Oracle Linux 6.8 에 Oracle 12c 설치하기

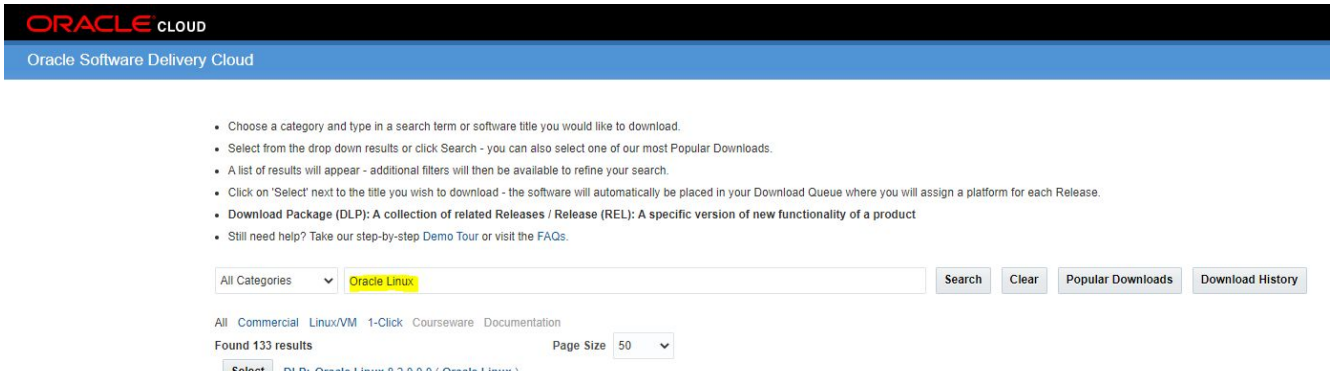
1. 설치순서

1) OS 다운 (Oracle Linux 버전 6.8)
2) 가상머신 설치 (VMware)
3) 가상 이미지 설치
4) 패키지 다운 및 환경변수 설정
5) DB 소프트웨어 설치 (Oracle 12c)

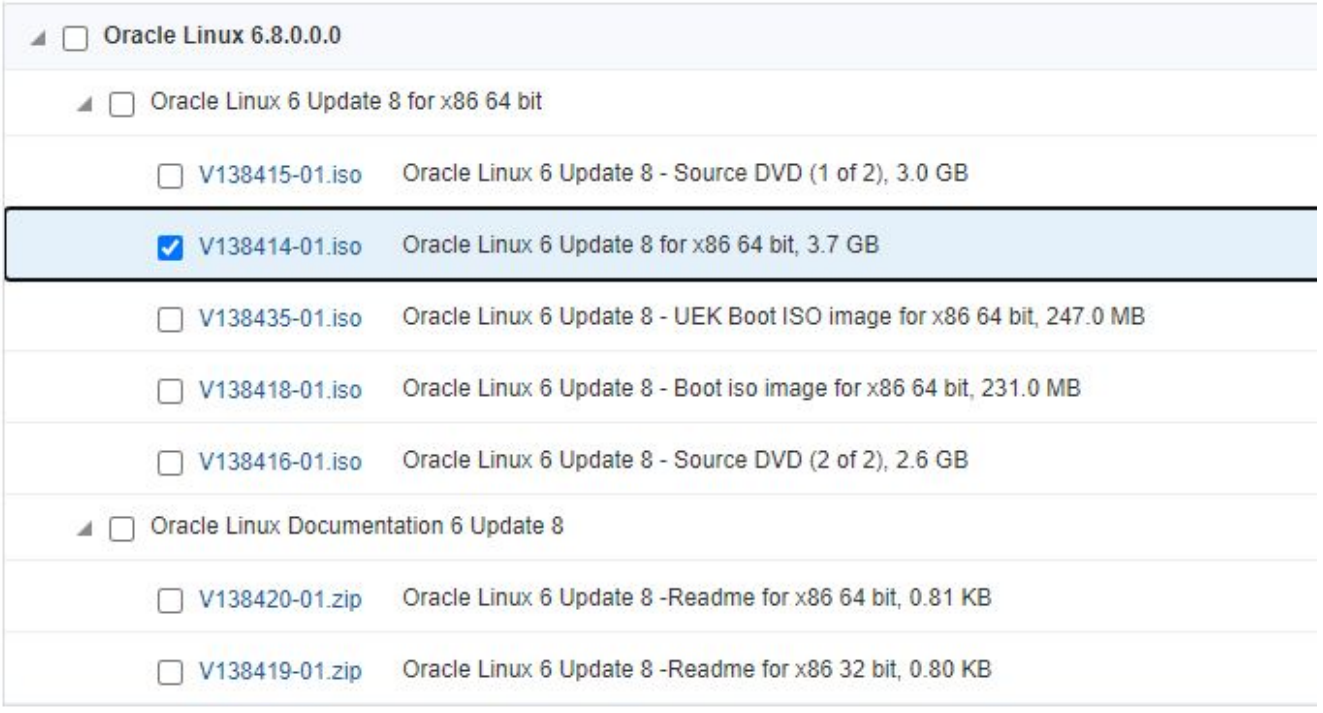
2. 설치하기

1) OS 다운 (Oracle Linux 버전 6.8)

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



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



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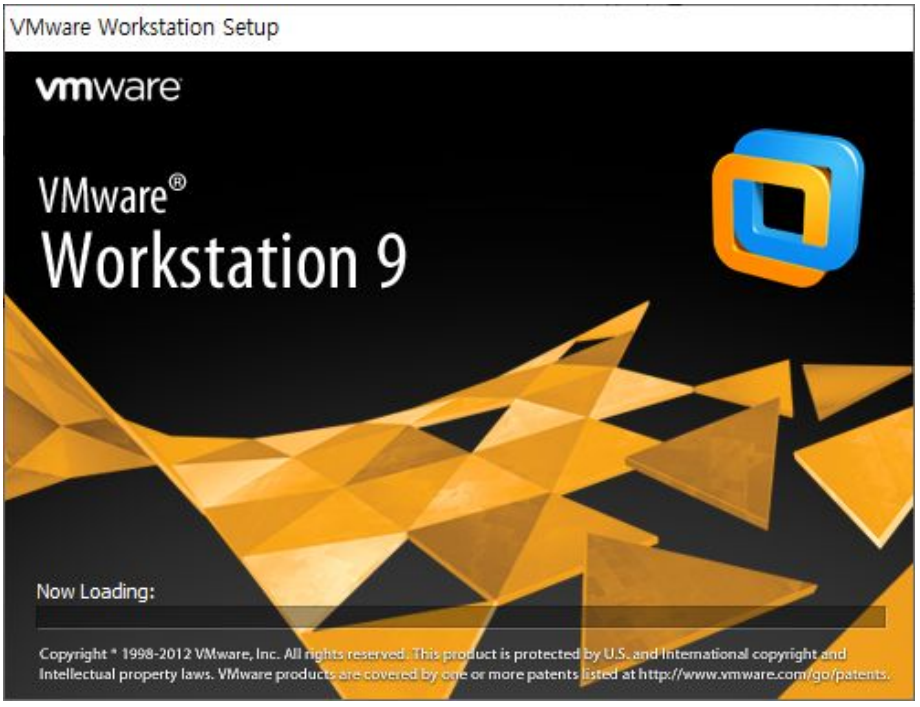
2) 가상머신 설치 (VMware)

VMware 설치



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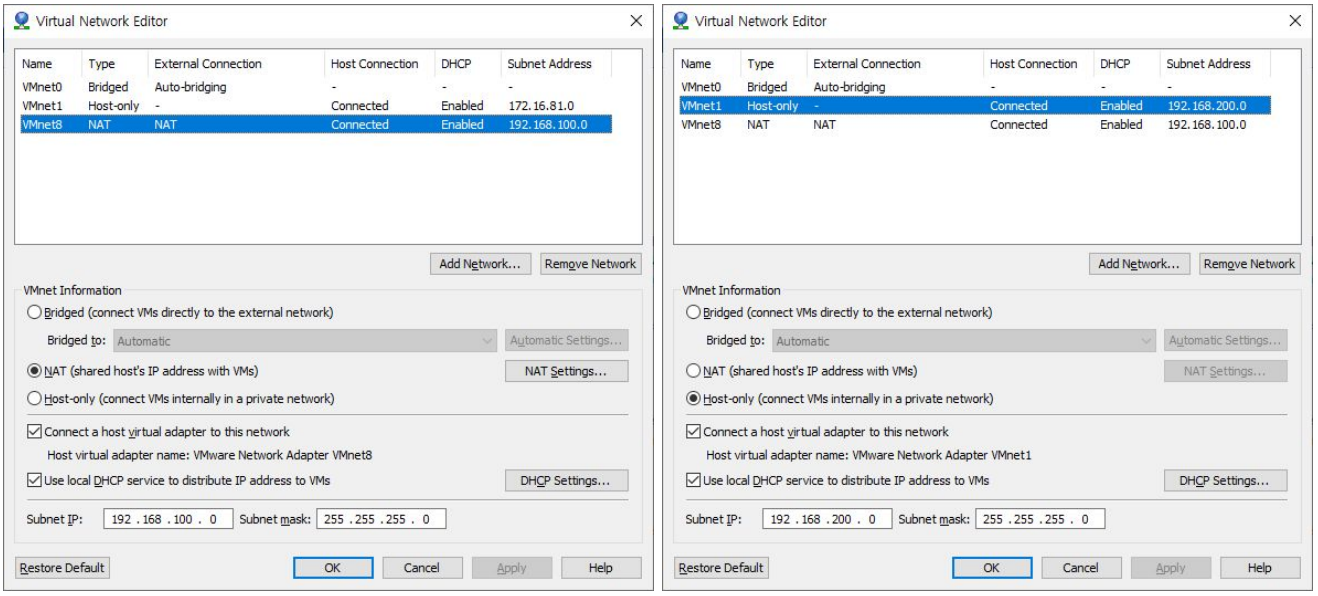
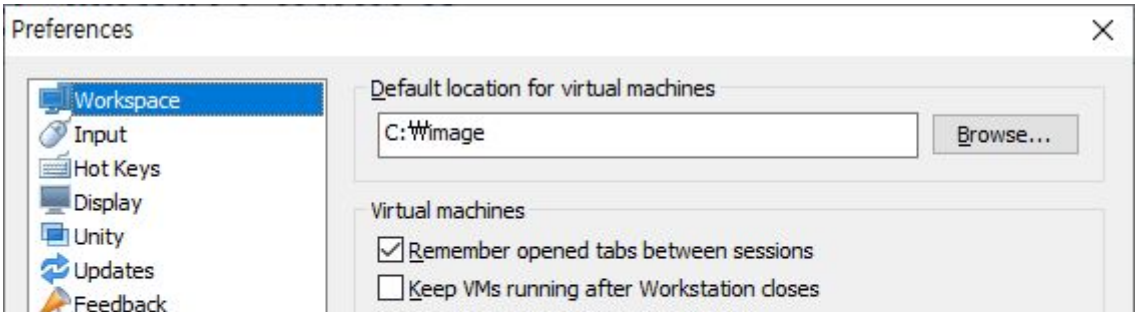
3) 가상 이미지 설치

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

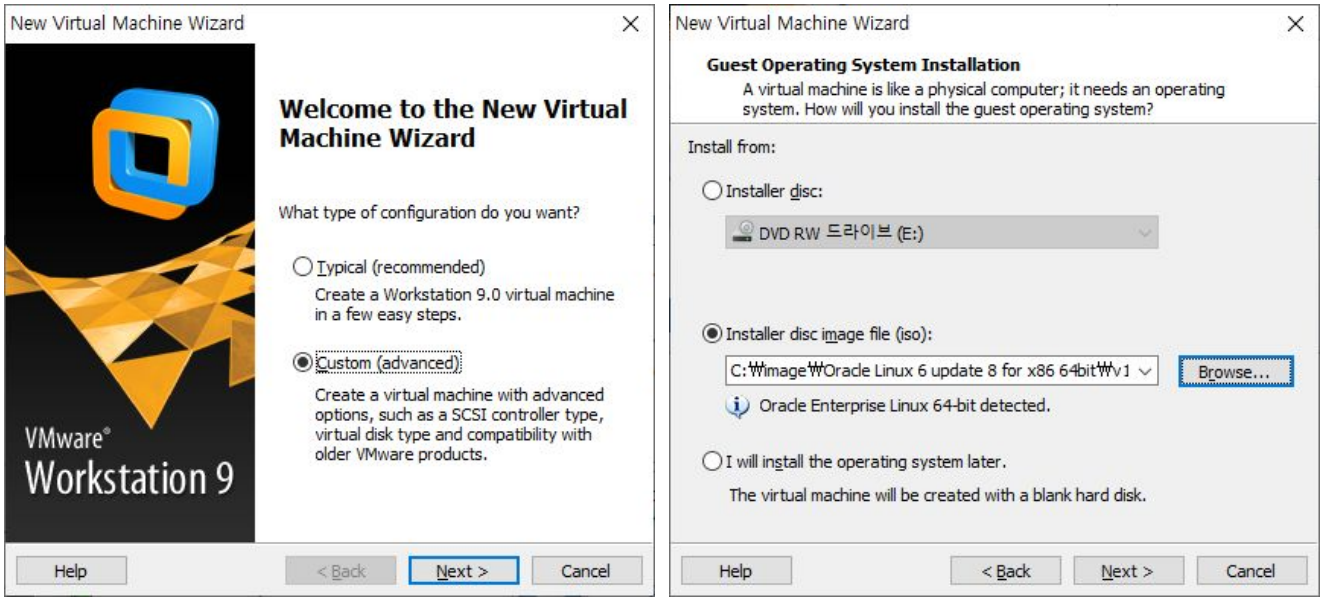


※ Host-only : 인스턴스들 간 공유할 수 있는 다리 역할, 하나의 디스크를 여러 PC가 공유

사전설정) Edit – Preferences 에서 가상머신 경로를 설정해준다.



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



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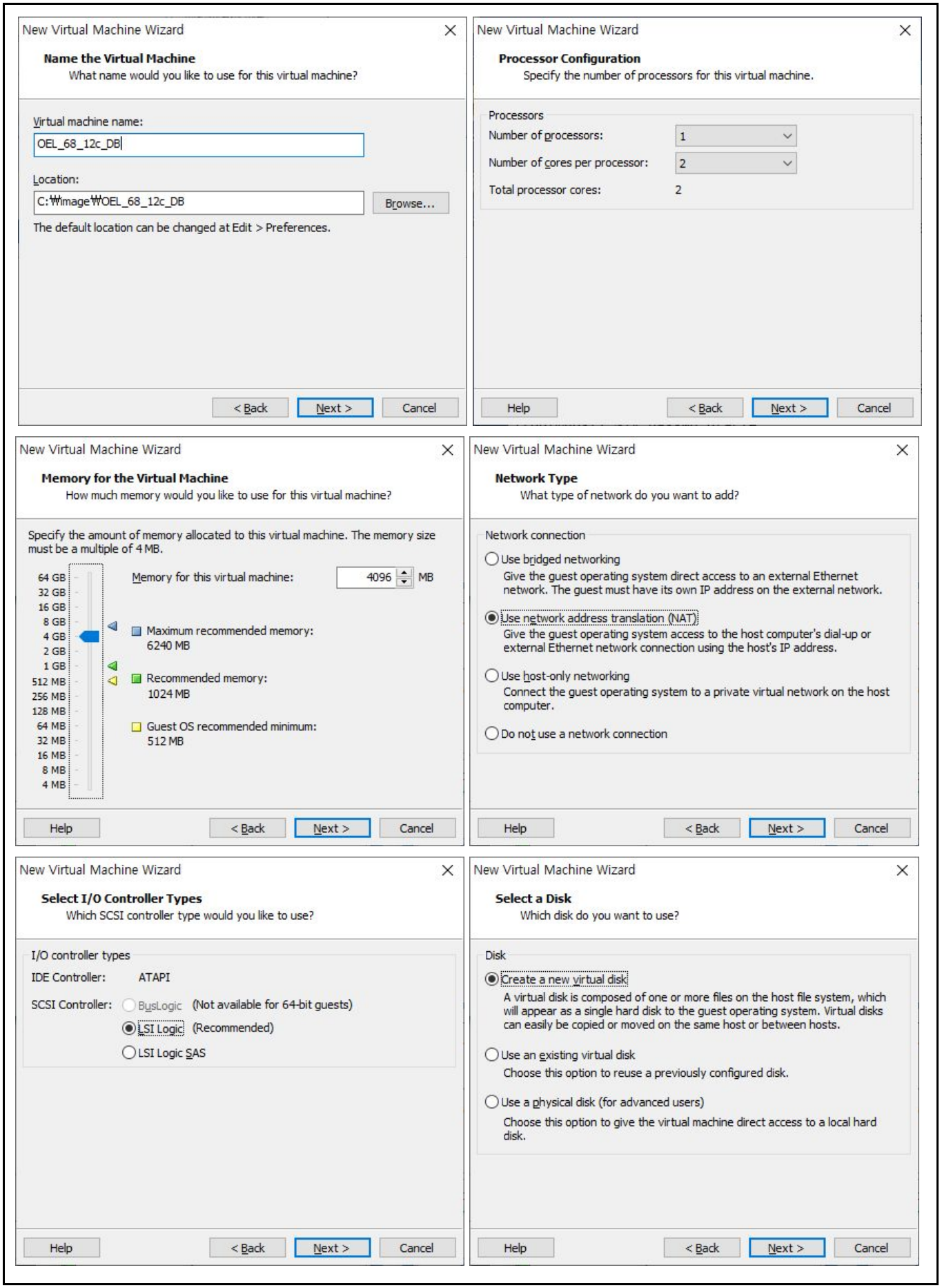

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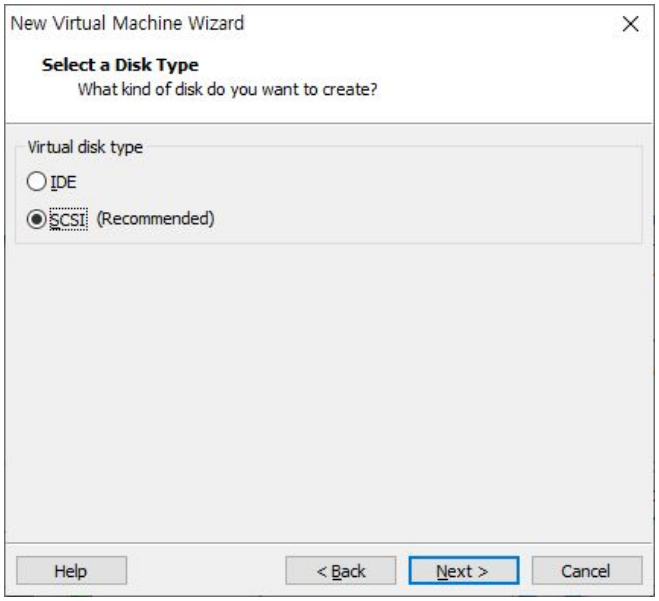

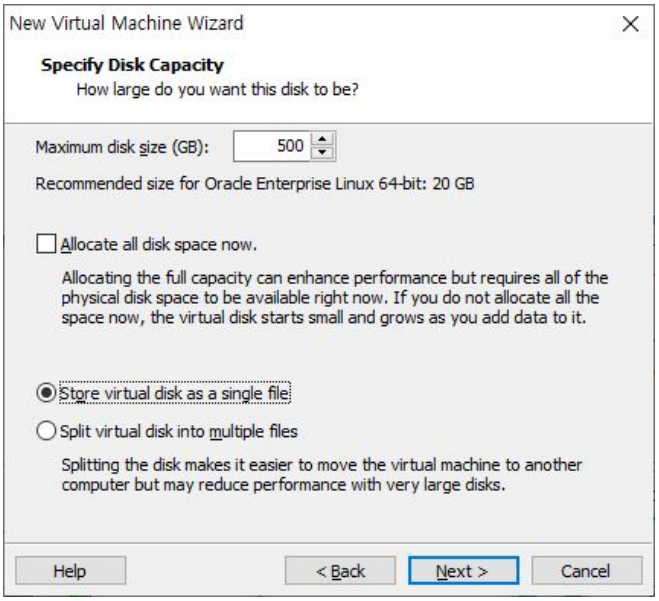

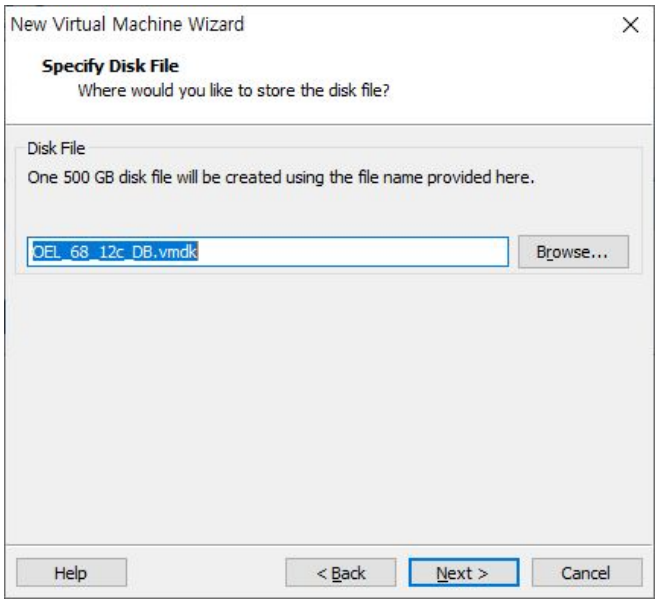

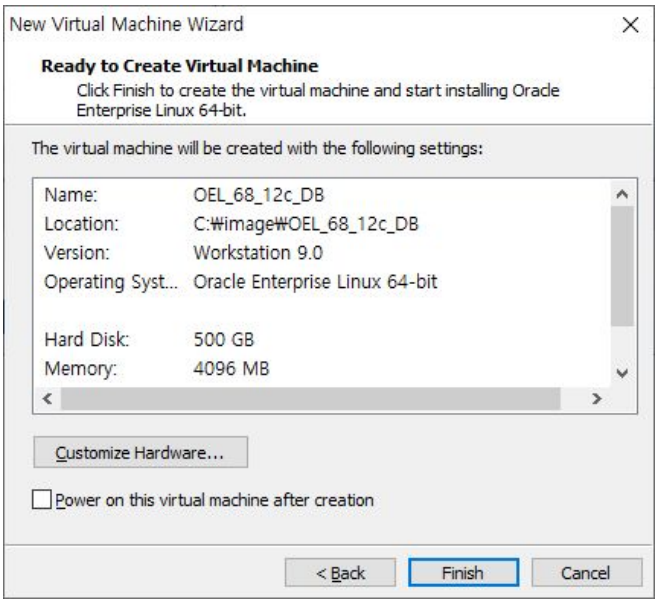

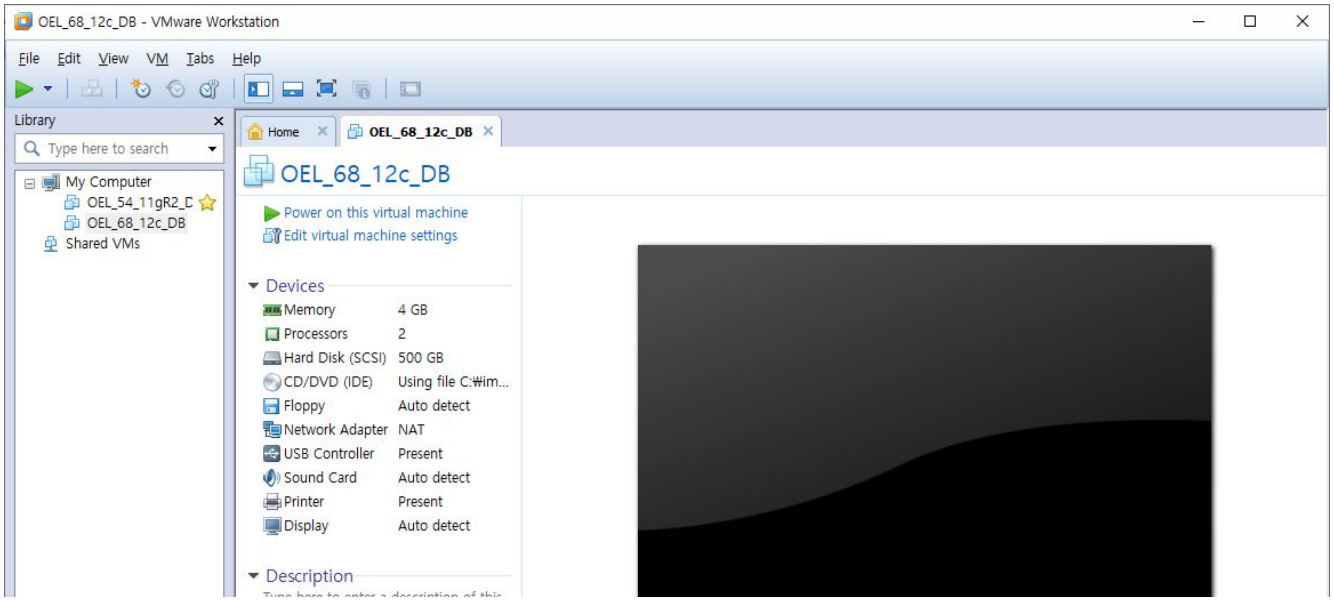

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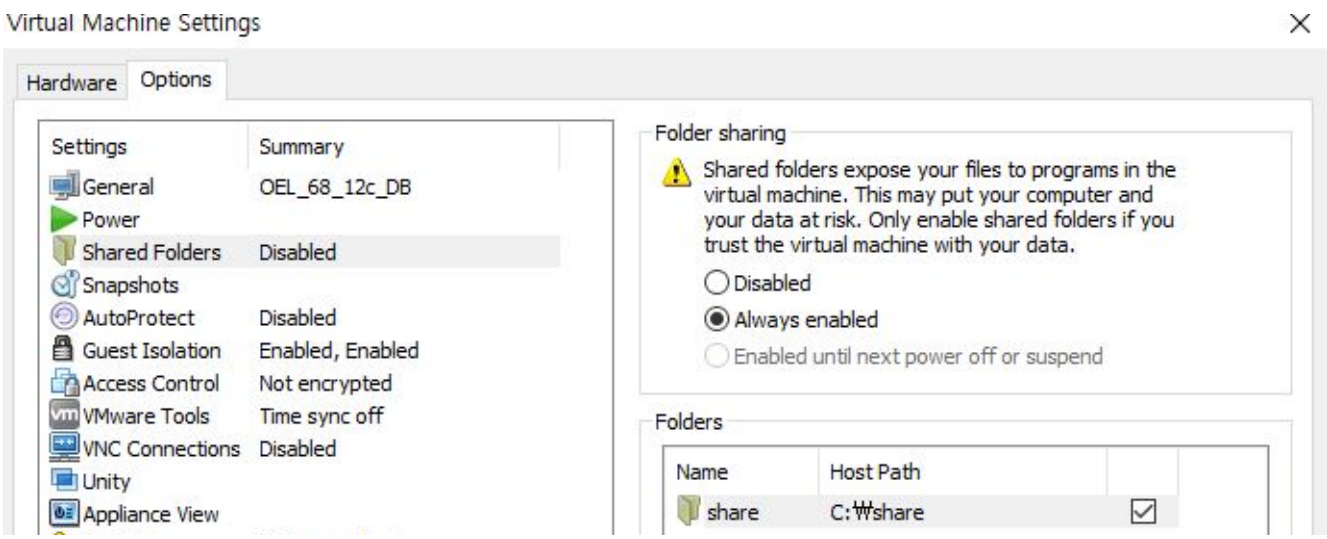
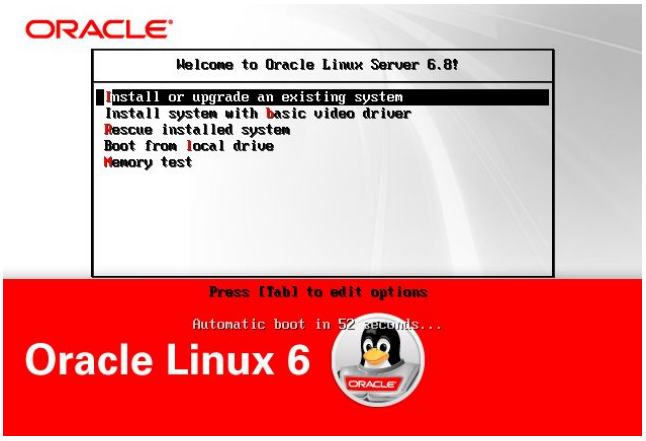
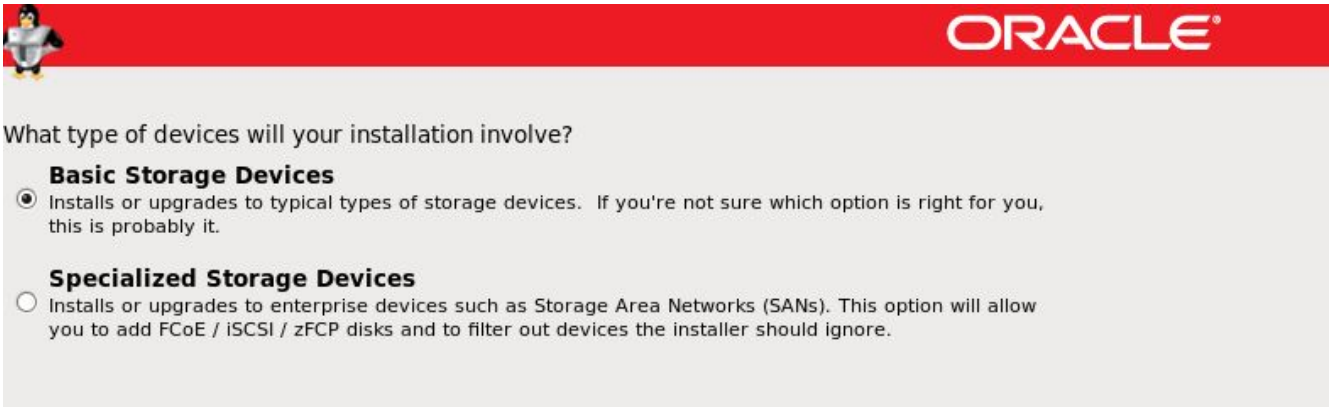
공유폴더 설정 (Edit Virtual Machine Settings)



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



[Skip 후 설치 진행]



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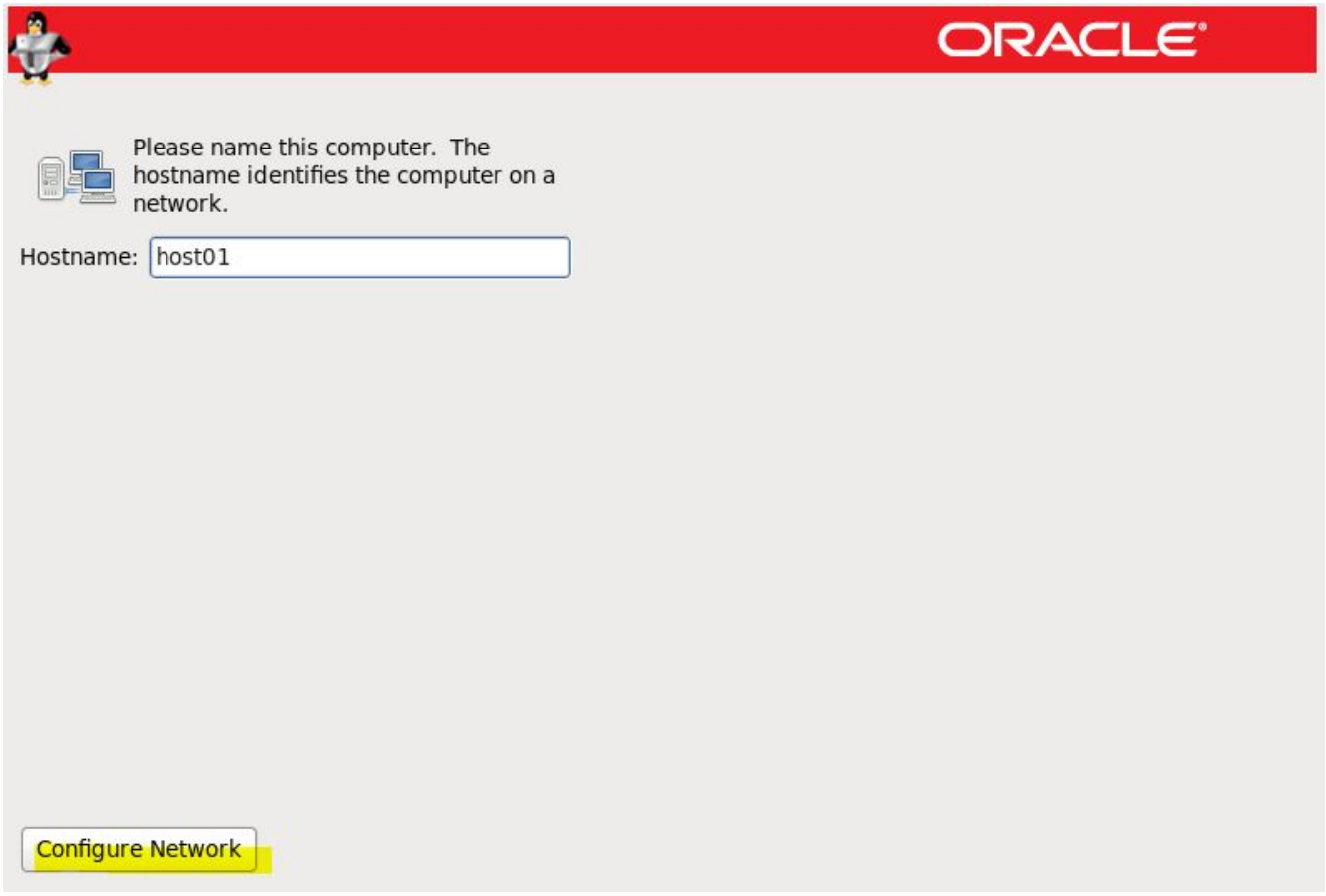

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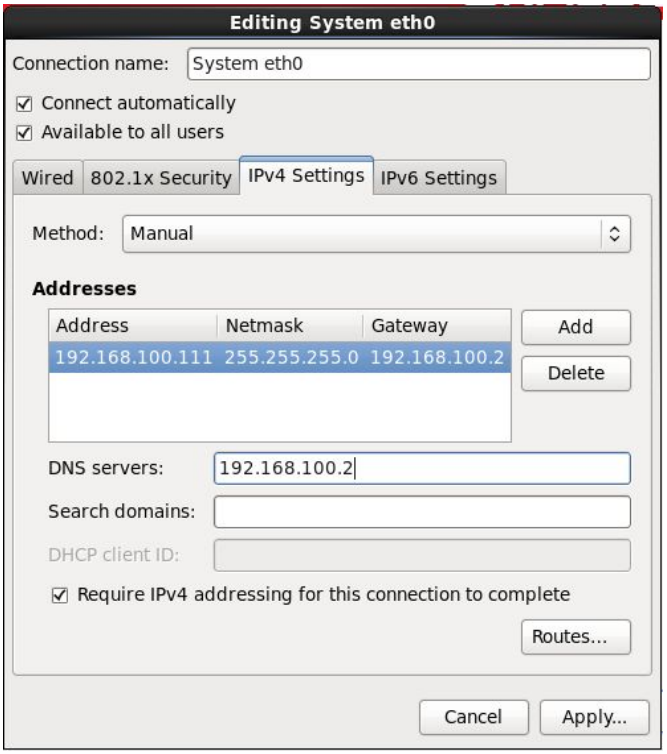
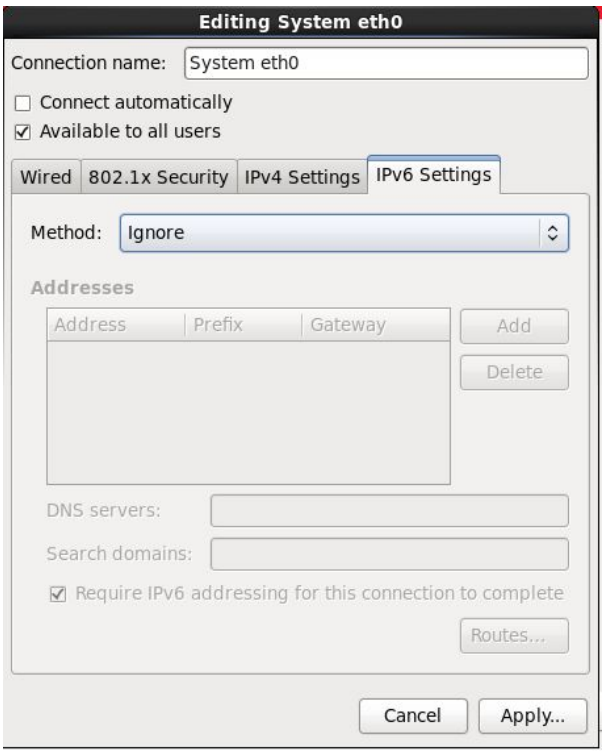
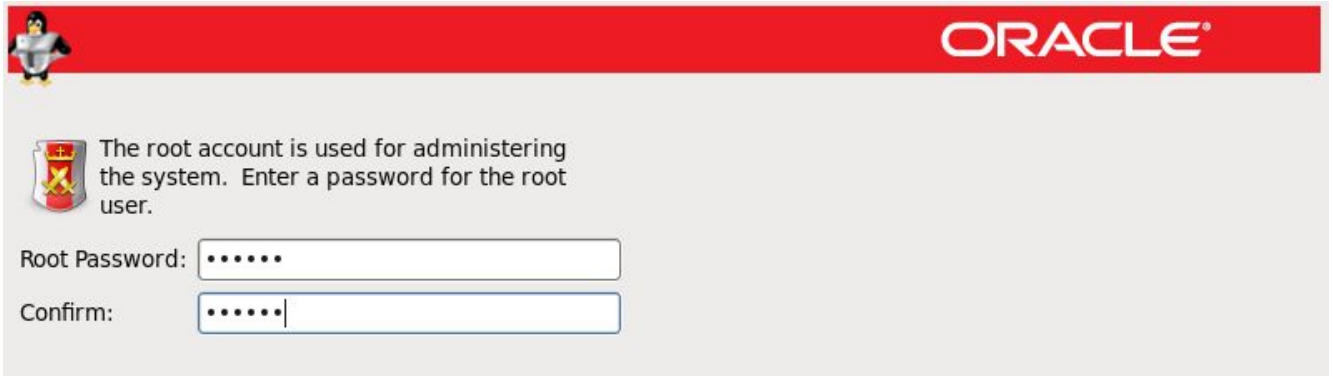




[호스트네임과 고정 IP주소 설정]

[지역 설정]



[Root Password 설정 (여기서는 oracle 로 지정)]

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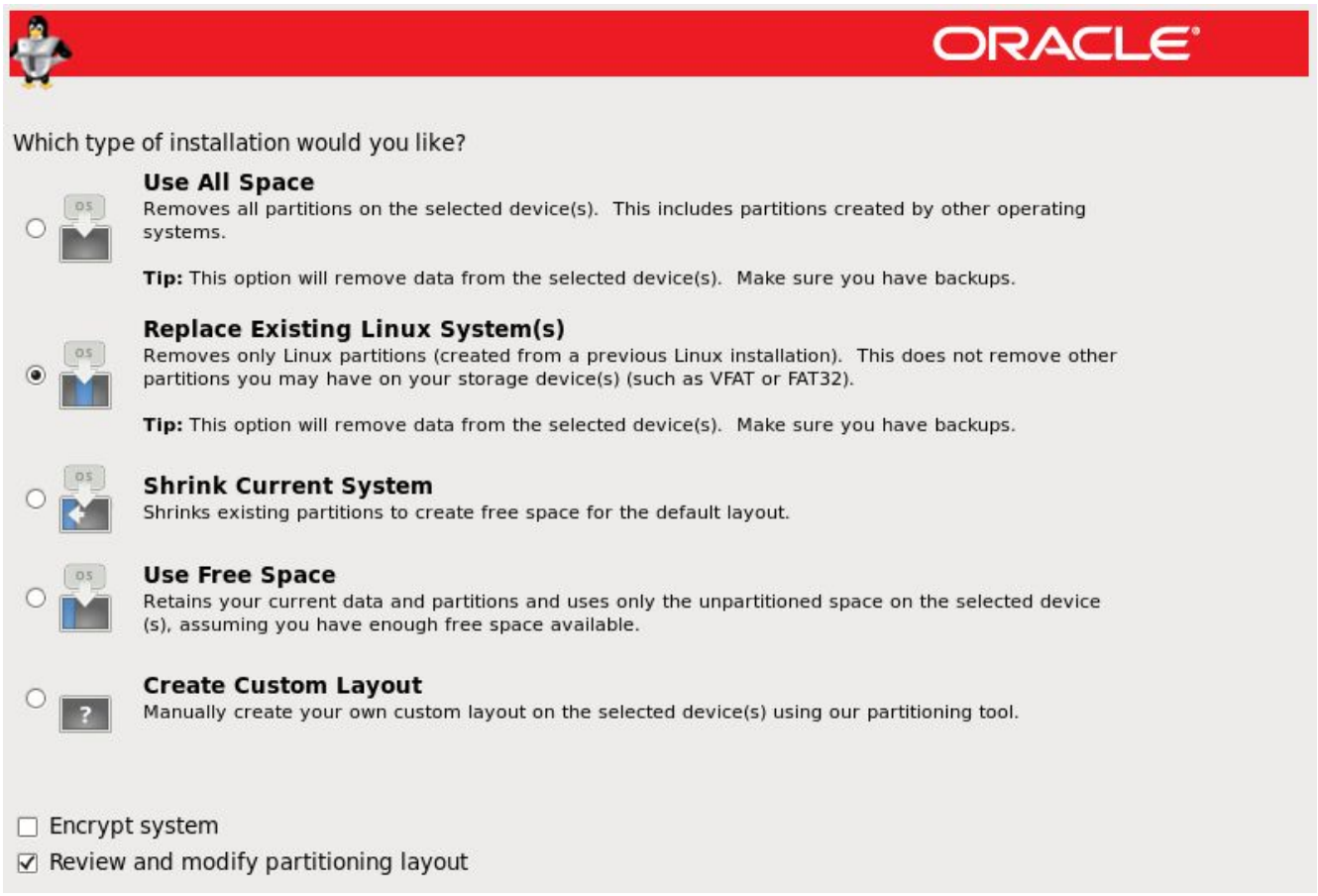
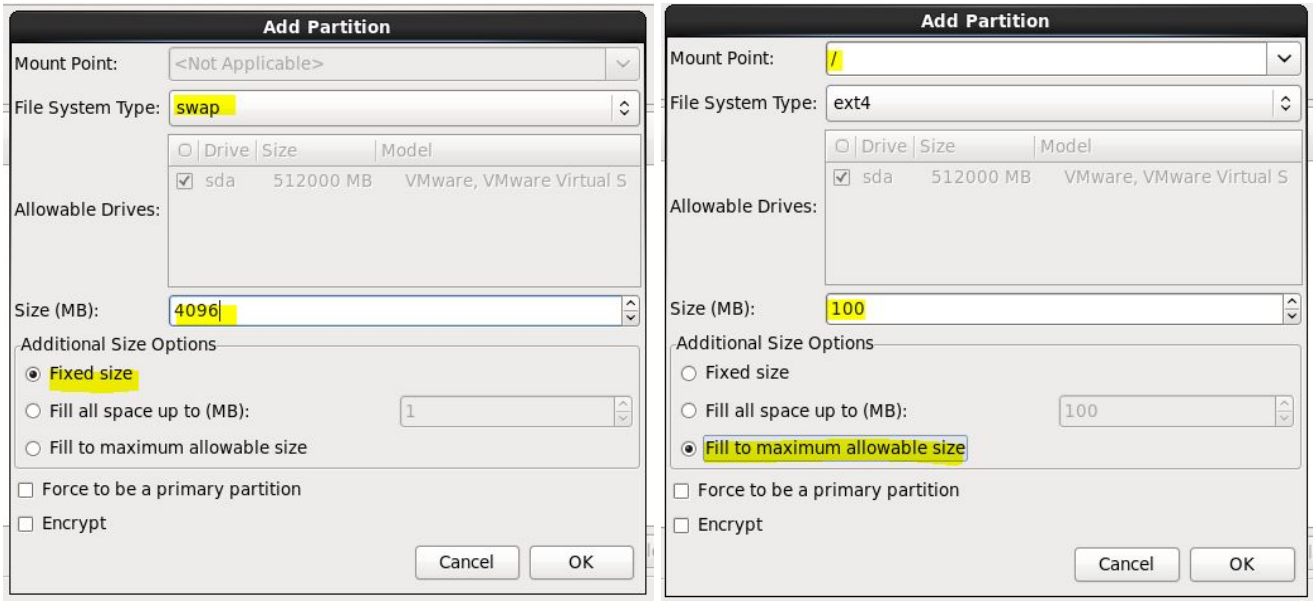
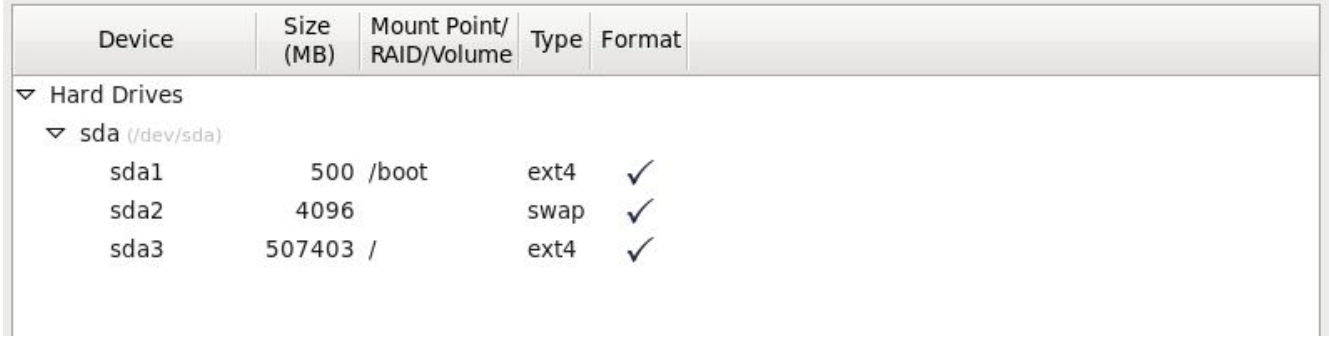


[타입 설정]





[파티션 설정 – 포맷 경고창 뜨면 Format, Writing Change]

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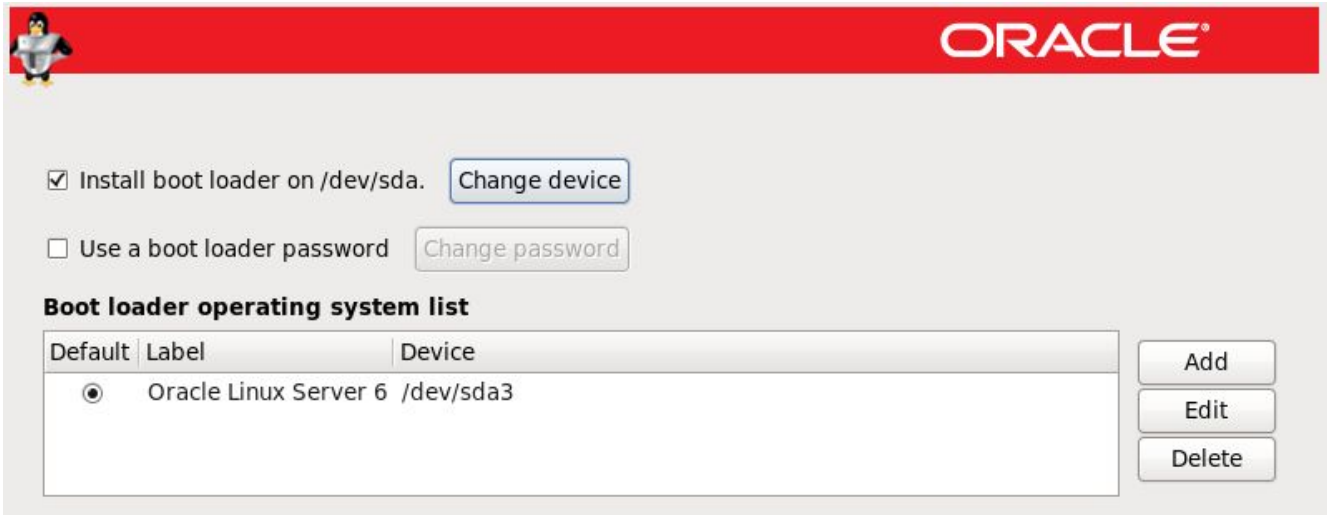
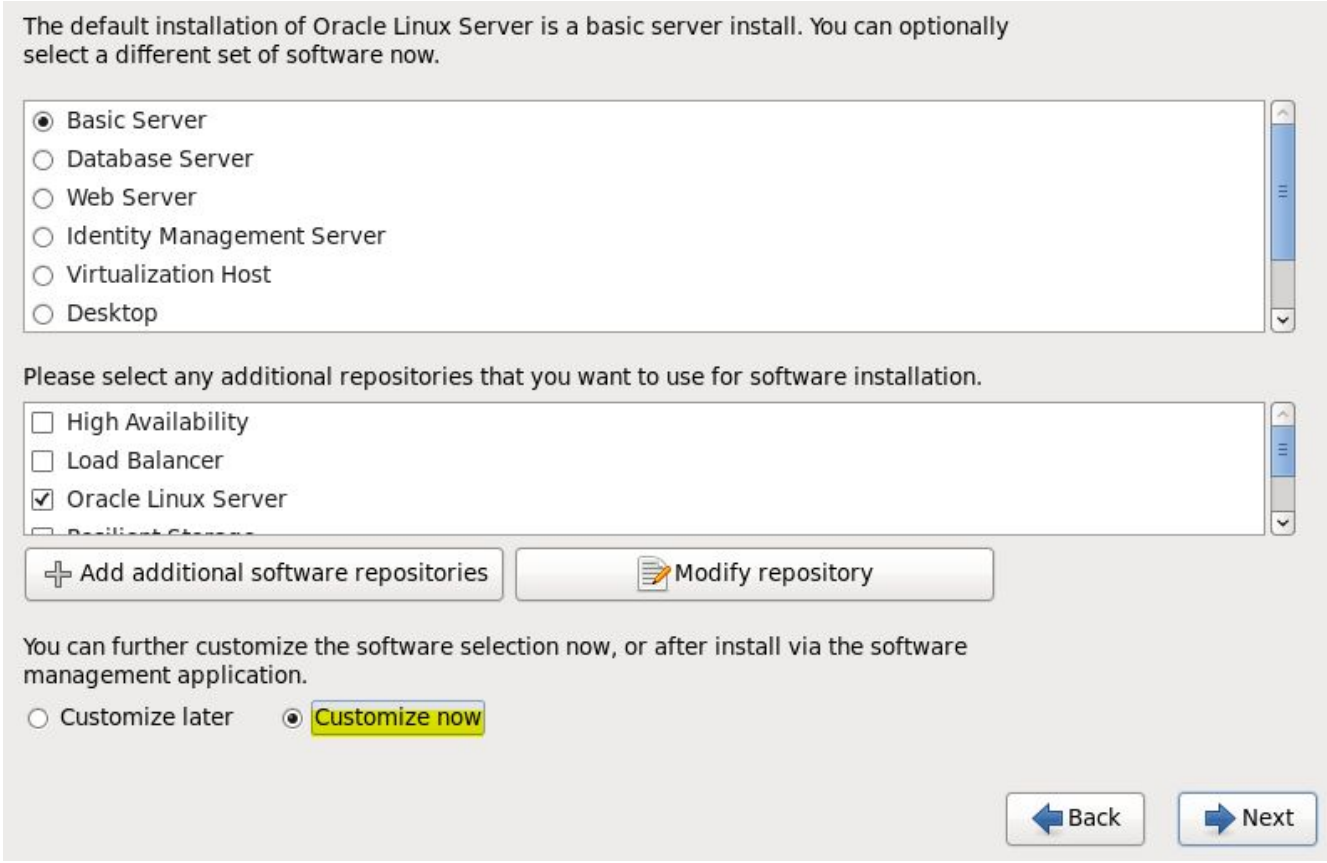
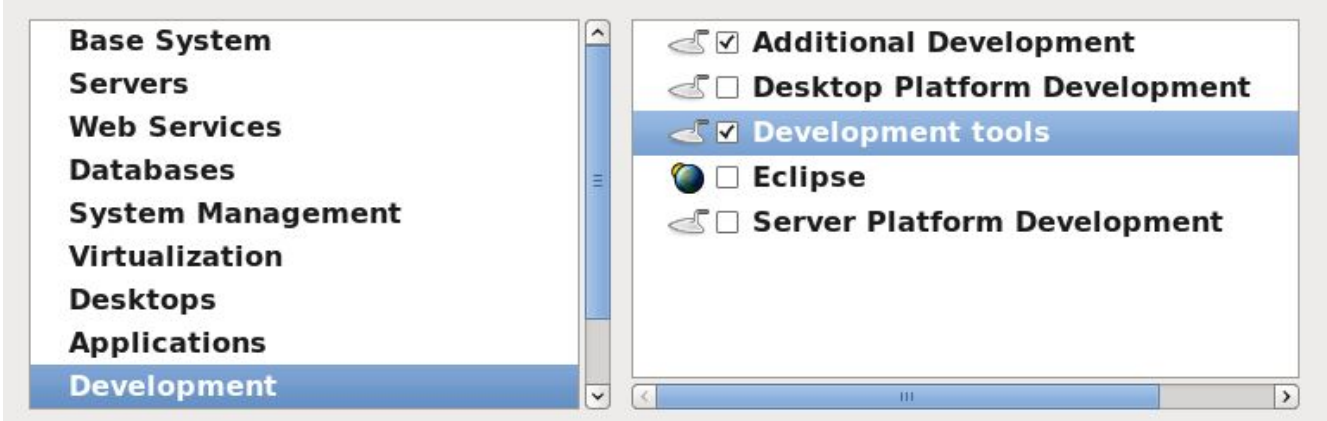


[부팅 설정 (부가기능)]





※ 아래와 같이 체크하고 그 외에는 체크를 해제한다.

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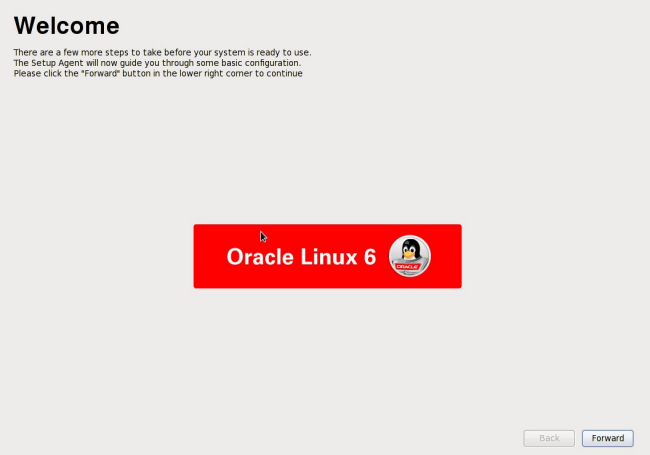
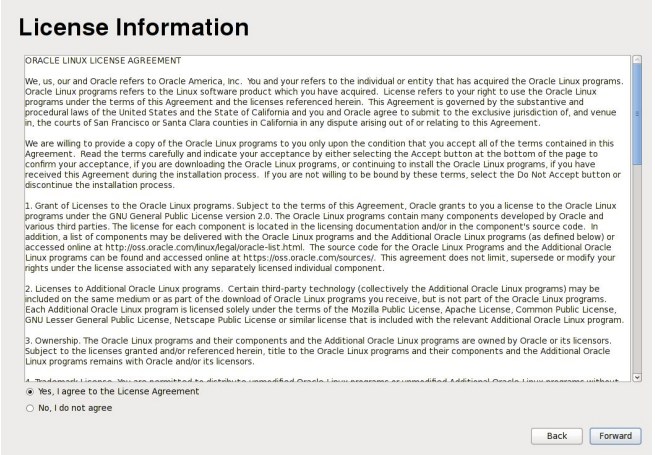
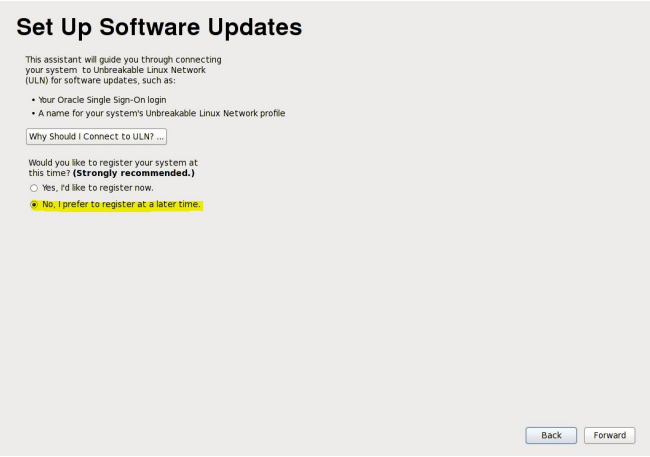
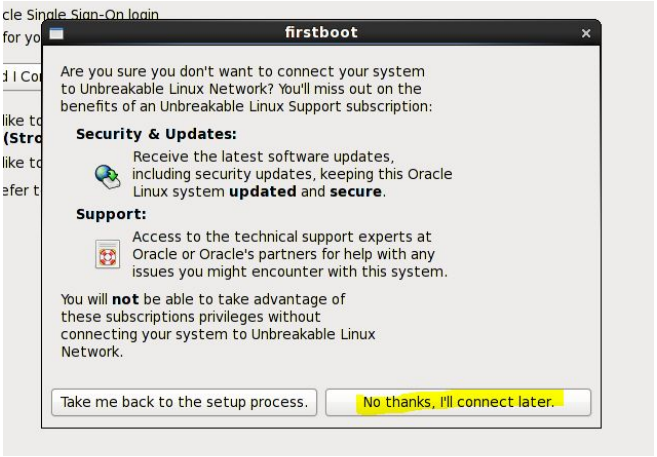
Base System	Base, Compatibility libraries, Hardware monitoring utilities, Large Systems Performance, Network file system client, Performance Tools, Perl Support
Servers	Server Platform, System administration tools
Desktops	Desktop, Desktop Platform, Fonts, General Purpose Desktop, Graphical Administration Tools, Input Methods, X Window System
Applications	Internet Browser
Development	Additional Development, Development Tools
UEK4 Kernel repo	UEK4 Kernel repo
Languages	Korean Support

리부팅 후 셋업설정









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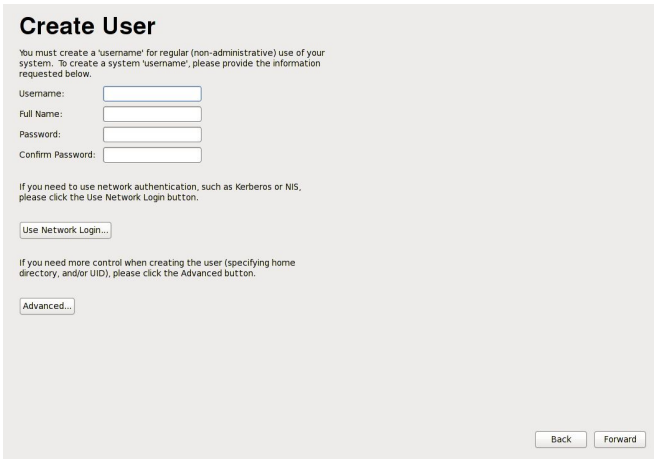
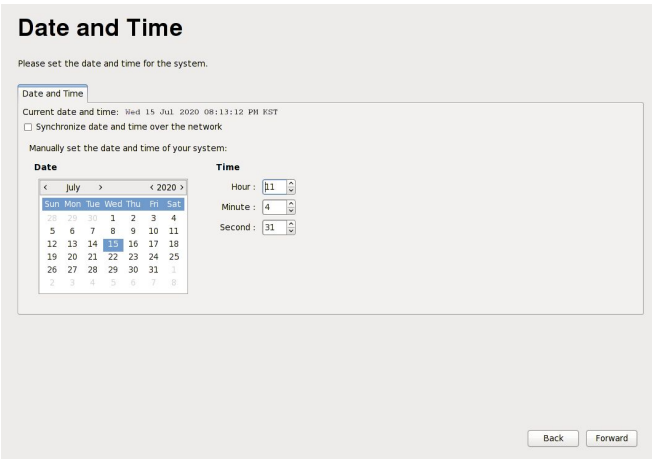
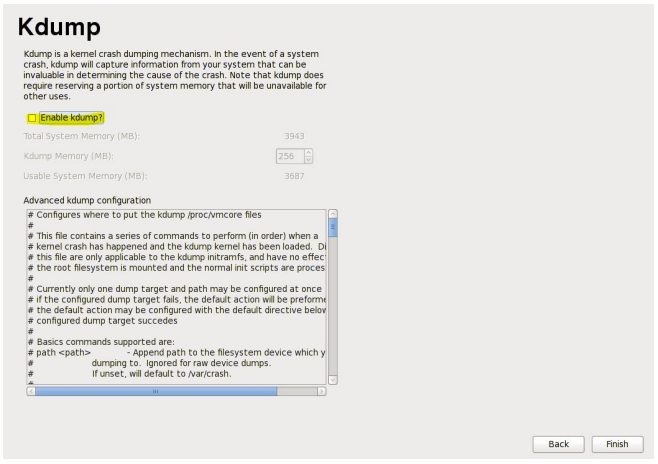
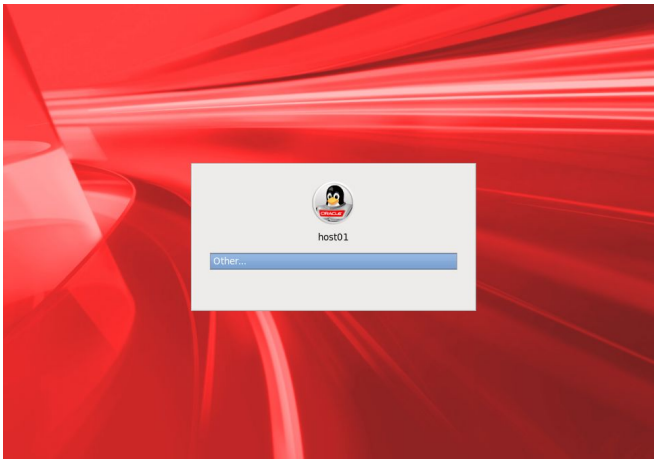
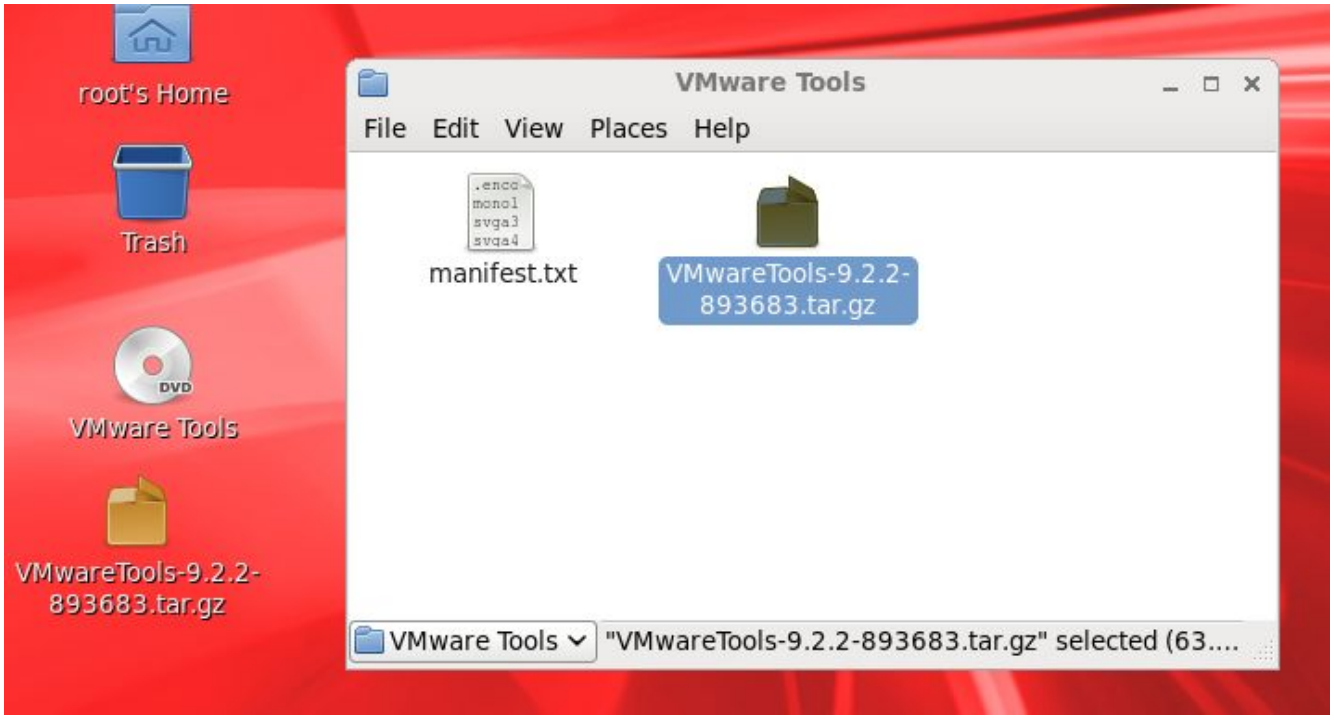








VMwareTools 설치 후 공유폴더 활성화



[가상머신 메뉴탭 – VM – install VMware Tool – 드래그해서 바탕화면에 놓기]

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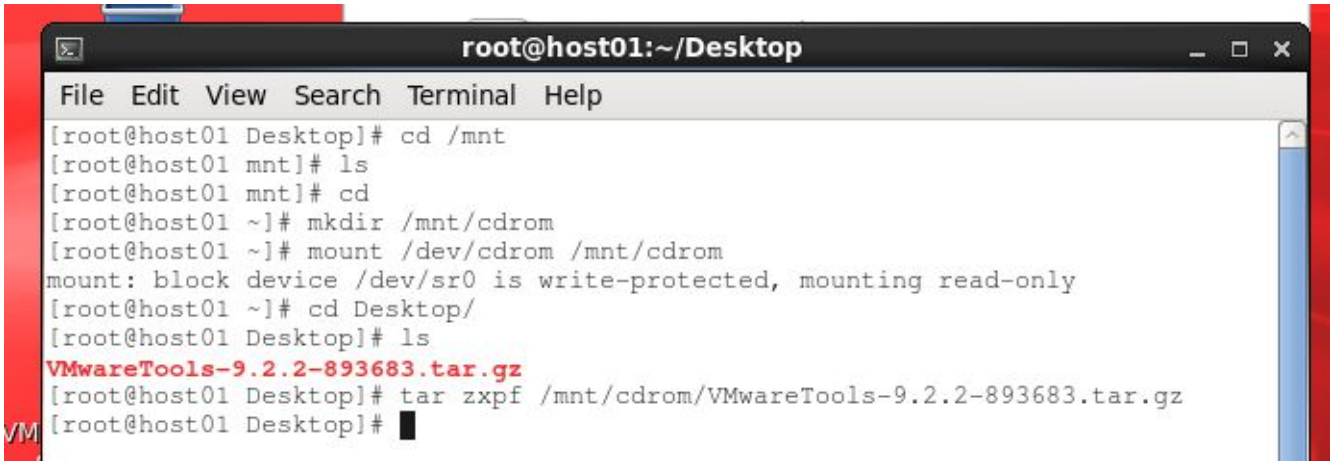
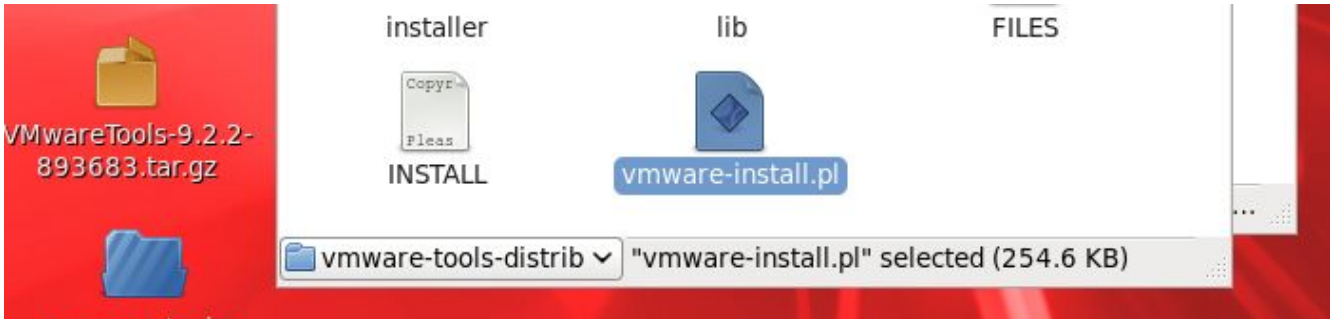


[압축풀기]



[더블클릭해서 설치]

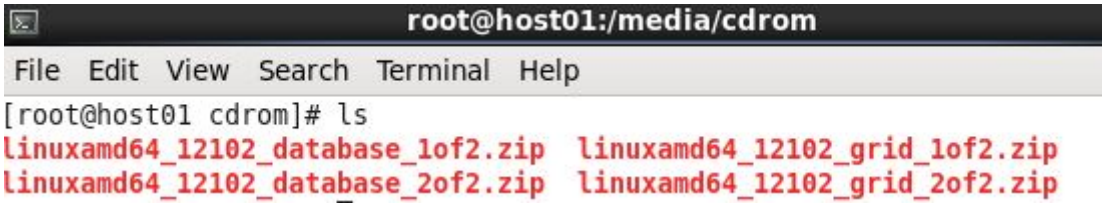
※ VMware Tools 설치가 불가할 시 윈도우에서 파일 보내는 법

```
[root@host01 ~]# cd /
[root@host01 /]# 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@host01 /]# cd media
[root@host01 media]# mkdir cdrom
[root@host01 media]# ls
cdrom
```

※ 윈도우 프롬프트창에서 실행

```
scp C:\share\linuxamd64_12102_database_1of2.zip root@192.168.100.111:/media/cdrom
scp C:\share\linuxamd64_12102_database_2of2.zip root@192.168.100.111:/media/cdrom
scp C:\share\linuxamd64_12102_grid_1of2.zip root@192.168.100.111:/media/cdrom
scp C:\share\linuxamd64_12102_grid_2of2.zip root@192.168.100.111:/media/cdrom
```



이슈사항) remote host identification has changed 에러 발생 시

```
[root@host01 /]# ssh-keygen -R 192.168.100.111
```

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사용자 그룹생성

```
[root@host01 ~]# groupadd -g 54321 oinstall
[root@host01 ~]# groupadd -g 54322 dba
[root@host01 ~]# groupadd -g 54323 oper
[root@host01 ~]# groupadd -g 54324 backupdba
[root@host01 ~]# groupadd -g 54325 dgdba
[root@host01 ~]# groupadd -g 54326 kmdba
[root@host01 ~]# groupadd -g 54327 asmdba
[root@host01 ~]# groupadd -g 54328 asmoper
[root@host01 ~]# groupadd -g 54329 asmadmin

[root@host01 ~]# useradd -u 54321 -g oinstall -G
dba,oper,backupdba,dgdba,kmdba,asmdba oracle
```

사용자 비밀번호 설정

```
[root@host01 ~]# 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/12.1.0.2/dbhome
export PATH=$ORACLE_HOME/bin:$PATH
export ORACLE_SID=PROD
export PS1="[\`echo \$ORACLE_SID\`@\h \W]$ "
unset LANG

-- INSERT --

[root@host01 ~]# chown oracle:oinstall /home/oracle/.bash_profile
```

패키지를 yum으로 다운받고 몇 가지 파일을 수정해준다.

```
[root@host01 ~]# yum install binutils -y
[root@host01 ~]# yum install compat-libcap1 -y
[root@host01 ~]# yum install compat-libstdc++-33 -y
[root@host01 ~]# yum install compat-libstdc++-33.i686 -y
[root@host01 ~]# yum install gcc -y
[root@host01 ~]# yum install gcc-c++ -y
[root@host01 ~]# yum install glibc -y
[root@host01 ~]# yum install glibc.i686 -y
[root@host01 ~]# yum install glibc-devel -y
[root@host01 ~]# yum install glibc-devel.i686 -y
[root@host01 ~]# yum install ksh -y
[root@host01 ~]# yum install libgcc -y
[root@host01 ~]# yum install libgcc.i686 -y
[root@host01 ~]# yum install libstdc++ -y

[root@host01 ~]# yum install libstdc++.i686 -y
[root@host01 ~]# yum install libstdc++-devel -y
[root@host01 ~]# yum install libstdc++-devel.i686 -y
[root@host01 ~]# yum install libaio -y
[root@host01 ~]# yum install libaio.i686 -y
[root@host01 ~]# yum install libaio-devel -y
[root@host01 ~]# yum install libaio-devel.i686 -y
[root@host01 ~]# yum install libXext -y
[root@host01 ~]# yum install libXext.i686 -y
[root@host01 ~]# yum install libXtst -y
```

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```
[root@host01 ~]# yum install libXtst.i686 -y
[root@host01 ~]# yum install libX11 -y
[root@host01 ~]# yum install libX11.i686 -y
[root@host01 ~]# yum install libXau -y
[root@host01 ~]# yum install libXau.i686 -y
[root@host01 ~]# yum install libxcb -y
[root@host01 ~]# yum install libxcb.i686 -y
[root@host01 ~]# yum install libXi -y
[root@host01 ~]# yum install libXi.i686 -y
[root@host01 ~]# yum install make -y
[root@host01 ~]# yum install sysstat -y
[root@host01 ~]# yum install unixODBC -y
[root@host01 ~]# yum install unixODBC-devel -y
[root@host01 ~]# yum install oracleasm* -y

[root@host01 ~]# vi /etc/sysctl.conf
================================================
fs.file-max = 6815744
kernel.sem = 250 32000 100 128
kernel.shmmni = 4096
kernel.shmall = 1073741824
kernel.shmmax = 4398046511104
net.core.rmem_default = 262144
net.core.rmem_max = 4194304
net.core.wmem_default = 262144
net.core.wmem_max = 1048576
fs.aio-max-nr = 1048576
net.ipv4.ip_local_port_range = 9000 65500
================================================

[root@host01 ~]# vi /etc/security/limits.conf
================================================
oracle   soft   nofile   1024
oracle   hard   nofile   65536
oracle   soft   nproc    16384
oracle   hard   nproc    16384
oracle   soft   stack    10240
oracle   hard   stack    32768

[root@host01 ~]# vi /etc/selinux/config
================================================
SELINUX=permissive

[root@host01 ~]# vi /etc/security/limits.d/90-nproc.conf
================================================
# Default limit for number of user's processes to prevent
# accidental fork bombs.
# See rhbz #432903 for reasoning.

*          soft    nproc     16384


[root@host01 ~]# service iptables stop

[root@host01 ~]# chkconfig iptables off

[root@host01 ~]# vi /etc/hosts
================================================
127.0.0.1               host01 localhost.localdomain localhost
192.168.100.111         host01
```

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환경변수 설정 시 지정했던 경로대로 디렉토리를 만들어준다.

※ chown 소유자 설정 / chmod 권한 변경

```
[root@host01 ~]# mkdir -p /u01/app/oracle
[root@host01 ~]# chown -R oracle:oinstall /u01
[root@host01 ~]# chmod -R 775 /u01
```

※ 압축을 풀 공간인 stage 디렉토리를 생성

```
[root@host01 ~]# mkdir /stage
```

※ 오라클 소프트웨어 압축해제

```
[root@host01 cdrom]# unzip linuxamd64_12102_database_1of2.zip -d /stage
[root@host01 cdrom]# unzip linuxamd64_12102_database_2of2.zip -d /stage
[root@host01 cdrom]# unzip linuxamd64_12102_grid_1of2.zip -d /stage
[root@host01 cdrom]# unzip linuxamd64_12102_grid_2of2.zip -d /stage
```

※ stage 디렉토리에 소유자 설정

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

[root@host1 /]# ls -l /

total 110

dr-xr-xr-x.   2 root   root      4096 Jul 15 17:04 bin
dr-xr-xr-x.   5 root   root      1024 Jul 16  2020 boot
drwxr-xr-x.   2 root   root      4096 Mar 23  2016 cgroup
drwxr-xr-x.  19 root   root      4200 Jul 16  2020 dev
drwxr-xr-x. 112 root   root     12288 Jul 15 17:09 etc
drwxr-xr-x.   3 root   root      4096 Jul 15 17:00 home
dr-xr-xr-x.  13 root   root      4096 Jul 15 17:05 lib
dr-xr-xr-x.   9 root   root     12288 Jul 15 17:03 lib64
drwx------.   2 root   root     16384 Jul 16  2020 lost+found
drwxr-xr-x.   4 root   root      4096 Jul 15 16:52 media
drwxr-xr-x.   2 root   root         0 Jul 16  2020 misc
drwxr-xr-x.   2 root   root      4096 Jul 15 16:51 mnt
drwxr-xr-x.   2 root   root         0 Jul 16  2020 net
drwxr-xr-x.   3 root   root      4096 Jul 16  2020 opt
dr-xr-xr-x. 179 root   root         0 Jul 16  2020 proc
dr-xr-x---.  24 root   root      4096 Jul 15 16:52 root
dr-xr-xr-x.   2 root   root     12288 Jul 15 17:03 sbin
drwxr-xr-x.   7 root   root         0 Jul 16  2020 selinux
drwxr-xr-x.   2 root   root      4096 Nov  1  2011 srv
drwxr-xr-x.   4 oracle oinstall  4096 Jul 15 17:11 stage
dr-xr-xr-x.  13 root   root         0 Jul 16  2020 sys
drwxrwxrwt.  15 root   root      4096 Jul 15 17:11 tmp
drwxrwxr-x.   3 oracle oinstall  4096 Jul 15 17:09 u01
drwxr-xr-x.  13 root   root      4096 Jul 16  2020 usr
drwxr-xr-x.  22 root   root      4096 Jul 16  2020 var
```

※ 설정완료 후 오라클 계정으로 재로그인한다.

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5) DB 소프트웨어 설치 (Oracle 12c)

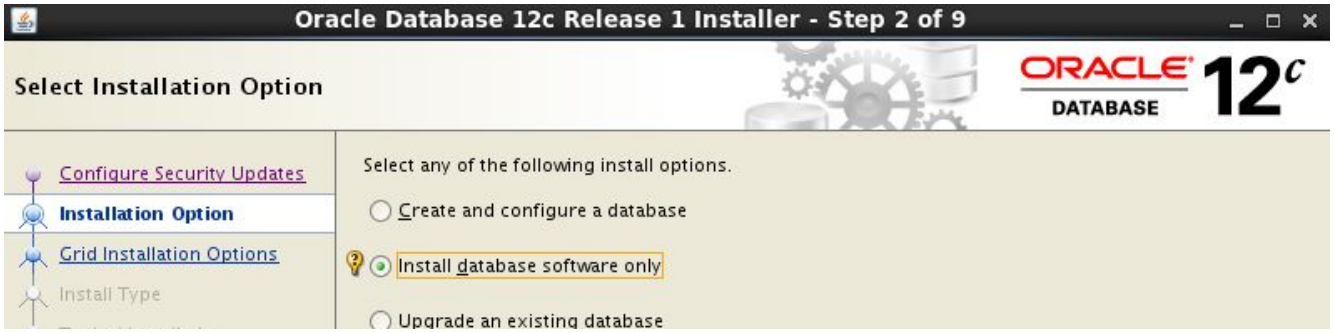
oracle 계정으로 로그인하여 오라클 소프트웨어를 설치한다.

```
[oracle@host01 ~]$ cd /stage/database/

[oracle@host01 database]$ ls
doc       readme.html  rpm           sshsetup  welcome.html
install   response     runInstaller  stage

[oracle@host01 database]$ ./runInstaller
```

오라클 12c를 설치한다.



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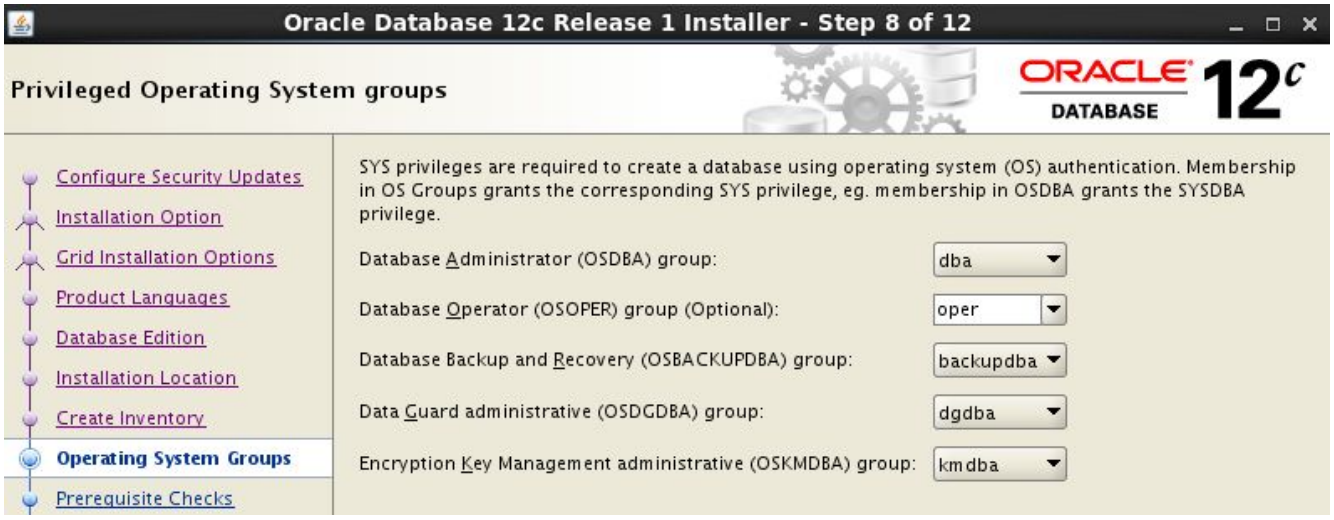

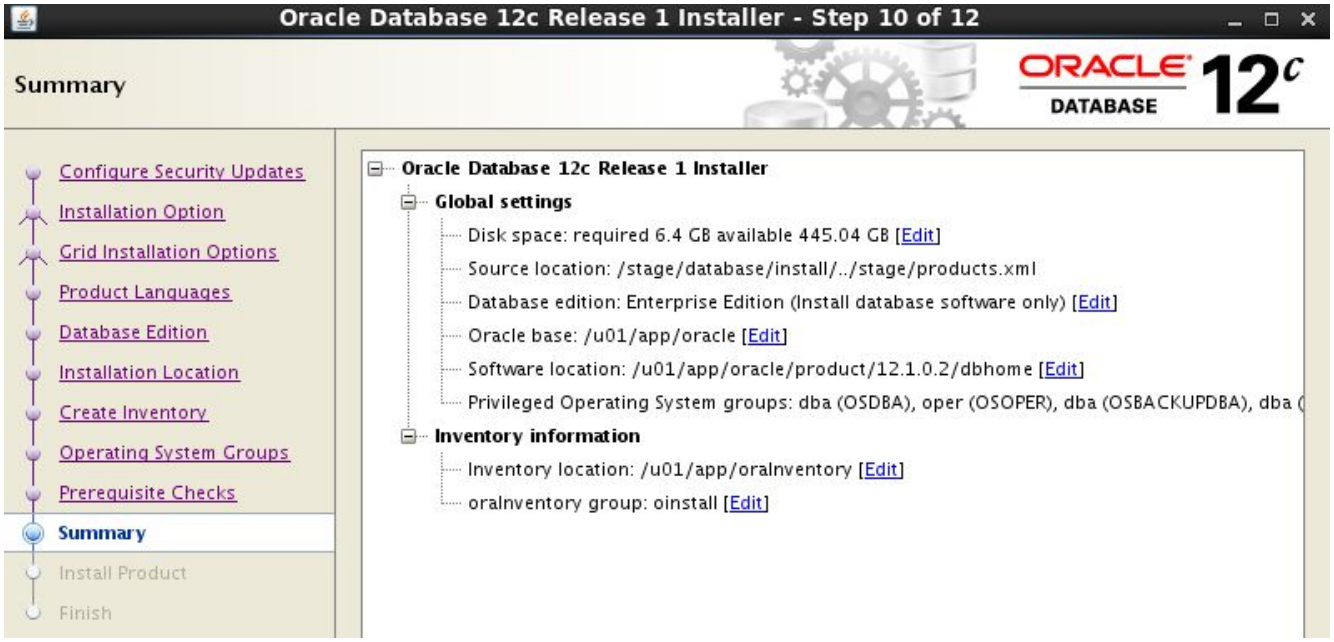

[에러가 없다면 Prerequisite Checks 단계를 건너뛴다]

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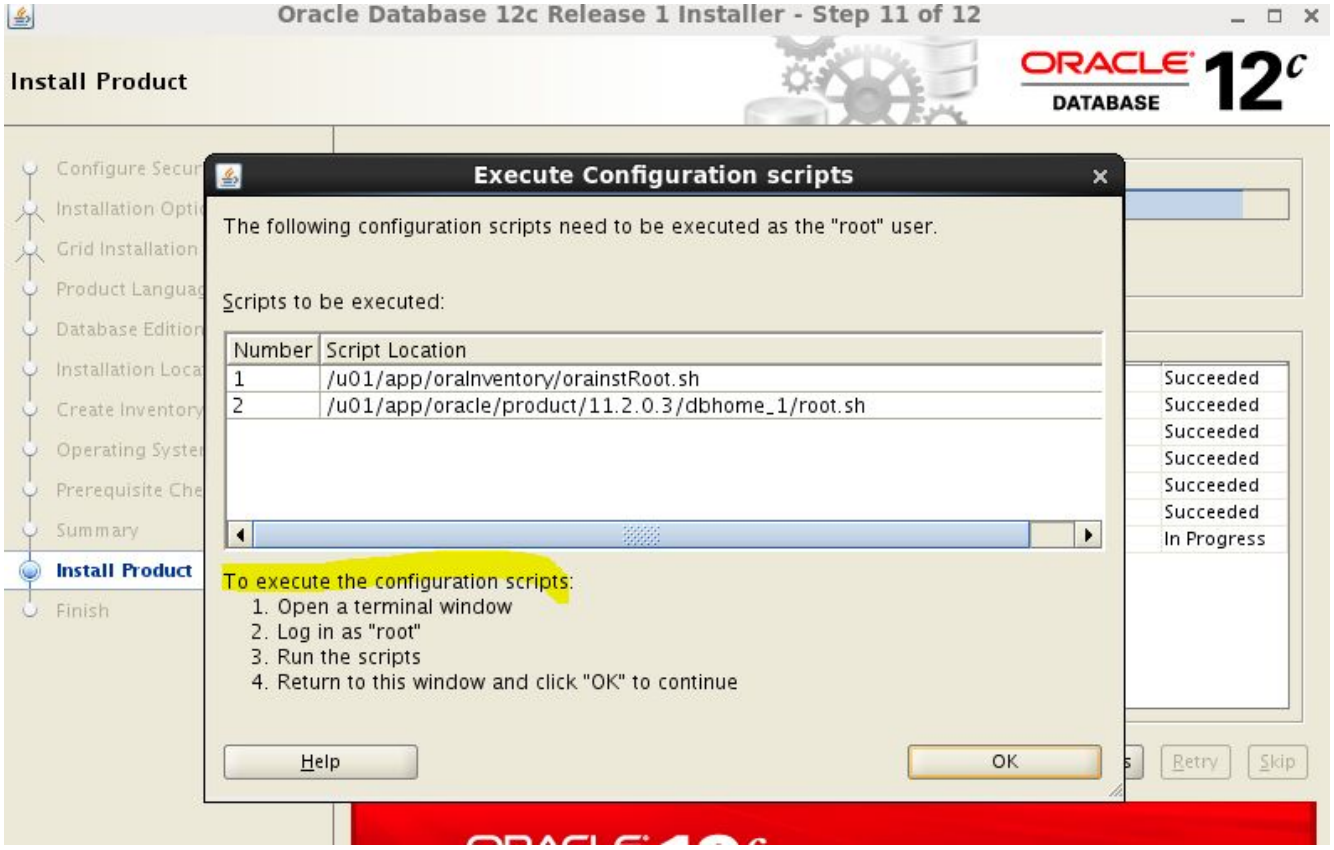

※ 루트로 로그인하여 To execute the configuration scripts 대로 진행한다.

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

[root@host01 ~]# /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@host01 ~]# /u01/app/oracle/product/12.1.0.2/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/12.1.0.2/dbhome_1
```

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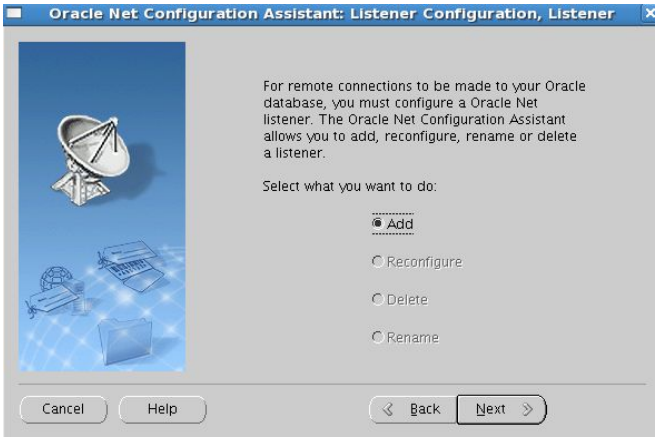
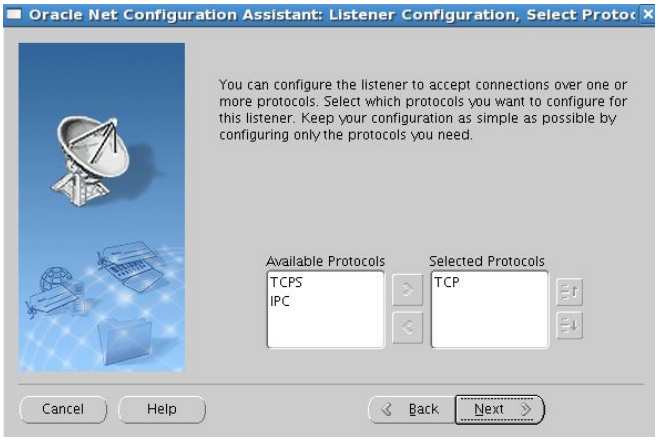
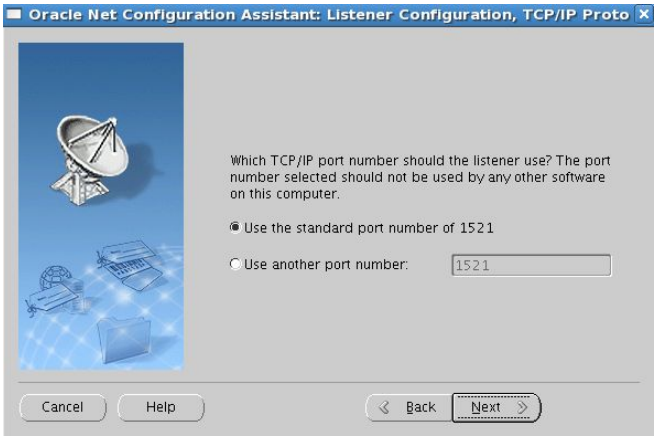
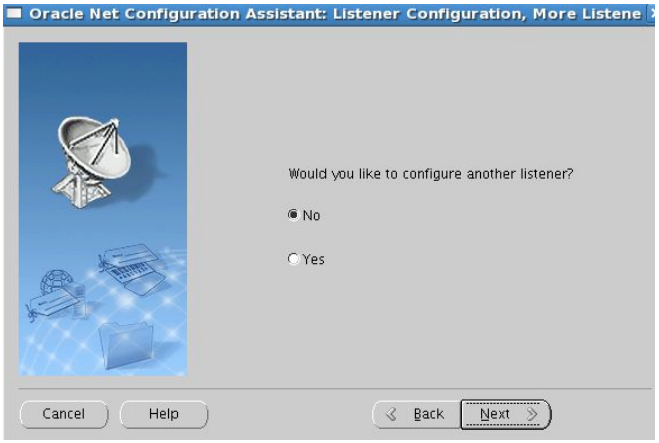
리스너 설정 (특별한 설정이 없으면 모든 단계에서 Next 로 넘어간다)

```
[oracle@host01 database]$ netca
```









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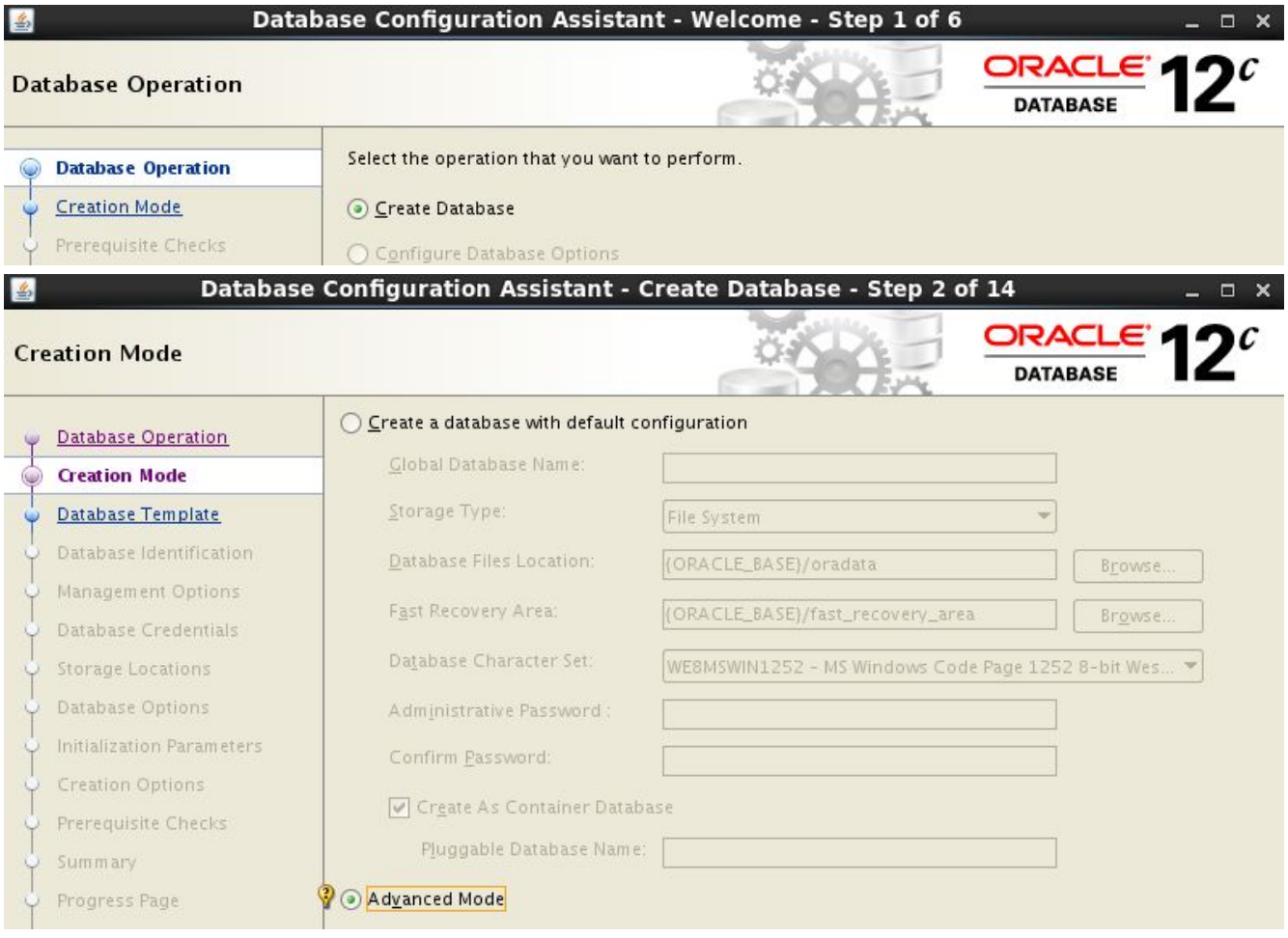
리스너 확인

```
[oracle@host01 ~]$ lsnrctl status

LSNRCTL for Linux: Version 12.1.0.2.0 - Production on 15-JUL-2020 13:43:26

Copyright (c) 1991, 2014, Oracle.  All rights reserved.

Connecting to (DESCRIPTION=(ADDRESS=(PROTOCOL=TCP)(HOST=host1)(PORT=1521)))
STATUS of the LISTENER
------------------------
Alias                     LISTENER
Version                   TNSLSNR for Linux: Version 12.1.0.2.0 - Production
Start Date                09-JUL-2020 13:43:17
Uptime                    0 days 0 hr. 0 min. 9 sec
Trace Level               off
Security                  ON: Local OS Authentication
SNMP                      OFF
Listener Parameter File
/u01/app/oracle/product/12.1.0.2/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@host01 ~]$ dbca
```



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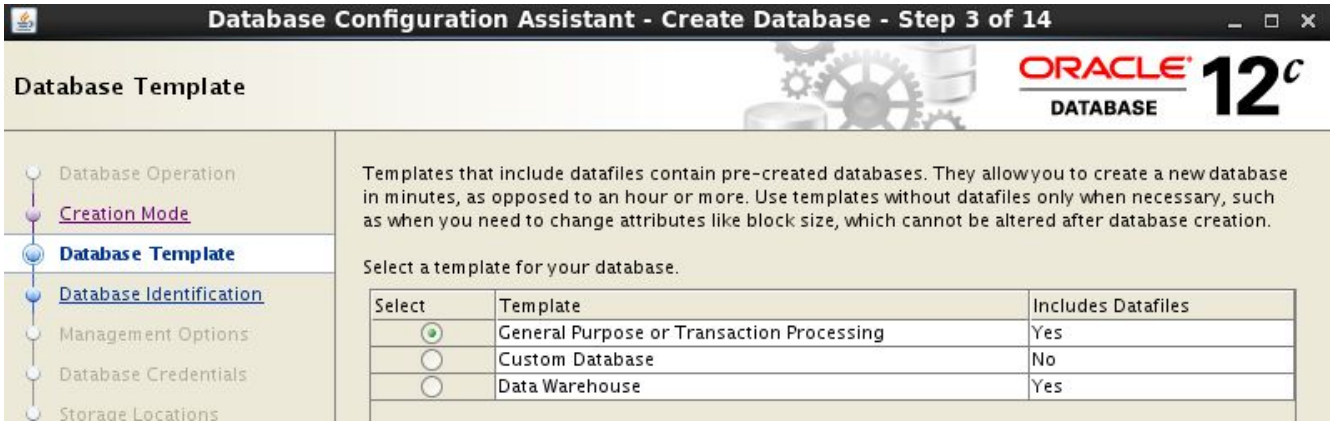

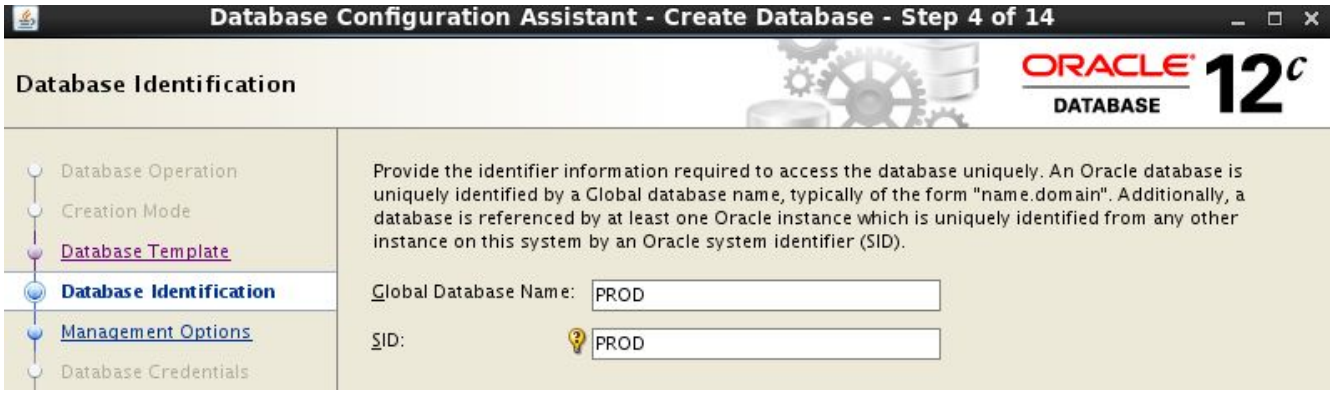

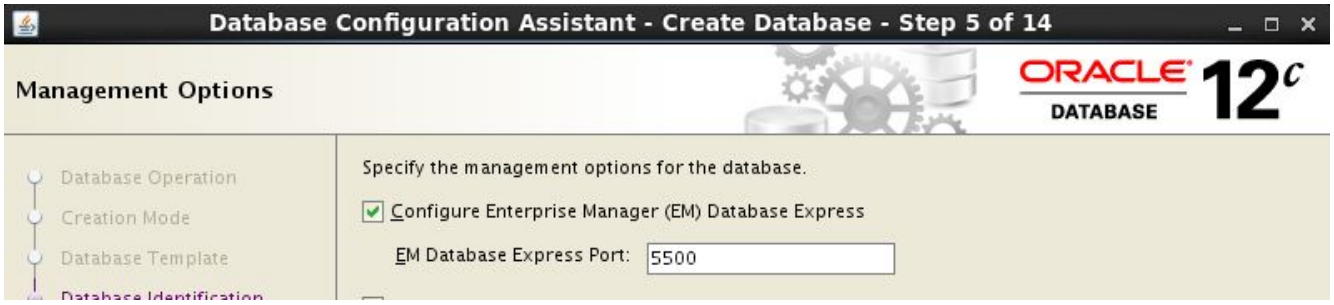

[oracle_4U 로 지정]

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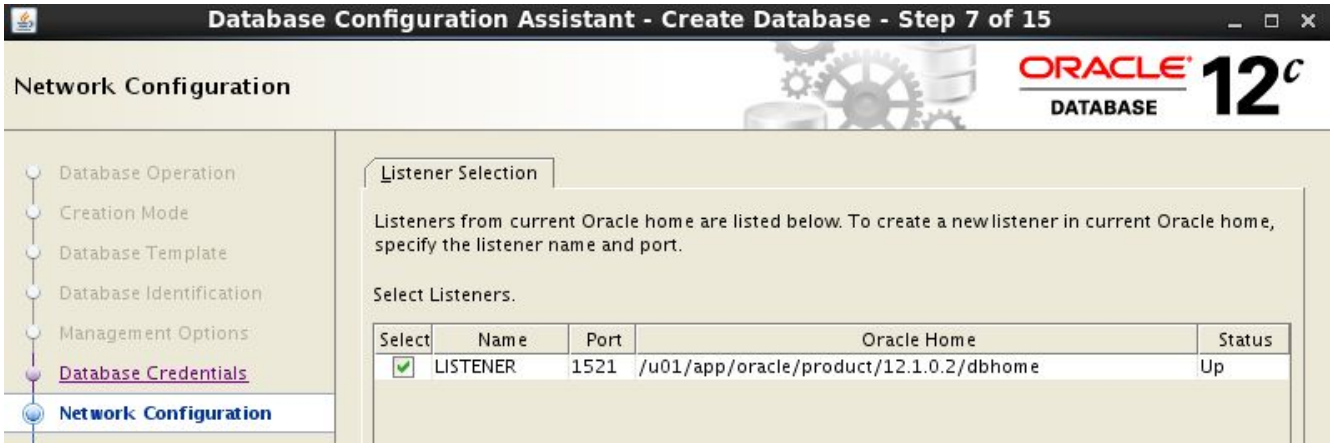

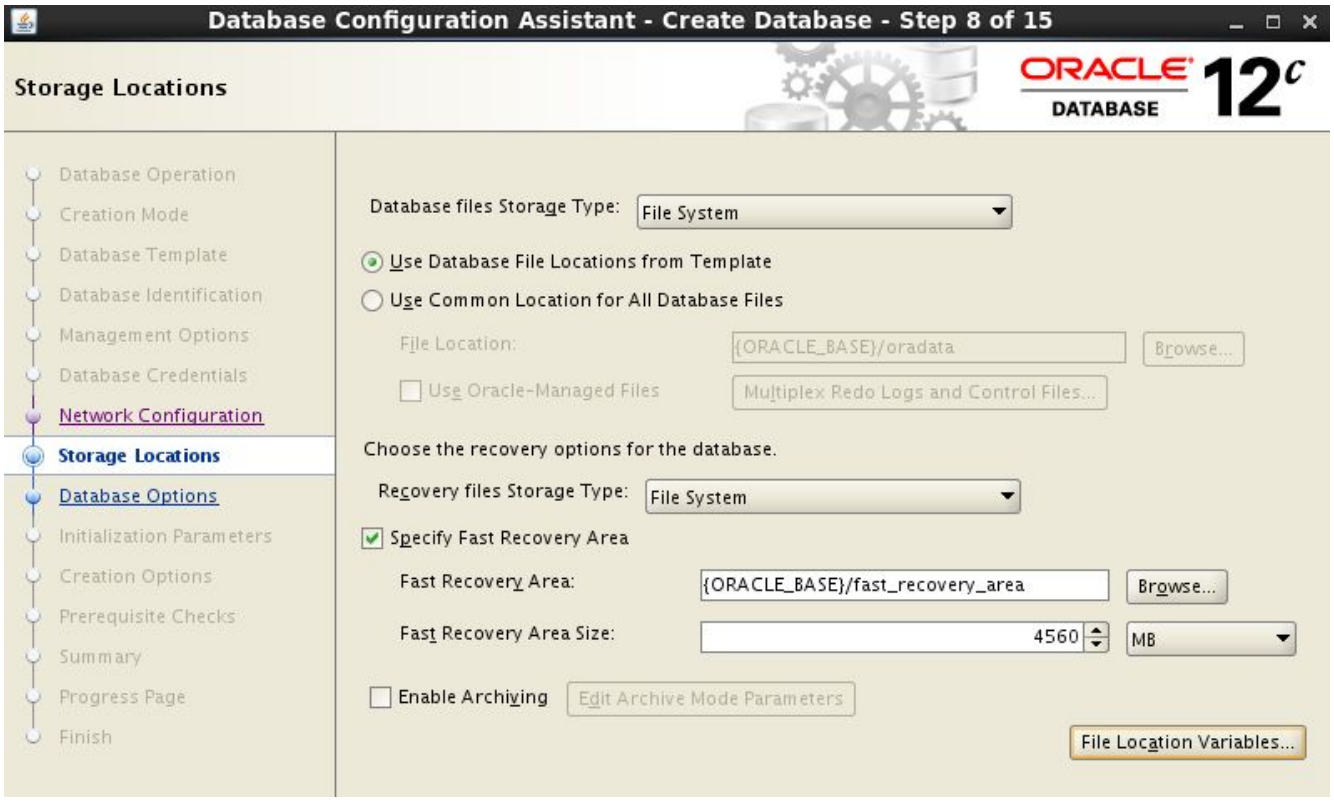

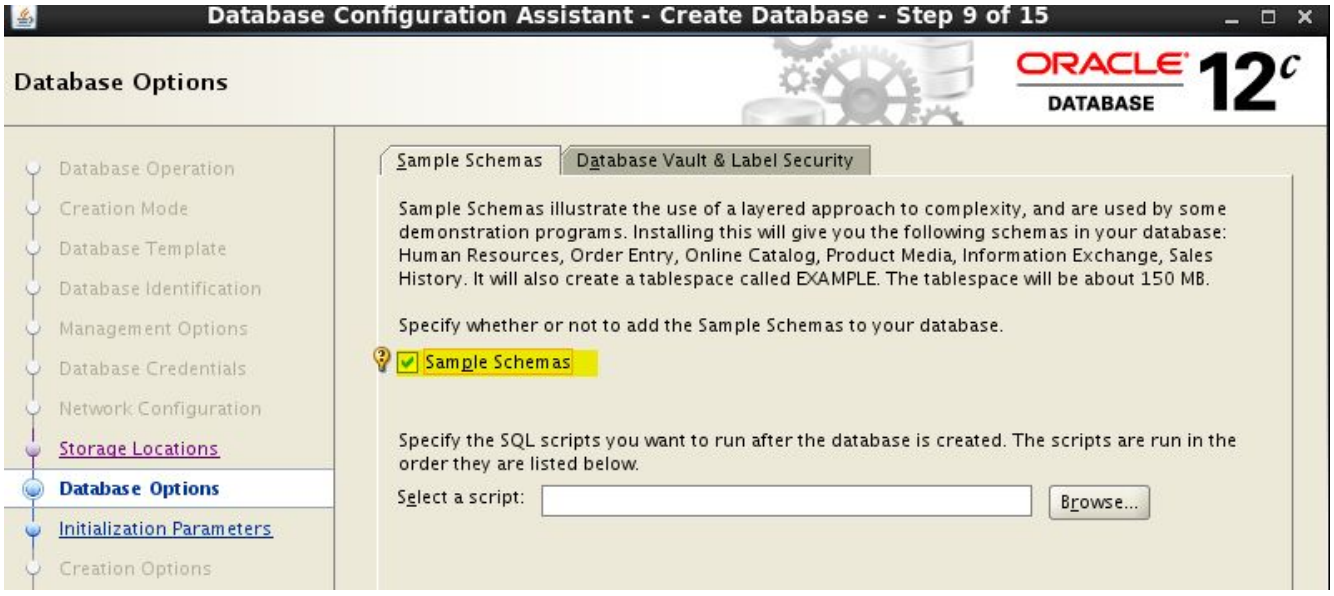

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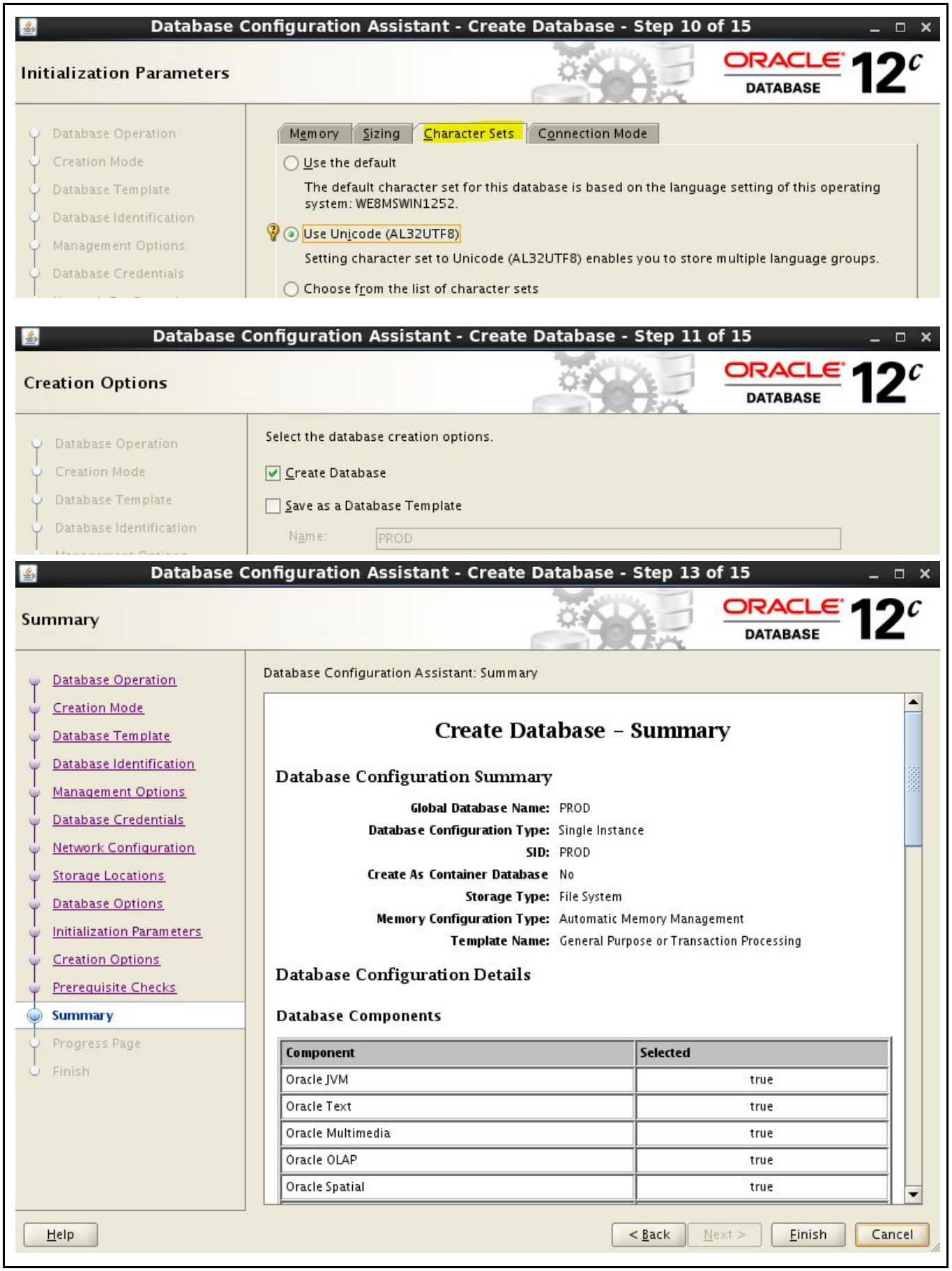

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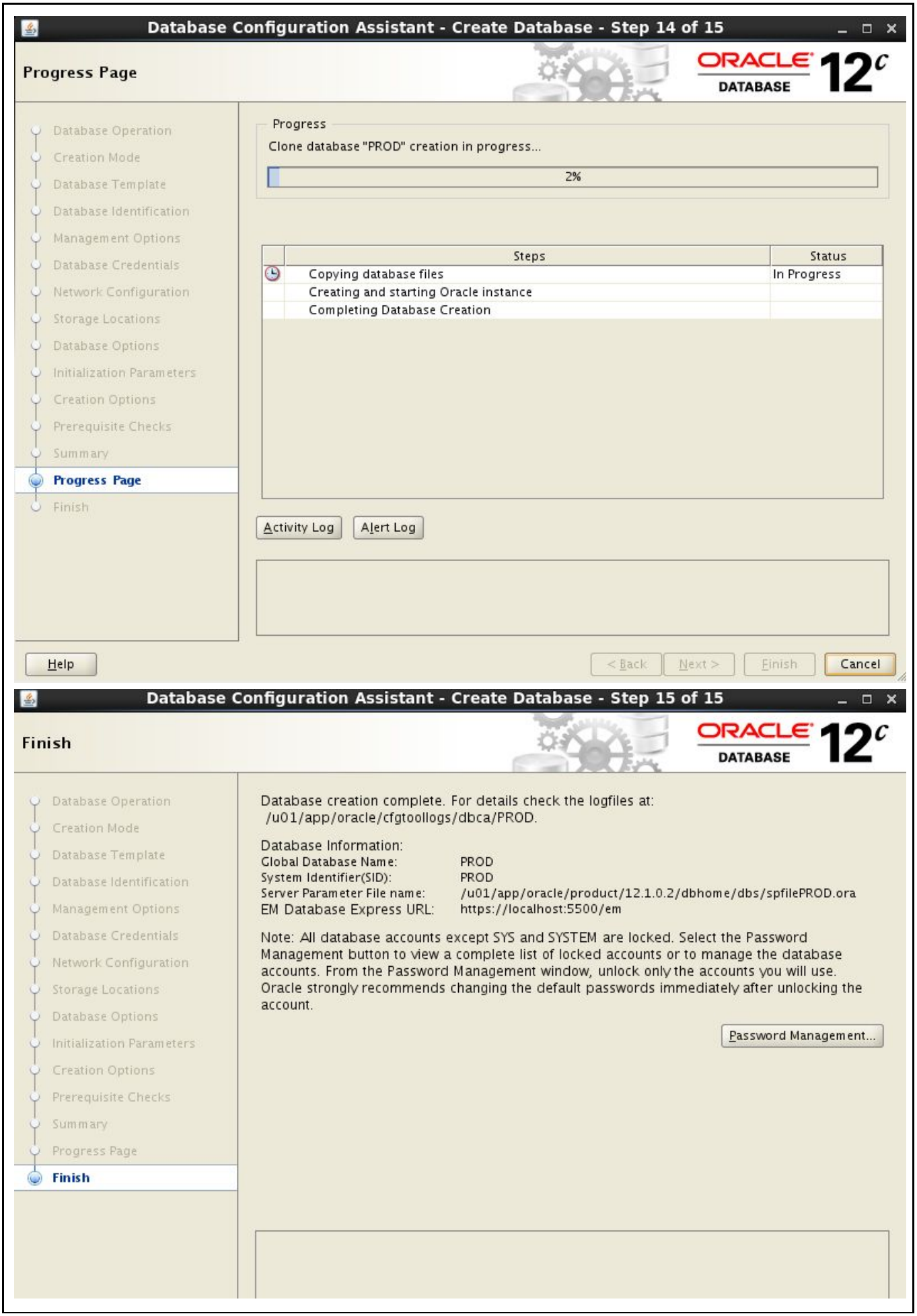

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DB 생성 확인

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

```
[oracle@host01 ~]$ cd $ORACLE_HOME/sqlplus/admin
[oracle@host01 admin]$ ls
glogin.sql  help  libsqlplus.def  plustrce.sql  pupbld.sql

[oracle@host01 admin]$ vi glogin.sql
```

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

```
[oracle@host01 ~]$ sqlplus / as sysdba

SQL*Plus: Release 12.1.0.2.0 Production on Wed Jul 15 14:09:56 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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