ASM 및 GI 구성



ABLESTACK Online Docs ABLESTACK-V4.0-4.0.15

# ASM 및 GI 구성

#### i Info

가이드에 사용되는 입력값은 예시입니다. 필요시 환경에 맞게 변경 가능합니다.

### ASM(Automatic Storage Management) 구성

Oracle에서 만든 자동으로 스토리지를 관리하는 소프트웨어로써, 데이터 베이스에서 사용하는 모든 파일(Contorl File, Archive log file, Redolog File, DataDump File, DataFile, SPFILE 등) 에 대해 자동저장공간 관리를 위해 ASM을 구성 합니다.

네트워크 IP 세팅 확인 ( 노드 : 전체 / 계정 : root )

ip a

#### 결과 값

- node1: Eth0: 192.168.0.110/24, Eth1: 10.1.1.110/24
- node2 : Eth0 : 192.168.0.120/24, Eth1 : 10.1.1.120/24

```
공유 디스크 세팅 확인 ( 노드 : 전체 / 계정 : root )
```

lsblk

디스크 목록에 sdb가 있는지 확인

| [root@ol7ra | c1 ~]# l: | sbll | k     |    |      |            | En | oot@ol7ra | c2 ~]# l: | sbli | ¢     |    |      |            |
|-------------|-----------|------|-------|----|------|------------|----|-----------|-----------|------|-------|----|------|------------|
| NAME        | MAJ:MIN   | RM   | SIZE  | RO | TYPE | MOUNTPOINT | NA | ME        | MAJ:MIN   | RM   | SIZE  | RO | TYPE | MOUNTPOINT |
| sdb         | 8:16      | 0    | 100G  | 0  | disk |            | sd | b         | 8:16      | 0    | 100G  | 0  | disk |            |
| sr0         | 11:0      | 1    | 1024M | 0  | rom  |            | sr | 0         | 11:0      | 1    | 1024M | 0  | rom  |            |
| sdc         | 8:32      | 0    | 100G  | 0  | disk |            | sd | c         | 8:32      | 0    | 100G  | 0  | disk |            |
| sda         | 8:0       | 0    | 100G  | 0  | disk |            | sd | a         | 8:0       | 0    | 100G  | 0  | disk |            |
| -sda2       | 8:2       | 0    | 99G   | 0  | part |            |    | sda2      | 8:2       | 0    | 99G   | 0  | part |            |
| -ol-swap    | 252:1     | 0    | 16G   | 0  | lvm  | [SWAP]     |    | -ol-swap  | 252:1     | 0    | 16G   | 0  | lvm  | [SWAP]     |
| Lol-root    | 252:0     | 0    | 83G   | 0  | lvm  | /          |    | └-ol-root | 252:0     | 0    | 83G   | 0  | lvm  | /          |
| ∟sda1       | 8:1       | 0    | 1G    | 0  | part | /boot      |    | sda1      | 8:1       | 0    | 1G    | 0  | part | /boot      |
| [root@ol7ra | c1 ~]#    |      |       |    |      |            | En | oot@ol7ra | c2 ~]#    |      |       |    |      |            |

#### 호스트 네임 세팅 ( 노드 : node1 / 계정 : root )

hostnamectl set-hostname ol7rac1

#### 호스트 네임 세팅 ( 노드 : node2 / 계정 : root )

hostnamectl set-hostname ol7rac2

#### 오라클 데이터베이 구성전 설치 (노드: 전체 / 계정: root)

yum install -y oracle-database-preinstall-19c

preinstall이 완료되면 자동으로 rpm을 설치하고, 필요 그룹을 생성하고 해당 설치과정에서는 dba 그룹만 사용

#### 그룹 자동생성 확인 ( 노드 : 전체 / 계정 : root )

cat /etc/group



#### oracle, grid 유저 생성 및 비밀번호 수정 ( 노드 : 전체 / 계정 : root )

```
useradd -s /bin/bash -g dba oracle
passwd oracle
useradd -s /bin/bash -g dba grid
passwd grid
```

#### 유저 생성 확인 ( 노드 : 전체 / 계정 : root )

```
id oracle
(출력)
uid=1000(oracle) gid=54322(dba) groups=54322(dba)
```

```
id grid
(출력)
uid=1001(grid) gid=54322(dba) groups=54322(dba)
```

#### 계정별 bash\_profile 수정 ( 노드 : 전체 / 계정 : root )

```
vi ~/.bash_profile
```

(추가) umask 022

vi ~grid/.bash\_profile

```
(추가)
umask 022
```

vi ~oralce/.bash\_profile

(추가) umask 022

#### Grid 설치 폴더 생성 및 권한설정 ( 노드 : 전체 / 계정 : root )

```
mkdir -p /u01/app/19.0.0/grid
mkdir -p /u01/app/grid
chown -R grid:dba /u01
chmod -R 775 /u01
```

```
hosts 파일에 ip 등록 ( 노드 : 전체 / 계정 : root )
```

```
vi /etc/hosts

(추가)

### Public

192.168.0.110 ol7rac1

192.168.0.120 ol7rac2

### Private

10.1.1.110 ol7rac1-priv

10.1.1.120 ol7rac2-priv

### Virtual

192.168.0.121 ol7rac1-vip

192.168.0.122 ol7rac2-vip

### SCAN (스캔을 안쓰는 경우 세팅을 안해도 되는데 구성시 필수여서 입력해야함)

192.168.0.123 ol7rac-scan

192.168.0.124 ol7rac-scan

192.168.0.125 ol7rac-scan
```

#### Memory 확인 ( 노드 : 전체 / 계정 : root )

grep MemTotal /proc/meminfo

(결과) GI는 8GB 이상, DB는 1GB 이상.

#### Swap 공간 확인 ( 노드 : 전체 / 계정 : root )

```
grep SwapTotal /proc/meminfo
```

```
(결과)
메모리크기의 <u>1</u>~1.5배 이어야함. <16GB
```

#### [필요시] swap 볼륨 추가 ( 노드 : 전체 / 계정 : root )

```
> 10GB 생성
dd if=/dev/zero of=/etc/swapfile bs=1024 count=10000000
```

> Swap <mark>파일로 포맷</mark> mkswap /etc/swapfile

> Swap <mark>공간으로 활성화</mark> swapon /etc/swapfile

> /etc/fstab 파일에 추가 vi /etc/fstab

(추가) /etc/swapfile swap

swap defaults

0 0

ntp 설치 및 불필요 프로그램 종료 ( 노드 : 전체 / 계정 : root )

> ntpd 설치 yum install -y ntp

> ntpd <mark>설정 파일 수정</mark> vi /etc/sysconfig/ntpd

#### (수정)

# Command line options for ntpd #OPTIONS="-g" OPTIONS="-x -u ntp:ntp -p /var/run/ntpd.pid"

#### > ntpd 실행 및 상태확인

systemctl enable --now ntpd
systemctl status ntpd

#### > 불필요 소프트웨어 종료

systemctl disable --now avahi-daemon

> 방화벽 종료 (운영시 종료X) systemctl disable --now firewalld

#### Resource Limit 관련 파라메타 세팅 ( 노드 : 전체 / 계정 : root )

```
vi /etc/security/limits.conf

(추가) #End of file 바로 위에

grid soft nofile 4096

grid hard nofile 65536

grid soft nproc 16384

grid hard nproc 16384

grid soft stack 10240

grid hard stack 32768

grid soft memlock 3145728

grid hard memlock 3145728

oracle soft nofile 4096

oracle hard nofile 65536

oracle soft nproc 16384

oracle hard nproc 16384

oracle hard stack 32768

oracle soft stack 10240

oracle hard stack 32768

oracle soft stack 10240

oracle hard memlock 3145728
```

| #@student | -    | maxlo   | gins    | 4 |
|-----------|------|---------|---------|---|
| grid      | soft | nofile  | 4096    |   |
| grid      | hard | nofile  | 65536   |   |
| grid      | soft | nproc   | 16384   |   |
| grid      | hard | nproc   | 16384   |   |
| grid      | soft | stack   | 10240   |   |
| grid      | hard | stack   | 32768   |   |
| grid      | soft | memlock | 3145728 |   |
| grid      | hard | memlock | 3145728 |   |
|           |      |         |         |   |
| oracle    | soft | nofile  | 4096    |   |
| oracle    | hard | nofile  | 65536   |   |
| oracle    | soft | nproc   | 16384   |   |
| oracle    | hard | nproc   | 16384   |   |
| oracle    | soft | stack   | 10240   |   |
| oracle    | hard | stack   | 32768   |   |
| oracle    | soft | memlock | 3145728 |   |
| oracle    | hard | memlock | 3145728 |   |
|           |      |         |         |   |
| # End of  | file |         |         |   |

```
asmlib 설치 ( 노드 : 전체 / 계정 : root )
```

```
yum install -y oracleasm-support
yum install -y kmod-oracleasm
```

### ASM Disk 구성 작업

#### 1,2,5번 작업은 모든 노드에서 수행하고 3,4번 작업은 1번 노드에서만 수행합니다.

#### asmlib 설치 ( 노드 : 전체 / 계정 : root )

```
/usr/sbin/oracleasm configure -i
(입력)
grid > dba > y > y 순으로 입력
```

#### oracleasm 커널모듈 로딩 ( 노드 : 전체 / 계정 : root )

/usr/sbin/oracleasm init

#### 사용할 수 있는 Disk 확인 및 파티션 생성 ( 노드 : node1 / 계정 : root )

lsblk fdisk /dev/sdb (n > 엔터 > 엔터 > 엔터 > w) 파티션 생성 pvcreate /dev/sdb1

#### ASM disk scan ( 노드 : 전체 / 계정 : root )

oracleasm scandisks

(결과) 1,2번 노드에 DATA가 출력되는지 확인

#### grid S/W 설치 ( 노드 : node1 / 계정 : root )

```
mkdir -p /home/STAGE
cd /home/STAGE
wget https://images.ablecloud.io/LINUX.X64_193000_grid_home.zip
wget https://images.ablecloud.io/LINUX.X64_193000_db_home.zip
( 다운로드 : LINUX.X64_193000_grid_home.zip, LINUX.X64_193000_grid_home.zip 파일은 다운로드 사이트 >
https://www.oracle.com/database/technologies/oracle19c-linux-downloads.html 오라클 계정으로 로그인해야
다운로드 가능)
```

#### grid 계정 bash\_profile 수정 ( 노드 : node1 / 계정 : grid )

```
su - grid
vi .bash_profile
(주가)
export LANG=C
export ORACLE_BASE=/u01/app/grid
export ORACLE_HOME=/u01/app/19.0.0/grid
export ORACLE_SID=+ASM1
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib
export NLS_LANG=AMERICAN_AMERICA.AL32UTF8
export PATH=$ORACLE_HOME/bin:$PATH
alias oh='cd $ORACLE_HOME'
```

#### grid 계정 bash\_profile 수정 ( 노드 : node2 / 계정 : grid )

```
su - grid
vi .bash_profile
(추가)
export LANG=C
export ORACLE_BASE=/u01/app/grid
export ORACLE_HOME=/u01/app/19.0.0/grid
export ORACLE_SID=+ASM2
export LD_LIBRARY_PATH=$ORACLE_HOME/lib:/lib:/usr/lib
export NLS_LANG=AMERICAN_AMERICA.AL32UTF8
export PATH=$ORACLE_HOME/bin:$PATH
alias oh='cd $ORACLE_HOME'
```

~grid/.bash\_profile 확인

| # .bash_profile   | # .bash_profile   |
|---|---|
| <pre># Get the aliases and functions if [ -f ~/.bashrc ]; then                 . ~/.bashrc fi</pre> | <pre># Get the aliases and functions if [ -f ~/.bashrc ]; then                 . ~/.bashrc fi</pre> |
| # User specific environment and startup programs  | # User specific environment and startup programs  |
| PATH=\$PATH:\$HOME/.local/bin:\$HOME/bin  | PATH=\$PATH:\$HOME/.local/bin:\$HOME/bin  |
| export PATH   | export PATH   |
| umask 022   | umask 022   |
| export LANG=C   | export LANG=C   |
| export ORACLE_BASE=/u01/app/grid  | export ORACLE_BASE=/u01/app/grid  |
| export ORACLE_HOME=/u01/app/19.0.0/grid   | export ORACLE_HOME=/u01/app/19.0.0/grid   |
| export ORACLE_SID=+ASM1   | export ORACLE_SID=+ASM2   |
| <pre>export LD_LIBRARY_PATH=\$ORACLE_HOME/lib:/lib:/usr/lib</pre>                                   | <pre>export LD_LIBRARY_PATH=\$ORACLE_HOME/lib:/lib:/usr/lib</pre>                                   |
| export NLS_LANG=AMERICAN_AMERICA.AL32UTF8   | export NLS_LANG=AMERICAN_AMERICA.AL32UTF8   |
| export PATH=\$ORACLE_HOME/bin:\$PATH  | export PATH=\$ORACLE_HOME/bin:\$PATH  |
| alias oh='cd \$ORACLE_HOME'   | alias oh='cd \$ORACLE_HOME'   |

grid 설치파일 압축 풀기 ( 노드 : node1 / 계정 : grid )

```
cd /u01/app/19.0.0/grid
unzip -q /home/STAGE/LINUX.X64_193000_grid_home.zip
(1번노드에서만 풀면 됨 > 설치시 다른노드에 자동 복사함)
```

grid infrastructure 설치 ui 구동 ( 노드 : node1 / 계정 : grid )

```
> 윈도우 x-trem으로 접속하여 실행 (mac os 에서는 설치 UI 화면 깨짐 / windows MobaXtrem 사용)
su - grid
/u01/app/19.0.0/grid/gridSetup.sh
```

### grid infrastructure 구성

grid infrastructure 구성 마법사를 통해 작업을 진행합니다.



| <b>P</b> | Configuration Option    | Select an option to configure the software. The wizard will register the home in the central inventory and then perform the selected configuration. |
|----------|-------------------------|---|
| Ť        | Operating System Groups |   |
| Y        | Installation Location   | Configure Oracle Grid Infrastructure for a Standalone Server (Oracle <u>Restart</u> )   |
| Ŷ        | Root script execution   | O <u>U</u> pgrade Oracle Grid Infrastructure  |
| J        | Summary                 |   |
| Y        | Install Product         | Set Up Software Only  |
| Ó        | Finish                  |   |
|          |                         |   |
|          |                         |   |
|          |                         |   |
|          |                         |   |
|          |                         |   |
|          |                         |   |
|          |                         |   |
|          |                         | (2)   |
|          | Help                    | < Back Next > Install Cancel  |

– 🗆 🗙

19° ORACLE Grid Infrastructure

- Configure Oracle Grid Infrastructure for a New Cluster 선택
- Next 버튼 클릭

Step 2 of 9@ol7rac1

| Se | lect Cluster Configura  | tion 19° ORACLE<br>Grid Infrastructure  |
|----|-------------------------|---|
| *  | Configuration Option    | Choose the required cluster configuration.  |
| 2  | Cluster Configuration   | Onfigure an Oracle Standalone Cluster   |
| -  | Operating System Groups | ○ Configure an <u>O</u> racle Domain Services Cluster   |
| ×  | Root script execution   | ○ Configure an Oracle Member Cluster for Oracle <u>D</u> atabases                                 |
| Ý  | Prerequisite Checks     | Configure an Oracle Member Cluster for <u>Applications</u>  |
| Ý  | Summary                 |   |
| Ý  | Install Product         | Oracle Extended clusters are special purpose clusters that constitute nodes which span across     |
| 0  | Finish                  | multiple sites. Specify a minimum of 3 site names and a maximum of 5 (e.g., siteA, siteB, siteC). |
|    |                         | Configure as an Oracle <u>E</u> xtended cluster   |
|    |                         | Site names:   |
|    |                         |   |
|    |                         |   |
|    |                         |   |
|    |                         |   |
|    |                         |   |
|    |                         |   |
|    |                         |   |
|    |                         |   |
|    |                         |   |

< <u>B</u>ack

Nex

Install

Cancel

 $\times$ 

• Configure an Oracle Standalone Cluster 선택

• Next 버튼 클릭

<u>H</u>elp



#### Grid Plug and Play Information

| * | Configuration Option          | Single Client Access Name (SCAN) allows clients to use one name in connection strings to connect to the CLAN name can be bandled by any |
|---|-------------------------------|---|
| * | Cluster Configuration         | cluster node.   |
| 0 | Grid Plug and Play            | Create Local SCAN   |
| ų | Cluster Node Information      | Cluster Name: ol7rac-cluster  |
| Ý | Network Interface Usage       | SCAN Name: 017rac-scan  |
| * | Storage Option                | SCAN Port 💡 1521  |
| * | Create Grid Infrastructure Ma | 🔾 Use Shared SCAN   |
| Ý | Grid Infrastructure Managem   | SCAN Client Data: Browse  |
| Ý | Create ASM Disk Group         | Configure GNS   |
| Ý | ASM Password                  | Configure nodes Virtual IPs as assigned by the Dynamic Networks   |
| Ý | Operating System Groups       |   |
| 4 | Installation Location         | Create a n <u>e</u> w GNS   |
| * | Root script execution         | GNS VIP Address:  |
| ģ | Prerequisite Checks           | <u>G</u> NS Sub Domain:   |
| Ý | Summary                       | O Use Shared GNS  |
| Ý | Install Product               | CNS Client Data:  |
| 0 | Finish                        | Browse  |
|   |                               |   |
|   |                               |   |
|   |                               | $\sim$  |
| • |                               | (2)   |
|   | Help                          | < Back Next > Install Cancel  |

- Cluster Name : ol7rac-cluster 입력
- SCAN Name : ol7rac-scan 입력
- SCAN Port: 1521 입력
- Next 버튼 클릭



#### **Cluster Node Information**

| - | Configuration Option          | Provide the list of ne Add Cluster Node Information@ol7rac1  | lic Hostname       |
|---|-------------------------------|--|--------------------|
| T | Cluster Configuration         | and Virtual Hostnam  |                    |
| Ť | ciuster configuration         | P  |                    |
| Y | Grid Plug and Play            | ol7racl  O Add a gingle mode   |                    |
|   | Cluster Node Information      | Specify the name for the public host name. If you want to configure virtual<br>host name manually, then you will be prompted for the virtual IP address. |                    |
| Ý | Network Interface Usage       | Public Hostneme: 017rac2   |                    |
| * | Storage Option                | Virtual Hostname: ol7rac2-vip  |                    |
| X | Create Grid Infrastructure Ma | O Add a range of noges   |                    |
| Ý | Grid Infrastructure Managem   | Specify the node range expression for the required nodes. You can use the<br>following patterns to build the expression: Constant strings such as        |                    |
| Ý | Create ASM Disk Group         | "myhostname", single character ranges such as "[a-z]" and multi-character<br>sequences such as "[ab]cd]]".   |                    |
| Ý | ASM Password                  | Public Hostname Egoreesion:  |                    |
| Ý | Operating System Groups       | ⊻irtual Hostname Suffix:   |                    |
| 4 | Installation Location         | Nodes to be generated: 0   |                    |
| X | Root script execution         | 3  |                    |
| Ý | Prerequisite Checks           | Cancel   |                    |
| Ý | Summary                       |  | - I                |
| 4 | Install Product               |  |                    |
| 9 | Finish                        | SSH connectivity   | dit <u>R</u> emove |
|   |                               |  |                    |
|   |                               |  |                    |
|   |                               |  |                    |
| • |                               |  |                    |
|   | Help                          | < <u>B</u> ack <u>N</u> ext > Insta  | Cancel             |

- Add 버튼 클릭
- Public Hostname : ol7rac2 입력
- Virtual Hostname : ol7rac2-vip 입력
- Ok 버튼 클릭



#### **Cluster Node Information**

| <u>۾</u> | Configuration Option            | Provide the list of nodes to be managed by Oracle Grid Infrastructure with their Public Hostname<br>and Virtual Hostname. |
|----------|---------------------------------|---|
| 秦        | Cluster Configuration           |   |
| 4        | Grid Plug and Play              | Public Hostname Virtual Hostname  |
|          | <b>Cluster Node Information</b> | ol7rac2 ol7rac2-vip   |
| 1        | Network Interface Usage         |   |
| J        | Storage Option                  |   |
| T        | Create Crid Jefrachruchura Ma   |   |
| T        | Create Grid Infrastructure Ma   |   |
| 9        | Grid Infrastructure Managem     |   |
| Ý        | Create ASM Disk Group           |   |
| Ý        | ASM Password                    |   |
| ģ        | Operating System Groups         |   |
| 4        | Installation Location           |   |
| A        | Root script execution           | SSH connectivity Use Cluster Configuration Add Edit Remove  |
| Ý        | Prerequisite Checks             | OS Username: grid OS Password:  |
| Ý        | Summary                         |   |
| Ý        | Install Product                 | Reuse private and public keys existing in the user nome   |
| 9        | Finish                          | Test Setup  |
|          |                                 |   |
|          |                                 |   |
|          |                                 |   |
| •        |                                 | 5   |
|          | Help                            | < <u>Back</u> <u>Next</u> <u>Install</u> Cancel   |

- ol7rac1, ol7rac2 선택
- SSH connectivity 클릭
- OS Password : grid 계정 비밀번호 입력
- Setup 버튼 클릭
- Next 버튼 클릭



#### Specify Network Interface Usage

| 魚  | Configuration Option          | Private interfaces are used | by Oracle Grid Infrastructure fo | r internode traffic. |
|----|-------------------------------|-----------------------------|----------------------------------|----------------------|
| Ţ  | Cluster Configuration         | )                           |                                  |                      |
| J. | Grid Plug and Play            | Interface Name              | Subnet                           | Use for              |
| T  | Cluster Node Information      | eth0                        | 192.168.0.0                      | Public               |
| ľ  |                               | eth1                        | 10.1.1.0                         | ASM & Private        |
| 9  | Network Interface Usage       | VIIDIO                      | 192.100.122.0                    | Do Not Use           |
| *  | Storage Option                |                             |                                  |                      |
| *  | Create Grid Infrastructure Ma |                             |                                  |                      |
| Ý  | Grid Infrastructure Managem   |                             |                                  |                      |
| Ý  | Create ASM Disk Group         |                             |                                  |                      |
| Ý  | ASM Password                  |                             |                                  |                      |
| Ý  | Operating System Groups       |                             |                                  |                      |
| Ý  | Installation Location         |                             |                                  |                      |
| *  | Root script execution         |                             |                                  |                      |
| Ý  | Prerequisite Checks           |                             |                                  |                      |
| Ý  | Summary                       |                             |                                  |                      |
| Ý  | Install Product               |                             |                                  |                      |
| 0  | Finish                        |                             |                                  |                      |
|    |                               | ·                           |                                  |                      |
|    |                               |                             |                                  |                      |
|    |                               |                             |                                  |                      |
| •  |                               |                             | (2)                              | )                    |
|    | Help                          |                             | < <u>B</u> ack                   | Nex Install Cancel   |

- eth0: Public
- eth1: ASM & Private
- Next 버튼 클릭



| TTTT | Configuration Option<br>Cluster Configuration<br>Grid Plug and Play<br>Cluster Node Information<br>Network Interface Usage | You can place Oracle Cluster Registry (OCR) files and voting disk files on Oracle ASM storage, or<br>on a file system.<br><ul> <li>Use Oracle Flex <u>A</u>SM for storage</li> <li>Choose this option to configure OCR and voting disks on ASM storage. ASM instance will be<br/>configured on reduced number of cluster nodes.</li> <li>Use Shared File System</li> </ul> |
|------|--|--|
| 2    | Storage Option   | Choose this option to configure OCR and voting disk files on an existing shared file system.   |
| 4    | Create Grid Infrastructure Ma  |  |
| Ý    | Grid Infrastructure Managem  |  |
| Ý    | Create ASM Disk Group  |  |
| Ý    | ASM Password   |  |
| Ý    | Operating System Groups  |  |
| Ý    | Installation Location  |  |
| 4    | Root script execution  |  |
| Ý    | Prerequisite Checks  |  |
| Ý    | Summary  |  |
| Ý    | Install Product  |  |
| 9    | Finish   |  |
| •    | 88888  |  |
|      | Help   | < Back Next > Install Cancel   |

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19° ORACLE Grid Infrastructure

- Use Oracle Flex ASM for storage 선택
- Next 버튼 클릭

#### Create Grid Infrastructure Management Reposit...



|   | Or from the Orthop          | The Grid Infrastructure Management Repository is an essential component for complete operation  |
|---|-----------------------------|---|
| T | Configuration Option        | of the Autonomous Health Framework, that offers enhanced real time diagnostics and  |
| 4 | Cluster Configuration       | performance management, and Rapid Homes Provisioning for patching. The components that<br>depend on the repository in whole or in part are Cluster Health Advisor. Cluster Health Monitor |
| ý | Grid Plug and Play          | QoS Management, Rapid Homes Provisioning and Cluster Activity Log. It is best practice to install   |
| ų | Cluster Node Information    | this option and failure to do so could compromise timely resolution of issues as well as available<br>functionality for patching.   |
| ų | Network Interface Usage     | P Configure Grid Infrastructure Management Repository   |
| 4 | Storage Option              |   |
|   | Create Grid Infrastructu    | . <u>O I</u> es   |
| ų | Grid Infrastructure Managem | No     No   |
| Ý | Create ASM Disk Group       |   |
| Ý | ASM Password                |   |
| Ý | Operating System Groups     |   |
| Ý | Installation Location       |   |
| 4 | Root script execution       |   |
| Ý | Prerequisite Checks         |   |
| Ý | Summary                     |   |
| Ý | Install Product             |   |
| 9 | Finish                      |   |
|   |                             |   |
|   |                             |   |
|   |                             | $\sim$  |
| • |                             | 2   |
|   | Help                        | < Back New Install Cancel   |

- No 선택
- Next 버튼 클릭



#### Create ASM Disk Group

|   | Configuration Option<br>Cluster Configuration<br>Grid Plug and Play<br>Cluster Node Information | OCR and Voting disk data will be stored in the following ASM characteristics of this Disk group.         Disk group name       DATA         Redundancy       Flex       High Image Normal       External | Disk   | . group        | . Select disl    | ks and          |
|---|---|--|--------|----------------|------------------|-----------------|
| ÷ | Network Interface Usage   | Allocation Unit Size 4 💌 MB  |        |                |                  |                 |
| 本 | Storage Option  | Select Disks   | Sh     | ow Car         | ndidate/Prov     | isioned Disks 🔻 |
| * | Create Grid Infrastructure Ma   | Gamma Change Disk Discovery Path@ol7rac1   | ×      | MB)            | Status           | Failure Group   |
|   | Create ASM Disk Group   |  |        |                |                  |                 |
| Ý | ASM Password  | Changing the Dis 2 overy Path will affect all Disk Group   | os     |                |                  |                 |
| Ý | Operating System Groups   | Disk Discovery Path: /dev/oracleasm/disks/*  |        |                |                  |                 |
| Ý | Installation Location   | OK Cance   |        |                |                  |                 |
| * | Root script execution   |  |        |                |                  |                 |
| Ý | Prerequisite Checks   | Disk Discovery Path:'/dev/sd*'   |        |                |                  |                 |
| Ý | Summary   | Change Discovery <u>P</u> ath  |        |                | Specify <u>F</u> | ailure Groups   |
| Ý | Install Product   |  |        |                |                  |                 |
| 9 | Finish  | Configure Oracle ASM Filter Driver   |        |                |                  |                 |
|   |   | Select this option to configure ASM Filter Driver(AFD) to simp<br>disk devices by Oracle ASM.  | lify c | onfigu         | ration and n     | nanagement of   |
|   |   |  |        |                |                  |                 |
| • |   |  |        |                |                  |                 |
|   | Help  | < <u>B</u> ack   |        | <u>N</u> ext > | Insta            | Cancel          |

- Change Discovery Path 선택
- /dev/oracleasm/disks/\* 입력
- 엔터 입력

•

Finish

<u>H</u>elp

| 100  | officie ond innostracture roe in   | stater - step o or rogonact  |                             |
|------|--|--|-----------------------------|
| Cr   | eate ASM Disk Group  |  | Grid Infrastructure         |
| TTTT | Configuration Option<br>Cluster Configuration<br>Grid Plug and Play<br>Cluster Node Information<br>Network Interface Usage<br>Storage Option | OCR and Voting disk data will be stored in the following ASM Disk group.         Disk group name         DATA         Redundancy         Flex         High         Normal         External | roup. Select disks and      |
| T    |  | Select Disks   | Candidate/Provisioned Disks |
| 4    | Create Grid Infrastructure 2   | Disk Path  | Size (in MB) Status         |
|      | Create ASM Disk Group  | ✓ /dev/oracleasm/disks/DATA  | 102399 Provisioned          |
| ψ    | ASM Password   |  |                             |
| 4    | Operating System Groups  |  |                             |
| Ý    | Installation Location  |  |                             |
| Å    | Root script execution  |  |                             |
| ę    | Prerequisite Checks  | Disk Discovery Path:'/dev/oracleasm/disks/*'   |                             |
| Y    | Summary  | Change Discovery Path  |                             |
| Ý    | Install Product  |  |                             |
| 1    | Finish   | Configure Oracle ASM Eilter Driver   |                             |

disk devices by Oracle ASM.

Select this option to configure ASM Filter Driver(AFD) to simplify configuration and management of

3

< <u>B</u>ack

 $\underline{N}e \times t >$ 

П

V

Cancel

/dev/oracleasm/disks/DATA 선택 •

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Next 버튼 클릭 •

• External 선택

#### Specify ASM Password

|   | Configuration Option<br>Cluster Configuration<br>Grid Plug and Play<br>Cluster Node Information<br>Network Interface Usage | The new Oracle Automatic Storage Management (Oracle ASM) instance requires its own SYS user<br>with SYSASM privileges for administration. Oracle recommends that you create a less privileged<br>ASMSNMP user with SYSDBA privileges to monitor the ASM instance.<br>Specify the password for these user accounts.<br>O Use different passwords for these accounts |
|---|--|--|
| T | Storage Option   | Password Confirm Password  |
| * | Create Grid Infrastructure Ma  | sĭs  |
| ÷ | Create ASM Disk Group  | ASMSNMP  |
|   | ASM Password   |  |
| ų | Operating System Groups  | /  |
| 4 | Installation Location  | <ul> <li>Use same passwords for these accounts</li> </ul>  |
| * | Root script execution  | 2)   |
| ÷ | Prerequisite Checks  | Specify <u>P</u> assword: <u></u>  |
| 4 | Summary  |  |
| Ý | Install Product  |  |
| 9 | Finish   |  |
| • |  |  |
|   | Help   | < Back Next > Install Cancel   |

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19° ORACLE Grid Infrastructure

오라클 관리자 계정 비밀번호 입력 - Use same passwords for these accounts 선택 - 비밀번호 입력 - Next 버튼 클릭

| Fai       | lure Isolation Support  | 19° ORACLE'<br>Grid Infrastructure                             |
|-----------|---|--|
| イインノノノイイン | Configuration Option<br>Cluster Configuration<br>Grid Plug and Play<br>Cluster Node Information<br>Network Interface Usage<br>Storage Option<br>Create Grid Infrastructure<br>Create ASM Disk Group | Choose one of the following Failure Isolation Support options. |
| ų         | ASM Password  |  |
|           | Failure Isolation   |  |
| ų         | Management Options  |  |
| Ý         | Operating System Groups   |  |
| Ý         | Installation Location   |  |
| *         | Root script execution   |  |
| Ý         | Prerequisite Checks   |  |
| Ý         | Summary   |  |
| Ý         | Install Product   |  |
| 0         | Finish  |  |
| 4         |   | (2)  |
|           | Help  | < Back Next > Install Cancel                                   |

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- Do not use Intelligent Platform Management Interface (IPMI) 선택
- Next 버튼 클릭



#### Specify Management Options

| Å<br>₩ | Configuration Option<br>Cluster Configuration | You can configure to have this instance of Oracle Grid Infrastructure and Oracle Automatic<br>Storage Management to be managed by Enterprise Manager Cloud Control. Specify the details of<br>the Cloud Control configuration to perform the registration. |
|--------|---|--|
| ų      | Grid Plug and Play                            | Register with Enterprise Manager (EM) Cloud Con <u>t</u> rol   |
| ÷      | Cluster Node Information                      | O <u>M</u> S host:   |
| ÷      | Network Interface Usage                       | OMS port:  |
| 木      | Storage Option                                |  |
| *      | Create Grid Infrastructure Ma                 |  |
| ÷      | Create ASM Disk Group                         | EM Admin Password:   |
| ÷      | ASM Password                                  |  |
| ÷      | Failure Isolation                             |  |
|        | Management Options                            |  |
| ų      | Operating System Groups                       |  |
| Ý      | Installation Location                         |  |
| *      | Root script execution                         |  |
| Ý      | Prerequisite Checks                           |  |
| Ý      | Summary                                       |  |
| Ý      | Install Product                               |  |
| 9      | Finish  |  |
|        |   |  |
|        |   | $\sim$   |
| •      |   | 2  |
|        | Help  | < Back Next > Install Cancel   |

- Register with Enterprise Manager (EM) Cloud Control 해제
- Next 버튼 클릭



#### Privileged Operating System Groups

| Cluster Configuration<br>Grid Plug and Play<br>Cluster Node Information | Select the name of the operating system group, that want to use for operating system authentication to Oracle Automatic Storage Managen 1 Oracle ASM Administrator (OSASM) Group Oracle ASM DBA (OSDBA for ASM) Group dba |
|---|---|
| Starsage Option   | e Grid Infrastructure 19c Installer@ol7rac1 X   |
| Create Grid Infrastr<br>Create ASM Disk Gr<br>ASM Password              | [INS-41808] Possible invalid choice for OSASM Group.<br>[INS-41809] Possible invalid choice for OSDBA Group.<br>[INS-41812] OSDBA and OSASM are the same OS group.  |
| <ul> <li>Failure Isolation</li> <li>Management Option</li> </ul>        | [INS-41875] Oracle ASM Administrator (OSASM) Group specified is<br>same as the users primary group.   |
| Operating System     Installation Location     Root script executio     | Are you sure you want to 3 ue ?<br>Yes No Details   |
| Prerequisite Checks   | -29   |
| Summary   |   |
| Install Product   |   |
| Finish  | (2)   |
| Help  | < Back Next > Install Cancel  |

- OSASM group, OSDBA for ASM Group dba로 선택
- Next 버튼 클릭
- Yes 버튼 클릭

#### Specify Installation Location



| 个个  | Configuration Option<br>Cluster Configuration<br>Grid Plug and Play | Specify the Or<br>is the location<br>ASM and Orac<br>configuration | racle base. The Oracle base directory for the Oracle Grid Infrastructure<br>where diagnostic and administrative logs, and other logs associated v<br>le Clusterware are stored. This location would also contain files pertain<br>of Oracle Clusterware. | installation<br>with Oracle<br>hing to the |
|-----|---|--|--|--|
| 4   | Cluster Node Information  | <u>O</u> racle base:   | /u01/app/grid  | Browse                                     |
| 4   | Network Interface Usage   |  |  |  |
| *   | Storage Option  | This software  | directory is the Oracle Grid Infrastructure home directory.  |  |
| *   | Create Grid Infrastructure Ma                                       | Software loca  | tion: /u01/app/19.0.0/grid   |  |
| 4   | Create ASM Disk Group   |  |  |  |
|     | ASM Password  |  |  |  |
| ÷   | Failure Isolation   |  |  |  |
| ÷   | Management Options  |  |  |  |
| ÷   | Operating System Groups   |  |  |  |
|     | Installation Location   |  |  |  |
| *   | Root script execution   |  |  |  |
| Ý   | Prerequisite Checks   |  |  |  |
| Ý   | Summary   |  |  |  |
| Ý   | Install Product   |  |  |  |
| 0   | Finish  |  |  |  |
|     |   |  |  |  |
| . [ |   |  |  |  |
| •   |   |  |  |  |
|     | Help  |  | < <u>B</u> ack <u>N</u> ext > Install  | Cancel                                     |

• Next 버튼 클릭

#### Create Inventory



|   | Help                          | < Back Next > Install Cancel  |
|---|-------------------------------|---|
| • |                               |   |
|   |                               | $\sim$  |
| 9 | Finish                        |   |
| 4 | Install Product               |   |
| 4 | Summary                       |   |
| 4 | Prerequisite Checks           |   |
| * | Root script execution         |   |
| 0 | Create Inventory              |   |
| 4 | Installation Location         |   |
|   | Operating System Groups       |   |
| Ý | Management Options            |   |
| Ý | Failure Isolation             |   |
| ÷ | ASM Password                  |   |
| ÷ | Create ASM Disk Group         | oraniventory Group Marine. doa  |
| 4 | Create Grid Infrastructure Ma | oraliventory Group Name: dba  |
| 个 | Storage Option                | Members of the following operating system group (the primary group) will have write permission<br>to the inventory directory (oraloventory).  |
| Ý | Network Interface Usage       |   |
| Ý | Cluster Node Information      | Browse  |
| ÷ | Grid Plug and Play            | Inventory Directory (-0.2) (and family requires 150 kilobytes of disk space.  |
| * | Cluster Configuration         | automatically sets up subdirectories for each product to contain inventory data. The subdirectory for each product typically requires 150 kilobytes of disk space.  |
| 來 | Configuration Option          | You are starting your first installation on this host. Specify a directory for installation metadata<br>files (for example, install log files). This directory is called the "inventory directory". The installer |
|   |                               |   |

• Next 버튼 클릭



| 个个 | Configuration Option<br>Cluster Configuration | During the software configuration, certain operations have to be performed as "root" user. You<br>can choose to have the installer perform these operations automatically by specifying inputs for<br>one of the options below. The input specified will also be used by the installer to perform<br>additional prerequisite checks. |
|----|---|--|
| Ý  | Grid Plug and Play                            |  |
| ÷ψ | Cluster Node Information                      | Automatically run configuration scripts  |
| ÷  | Network Interface Usage                       | • Use "root" user <u>c</u> redential   |
| *  | Storage Option                                | Password : 💡   |
| *  | Create Grid Infrastructure Ma                 | O Use <u>s</u> udo   |
| Ý  | Create ASM Disk Group                         | Program path : //usr/bin/sudo Browse   |
| ψ  | ASM Password                                  |  |
| ÷  | Failure Isolation                             | grid   |
| ÷  | Management Options                            | Password :   |
| ÷  | Operating System Groups                       |  |
| Ý  | Installation Location                         |  |
| ų  | Create Inventory                              |  |
| 2  | Root script execution                         |  |
| ψ  | Prerequisite Checks                           |  |
| Ý  | Summary                                       |  |
| Ý  | Install Product                               |  |
| 9  | Finish  |  |
| 4  |   |  |
|    | <u>H</u> elp                                  | < Back Next > Install Cancel   |

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19° ORACLE' Grid Infrastructure

- Automatically run configuration scripts 선택
- Password : root 계정 비밀번호 입력
- Next 버튼 클릭

#### Perform Prerequisite Checks



| Ŷ | Configuration Option          | Verifying that the target environment meets minimum installation and configuration requirements<br>for products you have selected. This can take time. Please wait. |   |
|---|-------------------------------|---|---|
| T | Crid Dlug and Dlay            | 48%   |   |
| J | Cluster Node Information      | Checking Multicast or broadcast check   |   |
| Ý | Network Interface Usage       |   |   |
| 泉 | Storage Option                |   |   |
| * | Create Grid Infrastructure Ma |   |   |
| 4 | Create ASM Disk Group         |   |   |
| Ý | ASM Password                  |   |   |
| 4 | Failure Isolation             |   |   |
| Ý | Management Options            |   |   |
| 4 | Operating System Groups       |   |   |
| Ý | Installation Location         |   |   |
| 4 | Create Inventory              |   |   |
| 泉 | Root script execution         |   |   |
|   | Prerequisite Checks           |   |   |
| Ý | Summary                       |   |   |
| Ý | Install Product               |   | 1 |
| 9 | Finish                        |   |   |
|   |                               |   |   |
| • |                               |   | ] |
|   | Help                          | < <u>B</u> ack <u>N</u> ext > <u>I</u> nstall Cancel  |   |

• 설치 전 체크 테스트 화면

#### Perform Prerequisite Checks

| jų. | Configuration Option     |  |                |             |
|-----|--------------------------|--|----------------|-------------|
| T   | Cluster Configuration    | Some of the minimum requirements for installation are not completed. Revie<br>listed in the following table, and recheck the system. | ew and f       | e issues    |
| Ý   | Grid Plug and Play       | Check A ] Eix & Check Again ] Show Failed 💎 📄 All Nodes  | ~              | ✓ Ignore A  |
| Ý   | Cluster Node Information |  |                |             |
| Ý   | Network Interface Usage  | Checks   | Status         | Fixable     |
|     | Storage Option           | Checks   | nored          | Yee         |
| 1   | Create Grid Infrastr     | Grid Infrastructure 19c Installer@ol7rac1 X  | inor e u       | 103         |
| T   | Create ASM Disk Gr       |  | nored          | No          |
| ų   | ASM Password             | [INS-13016] You have chosen to ignore some of the prerequisites<br>for this installation. This may impact product configuration.     |                |             |
| - 🦕 | Failure Isolation        | -  |                |             |
| ÷   | Management Option        | Are you sure you want to a long ?  |                |             |
| Ý   | Operating System (       | Yes No Details   |                |             |
| Ý   | Installation Location    |  |                |             |
| ÷   | Create Inventory         |  |                |             |
| *   | Root script execution    |  |                |             |
|     | Prerequisite Checks      |  |                |             |
| ÷   | Summary                  |  |                |             |
| 9   | Install Product          |  |                |             |
| 9   | Finish                   | This is a prerequisite condition to test whether the package "cvuqdisk-1.0.10 system. (more details)                                 | )-1" is avail: | able on the |
| 4   |                          | Check Failed on Nodes: (ol7rac1, ol7rac2)  |                |             |
|     | Help                     | < Back Next >  | Install        | Cancel      |

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19° ORACLE Grid Infrastructure

- Ignore 선택
- Next 버튼 클릭
- Yes 버튼 클릭

#### Summary



|            |                               | [ | Annala Caid Infer atmosphere 10a In stalling                                   |       |
|------------|-------------------------------|---|--|-------|
| 个          | Configuration Option          |   | - Oracle Grid Infrastructure 19c Installer                                     |       |
| 魜          | Cluster Configuration         |   | ⊟ Global Settings  |       |
| 1          | Grid Plug and Play            |   | — Config Option: Configure Oracle Grid Infrastructure for a New Cluster (Edit) |       |
| T          |                               |   | — Oracle base for Oracle Grid Infrastructure: /u01/app/grid [Edit]             |       |
| Ť          | Cluster Node Information      |   | Grid home: /u01/app/19.0.0/grid  |       |
| Ý          | Network Interface Usage       |   | Privileged Operating System Groups: dba (OSDBA), dba (OSASM) [Edit]            |       |
|            | Storage Option                |   | Root script execution configuration: Root user credential [Edit]               |       |
| T          | Create Grid Infractructure Ma |   | - Inventory information  |       |
| T          |                               |   | Inventory location: /u01/app/oralnventory [Edit]                               |       |
| Ŷ          | Create ASM Disk Group         |   | Central inventory (orainventory) group: dba [Edit]                             | 100   |
| ÷          | ASM Password                  |   | - Management information   | 100 L |
| - <b>b</b> | Failure Isolation             |   | Management method: None (Edit)   |       |
| 1          | Management Options            |   | ⊡ Grid Infrastructure Settings   |       |
| 1          | Operating System Groups       |   | Cluster Configuration: Standalone Cluster [Edit]                               |       |
| T          |                               |   | Cluster Name: ol7rac-cluster [ <u>Edit</u> ]                                   |       |
| Ť          | Installation Location         |   | Hub nodes: ol7rac1.ol7rac2 ( <u>Edit</u> )                                     |       |
| Ý          | Create Inventory              |   | SCAN Type: Local SCAN  |       |
| *          | Root script execution         |   | Single Client Access Name (SCAN): ol7rac-scan [Edit]                           |       |
| <u>ل</u>   | Prerequisite Checks           |   | SCAN Port: 1521 [Edit]   |       |
|            | Summary                       |   | Public Interface(s): eth0 [Edit]   |       |
| T          | In shall Decident             |   | ASM & Private Interface(s): eth1 [Edit]  |       |
| Y          | Install Product               |   | Storage Information  |       |
| Ó          | Finish                        |   | Storage Type: Oracle ASM [ <u>Edit</u> ]                                       | -     |
|            |                               |   |  | -     |
| •          |                               |   | 1 Save Response File   | 3     |
|            | Help                          |   | < <u>Back</u> Next > Install Cano  | el:   |

#### • Install 버튼 클릭

#### Install Product

| ö  | Configuration Option     | Progress   |                              |
|----|--------------------------|--|------------------------------|
| T  | configuration option     | 100%   |                              |
| 4  | Cluster Configuration    |  | k                            |
| Ý  | Grid Plug and Play       | Setup completed with overall status as Failed          |                              |
| ģ  | Cluster Node Information |  |                              |
| Ý  | Network Interface Usage  | Status   |                              |
| J. | Storage Option           | Ink binaries   | Succeeded                    |
| 1  |                          | Calue  | Succeeded                    |
| Y  | Create Grid Intrasti     | e Grid Infrastructure 19c Installer@ol7rac1 X          | Succeeded                    |
| Ý  | Create ASM Disk Gr       |  | Succeeded                    |
| 9  | ASM Password             | (INS-20802) Oracle Cluster Verification Utility failed | Succeeded                    |
|    |                          | [INS-20002] Oracle Cluster Verification Durity Tailed. | Succeeded                    |
| Y  | Failure Isolation        |  | Succeeded                    |
| ģ  | Management Option        |  | Succeeded                    |
| Ц  | Operating System (       | <u>O</u> K <u>D</u> etails                             | Succeeded                    |
| Ĭ  | Operating System -       |  | Failed                       |
| Ý  | Installation Location    | ✓ • Update Inventory                                   | Succeeded                    |
| 9  | Create Inventory         | Oracle Net Configuration Assistant                     | Succeeded                    |
| T  |                          | Automatic Storage Management Configuration Assistant   | Succeeded                    |
| 4  | Root script execution    | <ul> <li>oracle cluster vernication oblity</li> </ul>  | Falled                       |
| ģ  | Prerequisite Checks      |  |                              |
| Ý  | Summary                  | Details Revert All Rever                               | t <u>R</u> etry <u>S</u> kip |
| ¢  | Install Product          |  |                              |
| 5  | Finish                   |  |                              |
|    |                          | 19 ORACLE  |                              |
|    |                          | Grid Infrastructure                                    |                              |
| (  |                          |  |                              |
|    | Help                     | < Back Next > Ir                                       | stall Close                  |

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19° ORACLE' Grid Infrastructure

- Ok 버튼 클릭
- Next 버튼 클릭

#### Install Product

|    | Configuration Ontion     | Progress  |                  |      |  |  |  |
|----|--------------------------|---|------------------|------|--|--|--|
| T  | comgaration option       | 100%  |                  |      |  |  |  |
| 8  | Cluster Configuration    | 10070   |                  |      |  |  |  |
| Ý  | Grid Plug and Play       | Oracle Cluster Verification Utility failed.                   |                  |      |  |  |  |
| Ý  | Cluster Node Information |   |                  |      |  |  |  |
| Ý  | Network Interface Usage  | Status  |                  |      |  |  |  |
| 4  | Storage Option           |   | Succeeded        |      |  |  |  |
| T  | 🔮 Oracle G               | Grid Infrastructure 19c Installer@ol7rac1                     | Succeeded        |      |  |  |  |
| X  | Create Grid Intrastr     |   | Succeeded        |      |  |  |  |
| ý  | Create ASM Disk Gr       |   | Succeeded        |      |  |  |  |
|    | ASM Password             | [INS-43080] Some of the configuration assistants failed, were | Succeeded        |      |  |  |  |
| Ť  |                          | cancelled or skipped.   | Succeeded        |      |  |  |  |
| 9  | Failure Isolation        |   | Succeeded        | 100  |  |  |  |
| ¢. | Management Option        | Are you sure you want to the ?                                | Succeeded        |      |  |  |  |
|    | Operating Systems        |   | Succeeded        |      |  |  |  |
| Ĭ  | Operating System (       | Yes <u>N</u> o <u>D</u> etails                                | Failed           |      |  |  |  |
| Ý  | Installation Location    |   | Succeeded        |      |  |  |  |
| 5  | Create Inventory         | Oracle Net Configuration Assistant                            | Succeeded        |      |  |  |  |
| T  |                          | Automatic Storage Management Configuration Assistant          | Succeeded        |      |  |  |  |
| 8  | Root script execution    | • Oracle Cluster Verification Utility                         | Falled           |      |  |  |  |
| Ý  | Prerequisite Checks      |   |                  |      |  |  |  |
| Ý  | Summary                  | Details Revert All Revert                                     | Retry            | ikip |  |  |  |
|    | Install Product          |   |                  |      |  |  |  |
| 5  | Finish                   |   |                  |      |  |  |  |
|    |                          |   |                  |      |  |  |  |
|    |                          | Grid Infrastructure   |                  |      |  |  |  |
| •  | 10000                    |   |                  |      |  |  |  |
|    | Help                     | < Back Next > Ins   | tall <u>C</u> lo | ose  |  |  |  |

• Yes 버튼 클릭 (SCAN 구성 관련 에러 무시하고 진행)

– 🗆 X

19° ORACLE Grid Infrastructure



#### Finish

|                      | < <u>Back</u> <u>N</u> ext > <u>I</u> nstall  |
|----------------------|---|
| 33335                |   |
|                      |   |
| Finish               |   |
| Install Product      |   |
| Summary              |   |
| Prerequisite Check   |   |
| Root script execut   |   |
| Create Inventory     |   |
| Installation Locatio |   |
| Operating System     | roups   |
| Management Optic     |   |
| Failure Isolation    |   |
| ASM Password         |   |
| Create ASM Disk G    | up  |
| Create Grid Infras   | icture Ma   |
| X Storage Option     |   |
| Network Interface    | age   |
| Cluster Node Infor   | ation   |
| Grid Plug and Play   |   |
| Cluster Configurat   | n de la companya de l                                       |
| Configuration Opti   | The configuration of Oracle Grid Infrastructure for a Cluster was successful, but some<br>configuration assistants failed, were cancelled or skipped. |
|                      |   |

• Close 버튼 클릭

ASM 및 Grid Infrastructure 구성 완료

Grid Infrastructure 구성 확인 (노드:nodel/계정:grid)

| [grid@ol7rac1 oraInventory]\$ crsctl stat res -t |           |                |         |                 |  |  |  |  |  |
|--|-----------|----------------|---------|-----------------|--|--|--|--|--|
| Name   | Target    | State          | Server  | State details   |  |  |  |  |  |
| Local Resources                                  |           |                |         |                 |  |  |  |  |  |
| org.LISTENER.lsnr                                |           |                |         |                 |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| ora.chad   |           |                |         |                 |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| ora.net1.network                                 |           |                |         |                 |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| ora.ons  |           |                |         |                 |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
|  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
|  |           |                |         |                 |  |  |  |  |  |
| Cluster Resour                                   | ces       |                |         |                 |  |  |  |  |  |
|  |           |                |         |                 |  |  |  |  |  |
| ora.ASMNET1LSN                                   | R_ASM.ls  | nr(ora.asmgro  | up)     |                 |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
| 2  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| 3  | OFFLINE   | OFFLINE        |         | STABLE          |  |  |  |  |  |
| ora.DATA.dg(or                                   | a.asmgro  | up)            |         |                 |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
| 2  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| 3  | OFFLINE   | OFFLINE        |         | STABLE          |  |  |  |  |  |
| ora.LISTENER_S                                   | CAN1.lsn  | r              |         |                 |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| ora.LISTENER_S                                   | CANZ.lsn  | r              |         |                 |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
| ora.LISTENER_S                                   | CAN3.lsn  | r              |         |                 |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7rac1 | STABLE          |  |  |  |  |  |
| ora.asm(ora.as                                   | mgroup)   |                |         |                 |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7rac1 | Started, STABLE |  |  |  |  |  |
| 2  | ONLINE    | ONLINE         | ol7rac2 | Started, STABLE |  |  |  |  |  |
| 3  | OFFLINE   | OFFLINE        |         | STABLE          |  |  |  |  |  |
| ora.asmnet1.as                                   | mnetwork  | (ora.asmgroup) | )       | 67101 F         |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol/racl | STABLE          |  |  |  |  |  |
| 2  | ONLINE    | ONLINE         | ol7rac2 | STABLE          |  |  |  |  |  |
| 3  | OFFLINE   | OFFLINE        |         | STABLE          |  |  |  |  |  |
| ora.cvu  |           | ANI 7115       | -17     | (T10) F         |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol/raci | STABLE          |  |  |  |  |  |
| ora.ol/racl.vi                                   |           |                | -17     | 671016          |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol7racl | STABLE          |  |  |  |  |  |
| ora.ol/rac2.vi                                   |           |                | -17     | 671016          |  |  |  |  |  |
| 1  | ONLINE    | ONLINE         | ol/racz | STABLE          |  |  |  |  |  |
| ora.qosmserver                                   |           |                | -171    | CTADLE          |  |  |  |  |  |
| 1  | UNLINE    | UNLINE         | ol/racl | STABLE          |  |  |  |  |  |
| ora.scan1.vip                                    |           |                | -172    | CTADLE          |  |  |  |  |  |
| 1  | UNLINE    | UNLINE         | ol/racz | STABLE          |  |  |  |  |  |
| ora.scan2.vip                                    | 0111 7115 | ANII 7015      | -17     | (T10) 5         |  |  |  |  |  |
| 1  | ONLINE    | UNLINE         | ol/racl | STABLE          |  |  |  |  |  |
| ora.scans.vip                                    |           |                | -171    | CTADLE          |  |  |  |  |  |
| 1  | UNLINE    | UNLINE         | ol/racl | STABLE          |  |  |  |  |  |
|  |           |                |         |                 |  |  |  |  |  |

ASM 및 GI 작업이 완료 되었으며, 다음 작업으로 Oracle 데이터베이스 소프트웨어 설치 및 데이터베이스 구성 작업을 진행합니 다.

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