

ORACLE®

Oracle Database Appliance Hands-On Training Supporting the Installation Service

Oracle Database Appliance X7-2 S/M



Deploying the Oracle Database Appliance On VirtualBox 5.2.8

Mar 2018

ORACLE

Preparing for the ODA X7-2 SM installation and deployment

- Installation Checklist
 - Oracle VirtualBox v5.2.8 or Later
 - Oracle VirtualBox Extension Pack 5.2.8 or Later
 - OS : Windows 7 or Later
 - Memory : 8GB or More
 - HDD Capacity : 60GB or More

ODA Software

Patch Number	Description
Patch 23530609	Oracle Database Appliance Patch 12.2.1.2 reimage (Preinstalled on VM)
Patch 27141226	Oracle Database Appliance Server Patch 12.2.1.2 Patch for ODA CLI/DCS Stack
Patch 27119393	Oracle Database Appliance 12.2.1.2 GI Clone for ODA CLI/DCS Stack (Mandatory)
Patch 27119402	Oracle Database Appliance 12.2.0.1.171017 RDBMS Clone for ODA CLI/DCS Stack (Optional)
Patch 23494997	Oracle Database Appliance 11.2.0.4.171017 RDBMS Clone for ODA CLI/DCS Stack (Optional)

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

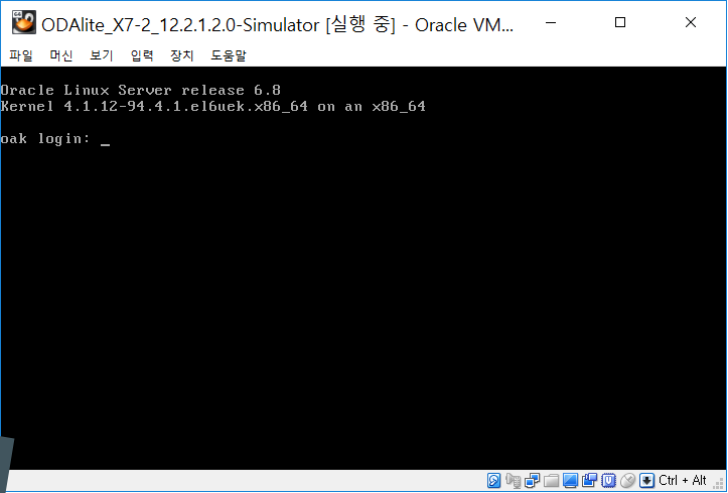
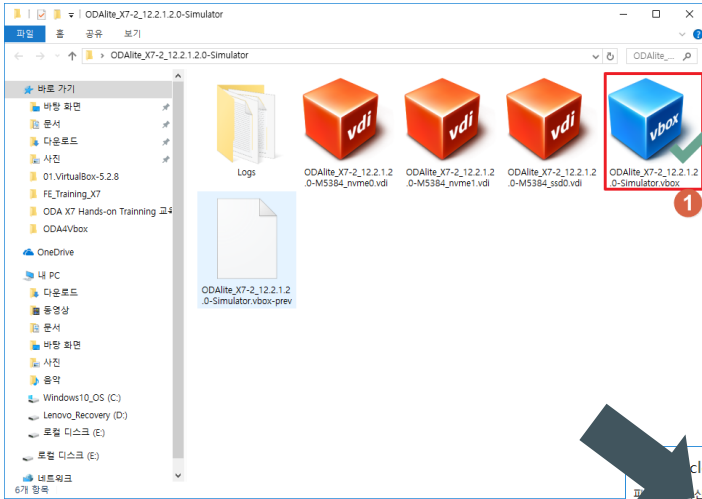
Deploying The Platform



Deployment Procedure

1. **Open ODA X7 S/M Simulator(VM)**
2. **Copy the Oracle Database Appliance DCS Patch, GI and DB files to the ODA Simulator**
3. **Update Metadata Repository**
4. **Deploy the Oracle Database Appliance**
5. **Monitor Deployment Progress**

Open ODA X7-2 S/M Simulator



***TIP:**
User : root
Password: welcome1



Plumb The Network

Boot up into the system console

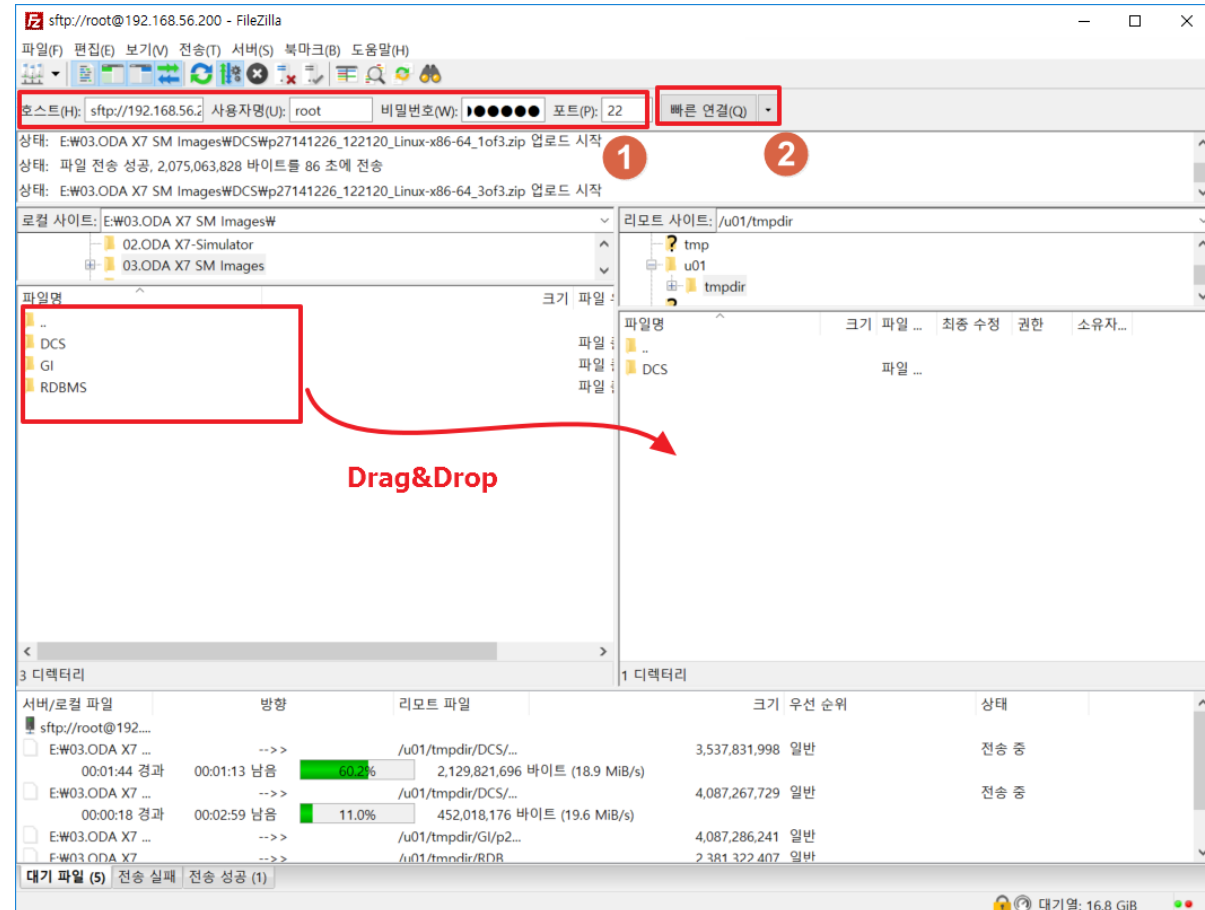
```
[root@oak ~]# /opt/oracle/oak/bin/configure-firstnet
Select the Interface to configure the network on (btbond1) [btbond1]: Enter!
Configure DHCP on btbond1 (yes/no) [no]: Enter!
INFO: You have chosen Static configuration
Use VLAN on btbond1 (yes/no) [no]: Enter!
Enter the IP address to configure : 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
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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",
  "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",  
  "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" : [ ],
  ...
}
```

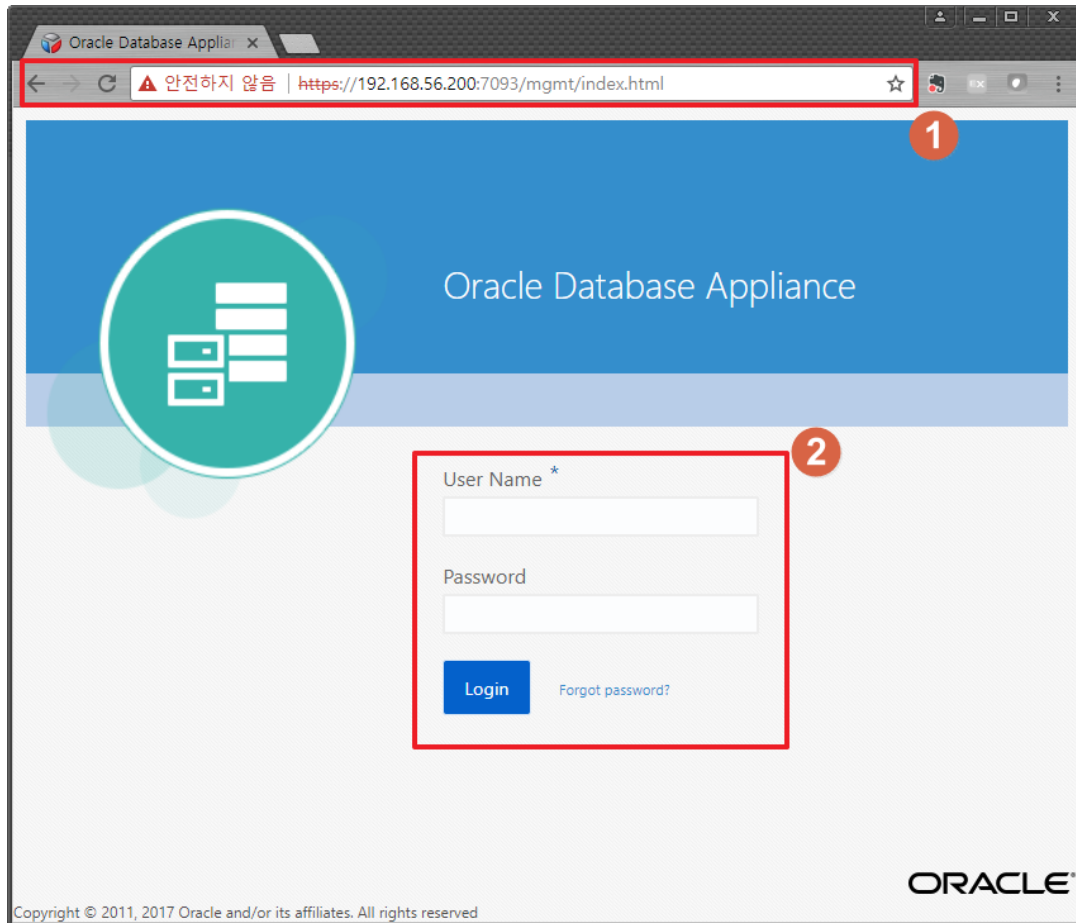

Check 'update-repository'

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

The screenshot shows the Oracle Database Appliance management console. The top left corner displays the Oracle logo and the text "Database Appliance". The top right corner has a status bar with "Auto Refresh Disabled" and "About" dropdown menus. Below the status bar are three tabs: "Appliance" (selected), "Database", and "Activity". On the left side, there is a navigation menu with four items: "Appliance" (highlighted), "Network", "Oracle ASR", and "Patch Manager". The main content area is mostly empty, with a central message: "Oracle Database Appliance is not configured. Click **Create Appliance** to get started." Below this message is a button labeled "Create Appliance" which is highlighted with a red rectangular box and a green checkmark icon. Underneath the button is a blue link labeled "Learn More".

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 *

rd *

This value can
be 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 IP Address * <input type="text" value="192.168.56.210"/> Subnet Mask * <input type="text" value="255.255.255.0"/> Gateway * <input type="text" value="192.168.56.1"/>	ILOM Network ILOM Host Name <input type="text"/> IP Address <input type="text"/> 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 *
<input type="text" value="grid"/>	<input type="text" value="1000"/>
DB User *	DB UserID *
<input type="text" value="oracle"/>	<input type="text" value="1001"/>
Install Group *	Install GroupID *
<input type="text" value="oinstall"/>	<input type="text" value="1001"/>
DBA Oper Group *	DBA Oper GroupID *
<input type="text" value="dbaoper"/>	<input type="text" value="1002"/>
DBA Group *	DBA GroupID *
<input type="text" value="dba"/>	<input type="text" value="1003"/>
ASM Admin Group *	ASM Admin GroupID *
<input type="text" value="asmadmin"/>	<input type="text" value="1004"/>
ASM Oper Group *	ASM Oper GroupID *
<input type="text" value="asmoper"/>	<input type="text" value="1005"/>
ASM DBA Group *	ASM DBA GroupID *
<input type="text" value="asmdba"/>	<input type="text" value="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 x

Are you sure you want to submit the provisioning job?

No **Yes**



Job Status x

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

The screenshot shows the Oracle Database Appliance management console. The top header includes the Oracle logo and 'Database Appliance'. On the right, there are controls for 'Auto Refresh Disabled' and 'About'. Below the header, there are three tabs: 'Appliance' (selected), 'Database', and 'Activity'. A left-hand navigation menu lists 'Appliance', 'Network', 'Oracle ASR', and 'Patch Manager'. The main content area is divided into three sections: 'Appliance Information', 'System Information', and 'Disk Group Information'. The 'Appliance Information' section displays the ID, Platform, Data Disk Count, CPU Core Count, and Created date. The 'System Information' section displays Host Name, Domain Name, Time Zone, DB Edition, DNS Servers, and NTP Servers. The 'Disk Group Information' section contains a table with columns for Name, Redundancy, and Percentage.

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®