

Install Oracle VM Server

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This paper is the first in a series describing how-to install Oracle VM Server and several Oracle VM guests.

After this paper following papers will be published:

- Install and configure Oracle VM Manager Release 2.2
- How to manually create a VM guest hosting Oracle Enterprise Linux 5
- How to create a VM guest hosting Oracle Enterprise Linux 5 using Oracle VM Manager
- How to create a VM guest hosting Oracle Enterprise Linux 5 using Oracle VM Manager and kickstart files
- Install and configure Oracle Enterprise Manager Grid Control 11g on an Oracle VM guest
- Create an Oracle 11gR2 RAC cluster on Oracle VM guests

This paper is will describe the installation of Oracle VM Server on a new system. For this purpose I configured a very nice server with lots of memory to create several Oracle VM guest which can run simultaneous.

The specifications of this server are the following:

1 Cooler Master Centurion 5 II Tower Case, No PSU, Black

1 Asus P6T Deluxe V2, s1366 ATX, X58, DDR3, 3xPCIe, 1394

1 Cooler Master Silent Pro 500W 80PLUS, 135mm Fan

1 Intel Core i7-950, s1366, 3.06GHz, 4.80 GT/sec QPI, 8MB

1 Zalman CNPS10X PERFORMA S775/754/1366/939/940/AM2(+)

6 ICIDU Value DDR3, 1333-4G 1333MHz, Lat 9, 1x4GB

1 Western Digital 500GB Caviar Blue SATAII 7200rpm 16MB

1 Western Digital 2TB Caviar Black SATAII 7200rpm 64MB

1 Asus GeForce EN8400GS SILENT/P 512M DDR2, DVI, VGA, PCIe

Because Oracle VM Server will be the operating system, no other os is installed. For the installation I used the monitor, keyboard and mouse of my home computer and I also have an external CD burner. After installation and plugging the server into my home network I don't need these components anymore. From this time I must be able to login from my laptop connected to the network.

So, now we can get started with installing Oracle VM Server.

Some screenshots are from an installation on VMWare because I couldn't capture the actual screen, but forgive me for this.

Follow the next steps to install Oracle VM Server:

- 1. Download Oracle VM Server from here: <u>http://edelivery.oracle.com/oraclevm</u>
- 2. The complete official guide to install Oracle VM Server 2.2 is available here: <u>Oracle VM Server</u> installations guide.
- 3. Burn the Oracle VM Server ISO image to a CDROM
- 4. Boot the server with the Oracle VM Server CMROM.
- 5. The Oracle VM Server installation screen is displayed.

Oracle VM Server	1
	ORACLE
Welcome to OracleUM Server 2.2.1	
- To install or upgrade press the <enter> key.</enter>	
 To perform a physical to virtual conversion type linux p20 press the <enter> key.</enter> 	and
- Use the function keys listed below for more information.	
[F1-Main] [F2-Options] [F3-General] [F4-Kernel] [F5-Rescue] boot: _	

Press **ENTER** to start the installation.

6. The Keyboard Selection screen is displayed.



Select the keyboard layout type from the list of available options.

This keyboard will become the default keyboard for the Oracle VM Server operating system. Select **OK** and press **ENTER**.

7. The Installation Method screen is displayed:

Welcome to Oracle VM 3	Server
	Installation Method
	What type of media contains the packages to be installed?
	Local CDROM Hard drive MFS image FTP HTTP
	OK Back
<tab>/<alt-tab> bet</alt-tab></tab>	ween elements <space> selects <f12> next screen</f12></space>

Action:

Select Local CDROM as the media type, select OK and press ENTER.

8. The **CD Found** screen is displayed.

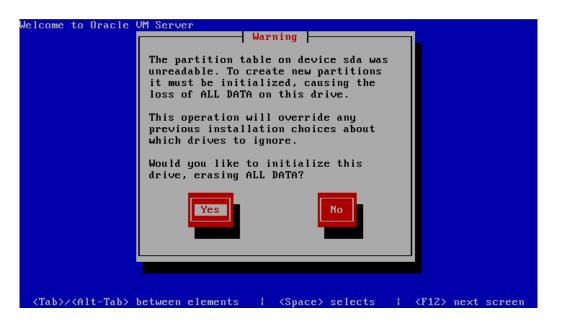
Welcome to Oracle VM Server
CD Found
To begin testing the CD media before installation press OK.
Choose Skip to skip the media test and start the installation.
<tab>/<alt-tab> between elements <space> selects <f12> next screen</f12></space></alt-tab></tab>

Action:

I choose to **SKIP** this test because I already used my Oracle VM Server CDROM before.

It is recommended to test the media before running an installation for the first time.

9. Warning screens are displayed to confirm you want to remove ALL partitions on the drives.



Action:

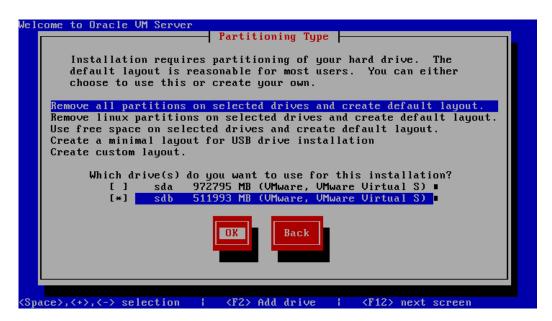
Select Yes and press ENTER (for all drives).

10. The **Partitioning Type** screen is displayed.

In my server I have the following drives:

- 500 GB drive
- 2 TB drive

On the 500 GB drive I want to install Oracle VM Server and on the 2TB drive I want to create the Oracle VMs. So this will become my /OVS partition.



Select **Remove all partitions on selected drives and create default layout** and only select the 500 GB device. Select **OK** and press **ENTER**.

11. A **Warning** screen is displayed to confirm you want to remove ALL partitions on the selected drive.

lcome to Oracle	UM Server
	Warning
	You have chosen to remove all partitions (ALL DATA) on the following drives:
	sdb (VMware, VMware Virtual S 511993 MB)
	Are you sure you want to do this?
· · · · · · · · · · · · · · · · · · ·	
Tab>/ <alt-tab></alt-tab>	between elements $ $ <space> selects $$ <f12> next scree</f12></space>

Action:

Select Yes and press ENTER.

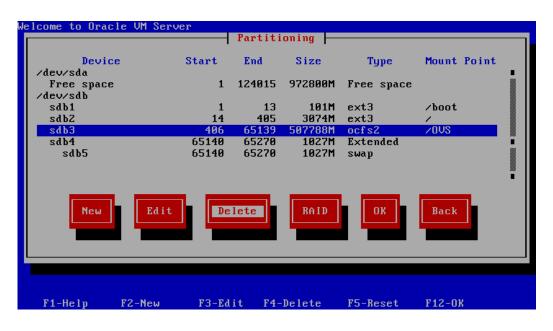
12. The **Review Partitioning Layout** screen is displayed.

lelcome to Oracle UM Server
Review Partition Layout Review and modify partitioning layout? Yes No
<tab>/<alt-tab> between elements { <space> selects { <f12> next screen</f12></space></alt-tab></tab>

Action:

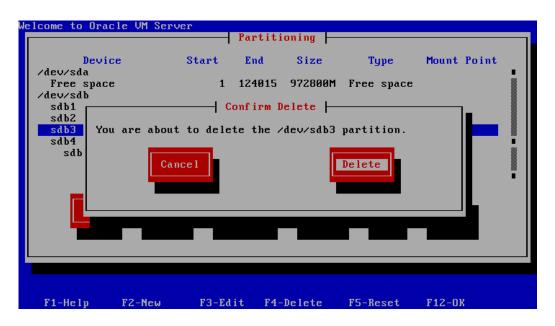
Select **Yes** and press **ENTER**. (Not just because you are curious and want to see the layout, but because you want to make some modifications to add the 2 TB drive to the /OVS partition)

13. The **Partitioning** screen is displayed.



Action:

Select the /OVS mount point (in my case sdb3), select the Delete button and press ENTER.



Action:

Confirm the delete of the partition. Select **OK** and press **ENTER**.

- elcome to Oracle VM Server - Partitioning -Size Mount Point Device Start End Type /dev/sda 124015 972800M Free space Free space ′dev∕sdb 1 14 101M 3074M 1027M sdb1 13 ext3 ∕boot sdb2 405 ext3 406 sdb3 536 swap 507788M Free space 537 65270 Free space Delete Back Ed i RAII Neω F1-Help F2-New F3-Edit F4-Delete F5-Reset F12-0K
- 14. In this step we will select the drive to recreate the /OVS mount point.

Select the free space of the 2 TB device (in my case /dev/sda), select New and press ENTER.

15. Now we can recreate a new /OVS mount point:

Weld	come to	Oracle VM Serv	er				
			Add	Partition -			
	∕dev∕sd	Ma	unt Point: <mark>Z</mark>				oint 📲
	Free	👘 🛛 📕 File Syste	m type:		Allowable D		
	∕dev⁄sd	ext2	• •		[*] sda	_	
	sdb1	ext3	•		[] <mark>sdb</mark>	•	
	sdb2	01 (MD)					
	sdb3 Free	Size (MB):			Fixed Size: ize of (MB):		
	Tree				lable space:		
					Tubio space.		
			Force to b	e a primary p	artition		
	Ę	KO I			Cance l		
	F1-Help	F2-New	F3-Edit	F4-Delete	F5-Reset	F12-0K	

Action:

Because at this moment I don't have the intention to create more than one Oracle VM Server, I wil create the new /OVS filesystem as ext3. This relieves me from the burden of maintaining the ocfs2 cluster.

Mount Point: /OVS File System Type: ext3 Allowable Drives: sda Size: Fill all available space Select **OK** and press **ENTER**. 16. The **Free space** on the sdb device can, for example, be used as a software repository. For this purpose I create a /software mount point

Welcome to Oracl	e VM Server					
		Partit	ioning 🗕			
Device /dev/sda	Start	End	Size	Туре	Mount Point	
sda1 /dev/sdb	1	124014	972795M	ext3	ZVOVS	
sdb1	1	. 13	101M	ext3	∕boot	
sdb2	14	405	3074M	ext3	1	
sdb3	406	536	1027M	swap		
Free space	537	65270	507788M	Free space		
New	Edit	elete	RAID	OK	Back	

Action:

Select the free space of the 500 GB device (in my case /dev/sdb), select New and press ENTER.

17. Add the /software partition

łe	lcome to	Oracle VM Serv						
Г			Add	Partition -			-	1
	/dev/sd	Мо	unt Point: <mark>Z</mark>	software			oint	l
	sda1	File Syste	m type:		Allowable D	rives:		l
	∕dev/sd	ext2	•		[] sda			l
	sdb1 sdb2	ext3	•		[*] <mark>sdb</mark>	•		I.
	sab2 sdb3	Size (MB):			Fixed Size:			I
	Free			ill maximum s	ize of (MB):	1		I
			(*)	Fill all avai	lable space:			L
		[]	Force to b	e a primary p	artition			l
								I
		OK			Cancel			I
			-					I
	-		_	-				
L								J
	F1-Help	F2-New	F3-Edit	F4-Delete	F5-Reset	F12-0K		

Action:

Mount Point: /software File System Type: ext3 Allowable Drives: sdb Size: Fill all available space

18. Confirm the newly created mount points.

Weld	come to Oracl	le VM Server		Partiti	oning 📙			
	Device	e S	tart	End	Size	Туре	Mount Point	
	′dev/sda sda1		1	124014	972795M	ext3	ZOVS	
	'dev/sdb							
	sdb1 sdb2		1 14	13 405	101M 3074M	ext3 ext3	∕boot	
	sdb3		406	536	1027M	swap	· · · · · · · · · · · · · · · · · · ·	
	sdb4		537	65270	507788M	Extended		
	sdb5		537	65270	507788M	ext3	∕software	
	New	Edit	De	lete	RAID	OK	Back	•
	F1-Help	F2-New	F3-Ed	it F4-	Delete	F5-Reset	F12-0K	

Action:

Select OK and press ENTER.

19. The Boot Loader Configuration screen is displayed.

lcome to Oracle VM Server
Boot Loader Configuration
Where do you want to install the boot loader?
/dev/sda Master Boot Record (MBR) /dev/sdb1 First sector of boot partition
Change drive order
<pre><tab>/<alt-tab> between elements <space> selects <f12> next screen</f12></space></alt-tab></tab></pre>

Action:

Install the boot loader on the Master Boot Record (MBR) of /dev/sda Select **OK** and press **ENTER**.

20. The Oracle VM Management Interface screen is displayed.



Action:

Choose **eth0** as the network interface to use for management of this machine. Select **OK** and press **ENTER**.

21. The IPv4 Configuration screen is displayed.

Welcome to Oracle VM Server
IPv4 Configuration for eth0
Intel Corporation 82545EM Gigabit Ethernet Controller (Copper) 00:0C:29:7F:63:18
() Dynamic IP configuration (DHCP) (*) Manual address configuration
IP Address Prefix (Netmask) 192.168.0.200 / 255.255.0
<tab>/<alt-tab> between elements <space> selects <f12> next screen</f12></space></alt-tab></tab>

Action:

Configure your network for the eth0 device. Choose the IP address and Netmask suitable for your environment.

22. The Miscellaneous Network Settings screen is displayed.

Welcome to	Oracle VM Server
	Miscellaneous Network Settings
	Gateway: 192.168.0.1 Primary DNS: 192.168.0.1 Secondary DNS:
	OK Back
<tab>/<a< td=""><td>lt-Tab> between elements <space> selects <f12> next screen</f12></space></td></a<></tab>	lt-Tab> between elements <space> selects <f12> next screen</f12></space>

Action:

Configure the Gateway, Primary DNS and Secondary DNS. Select **OK** and press **ENTER**.

23. The Hostname Configuration screen is displayed.

assigne select	' system is part o d by DHCP, selec	t automaticallu er a hostname f	twork where hostname y via DHCP. Otherwis for your system. If	e,
) automatically *) manually	via DHCP <mark>oraov</mark>	vs01	
	OK		Back	

Action:

It is important to always have a static IP address and hostname for your Oracle VM Server. Assign a name to the Oracle VM Server.

24. The **Time Zone Selection** screen is displayed.

Welcome to Oracle VM Server	
Time Zone Selection	
What time zone are you located in?	
[] System clock uses UTC	
Europe/Amsterdam Europe/Andorra Europe/Athens	
Europe/Belgrade	
<pre><tab>/<alt-tab> between elements <space> selects <i< pre=""></i<></space></alt-tab></tab></pre>	F12> next screen

Action:

Choose the time zone where your Oracle VM Server will be provisioned. If you don't want do use UTC, the deselect this option.

Select OK and press ENTER.

25. The Oracle VM Agent password screen is displayed.

elcome to Oracle VM Server
Oracle VM Agent password Enter a password for the Oracle VM agent (ovs-agent). This password is used in Oracle VM manager to manage and monitor this server and its guest VMs. You must type it twice to ensure you know what it is and didn't make a mistake in typing. Password: Password (confirm): W***** Back
<tab>/<alt-tab> between elements <space> selects <f12> next screen</f12></space></alt-tab></tab>

Action:

Enter a password for the Oracle VM Agent (ovs-agent).

This password is used to monitor and manage this VM Server and the guests created and running within it.

26. The **Root Password** screen is displayed.



Action:

Enter the password for the root account. The root password must be at least 6 characters long. Select **OK** and press **ENTER**.

27. The dependencies in the packages will be tested.

Welcome to Oracle VM Server
Dependency Check
Checking dependencies in packages selected for installation
8%
<tab>/<alt-tab> between elements <space> selects <f12> next screen</f12></space></alt-tab></tab>

28. The **Installation to begin** screen is displayed.



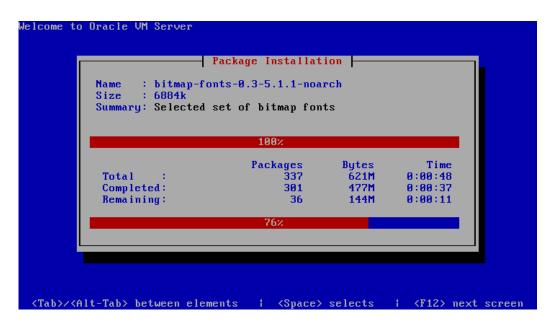
Action:

Select **OK** to start the installation.

29. The file system will be formatted according to the partitioning layout:

Jelcome to Oracle VM Server
Formatting
Formatting / file system
96%
<tab>/<alt-tab> between elements <space> selects <f12> next screen</f12></space></alt-tab></tab>

30. The Oracle VM Server is installed within 1-2 minutes, depending on your system:



31. The **Complete** screen is displayed after all files are installed and the configuration is complete.

Welcome to	Oracle VM Server
l l	Complete
	The Oracle VM Server installation is complete.
	Remove any media used during the installation process and press <enter> to reboot your system.</enter>
	Reboot
	<enter> to reboot</enter>

Action:

Remove the Oracle VM Server CDROM, select Reboot and press ENTER.

32. The End User License Agreement screen is displayed.



Action:

After you have carefully read the EULA (End User License Agreement) select Agree to continue.

33. The Oracle VM Server login prompt is displayed.

```
Oracle VM server release 2.2.1
lypervisor running in 64 bit mode with NO Hardware Virtualization support.
Network :
Management Interface :
If : xenbr0(Up) Mac : 00:0C:29:DD:E8:11 IP address : 192.168.0.200
Configured Networks and Bridges :
                    Mac : 00:0C:29:DD:E8:11
Mac : 00:0C:29:DD:E8:18
Mac : 00:0C:29:DD:E8:18
Mac : 00:0C:29:DD:E8:11
If : eth0
If : eth1
   : xenbr0
Ιf
                    Mac : 00:0C:29:DD:E8:1B
If : xenbr1
СРИ :
cpu family
model
                   : 30
                   : Intel(R) Core(TM) i7 CPU
                                                           Q 820 @ 1.73GHz
nodel name
oraovs01 login: _
```

Action:

Log into Oracle VM Server as root using the password set during the install.

At this moment the installation is complete!

The Oracle VM Agent is also started is will be automatically started each time the server is rebooted.