

# HOL 10472

# How to Deploy an Oracle E-Business Suite System in Minutes Using Oracle VM Templates

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## **1 INTRODUCTION**

## 1.1 LAB OBJECTIVE

# This document details all actions that you will be running during Oracle OpenWorld session Hands On Lab HOL10472.

The objective of this lab is to demonstrate how OracleVM Templates provide an easy and fast way of deploying Oracle Applications like Oracle eBusiness Suite systems. Those templates are designed to build test or production environments single or multi-tier.

## During this session, you are going to deploy a two-tier Oracle eBusiness Suite 12.1.3 system with one database node and one application node.

### STEPS TO PERFORM BEFORE CONTINUING READING :

TO SAVE TIME, THE FIRST THING TO DO IS TO START BOTH VirtualBox VMs (Oracle VM Manager and Oracle VM Server) :

- Select the VM called "ovmm10472.oow.local" and click on the icon it (Figure 1.1.1)
- Select the VM called "ovs10472.oow.local" and click on the icon 🕏 to start it (Figure 1.1.1)



Figure 1.1.1





## 1.2 PREPARATION (HAS BEEN DONE BEFORE THE LAB)

To save time and fit in the one hour slot of Oracle OpenWorld labs, some actions were made before the actual lab.

Here is a quick list of actions which were already done :

- Install Oracle Linux 6.7 (64 bits) on all the laptops.
- Install Oracle VirtualBox 5.0.6 + Extension Pack on all the laptops.
- o Install an Oracle VM Manager 3.3.3 server in a VirtualBox virtual machine.
- o Install an Oracle VM Server 3.3.3 server in a VirtualBox virtual machine.

## 1.3 GLOBAL PICTURE

The following picture shows all the components of this HOL:









## **2 DETAILED INSTRUCTIONS**

## 2.1 START BOTH SERVERS (VIRTUAL BOX VMS)

# As previously explained, we will use Oracle VirtualBox to host the 2 servers (Oracle VM Server, Oracle VM Manager) on a single laptop.

Both VMs should have been started in 1.1, if not please start both VMs as described in Chapter 1.1

### TO DO :

- Wait for both VMs to be ready
  - Wait for the Oracle Linux display screen on the VM ovmm10472.oow.local (Figure 2.1.2)
  - Wait for Oracle VM server display screen on the VM ovs10472.oow.local (Figure 2.1.2)
  - Open a Terminal window and check you are able to ping both VMs : ovmm10472.oow.local : 192.168.56.50 ovs10472.oow.local : 192.168.56.10



Figure 2.1.2

- Once both VMs are started and you have checked ping is OK you can :
  - Minimize the main VirtualBox program window
  - Minimize the Oracle VM Manager VirtualBox window
  - Minimize the Oracle VM Server VirtualBox window

All next steps will be done from your laptop native OS.





## 2.2 CONNECT TO THE ORACLE VM MANAGER CONSOLE

TO DO :

 On your Linux physical desktop open a Firefox browser and connect to the Oracle VM Manager console using URL <u>https://192.168.56.50:7002/ovm/console</u>

You should get the following login page :

🖉 Oracle VM Login 🛛 🗶 🔶			
A https://192.168.56.50:7002/ovm/console/faces/login.jspx		✓ C Q. Search	☆ @ ♥ ♣ ♠ ♥ ☰
CRACLE VM Manager			
	Welcome Log in 5 the Oracle VM Manager * Username: addrim * Password: > Accessibili Welcome 1		
	Logn		
		Copyright © 2007, 2014 Orac	le and/or its affiliates. All rights reserved. Oracle VM Manager 3.3.3.1085

- Log in using the following credentials:
  - Login : admin(Oracle VM Manager Administrator)
  - o Password : Welcome1

## 2.3 CREATE A STORAGE REPOSITORY

A storage repository is where Oracle VM resources may reside. Resources include virtual machines, templates for virtual machine creation, virtual machine assemblies, ISO files (DVD image files), shared virtual disks, and so on.

We will create a storage repository for Oracle VM by using a pre-existing disk. This disk already contains an existing repository with Oracle E-Business Suite template inside. Creating the repository is very simple but importing the Oracle E-Business Suite template would take too much time during this HOL session.





### TO DO :

- In servers and VMs Tab, select ovs10472.oow.local and in Perspective choose Physicals disks (Figure 2.3.1)
- Select the 250 GB hard disk (SATA\_VBOX\_HARDDISK) (Figure 2.3.1)
- Click on the Physical Disk (Figure 2.3.1) and click OK on the Confirmation window

Oracle VM Home × •	
A https://192.168.56.50.7002/ovm/console/faces/resource/resourceView.jspx	✓ C Q Search
ORACLE' VM Manager	
Health       Servers and VMs       Repositories       Networking       Storage       Jobs         Image: Server Proofs       Image: Ser	tug-in Description ineric SC VBOX HARDDISK
Figure 2.3.1	

- In Repositories tab you will see the pre-existing repository named "ebsrepo\_12.1.3". For now, this repo is not already presented to any server
- Select the repository named "ebsrepo\_12.1.3" and click local to edit the Repository (Figure 2.3.2)
- In the Present Repository tab, add "ebspool.oow.local(0/1)" to the Presents to Server Pool(s) list box (Figure 2.3.2)
- Click OK to complete

🖉 Oracle VM Home 🛛 🗶 🔶		
A https://192.168.56.50:7002/ovm/cons	sole/faces/resource/resourceView.jspx	~
ORACLE: VM Manager		
Servers and VMs       Repositories         Show My Repositories       Image: Comparison of the server of the	Networking       Storage       Jobs         Perspective:       Info       Info         Respective:       Info       Info         Parts:       Connect by you         Path:       Info       Info         Share Path:       Info       Info         Info       0004fb0000030000cdca77dd28e5307         Presented to Servers:       Present Repository         Present Repository       Present Repository         No data to display       Present Repository ebsrepo_121.13 to:       Server Pool(s)         @stopic/output       @stopic/output       @stopic/output         Info       Info       Server Pool(s)       Present Repository         Present Repository       Present Repository       Present Server Pool(s)       @stopic/output         Info       Info       Info       Info       Info         Info       Info       Info       Info       Info         Info       Info       Info       Info       Info	

Figure 2.3.2

- The repository is now owned and presented to the Oracle VM Server "ovs10472.oow.local"
- You need to refresh the repository by clicking on 🚇 (Figure 2.3.3)







Health Servers and VMs Repositories	Networking Storage Tools and Resources Jobs
negan gervers and this Aepositories	Temeruna entrate Teera mur veseniera Teera
<ul> <li>Show My Repositories</li> <li>Show All Repositories</li> <li></li></ul>	Perspective:       Info         Repository Name:       ebsrepo_12.1.3         Ownership:       Owned by you         Path:       //dev/mapper/IATA_VBOX_HARDDISK_VB516e5b5-9505d6a0         Physical Disk:       IATA_VBOX_HARDDISK_VB516e5b5-9505d6a0         Share Path:       File System Used (GiB): 109.55         Used %:       44.0%         ID:       0004/tb0000030000cdca77dd28e5307a         Presented to Server S:       Server Paol         Server Name       Server Pool         Status       ovs10472.oowl

Figure 2.3.3

- Under "ebsrepo\_12.1.3", VM Templates check that following templates are available:
   EBS1213\_APPS-TIER (Oracle eBusiness Suite 12.1.3 Application Tier)
  - EBS1213\_DB-TIER (Oracle eBusiness Suite 12.1.3 Database Tier)



Figure 2.3.4

Now that you have a repository and a complete Oracle eBusiness Suite 12.1.3 template inside, you are going to create 2 virtual machines from this template ( one for each template ).





## 2.4 CLONE VM FROM EBS DB-TIER ORACLE VM TEMPLATE

The goal of this HOL LAB is to configure a 2 nodes eBusiness Suite system; first node that will be created is the database-tier:

- Click the **Servers and VMs** tab (Figure 2.4.1)
- Click Create Virtual Machine *if* in the toolbar (Figure 2.4.1)
- From Create Virtual Machine wizard (Figure 2.4.1)
  - Select Clone from an existing VM Template
  - VM Template = EBS1213\_DB-TIER
  - $\circ$  Clone Count = 1
  - $\circ$  Name Index = 0
  - VM Name = ebsdb01.oow.local

Oracle VM Home × +					
A https://192.168.56.50:7002/ovm/c	onsole/faces/resource/resourceView	v.jspx			• C Q Search
ORACLE: VM Manager					
Health Servers and VMs Repositori	es <u>N</u> etworking St <u>o</u> rage	Tools and Resources Jobs			
Server Pools	View → Perspective: Physical Name ▲ Event Se > 1ATA_VBOX_HAR Informati	Disks 1 66 / 25 등 정 정 정 정 Name Filter. verity Size (GiB) Volume Group SAN Server onal 250.0 Local Storage Volume Group Generic Local Storag	Type Fi e Array LUN fs	Go Storage Plu le System Storage Plu on 1ATA_VBOX Oracle Gene	g-In Description eric SC VBOX HARDDIS
		🔮 Create Virtual Machine			
		How do you want to create your Virtual Machine?			
		Create a new VM (Click Next to continue)	Cione for Cone for Cone for Cone for Cone for Repository: VM Templat VM Name: * Server Pool Description: One: The f Cione oper	m an existing VM Template	C C C C C C C C C C C C C C C C C C C
					<u>Cancel</u> <u>Finish</u>

Figure 2.4.1

- Click Finish
- In Servers and VMs Tab, In Perspective select Virtual Machines, you should have 1 VM: ebsdb01.oow.local.0

Oracle VM Home × +					
A https://192.168.56.50:7002/ovm/	console/faces/resource/resourceView.jspx				✓ ♂ ♀
ORACLE: VM Manager					
Health Servers and VMs Repositor	es <u>N</u> etworking St <u>o</u> rage <u>T</u> ools a	and Resources <u>J</u> obs			
B. P. J. / X. Q. 2	View - Perspective: Virtual Machine	es 💽 / 🗶 🕨 💷 🕬	200 C III 21 26 26 93	🖳 🗐 🛛 Name Filter 💽	Go
Server Pools	Name Status Tag(s)	Event Severity Server	Max. Memory (MB) Memory (MB)	Max. Processors Processors	Keymap Operating System
復 [wstb472.oow.loca] ① Unassigned Servers ② Unassigned Virtual Machines					
Figure 2.4.2				Hardware and Sof	ftware

Engineered to Work Together





## 2.5 CLONE VM FROM EBS APP-TIER ORACLE VM TEMPLATE

The goal of this HOL LAB is to configure a 2 nodes eBusiness Suite system; second node that will be created is the application-tier:

- Click the **Servers and VMs** tab (Figure 2.5.1)
- Click Create Virtual Machine *if* in the toolbar (Figure 2.5.1)
- From Create Virtual Machine wizard (Figure 2.5.1)
  - Select Clone from an existing VM Template
  - VM Template = EBS1213\_APP-TIER
  - $\circ$  Clone Count = 1
  - $\circ$  Name Index = 0
  - VM Name = ebsapp01.oow.local

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ORACLE' VM Manager			
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Server Pools      Server Pools      Server Pools      Server Pools      Server Servers      Unassigned Servers      Unassigned Virtual Machines	View • Perspective: [Virtual Max Name	chines V X X Q Q X C C C C C C C C S C S S S S S S S S S	Max         Processors         Processors         Coperating System           1         en-us         Oracle Linux 5
		😭 Create Virtual Machine	
		How do you want to create your Virtual Machine?	
		Create a new VM (Click Next to continue)	Clone from an existing VM Template Clone Count 10 Name IndeC 00 * Repository: ebsrepo_12.1.3 * * VM Template EBS1213_APPS-TIER * VM Name: ebsapp01.cow.local * * Server Pool: ebspool.cow.local * Description: 0 Note: The repository will be locked for the duration of the Simple Clone operation.
			_ <u>Cancel</u> _Einish _

Figure 2.5.1

- Click Finish
- In Servers and VMs Tab, In Perspective select Virtual Machines, you should have 2 VMs: ebsdb01.oow.local.0 and ebsapp01.oow.local.0

Oracle VM Home 🗙 💠									
A https://192.168.56.50:7002/ovm/con	sole/faces/resource/resourceView.jsp>	x							✓ C Q, Se
ORACLE: VM Manager									
Health Servers and VMs Repositories   Repositories	Networking Storage Tools View - Perspective: Virtual Machin Name Status Tag(s) > ebsapp01.cow.l Stopped > ebsdb01.cow.lo Stopped	and Resources	Jobs	2 (2) (2 11) Max Memory (MB 4096 4096	1 등 1 등 등 등 Memory (MB) 4096 4096	Max. Proces	ume Filter Y ssors Processors K 1 e 1 e	Ceymap In-us In-us	Qperating System Oracle Linux 5 Oracle Linux 5
		Fig	ure 2.5.	2					



ORACLE







## **3 START AND CONFIGURE EBUSINESS SUITE VMS**

Oracle VM Templates and Appliances are built to be automatically managed by Oracle Enterprise Manager 12c where, using OEM12c, you are able to deploy the entire Oracle E-Business Suite System; this does not mean that everything can be manually executed.

In this HOL we are going to create an Oracle eBusiness Suite 12.1.3 system composed of 1 VM related to the database-tier and 1 VM related to the application-tier; Oracle VM Templates and Appliances of newer Oracle eBusiness Suite releases (like 12.2.x) are already available but with our limited resource (single laptop) and time (1 hour) we haven't the opportunity to use the latest release.

You can find much more details at the following link:

https://blogs.oracle.com/stevenChan/entry/e\_business\_suite\_virtual\_machines

### 3.1 START AND CONFIGURE DATABASE-TIER VM

In "Oracle VM Manager" BUI choose VM named "ebsdb01.oow.local" and edit it (Figure 3.1.1):

- Click the Servers and VMs tab
- Click physical server "ovs10472.oow.local"
- Select Perspective "Virtual Machines"
- Select VM "ebsdb01.oow.local" and button "Edit"



Figure 3.1.1

We need to associate vNIC to a specific network-type before starting it; in the "Edit VM" section (Figure 3.1.2):

- Click "Network" tab
- Under "Slot 0" choose Network named "guest-network-public"
- Confirm with "OK"





#### Edit Virtual Machine:ebsdb01.oow.local.0

Slot	MAC Address	Network	Action
)	00:21:f6:eb:96:e6	guest-network-public	×
			4
			~
\dd a \	'irtual NIC to this Virtual Machine:		
ldd a V O Dy	'irtual NIC to this Virtual Machine: namically Assign MAC	Natural and taken to sublice	
dd a \ O Dy O Sp	ritual NIC to this Virtual Machine: namically Assign MAC ecify MAC Address:	Network: guest-network-public	Add <u>V</u> NIC
dd a \ O Dy O Sp	rirtual NIC to this Virtual Machine: namically Assign MAC ecify MAC Address:	Network: guest-network-public	Add <u>V</u> NIC

Figure 3.1.2

In "Oracle VM Manager" BUI choose VM named "ebsdb01.oow.local" and start it (Figure 3.1.3):

- Click the Servers and VMs tab
- Click physical server "ovs10472.oow.local"
- Select Perspective "Virtual Machines"
- Select VM "ebsdb01.oow.local" and button "Start"

Oracle VM Home     ×						
A https://192.168.56.50:7002/ovm/conse	ole/faces/resource/resourceView.jsp					✓ C Q St
ORACLE: VM Manager						
Health Servers and VMs Repositories	Networking Storage Tools View - Perspective: Virtual Machin Name → Status Tag(s) > ebsap01.cowl Stopped > ebsdb01.cowlo Stopped	and Resources Jobs es V Resources Jobs es V Resources V Resources Event Server Informational ovs10472.cowl	<ul> <li>C C M C C C C C C C C C C C C C C C C C</li></ul>	A Constant And	vessors Keymap en-us en-us	Go Operating System Oracle Linux 5 Oracle Linux 5

Figure 3.1.3

Once VM is started, open the console of this VM (Figure 3.1.4):

- Click the Servers and VMs tab
- Click physical server "ovs10472.oow.local"
- Select Perspective "Virtual Machines"
- Select VM "ebsdb01.oow.local" and button "Launch Console"

## NB: a pop-up blocker could intercept the console so you should need to accept pop-ups from this website





V C Search				
🗧 ebsdb01.oow.local.0 - Mozilla Firefox 🚽 🗖 🗙				
ebsdb01.oow.local.0 × +				
🖕 🔄 🛦 https://192.168.56.50:7002/ovm/core/console/novne 🗸 C 🔍 Search 🔄 🔂 🖝 » 🗄				
Connected (encrypted) to: ebsdb01.cow.local.0				
W Oracle VM Console				
Oracle Linux Server 6.3				

Figure 3.1.4

By the console opened, once the prompt is ready, authenticate with "**root**" and the template will ask for new password for users like "**root**", "**oracle**" and "**appImgr**" ( you have to insert new passwords twice for each user ).

Defaults used in this HOL are:

root / ovsroot oracle / oracle applmgr / applmgr

At the step asking for:



Confirm with "PROD" option (this step will enable a Linux service to startup database-tier):





Proceed with "ebsdb01.oow.local" network configuration with the following steps:

- 1. cd /u01/install/scripts
- 2. ./configstatic.sh

Here the details to insert into the network configuration phase (Figure 3.1.5):

- Enter static IP address: 192.168.56.90
- Enter netmask: **255.255.255.0**
- Enter gateway: 192.168.56.1
- Enter DNS server: 192.168.56.50
- Enter Hostname: ebsdb01.oow.local (correct name should be proposed)

Connected (encrypted) to: ebsdb01.oow.local.0	Ctrl Alt Ctrl-Alt-Del 👰
Oracle VM Console	
-rwxr-xr-x. 1 oracle oinstall 1786 May 23 2014 configstatic.sh -rwxr-xr-x. 1 oracle oinstall 7544 May 22 2014 configwebentry.sh -rwxr-xr-x. 1 oracle oinstall 508 May 22 2014 configuum.sh -rwxr-xr-x. 1 oracle oinstall 608 May 22 2014 zeroout.sh Iroot@localhost scripts]# ./configstatic.sh Configure a Static IP	
Configuring network interface. Network device: eth0 Hardware address: 00:21:F6:EB:96:E6	
Enter static IP address: 192.168.56.90 Enter netmask: [255.255.255.0] 255.255.255.0 Enter gateway: 192.168.56.1 Enter DNS server: 192.168.56.50	
Shutting down interface eth0:[ OK ]Shutting down loopback interface:[ OK ]	
Configuring network settings. IP configuration: Static IP address	
Bringing up loopback interface: Bringing up interface eth0: Determining if ip address 192.168.56.90 is already in h0 [ OK ]	n use for device et
Enter hostname (e.g, host.example.com): [ebsdb01.oow.local]	
Network configuration changed successfully. IP configuration: Static IP address IP address: 192.168.56.90 Netmask: 255.255.255.0 Gateway: 192.168.56.1 DNS server: 192.168.56.50 Hostname: ebsdb01.oow.local [root@localhost scripts]#_	

Figure 3.1.5





Proceed with "**ebsdb01.oow.local**" Oracle eBusiness Suite Database-Tier configuration with the following steps (Figure 3.1.6):

- Change directory to "/u01/install/PROD/scripts" cd /u01/install/PROD/scripts
- Execute command "**proddbconfig.sh**" to proceed with the database configuration: ./proddbconfig.sh
  - o Enter the Oracle Database SID: OOW2015

Connected (encrypted) to: ebsdb01.oow.local.0
Oracle VM Console
-rwxr-xr-x. 1 oracle oinstall 704 May 21 2014 proddb.rc -rwxr-xr-x. 1 oracle oinstall 1638 May 21 2014 startproddb.sh -rwxr-xr-x. 1 oracle oinstall 1634 May 21 2014 stopproddb.sh [root@localhost scripts]# ./proddbconfig.sh
Pinging the Host ebsdb01.oow.local The Host ebsdb01.oow.local is responding proceeding with the configuration
Prepare the Pairs File for Database Tier Clone
ORACLE_SID is not set in the Pairs File Enter the Oracle Database SID :00W2015
Starting DB Tier configuration
Parameters Used for this Configuration The Pairs File :/u01/install/PROD/scripts/inst_db_pairs.txt The Source context file used :/u01/install/PROD/db/tech_st/12/appsutil/clone/context/db/CTXDRIG.xml The Target context file :/u01/install/PROD/db/tech_st/12/appsutil/OOW2015_ebsdb01.xml
The Configuration Used to Create this UM The Oracle E-Business Suite DBSID : OOW2015 The Oracle E-Business Suite DB HostName : ebsdb01 The Oracle E-Business Suite DB Domain Name :oow.local The Oracle E-Business Suite DB TNS Port :1521
Starting Oracle Universal Installer
Checking swap space: must be greater than 500 MB. Actual 10239 MB Passed -

Figure 3.1.6

The "Rapid Clone Wizard" will proceed to the database configuration (Figure 3.1.7):





Figure 3.1.7

Once completed a window asking for "**root**", "**oracle**" and "**appImgr**" password; after that an output similar to the following one may appear (Figure 3.1.8):

Connected (encrypted) to: ebsdb01.oow.local.0	Ctrl Alt	Ctrl-Alt-Del
Oracle VM Console		
addbctl.sh: exiting with status 0		
======================================		
The Oracle E-Business Suite DB HostName : ebsdb01.oow.local The Base Installation Directory : /u01/install/PROD The Oracle Home Location : /u01/install/PROD/12 The Oracle E-Business Suite Data File Dir: /u01/install/PROD/data The Oracle E-Business Suite DBSID : OOW2015 The Oracle E-Business Suite DB TNS Port : 1521 ====================================		
[root@localhost scripts]#		

Figure 3.1.8





Now you should be able to directly connect to the VM "**ebsdb01.oow.local**" and verify that <u>Oracle</u> <u>Database 12.1.0.1</u> is active; proceed with following steps (Figure 3.1.9):

- ssh on ebsdb01.oow.local (credential root/ovsroot) ssh root@192.168.56.90
- Change user to "oracle" su - oracle
- Export following env parameters: export ORACLE\_HOME=/u01/install/PROD/db/tech\_st/12 export PATH=\$ORACLE\_HOME/bin:\$PATH export ORACLE\_SID=OOW2015
- Connect "as sysdba" to the database: sqlplus / as sysdba
- Execute the following statement to verify that Oracle Instance is opened: set lines 180 select \* from v\$instance;

🔄 🔤 Term - oracle@ebsdb01:~ 🔤 🗖 🗙
<pre>[root@ebsdb01 ~]# su - oracle [oracle@ebsdb01 ~]\$ export ORACLE_HOME=/u01/install/PROD/db/tech_st/12 [oracle@ebsdb01 ~]\$ export PATH=\$ORACLE_HOME/bin:\$PATH [oracle@ebsdb01 ~]\$ export ORACLE_SID=00W2015 [oracle@ebsdb01 ~]\$ sqlplus / as sysdba</pre>
SQL*Plus: Release 12.1.0.1.0 Production on Wed Oct 14 09:08:27 2015
Copyright (c) 1982, 2013, Oracle. All rights reserved.
Connected to: Oracle Database 12c Enterprise Edition Release 12.1.0.1.0 - 64bit Production With the Partitioning, OLAP, Advanced Analytics and Real Application Testing options
SQL> set pages 180 SQL> select * from v\$instance;
INSTANCE_NUMBER INSTANCE_NAME
HOST_NAME
VERSION 0% STARTUP_T STATUS PAR THREAD# ARCHIVE LOG_SWITCH_WAIT
LOGINS SHU DATABASE_STATUS INSTANCE_ROLE ACTIVE_ST BLO CON_ID
INSTANCE_MO EDITION
FAMILY
1 00W2015 ebsdb01.oow.local 12.1.0.1.0 14-OCT-15 OPEN NO 1 STOPPED ALLOWED NO ACTIVE PRIMARY_INSTANCE NORMAL NO 0 REGULAR EE

Figure 3.1.9





## 3.2 START AND CONFIGURE APPLICATION-TIER VM

In "Oracle VM Manager" BUI choose VM named "ebsapp01.oow.local" and edit it (Figure 3.2.1):

- Click the Servers and VMs tab
- Click physical server "ovs10472.oow.local"
- Select Perspective "Virtual Machines"
- Select VM "ebsapp01.oow.local" and button "Edit"

🖉 Oracle VM Home 🛛 🗶 🐣				
◆ ▲ https://192.168.56.50:7002/ovm/cons	ole/faces/resource/resourceView.jspx			
ORACLE: VM Manager				
Health Servers and VMs Repositories	Networking Storage Tools a	and Resources Jobs		B. C
	ebsapp01.oow.l Stopped	Information Edit s10472.oow.l	4096 4096	1
Unassigned Virtual Machines	> ebsdb01.cow.lo Running	Informational ovs10472.oow.l	4096 4096	1

Figure 3.2.1

We need to associate vNIC to a specific network-type before starting it; in the "Edit VM" section (Figure 3.2.2):

- Click "Network" tab
- Under "Slot 0" choose Network named "guest-network-public" and confirm with "OK"

Edit Virtual Machine:ebsapp01.oow.local.0

_	Iguration Networks Disks	Boot Order Tags	
Slot	MAC Address	Network	Action
)	00:21:f6:c5:06:92	guest-network-public 💌	×
			$\bigtriangledown$
dd a V	rinual NIC to this Virtual Machine:		
O o	ecify MAC Address:	Network: guest-network-public	► Add <u>V</u> NIC
2 Sn			
⊖ Sp			_
U Sp			<u>C</u> ancel O <u>K</u>
⊖ sp		Figure 3.2.2	<u>Cancel</u> OK





In "Oracle VM Manager" BUI choose VM named "ebsapp01.oow.local" and start it (Figure 3.2.3):

- Click the Servers and VMs tab
- Click physical server "ovs10472.oow.local"
- Select Perspective "Virtual Machines"
- Select VM "ebsapp01.oow.local" and button "Start"

∫ Oracle VM Home × ♣									
A https://192.168.56.50:7002/ovm/con	sole/faces/resource/resourceView.jspx							✓ C <sup>2</sup>	Q Se
ORACLE' VM Manager									
He <u>a</u> lth <u>S</u> ervers and VMs <u>R</u> epositories	<u>N</u> etworking St <u>o</u> rage <u>T</u> ools a	nd Resources	Jobs						
	View - Perspective: Virtual Machine	s 🚽 🧷 🗙	<b>()</b>	2 <b>()</b> () ()	<b>5</b> 8 8 9	R. 100 N	ame Filter 🔄		Go
V 🕅 Server Pools	Name Status Tag(s)	Event Severity	Server	Max. Memory (ME	Memory (MB)	Max. Proce	essors Processors Keym	p Operating Sy	stem
V P ebspool.oow.local	ebsapp01.oow.l Stopped	Informational	ovs10472.oow.l	4096	4096	1	1 en-us	Oracle Linux	5
ovs10472.oow.local	▷ ebsdb01.oow.lo Running	Informational	ovs10472.oow.l	4096	4096	1	1 en-us	Oracle Linux	5
<ul> <li>Unassigned Servers</li> <li>Unassigned Virtual Machines</li> </ul>									
		<u> </u>							

Figure 3.2.3

Once VM is started, open the console of this VM (Figure 3.2.4):

- Click the Servers and VMs tab
- Click physical server "ovs10472.oow.local"
- Select Perspective "Virtual Machines"
- Select VM "ebsapp01.oow.local" and button "Launch Console"

# NB: a pop-up blocker could intercept the console so you should need to accept pop-ups from this website



Figure 3.2.4





By the console opened, once the prompt is ready, authenticate with "root" and the template will ask for new password for users like "root", "oracle" and "applmgr" (you have to insert new passwords twice for each user ).

Defaults used in this HOL are:

root / ovsroot oracle / oracle applmgr / applmgr

At the step asking for Database-Tier information, use following datas (Figure 3.2.5):

- Enter the IP Address of the Database Tier Host: 192.168.56.90
- Enter the Database Tier Hostname without the domain: ebsdb01 •
- Enter the Database Tier domain name: oow.local •

Connected (encrypted) to: ebsapp01.oow.local.0	Ctrl Alt	Ctrl-Alt-Del
Oracle VM Console		
HOSTNAME FOR THE UM : localhost.localdomain DB FILE SYSTEM OWNER : applmgr TOP-LEVEL INSTALLATION DIRECTORY: /u01/install/APPS SCRIPTS TO START/STOP/RECONFIGURE THE INSTANCE: /u01/install/APPS/scripts SCRIPTS TO RECONFIGURE THE UM: /u01/install/scripts ORACLE E-BUSINESS SUITE HOME PAGE: http://apps.example.com:8000 ==================================		

Figure 3.2.5

Now the configuration will proceed to create and execute a complete "AutoConfig" on the applicationtier system; once completed you'll have to confirm the creation of a Linux Service dedicated to start Application-Tier processes while booting the VM (Figure 3.2.6):

Enter your response (APPS/NONE): APPS •



Figure 3.2.6





Proceed with "ebsapp01.oow.local" network configuration with the following steps:

- cd /u01/install/scripts
- ./configstatic.sh

Here the details to insert into the network configuration phase (Figure 3.2.5):

- Enter static IP address: 192.168.56.80
- Enter netmask: 255.255.255.0
- Enter gateway: 192.168.56.1
- Enter DNS server: **192.168.56.50**
- Enter Hostname: ebsapp01.oow.local (correct name should be proposed)

Connected (encrypted) to: ebsapp01.oow.local.0	Ctrl Alt	Ctrl-Alt-Del
-rwxr-xr-x. 1 applmgr oinstall 1787 May 24 2014 configstatic.sh -rwxr-xr-x. 1 applmgr oinstall 4596 Jun 9 2014 configwebentry.sh -rwxr-xr-x. 1 applmgr oinstall 508 Jan 8 2014 configyum.sh -rwxr-xr-x. 1 root root 608 Jan 15 2014 zeroout.sh Iroot@localhost scripts]# ./configstatic.sh Configure a Static IP		
Configuring network interface. Network device: eth0 Hardware address: 00:21:F6:11:24:F3		
Enter static IP address: 192.168.56.80 Enter netmask: [255.255.255.0] 255.255.255.0 Enter gateway: 192.168.56.1 Enter DNS server: 192.168.56.50		
Shutting down interface eth0:[ OK ]Shutting down loopback interface:[ OK ]		
Configuring network settings. IP configuration: Static IP address		
Bringing up loopback interface: [ OK ] Bringing up interface eth0: Determining if ip address 192.168.56.80 is already in a h0 [ OK ]	use for d	evice et
Enter hostname (e.g, host.example.com): [ebsapp01.oow.local]		
Network configuration changed successfully. IP configuration: Static IP address IP address: 192.168.56.80 Netmask: 255.255.255.0 Gateway: 192.168.56.1 DNS server: 192.168.56.50 Hostname: ebsapp@1.oow.local [root@localhost scripts]#		

Figure 3.2.5

Proceed with "**ebsapp01.oow.local**" Oracle eBusiness Suite Application-Tier configuration with the following steps (Figure 3.2.6):

 Change directory to "/u01/install/APPS/scripts" cd /u01/install/APPS/scripts





- Execute command "appsconfig.sh" to proceed with the database configuration: ./appsconfig.sh
  - Press any key to continue...: <ENTER>
  - Enter the IP Address of the DB Tier Host: 192.168.56.90
  - Enter the Database Tier Host Name (without the domain): ebsdb01
  - o Enter the Database Tier Domain Name: **oow.local**
  - o Enter the Oracle Database Sid: OOW2015
  - o Enter the TNS Listener Port Number: 1521

Connected (encrypted) to: ebsapp01.oow.local.0
Oracle VM Console
Checking if the FQDN is > 30 chars
The FQDN is less than 30 characters. Proceeding with the configuration Database Tier Information is not set in the Pairs File Prompting the user for Database Tier Information
Enter the IP Address of the DB Tier Host: 192.168.56.90
Enter the Database Tier Host Name (without the domain) :ebsdb01
Enter the Database Tier Domain Name oow.local
Enter the Oracle Database SID (DOW2015)
Enter the TNS Listener Port Number 1521
Updating /etc/hosts file with DB Tier Information
Starting Apps Tier configuration
Parameters Used for this Configuration The Pairs File :/u01/install/APPS/scripts/inst_apps_pairs.txt The Source context file used :/u01/install/APPS/apps/apps_st/comn/clone/context/apps/CTXORIG.xml The Target context file :/u01/install/APPS/inst/apps/00W2015_ebsapp01/appl/admin/00W2015_ebsap p01.xml

Figure 3.2.6

At the end of the procedure, you'll have to re-insert passwords for "**root**", "**oracle**" and "**appImgr**" accounts; at the end you'll see an "INSTALLATION SUMMARY" (Figure 3.2.7):





Press any key to continue... [root@localhost scripts]# \_

Figure 3.2.7

Now you should be able to directly connect to the VM "**ebsdb01.oow.local**" and verify that <u>Oracle</u> <u>eBusiness Suite 12.1.3</u> is active; proceed with following steps (Figure 3.2.8):

- ssh on ebsapp01.oow.local (credential root/ovsroot) ssh root@192.168.56.80
- Change user to "appimgr" su – appimgr
- Execute the following "Env" script: . /u01/install/APPS/apps/apps\_st/appl/APPSOOW2015\_ebsapp01.env
- Change directory to "\$INST\_TOP/admin/scripts" cd \$INST\_TOP/admin/scripts
- Verify that all web-services (apache and OC4J) are active: ./adopmnctl.sh status





Figure 3.2.8





### 3.3 CONNECT TO EBUSINESS SUITE AND TEST ITS FUNCTIONALITIES

Target of this chapter is to verify Oracle eBusiness Suite 12.1.3 base functionalities:

- Open Oracle eBusiness Suite 12.1.3 URL
- Login to the Oracle eBusiness Suite HomePage
- Open "**Requests**" section to submit a job
- Verify "Log" and "Output" of the job submitted / executed

On your laptop verify that "/etc/hosts" contains an entry to reach "ebsapp01.oow.local":

• cat /etc/hosts



If not present, insert following entry into the file "/etc/hosts" (need "root" access on the laptop):

• 192.168.56.80 ebsapp01.oow.local ebsapp01

On your laptop open the browser (Firefox) and connect to the eBusiness Suite URL:

http://ebsapp01.oow.local:8000

A login prompt (Figure 3.3.1) should appear (first opening could take some seconds):

ORACLE		
	*User Name	
	*Password	(example: michael.james.smith)
ALC ALC		(example: 4u99v23) Login Cancel
		Login Assistance
	Accessibilit	y None
	Select a Language: English	
Privacy Statement		
	Figure 3.3.1	Hardware and Software





Login with :

- User: sysadmin
- Password: sysadmin

Oracle eBusiness Suite Home Page should appear (Figure 3.3.2):

Connecting × Oracle Application	ns Hom × 🔶					
ebsapp01.oow.local:8000/OA_HTML/OA.jsp	OAFunc=OAHOMEPAGE					
					Constanting of the local division of the loc	
Enterprise Search All			Go	Se	arch Results Display Preference Standard	<b>.</b>
Oracle Applications Home Page						
Main Menu  Personalize	Worklist From There are no notifications in this view. ✓ TIP <u>Vacation Rules</u> - Redirect or auto-respond ✓ TIP <u>Worklist Access</u> - Specify which users can	Type to notifica view and	Subject tions. act upon yo	Full Sent	List Due ations.	



Following Steps will guide you to create a simple report named "Active Users" by the execution of a concurrent-request:

• Expand "System Administrator", "Concurrent" and choose "Requests" (Figure 3.3.3)

Connecting × Oracle Application	ons Hom × +					
ebsapp01.oow.local:8000/OA_HTML/OA.js	p?OAFunc=OAHOMEPAGE#					
ORACLE <sup>®</sup> E-Business Suite	and the second			-		
Enterprise Search All			Go	Search F	Results Display Preference	Standard 💌
Oracle Applications Home Page						
Main Menu  Personalize  Application Developer  Application Diagnostics  Auditing Manager  CM HTML Administration  CM HTML Administration  Picture System Administration  System Administration  System Administration  Concurrenti Concurr	Worklist From There are no notifications in this view. ≪TIP <u>Vacation Rules</u> - Redirect or auto-respo ≪TIP <u>Worklist Access</u> - Specify which users of	Type ond to notifica an view and	Subject tions. act upon yo	Full List Sent Due		
	Figure 3.3.3					
				Hardw Enginee	are and Software red to Work Together	





• Confirm(two times) java warnings with "**YES**" (Figure 3.3.4)

The application Oracle E-Business Suite from http://ebsapp01.oow.local:8000/forms/frmservlet?appletmode=nonforms& resources from the following remote locations:            • http://ebsapp01.oow.local:8000/OA_JAVA/oracle/apps/fnd/jar            • http://ebsapp01.oow.local:8000/forms         Be very careful when application is loading from different space then you         For more information see:         JAR File Manifest Attributes         and         Preventing the Repurposing of an Application	· · · · · · · · · · · · · · · · · · ·
For more information see: <u>JAR File Manifest Attributes</u> and <u>Preventing the Repurposing of an Application</u>	The application Oracle E-Business Suite from http://ebsapp01.oow.local:8000/forms/frmservlet?appletmode=nonforms& resources from the following remote locations: • http://ebsapp01.oow.local:8000/OA_JAVA/oracle/apps/fnd/jar • http://ebsapp01.oow.local:8000/forms Be very careful when application is loading from different space then you
	For more information see: <u>JAR File Manifest Attributes</u> and <u>Preventing the Repurposing of an Application</u>
Yes No	Yes No

Figure 3.3.4

• On the new window opened choose "Submit a New Request..." (Figure 3.3.5)

uests	• Find Requests		
Ret	○ My Completed <u>R</u> equest	s	
quest	My Requests In Progress     All My Requests     Specific Requests     Request ID	ss	Priorit
	Name		· · · · · · · · · · · · · · · · · · ·
	Date Submitted		
	Date Completed		
	Status		
	Phase		
	Requestor		,
		□Include Reguest Set Stages in Query	
La	Order By	Request ID 🗸	
HO	Sele	ct the Number of Days to View: 7	
Can	Submit a New Requ	iest <u>C</u> lear Find	

Figure 3.3.5





• Choose "Single Request" and confirm with "OK" (Figure 3.3.6)



Figure 3.3.6

- As "**Request Name**" insert "**Active Users**" and click "**Submit**" to confirm (Figure 3.3.7) NB:
  - $\circ~$  A further window will open and you have to confirm with "OK" also there
  - $\circ$   $\;$  Another window will open asking to submit another request, respond with "NO"  $\;$

O Submit Request		×
<ul> <li>Run this Request.</li> </ul>		
		Сору
Nome	Active Licens	
Name	Active Osers	
Operating Unit		
Parameters		
Language	American English	
	Language Setti	Debug Options
At these Times		
Run the Job	As Soon as Possible	Sche <u>d</u> ule
Upon Completion		
	Save all Output Files	
Lavout		Options
Notify	· · · · · · · · · · · · · · · · · · ·	
Print to	noprint	(Delivery Opts
	Submit	Cancel
	Figure 3.3.7	
	Hardv Engine	vare and Software ered to Work Together





• On the "Find Request" window search for "All My Requests" (Figure 3.3.8)

Find Requests		×
O My Completed Request	s	
My Requests In Progre	55	
Request ID		
Name		
Date Submitted		
Date Completed		
Status		
Phase		
Requestor		
	□Include Reguest Set Stages in Query	
Order By	Request ID 👻	
Sele	ct the Number of Days to View: 7	
Submit a <u>N</u> ew Requ	Jest <u>C</u> lear Find	$\mathbf{D}$

Figure 3.3.8

• Select the line containing your request "Active Users" and verify output and log file by using "View Output" and "View Log..." buttons (Figure 3.3.9)

Refr	resh Data Find Re	quests	Subr	<u>n</u> it a New Reque	st
Request I	D Parer	nt			
	Name	Phase	Status	Requestor	Priority
400187	Purge Logs and Closed	Pending	Scheduled	SYSADMIN	50
400186	Active Users	Completed	Normal	SYSADMIN	50
400185	OAM Applications Dash	Pending	Scheduled	SYSADMIN	50
400184	Workflow Control Queu	Pending	Scheduled	SYSADMIN	50
400181	OAM Applications Dash	Completed	Normal	SYSADMIN	50
400180	Workflow Agent Activity	Pending	Scheduled	SYSADMIN	50
400179	OAM Applications Dash	Completed	Normal	SYSADMIN	50
400178	Purge Logs and Closed	Completed	Normal	SYSADMIN	50
400177	Workflow Control Queu	Completed	Normal	SYSADMIN	50
400176	Workflow Work Items S	Pending	Scheduled	SYSADMIN	50
Hold	d Request View D	etails	(	View Output	
Canc	el Request Diagn	ostics	(	View Log	

Figure 3.3.9





### Congratulations,

You are now at the end of this HOL session.

As you can see you are pretty much at the limit of what we can achieve with a "small" laptop.. Because of several laptop resources limitation (CPU, disk access and network bandwidth) the Oracle eBusiness Suite 12.1.3 deployment should take more than 50 minutes and you should not be able to see the end of the deployment during this session.







## 4 **REFERENCES**:

## 4.1 ORACLE VM 3.3 DOCUMENTATION

### http://docs.oracle.com/cd/E50245\_01/

ORACLE

			Search	٩
Last Updated: 17 August 2015			Downlo	oad Library
Oracle VM 3.3				
Oracle VM Release 3.3 Documentation				
Oracle VM Release Notes for 3.3.1	ePub	HTML	PDF	
Oracle VM Release Notes for 3.3.2	ePub	HTML	PDF	
Oracle VM Release Notes for 3.3.3	ePub	HTML	PDF	
Oracle VM Installation and Upgrade Guide for Release 3.3	ePub	HTML	PDF	
Oracle VM Manager Getting Started Guide for Release 3.3	ePub	HTML	PDF	
Oracle VM Concepts Guide for Release 3.3	ePub	HTML	PDF	
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Oracle VM Command Line Interface User's Guide for Release 3.3	ePub	HTML	PDF	
Oracle VM Web Services API Developer's Guide for Release 3.3	ePub	HTML	PDF	
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Oracle VM Paravirtual Drivers Installation Guide for Microsoft Windows for Release 3.2.3	ePub	HTML	PDF	
Oracle VM Third-Party Licensing Information for Release 3.3	ePub	HTML	PDF	

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## 4.2 EBS ORACLE VM TEMPLATE DOCUMENTATION

https://blogs.oracle.com/stevenChan/entry/e\_business\_suite\_virtual\_machines

EBS VMs: Appliances ×	
→ C 🏠 https://blogs.oracle.com/stevenChan/entry/e_business_suite_virtual_mac	hines
BLOGSHOME PRODUCTS & SERVICES DOWNLOADS SUPPORT PARTNERS COMMUNITIES A	ABOUT Logou
Oracle E-Business Suite Technology The latest news directly from E-Business Suite Development	ORACLE
« November 2014 Update   Main   JRE Support Ends »	About
EBS VMs: Appliances, Templates, and Assemblies Explained By thoyes-Oracle on Dec 02, 2014	Blog Authors Certifications Upgrade Recommendations
This article describes the different types of Oracle E-Business Suite virtual machine software packages available, and how they are appropriate for different situations.	FAQ Webcasts & Training
The appliances, templates, and assemblies provided on the Oracle Software Delivery Cloud [ <u>https://edelivery.oracle.com/linux</u> ) all contain virtual machine images. These are intended for different purposes, but all allow you to install EBS rapidly and create an EBS virtual machine.	Subscribe by Email
ORACLE	Enter search term:
Oracle Software Delivery Cloud - Oracle Linux and Oracle VM Sign Out Cloud Portal (Oracle LinuxVM) + Language (English) + FAQs	Search only this blog
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Select a Product Pack Oracle VM Templates   Platform x86 64 bit	E-Business Suite Technology Sessions at OpenWorld 2015
	WebCenter Portal 11.1.1.9 Certified





### **Virtual Appliances**

	Single Node	Multi-Node	MOS Doc ID
Oracle VM Virtual Appliances for Oracle E-Business Suite 12.2.4	VIS	PROD, VIS	1928303.1
Oracle VM Virtual Appliances for Oracle E-Business Suite 12.2.3	VIS	PROD, VIS	1620448.1
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#### **VM Templates**

	Single Node	Multi-Node	MOS Doc ID
Oracle VM Templates for Oracle E-Business Suite 12.2.3 for Exalogic	n/a	PROD, VIS	1633952.1
Oracle VM Templates for Oracle E-Business Suite 12.2.2	n/a	PROD, VIS	1590941.1
Oracle VM Templates for Oracle E-Business Suite 12.1.3 for Exalogic	n/a	VIS	1499132.1

### **Virtual Assemblies**

	Single Node	Multi-Node	MOS Doc ID
Oracle Virtual Assemblies for Oracle E-Business Suite 12.2.3	PROD	PROD	1904928.1
Oracle Virtual Assemblies for Oracle E-Business Suite 12.1.3	PROD	PROD	1904928.1

### DEPLOYMENT ARCHITECTURE

The following diagram shows the Oracle VM architecture with deployed Oracle E-Business Suite appliances. In this example, both Oracle E-Business Suite appliances 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.

Sample Oracle VM Architecture with Deployed Oracle E-Business Suite appliances (Figure 4.2.1)







#### Figure 4.2.1

The components represented in the above diagram are described below:

### •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.

Before deploying the Oracle E-Business Suite appliance, you need to decide upon the deployment architecture. Instead of deploying the database tier appliance and the application tier appliance in a single server and pool as described in the above example, you can choose to place the database appliance on one server (and server pool) and the application tier appliance on another. Or, you can distribute the appliances to create virtual machines on different physical servers, and place them in the same server pool. For guidance on designing your system, refer to the Managing Server Pools chapter, Oracle VM User's Guide available in the <u>Oracle VM Documentation Library</u>.

Please note that it is possible to combine a deployed Oracle E-Business Suite appliance with a conventional installation. For example, you can deploy an application tier appliance and connect it to a traditional, non-virtual database instance.

The environment set up by the deployment of the Oracle E-Business Suite Oracle VM virtual appliances can be used as a starting point that can subsequently be enhanced and tuned to fit the requirements of the target system. For more information, refer to <u>Section 1.2.7</u>: <u>Managing the Virtual Environment Lifecycle</u>.

## 4.3 THIS DOCUMENT

This document can be found on https://blogs.oracle.com/scoter

