Oracle Linux 5.4 에 Oracle 11g R2 설치하기

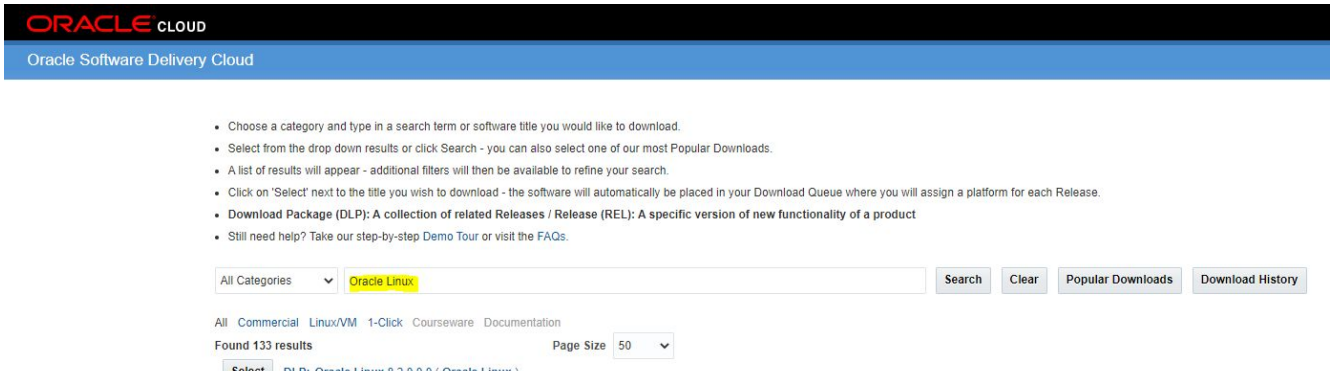
1. 설치순서

1) OS 다운 (Oracle Linux 버전 5.4)
2) 가상머신 설치 (VMware)
3) 가상 이미지 설치
4) 패키지 다운 및 환경변수 설정
5) DB 소프트웨어 설치 (Oracle 11g R2)

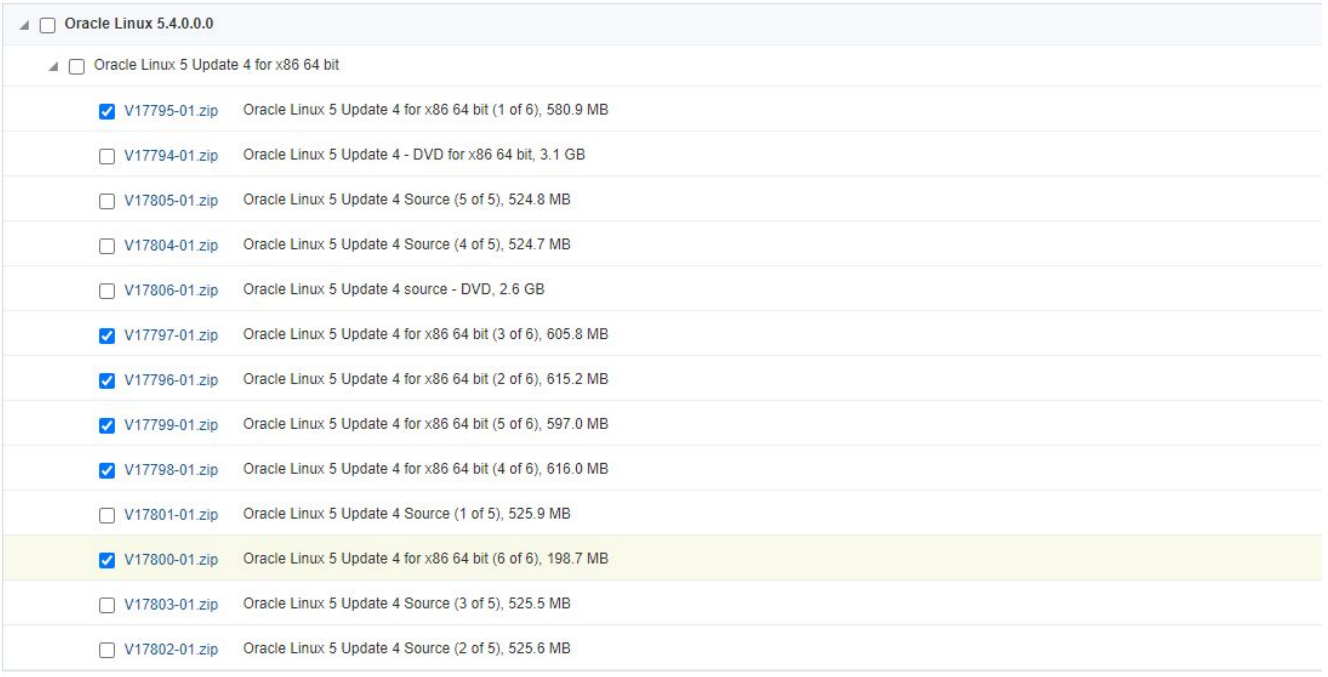
2. 설치하기

1) OS 다운 (Oracle Linux 버전 5.4)

https://edelivery.oracle.com/ 접속 후 Oracle linux 검색하여 버전을 고른다.



Oracle Linux ~ for x86 (64bit) 파일만 체크한 후 다운로드한다.



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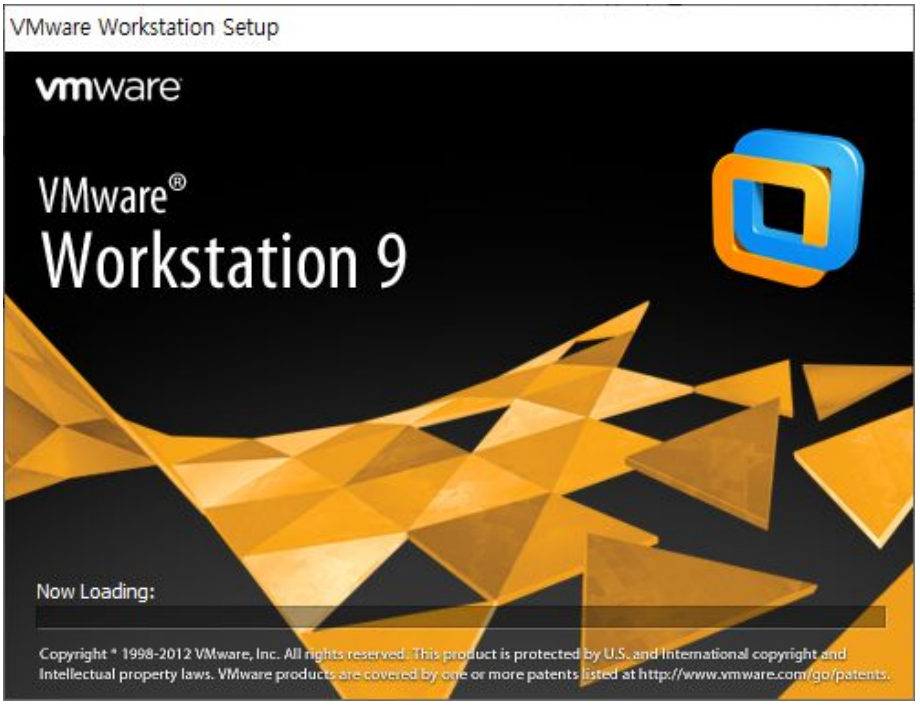
2) 가상머신 설치 (VMware)

VMware 설치



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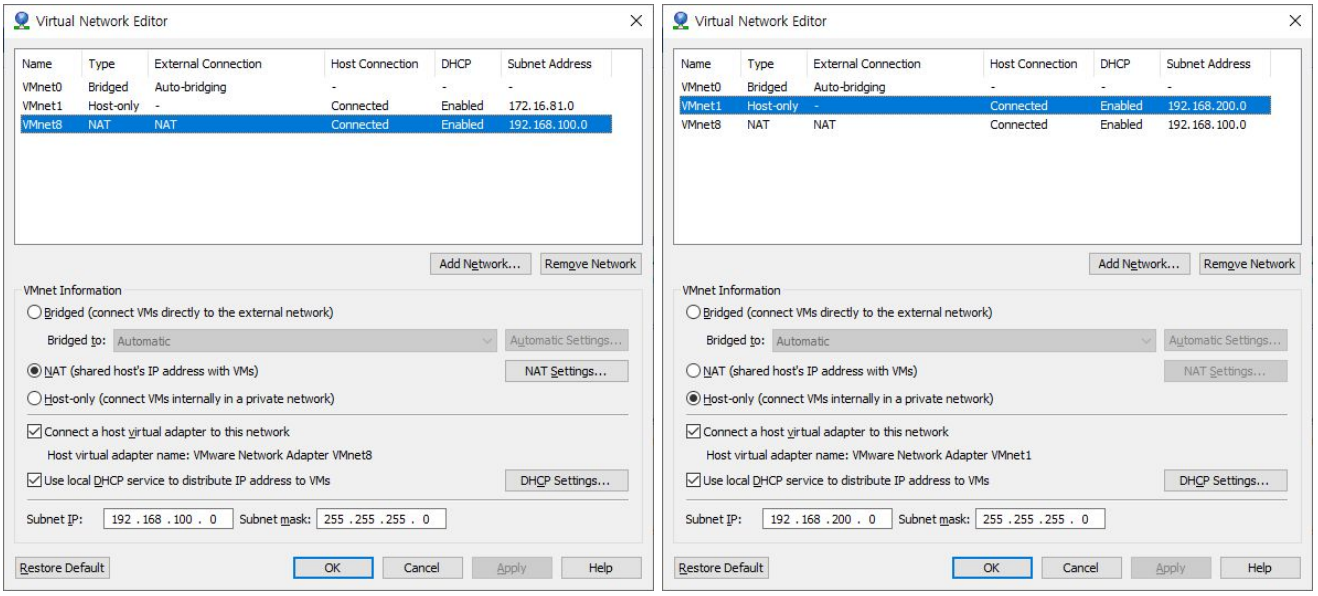
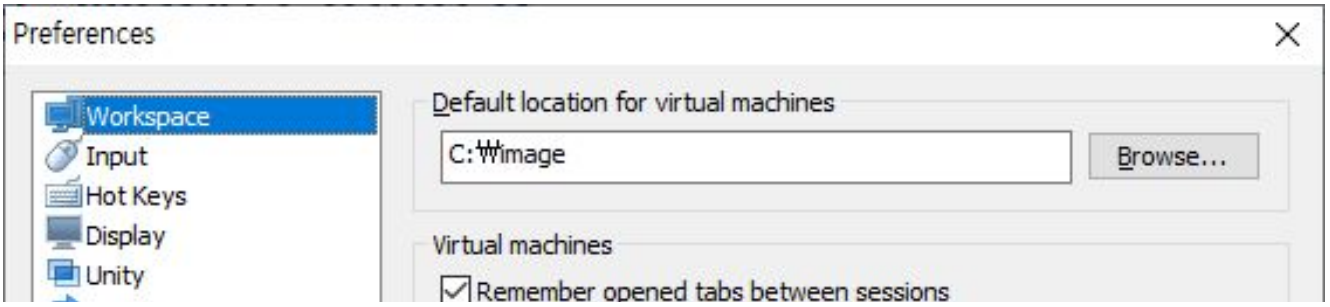
3) 가상 이미지 설치

사전설정) Edit – Virtual Network Editor 에서 NAT와 Host-only 를 설정해준다.

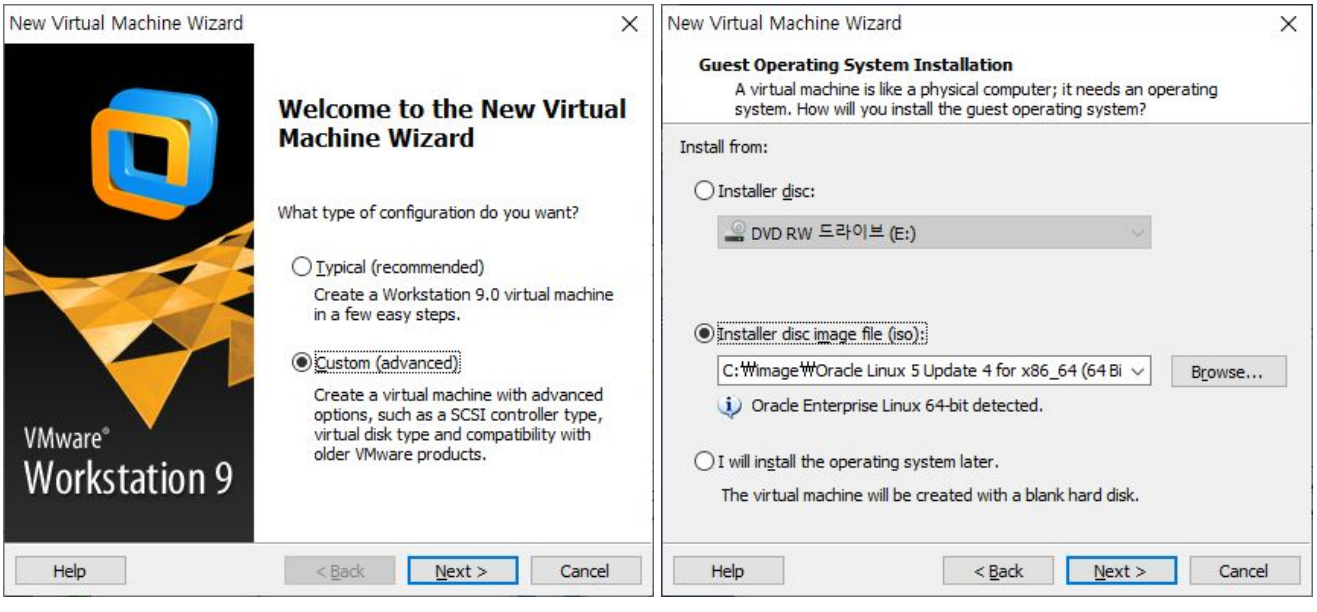


※ Host-only : 인스턴스들 간 공유할 수 있는 다리 역할, 하나의 디스크를 여러 PC가 공유

사전설정) Edit – Preferences 에서 가상머신 경로를 설정해준다.



이미지를 가상머신에 올린다. (File – New Virtual Machine – Custom)



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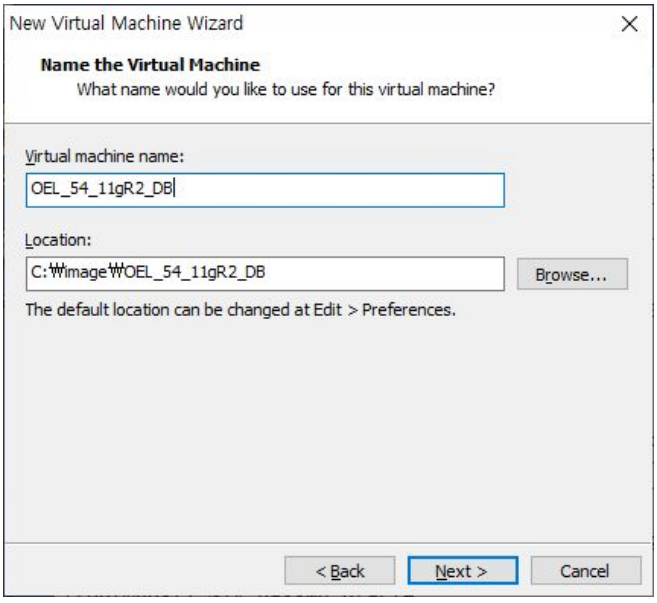

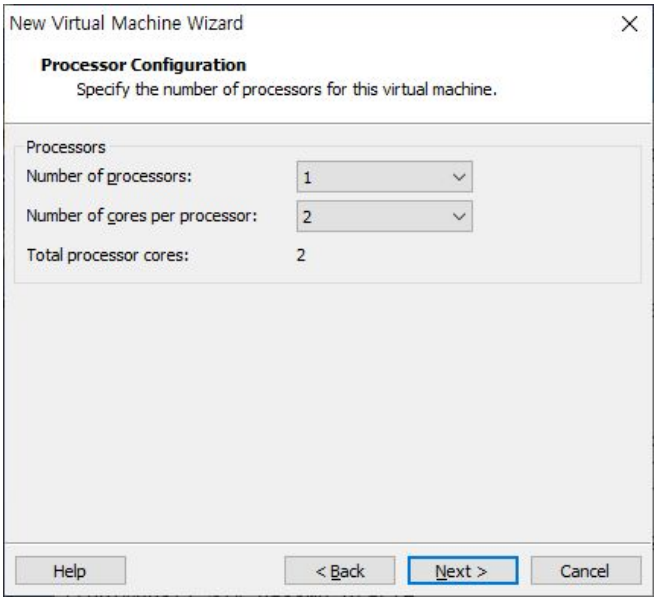

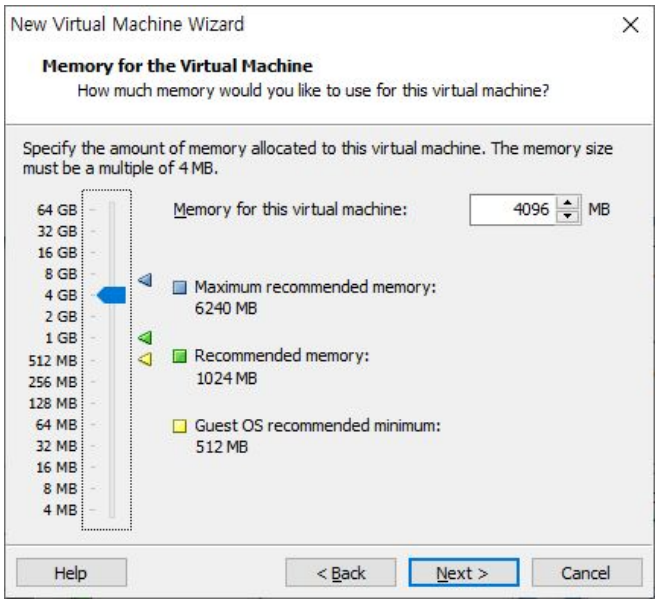

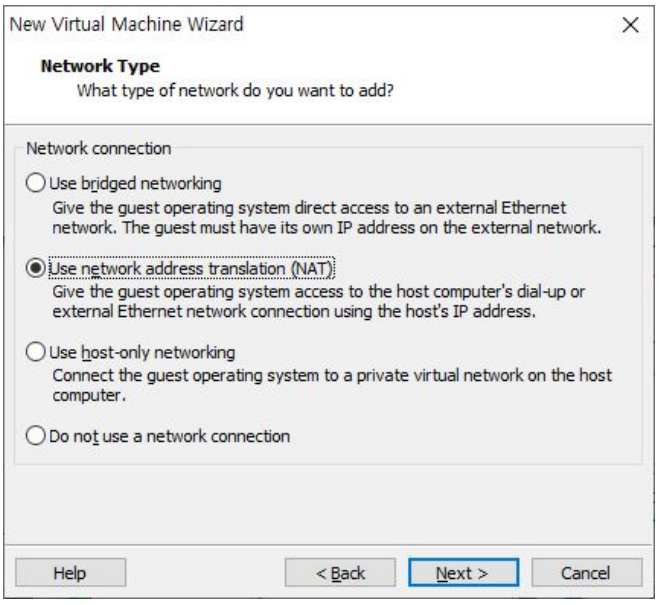

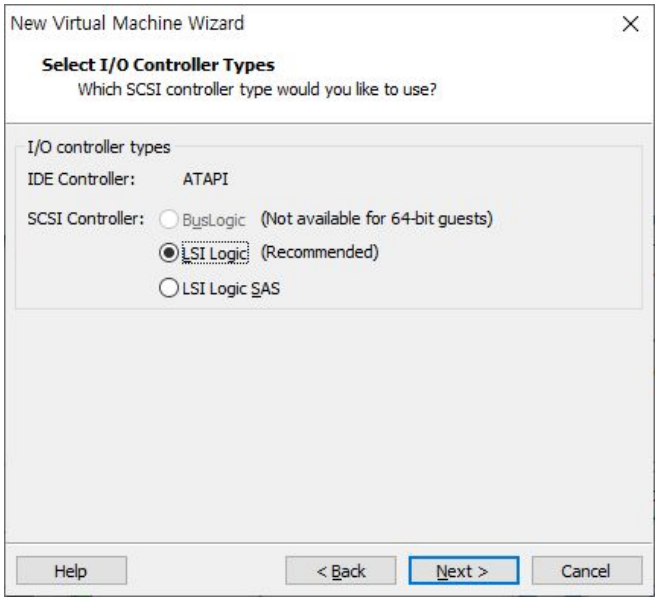

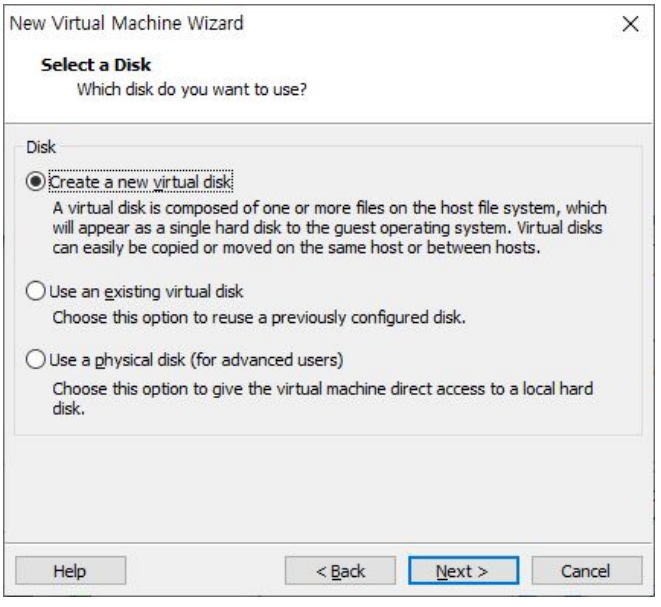

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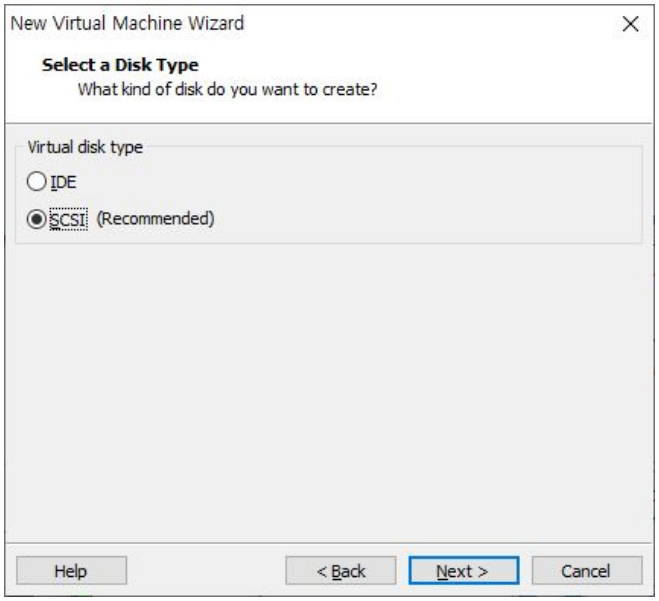

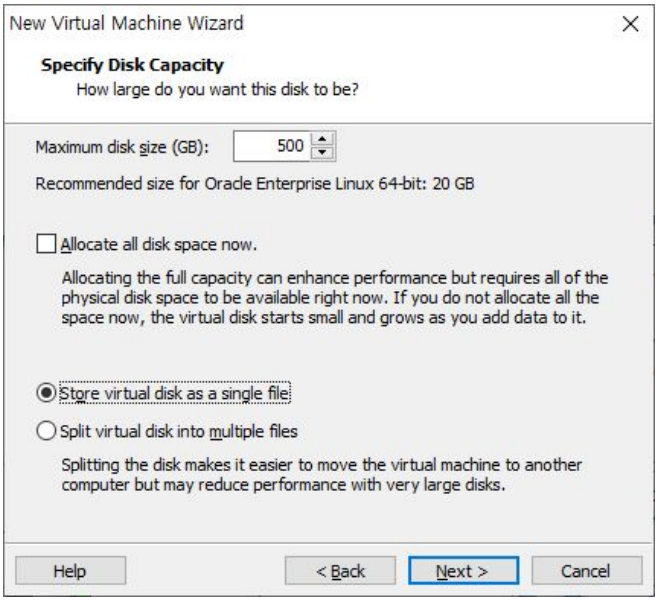

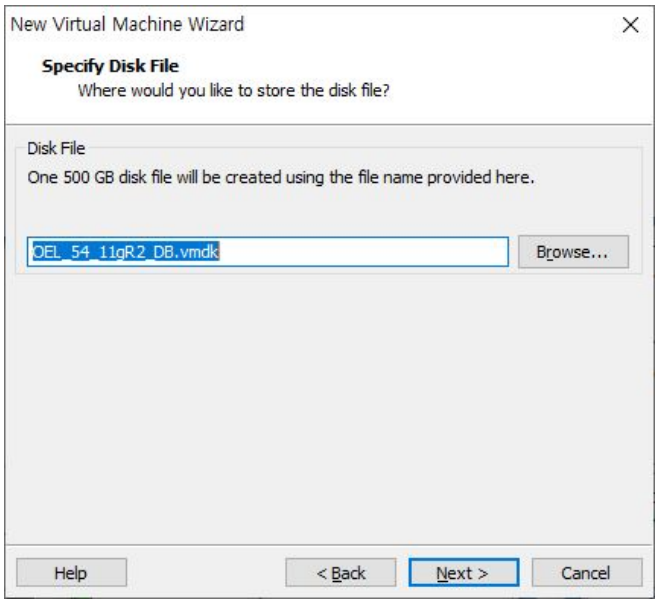

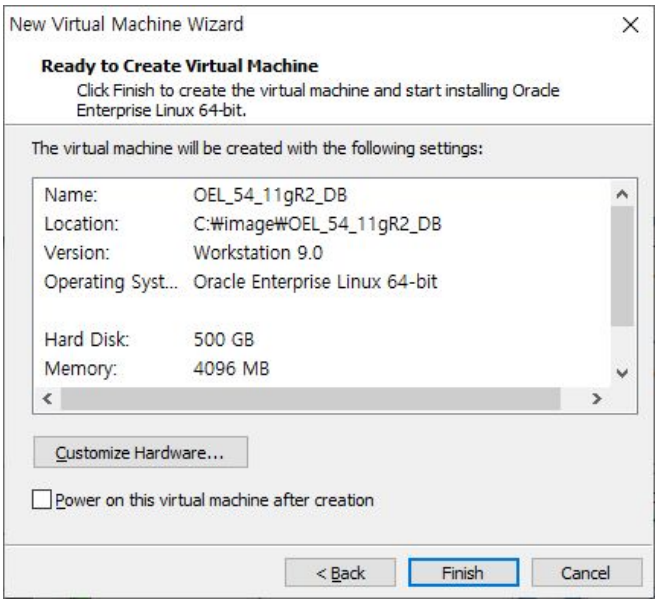

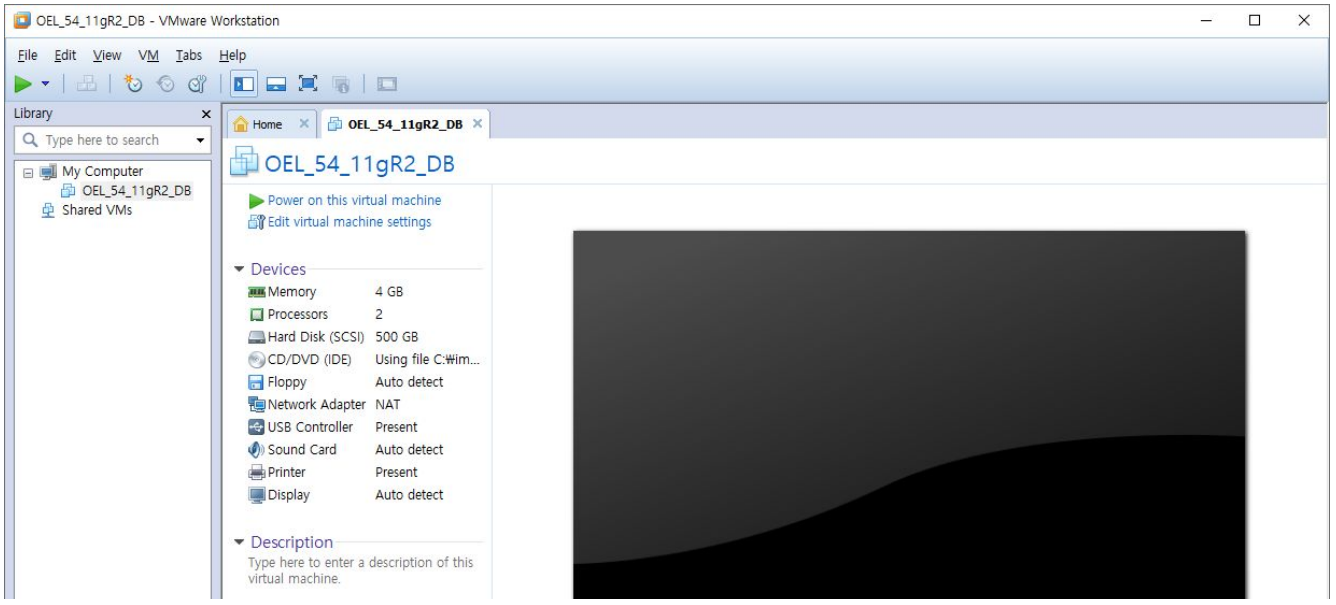

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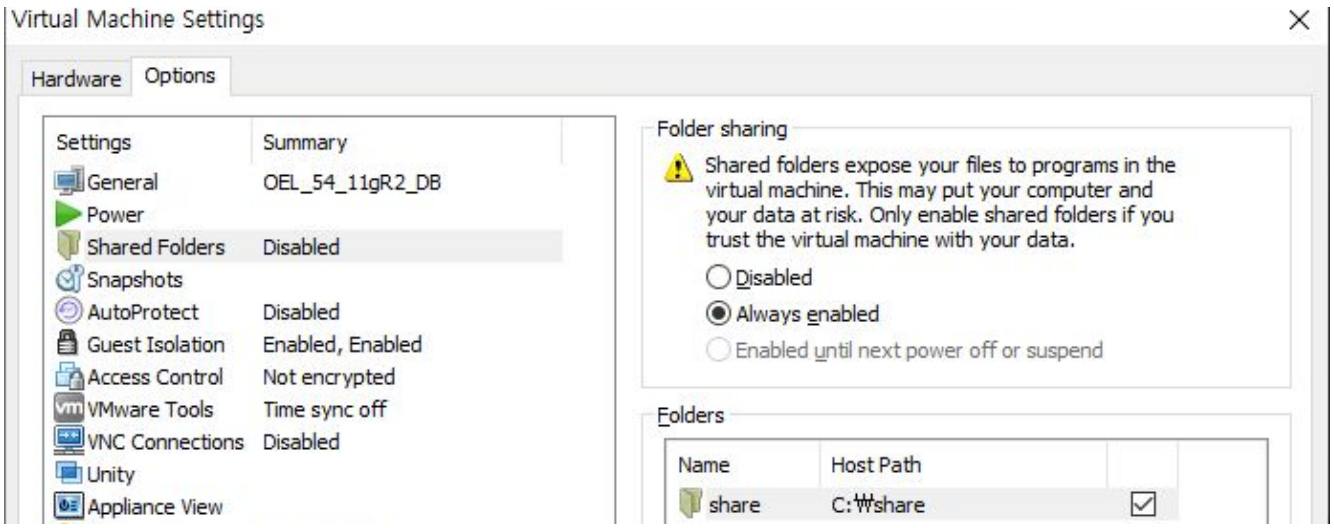
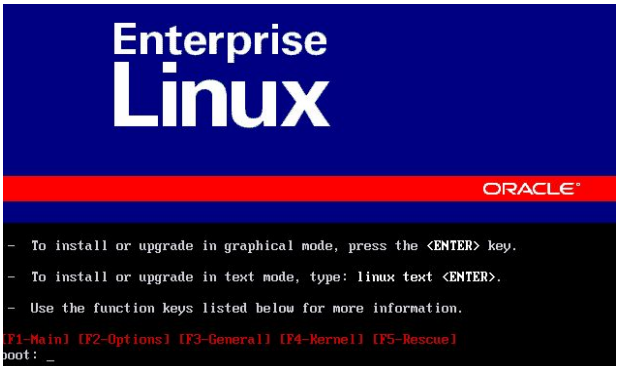
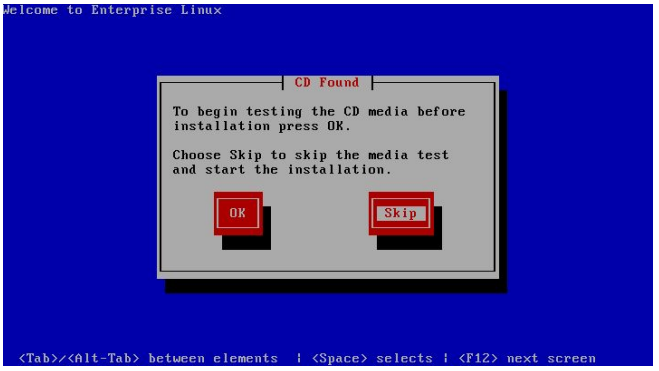
공유폴더 설정 (Edit Virtual Machine Settings)



Power on this virtual machine 을 눌러 가상 이미지 설치를 진행한다.





[Skip 후 설치 진행]

[English 선택 – Next – U.S.English 선택 – 팝업창 뜨면 Yes]

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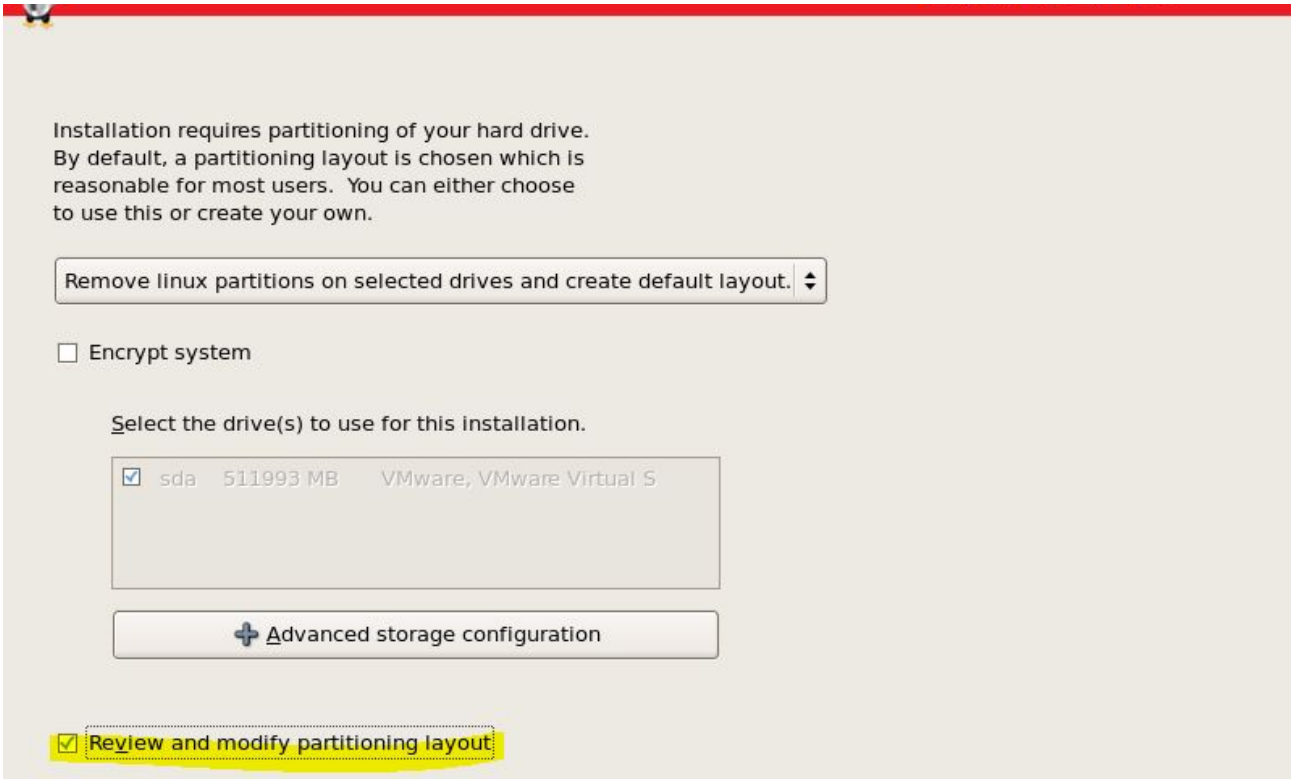
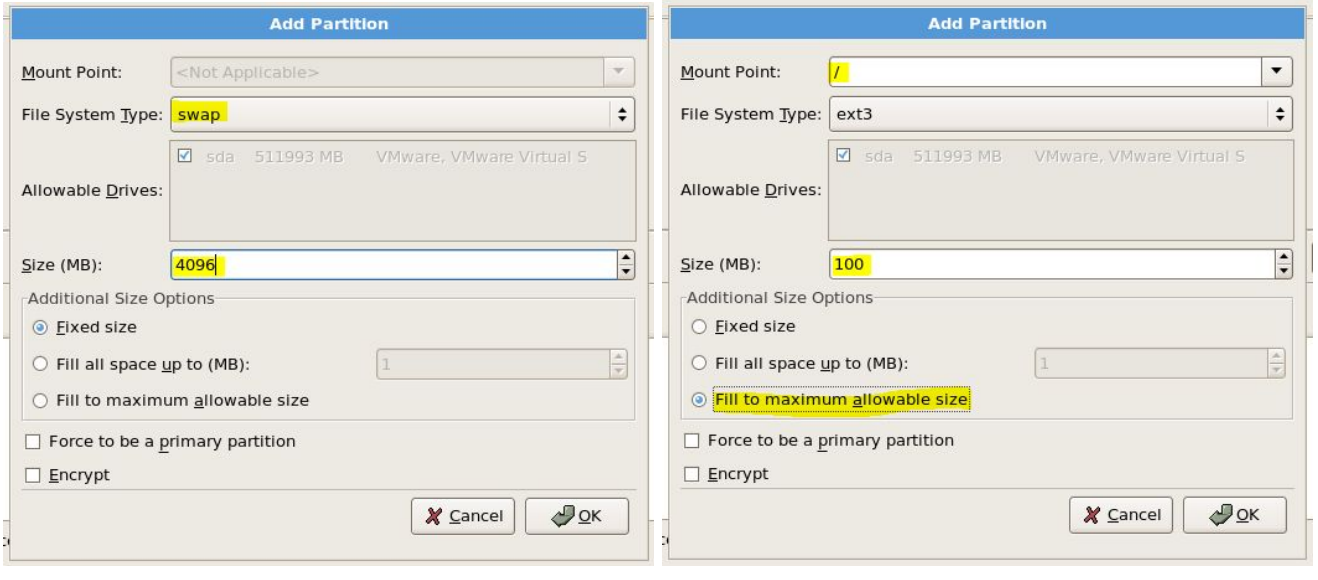
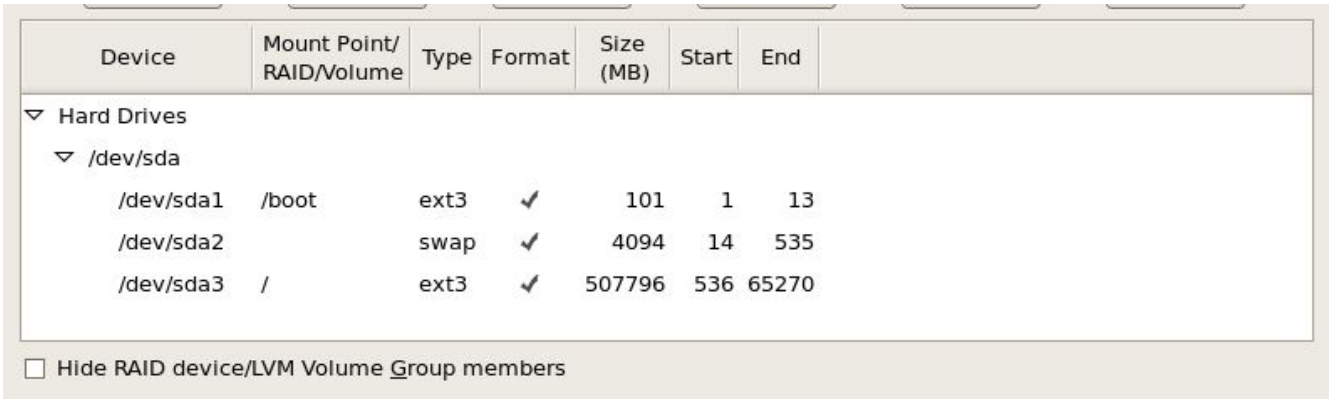


[체크박스 선택 – Next – 팝업창 뜨면 Yes]

※ SWAP : 디스크를 마치 메모리처럼 사용할 수 있도록 한다. 디스크가 용량이 부족할 경우 사용한다.





[파티션 설정]

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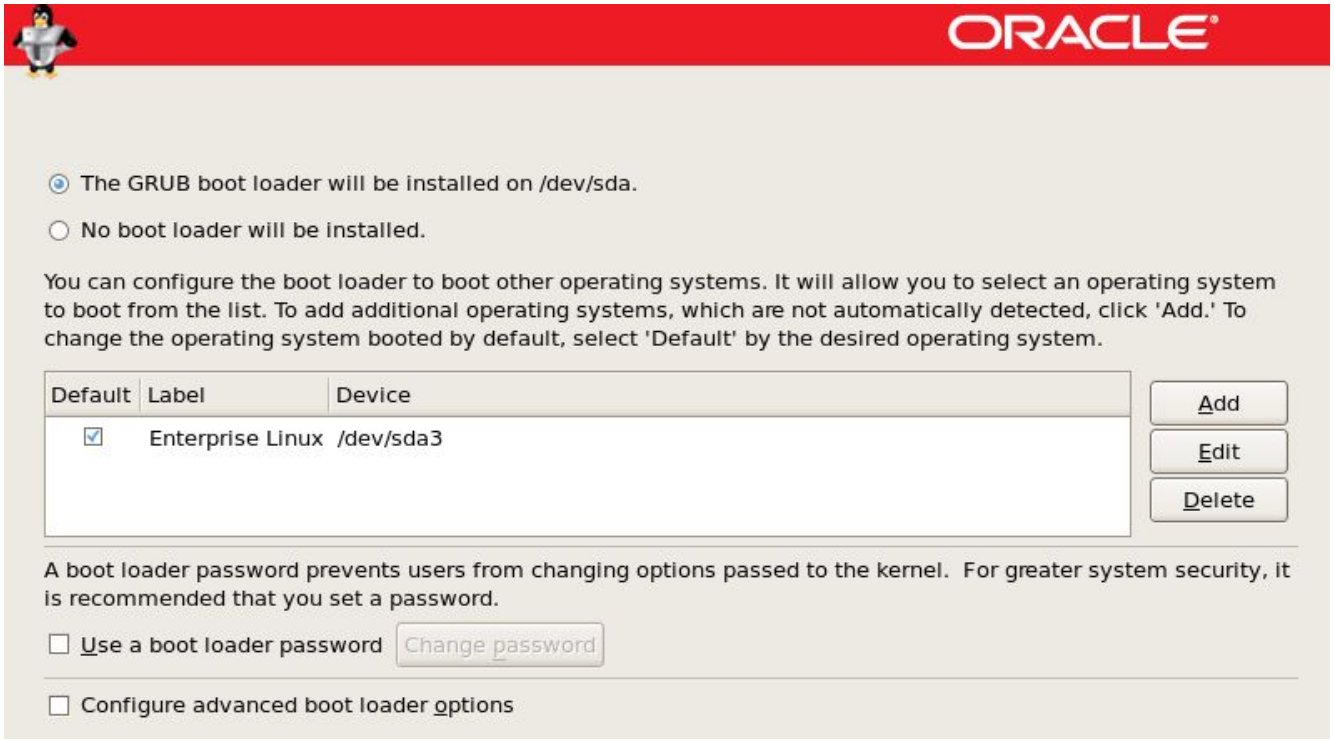
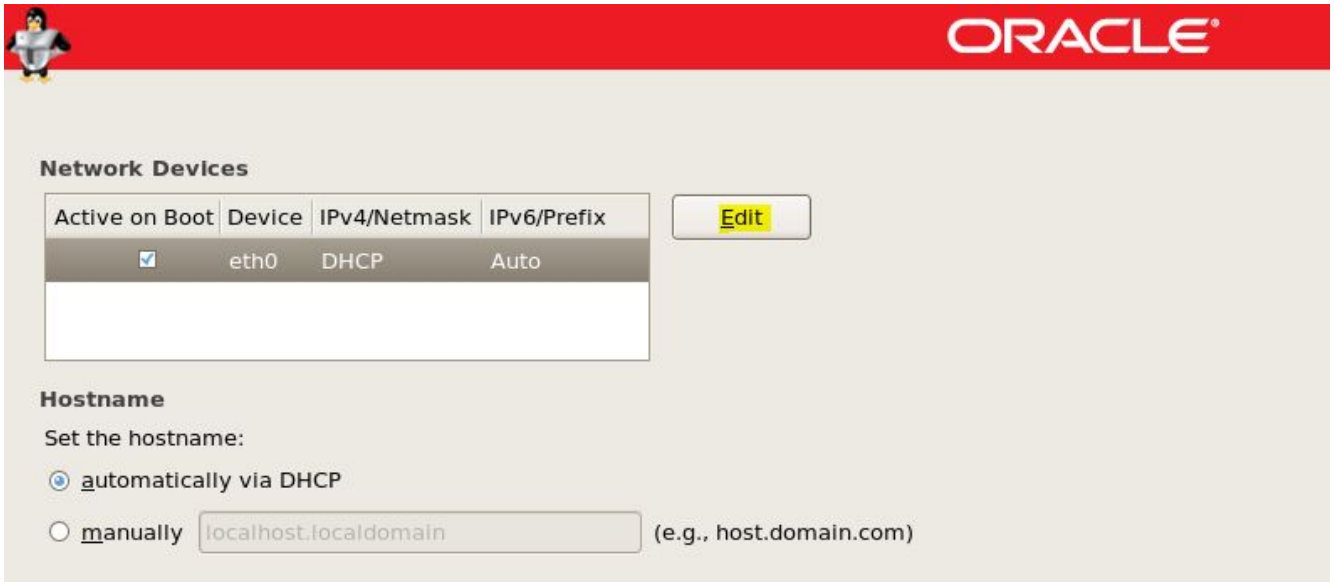
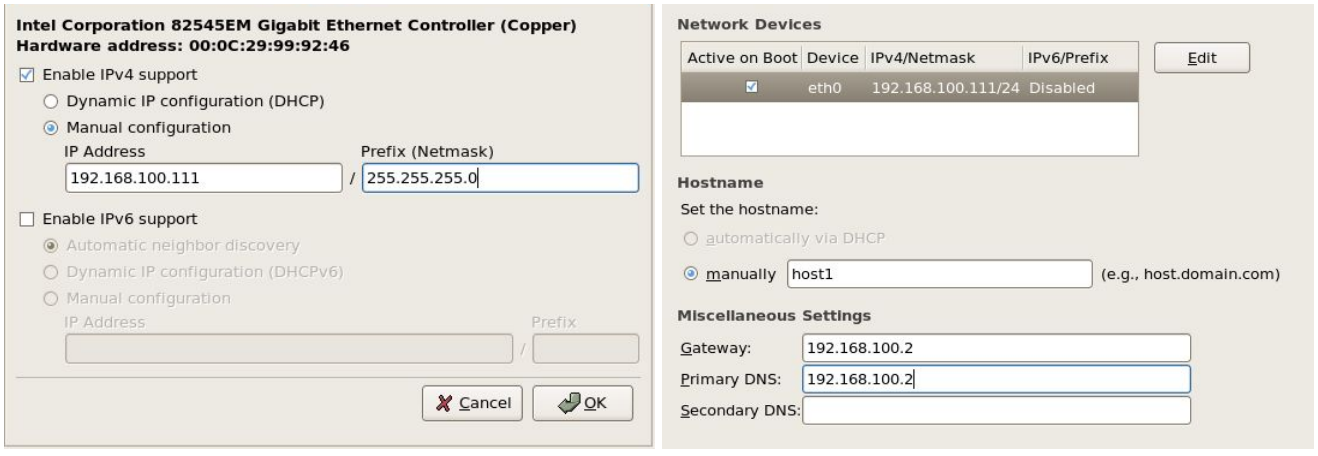


[부팅 설정 (부가기능)]





[네트워크 설정]

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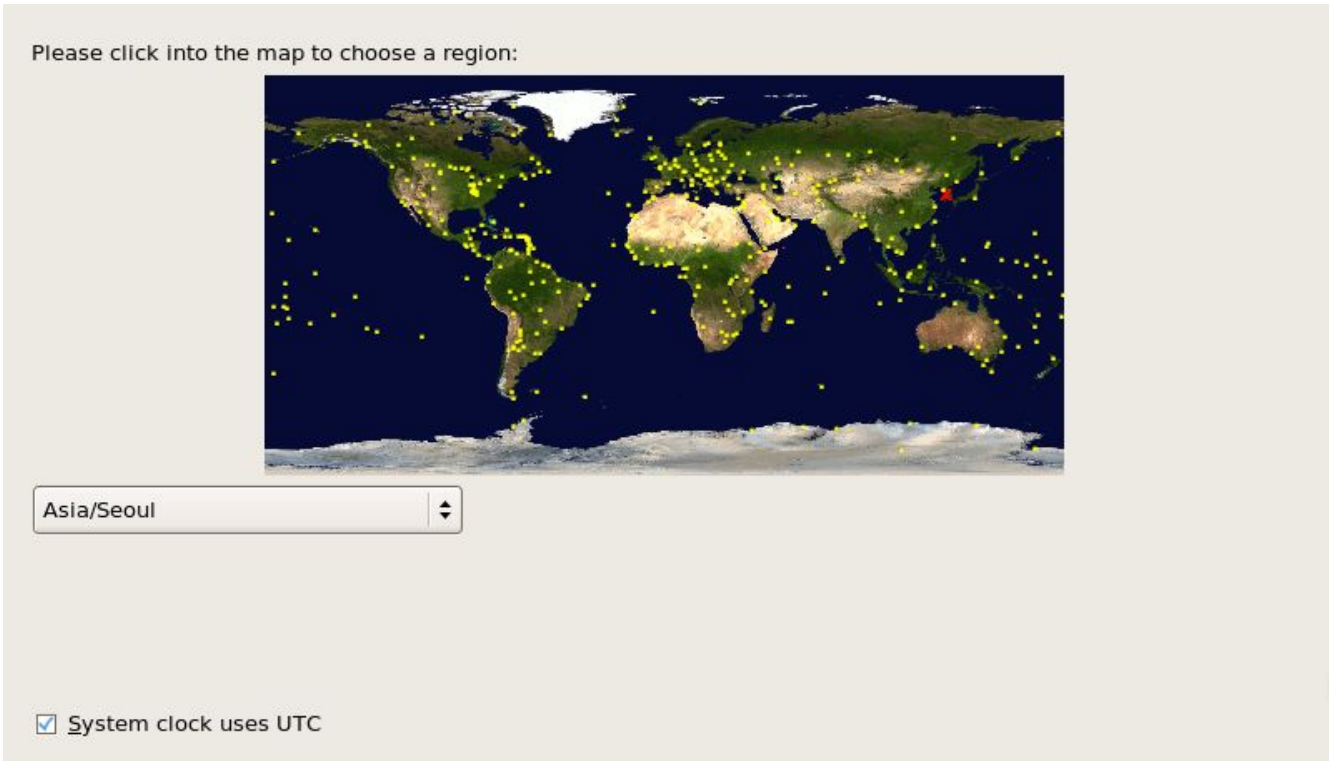
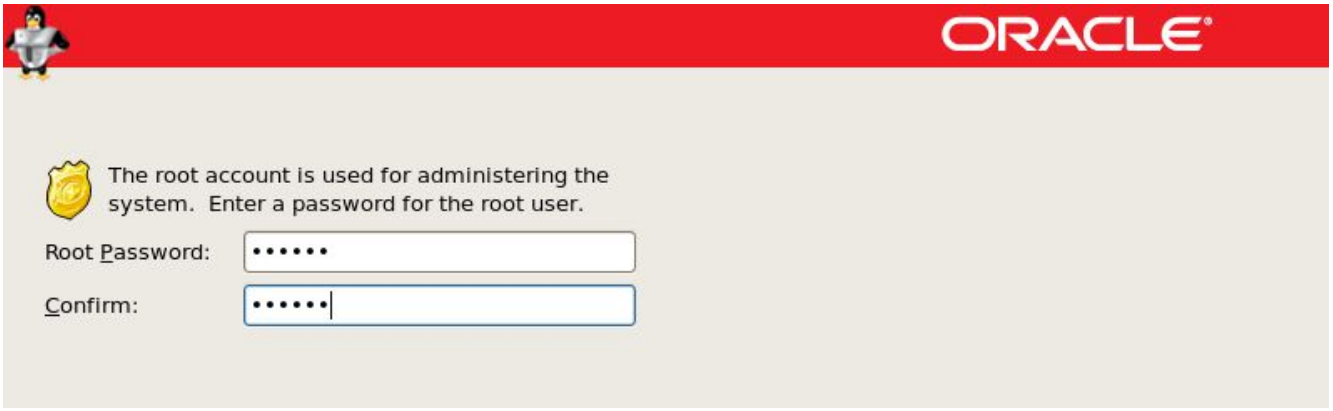


[지역 설정]



[Root Password 설정 (여기서는 oracle 로 지정)]

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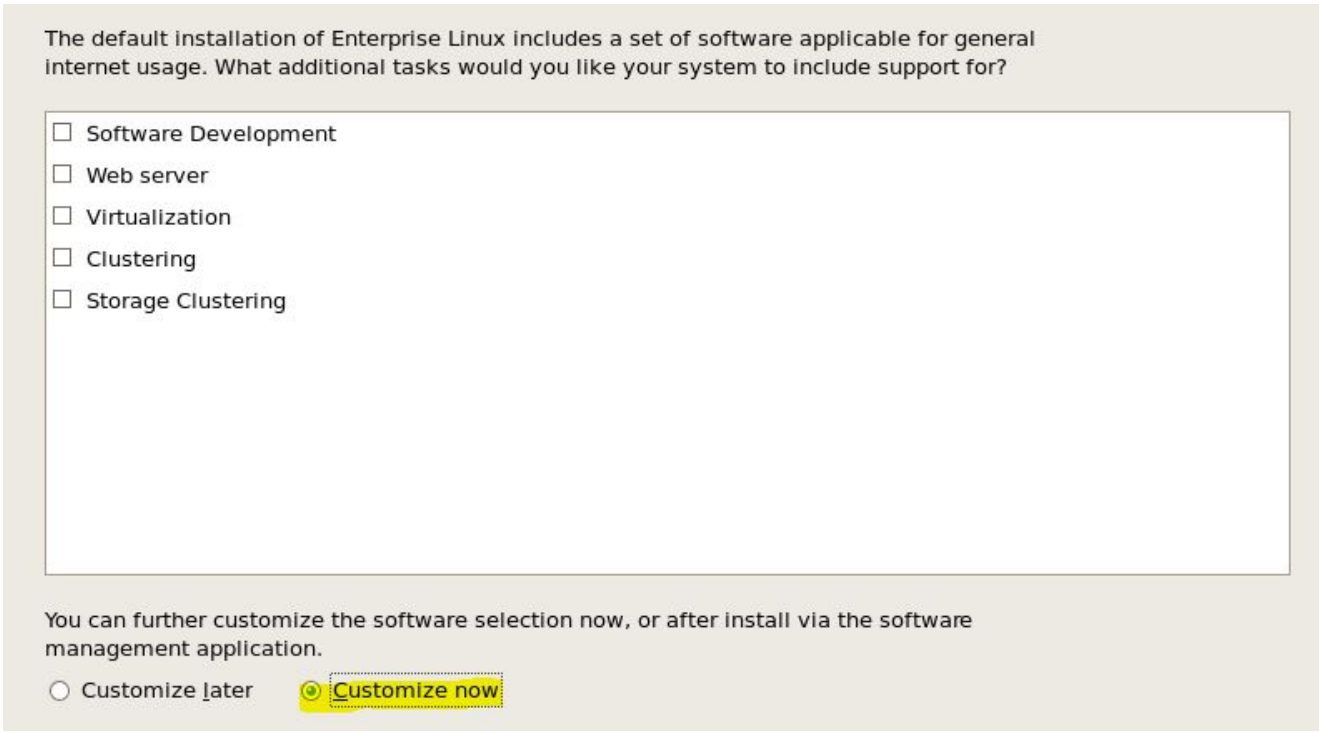
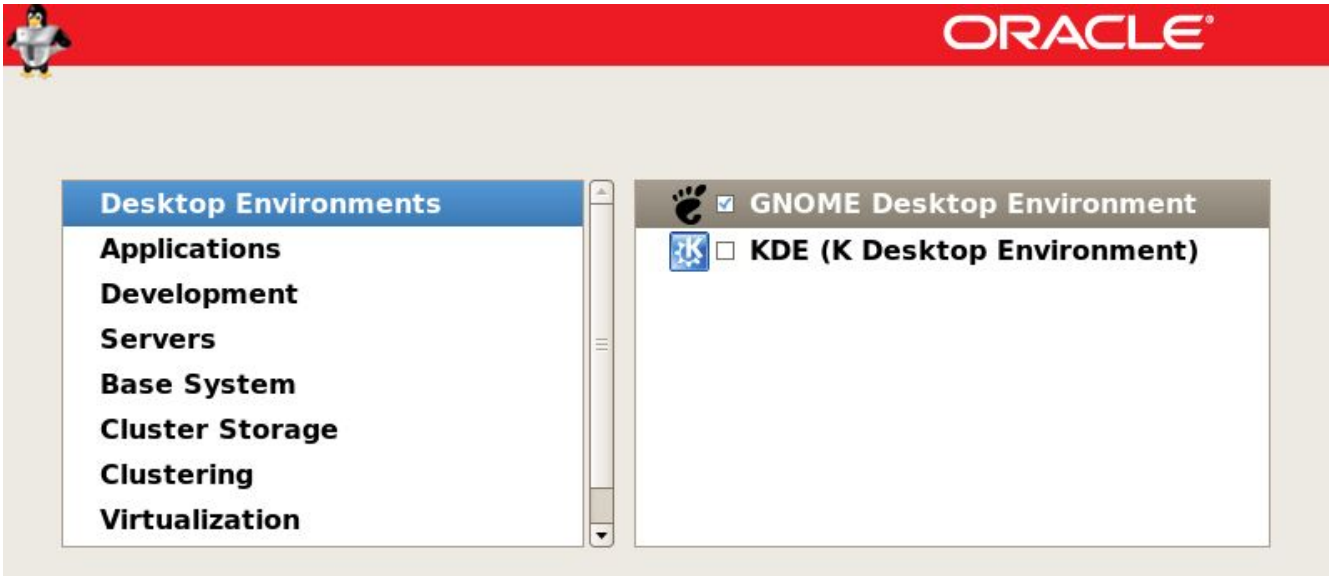


[Customize now 선택]



※ 아래와 같이 체크한다.

Desktop Environments	GNOME Desktop Environment
Applications	Editors, Graphical Internet
Development	Development Libraries, Development Tools
Servers	Server Configuration Tools
Base System	Administration Tools, Base, Legacy Software Support, System Tools, X Window System
Languages	Korean Support
Cluster Storage, Clustering, Virtualization 은 모두 선택하지 않는다.	

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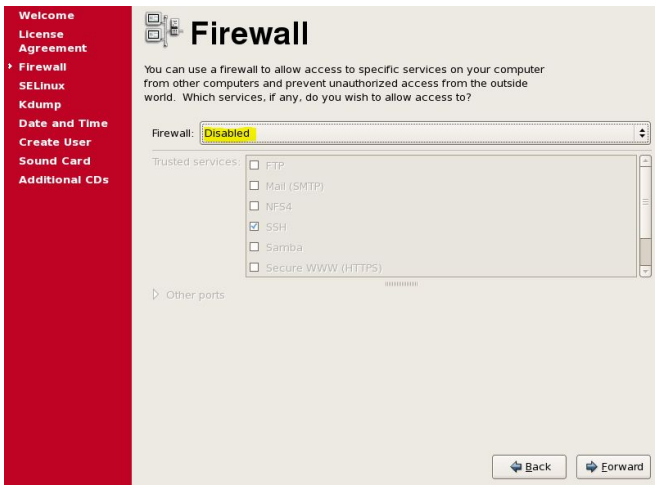
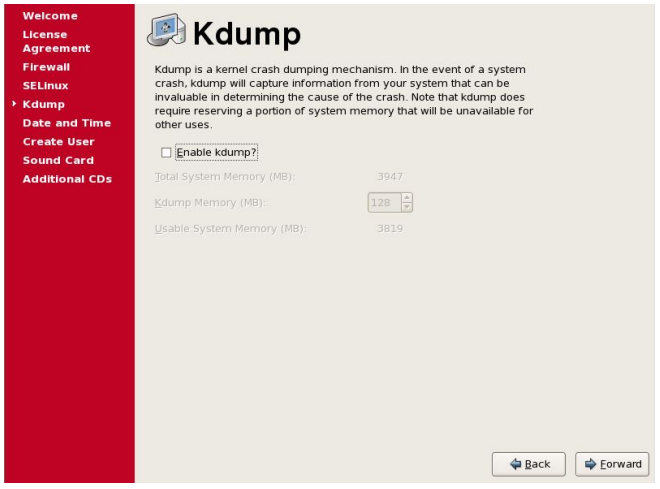
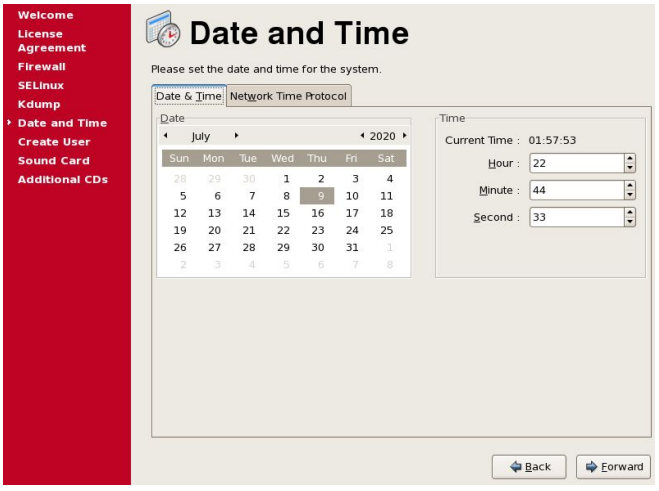
리부팅 후 셋업설정







[Firewall, Selinux 에서만 Disabled로 설정하고, 모두 기본값인 상태에서 넘어간다.]

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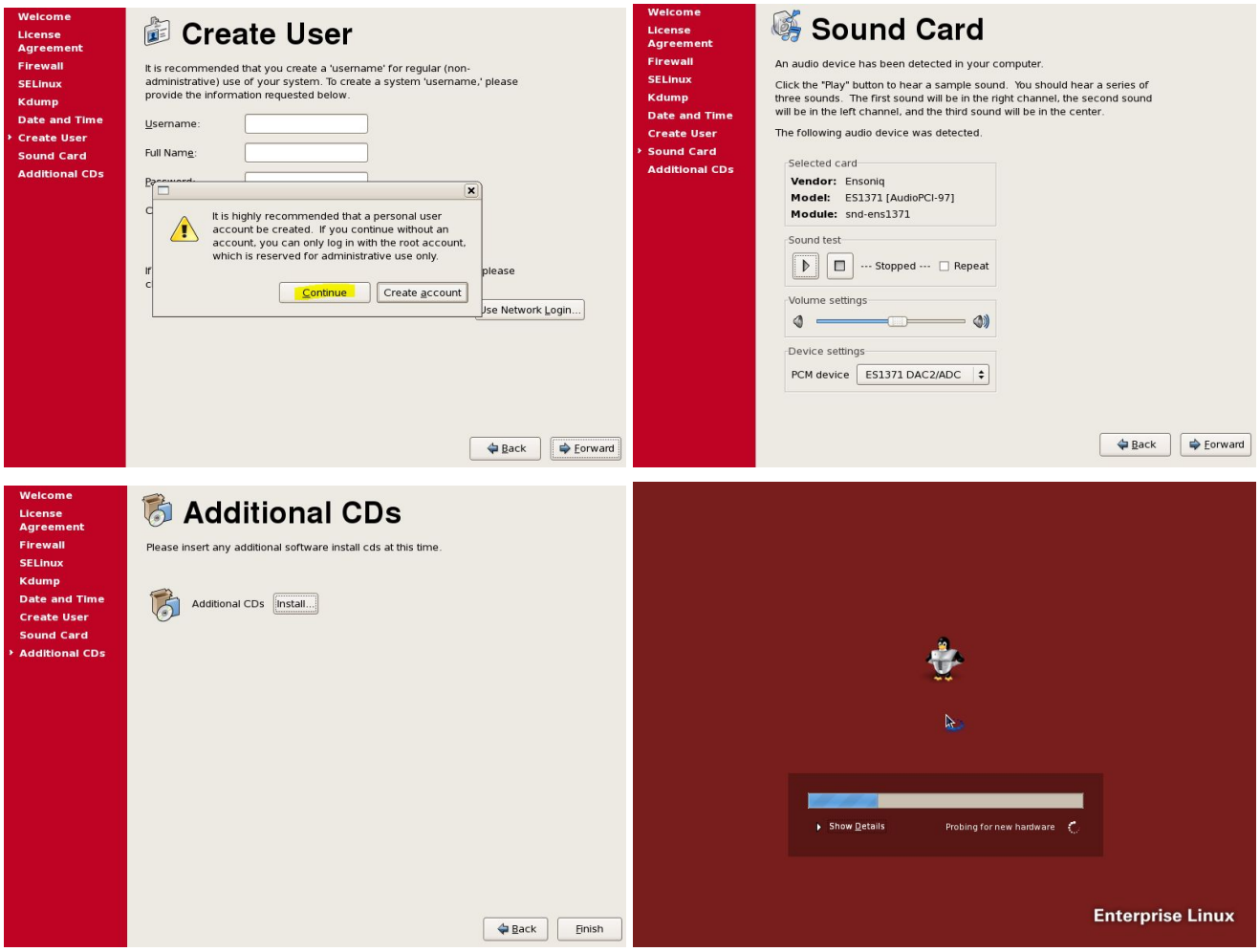
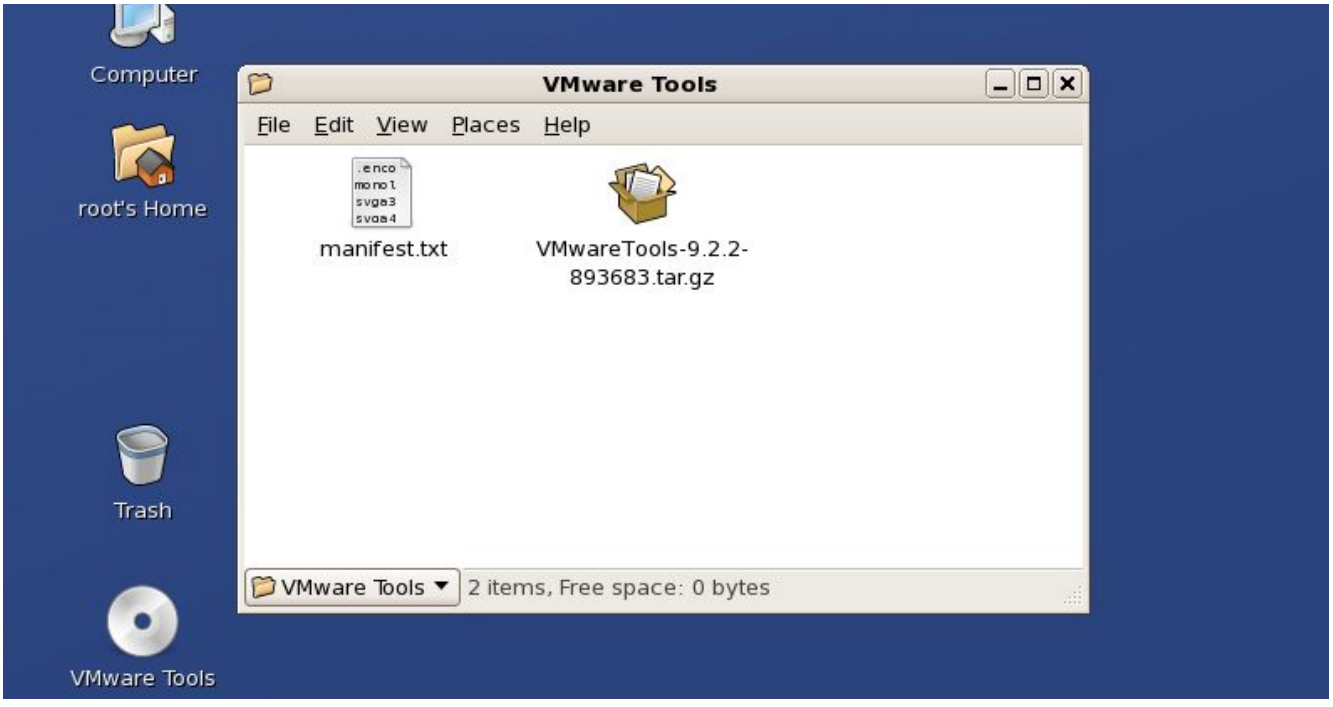


[Create User 에서 생성하지 않고 Continue로 넘어간다]

VMware Tools 설치 후 공유폴더 활성화



[가상머신 메뉴탭 – VM – install VMware Tool – 바탕화면으로 드래그]

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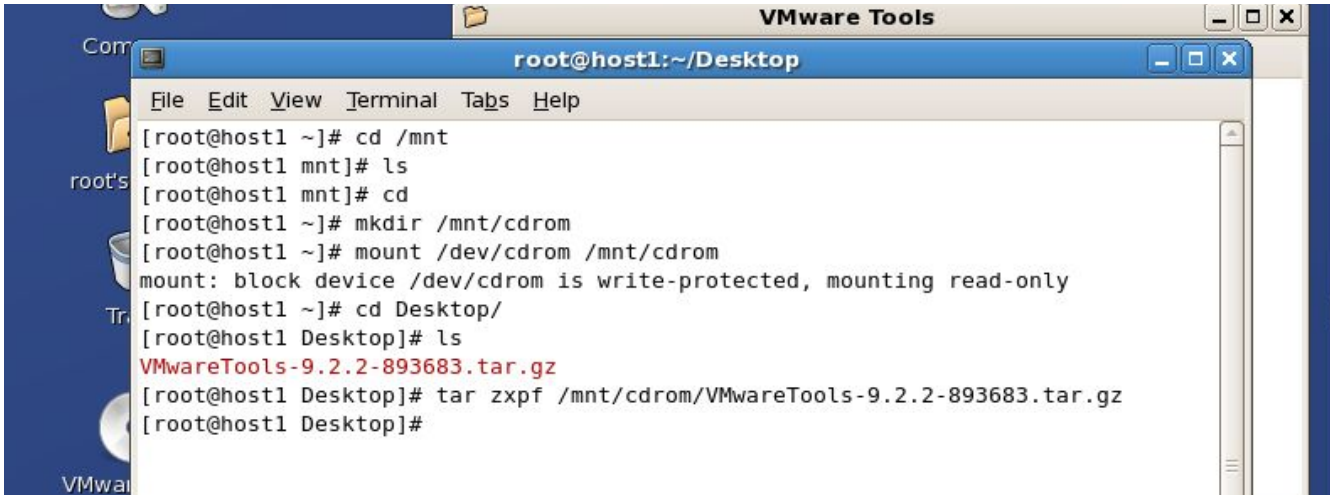
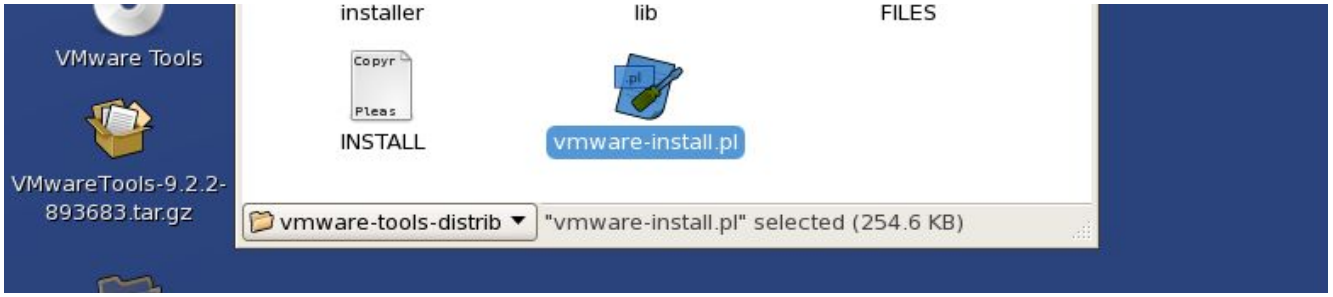
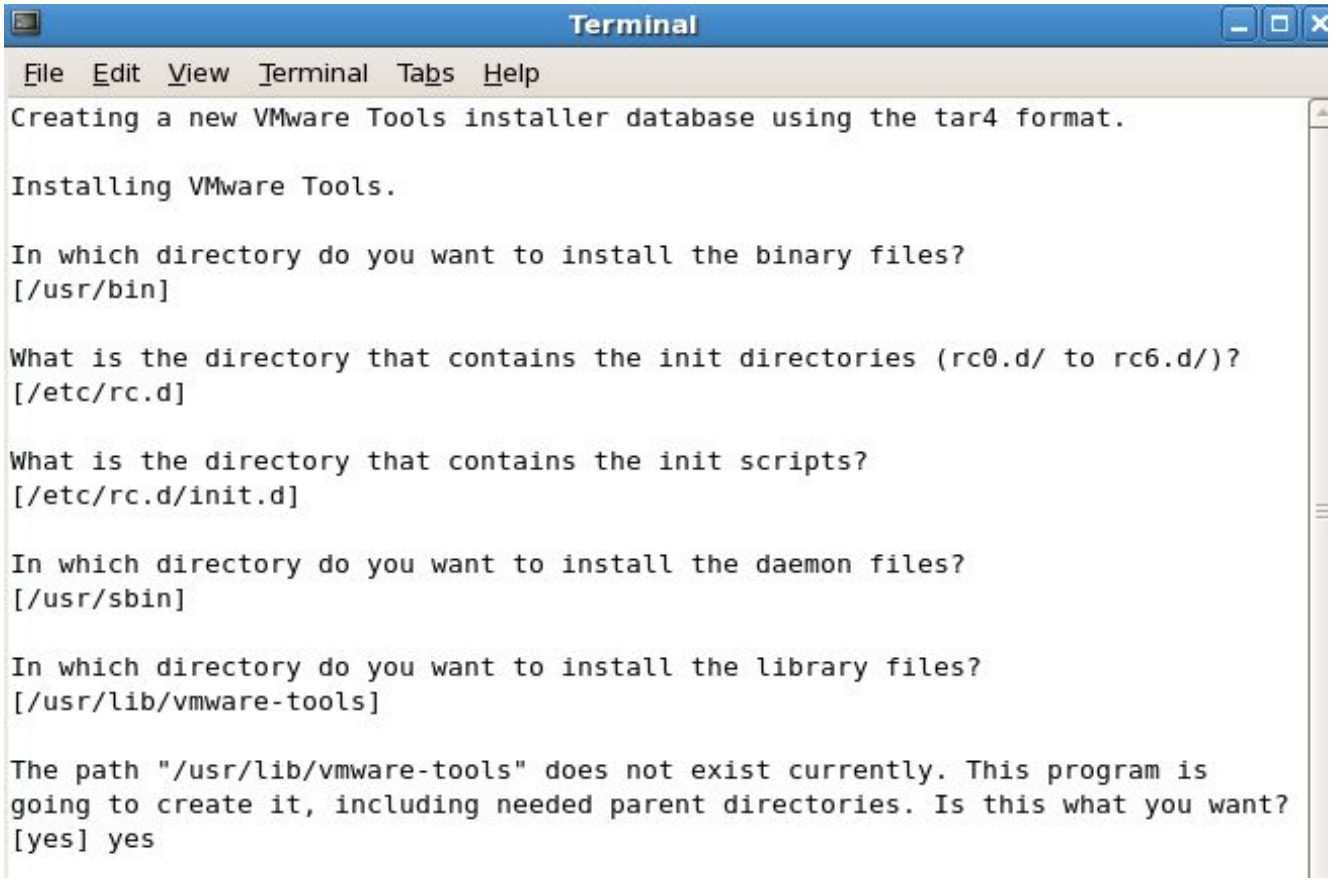


[압축풀기]



[더블클릭해서 설치]



[설치 후 재시작]

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사용자 그룹생성

※ 그룹이란?
특정 폴더나 파일을 특정 권한이 있는 사용자들만 사용할 수 있도록 해당 사용자들에게 권한을 부여하여 그룹 단위로 묶어 관리할 수 있다. 그룹은 기본적으로 사용자를 생성할 때 함께 생성된다.

※ 현재 생성되어 있는 그룹 조회
```
[root@host1 ~]# tail /etc/group
```

※ 유저의 그룹 정보를 확인
```
[root@host1 ~]# id [group_name]
```

※ GID가 777인 그룹 'test1' 를 생성
```
[root@host1 ~]# groupadd -g 777 test1
```

※ 그룹 수정
```
[root@host1 ~]# groupmod -g 54321 -n [새로운 명칭] oinstall
```

※ 그룹 삭제
```
[root@host1 ~]# groupdel [group_name]
```

※ 사용자 계정 생성
```
[root@host1 ~]# useradd -g test1 user1
```

- ✓ -u : 유저번호(UID) 지정
- ✓ -g : 그룹 지정
- ✓ -G : 보조 그룹 지정
- ✓ -d : 사용자의 홈 디렉토리 경로를 지정
- ✓ -s : 사용자의 로그인 쉘 지정

※ 사용자 계정 삭제
```
[root@host1 ~]# userdel user1
```

- ✓ -f : 강제 삭제
- ✓ -r : 계정 생성 시 함께 만들어진 모든 정보 삭제

※ user1에 'test2' 그룹 추가
```
[root@host1 ~]# usermod -G test2 user1
```

- ✓ -u : 새로운 유저번호(UID) 수정
- ✓ -g : 사용자의 기본 그룹 수정
- ✓ -G : 새로운 보조 그룹 설정
- ✓ -d : 사용자의 기본 홈 디렉토리 수정
- ✓ -s : 사용자의 로그인 쉘 변경
- ✓ -c : 사용자의 설명 수정
- ✓ -o : 강제 설정

```
[root@host1 ~]# groupadd oinstall
[root@host1 ~]# groupadd dba
[root@host1 ~]# groupadd oper
[root@host1 ~]# groupadd asmadmin
[root@host1 ~]# groupadd asmdba
[root@host1 ~]# groupadd asmoper

[root@host1 ~]# useradd -g oinstall -G dba,oper,asmdba,asmadmin,asmoper oracle
```

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사용자 비밀번호 설정

```
[root@host1 ~]# passwd oracle

Changing password for user oracle.
New UNIX password: oracle
BAD PASSWORD: it is based on a dictionary word
Retype new UNIX password: oracle

passwd: all authentication tokens updated successfully.
```

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4) 환경변수 설정 및 패키지 다운

환경변수 설정 후 소유자 설정

```
[root@host1 ~]# vi /home/oracle/.bash_profile

# .bash_profile

# Get the aliases and functions
if [ -f ~/.bashrc ]; then
    . ~/.bashrc
fi

# User specific environment and startup programs

PATH=$PATH:$HOME/bin

export PATH

# Oracle Settings
export ORACLE_BASE=/u01/app/oracle
export ORACLE_HOME=/u01/app/oracle/product/11.2.0.3/dbhome_1
export PATH=$ORACLE_HOME/bin:$PATH
export ORACLE_SID=PROD
export PS1="[\`echo \$ORACLE_SID\ '@\h \W]$ "
unset LANG
~
~
-- INSERT --

[root@host1 ~]# chown oracle:oinstall /home/oracle/.bash_profile
```

공유폴더에 있는 OS를 마운트 할 디렉토리를 생성한다.

```
[root@host1 ~]# cd /
[root@host1 /]# ls
bin   dev  home  lib64       media  mnt  opt   root  selinux  sys       tmp  var
boot  etc  lib   lost+found  misc   net  proc  sbin  srv      tftpboot  usr

[root@host1 /]# cd media
[root@host1 media]# mkdir cdrom
[root@host1 media]# ls
cdrom
```

공유폴더의 파일을 확인한다.

```
[root@host1 media]# cd /mnt/hgfs/share
[root@host1 share]# ls
enterprise-r5-u4-server-x86_64-dvd.iso  p10404530_112030_linux-x86-64_2of7.zip
p10404530_112030_linux-x86-64_1of7.zip  p10404530_112030_linux-x86-64_3of7.zip
```

패키지 설치를 위해 공유폴더에 있는 OS를 마운트한다.

```
[root@host1 share]# mount -t iso9660 -o loop
enterprise-r5-u4-server-x86_64-dvd.iso /media/cdrom
```

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패키지를 다운받고 몇 가지 파일을 수정해준다. (이미지에 존재하는 패키지를 활용하는 방법)

```
[root@host1 cdrom]# ls
blafdoc.css     EULA         GPL        README-en          RELEASE-NOTES-en.html
Server          VT           Cluster    eula.en_US         images      .html
RPM-GPG-KEY             supportinfo  ClusterStorage  eula.py     isolinux
RELEASE-NOTES-en  RPM-GPG-KEY-oracle     TRANS.TBL

[root@host1 cdrom]# cd Server

[root@host1 Server]# rpm -Uvh binutils-2.*
[root@host1 Server]# rpm -Uvh compat-libstdc++-33*
[root@host1 Server]# rpm -Uvh compat-libstdc++-33*.i386.rpm
[root@host1 Server]# rpm -Uvh elfutils-libelf*
[root@host1 Server]# rpm -Uvh gcc-4.*
[root@host1 Server]# rpm -Uvh gcc-c++-4.*
[root@host1 Server]# rpm -Uvh glibc-2.*
[root@host1 Server]# rpm -Uvh glibc-common-2.*
[root@host1 Server]# rpm -Uvh glibc-devel-2.*
[root@host1 Server]# rpm -Uvh glibc-headers-2.*
[root@host1 Server]# rpm -Uvh ksh*
[root@host1 Server]# rpm -Uvh libaio-0.*
[root@host1 Server]# rpm -Uvh libaio-devel-0.*
[root@host1 Server]# rpm -Uvh libgomp-4.*
[root@host1 Server]# rpm -Uvh libgcc-4.*
[root@host1 Server]# rpm -Uvh libstdc++-4.*
[root@host1 Server]# rpm -Uvh libstdc++-devel-4.*
[root@host1 Server]# rpm -Uvh make-3.*
[root@host1 Server]# rpm -Uvh sysstat-7.*
[root@host1 Server]# rpm -Uvh unixODBC-2.*
[root@host1 Server]# rpm -Uvh unixODBC-devel-2.*
[root@host1 Server]# rpm -Uvh numactl-devel-*


[root@host01 ~]# vi /etc/sysctl.conf
================================================
# for Oracle Database 11gR2
fs.suid_dumpable = 1
fs.aio-max-nr = 1048576
fs.file-max = 6815744
kernel.shmall = 2097152
kernel.shmmax = 4294967295
kernel.shmmni = 4096
kernel.sem = 250 32000 100 128
net.ipv4.ip_local_port_range = 9000 65500
net.core.rmem_default = 262144
net.core.rmem_max = 4194304
net.core.wmem_default = 262144
net.core.wmem_max = 1048576
================================================


[root@host0 ~]# vi /etc/security/limits.conf
================================================================
oracle soft nproc 2047
oracle hard nproc 16384
oracle soft nofile 4096
oracle hard nofile 65536
oracle soft stack 10240
```

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```
[root@host01]# vi /etc/hosts
==================================================================
192.168.100.111         host01
==================================================================

[root@host01]# mv /etc/ntp.conf /etc/ntp.conf.org
```

한번에 패키지를 다운받는다. (yum을 활용하는 방법)

```
[root@localhost ~]# yum install oracle-rdbms-server-11gR2-preinstall
Complete!
```

환경변수 설정 시 지정했던 경로대로 디렉토리를 만들어준다.

※ chown 소유자 설정 / chmod 권한 변경

```
[root@host1 ~]# mkdir -p /u01/app/oracle
[root@host1 ~]# chown -R oracle:oinstall /u01
[root@host1 ~]# chmod -R 775 /u01
```

※ 압축을 풀 공간인 stage 디렉토리를 생성

```
[root@host1 ~]# mkdir /stage
[root@host1 ~]# cd /mnt/hgfs/share
[root@host1 share]#
```

※ 오라클 소프트웨어 압축해제

```
[root@host1 share]# unzip p10404530_112030_linux-x86-64_1of7.zip -d /stage
[root@host1 share]# unzip p10404530_112030_linux-x86-64_2of7.zip -d /stage
[root@host1 share]# unzip p10404530_112030_linux-x86-64_3of7.zip -d /stage
```

※ stage 디렉토리에 소유자 설정

```
[root@host1 share]# chown -R oracle:oinstall /stage

[root@host1 /]# ls -l /

total 170
drwxr-xr-x   2 root   root      4096 Jul  9 12:19 bin
drwxr-xr-x   4 root   root      1024 Jul  9  2020 boot
drwxr-xr-x  12 root   root      4340 Jul  9 11:13 dev
drwxr-xr-x  93 root   root     12288 Jul  9 14:13 etc
drwxr-xr-x   3 root   root      4096 Jul  9 11:30 home
drwxr-xr-x  11 root   root      4096 Jul  9 12:18 lib
drwxr-xr-x   7 root   root      4096 Jul  9 12:18 lib64
drwx------   2 root   root     16384 Jul  9  2020 lost+found
drwxr-xr-x   3 root   root      4096 Jul  9 13:54 media
...
drwxr-xr-x   2 root   root     12288 Jul  9 12:19 sbin
drwxr-xr-x   2 root   root      4096 Jul  9  2020 selinux
drwxr-xr-x   2 root   root      4096 Jan  9  2009 srv
drwxr-xr-x   4 oracle oinstall  4096 Jul  9 14:28 stage
drwxr-xr-x  11 root   root         0 Jul  9 11:12 sys
drwxr-xr-x   3 root   root      4096 Jul  9  2020 tftpboot
drwxrwxrwt  14 root   root      4096 Jul  9 12:28 tmp
drwxrwxr-x   3 oracle oinstall  4096 Jul  9 14:19 u01
drwxr-xr-x  15 root   root      4096 Jul  9  2020 usr
drwxr-xr-x  23 root   root      4096 Jul  9  2020 var
```

※ 설정완료 후 오라클 계정으로 재로그인한다.

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5) DB 소프트웨어 설치 (Oracle 11g R2)

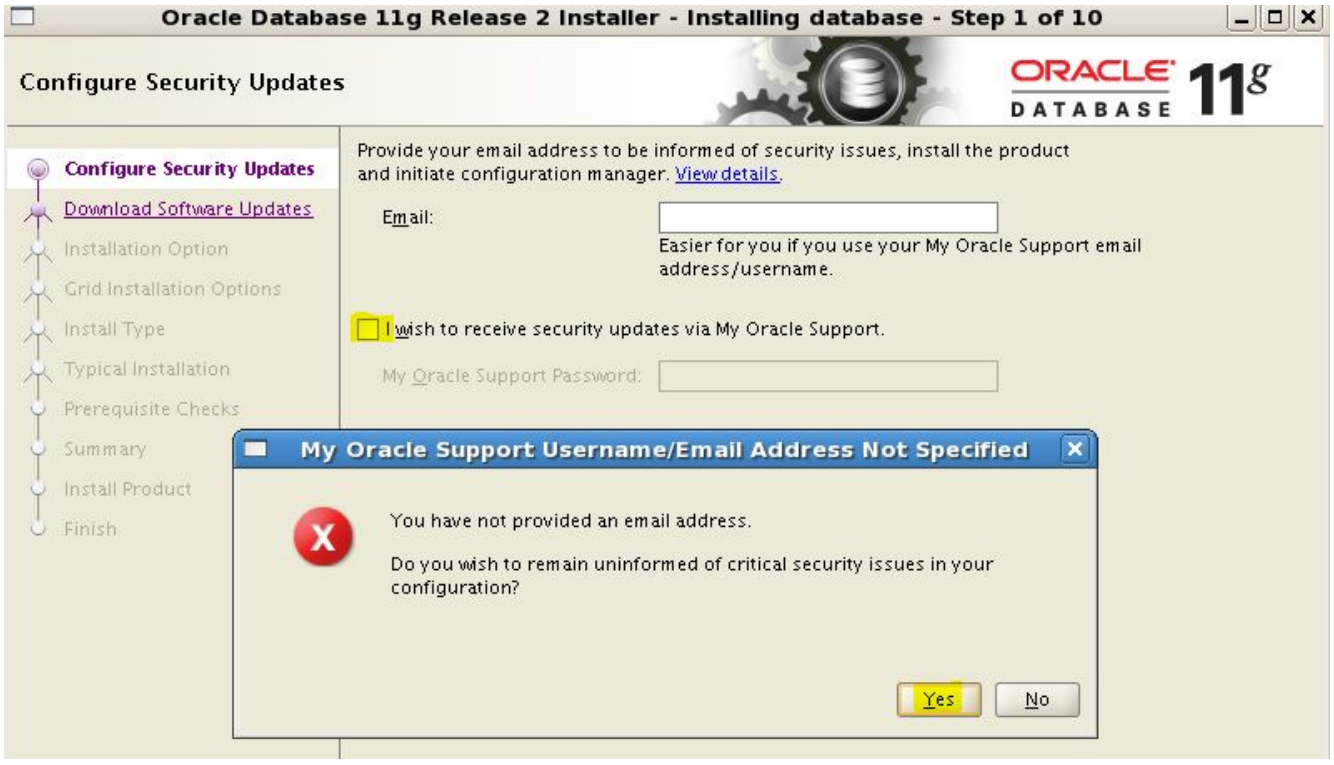
oracle 계정으로 로그인하여 오라클 소프트웨어를 설치한다.

```
[oracle@host1 ~]$ cd /stage/database/

[oracle@host1 database]$ ls
doc       readme.html  rpm           sshsetup  welcome.html
install   response     runInstaller  stage

[oracle@host1 database]$ ./runInstaller
```

오라클 11g R2를 설치한다.



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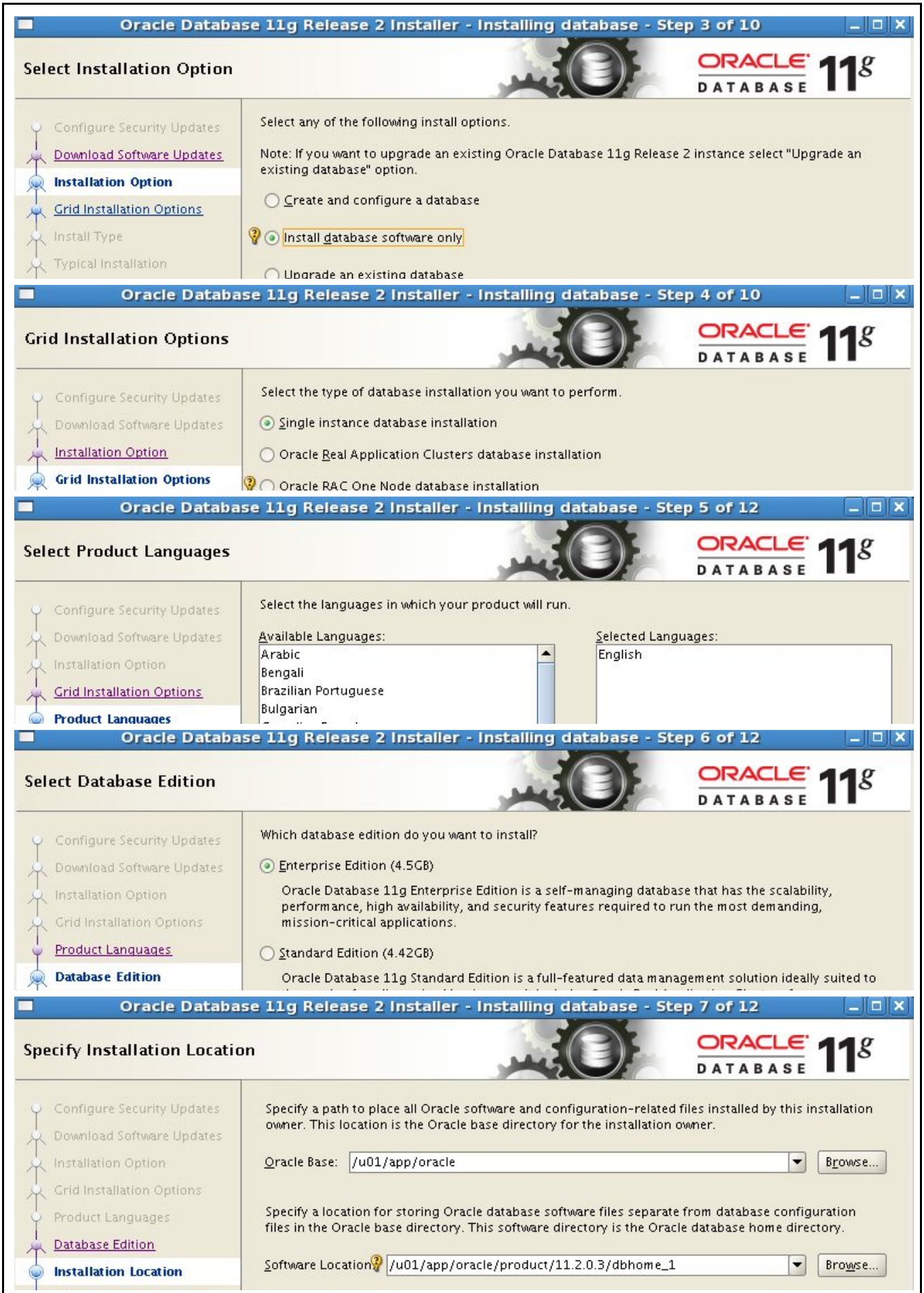

[환경변수 설정값 경로와 일치하는지 확인]

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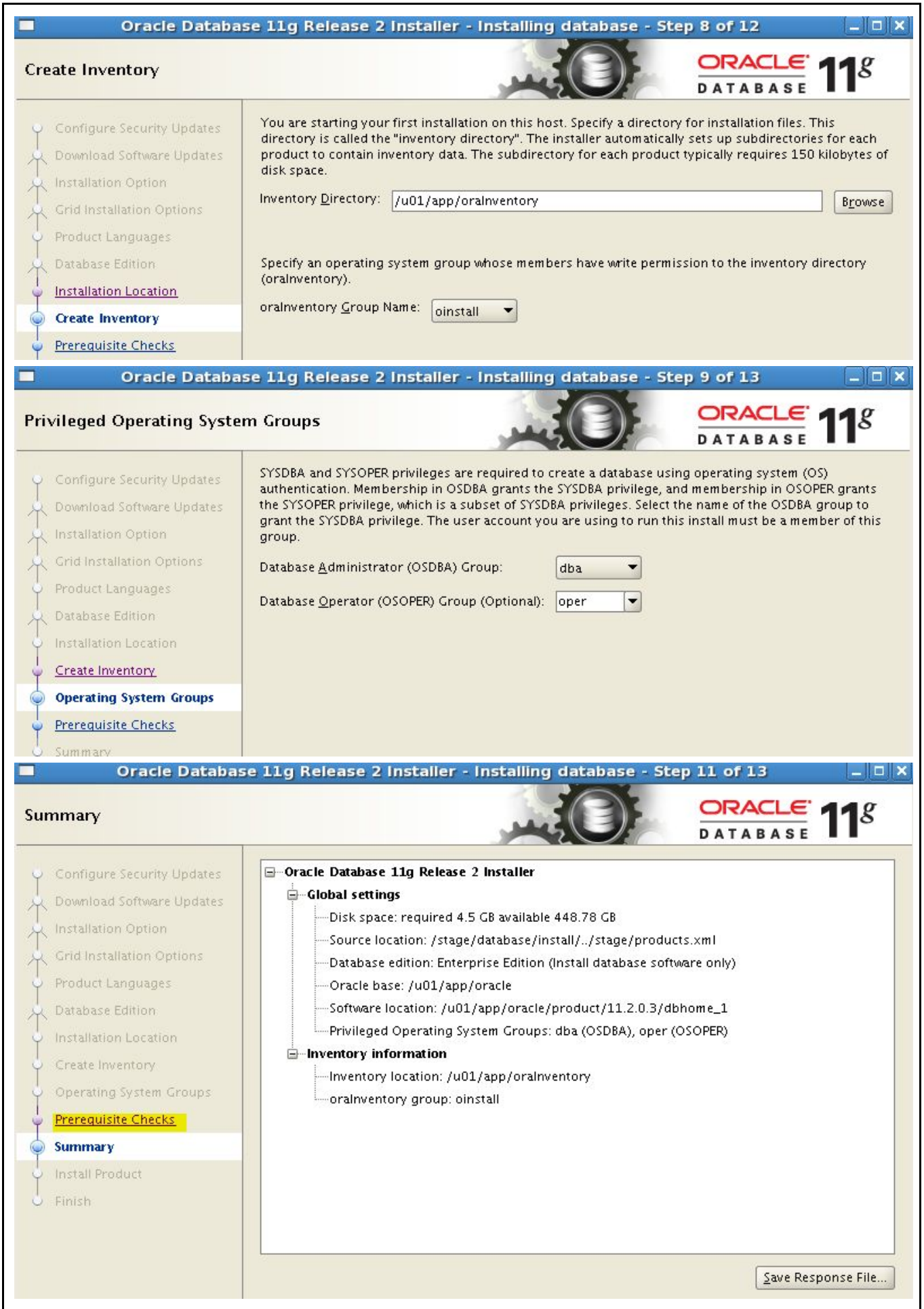

[에러가 없다면 Prerequisite Checks 단계를 건너뛴다]

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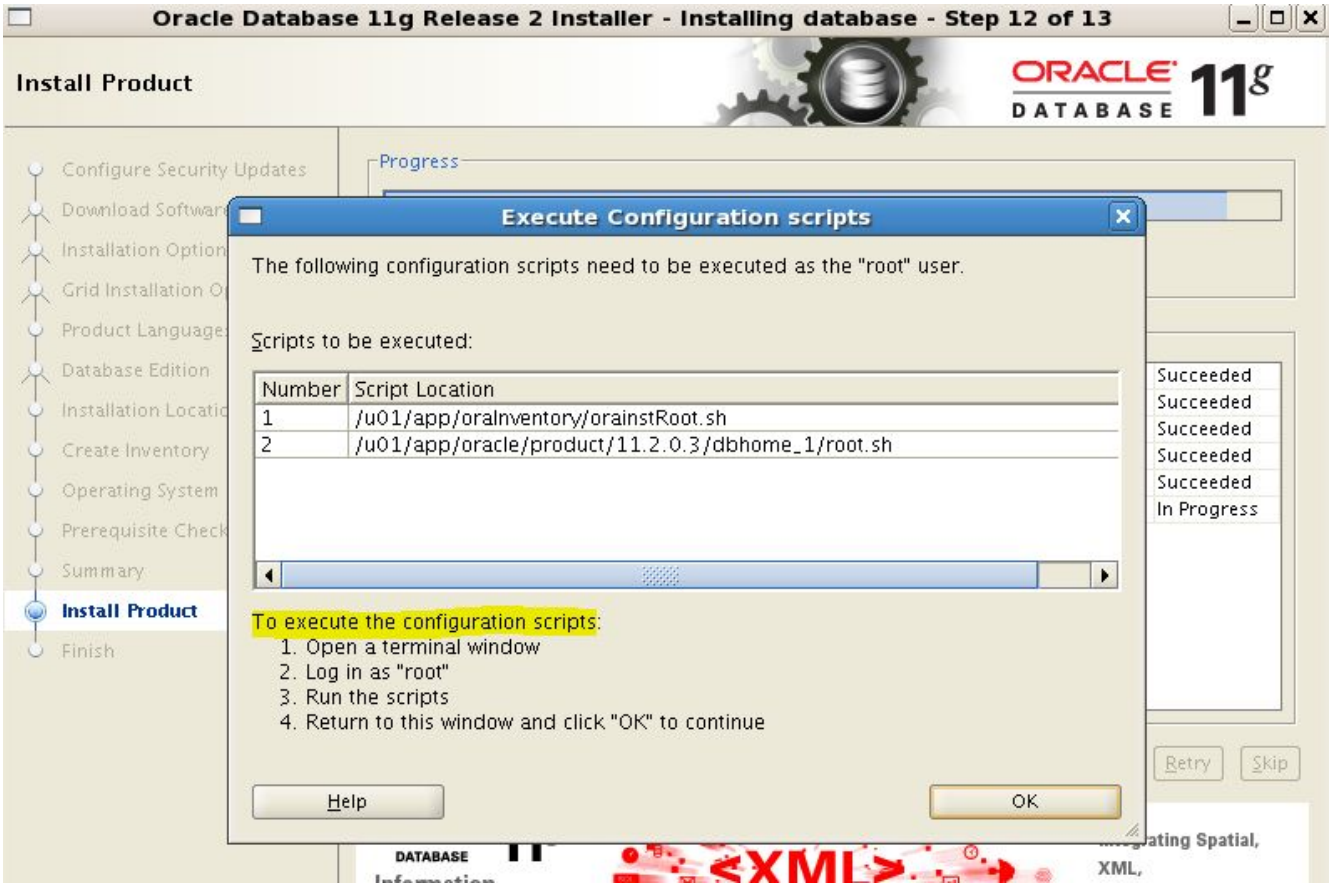

※ 루트로 로그인하여 To execute the configuration scripts 대로 진행한다.

```
[oracle@host1 ~]$ su -
Password: (oracle)

[root@host1 ~]# /u01/app/oraInventory/orainstRoot.sh
Changing permissions of /u01/app/oraInventory.
Adding read,write permissions for group.
Removing read,write,execute permissions for world.

Changing groupname of /u01/app/oraInventory to oinstall.
The execution of the script is complete.

[root@host1 ~]# /u01/app/oracle/product/11.2.0.3/dbhome_1/root.sh
Performing root user operation for Oracle 11g

The following environment variables are set as:
    ORACLE_OWNER= oracle
Enter the full pathname of the local bin directory: [/usr/local/bin]: (Enter)
   Copying dbhome to /usr/local/bin ...
   Copying oraenv to /usr/local/bin ...
   Copying coraenv to /usr/local/bin ...

Creating /etc/oratab file...
Entries will be added to the /etc/oratab file as needed by
Database Configuration Assistant when a database is created
Finished running generic part of root script.
Now product-specific root actions will be performed.
Finished product-specific root actions.    ORACLE_HOME=
/u01/app/oracle/product/11.2.0.3/dbhome_1
```

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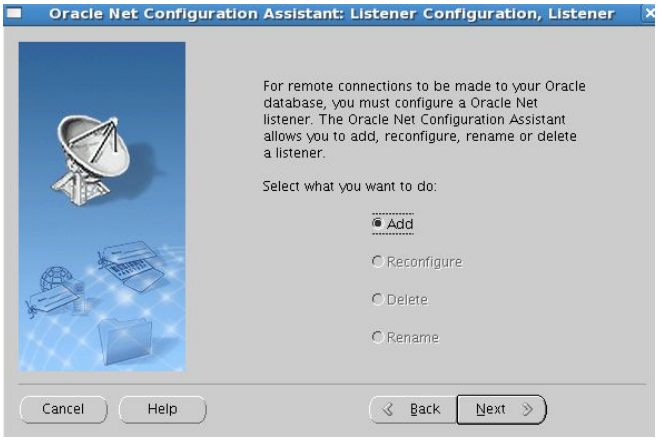
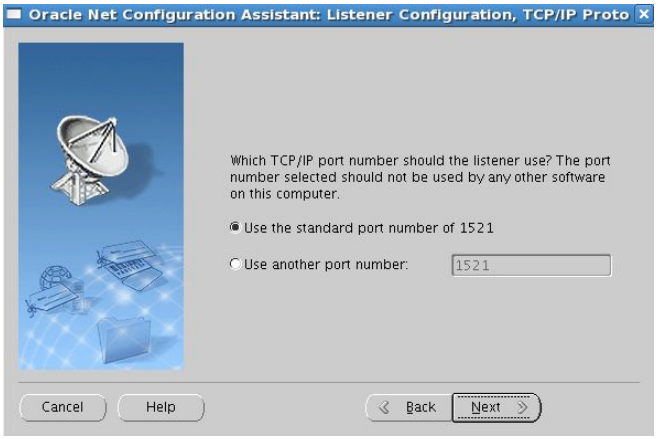
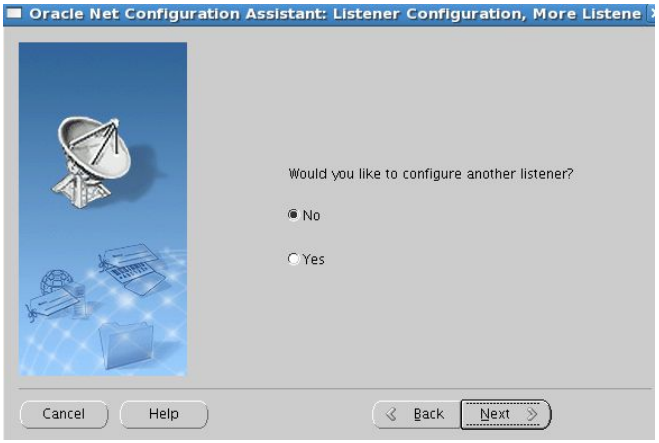
리스너 설정 (특별한 설정이 없으면 모든 단계에서 Next 로 넘어간다)

```
[oracle@host1 database]$ netca
```







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리스너 확인

```
[oracle@host1 ~]$ lsnrctl status

LSNRCTL for Linux: Version 11.2.0.3.0 - Production on 09-JUL-2020 15:17:06

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Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=host1)(PORT=1521)))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 11.2.0.3.0 - Production
Start Date                09-JUL-2020 15:16:44
Uptime                    0 days 0 hr. 0 min. 21 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File
/u01/app/oracle/product/11.2.0.3/dbhome_1/network/admin/listener.ora
Listener Log File         /u01/app/oracle/diag/tnslsnr/host1/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=host1)(PORT=1521)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc)(KEY=EXTPROC1521)))
The listener supports no services
The command completed successfully
```
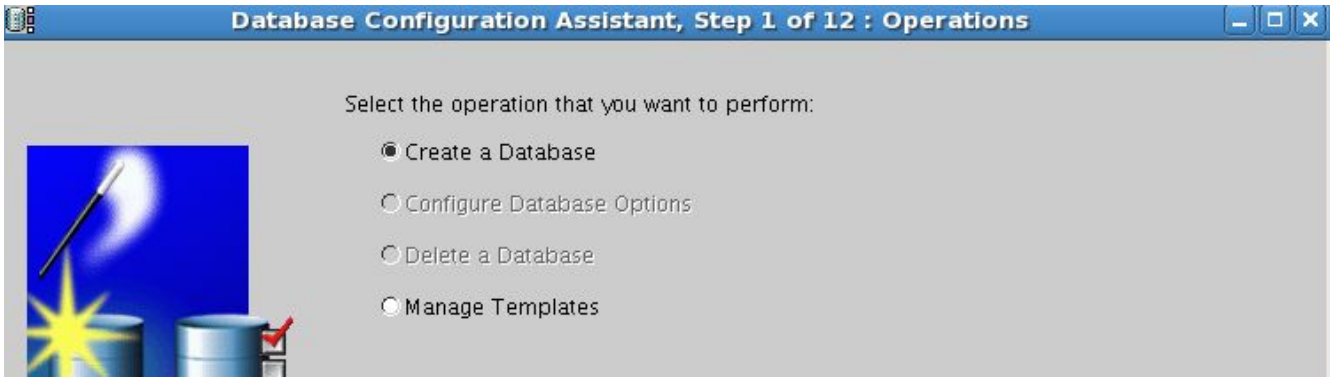
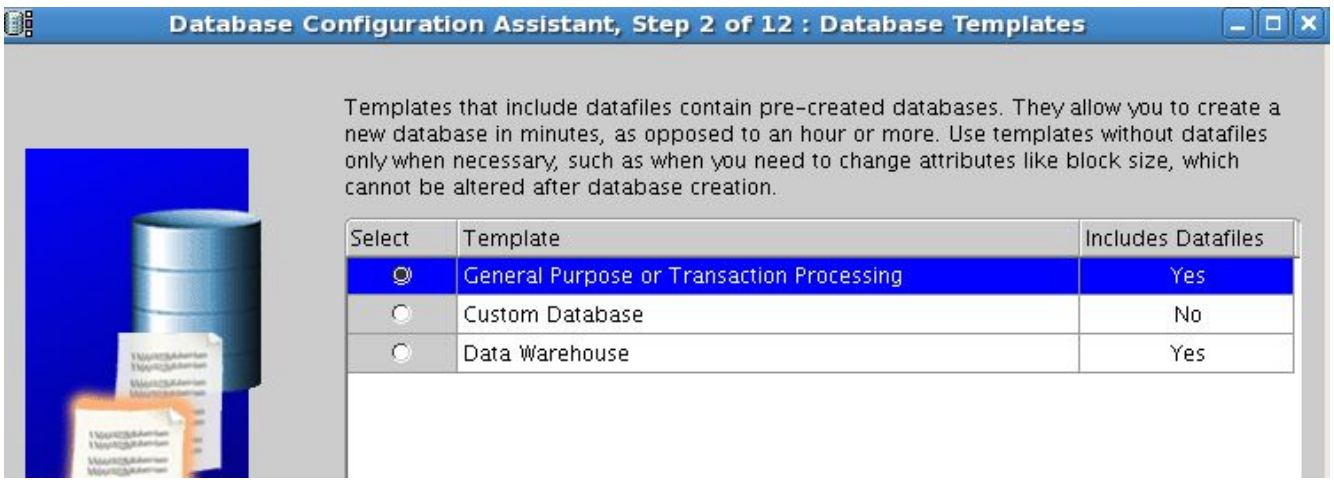

DB 생성

```
[oracle@host1 ~]$ dbca
```





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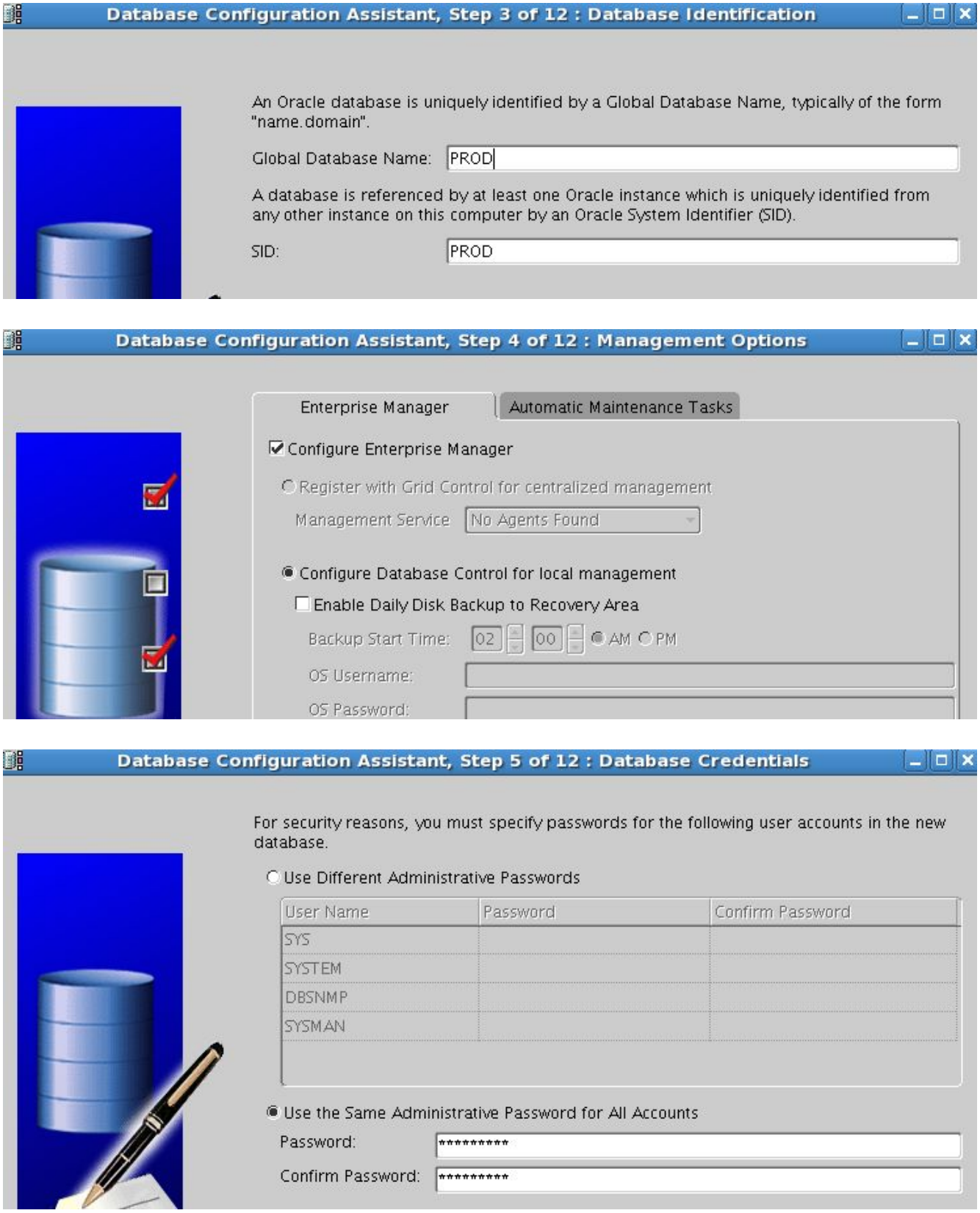

[oracle_4U 로 지정]

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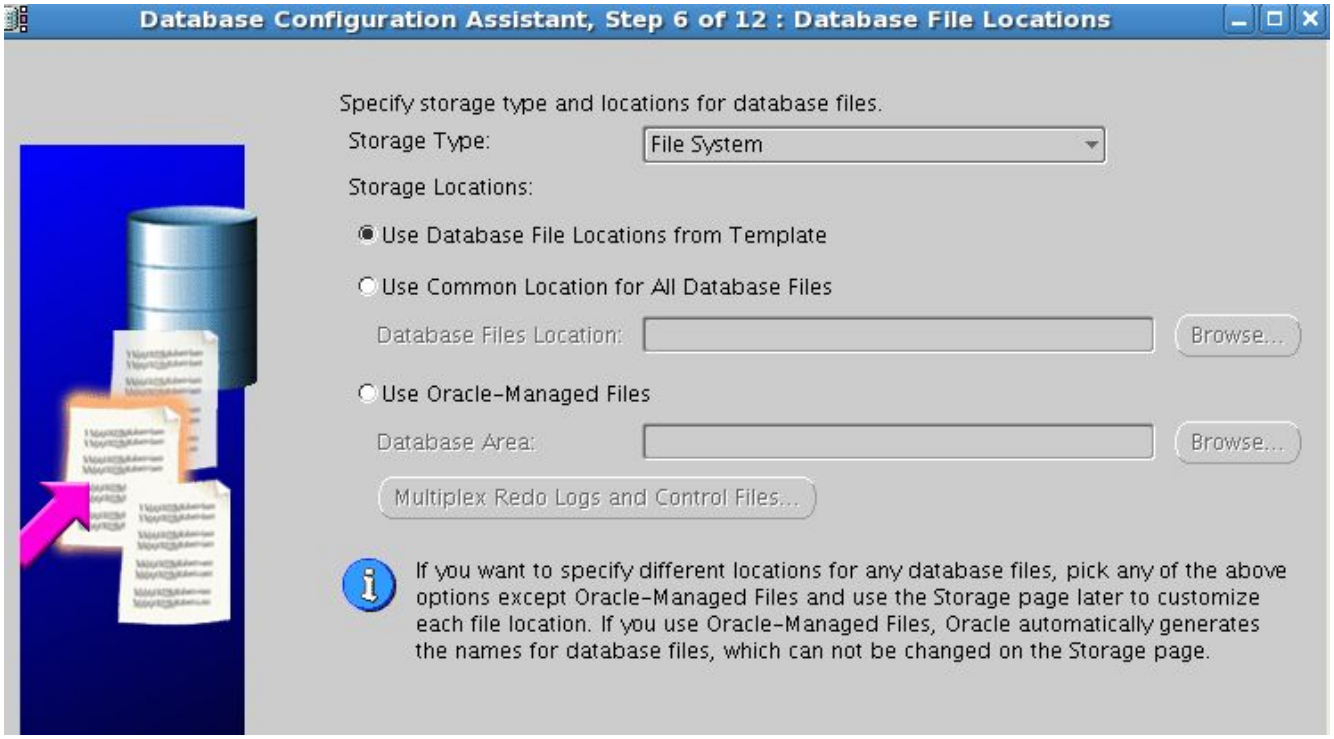

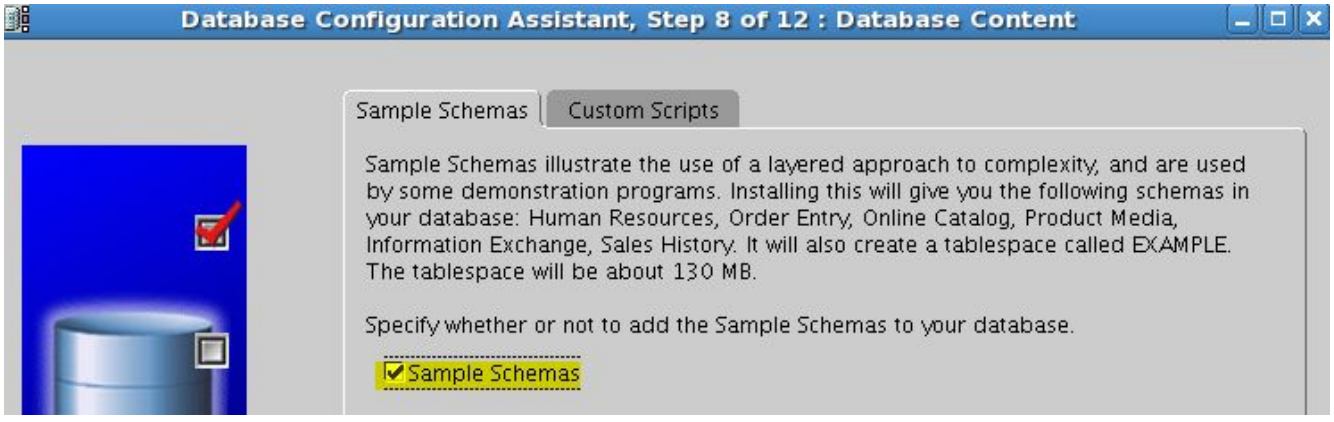

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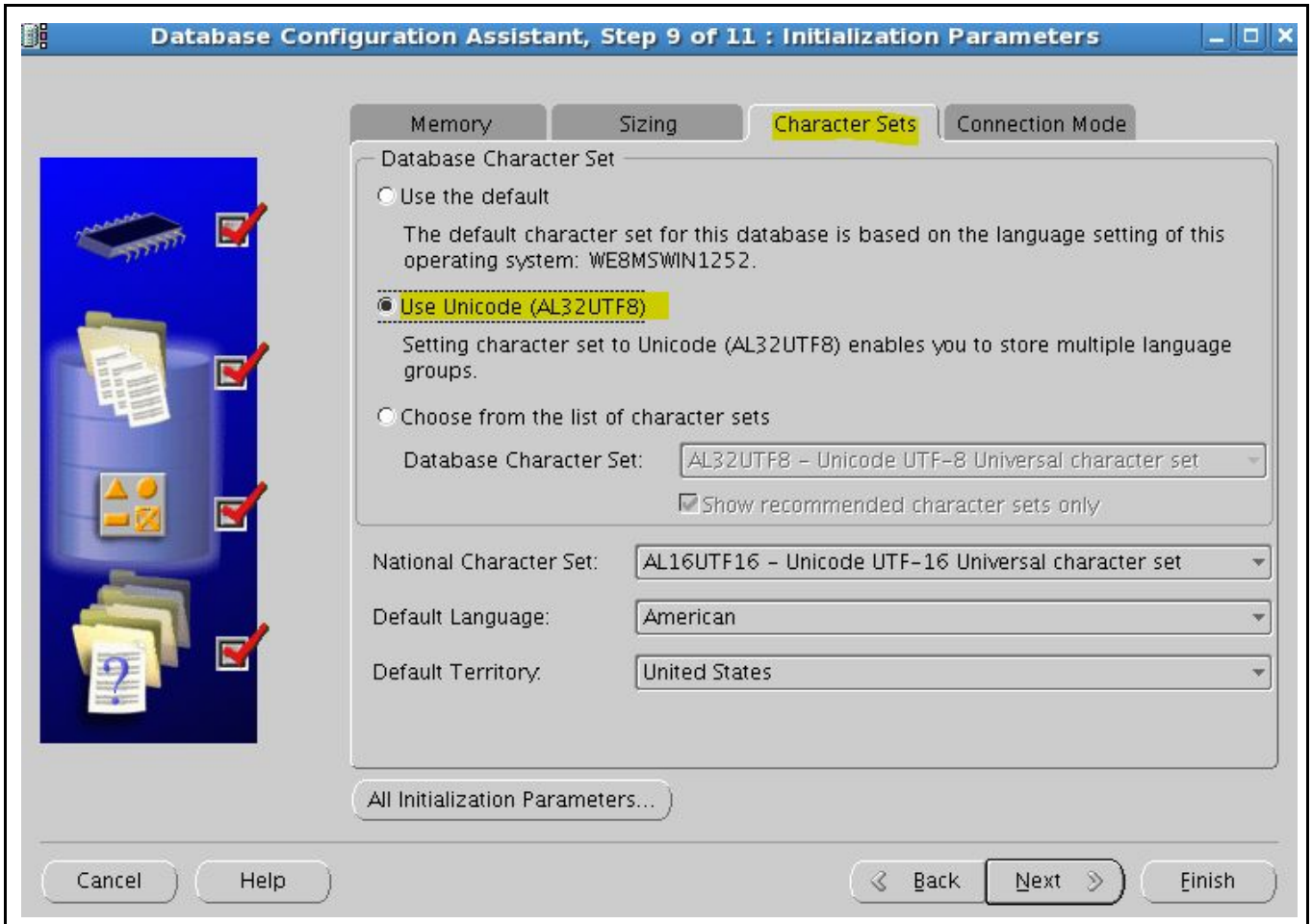

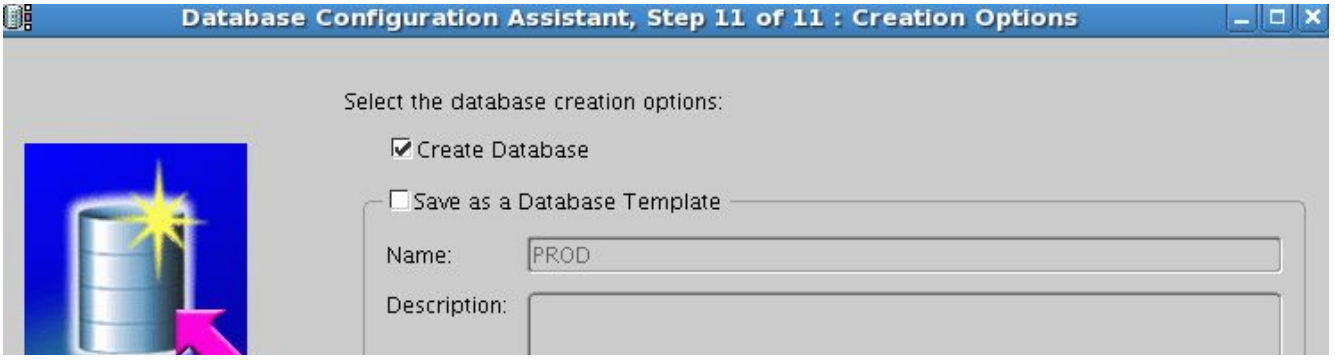

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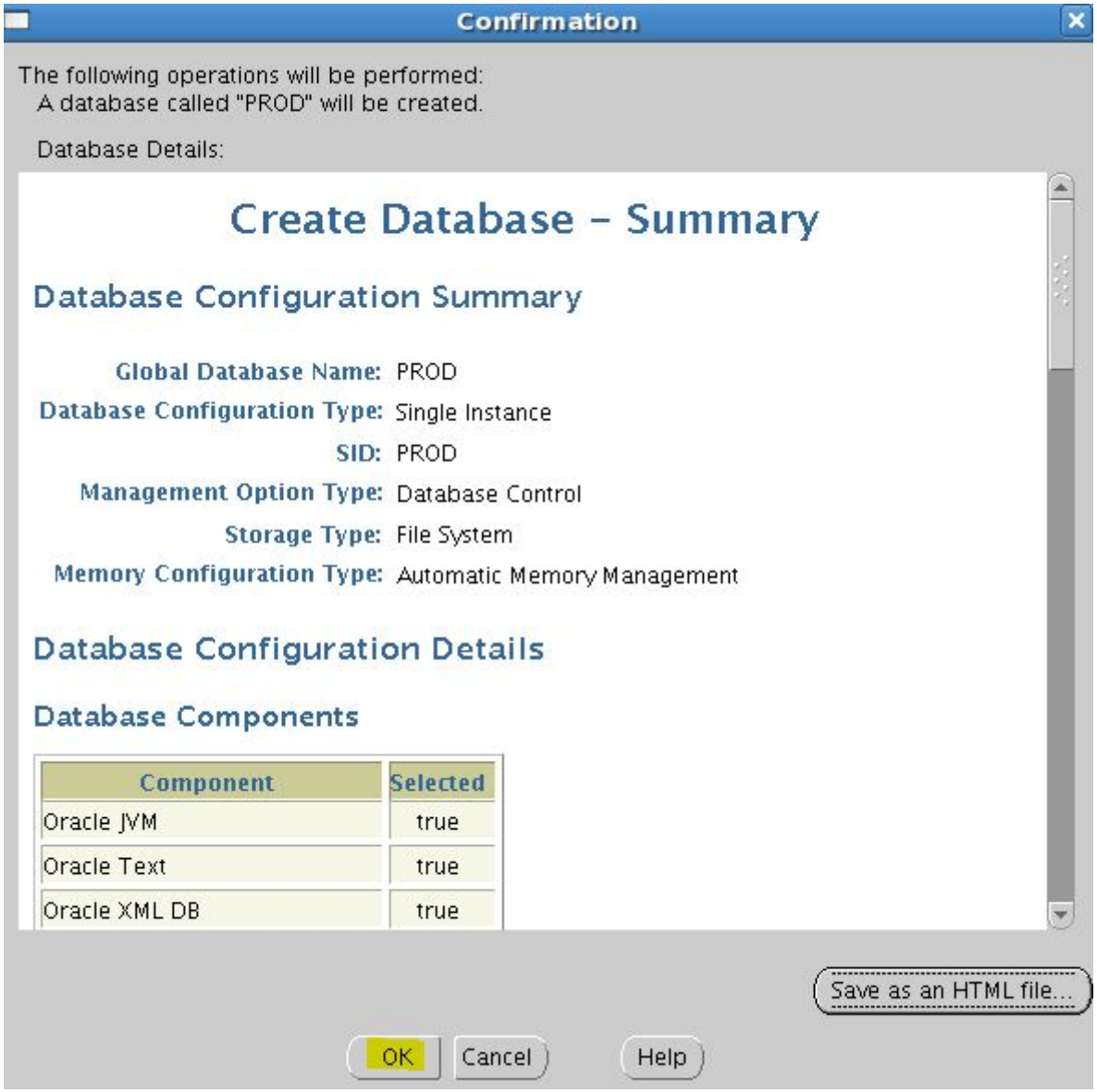

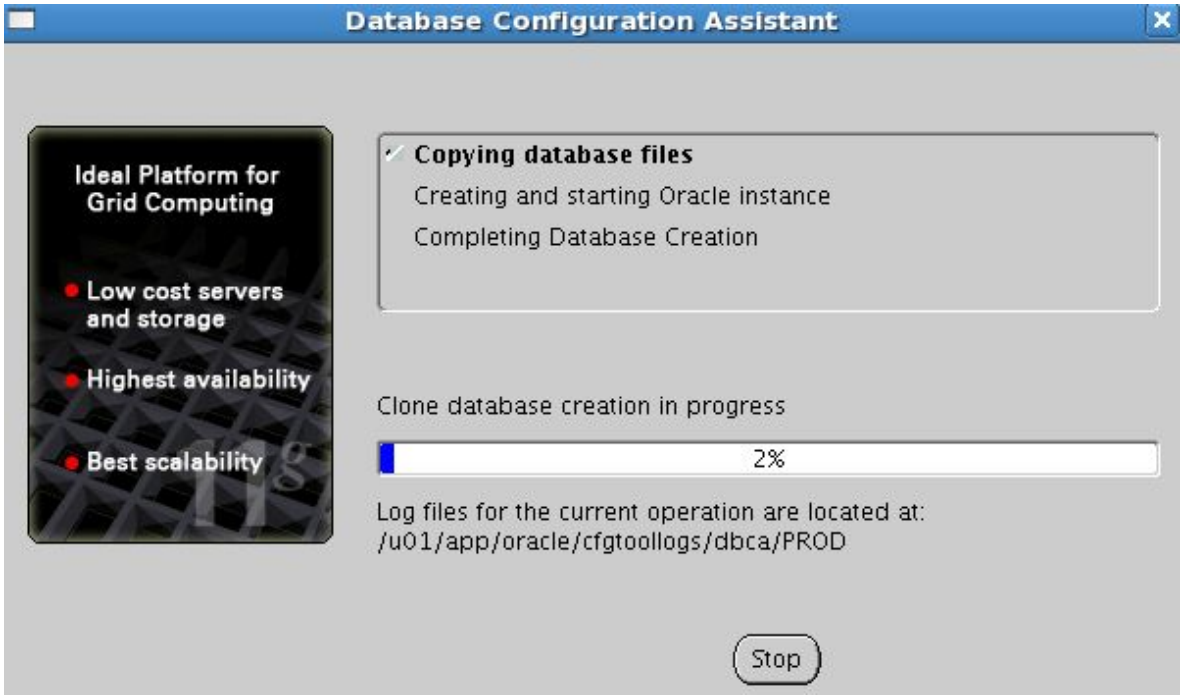

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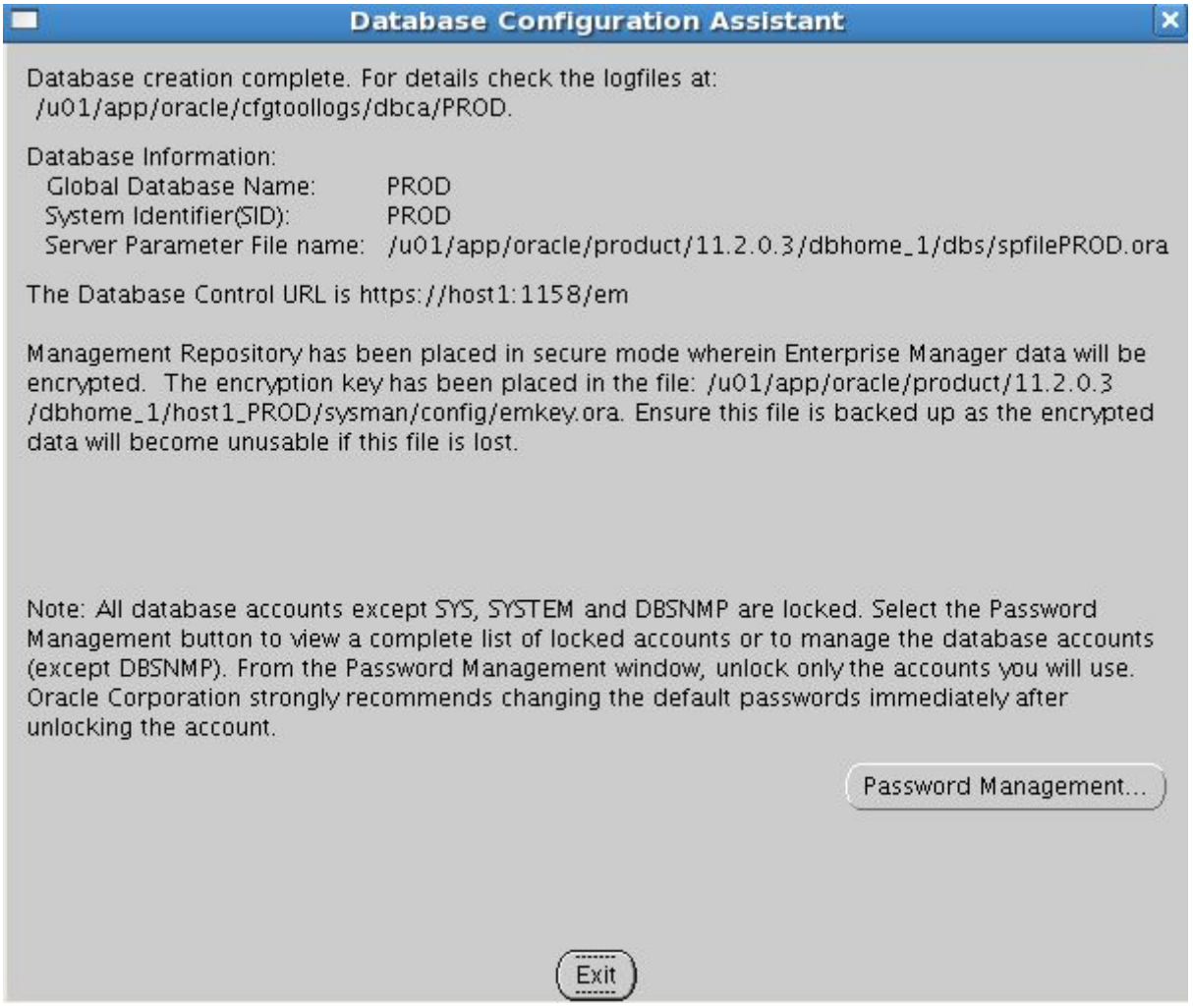

DB 생성 확인

※ 잠깐!! Prompt를 사용하기 편하도록 glogin.sql 파일 하단에 옵션을 추가한다.

```
[oracle@host1 ~]$ cd /u01/app/oracle/product/11.2.0.3/dbhome_1/sqlplus/admin
[oracle@host1 admin]$ ls
glogin.sql  help  libsqlplus.def  plustrce.sql  pupbld.sql

[oracle@host1 admin]$ vi glogin.sql

SET sqlprompt "_USER'@'_CONNECT_IDENTIFIER>"
SET linesize 500
SET pagesize 200

[oracle@host1 ~]$ sqlplus / as sysdba

SQL*Plus: Release 11.2.0.3.0 Production on Thu Jul 9 16:12:28 2020

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Connected to:
Oracle Database 11g Enterprise Edition Release 11.2.0.3.0 - 64bit Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SYS@PROD>
```

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