

ORACLE®

Oracle Database Appliance - FE Training Supporting the Installation Service

Oracle Database Appliance X7-2

Deploying the Oracle Database Appliance



Mar 2018

ORACLE®

Copyright © 2015, Oracle and/or its affiliates. All rights reserved. |

ODA Software

Patch Number	Description
Patch 23530609	Oracle Database Appliance Patch 12.2.1.2 reimage
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.

ORACLE® Integrated Lights Out Manager v4.0.0.22

About Refresh Logout

5 User: root Role: auro SP Hostname: scaoda7m003-c

NAVIGATION

- System Information
 - Summary
 - Processors
 - Memory
 - Power
 - Cooling
 - Storage
 - Networking
 - PCI Devices
 - Firmware
- Open Problems (2)
- System Log
- Remote Control
- Host Management
- System Management
- Power Management
- ILOM Administration
 - Identification
 - Logs
 - Management Access
 - User Management
 - Connectivity**
 - Configuration Management
 - Notifications
 - Date and Time
 - Maintenance

Connectivity

Network DNS Serial Port

View the MAC address and configure network settings for the Service Processor from this page. DHCP is the default mode, but you can manually configure a static IP Address, Netmask, and Gateway. You may also select which port you want to use for managing this Service Processor. [More details...](#)

General Settings Dynamic Address Local Host Interconnect Network Tools

General Settings

MAC Address: 00:10:E0:C3:DF:6C
Out of Band MAC Address: 00:10:E0:C3:DF:6C
Sideband MAC Address: 00:10:E0:C3:DF:6D
Management Port: MGMT
Link State: Up
802.1Q Tagging: ☐ Enabled
VLAN ID:
The valid range is from 1-4079. The default is: Disabled

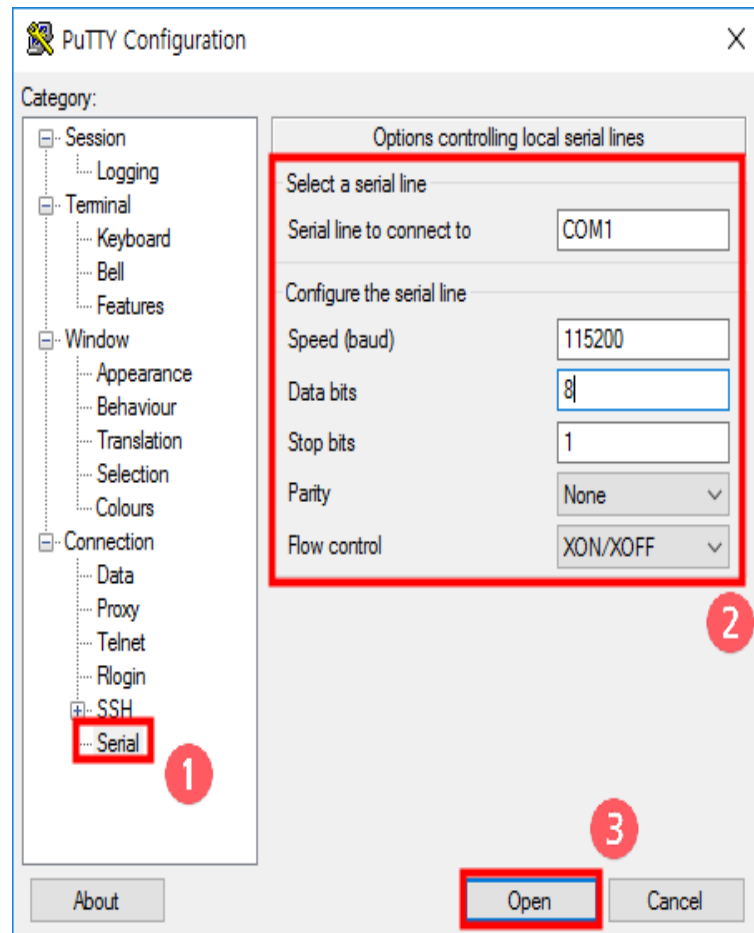
IPv4

State: ☒ Enabled
IP Discovery Mode: ☐ DHCP ☒ Static
DHCP Client ID: None
SysID is the System Identifier configured on the Identification Information page.
IP Address: 10.31.16.150
Netmask: 255.255.240.0
Gateway: 10.31.16.1

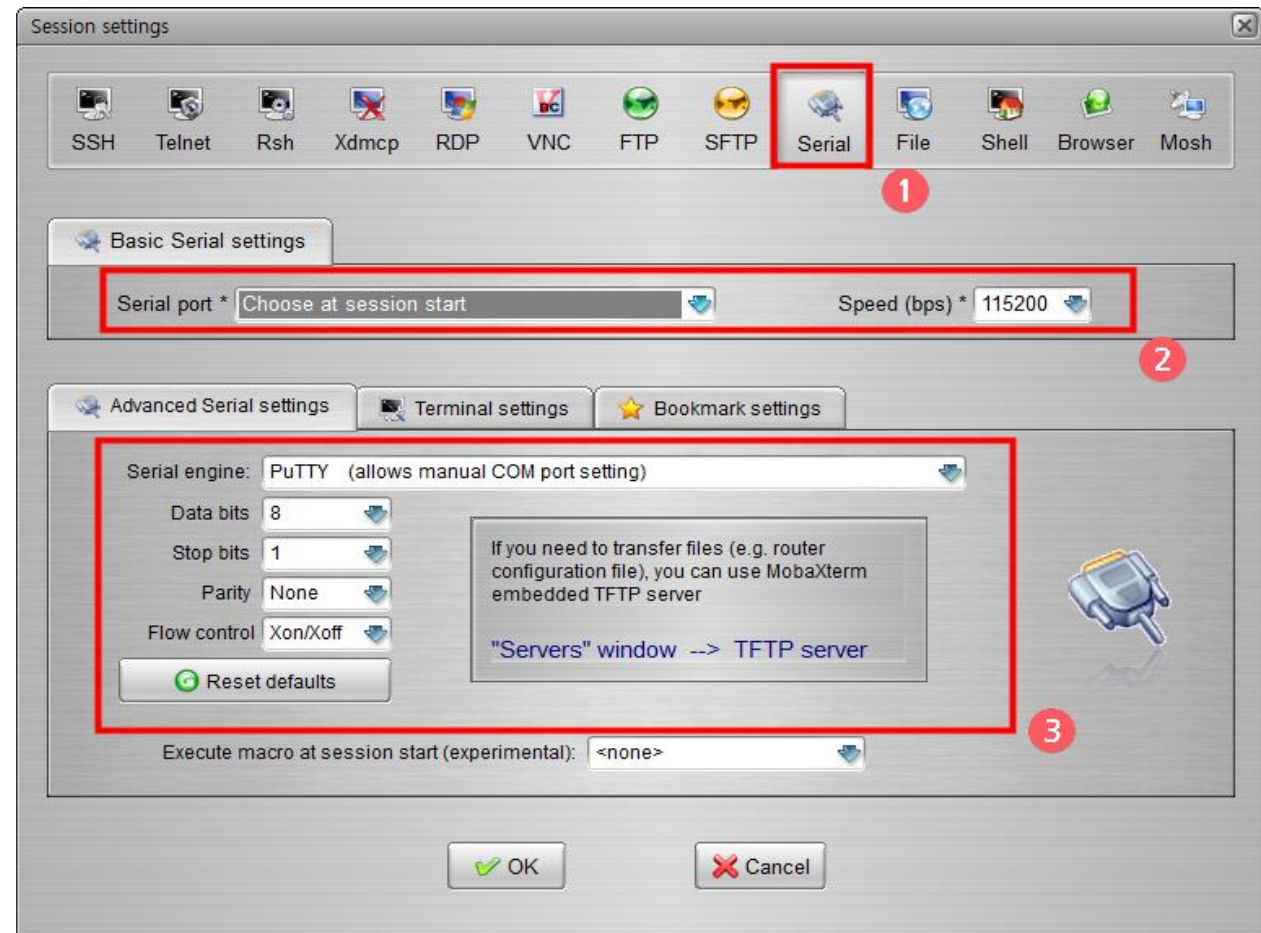
IPv6

State: ☒ Enabled

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:

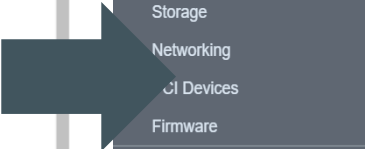
Password:

Log In

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

PCI 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

Actions

Power :
Locator

System
Remote

Status

Overall Status: Service Required Total Problem Count: 1

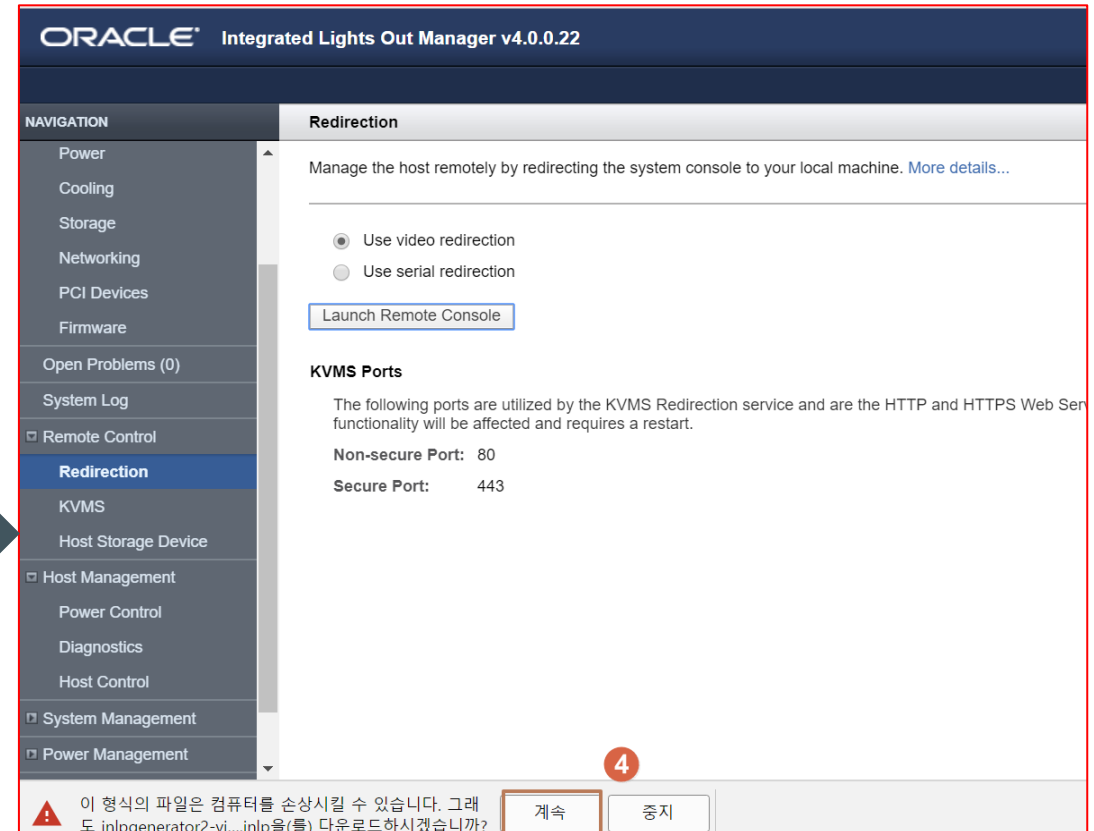
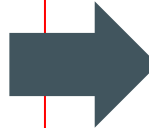
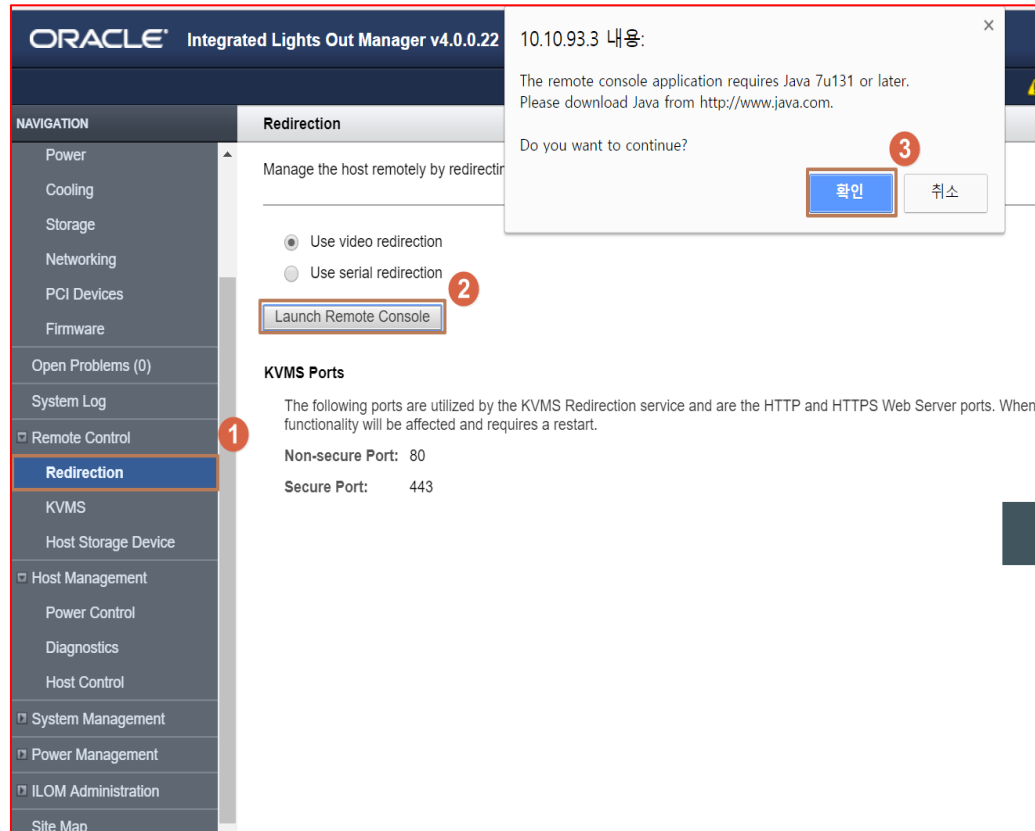
Subsystem	Status	Details
Processors	OK	Processor Architecture: x86 64-bit Processor Summary: Two Intel Xeon Processor Scalable Family



Re-Imaging with the ISO File

Re-Imaging

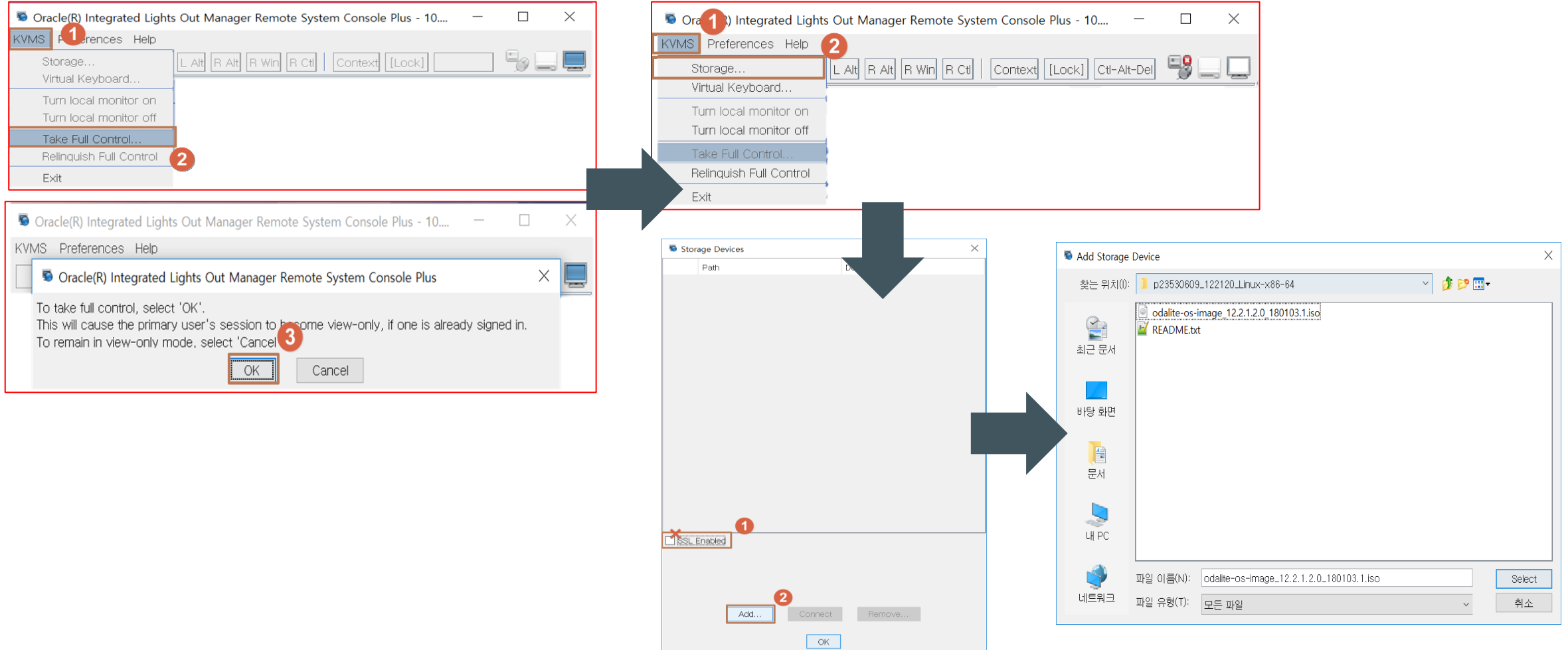
Launch Remote Console



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

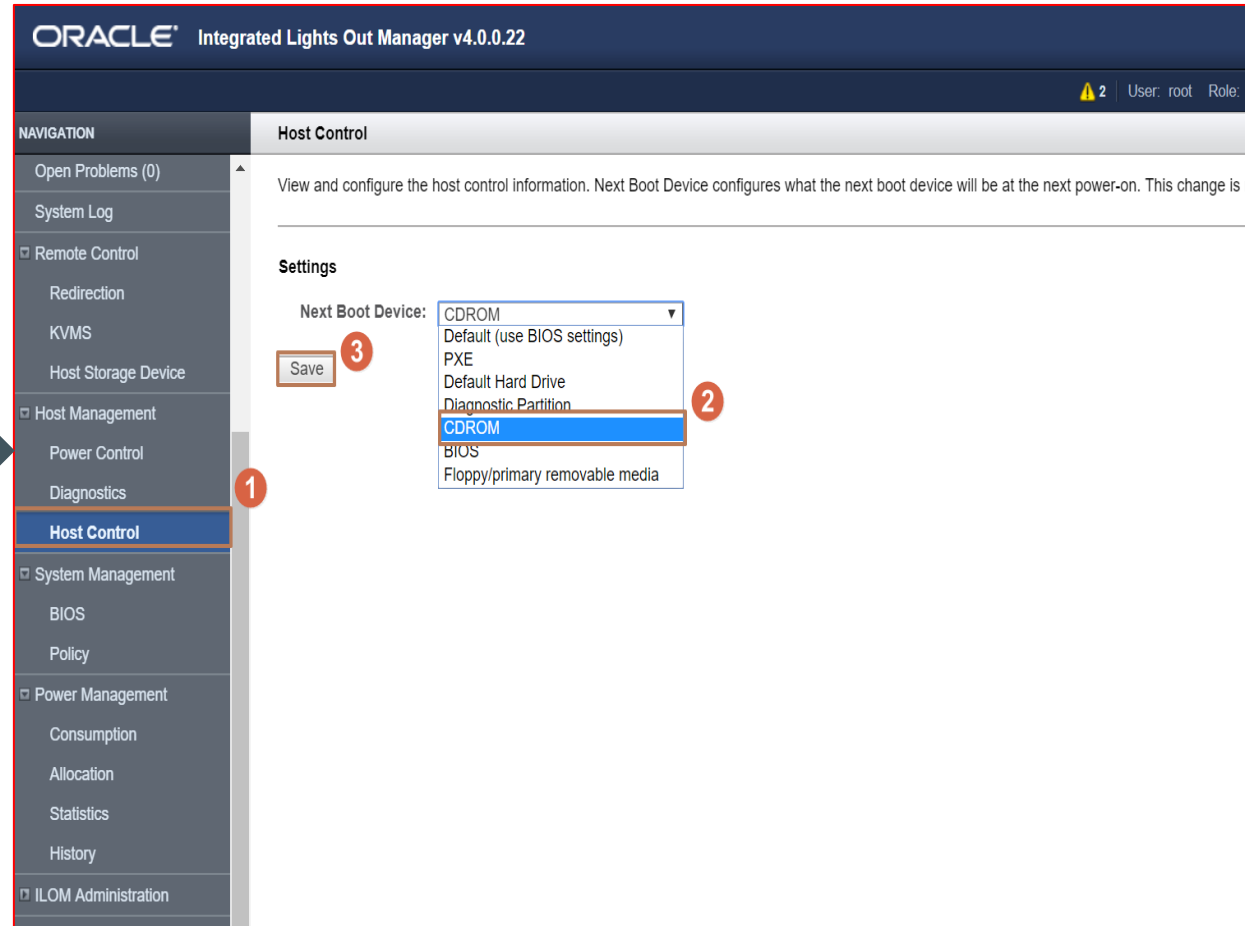
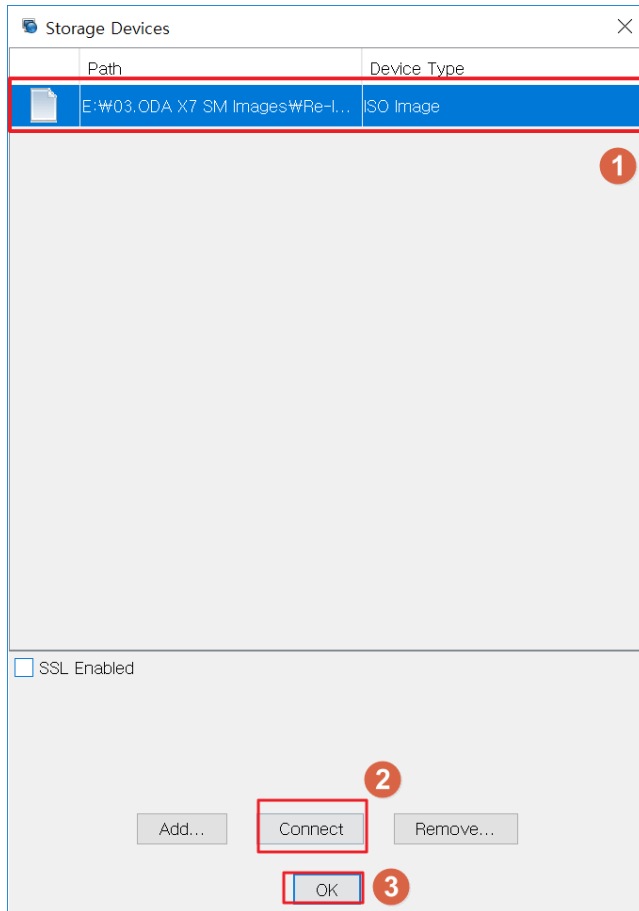
Re-Imaging

Remote Storage Connection



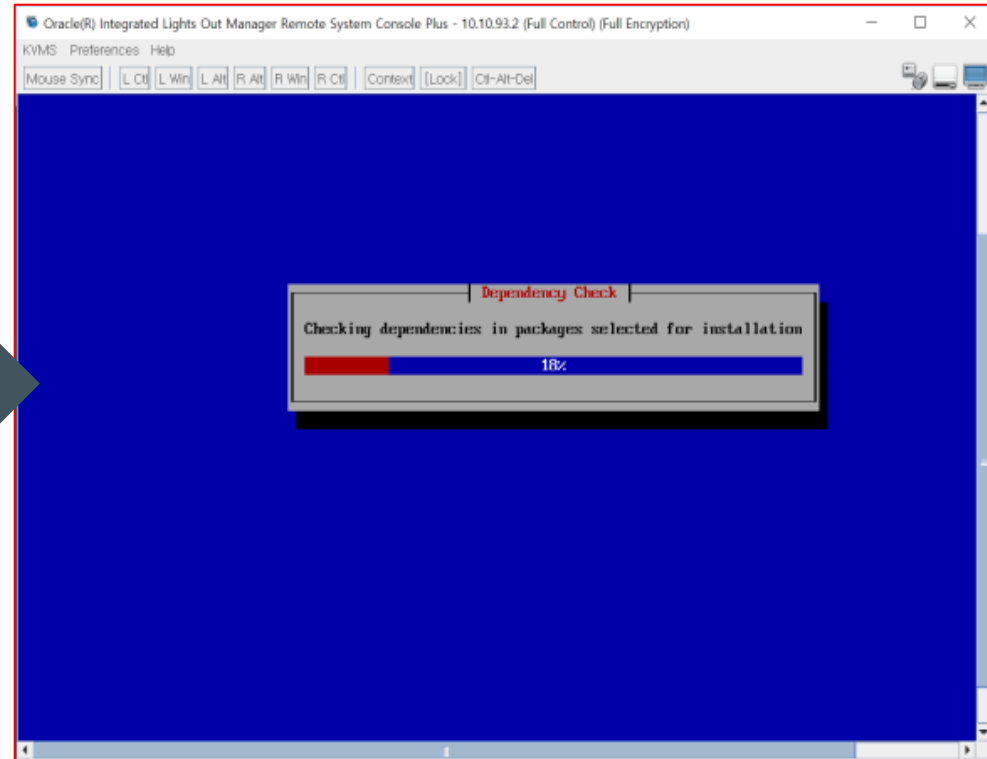
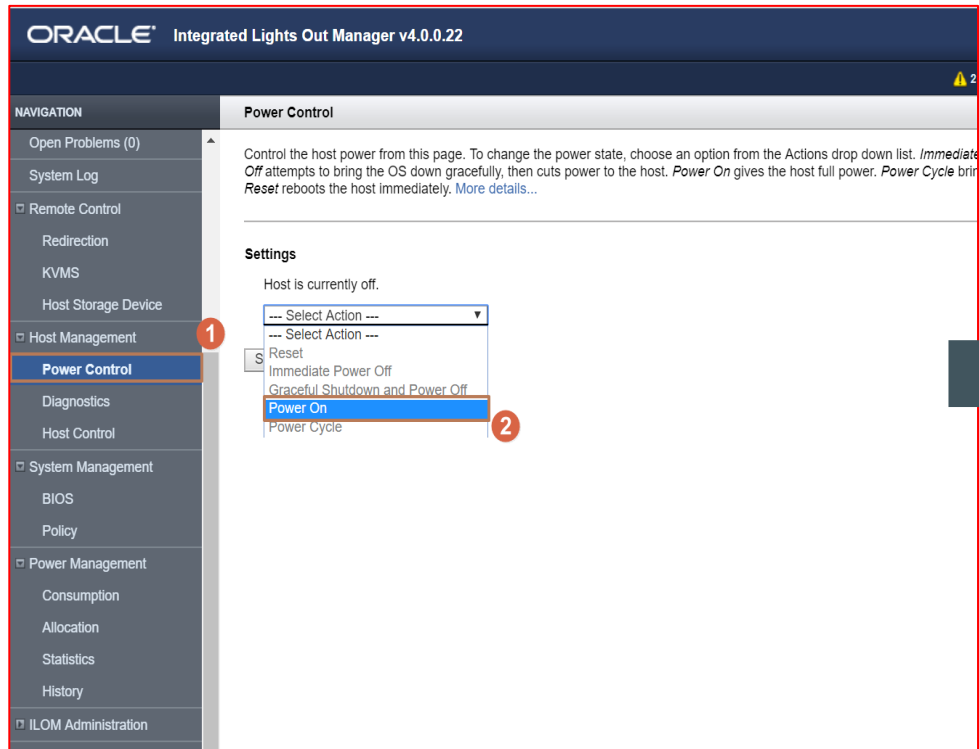
Re-Imaging

Remote Storage Connection & Boot Device Select



Re-Imaging

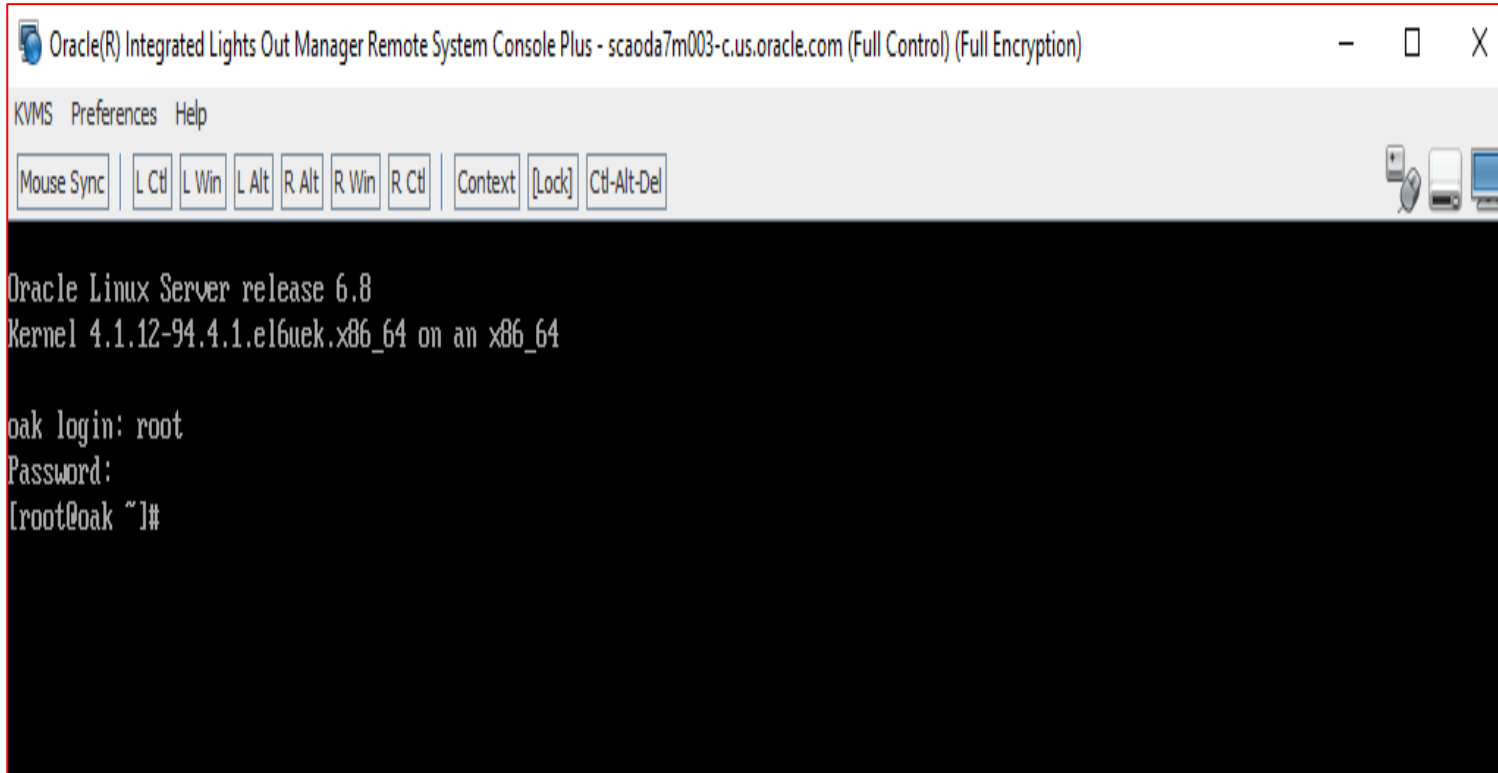
Power on



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

Re-Imaging

Install Complete



The screenshot shows a remote console window titled "Oracle(R) Integrated Lights Out Manager Remote System Console Plus - scaoda7m003-c.us.oracle.com (Full Control) (Full Encryption)". The window has a menu bar with "KVMS", "Preferences", and "Help". Below the menu bar is a toolbar with buttons for "Mouse Sync", "L Ctl", "L Win", "L Alt", "R Alt", "R Win", "R Ctl", "Context", "[Lock]", and "Ctl-Alt-Del". The main area is a black terminal window displaying the following text:

```
Oracle Linux Server release 6.8
Kernel 4.1.12-94.4.1.el6uek.x86_64 on an x86_64

oak login: root
Password:
[root@oak ~]#
```

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 ]
```

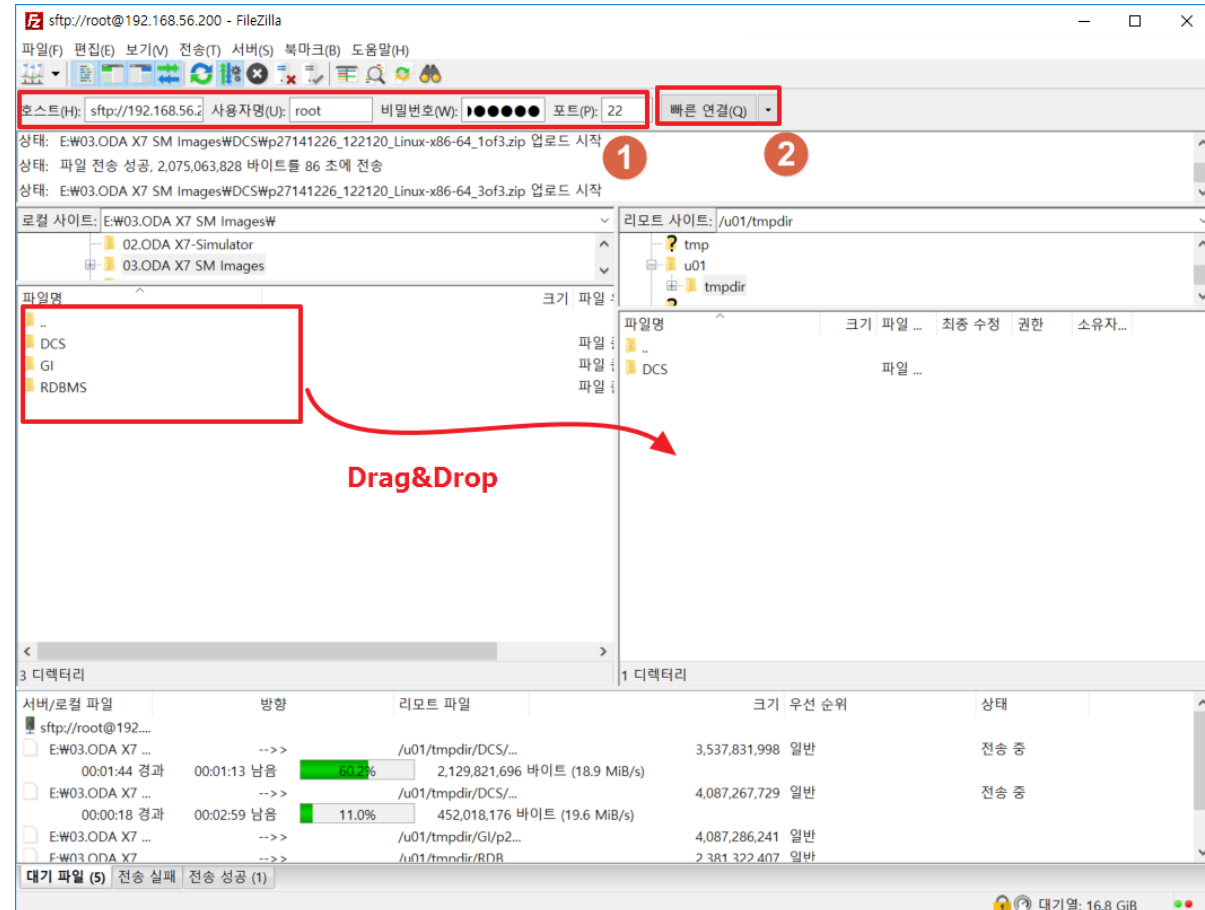

Pre-Deployment : Readyng the System

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
```

★ 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”

```
[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",
  "updatedAt" : "March 20, 2018 10:27:48 AM PDT"
}
```

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",
  "updatedAtTime" : "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",
  "updatedAt" : "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",  
  "updatedAt" : "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",  
  "updatedAt" : "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" : [ ],
```

```
  ...
```

```
}
```

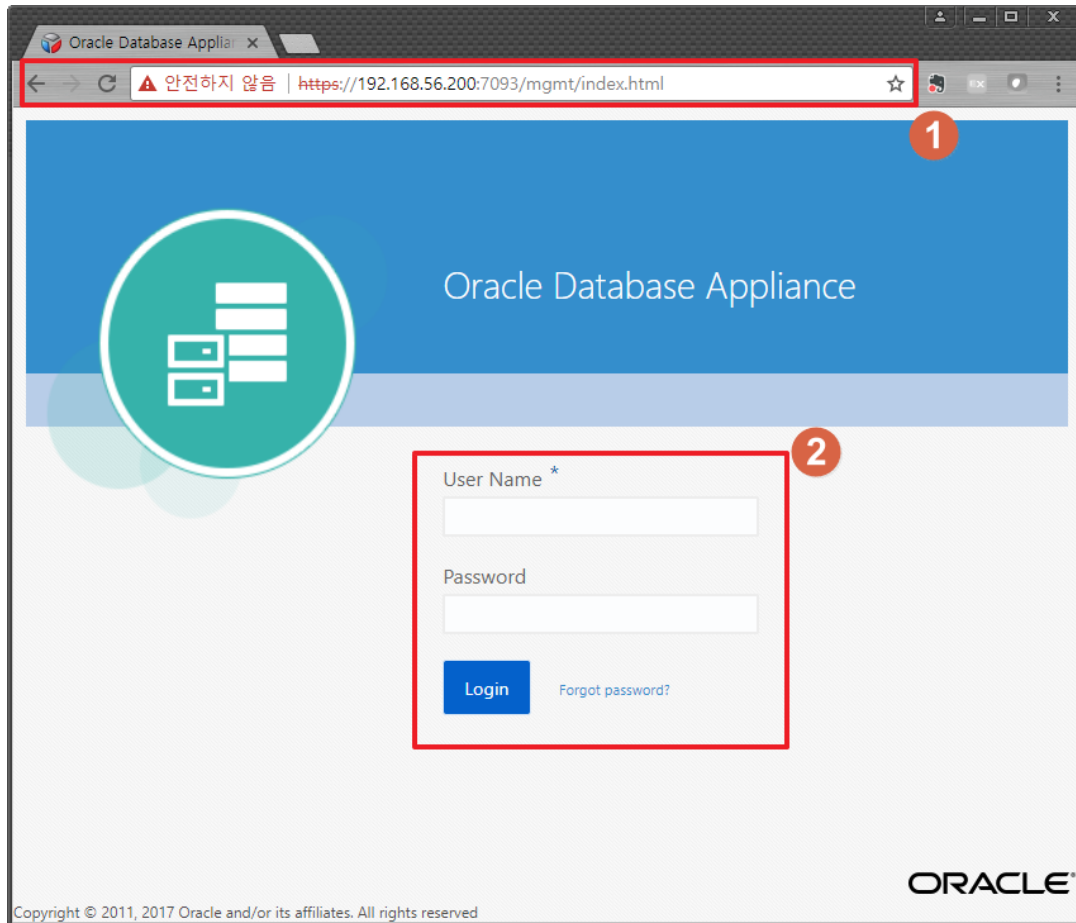

Check 'update-repository'

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.

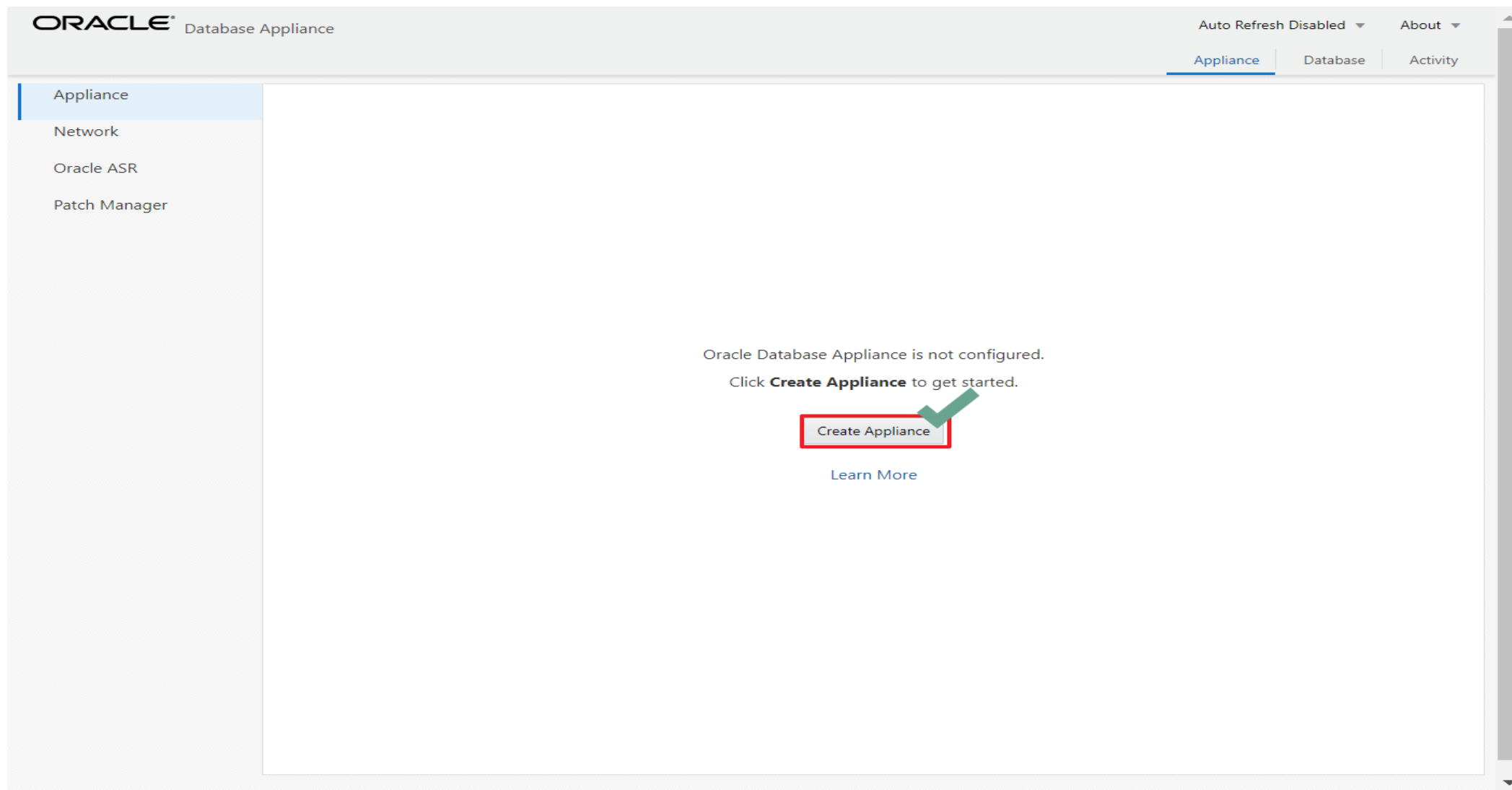
```
[root@oak ~]# ls -a /opt/oracle/oak/pkgrepos/orapkgs/clones  
.  ..  db112.171017.tar.gz  db122.171017.tar.gz  grid122.tar.gz
```

Log in to Web Console



- `https://<ip-address>:7093/mgmt/index.html`
- Username: oda-admin
- Password: welcome1

Deploy Oracle Database Appliance



Enter System Information

Appliance

Network

Oracle ASR

Patch Manager

Create Appliance

System Information

Host Name *

odasim

Domain Name *

oracle.com

Region

Asia ▼

Time Zone

Asia/Seoul ▼

DNS Servers

NTP Servers

Data Storage Percentage *

70

Master Password *

This value can be 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	ILOM Network
IP Address * <input type="text" value="192.168.56.210"/>	ILOM Host Name <input type="text"/>
Subnet Mask * <input type="text" value="255.255.255.0"/>	IP Address <input type="text"/>
Gateway * <input type="text" value="192.168.56.1"/>	Subnet Mask <input type="text"/>
	Gateway <input type="text"/>

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 *	GI UserID *
grid	1000
DB User *	DB UserID *
oracle	1001
Install Group *	Install GroupID *
oinstall	1001
DBA Oper Group *	DBA Oper GroupID *
dbaoper	1002
DBA Group *	DBA GroupID *
dba	1003
ASM Admin Group *	ASM Admin GroupID *
asmadmin	1004
ASM Oper Group *	ASM Oper GroupID *
asmoper	1005
ASM DBA Group *	ASM DBA GroupID *
asmdba	1006



Create a Database during Deployment

Database Information

Create Initial Database ☒ Yes ☐ No

DB Name *

orcl

DB Unique Name

orcl

DB Version

12.2.0.1.171017

CDB ☒ Yes ☐ No

PDB Name

PDB Admin User

Database Edition

Enterprise Edition

Shape

odb1s(1 Core, 4GB Memory)

Database Class

OLTP

Storage

ASM

Configure EM Express ☐ Yes ☒ No

EE or SE

Display all
versions that
have been
uploaded into
repository

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



Configure ASR (Optional during deployment)

ASR Information

Enable ASR: ☐ Yes ☒ No

[Cancel](#) [Submit](#)



Confirm

Are you sure you want to submit the provisioning job?

[No](#) [Yes](#)



Job Status

Provisioning job submitted successfully.

Click the link to display job details.

[352eb828-3a0e-4fb0-9b98-67b9ebbe4902](#)

Monitor Progress

ORACLE® Database Appliance

Auto Refresh Disabled ▾ About ▾

Appliance Database **Activity**

Activity

search 🔍

Page 1 of 1 (1-7 of 7 items) ⏪ < 1 > ⏩

Sort by: Created: New to Old ▾ Refresh

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
Description: Provisioning service creation
Status: Running
Created: March 21, 2018 4:53:11 AM KST
Message:

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

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 equivalence setup	March 21, 2018 4:53:22 AM KST	March 21, 2018 4:53:22 AM KST	Success

. . .



Completing appliance deployment

ORACLE[®]

Database Appliance

Auto Refresh Disabled ▾

About ▾

Appliance

Database

Activity

Appliance

Network

Oracle ASR

Patch Manager

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:

NTP Servers:

Disk Group Information

Name	Redundancy	Percentage
DATA	NORMAL	80
RECO	NORMAL	20

https://192.168.100.2:7093/mgmt/index.html?root=job&oj_Router=1N4IgTg9hA...

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®