

ORACLE®

Oracle Database Appliance - FE Training

Supporting the Installation Service

Oracle Database Appliance X7-2

Deploying the
Oracle Database Appliance



Mar 2018

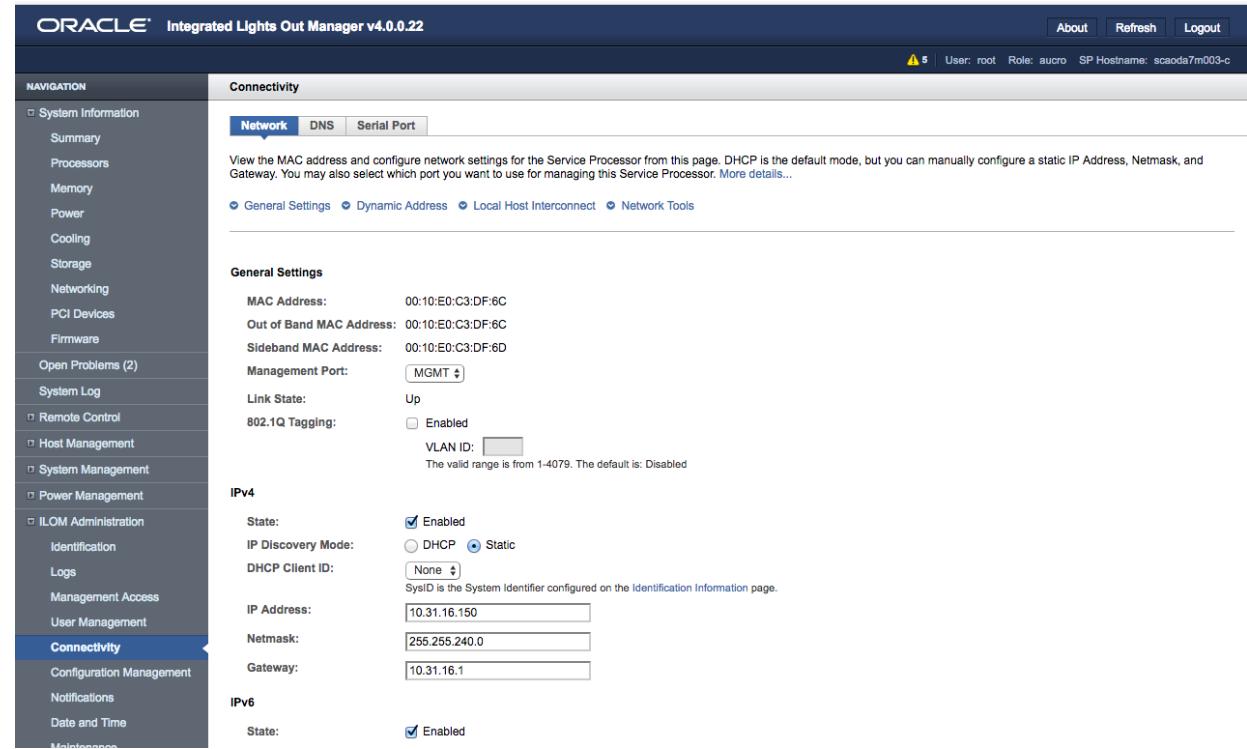
ORACLE®

ODA Software

Patch Number	Description
Patch 23530609	Oracle Database Appliance Patch 12.2.1.2 reimagine
Patch 27141226	Oracle Database Appliance Server Patch 12.2.1.2 Patch for ODACLI/DCS Stack
Patch 27119393	Oracle Database Appliance 12.2.1.2 GI Clone for ODACLI/DCS Stack (Mandatory)
Patch 27119402	Oracle Database Appliance 12.2.0.1.171017 RDBMS Clone for ODACLI/DCS Stack (Optional)
Patch 23494997	Oracle Database Appliance 11.2.0.4.171017 RDBMS Clone for ODACLI/DCS Stack (Optional)

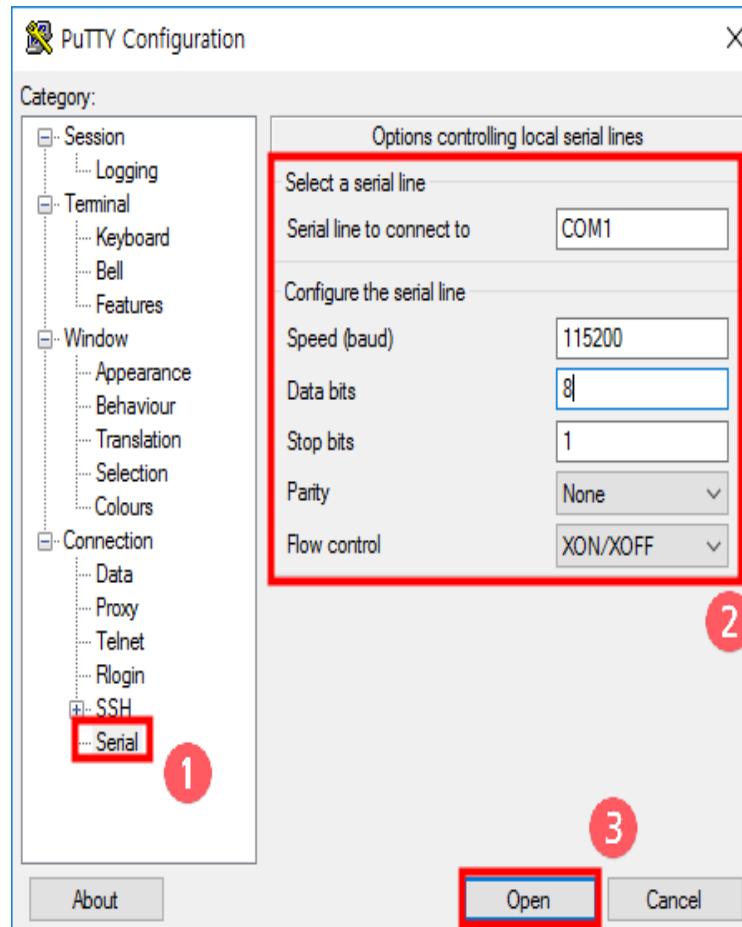
Access Your ILOM

- No video port is available on the ODA X7 servers
- Connect via Server Management serial port or determine the DHCP address that has been assigned to it
- Once connected, set the ILOM IP, Netmask, Gateway, etc.

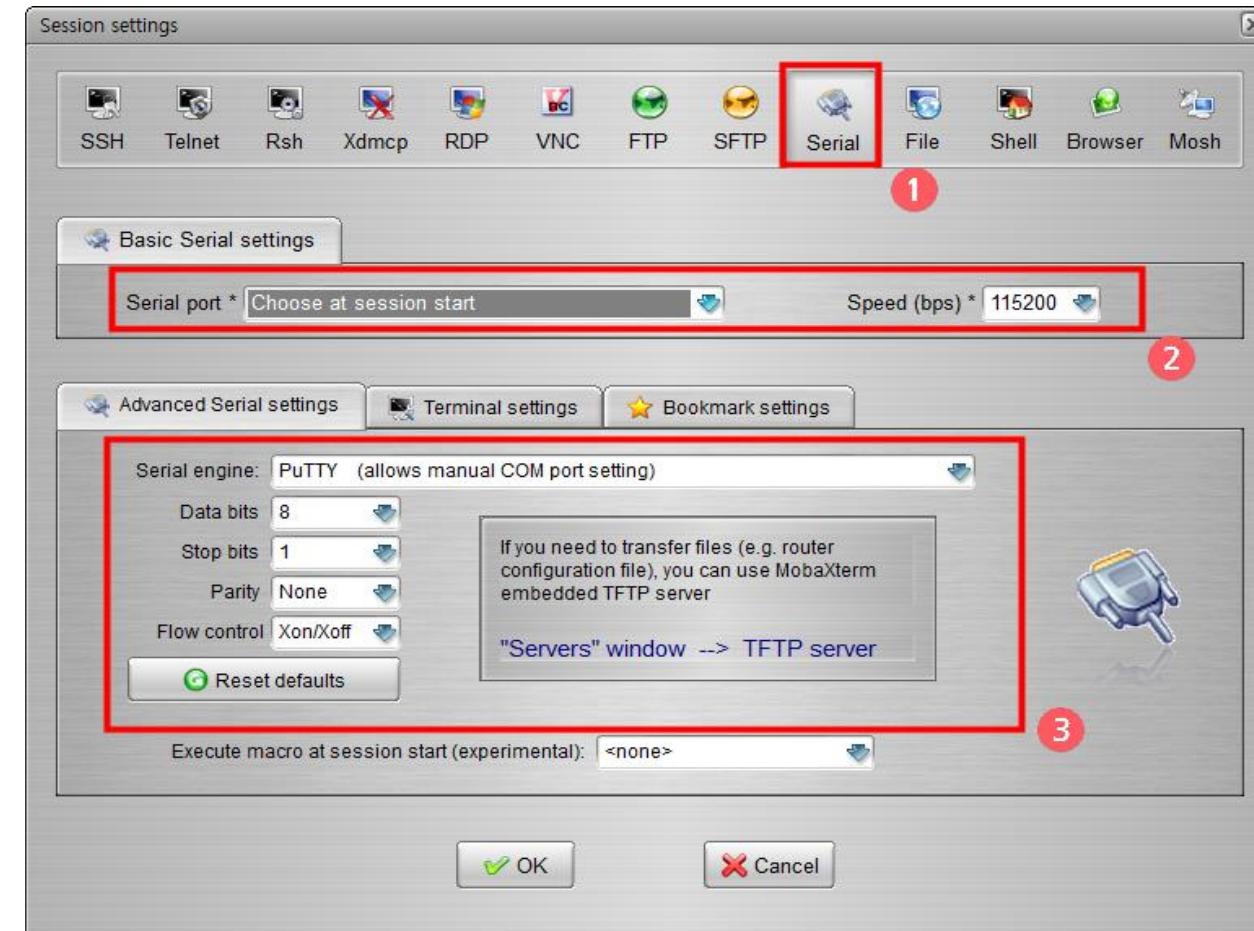


The screenshot shows the Oracle Integrated Lights Out Manager (ILOM) v4.0.0.22 interface. The title bar reads "ORACLE® Integrated Lights Out Manager v4.0.0.22". The top right corner shows a warning icon with the number 5, and the status "User: root Role: auro SP Hostname: scaoda7m003-c". The navigation menu on the left is expanded to show the "Connectivity" section, which is currently selected. The main content area is titled "Connectivity" and has tabs for "Network", "DNS", and "Serial Port", with "Network" selected. It displays general settings for the ILOM, including MAC addresses, management port (set to "MGMT"), link state (Up), and 802.1Q tagging (disabled). The "IPv4" section shows the IP configuration: State is "Enabled" (checked), IP Discovery Mode is "Static" (selected), DHCP Client ID is "None", IP Address is "10.31.16.150", Netmask is "255.255.240.0", and Gateway is "10.31.16.1". The "IPv6" section shows the state as "Enabled" (checked).

Configure ILOM IP Using Serial Connectivity(1)



Putty



MobaXterm

Configure ILOM IP Using Serial Connectivity(2)

Oracle(R) Integrated Lights Out Manager

Version 4.0.0.22 r120818

Copyright (c) 2010, Oracle and/or its affiliates. All rights reserved.

Login : root(default)
Password : changeme(default)

->

-> **cd /SP/network**

-> **set pendingipaddress=IP address**

-> **set pendingipnetmask=Netmask address**

-> **set pendingipgateway=Gateway address**

-> **set pendingipdiscovery=static**

-> **set commitpending=true**

Login to ILOM Web Console

URL : <https://xxx.xxx.xxx.xxx>

ORACLE® Integrated Lights Out Manager

About

Please Log In

SP Hostname: ORACLESP-1751XD3003

User Name:

Password:

Log In

Java

Username : root
Password : changeme

ORACLE® Integrated Lights Out Manager v4.0.0.28

⚠ 2 | User

NAVIGATION

- System Information
- Summary**
- Processors
- Memory
- Power
- Cooling
- Storage
- Networking
- CI Devices
- Firmware
- Open Problems (1)
- System Log
- Remote Control
- Host Management
- System Management
- Power Management
- ILOM Administration
- Site Map

Summary Information

View system summary information. You may also change power state and view system status and fault information. [More details...](#)

General Information

System Type	Rack Mount
Model	ODA X7-2M
QPart ID	Q12997
Part Number	ODA X7-2M
Serial Number	1751XD3003
RFID Serial Number	341A583DE58000000024CCF
Component Model	ORACLE SERVER X7-2
Component Part Number	7344014
Component Serial Number	1751XD3003
System Identifier	Oracle Database Appliance X7-2 Medium 1751XD3003
System Firmware Version	4.0.0.28
Primary Operating System	Not Available
Host Primary MAC Address	00:10:e0:da:c8:46
ILOM Address	192.168.100.1
ILOM MAC Address	00:10:E0:DA:C8:4A

Status

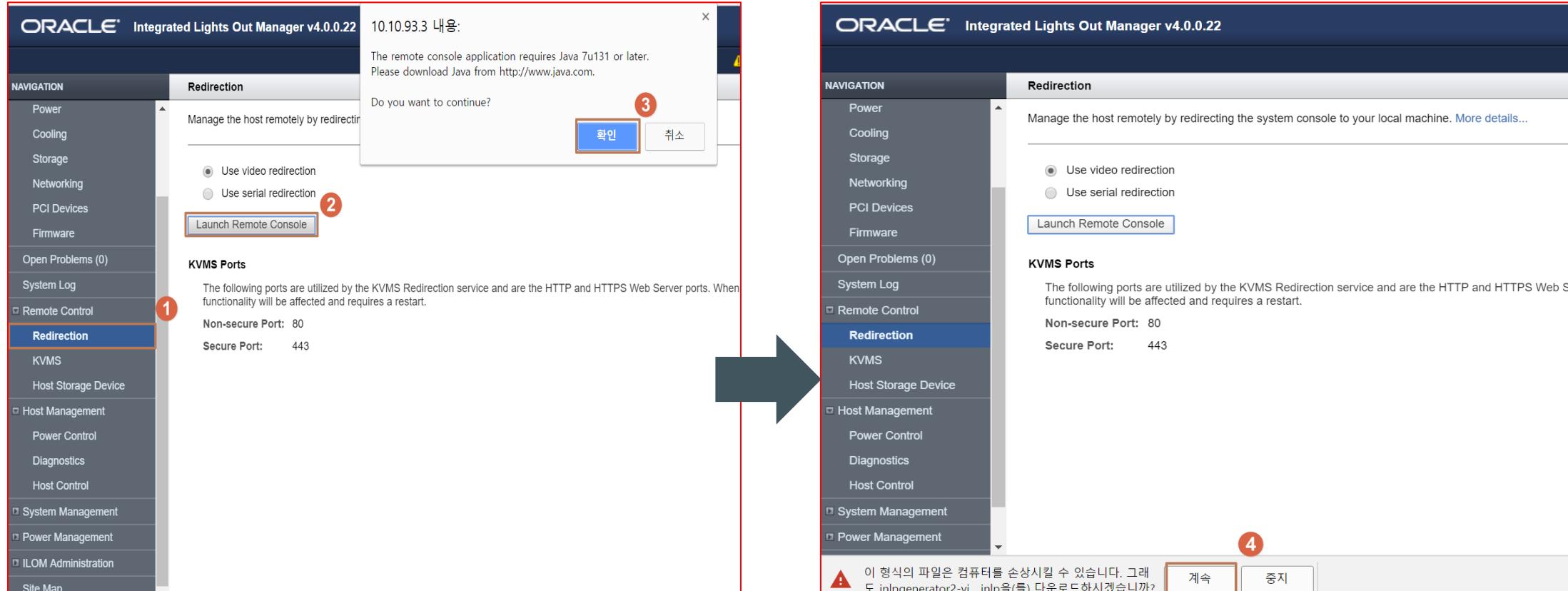
Overall Status: ✖ Service Required Total Problem Count: 1

Subsystem	Status	Details
Processors	✓ OK	Processor Architecture: x86 64-bit Processor Summary: Two Intel Xeon Processor Scalable Family

Re-Imaging with the ISO File

Re-Imaging

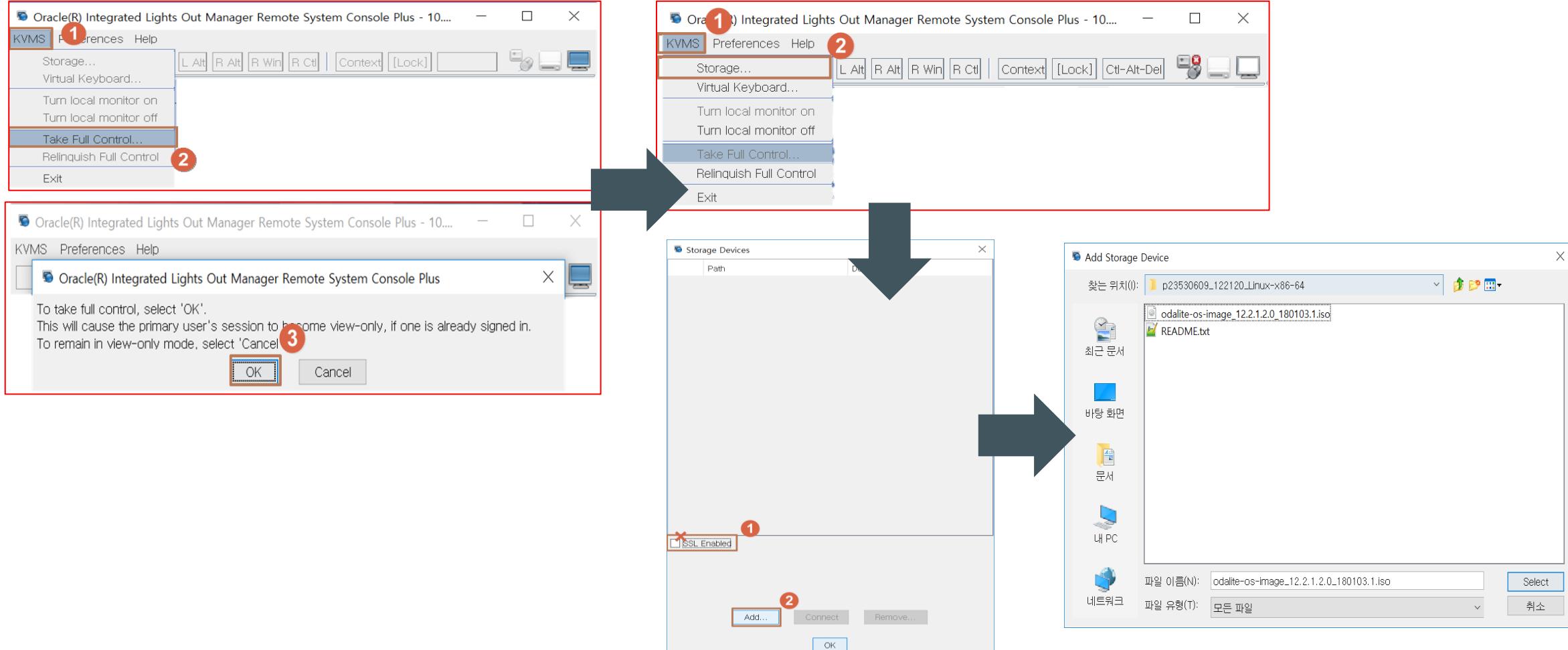
Launch Remote Console



***The remote console application requires JRE 7u131 or Later**

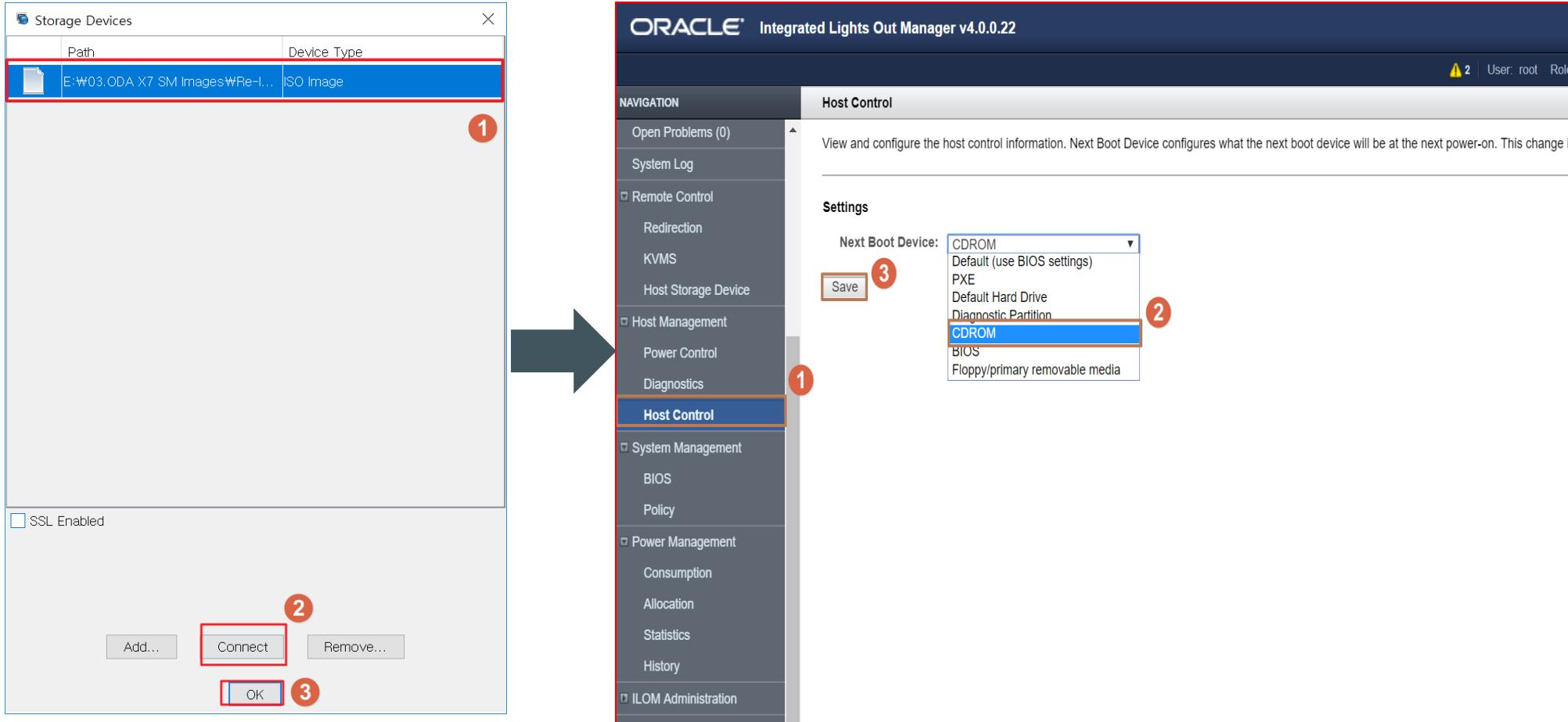
Re-Imaging

Remote Storage Connection



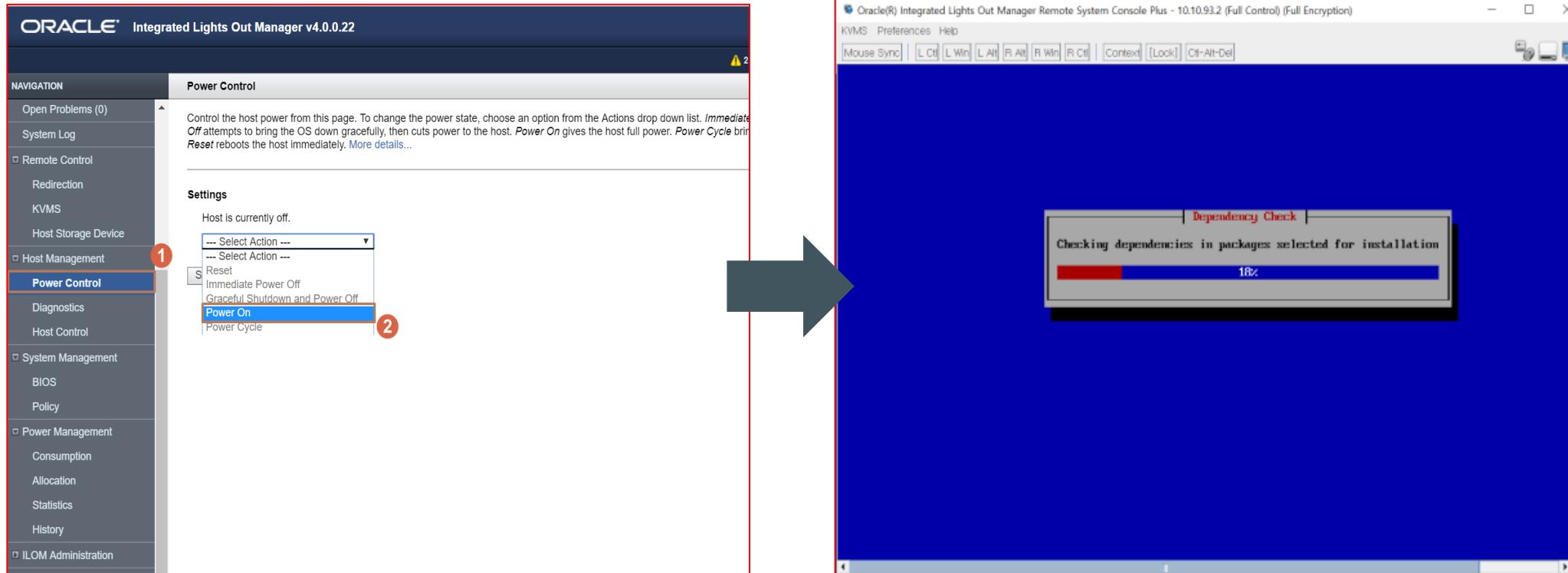
Re-Imaging

Remote Storage Connection & Boot Device Select



Re-Imaging

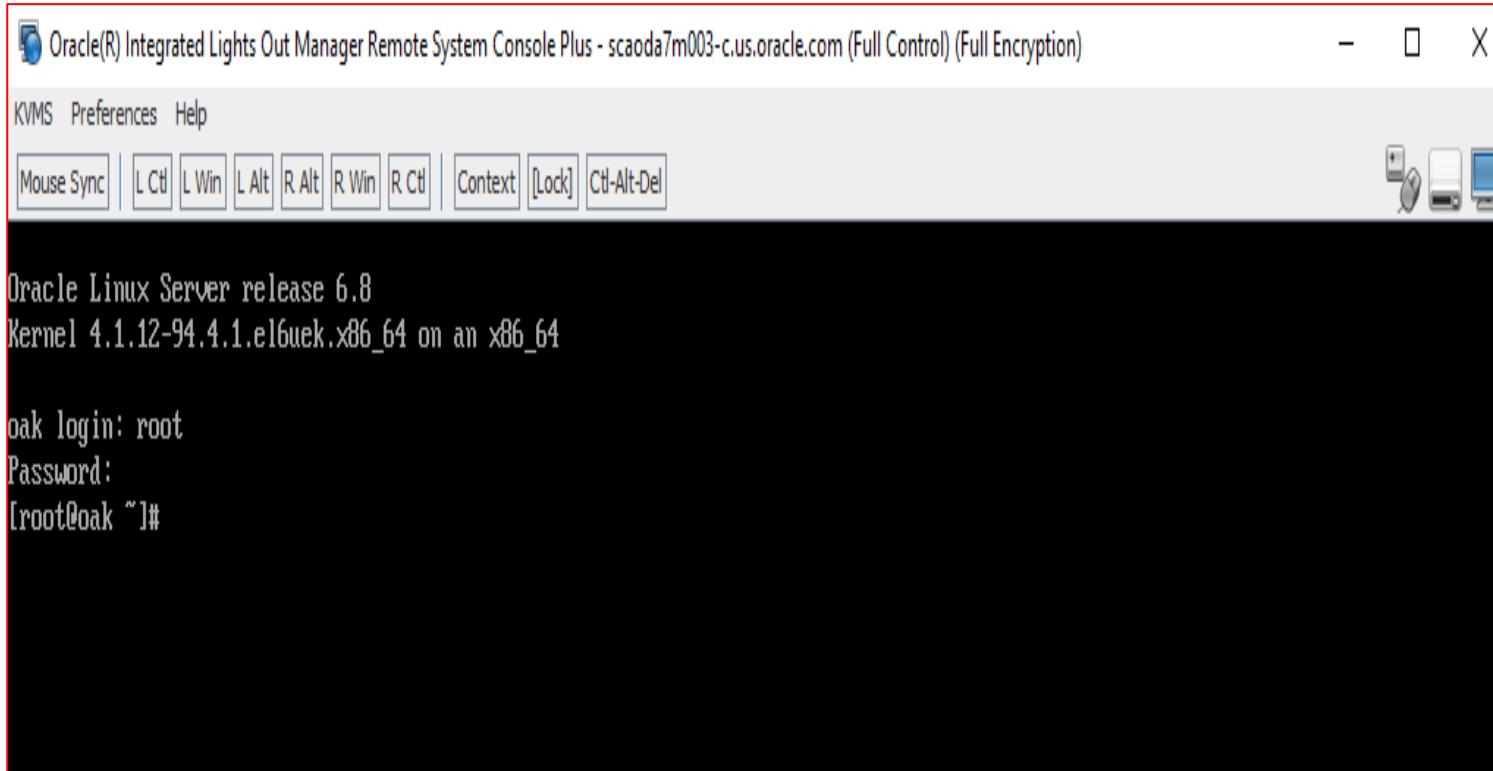
Power on



- * No need to set.
- * Installation will proceed automatically

Re-Imaging

Install Complete



Oracle Database Appliance X7-2S / X7-2M

Deploying The Platform



7 Steps and 32 minutes Later

1. Rack, Cable and Connect the Network and Power
2. Start Up the System
3. Plumb the Network
4. Copy the Oracle Database Appliance GI and DB files to the ODA
5. Update the Oracle Database Appliance Image
6. Deploy the Oracle Database Appliance
7. Monitor Deployment Progress

Plumb The Network

Boot up into the system console

```
[root@oak ~]# /opt/oracle/oak/bin/configure-firstnet
Select the Interface to configure the network on (btbond1) [btbond1]: Enter!
Configure DHCP on btbond1 (yes/no) [no]: Enter!
INFO: You have chosen Static configuration
Use VLAN on btbond1 (yes/no) [no]: Enter!
Enter the IP address to configure : 192.168.56.200
Enter the Netmask address to configure : 255.255.255.0
Enter the Gateway address to configure[192.168.56.1] : 192.168.56.1
INFO: Plumbing the IPs now
INFO: Restarting the network
Shutting down interface btbond1: [ OK ]
Shutting down interface em1: [ OK ]
Shutting down loopback interface: [ OK ]
Bringing up loopback interface: [ OK ]
Bringing up interface btbond1: Determining if ip address 192.168.56.200 is already in use for device btbond1...
[ OK ]
Bringing up interface em1: [ OK ]
```

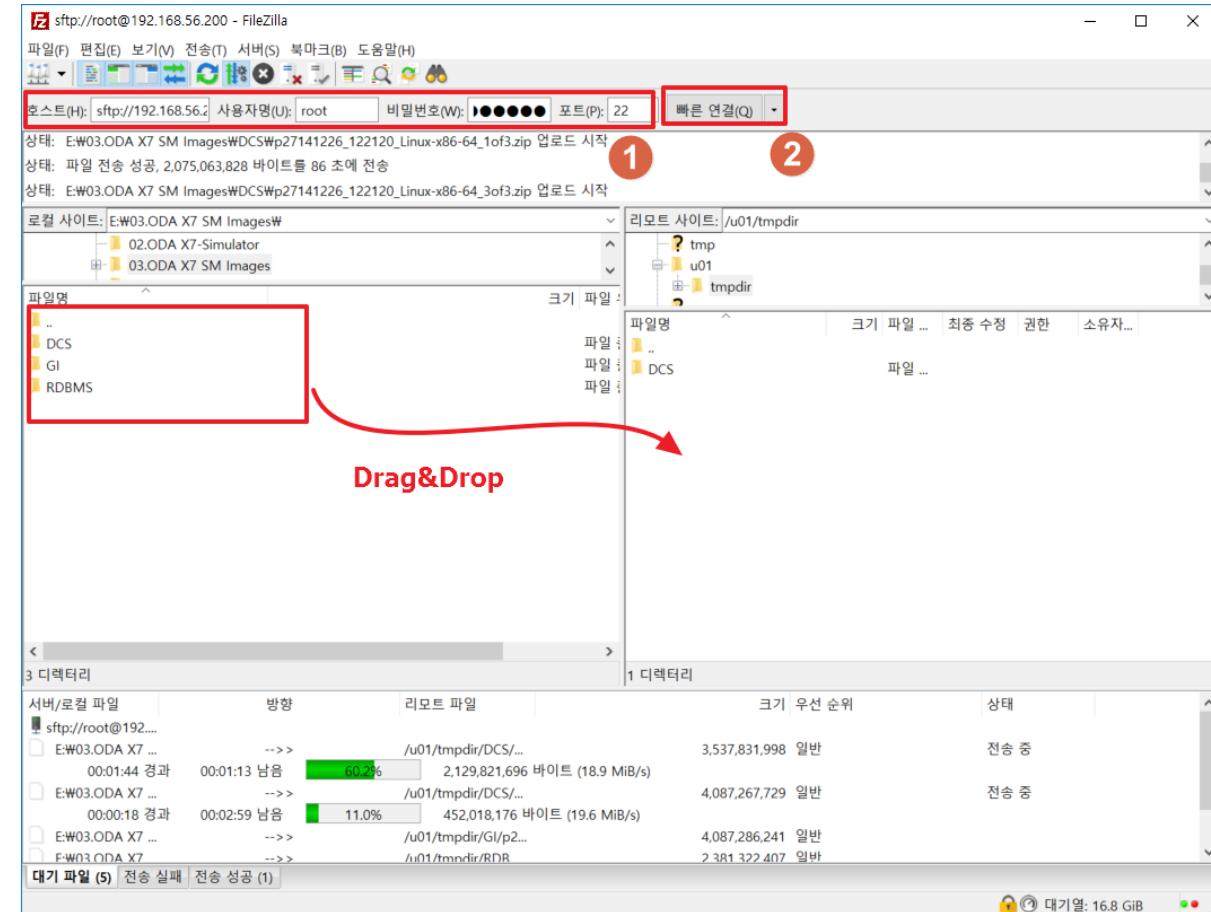
Pre-Deployment : Readyng the System

Upload installation files

*TIP:

Create a temporary directory to upload the GI, DB, etc files (/u01/tmpdir)

Example) # mkdir -p /u01/tmpdir



Pre-Deployment : Readyng the System(1)

Unzip & Update Repository

```
[root@oak ~]# cd /u01/tmpdir/DCS
[root@oak DCS]# unzip p27141226_122120_Linux-x86-64_1of3.zip
Archive: p27141226_122120_Linux-x86-64_1of3.zip
extracting: oda-sm-12.2.1.2.0-180103.2-server1of3.zip
inflating: README.html

[root@oak DCS]# /opt/oracle/dcs/bin/odacli update-repository -f /u01/tmpdir/DCS/oda-sm-12.2.1.2.0-180103.2-server1of3.zip
{
  "jobId" : "87f97e4c-7d10-4ed8-b65b-fce6b80e4494",
  "status" : "Created",
  "message" : "/u01/tmpdir/DCS/oda-sm-12.2.1.2.0-180103.2-server1of3.zip",
  "reports" : [ ],
  "createTimestamp" : "March 20, 2018 10:27:48 AM PDT",
  "resourceList" : [ ],
  "description" : "Repository Update",
  "updatedTime" : "March 20, 2018 10:27:48 AM PDT"
}
```

★ IMPORTANT

- Please unzip “p27141226_122120_Linux-x86-64_1of3.zip” only!!
- Please do not unzip “p27141226_122120_Linux-x86-64_2of3.zip” and “p27141226_122120_Linux-x86-64_3of3.zip”

Pre-Deployment : Readyng the System(2)

Check the Job Completion Status

```
[root@oak DCS]# odacli describe-job -i 87f97e4c-7d10-4ed8-b65b-fce6b80e4494
```

Job details

```
-----  
ID: 87f97e4c-7d10-4ed8-b65b-fce6b80e4494
```

```
Description: Repository Update
```

```
Status: Success
```

```
Created: March 20, 2018 10:27:48 AM PDT
```

```
Message: /u01/tmpdir/DCS/oda-sm-12.2.1.2.0-180103.2-server1of3.zip
```

Task Name	Start Time	End Time	Status
-----------	------------	----------	--------

```
-----
```

Pre-Deployment : Readyng the System(3)

Update Repository

```
[root@oak DCS]# /opt/oracle/dcs/bin/odacli update-repository -f /u01/tmpdir/DCS/p27141226_122120_Linux-x86-64_2of3.zip,/u01/tmpdir/DCS/p27141226_122120_Linux-x86-64_3of3.zip
{
  "jobId" : "68e3a36c-5d00-4301-8265-2df789ddf60e",
  "status" : "Created",
  "message" : "/u01/tmpdir/DCS/p27141226_122120_Linux-x86-64_2of3.zip,/u01/tmpdir/DCS/p27141226_122120_Linux-x86-64_3of3.zip",
  "reports" : [ ],
  "createTimestamp" : "March 20, 2018 10:38:30 AM PDT",
  "resourceList" : [ ],
  "description" : "Repository Update",
  "updatedTime" : "March 20, 2018 10:38:30 AM PDT"
}
```

***TIP:**

- Upload the remaining two files
- Remove spaces after comma

Pre-Deployment : Readyng the System(4)

Update DCS Agent

```
[[root@oak DCS]# /opt/oracle/dcs/bin/odacli update-dcsagent -v 12.2.1.2.0; sleep 120
{
  "jobId" : "d7f44020-619f-4db9-b560-9a8f680adc8b",
  "status" : "Created",
  "message" : "Dcs agent will be restarted after the update. Please wait for 2-3 mins before executing the other commands",
  "reports" : [ ],
  "createTimestamp" : "March 20, 2018 10:43:09 AM PDT",
  "resourceList" : [ ],
  "description" : "DcsAgent patching",
  "updatedTime" : "March 20, 2018 10:43:09 AM PDT"
}
```

Pre-Deployment : Readyng the System(5)

Upgrade Server

```
[root@oak DCS]# /opt/oracle/dcs/bin/odacli update-server -v 12.2.1.2.0
{
  "jobId" : "90831adf-3ebc-409d-a258-101db2191827",
  "status" : "Created",
  "message" : "Success of Server Update may trigger reboot of node after 4-5 minutes. Please wait till node restart",
  "reports" : [ ],
  "createTimestamp" : "March 20, 2018 11:31:37 AM PDT",
  "resourceList" : [ ],
  "description" : "Server Patching",
  "updatedTime" : "March 20, 2018 11:31:37 AM PDT"
}
```

Pre-Deployment : Readyng the System(6)

Update Repository(GI)

```
[root@oak ~]# cd /u01/tmpdir/GI  
  
[root@oak GI]# unzip p27119393_122120_Linux-x86-64.zip  
Archive: p27119393_122120_Linux-x86-64.zip  
extracting: oda-sm-12.2.1.2.0-171124-GI-12.2.0.1.zip  
...  
  
[root@oak GI]# /opt/oracle/dcs/bin/odacli update-repository -f /u01/tmpdir/GI/oda-sm-12.2.1.2.0-171124-GI-12.2.0.1.zip  
{  
  "jobId" : "95745b06-e378-4fd7-8592-b9254d77b65b",  
  "status" : "Created",  
  "message" : "/u01/tmpdir/GI/oda-sm-12.2.1.2.0-171124-GI-12.2.0.1.zip",  
  "reports" : [ ],  
  "createTimestamp" : "March 20, 2018 12:06:18 PM PDT",  
  "resourceList" : [ ],  
  "description" : "Repository Update",  
  "updatedTime" : "March 20, 2018 12:06:18 PM PDT"  
}
```

Pre-Deployment : Readyng the System(6)

Update Repository(Database)

```
[root@oak RDBMS]# unzip p23494997_122120_Linux-x86-64.zip
[root@oak RDBMS]# unzip p27119402_122120_Linux-x86-64.zip

[root@oak GI]# unzip p27119393_122120_Linux-x86-64.zip
Archive: p27119393_122120_Linux-x86-64.zip
extracting: oda-sm-12.2.1.2.0-171124-GI-12.2.0.1.zip
...
.

[root@oak RDBMS]# /opt/oracle/dcs/bin/odacli update-repository -f /u01/tmpdir/RDBMS/oda-sm-12.2.1.2.0-171124-DB-12.2.0.1.zip,/u01/tmpdir/RDBMS/oda-sm-12.2.1.2.0-171124-DB-11.2.0.4.zip
{
  "jobId" : "0c31abc3-fd3c-4b42-8dd7-f0d62171a76e",
  "status" : "Created",
  "message" : "/u01/tmpdir/RDBMS/oda-sm-12.2.1.2.0-171124-DB-12.2.0.1.zip,/u01/tmpdir/RDBMS/oda-sm-12.2.1.2.0-171124-DB-11.2.0.4.zip",
  "reports" : [ ],
  ...
}
```

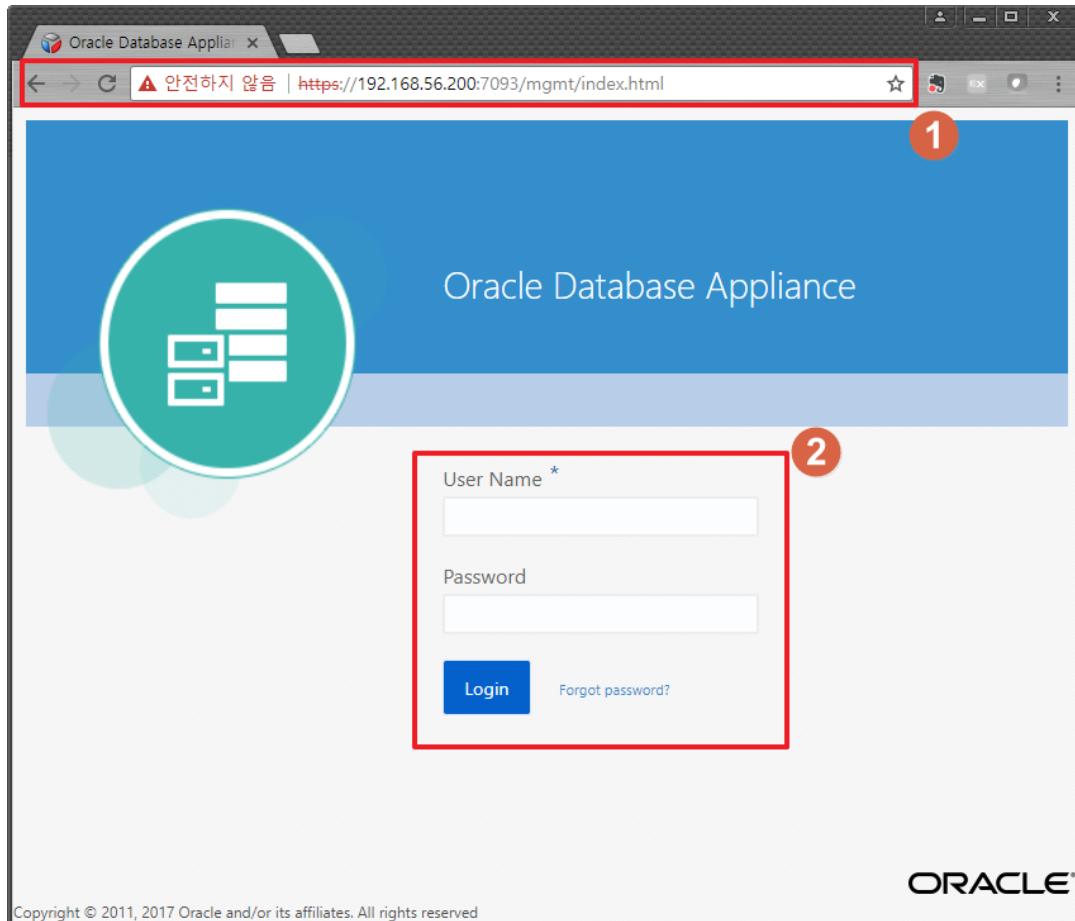
Check ‘update-repository’

The ‘update-repository’ command unpacks the ZIP file contents as follows:

- Database clone files, ASR, HMP, IMPI, OAK, JDK RPMs are unpacked into **/opt/oracle/oak/pkgrepos/orapkgs** directory.

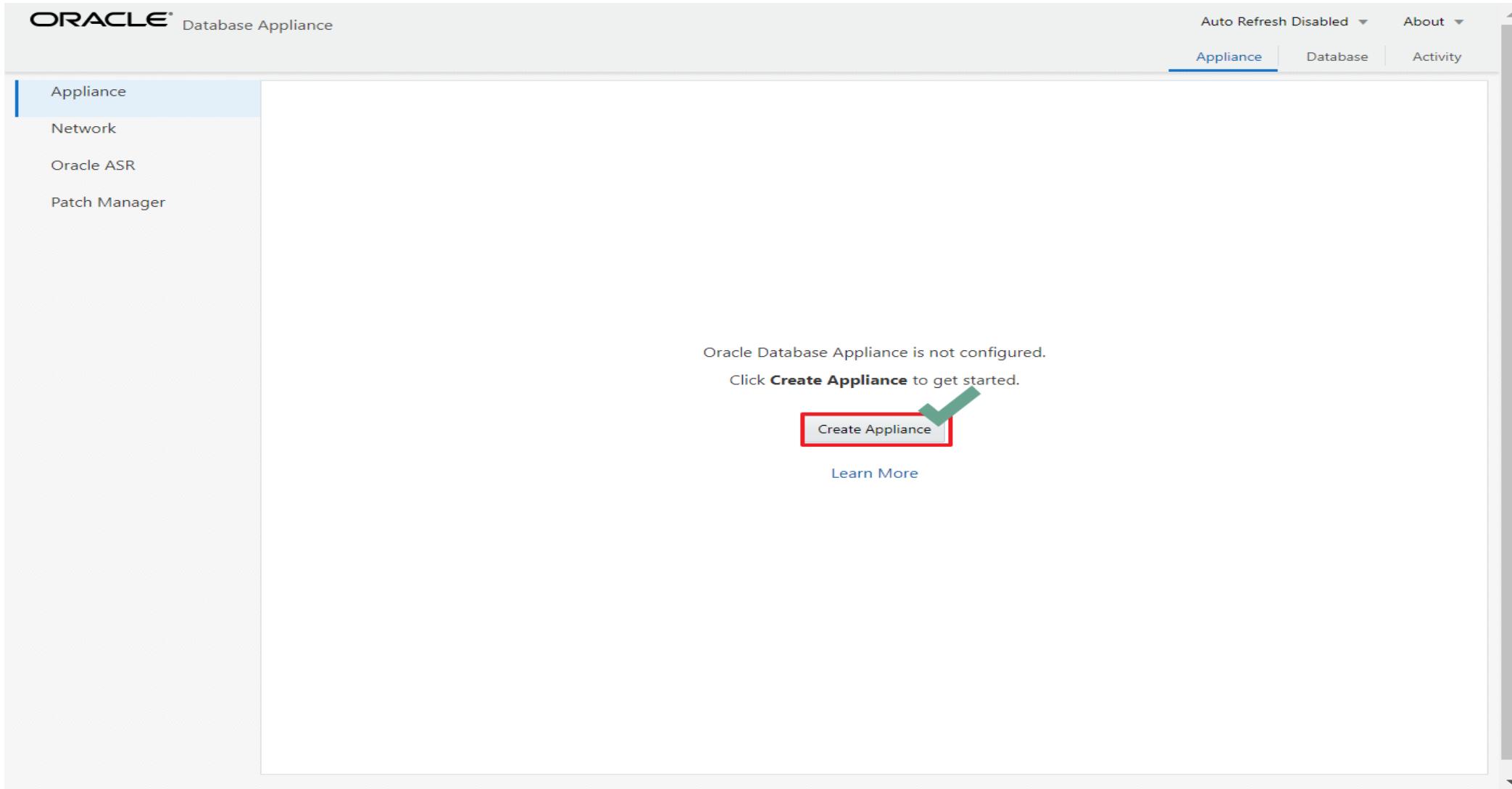
```
[root@oak ~]# ls -a /opt/oracle/oak/pkgrepos/orapkgs/clones
.  ..  db112.171017.tar.gz  db122.171017.tar.gz  grid122.tar.gz
```

Log in to Web Console



- [https://<ip-address>:7093/mgmt/index.html](https://192.168.56.200:7093/mgmt/index.html)
- Username: oda-admin
- Password: welcome1

Deploy Oracle Database Appliance



ORACLE® Database Appliance

Auto Refresh Disabled ▾ About ▾

Appliance Database Activity

Appliance

Network

Oracle ASR

Patch Manager

Oracle Database Appliance is not configured.

Click **Create Appliance** to get started.

Create Appliance

Learn More

Enter System Information

Appliance

Network

Oracle ASR

Patch Manager

Create Appliance

System Information

Host Name *	70	Data Storage Percentage *	Master Password *
odasim			
Domain Name *	70		
oracle.com			
Region	70		
Asia			
Time Zone	70		
Asia/Seoul			
DNS Servers			
NTP Servers			

This value can be between 10 - 90

Network Entry for ODA X7-2S/X7-2M

ORACLE® Database Appliance

Auto Refresh Disabled ▾ About ▾

Appliance Database Activity

Appliance

Network

Oracle ASR

Patch Manager

Network Information

Client Access Network

IP Address *

192.168.56.210

Subnet Mask *

255.255.255.0

Gateway *

192.168.56.1

ILOM Network

ILOM Host Name

IP Address

Subnet Mask

Gateway

If the ILOM is already configured, you can leave this blank

User Groups (Optional)

User and Group Selection

Customize Users & Groups Yes No

Allow OS Role Separation Yes No

GI User *

grid

DB User *

oracle

Install Group *

oinstall

DBA Oper Group *

dbaoper

DBA Group *

dba

ASM Admin Group *

asmadmin

ASM Oper Group *

asmoper

ASM DBA Group *

asmdba

GI UserID *

1000

DB UserID *

1001

Install GroupID *

1001

DBA Oper GroupID *

1002

DBA GroupID *

1003

ASM Admin GroupID *

1004

ASM Oper GroupID *

1005

ASM DBA GroupID *

1006



Create a Database during Deployment

Database Information

Create Initial Database Yes No

DB Name *

orcl

Database Edition

Enterprise Edition

EE or SE

DB Unique Name

orcl

Shape

odb1s(1 Core, 4GB Memory)

Character set

KO16MSWIN949

DB Version

12.2.0.1.171017

Database Class

OLTP

National Character set

AL16UTF16

CDB Yes No

Storage

ASM

Language

AMERICAN

PDB Name

Territory

AMERICA

PDB Admin User

Configure EM Express

Yes

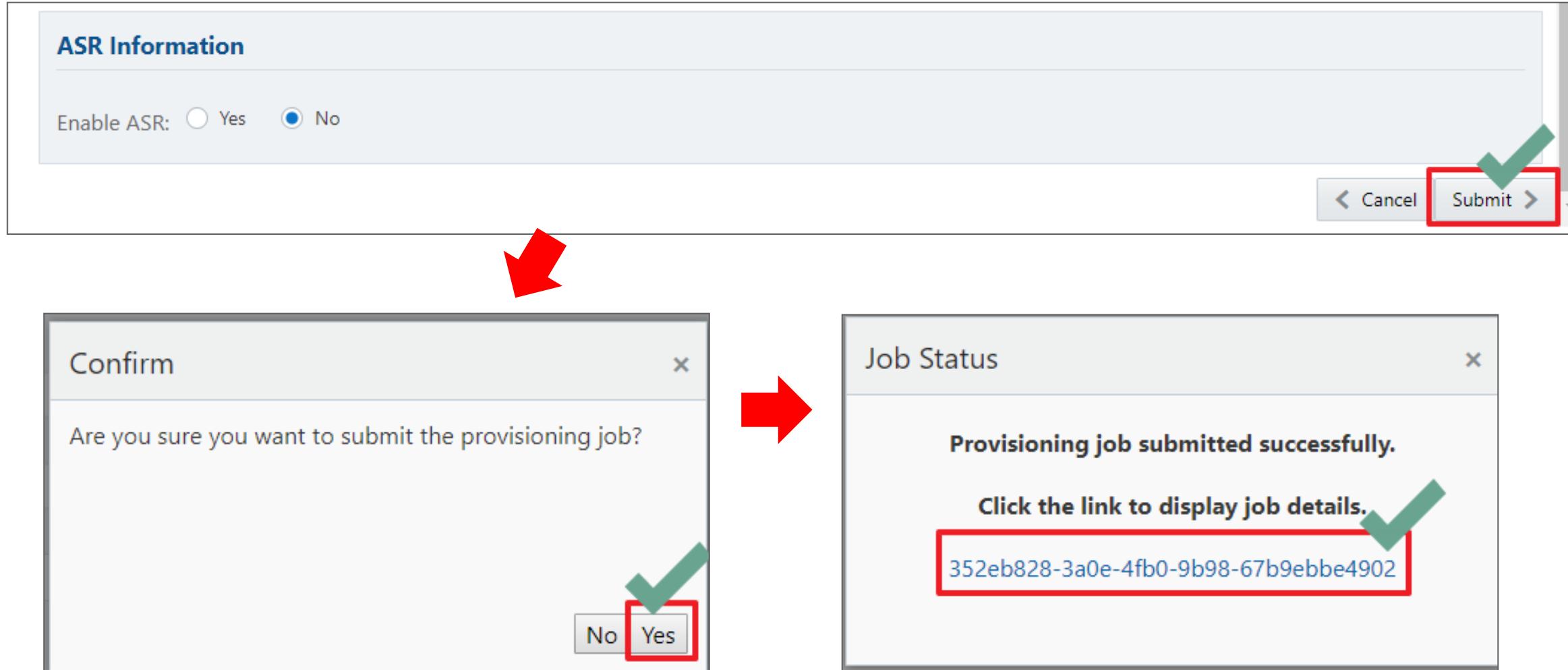
No

ASM for 12.X
ACFS for 11.2.0.4 or
12.X

Display all
versions that
have been
uploaded into
repository



Configure ASR (Optional during deployment)



Monitor Progress

ORACLE® Database Appliance

Auto Refresh Disabled ▾ About ▾

Appliance Database **Activity**

Activity

search

Page 1 of 1 (1-7 of 7 items) 1

Provisioning service creation ID: 352eb828-3a0e-4fb0-9b98-67b9ebbe4902	Created: Wed Mar 21 2018 오전 4:53:11	Status: Running
Repository Update ID: 0c31abc3-fd3c-4b42-8dd7-f0d62171a76e	Created: Wed Mar 21 2018 오전 4:19:55	Status: Success
Repository Update ID: 95745b06-e378-4fd7-8592-b9254d77b65b	Created: Wed Mar 21 2018 오전 4:19:55	Status: Success
Server Patching ID: 90831adf-3ebc-409d-a258-101db2191827	Created: Wed Mar 21 2018 오전 3:31:37	Status: Success
DcsAgent patching ID: d7f44020-619f-4db9-b560-9a8f680adc8b	Created: Wed Mar 21 2018 오전 2:43:09	Status: Success
Repository Update ID: 68e3a36c-5d00-4301-8265-2df789ddf60e	Created: Wed Mar 21 2018 오전 2:38:30	Status: Success

If you enable this, turn it off after the deployment.

Click the link for more information.

Monitor Progress from the Command Line

```
[root@odasim ~]# odacli describe-job -i 352eb828-3a0e-4fb0-9b98-67b9ebbe4902
```

Job details

ID: 352eb828-3a0e-4fb0-9b98-67b9ebbe4902

Trace Files: /opt/oracle/dcs/log/*.log.

Description: Provisioning service creation

Status: Running

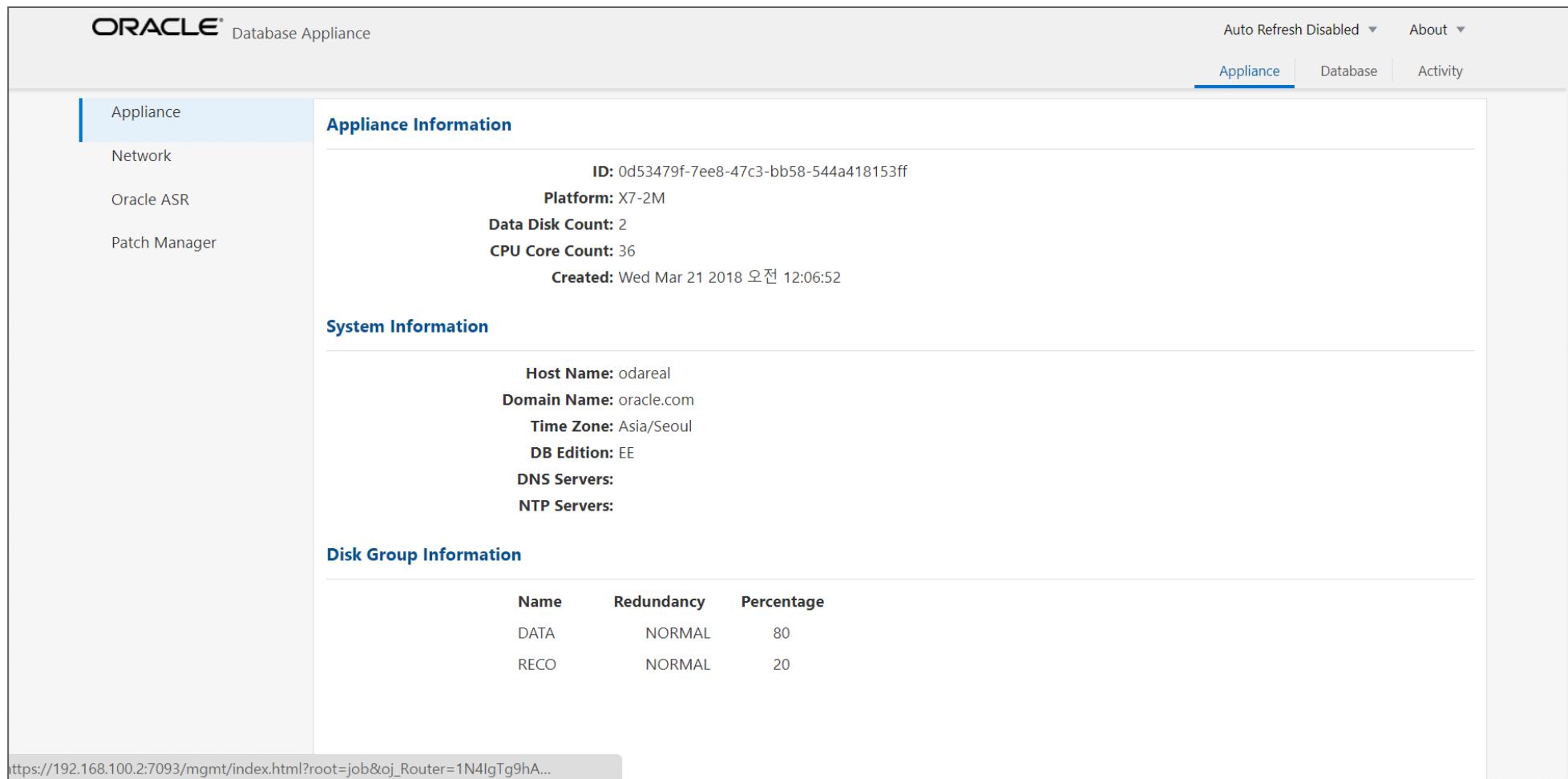
Created: March 21, 2018 4:53:11 AM KST

Message:

Task Name	Start Time	End Time	Status
Setting up Network	March 21, 2018 4:53:13 AM KST	March 21, 2018 4:53:13 AM KST	Success
OS usergroup 'asmdba'creation	March 21, 2018 4:53:19 AM KST	March 21, 2018 4:53:19 AM KST	Success
OS usergroup 'asmoper'creation	March 21, 2018 4:53:19 AM KST	March 21, 2018 4:53:20 AM KST	Success
OS usergroup 'asmadmin'creation	March 21, 2018 4:53:20 AM KST	March 21, 2018 4:53:20 AM KST	Success
OS usergroup 'dba'creation	March 21, 2018 4:53:20 AM KST	March 21, 2018 4:53:20 AM KST	Success
OS usergroup 'dbaoper'creation	March 21, 2018 4:53:20 AM KST	March 21, 2018 4:53:20 AM KST	Success
OS usergroup 'oinstall'creation	March 21, 2018 4:53:20 AM KST	March 21, 2018 4:53:20 AM KST	Success
OS user 'grid'creation	March 21, 2018 4:53:20 AM KST	March 21, 2018 4:53:20 AM KST	Success
OS user 'oracle'creation	March 21, 2018 4:53:20 AM KST	March 21, 2018 4:53:20 AM KST	Success
SSH equivalance setup	March 21, 2018 4:53:22 AM KST	March 21, 2018 4:53:22 AM KST	Success

...

Completing appliance deployment



The screenshot shows the Oracle Database Appliance management interface. The left sidebar has tabs for Appliance, Network, Oracle ASR, and Patch Manager, with 'Appliance' selected. The main content area has three sections: 'Appliance Information', 'System Information', and 'Disk Group Information'.

Appliance Information

- ID:** 0d53479f-7ee8-47c3-bb58-544a418153ff
- Platform:** X7-2M
- Data Disk Count:** 2
- CPU Core Count:** 36
- Created:** Wed Mar 21 2018 오전 12:06:52

System Information

- Host Name:** odareal
- Domain Name:** oracle.com
- Time Zone:** Asia/Seoul
- DB Edition:** EE
- DNS Servers:** (empty)
- NTP Servers:** (empty)

Disk Group Information

Name	Redundancy	Percentage
DATA	NORMAL	80
RECO	NORMAL	20

https://192.168.100.2:7093/mgmt/index.html?root=job&ojs_Router=1N4lgTg9hA...

Cleanup

Database Appliance Cleanup

```
[[root@odasim ~]# /opt/oracle/oak/onecmd/cleanup.pl
```

About to clean up deployment.

Cleanup erase 4MB of ASM metadata from ASM disks, it may cause data loss, take backup of user data on ASM disks

Running cleanup will delete Grid User - 'grid' and DB user - 'oracle' and also the groups 'oinstall,dba,asmadmin,asmoper,asmdba' nodes will be rebooted.

Do you want to continue (yes/no) : yes

Log file name is : /tmp/cleanup_temp_05:36:13_Mar_21.log

Executing </u01/app/12.2.0.1/grid/tfa/odasim/tfa_home/bin/uninstalltfa.sh -silent>

TFA will be uninstalled on node odasim :

Removing TFA from odasim...

Stopping TFA Support Tools...

Stopping TFA in odasim...

Shutting down TFA

oracle-tfa stop/waiting

.....

Questions?



Hardware and Software Engineered to Work Together

ORACLE®