Oracle Virtual Machine Template for Siebel CRM Installation Guide

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Introduction

This document covers the complete process of setting up an Oracle VM Template for Siebel CRM. Preparation steps are designed to ensure intuitive and easy setup and operation of the virtual Siebel environment.

About the Oracle VM Template for Siebel CRM

Setting up a virtualized Siebel environment is a very simple process. However, there are flexibilities built into the process offering choices to administrators on how to prepare for the deployment and management of the template.

Oracle VM Template for Siebel CRM is made up of two separate templates; one for the Oracle Database and one for the Siebel Applications. Administrators can choose to deploy both templates on a single physical server or on two or more separate physical servers. The decision depends on the purpose, such as for demo, proof of concept, QA/Development, Performance testing or Production. The purpose also mandates the level of hardware to be used. This document provides minimum system requirements, which are believed to be sufficient for non-production and non-performance test type uses.

Administrators can choose to manage their templates by using the command line interface or by using the Oracle VM Manager. Command line interface requires basic working knowledge of the Linux operating system. This method is quick, easy and does not require installation of any additional software. For administrators who prefer a GUI-based tool, Oracle VM Manager will have to be installed on a separate Linux machine. Some administrators may choose to create a third virtual environment on the same single box and install VM Manager in that virtual environment. Although it is possible to do, this third virtual environment will have to be the first one to bring up and additional physical RAM and CPU power will be required.

The Siebel template comes pre-configured to create environments suitable for demos and proof of concepts type projects. By default, Callcenter, Sales and Marketing cross-industry applications are enabled and “seed data” is provided. This template can also be used for functional QA, development or even production. However, certain changes will have to be made before it can be used for such purposes. Proper hardware specifications must be used and memory and VCPU parameters must be set properly in the vm.cfg file. “Seed data” must be removed and customer real data must be imported. Database table sizing and file system space allocations must be modified according to the customer business needs. It is recommended that customers use growth planning and hardware sizing guidelines and recommendations provided by their Oracle technical account representative or their Systems Integrator.

Once the templates are downloaded, administrators can choose one of two methods to transport the template files to the physical machine that will host the templates. Files can be FTP’d over or they can be transported using an external USB hard drive. If the template files are to be used over and over again on different hardware, we recommend the USB drive method to save time.
Terms Used in This Guide

<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypervisor System</td>
<td>The Physical machine on which the Oracle VM Server is installed. This machine is used to host one or more VM Templates. This is also called the “Host machine”. The Linux Operating system used to create this system is of low-footprint containing only the features required to host and manage VM templates.</td>
</tr>
<tr>
<td>Virtual Machine</td>
<td>A template is used to create a virtual environment (machine) which is hosted on a host machine or a hypervisor.</td>
</tr>
<tr>
<td>Oracle VM Manager</td>
<td>A GUI-based tool used to create and manage VM Templates.</td>
</tr>
<tr>
<td>Xen</td>
<td>The Xen® hypervisor is a powerful open source industry standard for virtualization of x86, x86_64, IA64, PowerPC, and other CPU architectures. It supports a wide range of guest operating systems including Windows®, Linux®, Solaris®, and various versions of the BSD operating systems. Oracle VM technology is built using the Xen standard.</td>
</tr>
</tbody>
</table>

Related Documentation and Links

Oracle VM Technology documents:  
http://download.oracle.com/docs/cd/E11081_01/welcome.htm

Oracle Virtual Machine Technology website:  
http://www.oracle.com/technologies/virtualization/index.html

Oracle Virtual Machine Technical Information page:  
http://www.oracle.com/technologies/virtualization/technical.html
ORACLE VM ENVIRONMENT FOR SIEBEL

The following are two possible scenarios for deploying a virtualized Siebel CRM environment.

Figure 1 illustrates the layout of a basic VM environment. It shows where the software is downloaded from and installed on the servers as well as how the VM Templates are managed using command line interface.
This document assumes that Oracle VM Server will be installed clean. In other words, servers will be wiped clean during the VM Server installation. Oracle VM Templates are not tested in a dual boot environment. These hardware requirements are suitable for demo and proof of concept type projects.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 dual-core server with 4 GB of RAM (6 GB recommended) for each VM OR Two dual core servers with 2 GB of RAM each. (4 GB each recommended)</td>
<td>You can setup a complete environment on a single physical server or two separate servers (one for DB and one for Siebel). Memory specified here is sufficient for demo or proof of concept type projects. Additional memory will be required for 5+ users and to enable additional application components. Please review the requirements for OVM and VM Manager at: <a href="http://www.oracle.com/technologies/virtualization/technical.html">http://www.oracle.com/technologies/virtualization/technical.html</a></td>
</tr>
<tr>
<td>A Windows PC running a supported OS and browser for Siebel Applications</td>
<td>Used to test the installation by accessing Siebel Applications using IE Browser.</td>
</tr>
</tbody>
</table>
### Suggested Accessories

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A CD/DVD Burner and at least 1 blank CD/DVD</td>
<td>To burn the bootable install CD or DVD for Oracle VM Server. CD/DVD burner needs to be capable of burning ISO images.</td>
</tr>
<tr>
<td>2. An external USB Drive with 100 GB of disk space or up to 10 extra blank CD/DVD</td>
<td>To transport downloaded templates to the working machines. FTP works as well. Either use an external USB drive or burn CDs/DVDs with the rest of the software. 5 CD/DVDs are required to burn Oracle Enterprise Linux (full OS) if you elect to host VM Manager.</td>
</tr>
<tr>
<td>3. A Linux machine on the network (Optional)</td>
<td>This could be a laptop or a desktop running Linux. This will be used as Oracle VM Manager.</td>
</tr>
</tbody>
</table>

### Software Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Access into E-Delivery</td>
<td>To download software <a href="http://edelivery.oracle.com/linux">http://edelivery.oracle.com/linux</a></td>
</tr>
<tr>
<td>2. Tight VNC (OPTIONAL)</td>
<td>VNC Viewer is used to access the VM machine. VNC Server may not be required as most VM Templates come with VNC Server pre-installed to run automatically at boot time. <a href="http://www.tightvnc.com/download.html">http://www.tightvnc.com/download.html</a></td>
</tr>
<tr>
<td>3. Oracle Enterprise Linux (5.2) from E-Delivery (5 ISO CD images or 1 ISO DVD image) (OPTIONAL)</td>
<td>If you need a machine to run Oracle VM Manager to manage your VMs.</td>
</tr>
<tr>
<td>4. Oracle VM Server (Version 2.1.2) from E-Delivery</td>
<td>Oracle Server: Base OS to host VM templates (Hypervisor) Oracle VM Manager: Manage VM Template servers (Optional) Oracle Server Source Code: Modify OS Kernel (Optional)</td>
</tr>
<tr>
<td>Requirement</td>
<td>Comment</td>
</tr>
<tr>
<td>-------------</td>
<td>---------</td>
</tr>
<tr>
<td>5. Oracle Siebel Database Template 8.1.1 (EL 5.2 JEOS included)</td>
<td>Oracle Database which includes Siebel Schema. AL32UTF8 char set. Database is Western char set enabled also.</td>
</tr>
<tr>
<td>6. Oracle Siebel Business Applications SIA Template 8.1.1 (EL 5.2 JEOS included)</td>
<td>Siebel application SIA. Includes cross-industry Marketing, Sales and Service applications.</td>
</tr>
<tr>
<td>7. Unzip utility for Linux OS (IF NEEDED)</td>
<td>To unzip the VM Templates use Linux-based unzip utility. To Unzip the VM Server ISO Image use WinZip.</td>
</tr>
<tr>
<td>8. Static IP Addresses</td>
<td>For the database and Siebel VM Templates. This is highly recommended. DHCP works well and requires extra step (see below)</td>
</tr>
</tbody>
</table>

### Process of Preparing for Installation

Complete the following tasks to prepare for installation.

1. (Optional) Download Unzip utility for Linux
2. (Optional) Download TightVNC for Linux
3. (Optional) Download Oracle Enterprise Linux
4. Download Oracle VM Server
5. Download and prepare Oracle Database VM Template
6. Download and prepare Siebel Business Application VM Template

<table>
<thead>
<tr>
<th>Template</th>
<th>Zip File Size</th>
<th>Fully Expanded Disk Space</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle 11g Database</td>
<td>Split into 3 zip files</td>
<td>Approximately 30 GB</td>
</tr>
<tr>
<td></td>
<td>1.6 GB, 1.6 GB, 1.3 GB</td>
<td></td>
</tr>
<tr>
<td>Siebel 8.11 SIA</td>
<td>Split into 2 zip files 1.6 GB and 1.7 GB</td>
<td>Approximately 23 GB</td>
</tr>
</tbody>
</table>
1 (Optional) Download Unzip utility for Linux

Perform this step if your native Linux unzip utility produces errors during unzipping process. Do not use WinZip to unzip Template files in Windows environment.

a Download the unzip utility (File = unzip.inx.Z) for Linux from: http://updates.oracle.com/unzips/unzips.html

b Burn the unzip utility onto a data CD/DVD. Perform this step if you do not plan to use ftp or an external drive to transport the unzip utility to your VM Server machine(s).

c Untar the zip utility file inside a Linux system.

2 (Optional) Download TightVNC for Linux

Perform this step if VNC server is not included in your OracleDB and Siebel Templates. In most cases VNC is included in the templates and runs automatically upon template boot up.

a Go to http://www.tightvnc.com/

b Click Download on the right side of the screen and select TightVNC Server for Linux and TightVNC Viewer for the platform you will use to remotely connect into your work machines.

File = tightvnc-server-1.3.9.1.i386.rpm

(For example; download TightVNC Viewer for Windows if you plan to use your laptop to access your Linux machines remotely.)

c Burn the TightVNC Server onto a data CD/DVD. Perform this step if you do not plan to use ftp or an external drive to transport the TightVNC Server to your Linux machine.

This is typically the same machine also running the VM Manager.

3 (Optional) Download Oracle Enterprise Linux

If you do not wish to use the command line interface to load and manage the templates and if you do not have a Linux machine to host Oracle VM Manager.

NOTE: It is highly recommend that you use the command line interface to manage VM Templates as it is quick, simple, easy and has very light footprint.

a Go to E-Delivery and click on “Linux” on the upper right hand corner.

b Enter your credentials and check two boxes to agree with terms and conditions

c Select “Enterprise Linux” and select “X86 32 Bit”

d Click on “Enterprise Linux Release 5 Update 3 Media Pack for x86 (32 bit)”

e Download “Enterprise Linux Release 5 Update 3 for x86 (32 Bit)”

f Download 5 CD sets (1 through 5) or 1 DVD

Download the latest version if one is available.

g Unzip the files to get ISO images.

h Burn the files onto 5 CDs or 1 DVD. The first CD and the DVD are bootable.
4 Download Oracle VM Server
   a Go to E-Delivery and click on “Linux” on the upper right hand corner.
   b Enter your credentials and check two boxes to agree with terms and conditions
   c Select “Oracle VM” and select “X86 32 Bit” and click Go.
   d Click on the link “Oracle VM 2.1.2 Media Pack”
   e Download Oracle VM Server 2.1.2 (Part number: V13798-01)
   f Download Oracle VM Manager 2.1.2 (Part number: V13800-01)
   g (OPTIONAL) Download the Oracle VM Server 2.1.2 Source (Part number: V13799-01) only if planning to customize VM Server Kernel. Download the latest version if one is available.
   h Unzip the files downloaded above to get the ISO images.
   i Use the VM Server ISO image to burn a CD/DVD. This CD/DVD is bootable.
   j Use the VM Manager ISO image to burn a CD/DVD. Perform this step if you do not plan to use ftp or an external drive to transport the VM Manager install files to your Linux machine.

5 Download and prepare Oracle Database VM Template (Comes pre-loaded with Siebel Schema, VNC Server and XM Command line interface)
   a Go to E-Delivery and click Linux on the upper-right-hand corner.
   b Enter your credentials and check two boxes to agree with terms and conditions
   c Select “VM Template” and select “X86 32 bit”
   d Select and download following 3 files:
     OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_1of3.zip
     OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_2of3.zip
     OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_3of3.zip
     CAUTION: DO NOT unzip these files on a windows machine.
   e Burn the files on a Data CD/DVD OR copy the files onto an external hard drive or ftp the files over in to the /OVS/seed_pool directory on the VM Server designated for database. Skip to step h if you use FTP method.
   f On the database server, create directories under /mnt for mounting your devices.
     # mkdir /mnt/usbdis OR # mkdir /mnt/mydisk
   g Mount the external drive or the CD/DVD into the system.
     # mount /dev/cdrom /mnt/mydisk
     OR if using an external hard drive
     # mount /dev/sda1 /mnt/usbdisk
   h Create the following directory and copy the files over from your media.
     # mkdir /OVS/seed_pool
     # cp <template zip files> to /OVS/seed_pool/
   i Alternatively ftp the files into /OVS/seed_pool/
   j Follow the instructions for installation of the database template.
6 Download and prepare Siebel Business Application VM Template
   a Go to E-Delivery and click on “Linux” on the upper right hand corner.
   b Enter your credentials and check two boxes to agree with terms and conditions
   c Select “VM Template” and select “X86 32 bit”
   d Select and download the following files:
     OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_10f2.zip
     OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_20f2.zip
     **CAUTION:** **DO NOT** unzip the files on a windows machine.
   e Use the files to burn a Data CD/DVD OR copy the files onto an external hard drive or ftp the files over to the VM Server designated for Siebel application. (May or may not be the same machine as the one hosting the database template)
   f On the VM Server for Siebel application, if the machine is different than the one used to host the database template, create two directories under /mnt for mounting your devices on this machine.
     # mkdir /mnt/usbdisk OR # mkdir /mnt/mydisk
   g Mount the external drive or the CD/DVD into the system.
     # mount /dev/cdrom /mnt/mydisk
     OR if using an external hard drive
     # mount /dev/sda1 /mnt/usbdisk
   h Create the following directory
     # mkdir /OVS/seed_pool
     # cp <template zip files> to /OVS/seed_pool/
   i Alternatively ftp the files into /OVS/seed_pool/
   j Follow the instructions for installation of Siebel application template.
Process of Installing the Template

Complete these tasks for installation.

1. (Optional) Installing Enterprise Linux
2. Install the VM Server
3. Install Oracle Database VM Template for Siebel (includes Siebel Schema)
4. Install Oracle VM Template for Siebel Business Applications

1. (Optional) Installing Enterprise Linux

Perform this step if you would like to use Oracle VM Manager to manage VM Templates.

   a. Insert the first CD (or DVD) created for Enterprise Linux into the CD/DVD Player of your server. This server WILL NOT be used to host VM Templates.

   b. Follow the Linux installation process. The system reboots at the end.

   c. (Optional) Install the TightVNC Server

      Mount the CD/DVD or external disk on which the TightVNC Server was copied. Alternatively ftp the TightVNC Server file over from your downloaded location onto the Linux server. File = tightvnc-server-1.3.9.1.i386.rpm

      # mkdir /usr/home/TightVNC/.

      If you FTP the file over, place it in a folder called /usr/home/TightVNC/.

      If you used the CD/DVD or external disk method:

      # mkdir /mnt/mydisk OR # mkdir /mnt/usbdisk
      # mount /dev/cdrom /mnt/mydisk
      if using the ISO image, mount iso image
      # mount -o loop, ro <Image.iso> /mnt/mydisk

      OR, if using an external hard drive

      # mount /dev/sda1 /mnt/usbdisk

      Copy the VNC Server installation files from the mounted media.

      # cp /mnt/usbdisk/tightvnc-server-1.3.9.1.i386.rpm /usr/home/TightVNC

      OR

      # cp /mnt/mydisk/tightvnc-server-1.3.9.1.i386.rpm /usr/home/TightVNC
      # cd /usr/home/TightVNC/
      # rpm tightvnc-server-1.3.9.1.i386.rpm

      Following the command line instructions

Run TightVNC Server
d  (Optional) Install Oracle VM Manager

These instructions assume that you have a GUI interface running on your Linux machine.

Mount the CD/DVD or external disk on which the Oracle VM Manager was copied. Alternatively ftp the Oracle VM Manager file.

# mkdir /usr/home/OVMMgr

if using the ISO image, mount ISO image

# mount -o loop, ro <Image.iso> /mnt/mydisk

If you FTP the file over, place it in a folder called /usr/home/OVMMgr/

If you used the CD/DVD or external disk method, mount the disk in the tray. The media will be mounted automatically and a “File Explorer” window will open.

Copy the content of the CD to /usr/home/OVMMgr/

# cd /usr/home/OVMMgr

# ./runInstaller.sh

Follow the on screen instructions and note the URL for the VM Manager.

Bring up a browser and type in the URL to confirm that the Oracle VM Manager was installed successfully. To use VM Manager, refer to the VM Manager guide located at the VM technology document site.

2  Install the VM Server

The following Steps are to be performed on every physical machine that is designated for running Oracle VM Templates. You may have chosen to install Oracle Database and Siebel Business Application templates on a single physical server or Oracle Database template on one and Siebel Business Application template on another physical server.

a  Insert the Oracle VM Server bootable CD into the drive and turn on your computer. You may have to force your computer to read from the CDROM if its not setup to do so in the BIOS settings. (Press F12 to see boot options)

For step-by-step instructions, see this 8-minute video on Youtube or the recorded training on Oracle University Online.

b  Chose all default values. Here are some answers that need some explanation.

   a. Choose “Install” option and choose “Re-install” to start fresh.
   b. Remove all the partitions and let Linux create defaults.
   c. Install the boot loader in the Master Boot Record (MBR)
   d. Select DHCP unless you have a dedicated (static) IP address allocated for this machine. Static IP addresses are highly recommended.
   e. Active on Boot and select IPV4 support.
Installation Process  ▪ Process of Installing the Template

3  Install Oracle Database VM Template for Siebel (includes Siebel Schema)

You are ready to load the VM Templates.

Log into the system you prepared with VM Server to host the database on.

a  Unzip the files individually.

   # cd /OVS/seed_pool
   # unzip OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_1of3.zip
   # unzip OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_2of3.zip
   # unzip OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_3of3.zip

Three files are produced as follows:

   # ls
   OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_1of3.tgz.0
   OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_2of3.tgz.1
   OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_3of3.tgz.2

b  Untar the tgz file to the location picked for the guest disk images. This step will create a directory with the name of the template.

   # cat OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_1of3.tgz.0
   # cat OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_2of3.tgz.1
   # cat OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM_3of3.tgz.2 | tar xzf -

This creates your final template directory:

   OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM

Confirm all the required files are there:

   # ls OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM
   oracle11gX86_asm.img (database image file)
   System.img (OS image file)
   vm.cfg (VM Configuration file)

c  Confirm / Modify vm.cfg file for the database template

Location of image files: Confirm the correct location of the two .img files.

   memory: Should be maximum possible. Default is 2 GB.
   name: Set to a small descriptive string. Example; ‘OraDB_Siebel’
   VCPU: Set it based on # of CPUs available and performance required. Default is 1.

   # vi vm.cfg
   bootloader = '/usr/bin/pygrub'
Installation Process

Process of Installing the Template

disk = ['file:/OVS/seed_pool/OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM/System.img,xvda,w', 'file:/OVS/seed_pool/OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM/oracle11g_x86_asm.img,xvdb,w']

memory = '2048'

name = 'OVM_EL5U3_X86_ORACLE11G_SIEBEL811ENU_SIA21111_PVM'

on_crash = 'restart'

on_reboot = 'restart'

uuid = '1f143d42-c9d3-dff0-b324-a87ef29d1d8e'

vcpus = 1

vfb = ['type=vnc,vncunused=1,vnclisten=0.0.0.0']

vif = ['']

Create XM

Start Oracle database template

# xm create vm.cfg

Confirm that your template has started correctly. There should not be any error message and the control is at the prompt again.

# xm list

There should be a console number in front of the template name.

e Use any VNC client to connect the OVM Server with the VNC port.

# vncviewer <OVM Server host> [OVM Server host is IP address of your hypervisor]

If using TightVNC for Windows, simply use Hypervisor’s IP address to connect

Following is the onscreen instruction to configure the new OVM guest

Use DHCP? y/n [n]n

Static IP: <Enter a valid IP address>

Netmask: <Enter netmask>

Default Gateway IP: <Enter default IP>

DNS Server IP: <Enter DNS Server IP>

Hostname: <Enter the OVM Hostname>

Relink binaries y/n [n] n

Http port for app express [8080]

Listener port [1521]

sys password:
(Note: Same password will be used for system and apex admin accounts)

autostart db y/n [y]
local bin directory [/usr/local/bin]
You will now be prompted to login to the OVM guest

Note: Once done, you can also access the new guest environment using SSH with the newly assigned IP address or the hostname

Enter username: oracle
Enter password: oracle
OVM Root Password: ovroot
Siebel schema owner and password
schema name: sia
schema password: sia
Your database instance is up and running. Make sure to capture the database’s IP address if you elected DHCP.

f If you selected DHCP, additional steps are required as follows.

- Log in to the template instance as root and identify the NIC’s MAC address by running the following command:
  
  # ifconfig eth0

  The address is the field marked "HWaddr". Make a note of this address.

- Back in the VM Server, modify the template configuration file with a text editor.
  Change the line:

  vif = [ 'type=netfront', ]

to the following:

  vif = [ 'type=netfront, mac=00:16:3E:xx:xx:xx', ]

  where "00:16:3E:xx:xx:xx" is the MAC address identified in the previous step.

- Shutdown and restart the template.
  # xm list (make note of the template console ID)
  # xm shutdown <template console ID>

  Wait for two minutes. Run (xm list) to make sure the template no longer appears on the list.
  # xm create vm.cfg

  Make sure you are able to connect to the DB by logging into the DB VM first and running the following command. You should see current date returned as output.
Installation Process: Process of Installing the Template

> sqlplus sia/sia@orcl OR sqlplus / as sysdba

Then type quit to exit the sqlplus prompt.

VM Manager method: (Use this method if you elected not to use the command line interface to load VM Templates)

**NOTE:** See detailed instructions below on how to use VM Manager to install VMs.

4 Install Oracle VM Template for Siebel Business Applications

Log into the system you prepared with VM Server to host the Siebel application on.

a Unzip the files individually.

# cd /OVS/seed_pool

# unzip OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_1of2.zip

# unzip OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_2of2.zip

Two files are produced as follows:

# ls

OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_1of2.tgz.0

OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_2of2.tgz.1

b Untar the tgz file to the location for the guest disk images, this step will create a directory with the name of the template.

# cat OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_1of2.tgz.0

OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_2of2.tgz.1 | tar xzf -

This creates your final template directory:

OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM

c Confirm all the required files are there:

# ls OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM

siebel.img

System.img

vm.cfg

d Confirm / Modify vm.cfg file for the database template.

Location of image files: Confirm the correct location of the two .img files.

memory: Should be maximum possible. Default is 3 GB.

VCPU: Set it based on # of CPUs available and performance required. Default is 1.

# vi vm.cfg

bootloader = '/usr/bin/pygrub'
Installation Process - Process of Installing the Template

```
 disk = ['file:/OVS/seed_pool/OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM/System.img,hda,w',
         'file:/OVS/seed_pool/OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM/siebel.img,hdb,w']
 memory = '3072'
 name = 'SiebelApp'
 on_crash = 'restart'
 on_reboot = 'restart'
 vcpus = 1
 vfb = ['type=vnc,vncunused=1,vnclisten=0.0.0.0']
 vif = ['']

 e  Create XM
     Start this OVM Siebel template:
     # xm create vm.cfg

     Then use any VNC client to connect to the OVM Server. VNC port is only required when using a single hardware to host multiple VM Templates.
     vncviewer <OVM Server host>:<port> [where OVM Server host is the IP address of the hypervisor and <port> = 1] Example; 10.4.5.6:1

     If using TightVNC for Windows, simply use Hypervisor’s IP address to connect.

     Following is the onscreen instruction to configure the new OVM guest
        Use DHCP? y/n [n]n
        Static IP: <Enter a valid IP address>
        Netmask: <Enter netmask>
        Default Gateway IP: <Enter default IP>
        DNS Server IP: <Enter DNS Server IP>
        Hostname: <Enter the OVM Hostname>

        Specify the Database server name or IP address to be used by Siebel:
        <Noted during database template install time>

        Specify a port that will be used for the database listener [1521]:

     You will now be prompted to login to the OVM guest

     NOTE: Once done, you can also access the new guest environment using SSH with the newly assigned IP address or hostname
        Enter username: siebel
```

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Enter password: siebel
OVM Root Password: ovsroot
Siebel schema username and password
schema name: sia
schema password: sia
Application ports
-------------
Siebel Web Server: 7780
Siebel Gateway Server: 2320
Server Connection Broker(SCB): 2321
Access Siebel application
http://<hostname>:7780/sales_enu
http://<hostname>:7780/marketing_enu
http://<hostname>:7780/callcenter_enu
username: sadmin
password: sadmin

**NOTE:** When needed, to start and stop Siebel application use the scripts located in:
/u01/apps/app_start.sh and app_stop.sh.

If you selected DHCP, additional steps are required as follows:

- Log in to the template instance as root and identify the NIC's MAC address by running the following command:
  
  # ifconfig eth0

  The address is the field marked "HWaddr". Make a note of this address.

- Back in the VM Server, modify the template configuration file with a text editor.
  
  Change the line:
  
  vif = [ 'type=netfront', ]

  to the following:
  
  vif = [ 'type=netfront, mac=00:16:3E:xx:xx:xx', ]

  where "00:16:3E:xx:xx:xx" is the MAC address identified in the previous step.

- Shutdown and re-start the template.
  
  # xm list (make note of the template console ID)
  
  # xm shutdown <template console ID>

- Wait for two minutes. Run (xm list) to make sure the template is no longer appears on the list.
Installation Process ▪ Process of Installing the Template

# xm create vm.cfg

g  Use VNC Viewer to access the Siebel VM

h  Log in as siebel user and run “ps -ef | grep sieb” command to confirm that Siebel applications are running. In some cases you may have to start Siebel manually. Follow these instructions to stop and start Siebel manually.
   □  # cd /u01
   □  # ./bounce_siebel_apps.sh
   □  # ./app_stop.sh (if bounce does not work)
   □  # ./app_start.sh

VM Manager Method: Use this method if you elect not to use the command line interface to load VM Templates.

Importing from an Oracle VM Server

To import an Oracle VM template into Oracle VM Manager from an Oracle VM Server

1  Assuming Oracle VM template directory has been placed in the /OVS/seed_pool directory.

2  Log into Oracle VM Manager and navigate to the Resources tab. The Virtual Machine Templates screen is displayed. Click Import. The Source screen is displayed.

3  Choose Select from Server Pool (Discover and register) and click Next.
   The General Information screen is displayed.

4  Enter or select the following:
   □  Server Pool Name: Select the server pool on which the virtual machine will be located.
   □  Virtual Machine Template Name: Select the Oracle VM template to be imported.
   □  Operating System: Select the operating system of the virtual machine.
   □  Virtual Machine System Username: Enter the username used to log into the virtual machine.
   □  Virtual Machine System Password: Enter the password used to log into the virtual machine.
   □  Description: Enter a description of the virtual machine.
   □  Click Next. The Confirm Information screen is displayed.

5  Click Confirm. The Virtual Machine Template screen is displayed with a message to confirm the template is imported.

6  To make the virtual machine template available for use, select the virtual machine template and click Approve. The View Virtual Machine Template screen is displayed. Click Approve.
   The Oracle VM template is imported and ready for use in Oracle VM Manager.

NOTE:  Downloaded .zip and .tgz files can be deleted.
Creating an Oracle Enterprise Linux Virtual Machine

To create an Oracle Enterprise Linux virtual machine using an Oracle VM template

1. Follow the steps in section "Importing an Oracle VM Template into Oracle," use VM Manager" to import the virtual machine template into Oracle VM Manager.

2. Log in to Oracle VM Manager and navigate to the Virtual Machines tab. Click Create Virtual Machine. The Creation Method screen is displayed.

3. Select Create virtual machine based on virtual machine template. Click Next. The Server Pool screen is displayed.

4. Select the Server Pool on which to create the virtual machine. Select an option from the Preferred Server dropdown. Click Next. The Source screen is displayed.

5. Select the template you imported in Step 1, and click Next. The Virtual Machine Information screen is displayed.

6. Enter the virtual machine name in the Virtual Machine Name field.

7. Enter the console password in the Console Password field. Confirm the console password by entering it again in the Confirm Console Password field. Select the network Interface Card and then click Next. The Confirm Information screen is displayed.

8. Confirm the virtual machine information, and click Confirm. The Virtual Machine screen is displayed with the message "Creating Virtual Machine".

9. When the virtual machine is created, the Status changes from Creating to Powered Off. To power on the virtual machine, click Power On.

Verifying the Template Installation

Using the URL noted during the installation of the Siebel VM Template, verify that your Siebel environment is setup correctly and that the database connection is working.

1. Go to the http://<Siebel Callcenter> URL

2. Log in as sadmin/sadmin.

3. Navigate to Site Map.

4. Navigate to Accounts and create an account.

5. Click Account and select opportunities second-level tab.

6. Create a new opportunity.

7. Navigate to Service Request and create a service request.

(Perform similar steps for Sales and Marketing.)
Using Virtual Siebel Environment

Bringing up multiple instances of the same template on one or more physical servers

Each new template requires additional physical memory and more CPU power to support the additional applications. It is important that each physical machine and each VM machine belongs to the same subnet. Static IP addresses are preferred for each physical and virtual machine.

In the example below, additional Siebel Server (or Siebel Web Server) is installed using the same Siebel VM Template file on the same hypervisor machine. We assume that the physical machine has at least additional 2 GB of physical RAM available. The process is same if a different physical server is used to bring up additional instances of Siebel.

1. Copy the zip file into a folder /OVS/
2. Unzip and then untar the files
3. Rename the directory to uniquely identify the application. For example
   OVM_EL5U3_X86_APPS_SIEBEL811ENU_SIA21111_PVM_SiebSr
4. In the vm.cfg file, change the name of the application. For example
   name = 'SiebelApp_Server2'
5. Follow the instructions provided previously to load this new template.
6. During the first boot provide the IP address and port number for the database.

Using Siebel Tools in the virtualized Siebel environment

The process for installing and using Siebel tools does not change when using virtualized Siebel using Oracle VM Template technology.

Siebel Tools is a Microsoft Windows based application and should be installed on a MSFT Windows system that is part of the same subnet as your virtualized Siebel environment.

Migrating a virtualized Siebel from one environment to another using VM Manager

With Oracle VM Manager, it is possible to migrate one virtual machine to another live. This feature can be used to migrate say from one DEV environment to another or from DEV to QA. Refer to the VM migration section in the Oracle VM Manager documentation located at:

http://download.oracle.com/docs/cd/E11081_01/doc/doc.21/e10901/vm.htm#BABHBEGF

For detailed instructions refer to Oracle VM documentation on Oracle Technology Network (OTN).

http://download.oracle.com/docs/cd/E11081_01/welcome.html
Going from shared server to a dedicated server for Oracle DB
Assuming that initially database and Siebel VMs were loaded on a single hypervisor, in order to accommodate for growth, database needs to be on a dedicated hardware with no other VMs running on that hypervisor.

1 Prepare a new physical server with new hypervisor. Use the instructions provided in this guide to bring up Siebel application in a new VM. Connect this new Siebel instance to your existing database.

2 Now you are ready to shut down the old Siebel instance which is sharing hardware with the database VM.
   - Log into Siebel application VM and shut down the Siebel application
   - Go to the Hypervisor and "xm shutdown <vm ID>" where the vm ID is the console ID of the Siebel VM running on that hypervisor. You can find out the vm ID by typing "xm list" command.

3 Once the Siebel VM has shut down, it is safe to delete the vm folder from that hypervisor.

4 Now you are ready to expand the footprint of the database VM
   - Bring the database down.
   - Shutdown the database VM
   - Adjust the memory and CPU parameters in the vm.cfg file of the database template. Use "xm info" command to see the hardware and other resources on this physical machine and the hypervisor.
   - XM Create the database template again. Verify that the database comes up correctly.
   - If required, make necessary adjustments to the disk space allocated to the database server.
   - If required, make necessary adjustments to the table space allocated to the database.
   - Stop and Start the database and/or the VM as necessary.

Add Siebel application servers to an existing Hypervisor
Assuming Siebel VM is running on a hardware that has spare CPU and memory resources to support additional VMs.

1 Copy the template zip or tar files and create a new VM directory in a location other than seed_pool. Rename the directory of the VM (say Siebel811_2)

2 Move this new directory into /OVS/seed_pool
3 Update the vm.cfg file of this new VM directory. Update the image location, VM name, disk and memory information appropriately.

4 Use "xm create vm.cfg" command to bring up this new template.
   Note: Do not copy and re-name an existing running vm folder. Always start with either the zip files or from the tar files.

**Add Siebel application servers to a new hardware**

Assuming a new physical hardware has been added to the Siebel infrastructure. Ensure that the IP address method is consistent (DHCP or Static) for the entire enterprise.

1 Using the already downloaded Siebel template, follow the instructions in this guide to install the template.

2 Bring up the Siebel template and provide the IP address and listener port number of the Siebel database.

**Add Siebel web servers to an existing Hypervisor OR Add Siebel web servers to a new hardware**

Follow the steps above for how to ‘Add Siebel application servers.’

Once Siebel application comes up, log into the Siebel VM and use standard Siebel administration guidelines to disable Siebel application server components and enable Siebel Web Server component.
5 Getting Help from Oracle

How to get support for products in the Oracle VM Template for Siebel CRM?

For products that are part of the Oracle VM Template for Siebel CRM, follow the instructions below to ensure timely and accurate support from Oracle. This section assumes that proper support options have been purchased.

Steps to perform before calling Oracle Support or logging a service ticket

1. Trace your steps back through the installation instructions to ensure all the necessary steps were performed as recommended.
2. If possible, start from scratch.
3. Keep a log of each installation step along with the values for various parameter settings, IP addresses, MAC addresses and any other decisions that were made during the installation.
4. Capture the problem description in detail, noting down any error messages including error codes, and conditions and decisions that lead to the error state.
5. Capture content from or save a copy of any log files relevant to your error. If unsure, save a copy of all the log files. Follow the specific product administration guide to find the location and description of the log files.
6. Because the VM Template delivers four different products in one package, it is important to know as much as you can, where the error is coming from before calling Oracle.

Who to call?

To ensure speedy and accurate support from Oracle, based on the information collected during debugging;

1. Call the main Oracle support line and ask for the specific product support team (Oracle Enterprise Linux, Oracle VM, Oracle Database, Siebel Applications, or Siebel Template Support)
2. If you have a direct phone contact for your specific product support, use that number.
3. If the problem is related to the Siebel Template, call Siebel Technical Support.
4. If logging a Service Request ticket, select the right product family, product name and component as it applies to your situation. (For example; you would call Oracle Database support if you are having trouble performance tuning Oracle Database)
What sort of problems may be associated to Oracle VM Template for Siebel?

Oracle VM Template for Siebel is a mechanism to deliver pre-installed virtualized Siebel Application environment. The Template was created using Oracle VM’s Template Builder Tool. As such the Oracle Database and Siebel Application functionality was not altered. Following are the possible problems that may be associated to the Siebel Template and its online delivery method.

1. Downloaded OVM Server ISO image corrupt or does not burn CD/DVD correctly. The DVD created is not bootable or installation of the VM Server fails.
2. Templates are corrupt when user tries to unzip and/or untar them. WinZip utility was used to unzip the Linux Templates.
3. Network outage was experienced during the download.
4. Invalid Memory and CPU settings in vm.cfg file.
5. Not enough physical system resources (hard disks, memory and CPU)
6. Unsupported hardware configuration such as multiple NIC cards without dedicated IP addresses.