Oracle Database Appliance End User Deployment

Introduction

Oracle Database Appliance ships from the factory with Oracle Enterprise Linux and Oracle Database Appliance Manager pre-installed. Oracle Database Appliance End User Deployment is the procedure to Install and Configure

- ➤ Customer Specific Information like Hostname, IP address etc

- ➤ Oracle Grid Infrastructure

- ➤ Oracle Database

Note: It is recommended to download the End User Image from My Oracle Support as the contents of the End User Deployment will change.

Pre-Deployment Planning

This is an optional step to reduce the time taken to complete Deployment. It includes planning among other things Cluster name, Hostname(s), IP address etc. "Oracle Database Appliance Offline Configurator" can help plan this. This is a java based GUI and can be downloaded from http://otn.oracle.com/goto/appliance.

Using the Database Appliance Offline Configurator

1.) Download and unzip the zip file into a directory (say d:\temp\configurator on windows or /tmp/configurator on Linux/Unix)
2.) Open a
   - o   command window on Windows and execute config.bat
     OR
   - o   X-term on Linux and execute and execute config.sh
3.) This will bring up the welcome screen as seen below

4.) Click on next and choose Typical or custom option. The tool provides two options
Typical and Custom. The following additional options can be configured with the
"Custom Option"

- ➢ Choose Database Backup type (Local or External)
- ➢ Provide NTP information
- ➢ Configure ILOM
- ➢ Configure Additional Networks on other interfaces (bond1,bond2, xbond0)
- ➢ Change Database Block size and Characterset
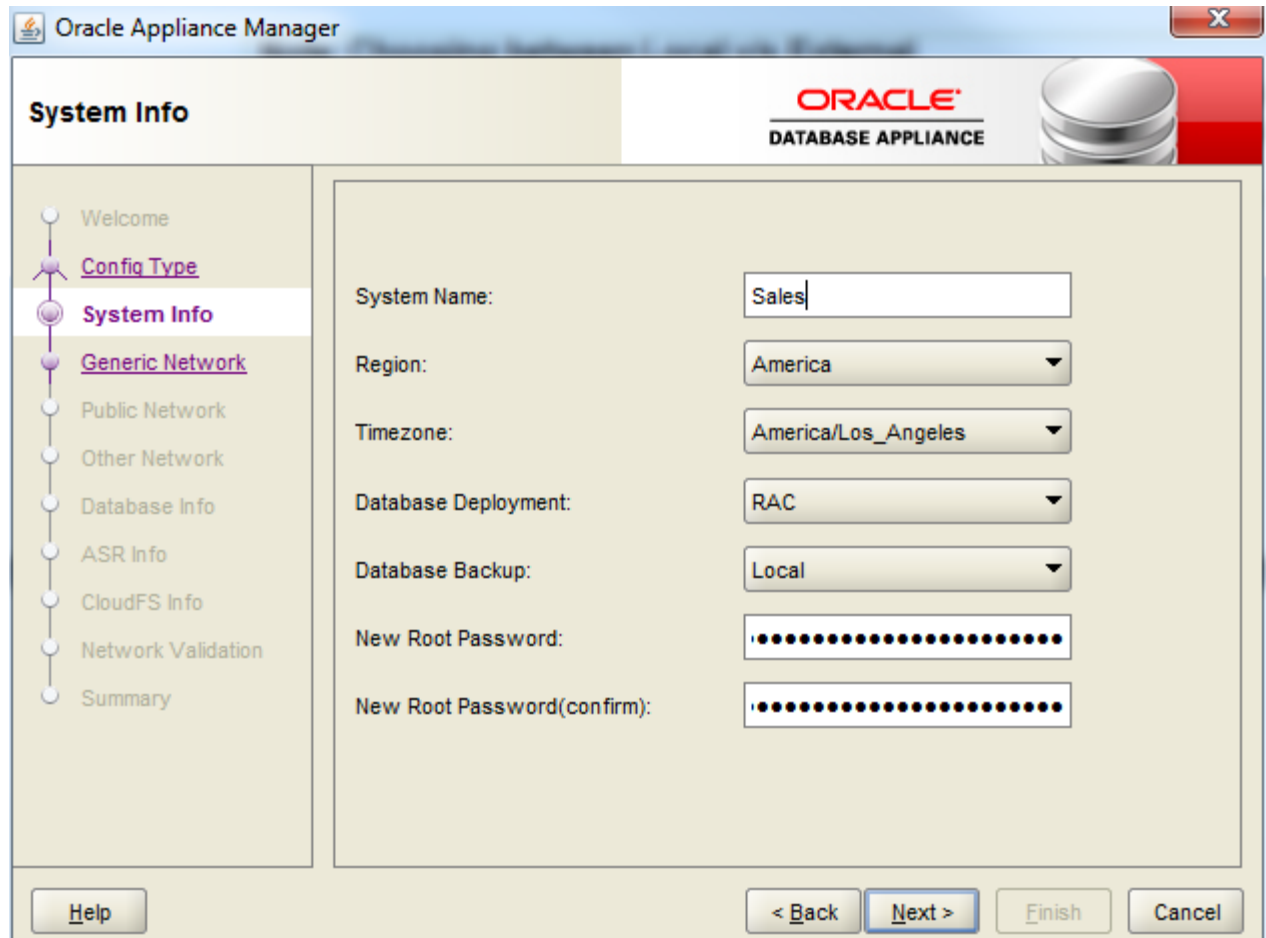- ➢ Configure ASR
- ➢ Resize CloudFS

5.) The example below uses **Custom** option
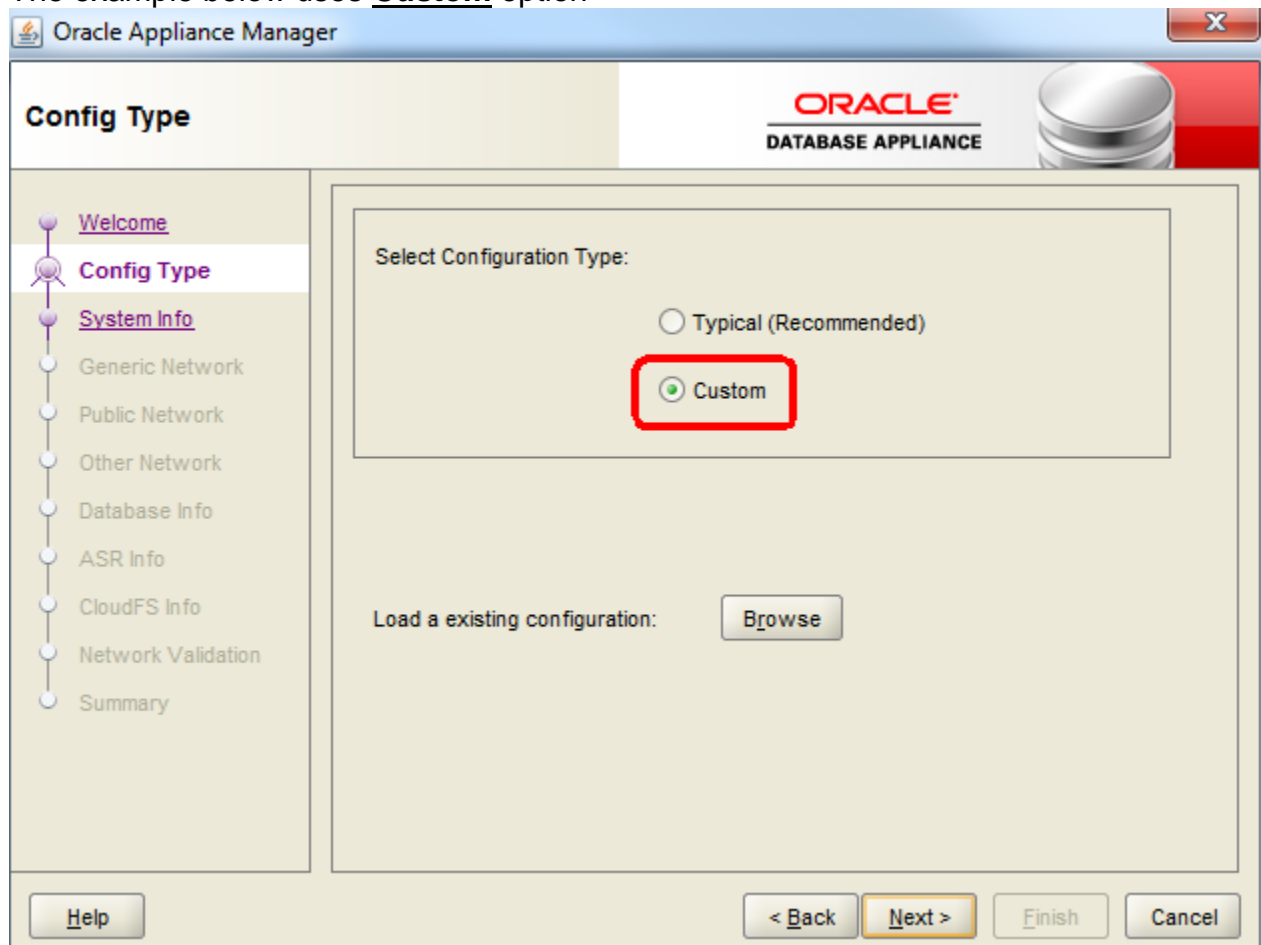
6.) Enter the system name and new root password of the system. Choose the region, Timezone, Database backup and the new root password.

> **Note: Choosing between Local v/s External**
> The Appliance ships with 4 Terabytes of Mirrored storage. Choosing Local will reduce the effective space to 1.2 Terabytes. Customers with higher space requirements should consider External backup

7.) Enter Domain name for the server and optionally enter the NTP Server information and click Next button to progress to the next screen.

8.) The fields are mostly pre-filled based on the system name. They can be corrected as needed. On entering the IP for the first Public Node name, the IP's for other fields are automatically incremented. These IP's should be corrected as necessary.
Optionally Customers can choose to use a 10GbE for their private instead of the default 1GbE by clicking on the interface field

Oracle Appliance Manager

Public Network

ORACLE
DATABASE APPLIANCE

- Welcome
- Config Type
- System Info
- Generic Network
- **Public Network**
- Other Network
- Database Info
- ASR Info
- CloudFS Info
- Network Validation
- Summary

	Node1-Name	Node1-IP		Node2-Name	Node2-IP
Public	Sales1	11.22.33.44		Sales2	11.22.33.45
VIP	Sales1-vip	11.22.33.46		Sales2-vip	11.22.33.47
SCAN	Sales-scan	Addresses		11.22.33.48	11.22.33.49
Netmask	255.255.255.0	Gateway	11.22.33.1		
Interface	bond0				

	Node1-Name	Node1-IP		Node2-Name	Node2-IP
ILOM	Sales1-ilom	99.88.77.66		Sales2-ilom	99.88.77.67
Netmask	255.255.255.0	Gateway			

Help   < Back   Next >   Finish   Cancel

9.) Customer can optionally choose to provide other network information or skip this screen

Other Network

	Node1-Name	Node1-IP	Node2-Name	Node2-IP
bond1	Sales1-net1		Sales2-net1	
Netmask		Gateway		
bond2	Sales1-net2		Sales2-net2	
Netmask		Gateway		
xbond0	Sales1-net3		Sales2-net3	
Netmask		Gateway		

Navigation steps: Welcome, Config Type, System Info, Generic Network, Public Network, **Other Network**, Database Info, ASR Info, CloudFS Info, Network Validation, Summary

Help   < Back   Next >   Finish   Cancel

10.)   Enter Database name and click on Next

Oracle Appliance Manager

Database Info

ORACLE
DATABASE APPLIANCE

- Welcome
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- Public Network
- Other Network
- **Database Info**
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- Summary

Database Name:	aa
Database Class:	Medium
Database Language:	en : English
Database Block Size:	8192
Database Characterset:	AL32UTF8

Help   < Back   Next >   Finish   Cancel

11.) Configure ASR as needed and Click on Next

Note: Choosing this option will result in ASR setup with the ASR infrastructure on Node 1. Do not choose this option if there is an external ASR infrastructure already implemented. This needs to be configured manually

12.) Optionally change the size of the Cloud File System or Uncheck the "Configure Cloud File System" .
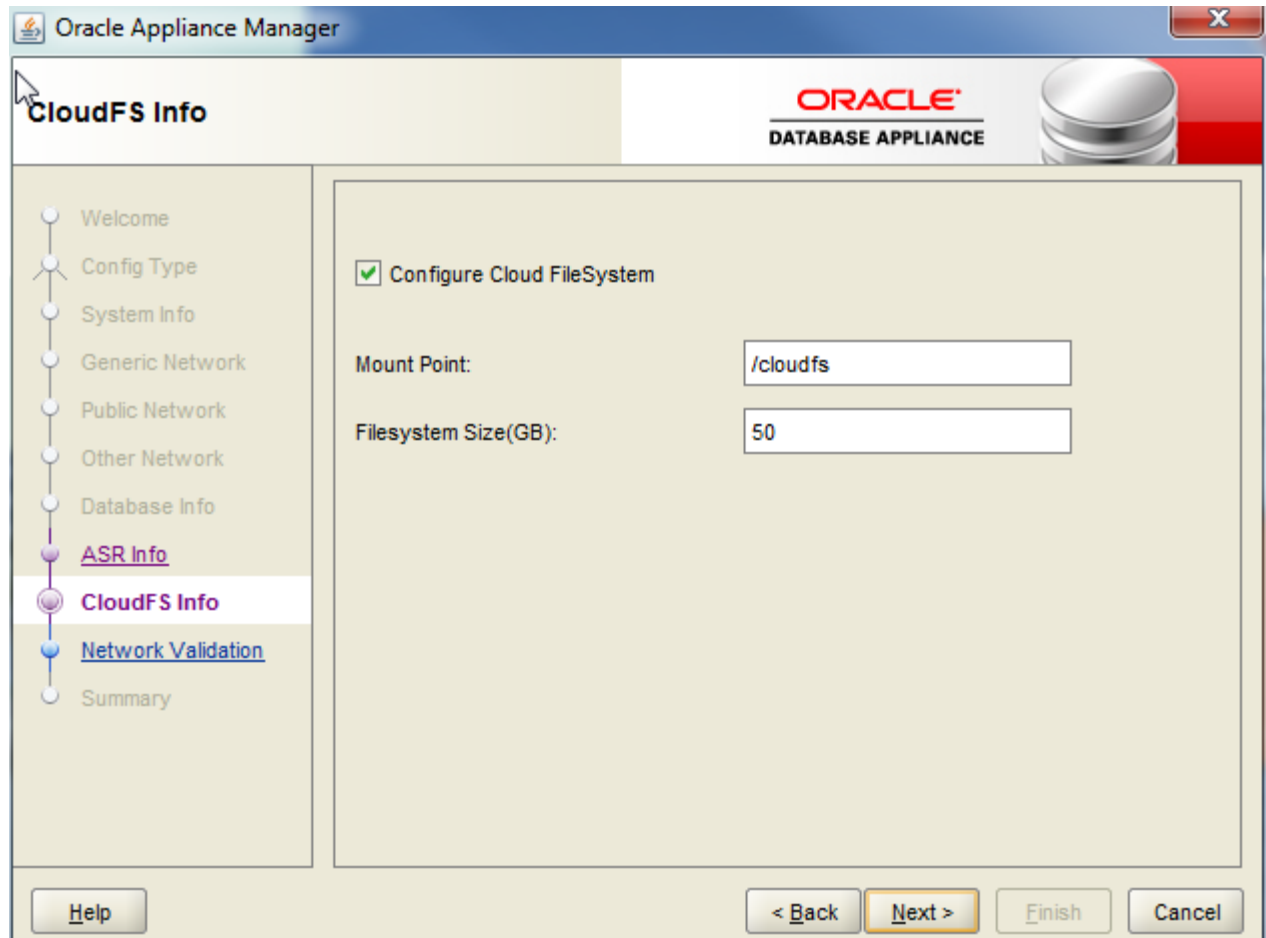
13.)   Choose to skip/ignore Network Validations. Choose Skip if the Offline Configurator is executed from a machine not on the network or in a different network where validations would Fail.
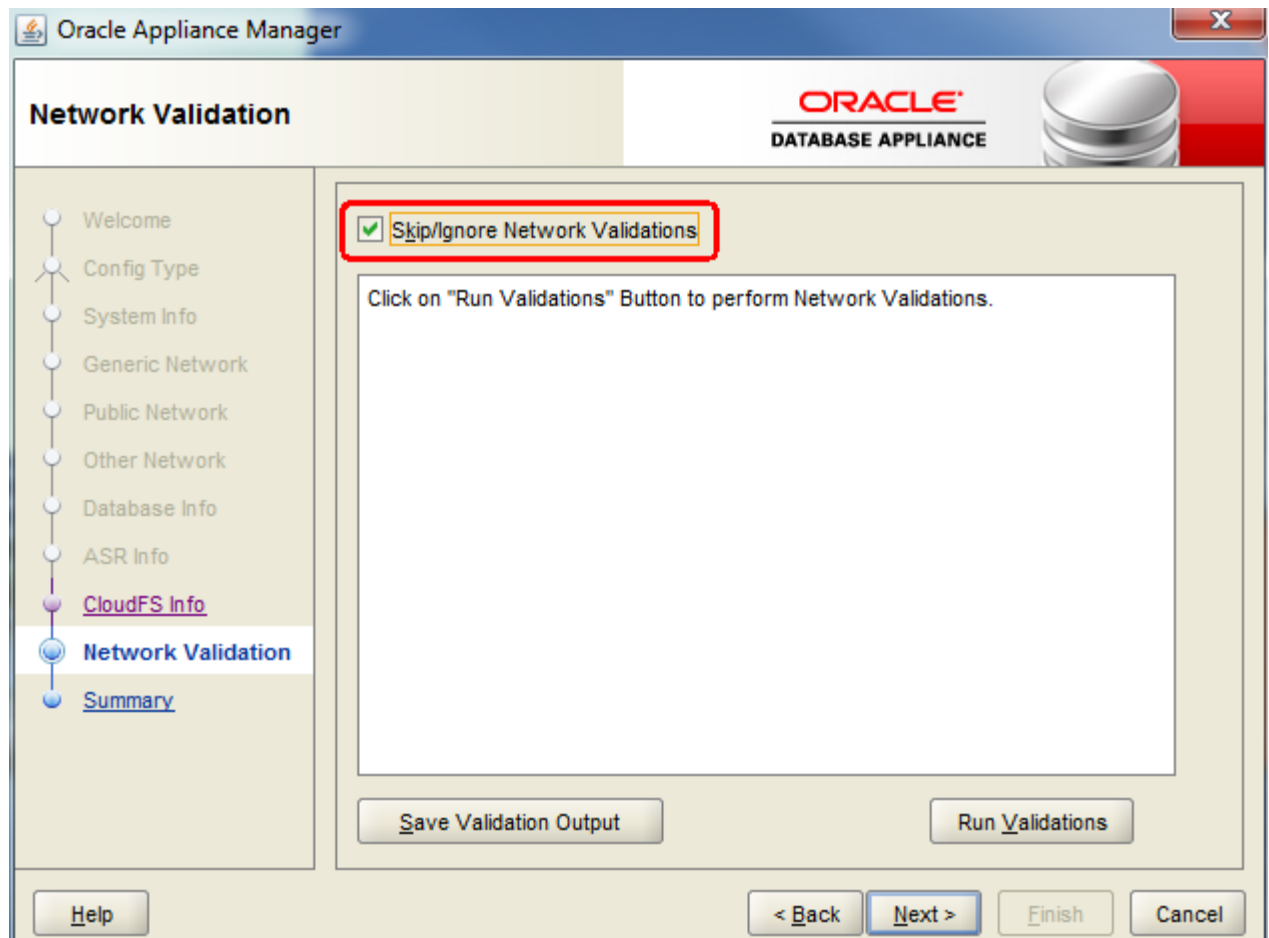
14.)	Review the information provided and click save to save the configuration information to a file as shown below. This is the file that will be used in Step
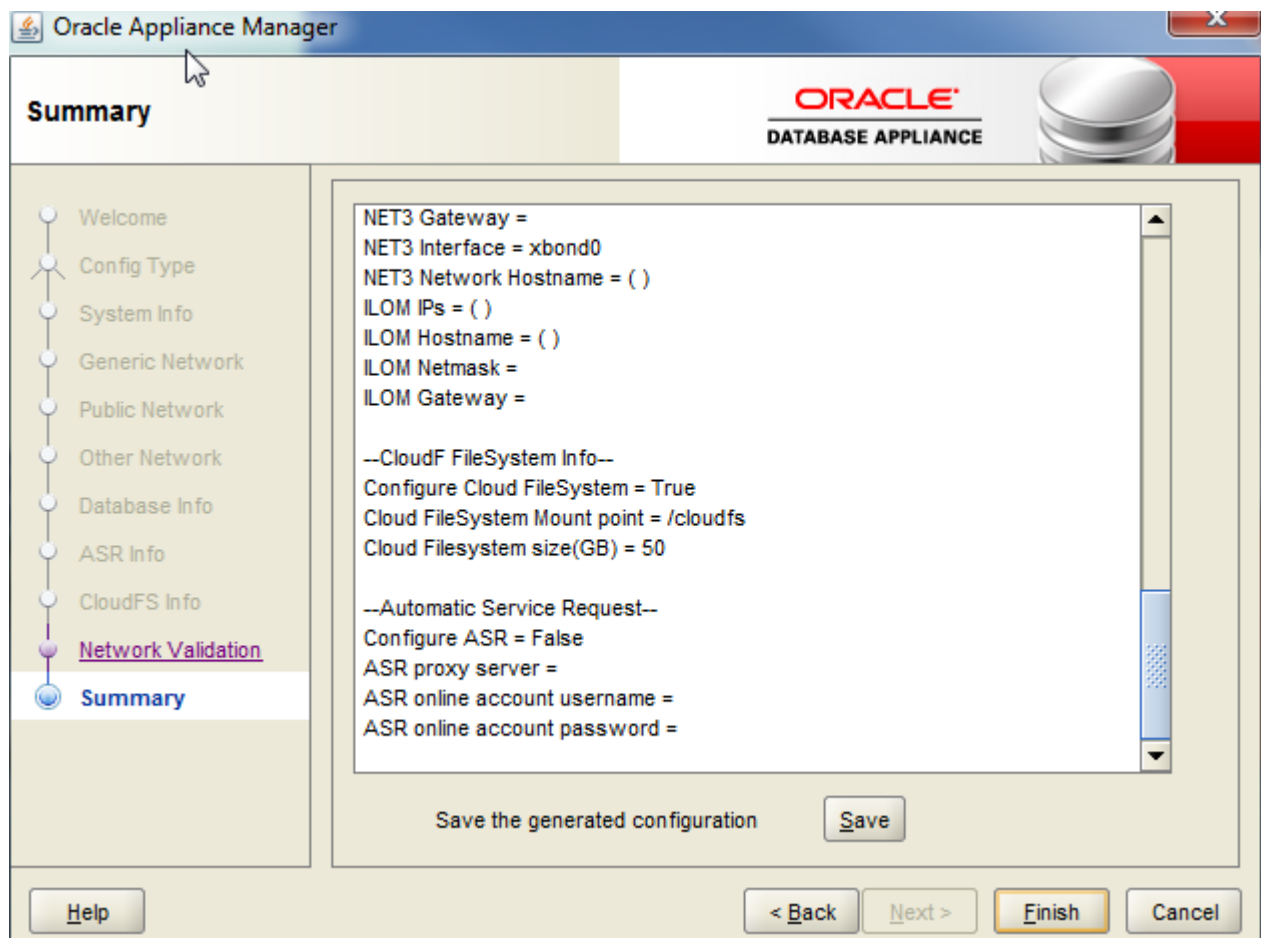
Deployment

Database Appliance ships from the factory with the Oracle Enterprise Linux and Oracle Appliance Manager pre-installed. Customers can choose to run the configurator from the Appliance or use the saved configuration file generated using the offline Configurator by following the Pre-planning steps documented above.

On receiving delivery of the Oracle Database Appliance and subsequent unpacking and mounting,

1. Connect the Power cable

2. Connect the appropriate network cables to
   a. eth2 and eth3 for 1GbE
      or
   b. eth8 and eth9 for 10GbE

3. Connect Monitor/Keyboard/Mouse or the KVM connector cables to the Laptop. This is optional and is only required if the system deployment is going to be performed from the console instead of the ILOM.

   It is possible to skip this step and login to the ILOM remotely and run the deployment from the ILOM.
4. To login to ILOM, open a browser and enter the ILOM IP address and it should show a screen like below

   login as root/changeme (default password)

5. Click on remote control and choose remote console
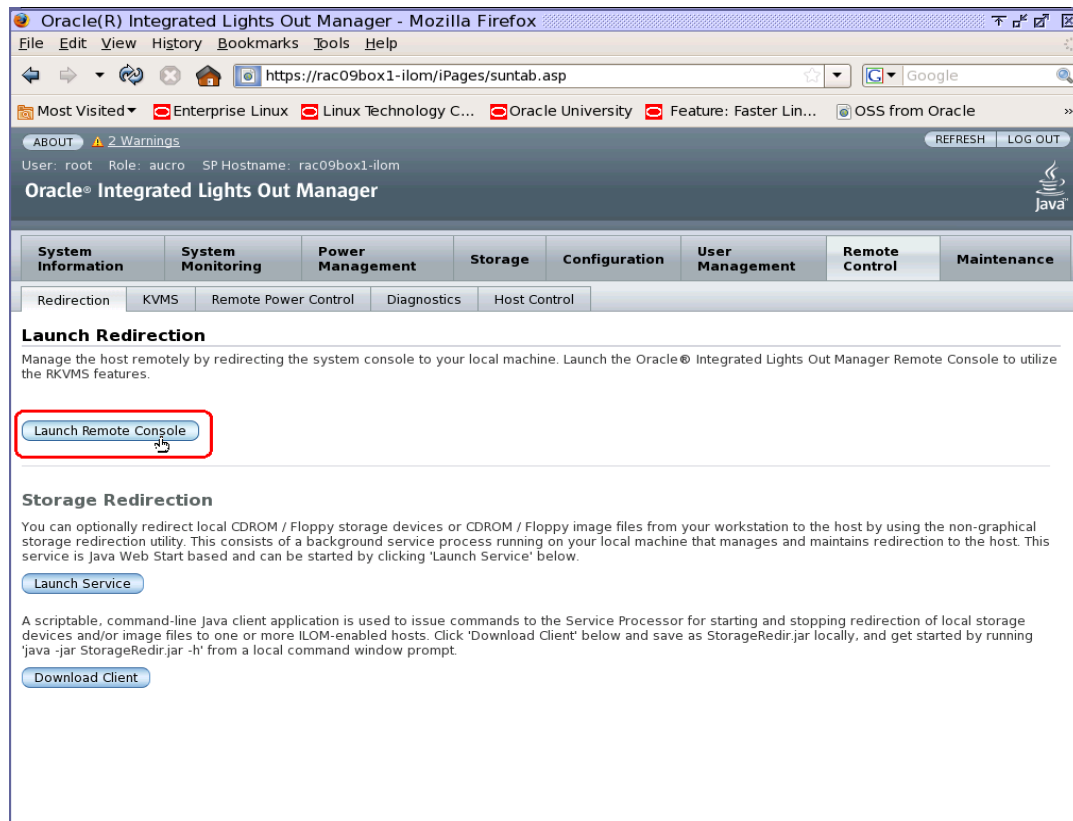
6. Login to the host using root and welcome1 as password and initiate X using startx
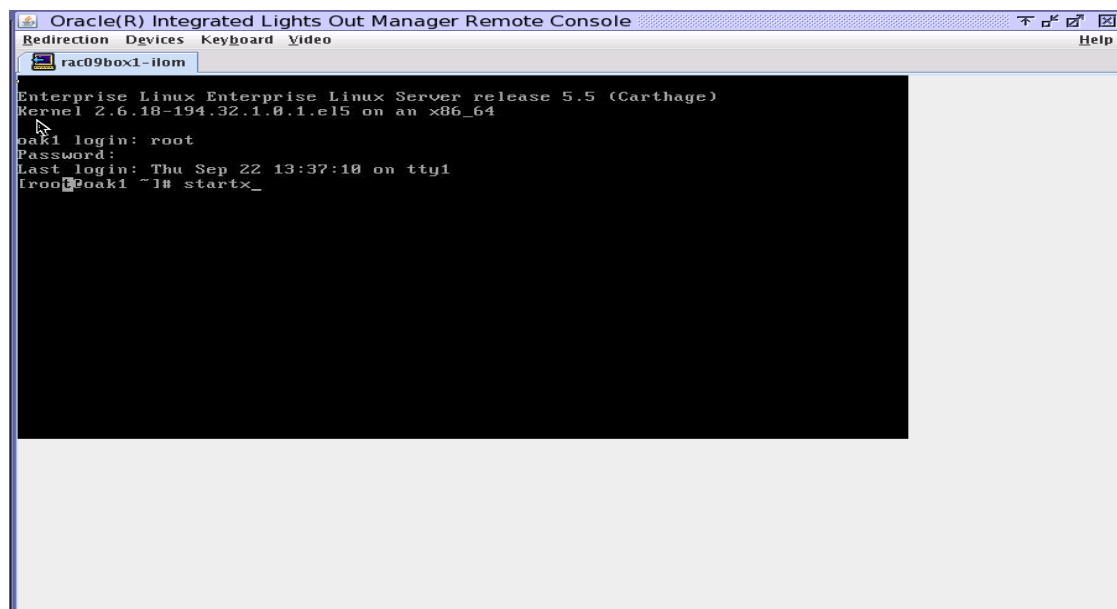
> **Note:**
> Regardless of how the GUI console is accessed, the deployment uses the same Appliance manager commands

7. Before starting deployment, the end user packages needs to be transferred to the Appliance. The end user packages are not shipped on the appliance.

> **Note:**
> Remember to Copy the Configuration file save during the Pre-Deployment Step (Step 14 above) to the Appliance along with the End user Packages.

The End User package can be downloaded to any Linux/Windows system and transferred via USB or via the network to the Appliance. The example below uses the network option

In order to transfer via Network, the network needs to be configured and this is accomplished using the configure firstnet command as shown below.

To configure the network, execute as root

#/opt/oracle/oak/oakcli configure firstnet

and enter the Interface/IP/Gateway Information.

The command plumbs an interface and allows ssh/scp access to the Appliance to get the end user Packages.

```
root@oak1:/opt/oracle/oak/bin
[root@oak1 /]# cd /opt/oracle/oak/bin
[root@oak1 bin]# ./oakcli configure firstnet
Select the interface to configure network on [bond0 bond1 bond2 xbond0]:bond0
Configure DHCP on bond0?(yes/no):no
INFO: Static configuration selected
Enter the IP address to configure:144.25.215.107
Enter the netmask address to configure:255.255.252.0
Enter the gateway address to configure:144.25.212.0
INFO: Plumbing the IPs now
INFO: Restarting the network
Shutting down interface bond0:                          [  OK  ]
Shutting down interface bond1:                          [  OK  ]
Shutting down interface bond2:                          [  OK  ]
Shutting down interface eth0:                           [  OK  ]
Shutting down interface eth1:                           [  OK  ]
Shutting down interface eth8:                           [  OK  ]
Shutting down interface eth9:                           [  OK  ]
Shutting down interface xbond0:                         [  OK  ]
Shutting down loopback interface:                       [  OK  ]
Bringing up loopback interface:                         [  OK  ]
Bringing up interface bond0:  RTNETLINK answers: Invalid argument
                                                       [  OK  ]
Bringing up interface bond1:                            [  OK  ]
Bringing up interface bond2:                            [  OK  ]
Bringing up interface eth0:                             [  OK  ]
Bringing up interface eth1:                             [  OK  ]
Bringing up interface xbond0:                           [  OK  ]
[root@oak1 bin]# 
```

8. Copy the end-user file using either the network or USB into any directory (for example "/tmp")
    Optionally copy the End User

    And execute as root

    #/opt/oracle/oak/oakcli unpack –package /tmp/p12978712_21000 Linux-x86-64.zip

9. Initiate the configurator using the following command

    #/opt/oracle/oak/bin/oakcli deploy

10. The deploy command launches a welcome screen. If the Offline Configurator was not used as mentioned in the Pre-planning section above, then enter the information in the configurator and initiate the deployment. The steps are exactly same as documented above.
    In the example below assumes that the configuration file was saved.

    choose the "load existing configuration" and browse to the file as shown below
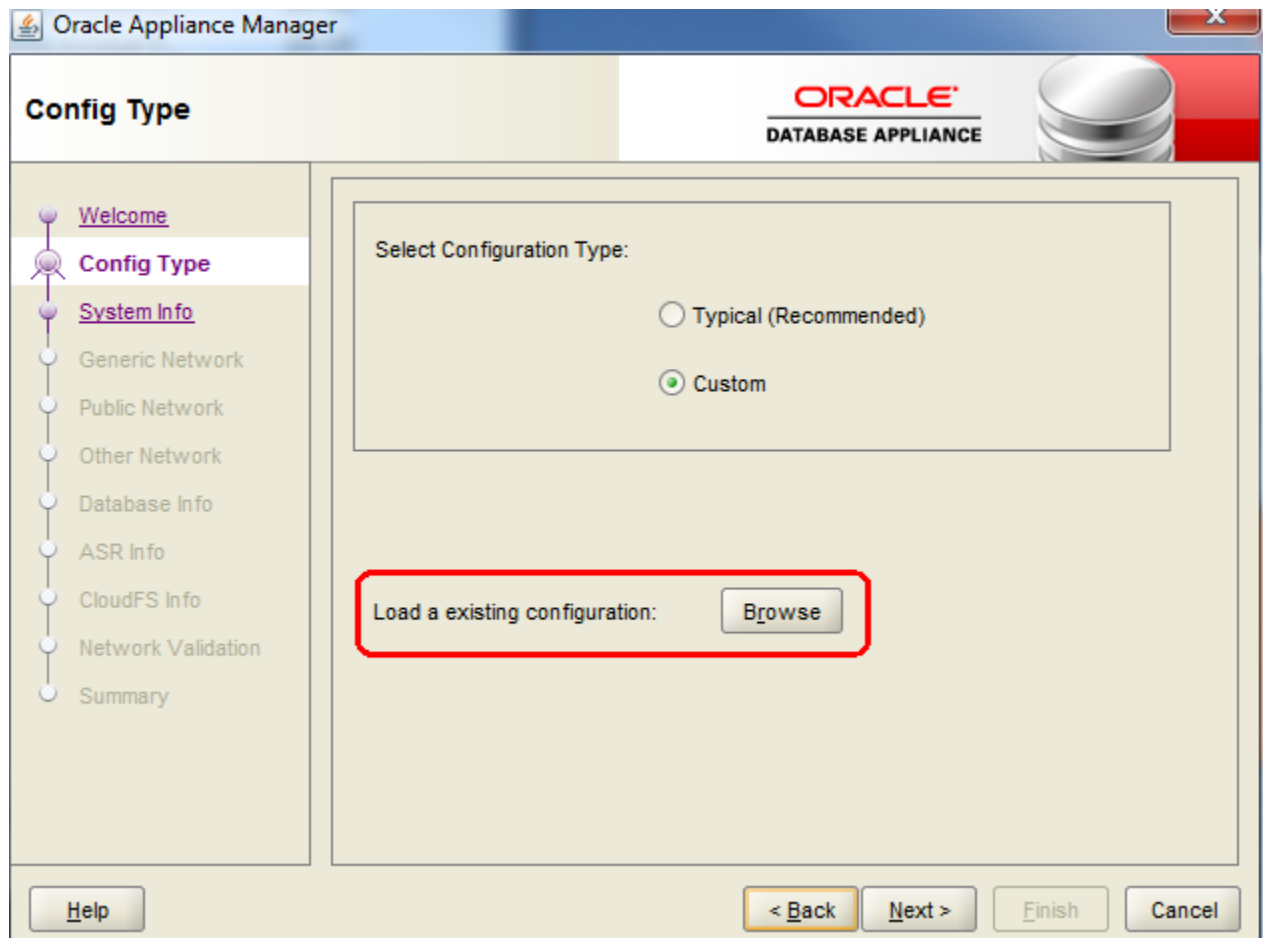
11. Click on the Next Button and Continue clicking on each screen and verify the
    information until the Summary screen and then click on "Finish".

Oracle Appliance Manager

Summary

- Welcome
- Config Type
- System Info
- Generic Network
- Public Network
- Other Network
- Database Info
- ASR Info
- CloudFS Info
- Network Validation
- Summary

```
NET3 Gateway =
NET3 Interface = xbond0
NET3 Network Hostname = ( )
ILOM IPs = (12.22.22.22 12.22.22.23)
ILOM Hostname = (aa1-ilom aa2-ilom)
ILOM Netmask = 255.255.255.0
ILOM Gateway = 12.22.22.1

--CloudF FileSystem Info--
Configure Cloud FileSystem = True
Cloud FileSystem Mount point = /cloudfs
Cloud Filesystem size(GB) = 50

--Automatic Service Request--
Configure ASR = False
ASR proxy server =
ASR online account username =
ASR online account password =
```

Save the generated configuration   Save

Help   < Back   Next >   Finish   Cancel

12. The deployment should complete in about 2 hours. Once the deployment is complete the Database is ready and available to use.