may wish to add customized first boot configuration steps. This means that you should edit the first boot configuration script, as described in the following section.

See Using the E-Business Suite Configuration Script.

Task 2-7-2: Using the E-Business Suite Configuration Script

To add configuration steps to the E-Business Suite templates, use the delivered configuration script, `ebiz_1211_reconfig.sh`. You can find this script in any E-business Suite template at location `/u01`. If you wish to extend the template, you can add the customization to this script

When the template is being initialized, the first boot configuration calls the functions and external script defined in the master script `ebiz_1211_reconfig.sh`

After you have modified the script `ebiz_1211_reconfig.sh` to include the customization, it is necessary to reset the template to get it ready to be saved, as described in the following section

See Resetting E-Business Suite Virtual Machines

A cleanup script `ebiz_1211_cleanup.sh` is also provided at location `/u01` to facilitate any customization that you may have.

Task 2-7-3: Resetting E-Business Suite Virtual Machines

It is possible to reset your virtual machine such that the next time it is started it will appear as a clean, newly started template. This is achieved by using the following commands, in the order given:

```
/usr/sbin/oraclevm-template --cleanup
/usr/sbin/oraclevm-template --enable
```

Use these commands when you have customized a virtual machine and want to save it as a template. Once you have decided that you want to save a particular virtual machine as a template, connect to the virtual machine using the VNC client, issue the two commands above, shut it down using Oracle VM Manager, and then finish by saving it as template.

Note. Because the `/usr/sbin/oraclevm-template -cleanup` option resets the network stack on the virtual machine it may appear to hang. If this happens, exit your login session and reconnect to the virtual machine, using the VNC client to invoke the `/usr/sbin/oraclevm-template -enable` option.

See Also

Oracle VM Manager User's Guide "Managing Virtual Machines"