

# Oracle SOA Suite VirtualBox Appliance

## Introduction and Readme

September 2015



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## 1 VirtualBox Appliance

WARNING – THIS VIRTUAL MACHINE IMAGE CONTAINS ORACLE PROPRIETARY SOFTWARE THAT IS LICENSED TO THE INDIVIDUAL THAT ORIGINALLY OBTAINED IT FROM ORACLE. IT MAY NOT BE TRANSFERRED OR DISTRIBUTED TO OTHER INDIVIDUALS, EVEN IF THOSE INDIVIDUALS ARE EMPLOYED BY THE SAME ENTITY. IF YOU DID NOT OBTAIN THIS IMAGE FROM AN ORACLE WEBSITE OR FROM AN AUTHORIZED ORACLE EMPLOYEE OR CONTRACTOR, YOU MAY NOT USE IT; VISIT [WWW.ORACLE.COM/OTN](http://www.oracle.com/otn) TO DOWNLOAD A COPY YOU MAY USE.

IF YOU RECEIVED THIS VIRTUAL MACHINE IMAGE DIRECTLY FROM ORACLE THEN BY CONTINUING TO INSTALL THE VIRTUAL MACHINE IMAGE YOU AGREE TO THE LICENSE TERMS AT <http://www.oracle.com/technetwork/licenses/soa-vm-license-2594428.html>.

### 1.1 Installed Software

Software	Version
Oracle Enterprise Linux (64-bit)	EL 6 Update 7 (64-bit)
Oracle Database, Enterprise Edition	12.1.0.2
Oracle SOA Suite 12c	12.1.3.0.1
Oracle Service Bus 12c	12.1.3.0.0
Oracle API Manager	12.1.3.0.0
Oracle Stream Explorer	12.1.3.0.1
Oracle Managed File Transfer	12.1.3.0.1
Oracle Sun JDK	1.7.0_79-b15 (64-bit)

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## 1.2 Settings

- Default memory is set to **8GB**.
- Default CPU count is set to **2**.
- Default network mode is NAT with port-forwarding and all the relevant ports for all configured servers are forwarded on the same port number. For e.g. port 7001 on the host is forwarded to port 7001 in the VM.
- SSH port 22 on the guest is mapped to port 7022 on the host.
- Hostname is soa-training.oracle.com

**NOTE: Please add soa-training as an alias for your loopback address (127.0.0.1) in your laptop/desktop's hosts file. This will allow you to run JDeveloper and/or Enterprise Manager locally and connect to the Weblogic domain in the virtual machine.**

## 1.3 User IDs

Administrative Login	weblogic/welcome1
Oracle Enterprise Database	All passwords are set to welcome1
OS Login	oracle/welcome1, root/welcome1

## 1.4 Domain Configurations

This VirtualBox contains three domain configurations:

- SOA Suite with Service Bus, Managed File Transfer
- API Manager
- Stream Explorer

## 2 Before you begin

### 2.1 Enable hardware virtualization in your PC BIOS

Make sure hardware virtualization is available for your PC. It's most likely turned off by default, so you will need to turn on the hardware virtualization capability before you can use it.

### 2.2 Install Oracle VM VirtualBox

This appliance was built with VirtualBox 5.0.4. Please download and install the latest [Oracle VM VirtualBox](#).

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## 3 Setting Up the VirtualBox Appliance

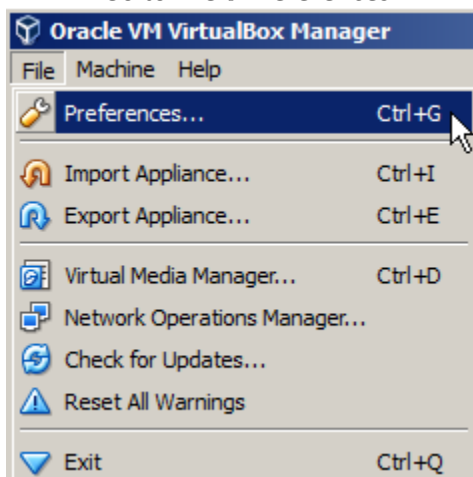
### 3.1 Download the appliance

The appliance is available as a multi-part 7-Zip archive and you will need utilities such as 7-Zip or the latest WinZip to create the OVA file.

- Download all the parts of the archive:
  - [SOA\\_12.1.3.0.1\\_OTN.7z.001](#)
  - [SOA\\_12.1.3.0.1\\_OTN.7z.002](#)
  - [SOA\\_12.1.3.0.1\\_OTN.7z.003](#)
  - [SOA\\_12.1.3.0.1\\_OTN.7z.004](#)
  - [SOA\\_12.1.3.0.1\\_OTN.7z.005](#)
  - [SOA\\_12.1.3.0.1\\_OTN.7z.006](#)
  - [SOA\\_12.1.3.0.1\\_OTN.7z.007](#)
- Download [md5sums-soa.txt](#): this file contains the MD5 sums of all the parts and can be used to test the integrity of the downloaded files using utilities such as md5sum on Linux or md5sums.exe available at <http://www.pc-tools.net/win32/md5sums/>
- Unzip the archive, this should create a single file called **SOA\_12.1.3.0.1\_OTN.ova**.

### 3.2 Setting your VirtualBox Preferences

- Start **VirtualBox**
- Before you start the import, you should set the import folder for the image
- Go to **File**→**Preferences**



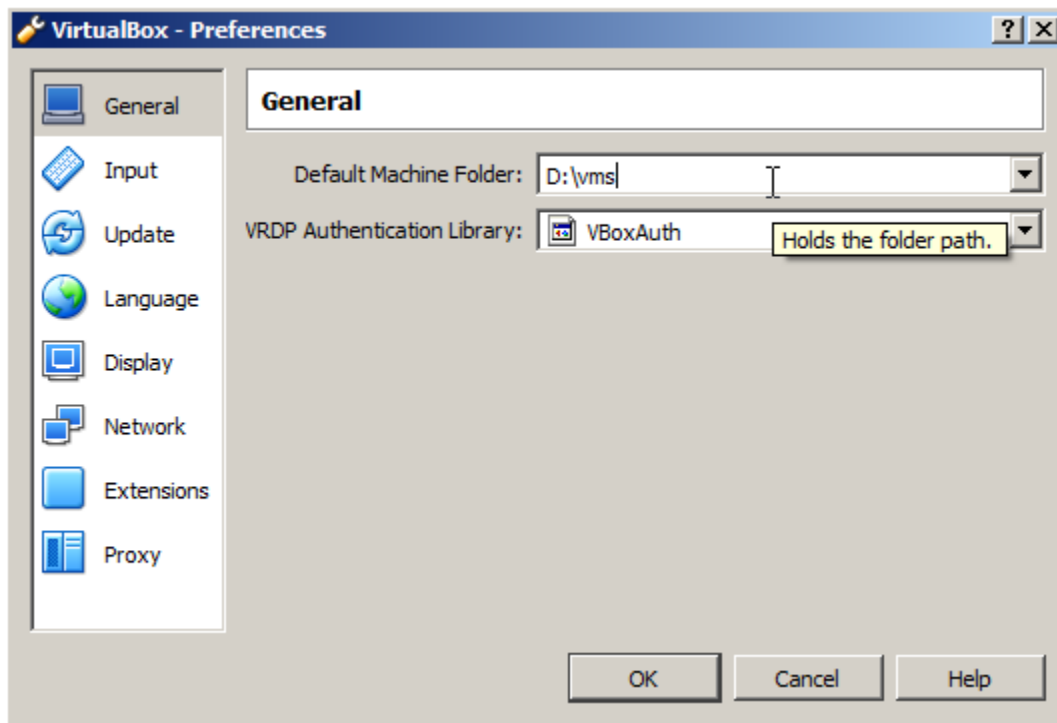
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- Set the **Default Machine Folder** to the location of your choice. This is where VirtualBox will store the virtual image you are about to import. Make sure to pick a location with sufficient space. You will need about 30 GB for this image.



- Click **OK**

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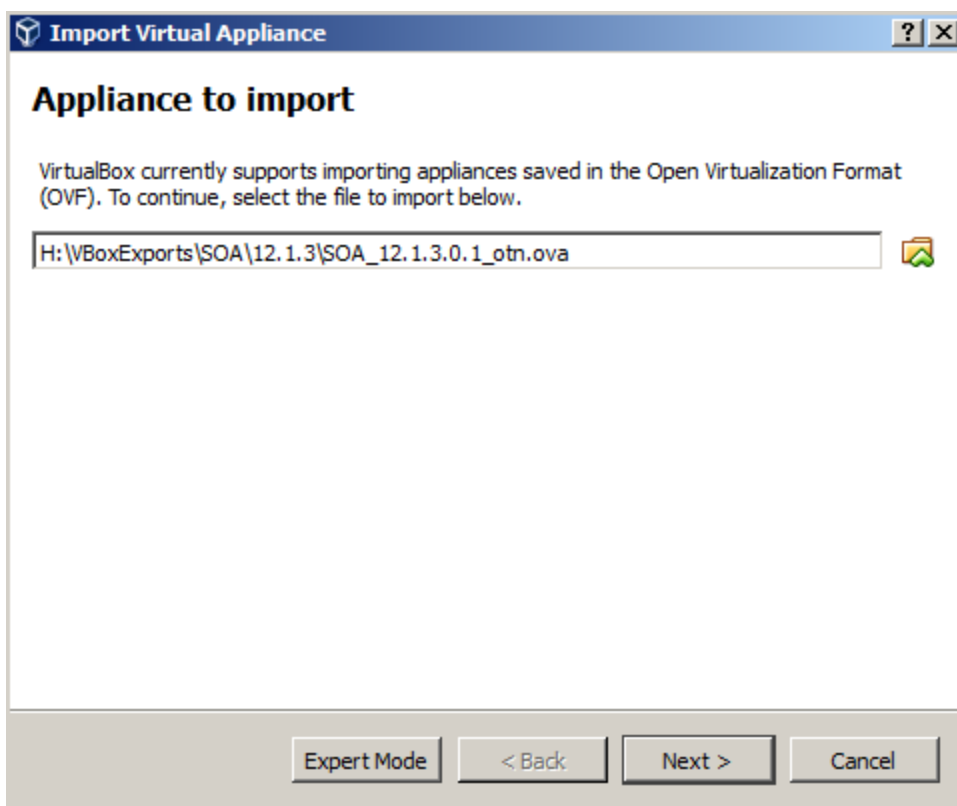
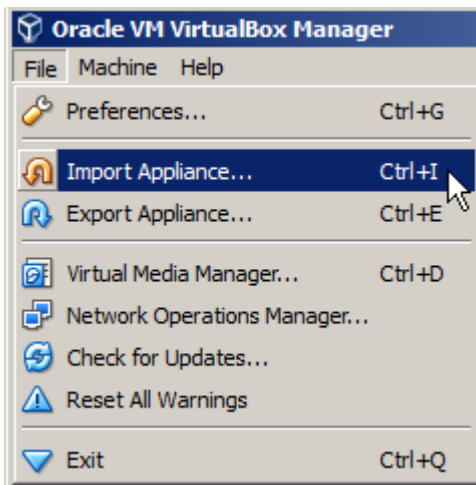
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### 3.3 Importing the Appliance

- Import the appliance (**File**→**Import Appliance ...**) and choose the **SOA\_12.1.3.0.1\_otn.ova** file.



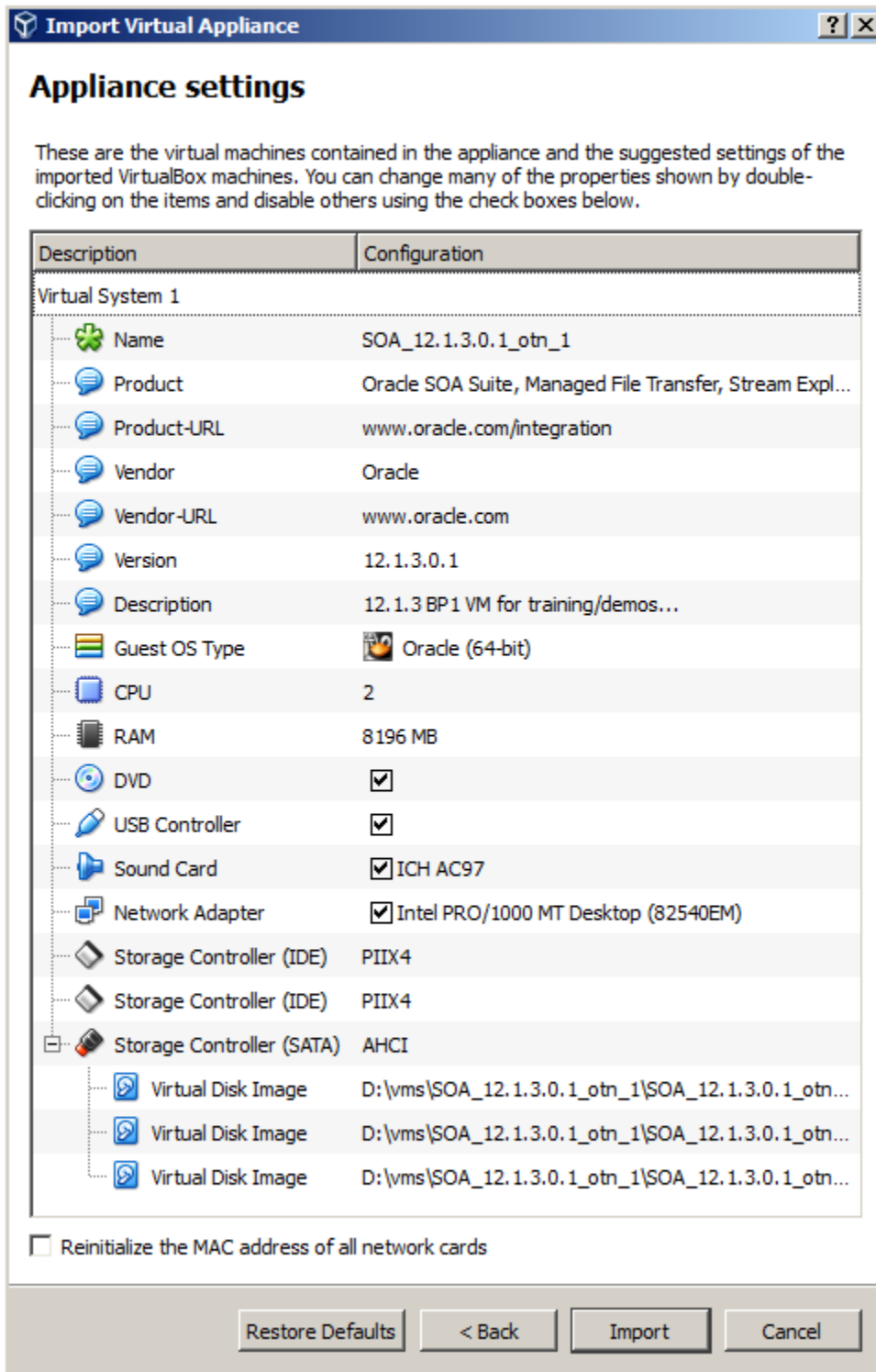
- You will be presented with the Appliance Settings. Review the settings and make any necessary changes.

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- Note: You may need to disable the USB controller. On some machines, an error was encountered on import/startup.



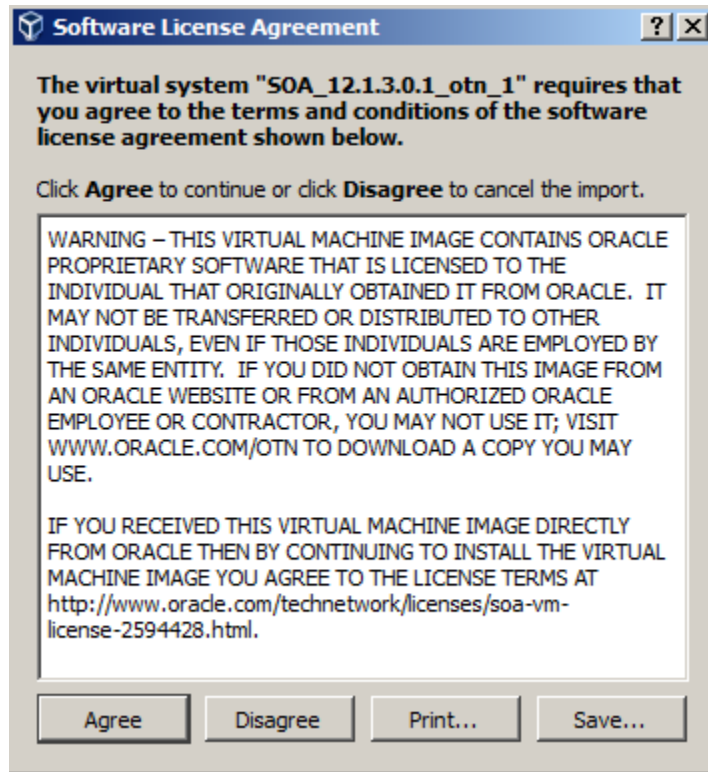
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- Click **Import**
- Accept the license agreement by clicking **Agree**

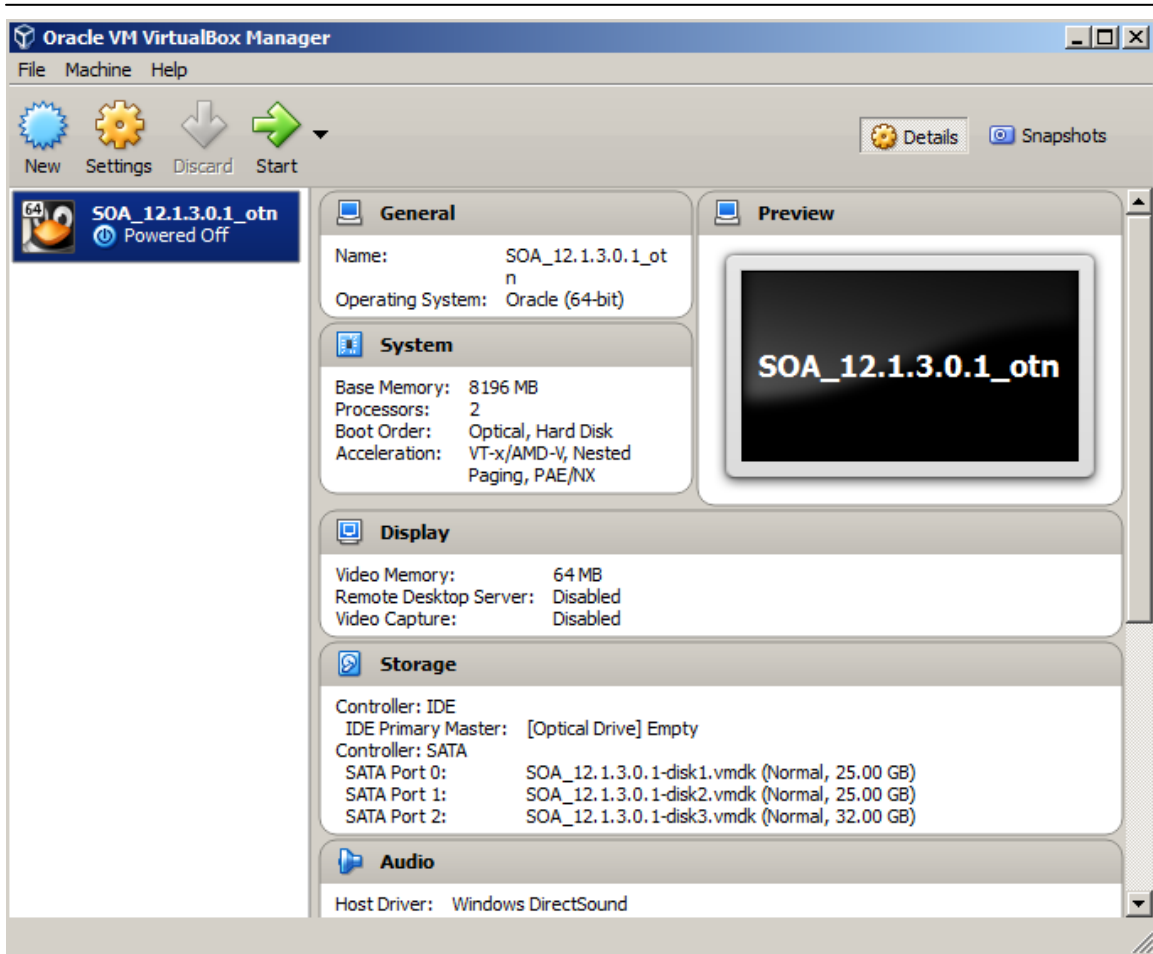


- The import will take a few minutes
- When the import is finished, click on the imported appliance and check the settings

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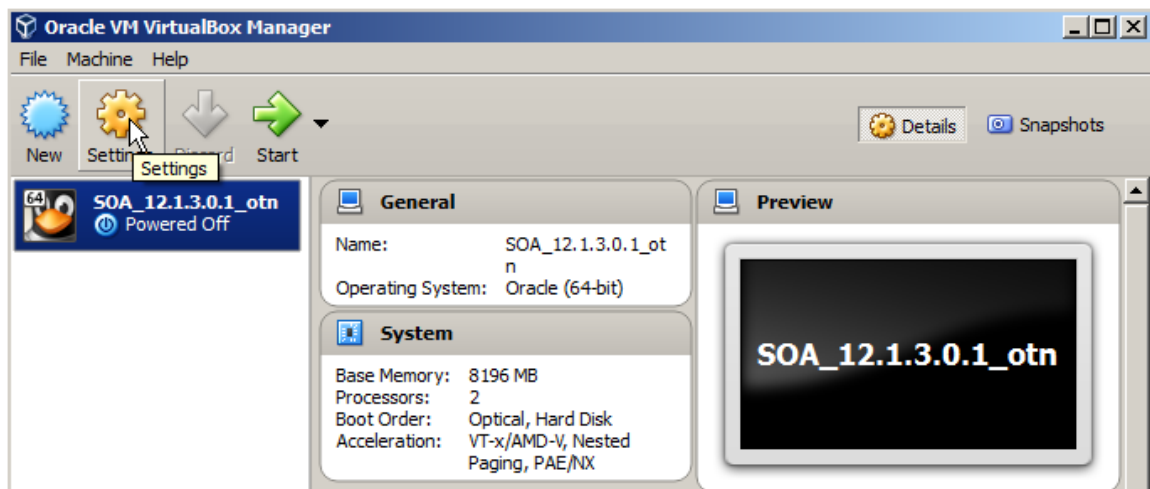
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### 3.4 Adjust memory and CPU settings:

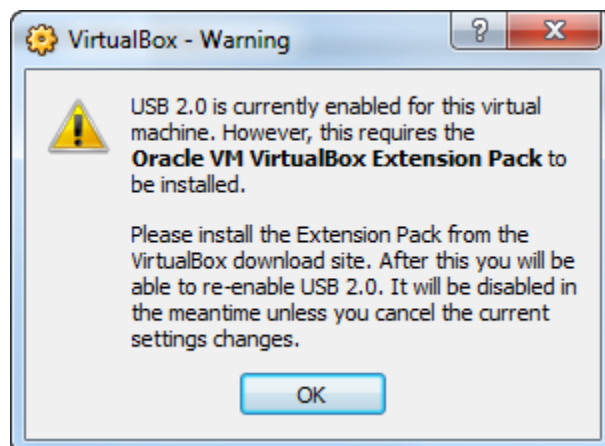
If you want to change the memory settings or the number of CPUs, please follow the steps below.

#### Change memory settings:

- With the appliance selected, click on **Settings**



- If you see an error related to USB 2.0, either install the Oracle VM Virtual Box extension from [the Oracle VM VirtualBox downloads page](#), or disable USB 2.0:

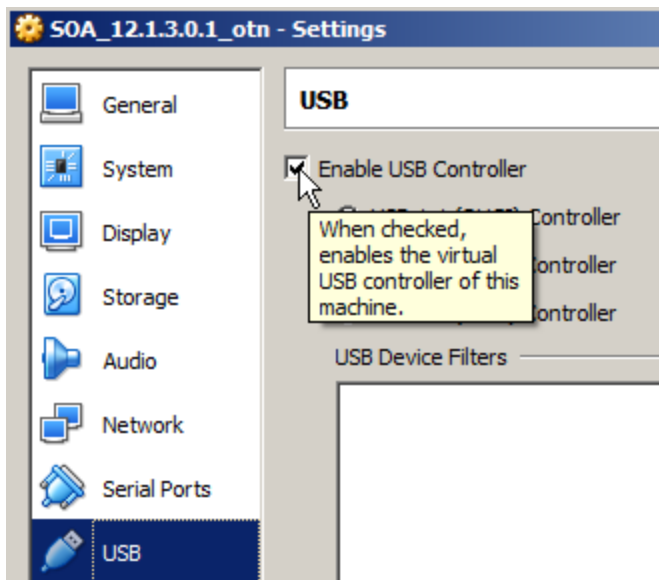


- Go to **USB**

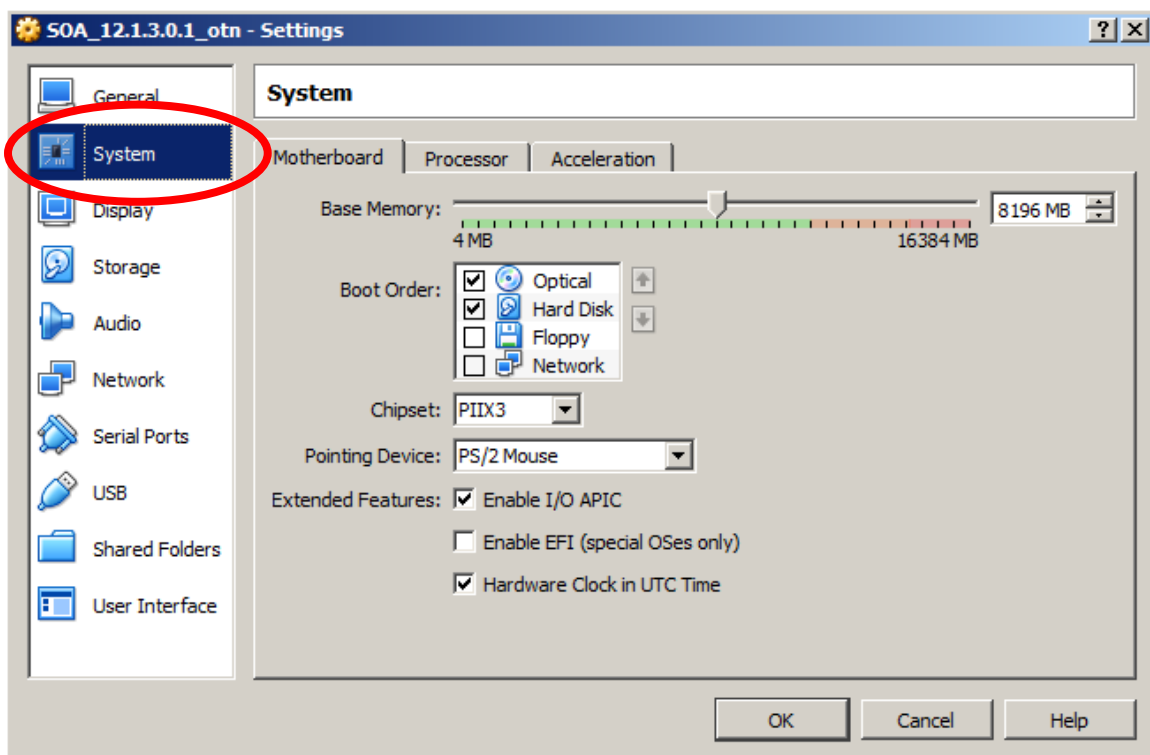
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- Uncheck the box in front of “Enable USB 2.0 (EHCI) Controller”
- Now go to **System**



- Set the memory to the desired value (you should be able to allocate at least 8GB to the VM).

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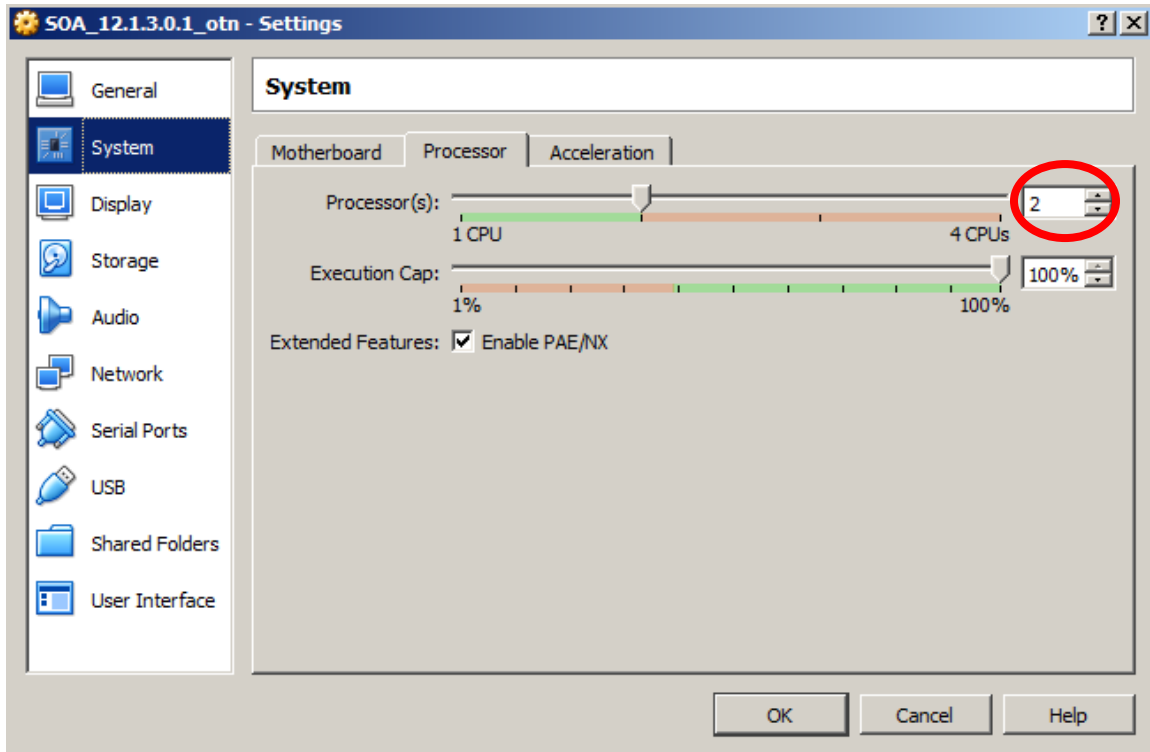
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- Click **OK**

### Change the number of CPUs

- Go to the “**Processor**” tab
- Enter the desired value



- Click **OK**

Now we're ready to start the appliance and set up our domain

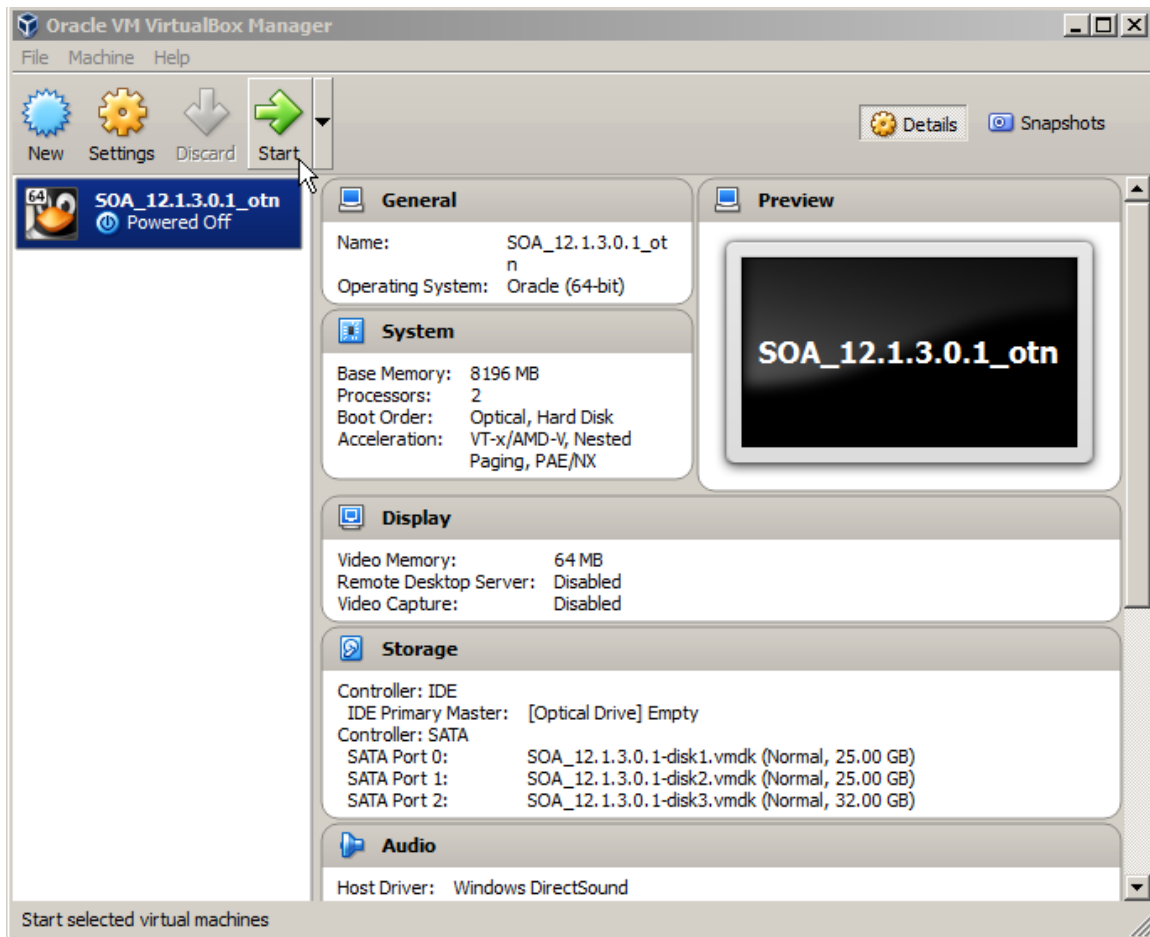
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### 4 Start the Appliance

- With the appliance selected, click on **Start**

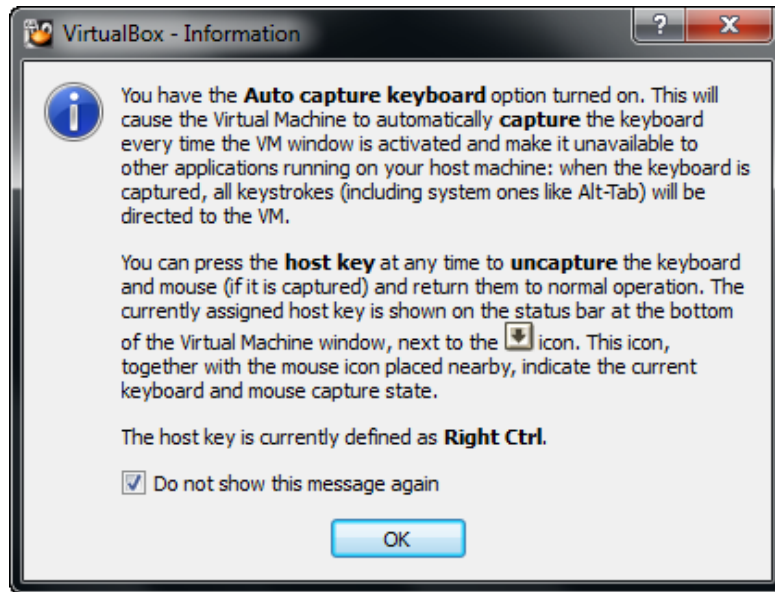


- If this window pops up, check “Do not show this message again” and click **OK**

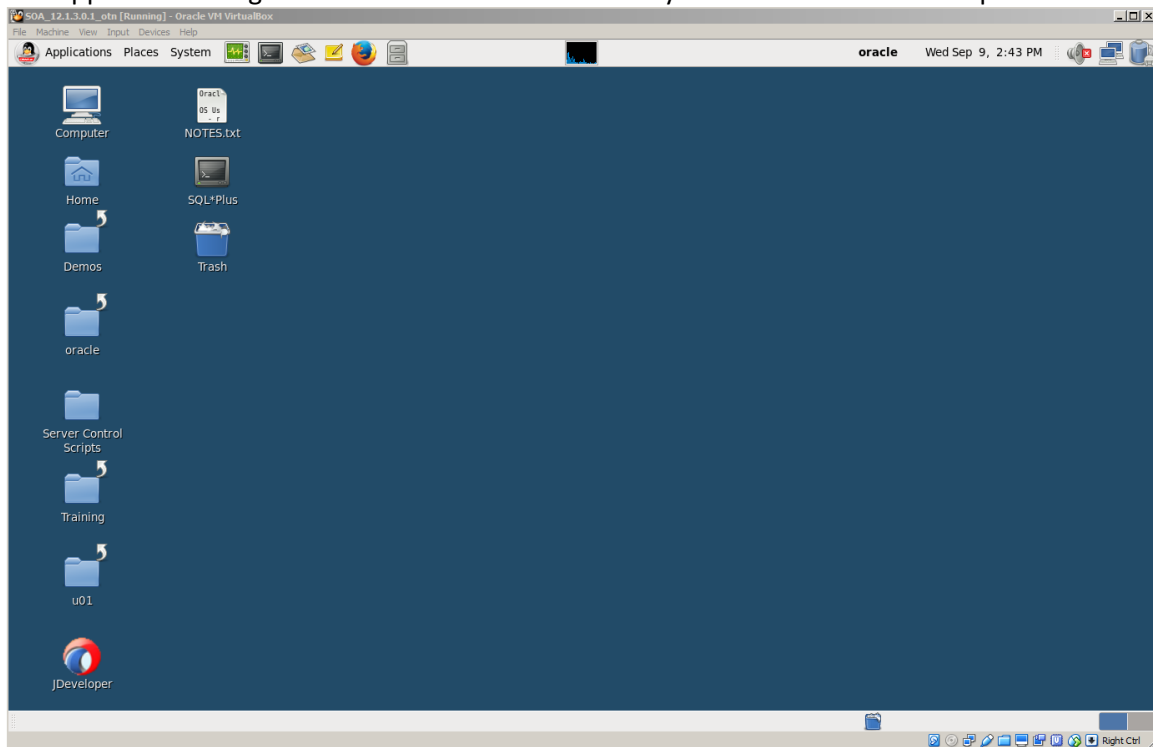
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The appliance will log in as the oracle user automatically and will show the desktop



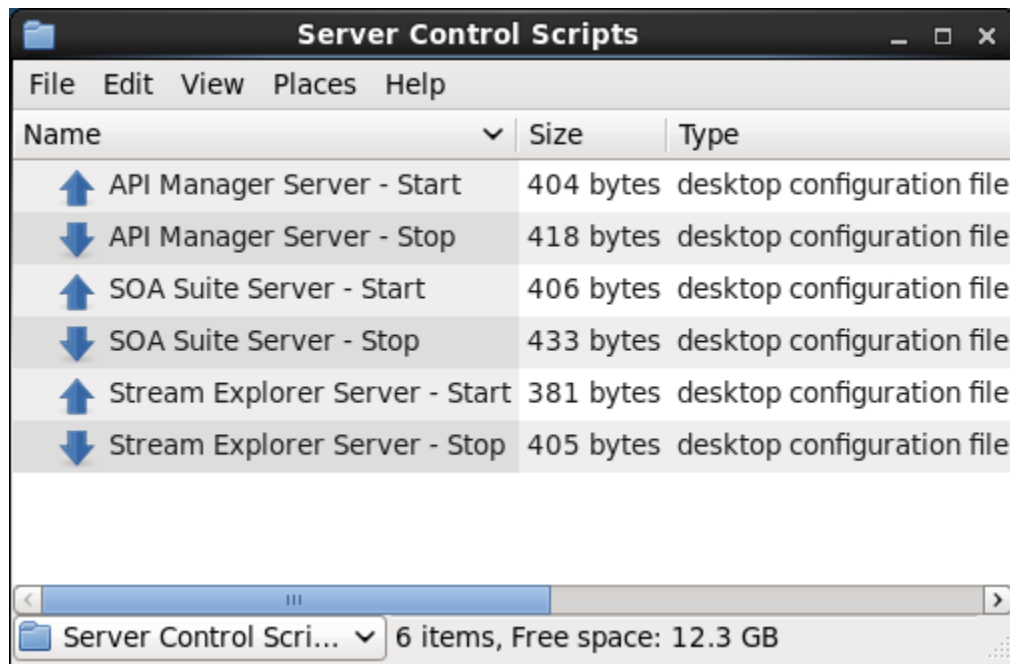
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### 4.1 Start the appropriate server



Open the Server Control Scripts folder on the desktop and you will find three sets of start/stop shortcuts as follows:

- API Manager: Use this for any trial, training, demo with API Manager
  - API Manager Server – Start: Starts up the **apim\_domain**. Double-clicking on this shortcut will open a terminal window showing the server output. **Do not close this window or the server will be killed!** You can minimize the window and go back to it if you need to review the log at any time.
    - The server is configured as a “compact domain” and uses port 7001
    - Do not attempt to run while the SOA Suite Server is running or you will have a port conflict.
  - API Manager Server – Stop: Shuts down the **apim\_domain**. Double-clicking on this shortcut will open a terminal window showing the output of the shutdown command. Do not close this window! Once this script has completed, both terminals will close automatically
- SOA Suite: Use this for any trial, training, demo of SOA Suite and Managed File Transfer
  - SOA Suite Server – Start: Starts up the **compact\_domain**. Double-clicking on this shortcut will open a terminal window showing the server output. Do not close this window or the server will be killed! You can minimize the window and go back to it if you need to review the log at any time.
    - The server is configured as a “compact domain” and uses port 7001
    - Do not attempt to run while the API Manager Server is running or you will have a port conflict.

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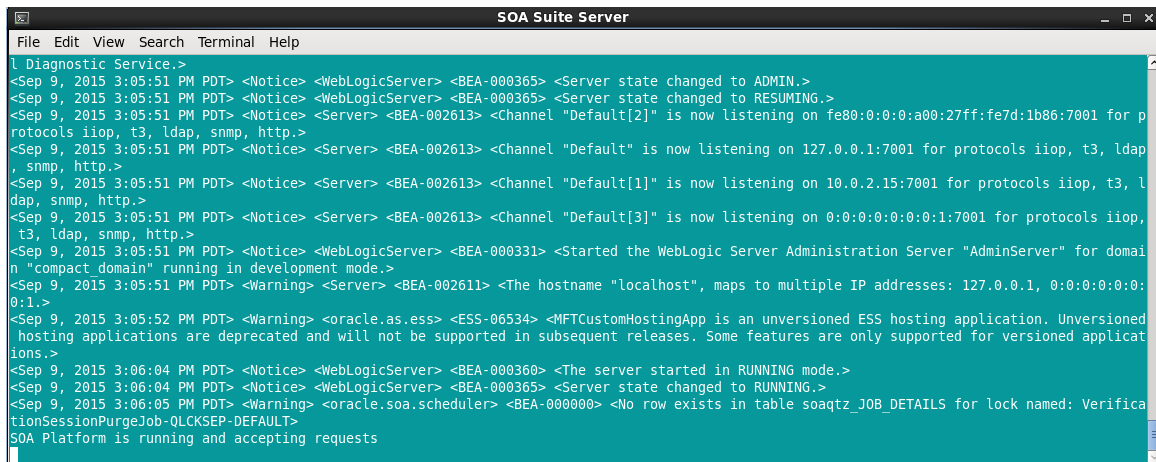


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- SOA Suite Server – Stop: Shuts down the **compact\_domain**. Double-clicking on this shortcut will open a terminal window showing the output of the shutdown command. Do not close this window! Once this script has completed, both terminals will close automatically
- Stream Explorer: Use this for any trial, training, demo of Stream Explorer
  - Stream Explorer Server – Start: Starts up the **sx\_domain**. Double-clicking on this shortcut will open a terminal window showing the server output. Do not close this window or the server will be killed! You can minimize the window and go back to it if you need to review the log at any time.
    - The server uses port 9002
  - SOA Suite Server – Stop: Shuts down the **sx\_domain**. Double-clicking on this shortcut will open a terminal window showing the output of the shutdown command. Do not close this window! Once this script has completed, both terminals will close automatically

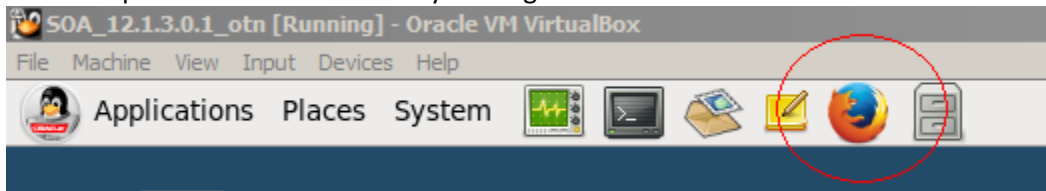
Once you have selected the appropriate server to start and it has completed its startup will see an appropriate message in the terminal window indicating that the server is started.



```
SOA Suite Server
File Edit View Search Terminal Help
l Diagnostic Service.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to ADMIN.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RESUMING.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <Server> <BEA-002613> <Channel "Default[2]" is now listening on fe80:0:0:0:a00:27ff:fe7d:1b86:7001 for p
rotocols iiop, t3, ldap, snmp, http.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <Server> <BEA-002613> <Channel "Default" is now listening on 127.0.0.1:7001 for protocols iiop, t3, ldap
, snmp, http.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <Server> <BEA-002613> <Channel "Default[1]" is now listening on 10.0.2.15:7001 for protocols iiop, t3, l
dap, snmp, http.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <Server> <BEA-002613> <Channel "Default[3]" is now listening on 0:0:0:0:0:0:1:7001 for protocols iiop,
t3, ldap, snmp, http.>
<Sep 9, 2015 3:05:51 PM PDT> <Notice> <WebLogicServer> <BEA-000331> <Started the WebLogic Server Administration Server "AdminServer" for domain
"compact_domain" running in development mode.>
<Sep 9, 2015 3:05:51 PM PDT> <Warning> <Server> <BEA-002611> <The hostname "localhost", maps to multiple IP addresses: 127.0.0.1, 0:0:0:0:0:0:
0:1.>
<Sep 9, 2015 3:05:52 PM PDT> <Warning> <oracle.as.ess> <ESS-06534> <MFTCustomHostingApp is an unversioned ESS hosting application. Unversioned
hosting applications are deprecated and will not be supported in subsequent releases. Some features are only supported for versioned applicat
ions.>
<Sep 9, 2015 3:06:04 PM PDT> <Notice> <WebLogicServer> <BEA-000360> <The server started in RUNNING mode.>
<Sep 9, 2015 3:06:04 PM PDT> <Notice> <WebLogicServer> <BEA-000365> <Server state changed to RUNNING.>
<Sep 9, 2015 3:06:05 PM PDT> <Warning> <oracle.soa.scheduler> <BEA-000000> <No row exists in table soaqtz_JOB_DETAILS for lock named: Verifica
tionSessionPurgeJob-QLCKSEP-DEFAULT>
SOA Platform is running and accepting requests
```

You may now want to minimize the terminal window to avoid accidentally closing it.

You can open the Firefox browser by clicking the Firefox icon in the menu bar

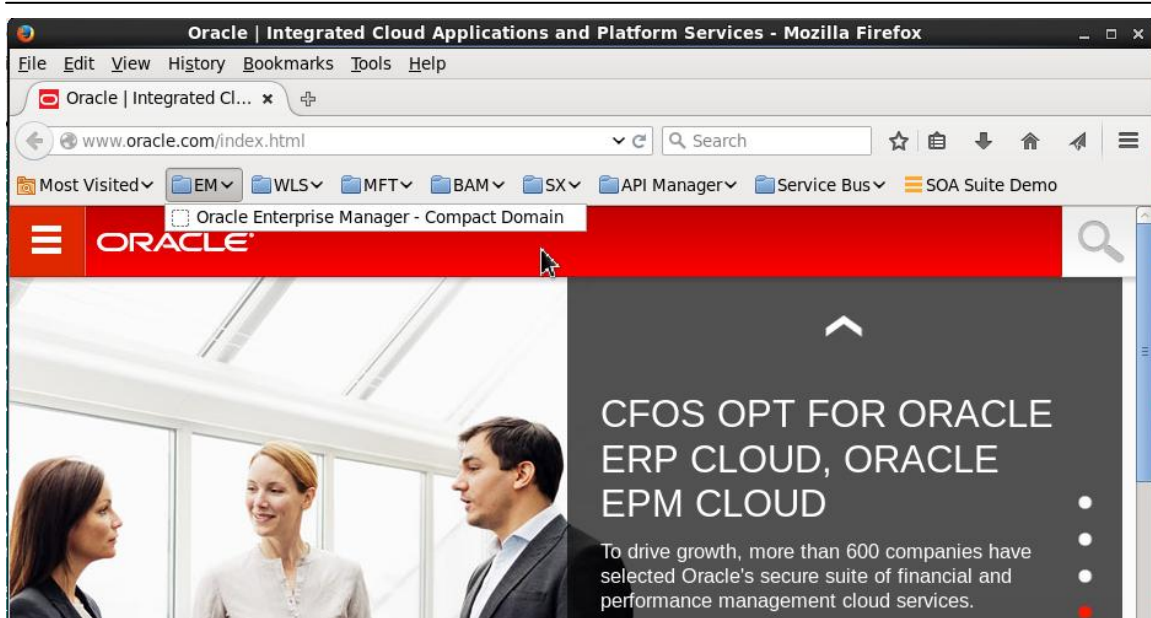


On the browser, there are shortcuts available for you open the appropriate console.

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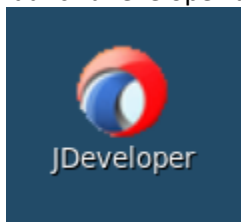


You can also use your browser on your host machine as the ports are all mapped through NAT on the VM configuration.

### 4.2 Using JDeveloper on the Appliance

One of the key features of SOA Suite 12c is that the SOA QuickStart allows you to get started and running with JDeveloper and SOA Suite. If you have already installed JDeveloper on your host machine and would like to connect to the SOA Suite server on the VM, the ports are mapped on the VM configuration.

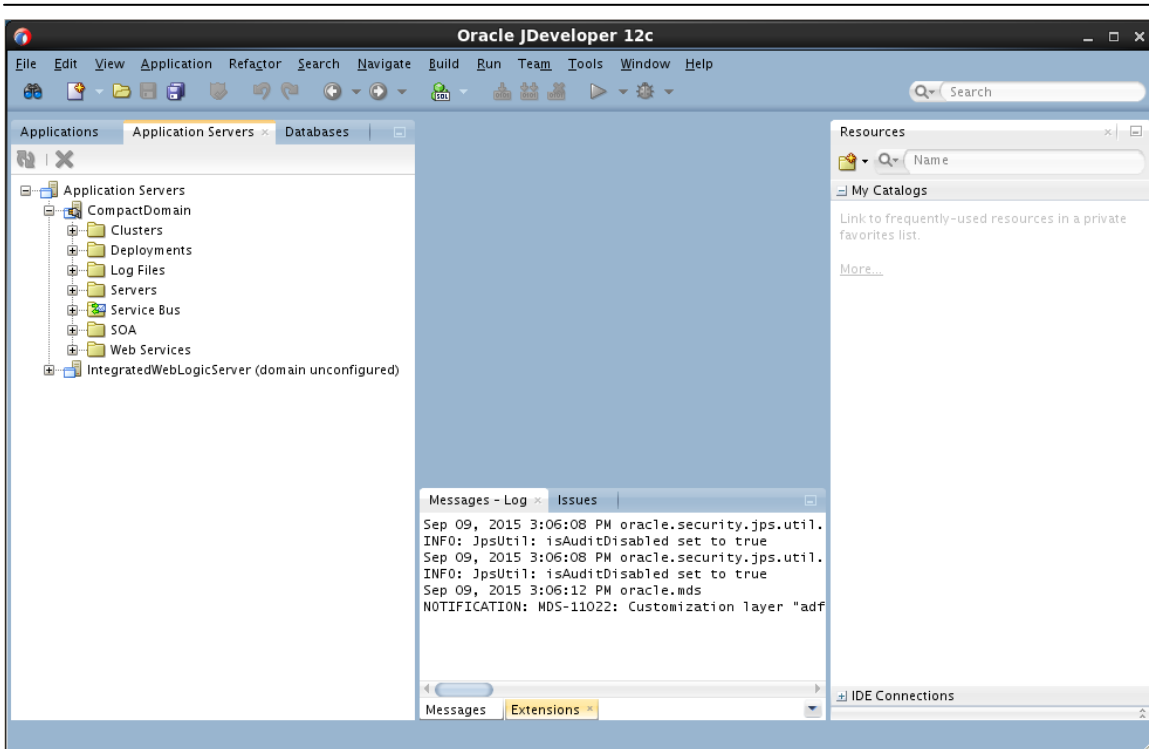
If you choose, you can also use JDeveloper that is installed in the VirtualBox Appliance. You can launch JDeveloper by simply double-clicking on the JDeveloper icon on the desktop.



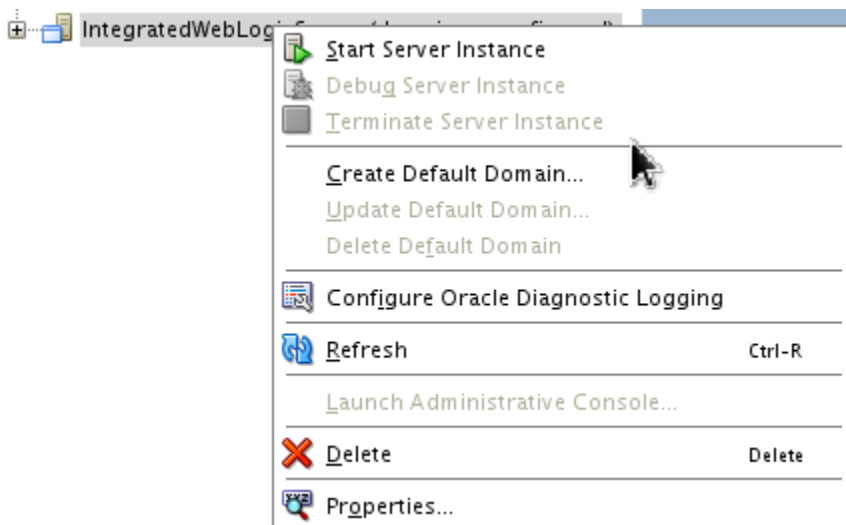
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- Note: The Application server connection for the compact domain is created for you. The IntegratedWebLogicServer domain is not configured, but you can create it if you choose by right-clicking it and selecting "Create Default Domain"



This will give you an integrated domain that will use port 7101 (or any other port you choose). While this would not conflict with the compact domain, you should make sure to allocate appropriate resources to the VM if you wish to do this.

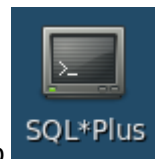
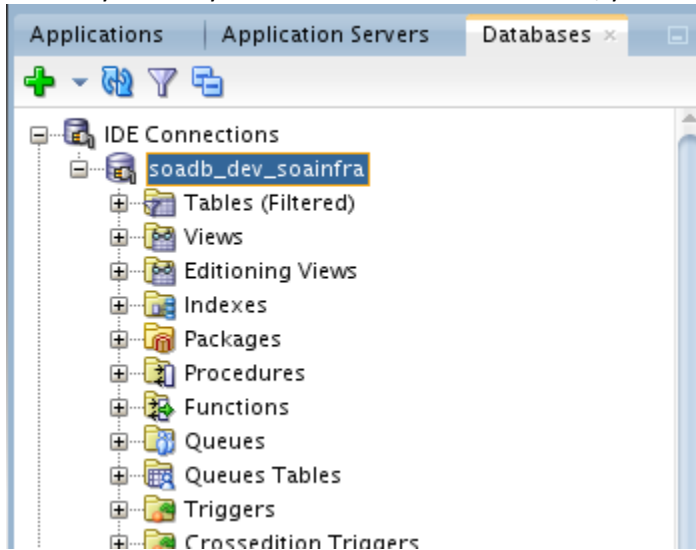
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### 4.3 Working with the Oracle Database

If for any reason you need to access the database, you can either do so through JDeveloper



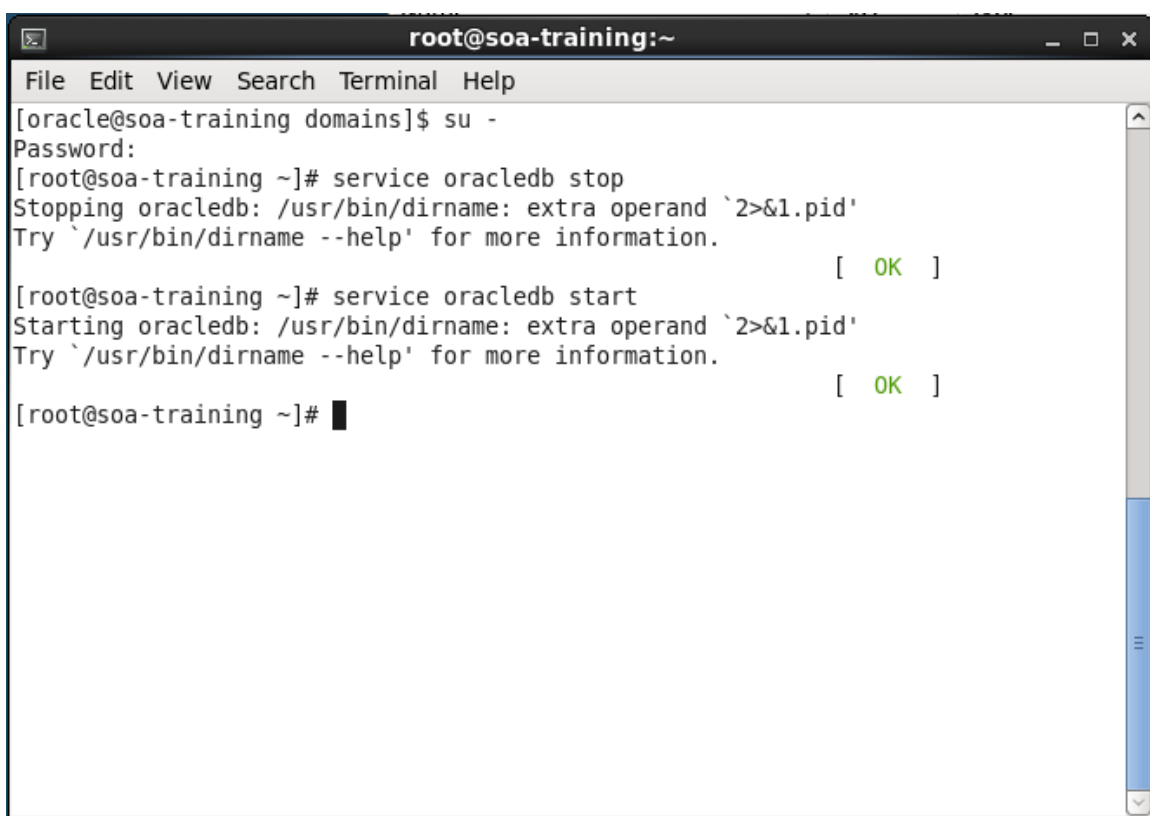
or through the SQL\*Plus prompt on the desktop

Using the SQL\*Plus prompt will open SQL plus logged in as **sysdba** role.

The database automatically starts/stops with the guest OS machine as a service. If for any reason you need to start or stop the database service (including listener) then open a terminal and perform the following:

- Switch to the root user by entering "su -" without the quotes
- When prompted, enter the password "welcome1" without the quotes
- To stop the database, make sure you have already stopped any running servers (SOA Suite, API Manager, etc) and then enter "service oracledb stop" without the quotes
- To start the database, enter "service oracledb start" without the quotes

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A terminal window titled "root@soa-training:~" with a menu bar (File, Edit, View, Search, Terminal, Help). The terminal shows the following commands and output:

```
[oracle@soa-training domains]$ su -
Password:
[root@soa-training ~]# service oracledb stop
Stopping oracledb: /usr/bin/dirname: extra operand `2>&1.pid'
Try `/usr/bin/dirname --help' for more information.
[ OK ]

[root@soa-training ~]# service oracledb start
Starting oracledb: /usr/bin/dirname: extra operand `2>&1.pid'
Try `/usr/bin/dirname --help' for more information.
[ OK ]

[root@soa-training ~]# █
```

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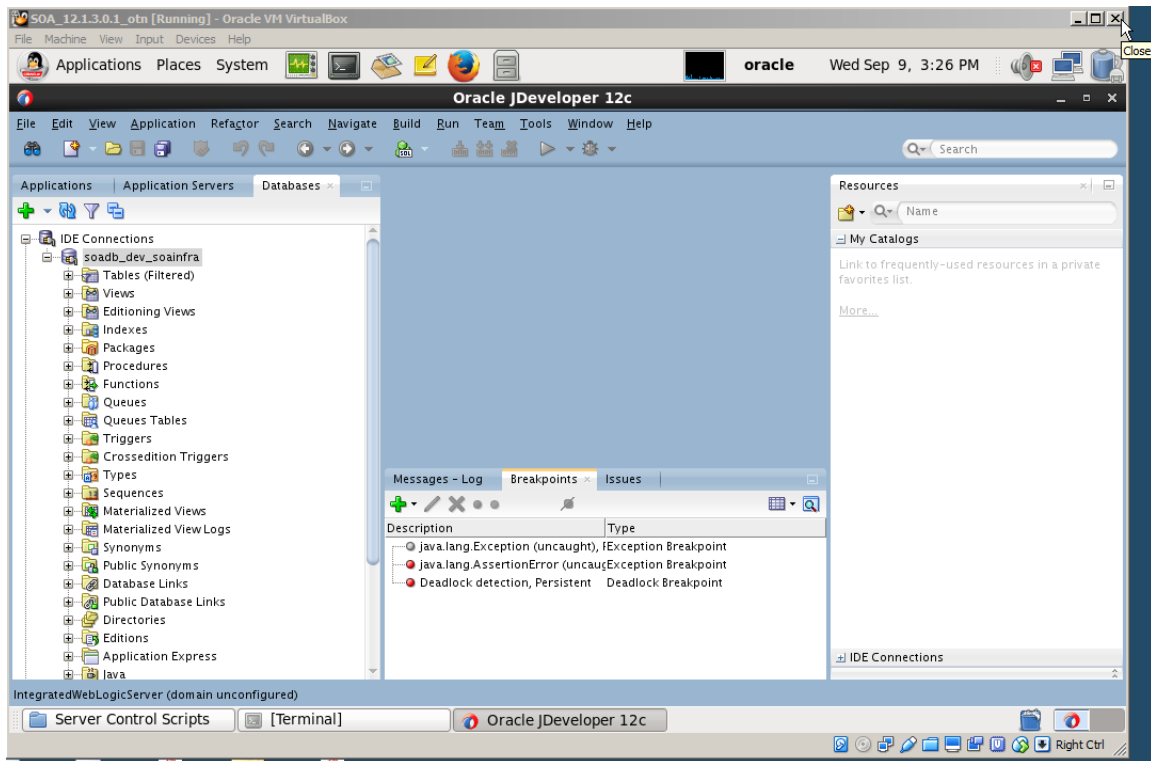
## Stop/shutdown the Appliance

When you want to stop the image you have two options:

### 4.4 Save the machine state

This option is much faster than completely shutting down. You can leave everything open and running and the state of the image is saved.

- Click on the **X** at the top right of your VirtualBox window



- Choose **“Save the machine state”**

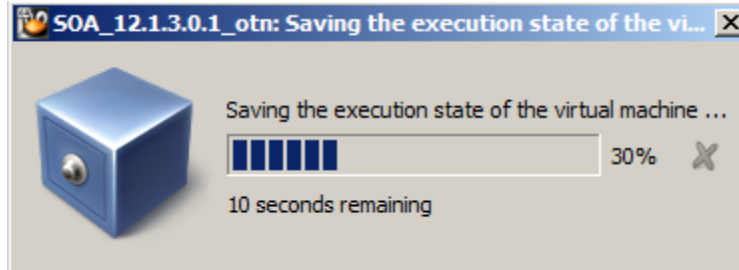


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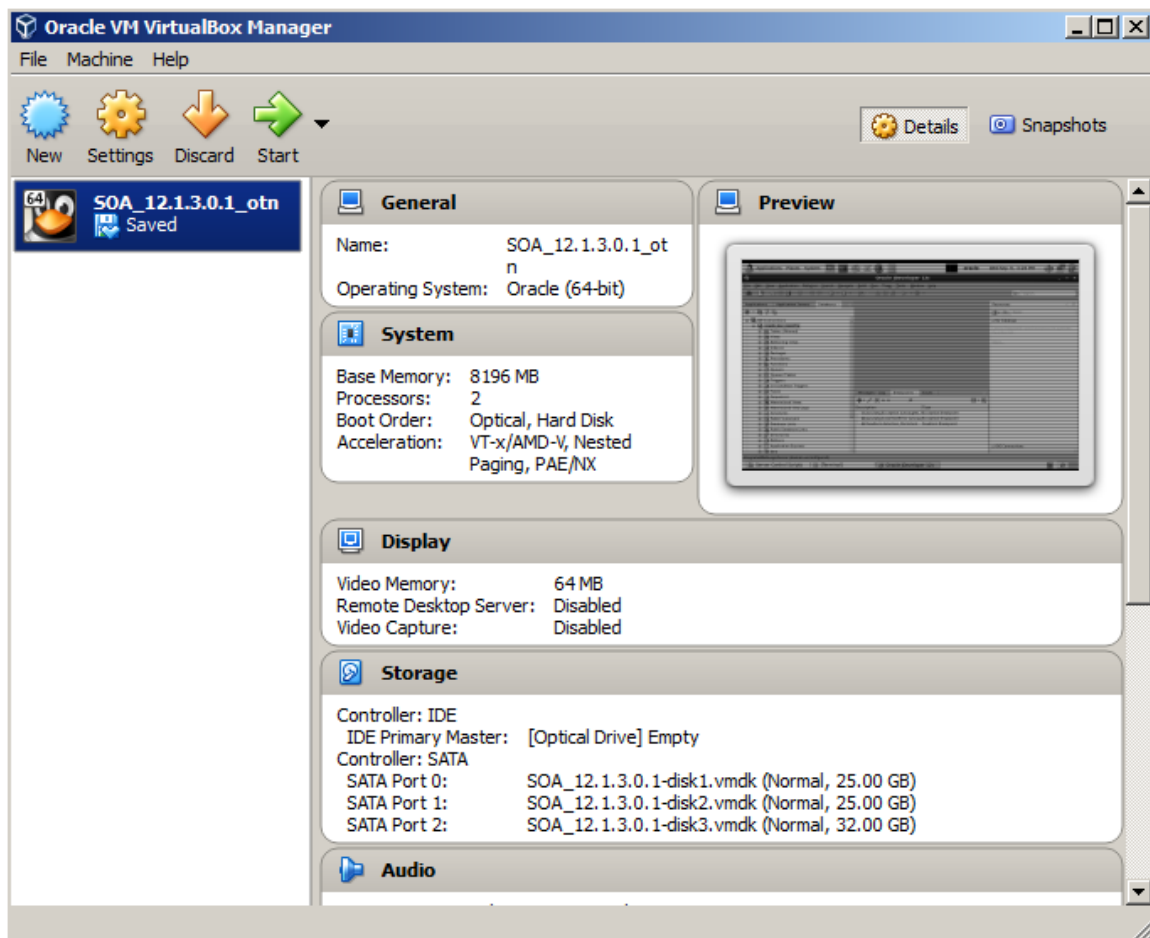
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- Click **OK**



- The Oracle VM VirtualBox Manager shows the image as **“Saved”**

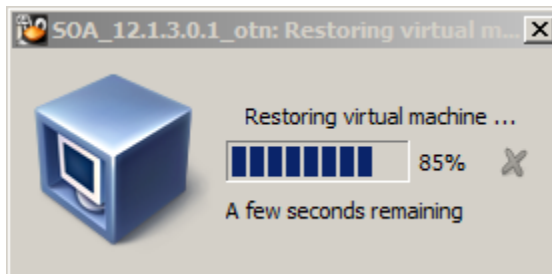
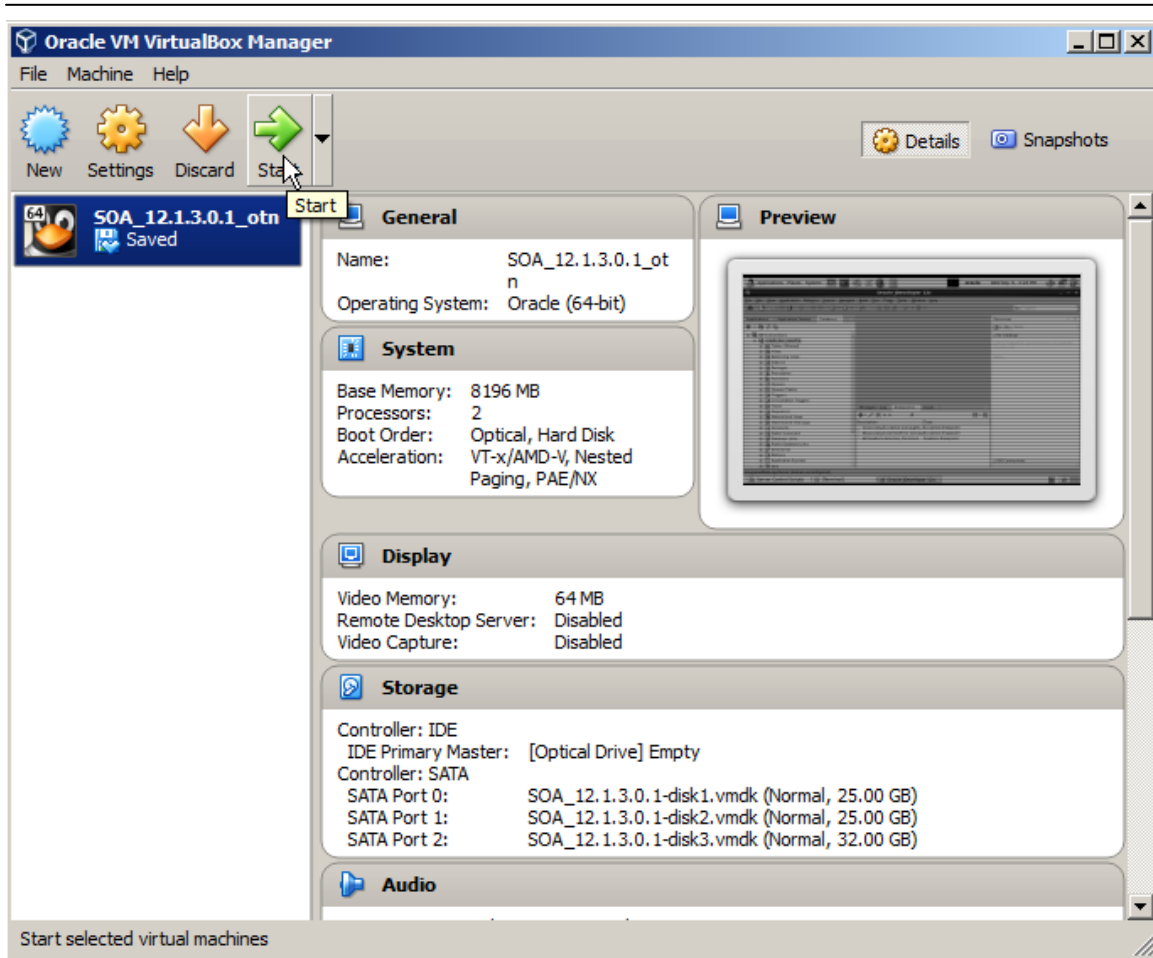


- If you want to start the image again, click on **Start** as you would also do after a shutdown

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- You will see that the image is in exactly the same state as before you saved it

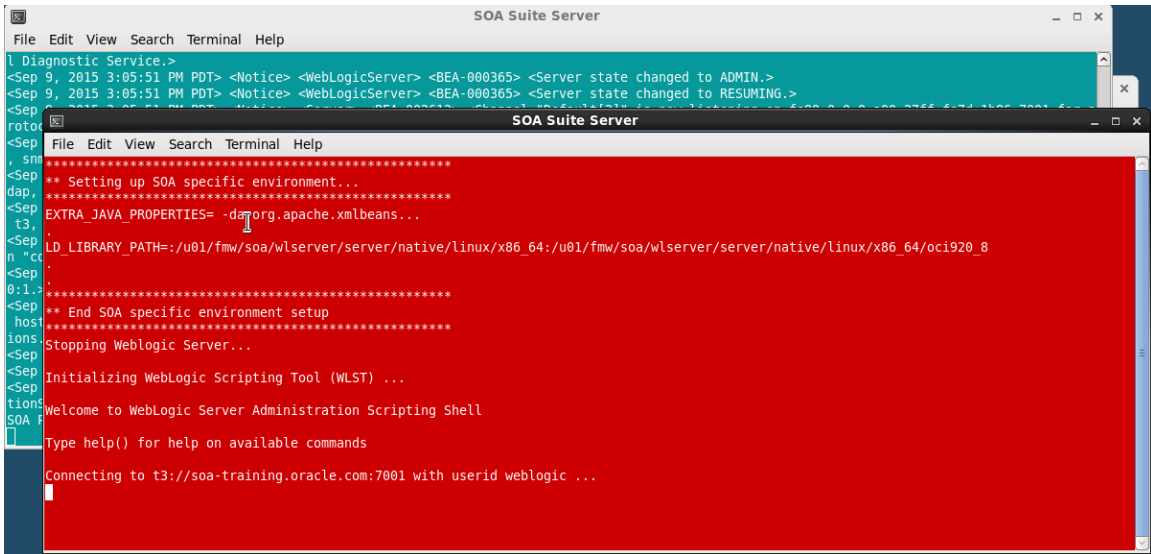
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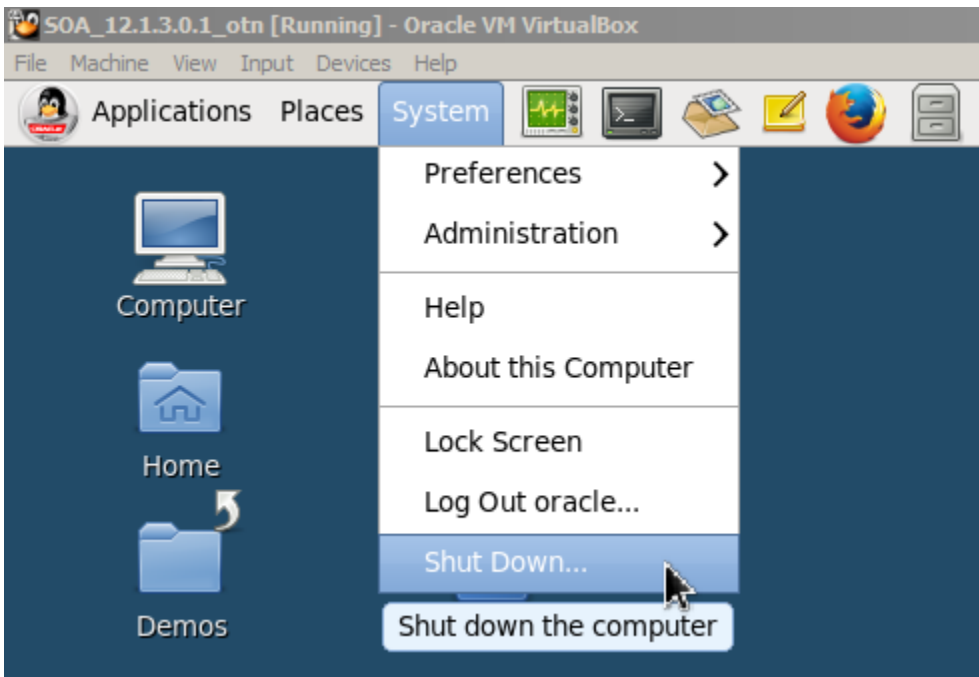
## 4.5 Shut down the image

Before shutting down the image, make sure that you have shut-down any running servers (SOA Suite Server, API Manager Server, etc)



- Don't worry about shutting down the database, it will shutdown automatically with the guest OS.

On the desktop, select System and Shut Down

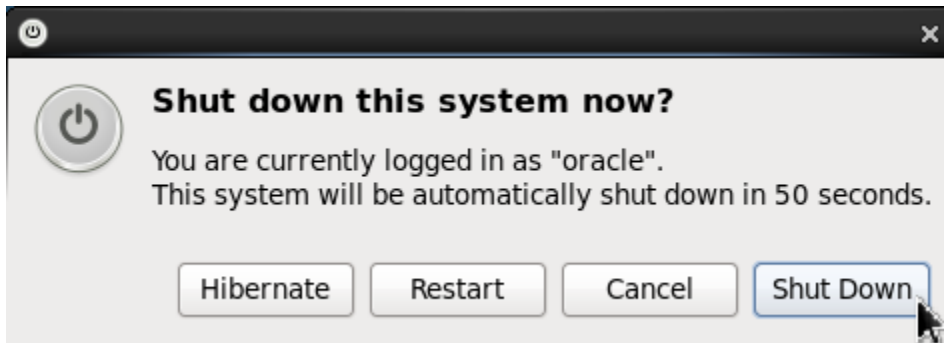


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Confirm the shutdown



You can watch the guest OS shutdown all of the services including the database

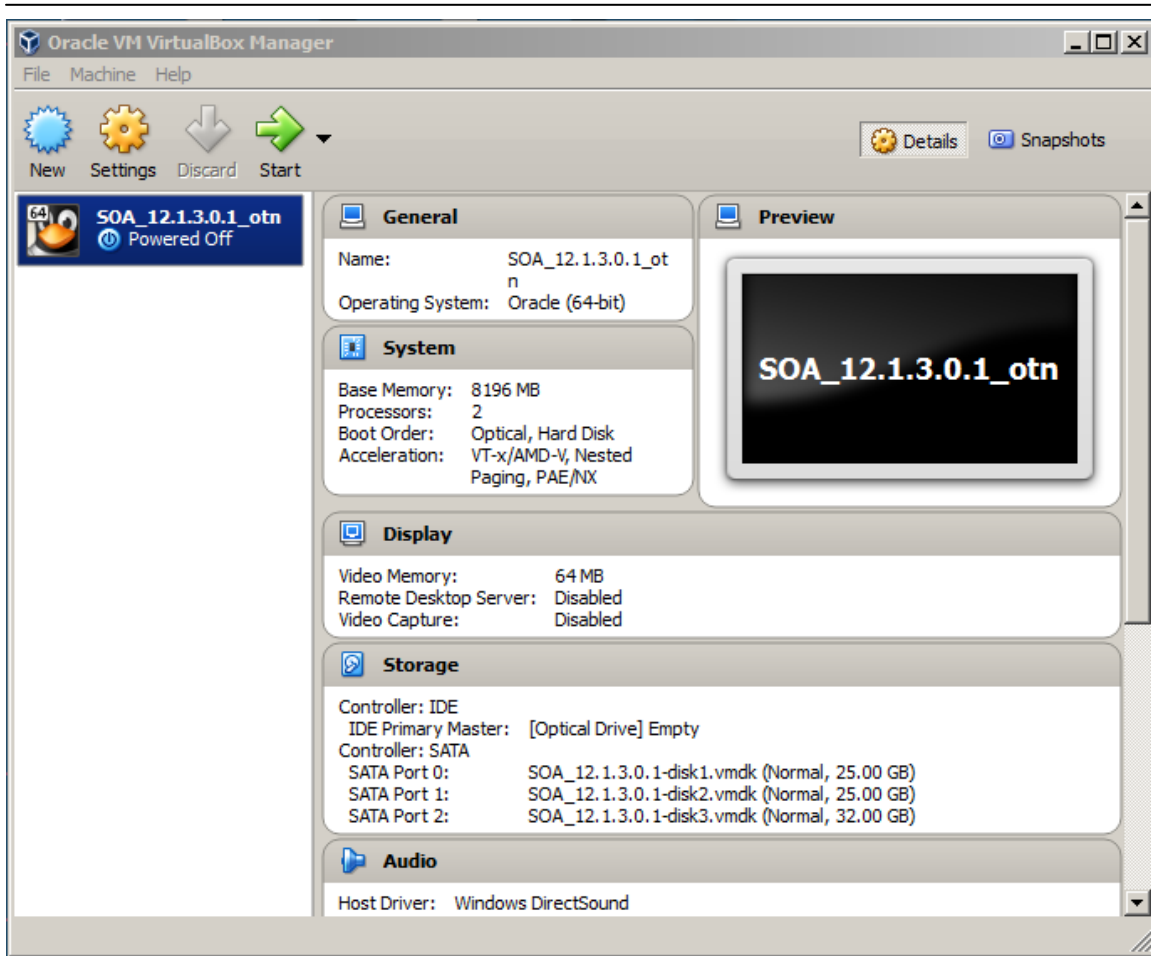
```
Shutting down...Stopping atd[ OK ]
Stopping cups: [ OK ]
Stopping sshd: [ OK ]
Shutting down postfix: [ OK ]
Stopping crond: [ OK ]
Stopping VirtualBox Guest Addition service [ OK ]
Stopping HAL daemon: [ OK ]
Stopping block device availability: Deactivating block devices:
[SKIP]: unmount of vg_soatraining-lv_root (dm-0) mounted on /
[ OK ]
Stopping NetworkManager daemon: [ OK ]
Stopping system message bus: [ OK ]
Stopping rpcbind: [ OK ]
Stopping auditd: [ OK ]
Shutting down system logger: [ OK ]
Shutting down loopback interface: [ OK ]
Stopping oracledb: /usr/bin/dirname: extra operand `2>&1.pid'
Try '/usr/bin/dirname --help' for more information.
```

Once it is complete, the window will close and the VirtualBox Manager will show the machine as powered off

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## Oracle SOA Suite VirtualBox Appliance

# Oracle SOA Suite VirtualBox Appliance

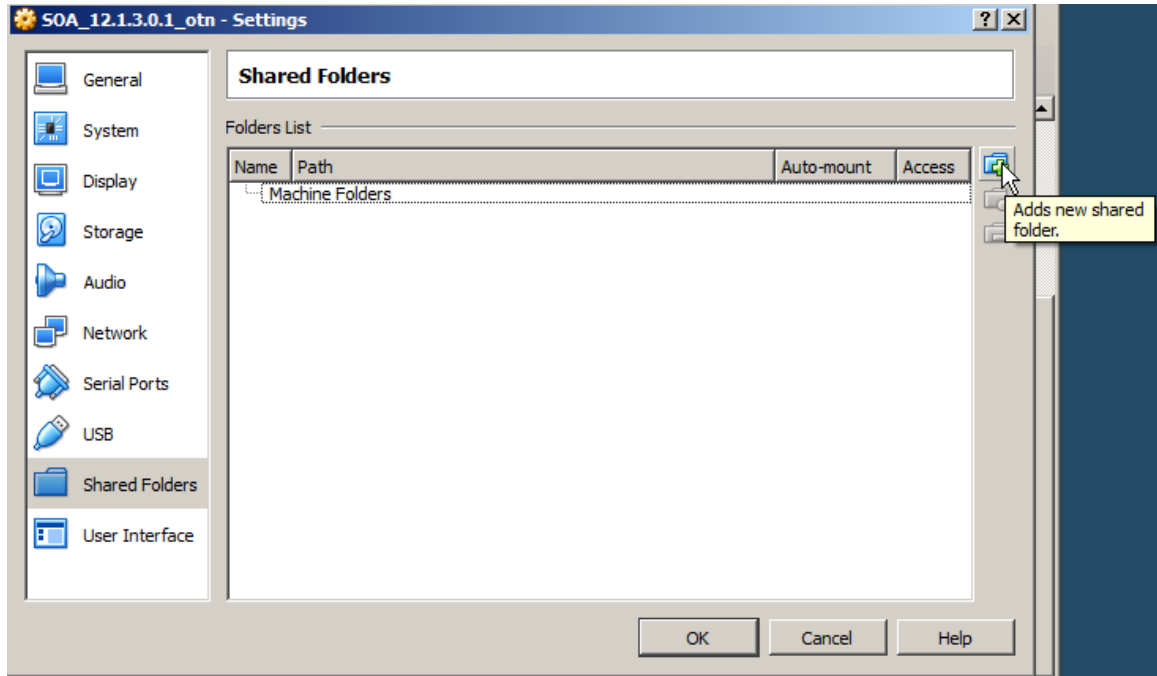


# Oracle SOA Suite VirtualBox Appliance

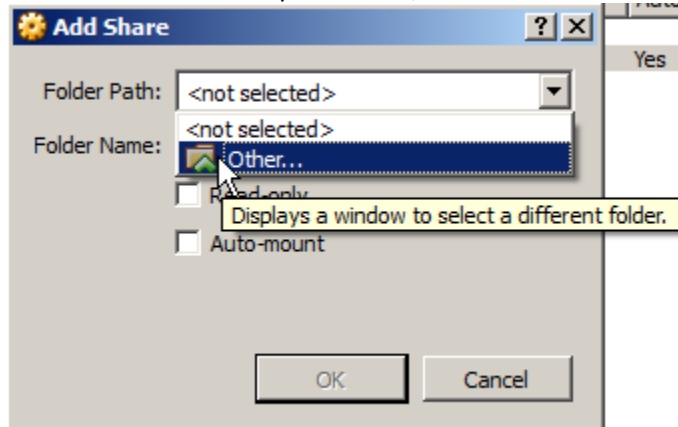
### 5 Set up a shared folder to move files between the VBox image and your local disk

You may want to copy files between the image and a local disk. This can easily be done through a shared folder following the steps below.

- Set up a shared folder on your laptop and remember the name, e.g. “share”
- In the image configuration, go to Shared Folders



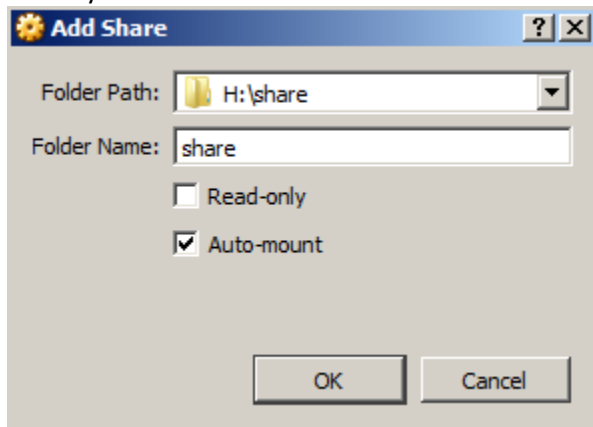
- Click Add a Share.
- In the **Folder Path:** drop-down list, choose **Other...**



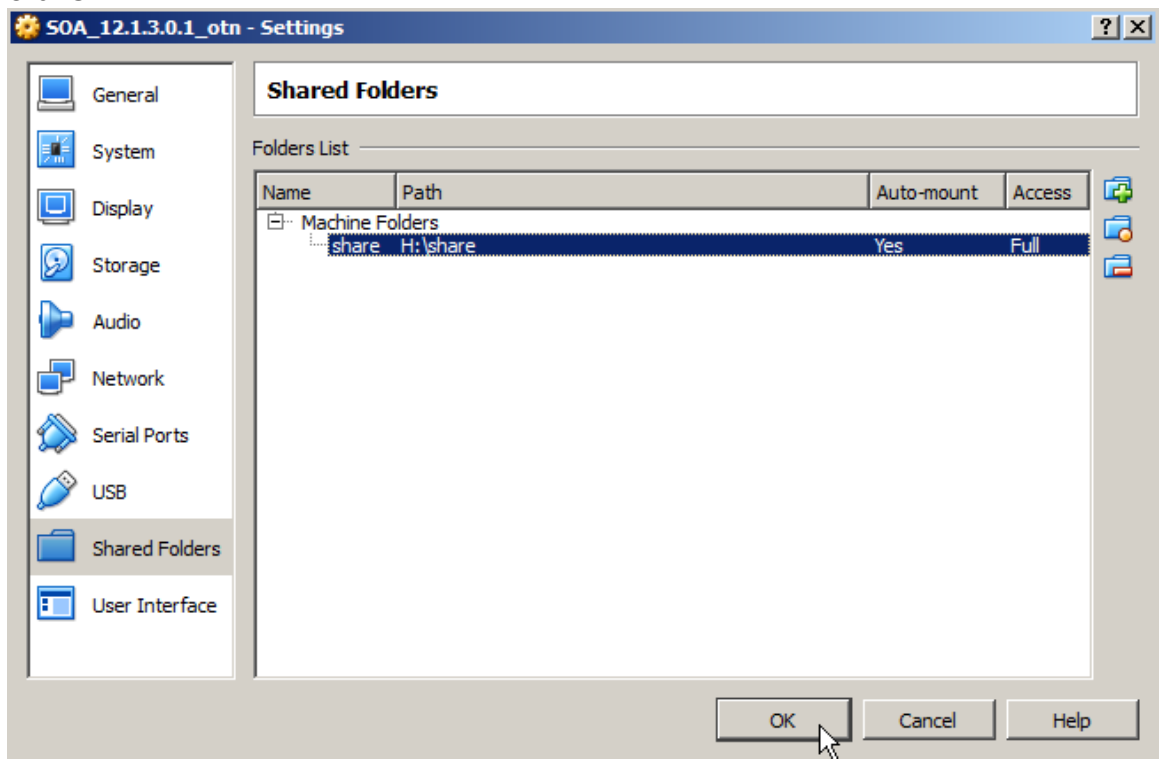
## Oracle SOA Suite VirtualBox Appliance

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- Select your local shared folder



- You can choose a different name or accept the default
- Select **Auto-mount**
- Click **OK**



- Click **OK**

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## Oracle SOA Suite VirtualBox Appliance