Using the Oracle Developer Days VirtualBox Image

As many of you know @krisrice put together a great VM for the Oracle Developer Days and while the content is great for education, I find us using it more and more a default scratch database on laptops. As usual, being 'Networkly challenged', it took me some time to figure out which network adapters did what and why. This is as much a note for me as it is to share with you :).

First of all, you need to install VirtualBox, which is found <u>here</u>. Then download one of the prebuilt VirtualBox images for the Developer Days. You can choose your one <u>here</u>. Download the ova file and then import your VM into VirtualBox.

To import, choose File> Import Appliance in VirtualBox and click choose to select the directory where you want the VM to live, then select your ova file. In this example, I'm using @krisrice's Oracle DeveloperDays VM. Once you click finish, and agree to the licenses, you'll see the 'Oracle Developer Days' VM in VirtualBox with a powered off state.



Great. We're ready to fire up the box and play inside it. All passwords for this are 'oracle', so you cant go wrong. In this, the database is all setup automatically, as is this list of stuff.

- Oracle Linux 5
- Oracle Database 11g Release 2 Enterprise Edition
- Oracle TimesTen In-Memory Database Cache
- Oracle XML DB
- Oracle SQL Developer
- Oracle SQL Developer Data Modeler
- Oracle Application Express
- Oracle JDeveloper
- Hands-On-Labs (accessed via the Toolbar Menu in Firefox)



So now, login to the vm with oracle/oracle and a terminal window will show you whats available and the network profiles you setup in the VM settings. The network settings I setup for this is here

Network
Adapter 1: PCnet-FAST III (Bridged adapter, en1: Wi-Fi (AirPort)) Adapter 4: PCnet-FAST III (NAT)

These two adapters do separate things. The bridged adapter will assign an IP address from the wireless NIC. This is setup by default when you install the VM and allows you to get access to the internet from the VM. The NAT adapter will allow you to access the VM from the host machine when you have no physical NIC or internet available. This happened me yesterday when presenting some SQLDeveloper functionality. By enabling the NAT adapter and setting up a few port forwarding rules, we can ssh into the VM and connect SQL Developer to the normal LISTENER port. The NAT adapter looks like this.

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General	System Display	Storage	Audio	Network	Ports	Shared Fold	lers
T Feed	Adapter 1	Adapt	ter 2	Adapter 3	Ada	pter 4	
Ce Ena	bie Network Adap	ver					
	Attached to:	NAT			9		
	Name:						\$
	Advanced						
	Adapter Type:	PCne	t-FAST II	I (Am79C9	973)		1
Pr	omiscuous Mode:	Deny					\$
	Mac Address:	08002	73E2FD	F			3
		🗹 Cab	le conne	ected			
		P	ort Forw	arding			
2					(Cancel	ОК
0							

and setting up two port forwarding rules, gives us this

Oracle O Rute	Cerveral System	Or IIII Im Display	acle Develope	r Days - Ne	rors Shared	Tolders		
	Name Rale 1 Rale 2	Protocol TCP TCP	Host IP	Hest Port 1521 2222	Guest IP	Guest Port 1521 22	0 0	ndk
								mg k.
					Cano		_	Enet 1
	0				Cancel) OK		- Farty
		-	Shared Fo	d Folders (ders: 1	_			

When you login to the VM, you'll see this on the terminal window.

	oracle@Unknown-08-00-27-4f-71-75:~	_0	×
E	Ele Edit View Terminal Tags Help		
Al	ll passwords are oracle or noted if otherwise.		-
ті /1	he SQL Developer and Data Modeler scripts are in the directory: home/oracle/Desktop/SQLDev_Tutorials/sqldev		
Te	o Reset the labs:		
50	QL Developer: /home/oracle/reset_sqldev		
A;	pplication Express: /home/oracle/reset_apex		
I	n-Memory Database Cache: /home/oracle/reset_imdbcache		
×2	ML Database: /home/oracle/reset_xmldb		
01 51 51	racle Enterprise Manager tart: emctl start dbconsole top : emctl stop dbconsole RL : https://127.0.0.1:1158/em		
** at	** Please note that this appliance is for testing purposes only, s such it is unsupported and should not be used as a production environment	nt.	
[4	<pre>inet addr:192.168.1.42 Bcast:192.168.1.255 Mask:255.255.255.0 inet addr:18.0.5.15 Bcast:10.8.5.255 Mask:255.255.255.0 inet addr:127.0.8.1 Mask:255.8.0.0 oracle@Unknown-00-80-27-4f-71-75 ~1\$ '/home/oracle/Desktop/README.txt' []</pre>		

This setup will allow you to spark up firefox in the VM and connect to the internet using the local network ip 192.168.1.42. Now, if we switch off the Airport and disable the bridging adapter, we should still be able to connect to the VM from outside. Restarting the VM, gives us this terminal window on login to the oracle account

```
oracle@localhost:
Elle Edit View Jerminal Tabs Help
All passwords are oracle or noted if otherwise.
The SQL Developer and Data Modeler scripts are in the directory:
/home/oracle/Desktop/SQLDev_Tutorials/sqldev
To Reset the labs:
SOL Developer:
                          /home/oracle/reset_sqldev
Application Express:
                          /home/oracle/reset_apex
In-Memory Database Cache: /home/oracle/reset_imdbcache
                         /home/oracle/reset_xmldb
XML Database:
Oracle Enterprise Manager
Start: emctl start dbconsole
Stop : emctl stop dbconsole
URL : https://127.0.0.1:1158/em
*** Please note that this appliance is for testing purposes only,
as such it is unsupported and should not be used as a production environment.
          inet addr:10.0.5.15 Bcast:10.0.5.255 Mask:255.255.255.0
          inet addr:127.0.0.1 Mask:255.0.0.0
[oracle@localhost ~]$
```

Now, we have no external IP, but we have our port forwarding rules set up to get access to the VM from outside. Now, we have two rules, one which maps anything on port 2222 to port 22 on the guest. this means we can ssh into the VM on port 2222 on the host. So, connecting with this

```
oracle@localhost:~
macbookpro:~ bamcgill$ ssh -p 2222 oracle@localhost[]
```

and we get the login terminal from the VM

```
oracle@localhost:~
bc_drivermgr:/home/oracle/app/oracle/product/TimesTen/tt1121/quickstart/s
mple_code/proc:/home/oracle/app/oracle/product/TimesTen/tt1121/quickstart
sample_code/ttclasses:/home/oracle/app/oracle/product/TimesTen/tt1121/qui
kstart/sample_code/ttclasses/xla:/home/oracle/app/oracle/product/TimesTer
tt1121/ttoracle_home/instantclient_11_1:/home/oracle/app/oracle/product/1
mesTen/tt1121/ttoracle_home/instantclient_11_1/sdk:/home/oracle/app/oracl
/product/TimesTen/tt1121/3rdparty/ant/bin:/usr/java/latest/bin:/usr/kerbe
os/bin:/usr/local/bin:/bin:/usr/bin:/home/oracle/app/oracle/product/11.2.
/dbhome_2/bin:/home/oracle/bin
CLASSPATH set to /home/oracle/app/oracle/product/TimesTen/tt1121/lib/ttjc
c6.jar:/home/oracle/app/oracle/product/TimesTen/tt1121/lib/orai18n.jar:/f
me/oracle/app/oracle/product/TimesTen/tt1121/lib/timestenjmsxla.jar:/home
oracle/app/oracle/product/TimesTen/tt1121/3rdparty/jms1.1/lib/jms.jar:.:/
ome/oracle/app/oracle/product/11.2.0/dbhome_2/ucp/lib/ucp.jar:/home/oracl
/app/oracle/product/11.2.0/dbhome_2/jdbc/lib/ojdbc6.jar
TNS_ADMIN set to /home/oracle/app/oracle/product/11.2.0/dbhome_2/network/
dmin
IP Address is:
          inet addr:10.0.5.15 Bcast:10.0.5.255 Mask:255.255.255.0
          inet addr:127.0.0.1 Mask:255.0.0.0
[oracle@localhost ~]$ []
```

Brilliant. Now, Lets see SQL Developer connect to the VM too. We setup the connection like a connection to xe on localhost, except the SID is orcl on the VM.

onnection Name	Connection Details	Cognection Name	Scott .
(69)	scott@//tocathest	Username	scatt.
		Esseward	
		Says Password	
		Oracle	
		Connection Type	e Innic. • Roje default •
		Hostingme	lecalhest
		Pogt	1521
		(i) SID	anci
		 Sgrvice name 	
		C OS Authentic	ation 🗌 Kerberos Authentication 🗌 Proxy Connection
atus :			

and we can look at the database version report which shows us what database we are connected to

Contract Internet
📌 🕨 🌺 Refresh 0 🔹 🥥 -
Your_Database_Settings
Oracle Database 11g Enterprise Edition Release 11.2.0.2.0 - Production
PL/SQL Release 11.2.0.2.0 - Production
CORE 11.2.0.2.0 Froduction
TNS for Linux: Version 11.2.0.2.0 - Production
NLSRTL Version 11.2.0.2.0 - Production

And now, you're connected and good to go. This is great for doing demos in a canned environment, especially when you dont have access to an internet connection when doing a demo or showing something off.