

**APPLIES TO:**

ORACLE 12C UPGRADE

**SUMMARY**

This article explains how to Perform the ORACLE 12C UPGRADE.

**AUTHOR:**

K.VENKATA RAMU.

**COMPANY:**

WILLSYS INFOSYSTEMS Pvt. Ltd.,

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Before upgrading to 12c make sure that you have upgraded your oracle client version to 11.2.0.4 and SSFS connectivity

Change oracle software user ora<SID> to user oracle

```
[root@willsysrm OCL_LINUX_X86_64]# ls -lrt
total 54312
-rwxr-xr-x. 1 root root 55610200 May  9 13:27 OCL11264.SAR
-rwxr-xr-x. 1 root root      82 May  9 13:27 LABEL.ASC
[root@willsysrm OCL_LINUX_X86_64]# more LABEL.ASC
ORACLE:11.2:CLIENT:Oracle Client 11.2.0.4 V2:LINUX_X86_64:LINUXX86_64:CD510xxxxx
```

```
[root@willsysrm OCL_LINUX_X86_64]# cp -pr OCL11264.SAR /oracle/client/11x_64/
```

```
[root@willsysrm OCL_LINUX_X86_64]# cd /oracle/client/11x_64/
```

```
[root@willsysrm 11x_64]# chmod -R 775 OCL11264.SAR
[root@willsysrm 11x_64]# chown -R srmadm:sapsys OCL11264.SAR
[root@willsysrm 11x_64]# ls -lrt
total 54316
dr-xr-xr-x. 2 srmadm sapsys  4096 Mar 14  2012 instantclient_11203
-rwxrwxr-x. 1 srmadm sapsys   163 Mar 14  2012 dbclient.lst
lrwxrwxrwx. 1 srmadm sapsys    41 May  8 23:16 instantclient -> /oracle/client/11x_64/instantclient_11203
-rwxrwxr-x. 1 srmadm sapsys 55610200 May  9 13:27 OCL11264.SAR
[root@willsysrm 11x_64]#
```

ORACLE database and CLIENT VERSION before Updating client :

```
willsysrm:orasrm 2> sqlplus "/as sysdba"
```

```
SQL*Plus: Release 11.2.0.3.0 Production on Sat May 9 14:23:14 2015
```

```
Copyright (c) 1982, 2011, Oracle. All rights reserved.
```

```
Connected to an idle instance.
```

Database data	
Database system	ORACLE
Release	11.2.0.3.0
Name	SRM
Host	willsysarm
Owner	SAPSR3

System: Kernel information	
<b>Kernel Information</b>	
Kernel release	721
Compilation	Linux GNU SLES-9...
Sup.Pkg lvl.	201
ABAP Load	1780
CUA load	39
Mode	opt
Rsyn file	
<b>Database information</b>	
DB client lib.	OCI_102, 11.2.0.3...
DB releases	ORACLE 10.1.0.*.*...
DBSL version	721.02
DBSL Patch Level	138
<b>System information</b>	
IP address	202.65.133.234
SAP versions	700, 710, 701, 70...
Operating System	Linux 2.6, Linux 3
OP release	2.6.32-220.e16.x8...

Stop the SAP system

```
willsyssrm:srmadm 7> stopsap r3
Checking SRM Database
Database is running
-----
stopping the SAP instance DVEBMGS00
Shutdown-Log is written to /home/srmadm/stopsap_DVEBMGS00.log
-----
/usr/sap/SRM/DVEBMGS00/exe/sapcontrol -prot NI_HTTP -nr 00 -function Stop
Instance on host willsyssrm stopped
Waiting for cleanup of resources
.....
stopping the SAP instance ASCS01
Shutdown-Log is written to /home/srmadm/stopsap_ASCS01.log
-----
/usr/sap/SRM/ASCS01/exe/sapcontrol -prot NI_HTTP -nr 01 -function Stop
Instance on host willsyssrm stopped
Waiting for cleanup of resources
..
```

## Stop the Database

```
[root@willsyssrm ~]# su - orasrm
willsyssrm:orasrm 4> sqlplus "/as sysdba"

SQL*Plus: Release 11.2.0.3.0 Production on Sat May 9 14:50:13 2015

Copyright (c) 1982, 2011, Oracle. All rights reserved.

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

SQL> shutdown immediate
Database closed.
Database dismounted.
ORACLE instance shut down.
---
```

## Stop the Database Listener

```
willsyssrm:orasrm 5> lsnrctl stop

LSNRCTL for Linux: Version 11.2.0.3.0 - Production on 09-MAY-2015 14:50:58

Copyright (c) 1991, 2011, Oracle. All rights reserved.

Connecting to (ADDRESS=(PROTOCOL=IPC) (KEY=SRM.WORLD))
The command completed successfully
```

Login as <sid>adm and navigate to the directory oracle/client/11x\_64

```
willsysrm:srmadm 11> pwd
/oracle/client/11x_64

willsysrm:srmadm 12> ls -lrt
total 54316
dr-xr-xr-x. 2 srmadm sapsys      4096 Mar 14  2012 instantclient_11203
-rwxrwxr-x. 1 srmadm sapsys      163 Mar 14  2012 dbclient.lst
lrwxrwxrwx. 1 srmadm sapsys      41 May  8 23:16 instantclient -> /oracle/client/11x_64/instantclient_11203
-rwxrwxr-x. 1 srmadm sapsys 55610200 May  9 13:27 OCL11264.SAR
```

UNCAR the OCL11264.SAR file

```
willsysrm:srmadm 11> SAPCAR -xvf OCL11264.SAR
SAPCAR: processing archive OCL11264.SAR (version 2.01)
x dbclient.lst
x instantclient_11204
x instantclient_11204/adrci
x instantclient_11204/classes12.jar
x instantclient_11204/genezi
x instantclient_11204/libclntsh.so.11.1
x instantclient_11204/libnnz11.so
x instantclient_11204/libociei.so
x instantclient_11204/ojdbc14.jar
x instantclient_11204/ojdbc5.jar
x instantclient_11204/ojdbc6.jar
x instantclient_11204/wrc
x instantclient_11204/libclntsh.so.10.1
x instantclient_11204/libclntsh.so
x instantclient_11204/libnnz10.so
x instantclient_11204/SAPIC_README
SAPCAR: 16 file(s) extracted
```

```
drwxr-xr-x. 2 srmadm sapsys      4096 Jul  4  2014 instantclient_11204
```

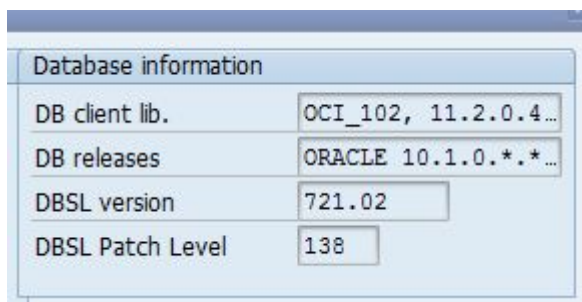
Create Symbolic Link with below command

ln -s instantclient\_11204 instantclient

```
willsysrm:srmadm 13> ln -s instantclient_11204 instantclient
```

```
willsysarm:armadm 14> ls -lrt
total 54320
dr-xr-xr-x. 2 srmadm sapsys      4096 Mar 14 2012 instantclient_11203
drwxr-xr-x. 2 srmadm sapsys      4096 Jul  4 2014 instantclient_11204
-r--r--r--. 1 srmadm sapsys       163 Jul  4 2014 dbclient.lst
-rwxrwxr-x. 1 srmadm sapsys 55610200 May  9 13:27 OCL11264.SAR
lrwxrwxrwx. 1 srmadm sapsys       19 May  9 15:00 instantclient -> instantclient_11204
willsysarm:armadm 15>
```

Start the database listener ,Database and SAP and check the client version



ORACLE SSFS:

As oracle 11g is directly installed the env variables and directories are already created

Change the env variable rsdb\_ssfs\_connect=0 to rsdb\_ssfs\_connect=1

And set this parameter rsdb\_ssfs\_connect=1 in DEFAULT.PFL

```
endsw
setenv SAPSYSTEMNAME SRM
set _UC_NUC=uc
set _DEF_EXE1=/usr/sap/"$SAPSYSTEMNAME"/SYS/exe/"$_UC_NUC"/"$_PLATFORM"
set _DEF_EXE2=/usr/sap/"$SAPSYSTEMNAME"/SYS/exe/run
set _DEF_EXE="$_DEF_EXE1 $_DEF_EXE2"
setenv DIR_LIBRARY ${_DEF_EXE2}
setenv RSEC_SSFS_DATAPATH /usr/sap/"$SAPSYSTEMNAME"/SYS/global/security/rsecssfs/
/data
setenv RSEC_SSFS_KEYPATH /usr/sap/"$SAPSYSTEMNAME"/SYS/global/security/rsecssfs/
key
setenv rsdb_ssfs_connect 1
```

.sapenv.csh .sapenv.sh .sapenv\_willsysrm.csh .sapenv\_willsysrm.sh

Restart the SAP system after setting the profile parameter in DEFAULT.PFL

Perform the SSFS connectivity according to the notes 1639578 and 1622837

```
willsysrm:srmadm 25> cd /usr/sap/SRM/SYS/global/security/  
willsysrm:srmadm 26> ls -lrt  
total 12  
drwx-----. 2 srmadm sapsys 4096 May  8 22:51 data  
drwx-----. 3 srmadm sapsys 4096 May  8 22:51 lib  
drwx-----. 4 srmadm sapsys 4096 May  8 22:51 rsecssfz  
willsysrm:srmadm 27> cd rsecssfz/  
willsysrm:srmadm 28> ls -lrt  
total 8  
drwx-----. 2 srmadm sapsys 4096 May  8 22:51 data  
drwx-----. 2 srmadm sapsys 4096 May  8 22:51 key
```

Navigate to the path

/sapmnt/SRM/global/security/rsecssfz as user <sidadm>

And execute below commands

rsecssfz put DB\_CONNECT/DEFAULT\_DB\_USER SAPSR3 -plain

rsecssfz put DB\_CONNECT/DEFAULT\_DB\_PASSWORD admin123

```
willsysrm:srmadm 26> rsecssfz put DB_CONNECT/DEFAULT_DB_USER SAPSR3 -plain  
willsysrm:srmadm 27> rsecssfz put DB_CONNECT/DEFAULT_DB_PASSWORD admin123  
willsysrm:srmadm 28> rsecssfz list
```

```
willsysrm:rmadm 28> rsecssf list
-----
--|
| Record Key                | Status                | Timestamp of last Update
|-----|-----|-----|
--|
| DB_CONNECT/DEFAULT_DB_PASSWORD | Encrypted            | 2015-05-09 10:27:28 UT
C |
| DB_CONNECT/DEFAULT_DB_USER     | Plaintext            | 2015-05-09 10:27:15 UT
C |
-----
--|

Summary
-----
Active Records      : 2 (Encrypted : 1, Plain : 1, Wrong Key : 0, Error : 0)
Datafile Location  : /usr/sap/SRM/SYS/global/security/rsecssf/data/SSFS_SRM.DAT
                    (when existing)
Keyfile Location   : /usr/sap/SRM/SYS/global/security/rsecssf/key/SSFS_SRM.KEY (
                    when existing)
```

Navigate to the path /sapmnt/SRM/global/security/rsecssf/data to check the data file location

```
willsysrm:rmadm 23> cd /usr/sap/SRM/SYS/global/security/
willsysrm:rmadm 24> ls -lrt
total 12
drwx-----. 2 srmadm sapsys 4096 May  8 22:51 data
drwx-----. 3 srmadm sapsys 4096 May  8 22:51 lib
drwx-----. 4 srmadm sapsys 4096 May  8 22:51 rsecssf
willsysrm:rmadm 25> cd rsecssf/
willsysrm:rmadm 26> ls -lrt
total 8
drwx-----. 2 srmadm sapsys 4096 May  8 22:51 key
drwx-----. 2 srmadm sapsys 4096 May  9 15:57 data
willsysrm:rmadm 27> cd data/
willsysrm:rmadm 28> ll
total 4
-rw-r--r--. 1 srmadm sapsys 486 May  9 15:57 SSFS_SRM.DAT
willsysrm:rmadm 29> sud
```

```
SQL> drop table OPS$SRMADM.SAPUSER;

Table dropped.

SQL> commit;

Commit complete.

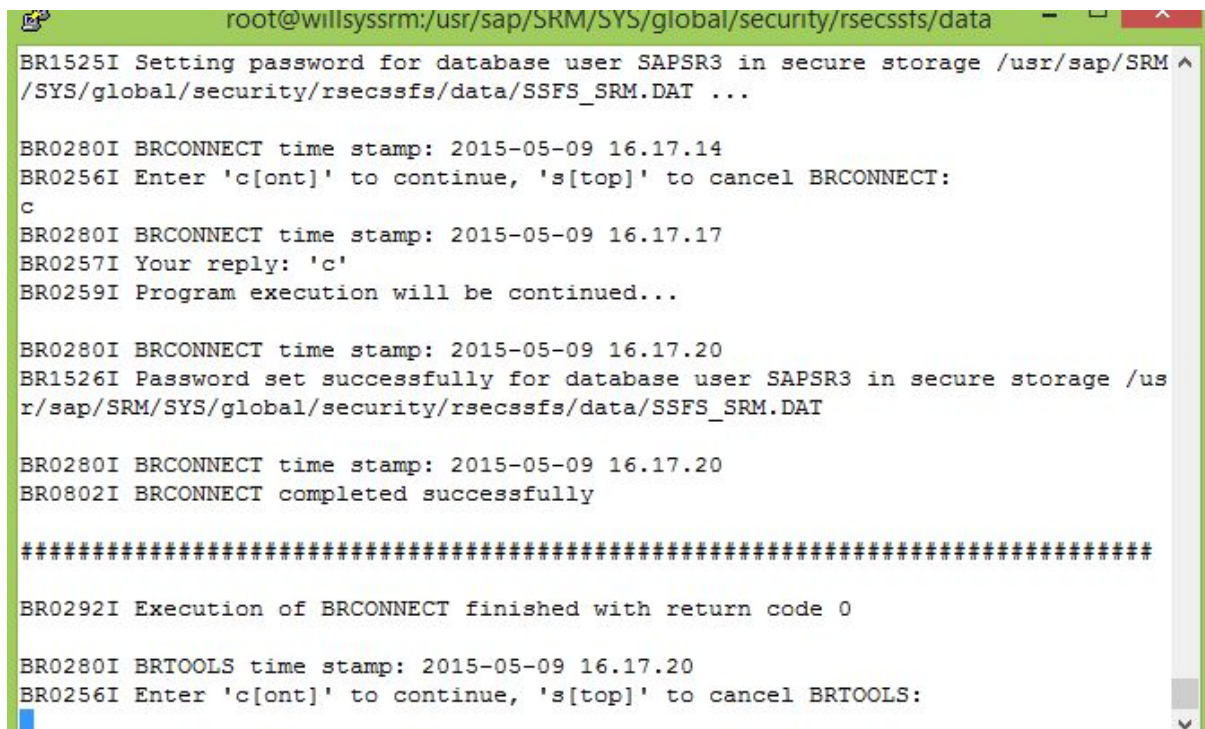
SQL> █
```



## Change the password of SAPSR3 using brtools

```
root@willsysrm:~  
BR0280I BRCONNECT time stamp: 2015-05-09 16.06.31  
BR0829I Password changed successfully in database for user SAPSR3  
BR0831I Table SAPUSER not found for user SAPSR3  
BR0252E Function stat() failed for '/usr/sap/SRM/SYS/global/security/rsecssfs/data'  
at location BrFileStatGet-1  
BR0253E errno 13: Permission denied  
BR0273E Determination of file status for /usr/sap/SRM/SYS/global/security/rsecssfs/data failed  
BR1527E Setting password for user SAPSR3 in secure storage failed  
BR0832E Changing password for user SAPSR3 failed  
  
BR0280I BRCONNECT time stamp: 2015-05-09 16.06.31  
BR0804I BRCONNECT terminated with errors  
  
#####  
BR0292I Execution of BRCONNECT finished with return code 5  
  
BR0280I BRTOOLS time stamp: 2015-05-09 16.06.31  
BR0668I Warnings or errors occurred - you can continue to ignore them or go back  
to repeat the last action  
BR0670I Enter 'c[ont]' to continue, 'b[ack]' to go back, 's[top]' to abort:  
█  
  
drwx----- . 5 srmadm sapsys 4096 May  8 22:51 security
```

```
[root@willsysssrm ~]# cd /usr/sap/SRM/SYS/global/
[root@willsysssrm global]# ls -lrt
total 16
drwxrwxr-x. 5 srmadm sapsys 4096 May  8 22:51 security
-rw-r--r--. 1 srmadm sapsys  272 May  8 22:51 ms_acl_info
drwxr-xr-x. 8 srmadm sapsys 4096 May  8 22:51 SDT
-rw-r--r--. 1 srmadm sapsys    0 May  9 05:58 ABAPPROT
drwxr-xr-x. 2 srmadm sapsys 4096 May  9 15:33 sapcontrol
[root@willsysssrm global]# chmod -R 777 security/
[root@willsysssrm global]# ls -lrt
total 16
drwxrwxrwx. 5 srmadm sapsys 4096 May  8 22:51 security
-rw-r--r--. 1 srmadm sapsys  272 May  8 22:51 ms_acl_info
drwxr-xr-x. 8 srmadm sapsys 4096 May  8 22:51 SDT
-rw-r--r--. 1 srmadm sapsys    0 May  9 05:58 ABAPPROT
drwxr-xr-x. 2 srmadm sapsys 4096 May  9 15:33 sapcontrol
[root@willsysssrm global]# cd security/
[root@willsysssrm security]# ll
total 12
drwxrwxrwx. 2 srmadm sapsys 4096 May  8 22:51 data
drwxrwxrwx. 3 srmadm sapsys 4096 May  8 22:51 lib
drwxrwxrwx. 4 srmadm sapsys 4096 May  8 22:51 rsecssfs
```



```
root@willsysssrm:/usr/sap/SRM/SYS/global/security/rsecssfs/data
BR1525I Setting password for database user SAPSR3 in secure storage /usr/sap/SRM ^
/SYS/global/security/rsecssfs/data/SSFS_SRM.DAT ...

BR0280I BRCONNECT time stamp: 2015-05-09 16.17.14
BR0256I Enter 'c[ont]' to continue, 's[top]' to cancel BRCONNECT:
c
BR0280I BRCONNECT time stamp: 2015-05-09 16.17.17
BR0257I Your reply: 'c'
BR0259I Program execution will be continued...

BR0280I BRCONNECT time stamp: 2015-05-09 16.17.20
BR1526I Password set successfully for database user SAPSR3 in secure storage /us
r/sap/SRM/SYS/global/security/rsecssfs/data/SSFS_SRM.DAT

BR0280I BRCONNECT time stamp: 2015-05-09 16.17.20
BR0802I BRCONNECT completed successfully

*****

BR0292I Execution of BRCONNECT finished with return code 0

BR0280I BRTOOLS time stamp: 2015-05-09 16.17.20
BR0256I Enter 'c[ont]' to continue, 's[top]' to cancel BRTOOLS:
```

```
-----
willsysrm:srmadm 23> R3trans -d
This is R3trans version 6.24 (release 721 - 26.09.13 - 20:13:07 ).
unicode enabled version
R3trans finished (0000).
willsysrm:srmadm 24> █

willsysrm:srmadm 24> startsap
Checking SRM Database
Database is running
-----
Starting Startup Agent sapstartsrv
OK
Instance Service on host willsysrm started
-----
starting SAP Instance ASCS01
Startup-Log is written to /home/srmadm/startsap_ASCS01.log
-----
/usr/sap/SRM/ASCS01/exe/sapcontrol -prot NI_HTTP -nr 01 -function Start
Instance on host willsysrm started
Starting Startup Agent sapstartsrv
OK
Instance Service on host willsysrm started
-----
starting SAP Instance DVEBMGS00
Startup-Log is written to /home/srmadm/startsap_DVEBMGS00.log
-----
/usr/sap/SRM/DVEBMGS00/exe/sapcontrol -prot NI_HTTP -nr 00 -function Start
Instance on host willsysrm started
willsysrm:srmadm 25> █
```

Migrate the Oracle software from user ora<dbid> to user oracle.  
Software Owner Migration Steps (Pre-Upgrade):

1. Stop the SAP system

```
willsyssrm:srmadm 23> stopsap r3
Checking SRM Database
Database is running
-----
stopping the SAP instance DVEBMGS00
Shutdown-Log is written to /home/srmadm/stopsap_DVEBMGS00.log
-----
/usr/sap/SRM/DVEBMGS00/exe/sapcontrol -prot NI_HTTP -nr 00 -function Stop
Instance on host willsyssrm stopped
Waiting for cleanup of resources
.....
stopping the SAP instance ASCS01
Shutdown-Log is written to /home/srmadm/stopsap_ASCS01.log
-----
/usr/sap/SRM/ASCS01/exe/sapcontrol -prot NI_HTTP -nr 01 -function Stop
Instance on host willsyssrm stopped
Waiting for cleanup of resources
```

## 2. Stop the Database

```
[root@willsyssrm ~]# su - orasrm
willsyssrm:orasrm 7> !sql
sqlplus "/as sysdba"

SQL*Plus: Release 11.2.0.3.0 Production on Sat May 9 16:38:40 2015

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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

SQL> shutdown immediate
Database closed.
Database dismounted.
ORACLE instance shut down.
```

## 3. Stop the Database Listener

```
willsyssrm:orasrm 8> lsnrctl stop

LSNRCTL for Linux: Version 11.2.0.3.0 - Production on 09-MAY-2015 16:40:09

Copyright (c) 1991, 2011, Oracle. All rights reserved.

Connecting to (ADDRESS=(PROTOCOL=IPC) (KEY=SRM.WORLD))
The command completed successfully
```

## 4. Create Oracle Software Owner account 'oracle'

```
groupadd oinstall

[root@willsyssrm ~]# groupadd oinstall
```

```
useradd -g oinstall -G dba,oper -c "oracle" -m -s "/bin/sh" oracle
[root@willsysrm ~]# useradd -g oinstall -G dba,oper -c "oracle" -m -s "/bin/sh"
oracle
```

```
passwd oracle
[root@willsysrm ~]# passwd oracle
Changing password for user oracle.
New password:
BAD PASSWORD: it is based on a dictionary word
Retype new password:
passwd: all authentication tokens updated successfully.
```

```
su - oracle -c "id; pwd"
[root@willsysrm ~]# su - oracle -c "id; pwd"
uid=504(oracle) gid=506(oinstall) groups=506(oinstall),504(dba),505(oper) contex
t=unconfined_u:unconfined_r:unconfined_t:s0-s0:c0.c1023
/home/oracle
```

##### 5. Modify SAP administrator account '<sapsid>adm' groupmod -A srmadm oinstall

```
[root@willsysrm ~]# groupmod -n srmadm oinstall
```

##### 6. 6. Modify Database Administrator account 'ora<dbsid>' Log on as 'root' and run the following commands:

```
mkdir -p /home/ora<dbsid>
```

```
[root@willsysrm ~]# mkdir -p /home/orasrm
```

```
chown ora<dbsid>:dba /home/ora<dbsid>
```

```
[root@willsysrm ~]# usermod -d /home/orasrm orasrm
[root@willsysrm ~]#
```

```
usermod -g dba -G oper,oinstall ora<dbsid>
```

```
usermod -g dba -G oper,oinstall orasrm
```

```
cd /oracle/<DBSID>
```

```
root@willsysrm:~  
login as: root  
root@202.65.133.234's password:  
Last login: Sat May 9 17:21:45 2015 from 182.73.37.58  
[root@willsysrm ~]# cd /oracle/SRM
```

```
mv .profile .login .bashrc .cshrc .sap* .dbenv* .j2eeenv* /home/ora<dbsid>
```

```
[root@willsysrm SRM]# mv .profile .login .bashrc .cshrc .sap* .dbenv* /home/ora  
srm/
```

```
mv startdb stopdb /home/ora<dbsid>
```

```
[root@willsysrm SRM]# mv startdb stopdb /home/orasrm
```

```
chown ora<dbsid>:dba /home/ora<dbsid>/.* /home/ora<dbsid>/*
```

```
[root@willsysrm SRM]# chown orasrm:dba /home/orasrm/.*/.* /home/orasrm/*  
[root@willsysrm SRM]#
```

When finished, log on as ora<dbsid> and check/verify the environment.

```
[ora<dbsid>] $ env
```

## 7 Change Ownership of Database Files and Directories

In this step you change permissions and ownership of Oracle database files and directories from 'ora<dbsid>' to 'oracle'.

Change File Permissions and Ownership with script 'orasid2oracle.sh'

Download '**orasid2oracle.sh** script from note 1915317 and copy to a location

```
[root@willsysrm oracle]# ls -lrt  
total 68  
-rw-r--r--. 1 root root 17868 May 8 13:39 orasid2oracle.sh  
[root@willsysrm oracle]# chmod -R 775 orasid2oracle.sh  
-rwxrwxr-x. 1 root root 17868 May 8 13:39 orasid2oracle.sh
```

Set environment variables SAPDATA\_HOME, ORACLE\_BASE and DB\_SID  
export SAPDATA\_HOME=<SAPDATA\_HOME>  
export ORACLE\_BASE=<ORACLE\_BASE>  
export DB\_SID=<DBSID>

```
[root@willsysrm oracle]# export SAPDATA_HOME=/oracle/SRM  
[root@willsysrm oracle]# export ORACLE_BASE=/oracle  
[root@willsysrm oracle]# export DB_SID=SRM  
[root@willsysrm oracle]#
```

For help, run:

```
[root]# ./orasid2oracle.sh -help
```

```
[root@willsysrm oracle]# ./orasid2oracle.sh -help  
.  
. orasid2oracle.sh - Changing Ownership Of Oracle Database Files  
. Copyright (c) Oracle Corporation 2014,2015. All Rights Reserved.  
. Reference SAP Note 1915317  
.  
. Platform : linux_x86_64  
. Date      : 2015_05_09 22:49:38  
. User      : root  
.  
. Usage: orasid2oracle.sh [options]  
.  
. Use this script to change the ownership of Oracle database files  
. and directories to a new Oracle software owner.  
.  
. Valid [options] are:  
.  
.      [-h|help]          show this help  
.  
.      [-V|-Version]
```

4. Perform a test run of the script:

```
[root]# ./orasid2oracle.sh -v
```

```
[root@willsysrm oracle]# ./orasid2oracle.sh -v
.
. orasid2oracle.sh - Changing Ownership Of Oracle Database Files
. Copyright (c) Oracle Corporation 2014,2015. All Rights Reserved.
. Reference SAP Note 1915317
.
. Platform : linux_x86_64
. Date      : 2015_05_09 22:50:43
. User     : root
.
. (INFO)    - Directory /oracle exists.
. (INFO)    - Environment variable SAPDATA_HOME is set to /oracle/SRM.
. (INFO)    - Environment variable ORACLE_BASE is set to /oracle.
. (INFO)    - OS commands will not be executed.
. (INFO)    - OS commands will be displayed.
. (INFO)    - New ownership: oracle:oinstall
. (INFO)    - New owner      : oracle
. (INFO)    - New group     : oinstall
. (INFO)    - SAPDATA_HOME : /oracle/SRM
. (INFO)    - ORACLE_BASE  : /oracle
. (INFO)    - DB_SID       : SRM
.
. Begin of execution section
.
```

5. Run the script with '-exec' option to perform the changes:

```
[root@willsysrm oracle]# ./orasid2oracle.sh -v -exec
```

```
root@willsysrm:/oracle
.
. (COMMAND) - RC=0 - chown oracle:oinstall /oracle
. (COMMAND) - RC=0 - chown oracle:oinstall /oracle/SRM
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapdata1
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/sapdata1
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapdata2
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/sapdata2
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapdata3
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/sapdata3
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapdata4
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/sapdata4
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/origlogA
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/origlogA
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/origlogB
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/origlogB
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/mirrlogA
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/mirrlogA
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/mirrlogB
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/mirrlogB
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/oraarch
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/oraarch
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/oraflash
. (COMMAND) - RC=0 - chmod 755 /oracle/SRM/oraflash
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/saparch
```



```

root@willsysrm:/oracle
. (COMMAND) - RC=0 - chmod 775 /oracle/SRM/saparch
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapbackup
. (COMMAND) - RC=0 - chmod 775 /oracle/SRM/sapbackup
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapcheck
. (COMMAND) - RC=0 - chmod 775 /oracle/SRM/sapcheck
. (COMMAND) - RC=0 - mkdir -p /oracle/SRM/sapprof
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapprof
. (COMMAND) - RC=0 - chmod 775 /oracle/SRM/sapprof
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/sapreorg
. (COMMAND) - RC=0 - chmod 775 /oracle/SRM/sapreorg
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/SRM/saptrace
. (COMMAND) - RC=0 - chmod 775 /oracle/SRM/saptrace
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/checkpoints
. (COMMAND) - RC=0 - chown -R oracle:oinstall /oracle/diag
.
. End of execution section
.
. (INFO) - Script has been run in execution mode.
. (INFO) - Ownership of Oracle database files and Oracle directories has been changed.
. (INFO) - Failed command executions: 0
. (INFO) - Successful command executions: 37
. (EXIT) - (0)
[root@willsysrm oracle]#

```

## 8. Change Ownership of Oracle Home (Software Owner)

Download the scripts from [sapnote\\_1983457](#)

Log on as the old software owner 'ora<dbid>' and start 'clone\_assistant.sh'(download from note to generate the scripts.

For help how to answer the questions, see example #1 in the appendix.

OS ./clone\_assistant.sh

2. Go to the scripts directory and run the generated Oracle home configuration scripts as appropriate user in the logical order:

1. As old software owner 'ora<dbid>', run:

OS> ./config01\_show\_env.sh

OS> ./config02\_detach\_oh.sh

2. As 'root, run

OS> ./config03\_set\_swowner.sh

3. As new software owner 'oracle', you run:

OS> ./config04\_clone\_oh.sh

4. As 'root, run

OS> ./config05\_run\_rootsh.sh

5. After you have successfully run the scripts above, you can delete the scripts to avoid that they are run

again:

As old software owner 'ora<dbsid>', run: ./config06\_cleanup.sh

```
[root@willsyssrm ~]# cd /oracle/
[root@willsyssrm oracle]# ll
total 72
drwxr-xr-x.  2 oracle oinstall  4096 May  8 23:16 checkpoints
drwxr-xr-x.  3 root    root      4096 May  8 23:16 client
drwxr-xr-x.  3 root    root      4096 May  9 23:03 clone_oh-1.7-005
...
[root@willsyssrm oracle]# chmod -R 775 clone_oh-1.7-005/
[root@willsyssrm oracle]# chown -R orasrm:dba clone_oh-1.7-005/
drwxrwxr-x.  3 orasrm dba        4096 May  9 23:03 clone_oh-1.7-005
...
```

Login as ora<SID> and navigate to the path where your script resides  
/oracle/clone\_oh-1.7-005/sapnote\_1983457/pkg\_clone\_oh

```
willsyssrm:orasrm 1> cd /oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/
willsyssrm:orasrm 2> pwd
/oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh
willsyssrm:orasrm 3> ls -lrt
total 192
-rwxrwxr-x. 1 orasrm dba      54 Jan 21 15:38 version.txt
-rwxrwxr-x. 1 orasrm dba 131116 Jan 21 15:38 clone_oh.sh
-rwxrwxr-x. 1 orasrm dba  39201 Jan 21 15:38 clone_assistant.sh
-rwxrwxr-x. 1 orasrm dba   6290 Jan 21 15:38 chk_clone_oh.sh
-rwxrwxr-x. 1 orasrm dba   2693 Jan 21 15:38 cfg_clone_oh.sh
-rwxrwxr-x. 1 orasrm dba   2833 Jan 21 15:38 cfg_clone_oh.csh
...
```

Run the scripts according to the note 1915317

```
willsyssrm:orasrm 4> ./clone_assistant.sh
```

```
willsysrm:orasrm 4> ./clone_assistant.sh
#####
### clone_assistant.sh (V1.7 PL 005 2015-01-19)
### Oracle Home Cloning Assistant
### Copyright (c) Oracle Corporation 2014. All Rights Reserved.
#####

The following actions are available:
  (1) Copying an existing Oracle home to a new location (clone)
  (2) Moving an existing Oracle home to a new location (relocate)
  (3) Changing the configuration of an existing Oracle home (config)
  (4) Managing an existing Oracle home (manage)
  (5) All these actions (all)
Which of these actions do you want to perform?
[clone]: 3
Your answer is: 3

(INFO) - For action 'config', several parameters are required.

Enter Oracle database release:
[11.2]:
```

(RUN remaining scripts clone/relocate/manage after config script)

```
root@willsysrm:/oracle
willsysrm:orasrm 4> ./clo
clone_assistant.sh* clone_oh.sh*
willsysrm:orasrm 4> ./clone_assistant.sh
#####
### clone_assistant.sh (V1.7 PL 005 2015-01-19)
### Oracle Home Cloning Assistant
### Copyright (c) Oracle Corporation 2014. All Rights Reserved.
#####

The following actions are available:
  (1) Copying an existing Oracle home to a new location (clone)
  (2) Moving an existing Oracle home to a new location (relocate)
  (3) Changing the configuration of an existing Oracle home (config)
  (4) Managing an existing Oracle home (manage)
  (5) All these actions (all)
Which of these actions do you want to perform?
[clone]: 3
Your answer is: 3

(INFO) - For action 'config', several parameters are required.

Enter Oracle database release:
[11.2]: 11.2
```

```
root@willsysrm:/oracle
Default value settings
-----

Oracle Release           : 11.2
Database name <DBSID>    : SRM
Source Oracle Home <IHRDBMS>: /oracle/SRM/1120X
Target Oracle Home <IHRDBMS>: /oracle/SRM/1120X
Target Oracle Base       : /oracle/SRM

Parameter help
-----

For Source Oracle home path, use installation Oracle home <IHRDBMS>.
For Target Oracle home path, use installation Oracle home <IHRDBMS>.

Example(s):
+-----+-----+-----+
|RELEASE |ORACLE_HOME           |IHRDBMS |
+-----+-----+-----+
|11.2.0.4 |/oracle/<DBSID>/112_64|/oracle/<DBSID>/11204 |
+-----+-----+-----+

Enter location for target Oracle home (ORACLE_HOME):
[/oracle/SRM/1120X]: /oracle/SRM/11203
```

```
Enter location for target Oracle home (ORACLE_HOME):
[/oracle/SRM/1120X]: /oracle/SRM/112_64
```

```
Enter name for target Oracle home (ORACLE_HOME_NAME):
If you do not specify an Oracle home name, it will be generated by OUI.
[]:
(INFO) - Oracle home name will be generated by OUI.
Your answer is: empty
```

```
Enter location for target Oracle base (ORACLE_BASE):
Reference: SAP Note 1521371
[/oracle/SRM]: /oracle/SRM
```

```
Enter name of OS group (OSDBA):
[dba]: dba
Your answer is: dba
```

```
Enter name of OS group (OSOPER):
[oper]: oper
```

Do you want to change the software owner for this Oracle home?

[no]: yes

Your answer is: yes

Enter name of Oracle Software Owner:

[oracle]: oracle

Enter name of primary group of Oracle Software Owner:

[oinstall]: oinstall

Your answer is: oinstall

Enter name of super user:

[root]: root

Enter location for oraInst.loc:

[/etc/oraInst.loc]: /etc/oraInst.loc

Your answer is: /etc/oraInst.loc

Enter location for scripts (script directory):

[/oracle/clone\_oh-1.7-005/sapnote\_1983457/pkg\_clone\_oh/clone\_scripts]:

Enter location for scripts (script directory):

[/oracle/clone\_oh-1.7-005/sapnote\_1983457/pkg\_clone\_oh/clone\_scripts]: /oracle/c  
clone\_oh-1.7-005/sapnote\_1983457/pkg\_clone\_oh/clone\_scripts

Your answer is: /oracle/clone\_oh-1.7-005/sapnote\_1983457/pkg\_clone\_oh/clone\_scri  
pts

(INFO) - You have specified the following parameters:

Action	:	config
Target Oracle Home path	:	/oracle/SRM/112_64
Oracle base path	:	/oracle/SRM
OSDBA group	:	dba
OSOPER group	:	oper
Software owner	:	oracle
Primary Group	:	oinstall
Release	:	11.2

```
Inventory Pointer      : /etc/oraInst.loc
Super user            : root
Script location       : /oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/
clone_scripts

(INFO) - For action 'config' and the given parameters, the following command
generates the corresponding scripts:

/oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/clone_oh.sh -action config
-tgt_oh /oracle/SRM/112_64 -tgt_ob /oracle/SRM -tgt_osdba dba -tgt_osoper oper
-tgt_swowner oracle -tgt_swowner_group oinstall -tgt_release 11.2 -invPtrLoc /e
tc/oraInst.loc -root root -script_dir /oracle/clone_oh-1.7-005/sapnote_1983457/p
kg_clone_oh/clone_scripts

Do you want to generate the scripts?
[yes]: yes
```

```
root@willsyssrm:/oracle
Current Settings for Configuring an Oracle Home

Source Oracle home      = not specified

Target Oracle home      = /oracle/SRM/112_64
Target Software Owner   = orasrm:dba
will be changed to     oracle:oinstall
Target Oracle home name = not specified
Target Oracle base      = /oracle/SRM
Target Oracle release   = 11.2
Target OSDBA group      = dba
Target OSOPER group     = oper

Copy command            = tar
Super user (root)       = root
Default oraInst.loc    = /etc/oraInst.loc

Creating scripts for action 'Configuring an Oracle Home' completed.
Location of generated scripts: /oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clon
e_oh/clone_scripts

(EXIT) - clone_assistant.sh - Exiting with exit code 0.
willsyssrm:orasrm 5>
```

**Go to the scripts directory and run the generated Oracle home configuration scripts as appropriate user in the logical order**

```
willsysrm:orasrm 5> cd /oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/cl
one_scripts
willsysrm:orasrm 6> ls -lrt
total 32
-rwxr-xr-x. 1 orasrm dba 3045 May 10 09:51 config00_settings.sh
-rwxr-xr-x. 1 orasrm dba 3809 May 10 09:51 config01_show_env.sh
-rwxr-xr-x. 1 orasrm dba 3721 May 10 09:51 config02_detach_oh.sh
-rwxr-xr-x. 1 orasrm dba 3612 May 10 09:51 config03_set_swowner.sh
-rwxr-xr-x. 1 orasrm dba 5532 May 10 09:51 config04_clone_oh.sh
-rwxr-xr-x. 1 orasrm dba 3410 May 10 09:51 config05_run_rootsh.sh
-rwxr-xr-x. 1 orasrm dba 3244 May 10 09:51 config06_cleanup.sh
willsysrm:orasrm 7>
```

As old software owner 'ora<dbid>', run:

OS> ./config01\_show\_env.sh

```
willsysrm:orasrm 7> ./config01_show_env.sh

DESCRIPTION: This script sets and displays the environment settings.

Source Oracle home           =
Target Oracle home           = /oracle/SRM/112_64
Target Oracle home name      =
Target Oracle base           = /oracle/SRM
Target Oracle release         = 11.2
Target OSDBA group           = dba
Target OSOPER group          = oper
Target Software Owner        = oracle:oinstall
Inventory Pointer File        = /etc/oraInst.loc
Super user (root)            = root
Platform                     = linux_x86_64
Hostname                     = willsysrm
User                         = orasrm
willsysrm:orasrm 8>
```

OS> ./config02\_detach\_oh.sh

```
willsysrm:orasrm 7> ./config01_show_env.sh
willsysrm:orasrm 8> ./config02_detach_oh.sh

DESCRIPTION: This script detaches the Oracle home from the central inventory.

Detaching Oracle home from Central Inventory
Oracle home: /oracle/SRM/112_64
Starting Oracle Universal Installer...

Checking swap space: must be greater than 500 MB.   Actual 19999 MB   Passed
The inventory pointer is located at /etc/oraInst.loc
The inventory is located at /oracle/oraInventory
```

```
willsysrm:orasrm 8> ./config02_detach_oh.sh

DESCRIPTION: This script detaches the Oracle home from the central inventory.

Detaching Oracle home from Central Inventory
Oracle home: /oracle/SRM/112_64
Starting Oracle Universal Installer...

Checking swap space: must be greater than 500 MB.   Actual 19999 MB   Passed
The inventory pointer is located at /etc/oraInst.loc
The inventory is located at /oracle/oraInventory
'DetachHome' was successful.
OUI finished with return code 0
willsysrm:orasrm 9>
```

OS> ./config03\_set\_swowner.sh

```
[root@willsysrm clone_scripts]# ./config03_set_swowner.sh

DESCRIPTION: This script configures the software owner of the Oracle home (if sp
ecified).

Changing software owner for /oracle/SRM/112_64 to oracle:oinstall
Enter password for root:
[root@willsysrm clone_scripts]# ./config03_set_swowner.sh

DESCRIPTION: This script configures the software owner of the Oracle home (if sp
ecified).

Changing software owner for /oracle/SRM/112_64 to oracle:oinstall
Enter password for root:
willsysrm:orasrm 10> ./config03_set_swowner.sh

DESCRIPTION: This script configures the software owner of the Oracle home (if sp
ecified).

Changing software owner for /oracle/SRM/112_64 to oracle:oinstall
Enter password for root:
Password:
```

As new software owner 'oracle', you run:

OS> ./config04\_clone\_oh.sh



```
[oracle@willsyssrm clone_scripts]$ ./config04_clone_oh.sh

DESCRIPTION: This script runs the clone command (clone.pl) for the Oracle home.

Cloning Oracle home /oracle/SRM/112_64
./runInstaller -clone -waitForCompletion -invPtrLoc /etc/oraInst.loc "ORACLE_
BASE=/oracle/SRM" "ORACLE_HOME=/oracle/SRM/112_64" "oracle_install_OSDBA=dba" "o
racle_install_OSOPER=oper" "oracle_install_OSBACKUPDBA=" "oracle_install OSDGDBA
=" "oracle_install_OSKMDBA=" "oracle.sysman.ccr:PRE_REQUISITE=true" -defaultHome
Name -silent -noConfig -nowait
Starting Oracle Universal Installer...

Checking swap space: must be greater than 500 MB.  Actual 19999 MB    Passed
Preparing to launch Oracle Universal Installer from /tmp/OraInstall2015-05-10_10
-08-09AM. Please wait ...Oracle Universal Installer, Version 11.2.0.3.0 Producti
on
Copyright (C) 1999, 2011, Oracle. All rights reserved.

You can find the log of this install session at:
 /oracle/oraInventory/logs/cloneActions2015-05-10_10-08-09AM.log
.....
..... 100% Done.
```

```
Installation in progress (Sunday, May 10, 2015 10:08:21 AM IST)
.....
..... 79% Done.

Install successful

Linking in progress (Sunday, May 10, 2015 10:08:25 AM IST)
Link successful

Setup in progress (Sunday, May 10, 2015 10:09:13 AM IST)
Setup successful
```

```

oracle@willsyssrm:clone_scripts
.....
79% Done.
Install successful
Linking in progress (Sunday, May 10, 2015 10:08:25 AM IST)
Link successful
Setup in progress (Sunday, May 10, 2015 10:09:13 AM IST)
Setup successful
End of install phases.(Sunday, May 10, 2015 10:09:36 AM IST)
WARNING:
The following configuration scripts need to be executed as the "root" user.
/oracle/SRM/112_64/root.sh
To execute the configuration scripts:
  1. Open a terminal window
  2. Log in as "root"
  3. Run the scripts
The cloning of OraHome1 was successful.
Please check '/oracle/oraInventory/logs/cloneActions2015-05-10_10-08-09AM.log' f
or more details.
OUI finished with return code 0
[oracle@willsyssrm clone_scripts]$

```

```

[root@willsyssrm oracle]# cd /oracle/SRM/112_64/
[root@willsyssrm 112_64]# ./root.sh
Check /oracle/SRM/112_64/install/root_willsyssrm_2015-05-10_10-11-12.log for the
output of root script

```

As 'root, run

OS> ./config05\_run\_rootsh.sh

```

[root@willsyssrm clone_scripts]# pwd
/oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/clone_scripts
[root@willsyssrm clone_scripts]#

```

```

[root@willsyssrm clone_scripts]# pwd
/oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/clone_scripts
[root@willsyssrm clone_scripts]# ./config05_run_rootsh.sh
DESCRIPTION: This script runs root.sh script for the Oracle home.
Executing /oracle/SRM/112_64/root.sh
Enter password for root:
Check /oracle/SRM/112_64/install/root_willsyssrm_2015-05-10_10-17-32.log for the
output of root script
[root@willsyssrm clone_scripts]#

```

After you have successfully run the scripts above, you can delete the scripts to avoid that they are run

again:

As old software owner 'ora<dbsid>', run: config06\_cleanup.sh

```
willsyssrm:orasrm 14> ./config06_cleanup.sh

DESCRIPTION: This script deletes generated script files in directory /oracle/clone_oh-1.7-005/sapnote_1983457/pkg_clone_oh/clone_scripts for action config

willsyssrm:orasrm 15>
```

Log on as Software Owner 'oracle' and start the database listener(make sure that you have moved 'ora<dbsid>' profiles and scripts (.profile .login .bashrc .cshrc .sap\* .dbenv\* .j2eeenv\* startdb stopdb) from old user home to new user home directory

1. Log on to the database server host as 'oracle'
2. Set the environment (ORACLE\_HOME, PATH)

```
willsyssrm:oracle 58> lsnrctl start

LSNRCTL for Linux: Version 11.2.0.3.0 - Production on 10-MAY-2015 12:02:45

Copyright (c) 1991, 2011, Oracle. All rights reserved.

Starting /oracle/SRM/112_64/bin/tnslsnr: please wait...

TNSLSNR for Linux: Version 11.2.0.3.0 - Production
System parameter file is /oracle/SRM/112_64/network/admin/listener.ora
Log messages written to /oracle/SRM/saptrace/diag/tnslsnr/willsyssrm/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=SRM.WORLD)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=SRM)))
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=willsyssrm) (PORT=1521)))

Connecting to (ADDRESS=(PROTOCOL=IPC) (KEY=SRM.WORLD))
```

```
root@willsysrm:/home/orasrm
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=willsysrm) (PORT=1521)))
Connecting to (ADDRESS=(PROTOCOL=IPC) (KEY=SRM.WORLD))
STATUS of the LISTENER
-----
Alias                LISTENER
Version              TNSLSNR for Linux: Version 11.2.0.3.0 - Production
Start Date           10-MAY-2015 12:04:26
Uptime               0 days 0 hr. 0 min. 0 sec
Trace Level          off
Security             ON: Local OS Authentication
SNMP                 OFF
Listener Parameter File  /oracle/SRM/112_64/network/admin/listener.ora
Listener Log File     /oracle/SRM/saptrace/diag/tnslsnr/willsysrm/listener/
alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=SRM.WORLD)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=ipc) (KEY=SRM)))
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp) (HOST=willsysrm) (PORT=1521)))
Services Summary...
Service "SRM" has 1 instance(s).
  Instance "SRM", status UNKNOWN, has 1 handler(s) for this service...
The command completed successfully
```

```
willsysrm:oracle 59> !sql
sqlplus "/as sysdba"

SQL*Plus: Release 11.2.0.3.0 Production on Sun May 10 12:02:57 2015

Copyright (c) 1982, 2011, Oracle. All rights reserved.

Connected to an idle instance.

SQL> startup
ORA-32004: obsolete or deprecated parameter(s) specified for RDBMS instance
ORACLE instance started.

Total System Global Area 1089871872 bytes
Fixed Size                2235288 bytes
Variable Size             553649256 bytes
Database Buffers         528482304 bytes
Redo Buffers              5505024 bytes
Database mounted.
Database opened.
```

```
root@willsyssrm:/oracle/SRM
drwxr-xr-x. 2 oracle oinstall 4096 May 10 12:03 dbs
[root@willsyssrm 112_64]# cd ../
[root@willsyssrm SRM]# ls -lrt
total 88
-rw-rw-r--. 1 orasrm dba      16263 May  8 23:16 11gininstall_11203.log
drwxr-xr-x. 14 oracle oinstall 4096 May  8 23:16 sapdata2
drwxr-xr-x.  9 oracle oinstall 4096 May  8 23:16 sapdata3
drwxr-xr-x.  3 oracle oinstall 4096 May  8 23:16 sapdata4
drwxr-xr-x.  7 oracle oinstall 4096 May  8 23:16 sapdata1
drwxr-xr-x.  2 oracle oinstall 4096 May  8 23:16 oraflash
drwxrwxr-x.  2 oracle oinstall 4096 May  8 23:16 sapbackup
drwxrwxr-x.  2 oracle oinstall 4096 May  8 23:16 sapreorg
drwxrwxr-x.  2 oracle oinstall 4096 May  8 23:16 saparch
drwxrwxr-x.  6 oracle oinstall 4096 May  8 23:16 saptrace
drwxr-xr-x.  3 oracle oinstall 4096 May  8 23:17 origlogA
drwxr-xr-x.  2 oracle oinstall 4096 May  8 23:17 mirrlogA
drwxr-xr-x.  3 oracle oinstall 4096 May  8 23:17 origlogB
drwxr-xr-x.  2 oracle oinstall 4096 May  8 23:18 mirrlogB
drwxrwxr-x.  2 oracle oinstall 4096 May  9 05:53 sapcheck
drwxr-xr-x.  2 oracle oinstall 4096 May  9 15:47 oraarch
drwxrwxr-x.  2 oracle oinstall 4096 May  9 22:52 sapprof
drwxr-xr-x. 73 oracle oinstall 4096 May 10 10:08 112_64
drwxr-xr-x.  2 oracle srmadm  4096 May 10 10:55 checkpoints
```

After changing the owner ship check whether are you able to start database ,listener and sap

## ORACLE UPGRADE 12c:

```
[root@willsysrm stage]# mkdir -p /oracle/stage/12102/

[root@willsysrm stage]# chmod 755 /oracle/stage/12102/

[root@willsysrm stage]# chown -R oracle:oinstall 12102/
[root@willsysrm stage]#

[root@willsysrm oracle12c]# cd 51047708/
[root@willsysrm 51047708]# ls -lrt
total 7590268
-rwxr-xr-x. 1 root root 1681618329 Aug  8  2014 OR112164.SAR
-rwxr-xr-x. 1 root root 1754991010 Aug  8  2014 OR312164.SAR
-rwxr-xr-x. 1 root root  647346641 Aug  8  2014 OR412164.SAR
-rwxr-xr-x. 1 root root  920836943 Aug  8  2014 OR512164.SAR
-rwxr-xr-x. 1 root root  682361092 Aug  8  2014 OR612164.SAR
-rwxr-xr-x. 1 root root  500979953 Aug  8  2014 OR712164.SAR
-rwxr-xr-x. 1 root root  569503700 Aug  8  2014 OR812164.SAR
-rwxr-xr-x. 1 root root      1418 Dec 11 12:07 COPY_TM.TXT
-rwxr-xr-x. 1 root root      4444 Dec 11 12:07 COPY_TM.HTM
-rwxr-xr-x. 1 root root 1014702145 Mar 18 10:08 OR212164.SAR
-rwxr-xr-x. 1 root root         22 Mar 27 10:18 VERSION.ASC
-rwxr-xr-x. 1 root root         96 Mar 27 10:18 LABEL.ASC
-rwxr-xr-x. 1 root root         63 Mar 27 10:18 CDLABEL.ASC
-rwxr-xr-x. 1 root root         22 Mar 27 10:27 VERSION.EBC
-rwxr-xr-x. 1 root root         96 Mar 27 10:27 LABEL.EBC
-rwxr-xr-x. 1 root root         63 Mar 27 10:27 CDLABEL.EBC
-rwxr-xr-x. 1 root root         724 Mar 27 10:28 MDSFILE.DAT
-rwxr-xr-x. 1 root root        1313 Mar 27 10:29 SHAFILE.DAT
[root@willsysrm 51047708]# cp -pr OR112164.SAR OR212164.SAR /oracle/stage/12102/
/
```

Login as oracle software owner “oracle” and unacar the OR112164.SAR and OR212164.SAR

```
[root@willsysrm oracle]# su - oracle
willsysrm:oracle 51> cd /oracle/stage/12102/
willsysrm:oracle 52> ls -lrt
total 2633140
-rwxrwxr-x. 1 oracle oinstall 1681618329 Aug  8  2014 OR112164.SAR
-rwxrwxr-x. 1 oracle oinstall 1014702145 Mar 18 10:08 OR212164.SAR
willsysrm:oracle 53> SAPCAR -xvf OR112164.SAR
```

```
root@willsysrm:/oracle
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p10.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p11.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p12.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p13.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p14.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p15.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p16.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p17.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p18.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p1.jar
x database/stage/Components/oracle.javavm.server/12.1.0.2.0/1/DataFiles/filegrou
p2.jar
```

```
root@willsysrm:/oracle
x database/install/unzip
x database/install/resource
x database/install/resource/cons_zh_TW.nls
x database/install/resource/cons_es.nls
x database/install/resource/cons_fr.nls
x database/install/resource/cons_ja.nls
x database/install/resource/cons_it.nls
x database/install/resource/cons_ko.nls
x database/install/resource/cons_pt_BR.nls
x database/install/resource/cons.nls
x database/install/resource/cons_zh_CN.nls
x database/install/resource/cons_de.nls
x database/install/detachHome.sh
x database/install/oraparam.ini.deinstall
x database/install/lsnodes
x database/install/images
x database/install/images/billboards.gif
x database/install/runInstaller.sh
x database/install/attachHome.sh
x database/install/clusterparam.ini
x database/install/oraparam.ini
x database/install/addLangs.sh
SAPCAR: 1983 file(s) extracted
willsysrm:oracle 54>
```

```
root@willsysrm:/oracle
/1
x database/stage/Components/oracle.rdbms.install.seeddb.sample_schema/12.1.0.2.0
/1/DataFiles
x database/stage/Components/oracle.rdbms.install.seeddb.sample_schema/12.1.0.2.0
/1/DataFiles/filegroup1.jar
x database/stage/Components/oracle.rdbms.install.seeddb.sample_schema/12.1.0.2.0
/1/DataFiles/filegroup2.jar
x database/stage/Components/oracle.rdbms.install.seeddb
x database/stage/Components/oracle.rdbms.install.seeddb/12.1.0.2.0
x database/stage/Components/oracle.rdbms.install.seeddb/12.1.0.2.0/1
x database/stage/Components/oracle.rdbms.install.seeddb/12.1.0.2.0/1/DataFiles
x database/stage/Components/oracle.rdbms.install.seeddb/12.1.0.2.0/1/DataFiles/f
ilegroup1.jar
x database/stage/Components/oracle.rdbms.install.seeddb/12.1.0.2.0/1/DataFiles/f
ilegroup2.jar
x database/stage/Components/oracle.javavm.containers
x database/stage/Components/oracle.javavm.containers/12.1.0.2.0
x database/stage/Components/oracle.javavm.containers/12.1.0.2.0/1
x database/stage/Components/oracle.javavm.containers/12.1.0.2.0/1/DataFiles
x database/stage/Components/oracle.javavm.containers/12.1.0.2.0/1/DataFiles/file
group1.jar
x database/stage/Components/oracle.javavm.containers/12.1.0.2.0/1/DataFiles/file
group2.jar
```

```
root@willsysrm:/oracle
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/Expanded/filegro
up16/README_rdbms.htm
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/Expanded/filegro
up77
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/Expanded/filegro
up77/README
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.12.1
.jar
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.3.1.
jar
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.19.1
.jar
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.25.1
.jar
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.13.1
.jar
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.4.1.
jar
x database/stage/Components/oracle.rdbms/12.1.0.2.0/1/DataFiles/filegroup19.26.1
.jar
x database/install
x database/install/.oui
SAPCAR: 201 file(s) extracted
willsysrm:oracle 55>
```



```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
willsysrm:oracle 52> ls -lrt
total 2633144
-rwxrwxr-x. 1 oracle oinstall 1681618329 Aug  8  2014 OR112164.SAR
-rwxrwxr-x. 1 oracle oinstall 1014702145 Mar 18 10:08 OR212164.SAR
drwxr-xr-x. 8 oracle srmadm      4096 Mar 18 14:36 database
willsysrm:oracle 53> cd database/
willsysrm:oracle 54> ls -lrt
total 40
-rwxr-xr-x. 1 oracle srmadm  500 Feb  7  2013 welcome.html
-rwxr-xr-x. 1 oracle srmadm 8533 Jul  7  2014 runInstaller
drwxr-xr-x. 2 oracle srmadm 4096 Jul  7  2014 rpm
drwxrwxr-x. 2 oracle srmadm 4096 Jul  7  2014 sshsetup
drwxrwxr-x. 2 oracle srmadm 4096 Jul  7  2014 response
drwxr-xr-x. 14 oracle srmadm 4096 Aug  8  2014 stage
drwxr-xr-x. 4 oracle srmadm 4096 Aug  8  2014 install
drwxr-xr-x. 2 oracle srmadm 4096 Mar 18 14:36 SAP
willsysrm:oracle 55> cd SAP/
willsysrm:oracle 56> ls -lrt
total 188
-rwxr-xr-x. 1 oracle srmadm  1119 Mar 18 14:36 RUNINSTALLER
-rwxr-xr-x. 1 oracle srmadm 187801 Mar 18 14:36 12cinstall.sh
willsysrm:oracle 57> pwd
/oracle/stage/12102/database/SAP
willsysrm:oracle 58> █
```

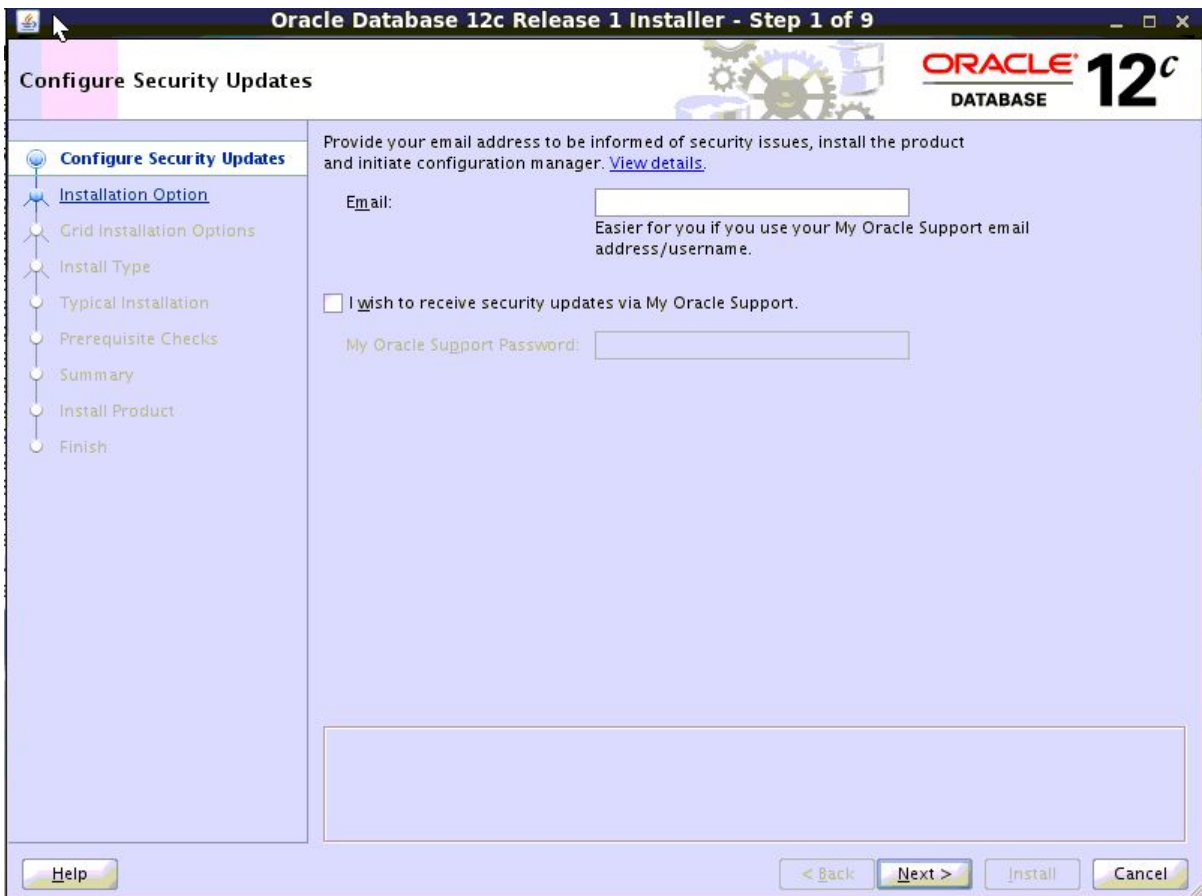
```
willsysrm:oracle 57> pwd
/oracle/stage/12102/database/SAP
willsysrm:oracle 58> ./RUNINSTALLER -check█
```

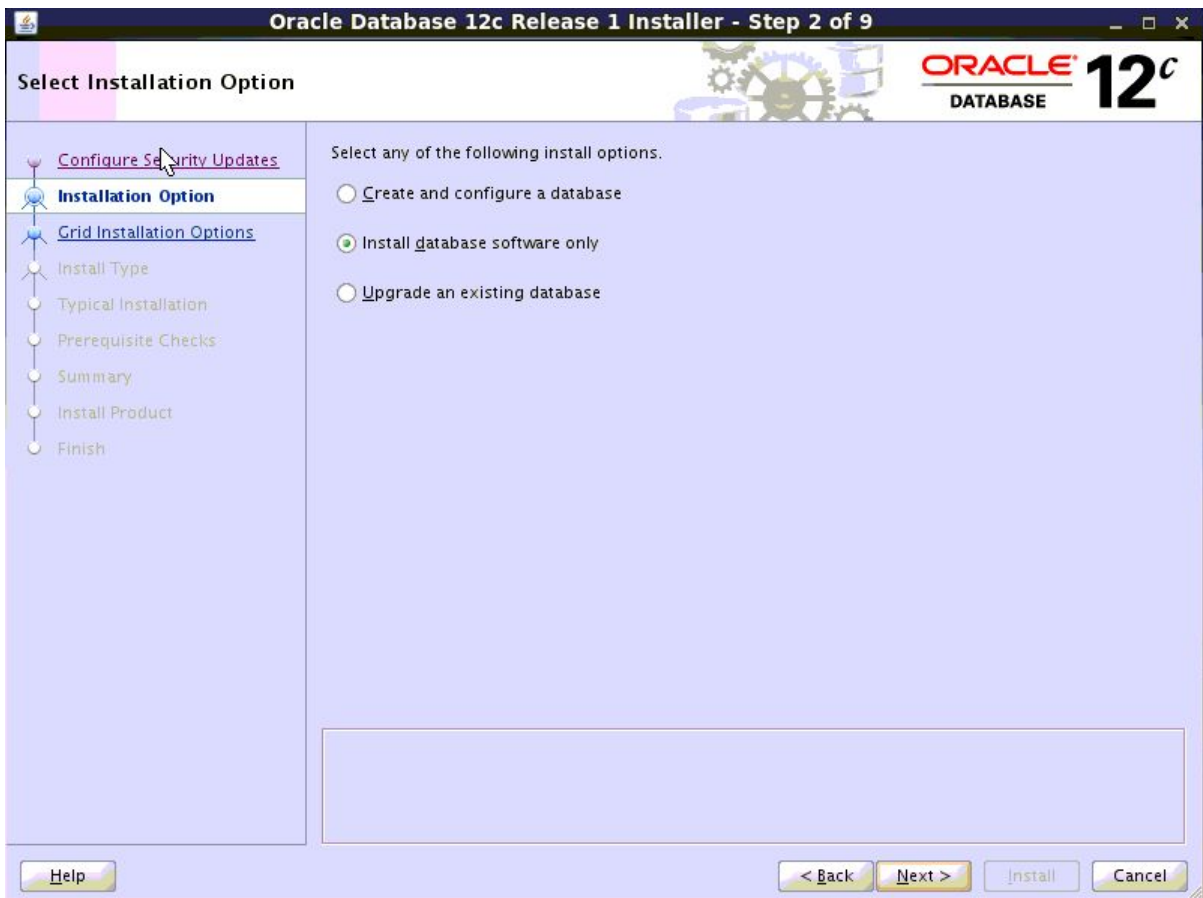
```
root@willssrm:~/Desktop
File Edit View Search Terminal Help
. at oracle.install.commons.flow.FlowApplication.startup(FlowApplication.j
ava:198)
. at oracle.install.commons.base.driver.common.Installer.startup(Installer
.java:355)
. at oracle.install.iwv.db.driver.DBInstaller.startup(DBInstaller.java:130
)
. at oracle.install.iwv.db.driver.DBInstaller.main(DBInstaller.java:161)
.
. (INFO) - Oracle Universal Installer finished.
. (INFO) - Name of OUI session log file not found.
.
. Performing clean up tasks ...
. Clean up tasks completed.
.
. Post-installation tasks are not executed.
. Reason: -executePrereqs /
. Post-installation tasks have been skipped.
.
. Check Results
. (INFO) - Software installation prerequisite checks finished.
. (INFO) - You can find the installation summary log at /home/oracle/12cinst
all 12102.log
. (EXIT) - Exiting with exit code 0.
willssrm:oracle 59>
```

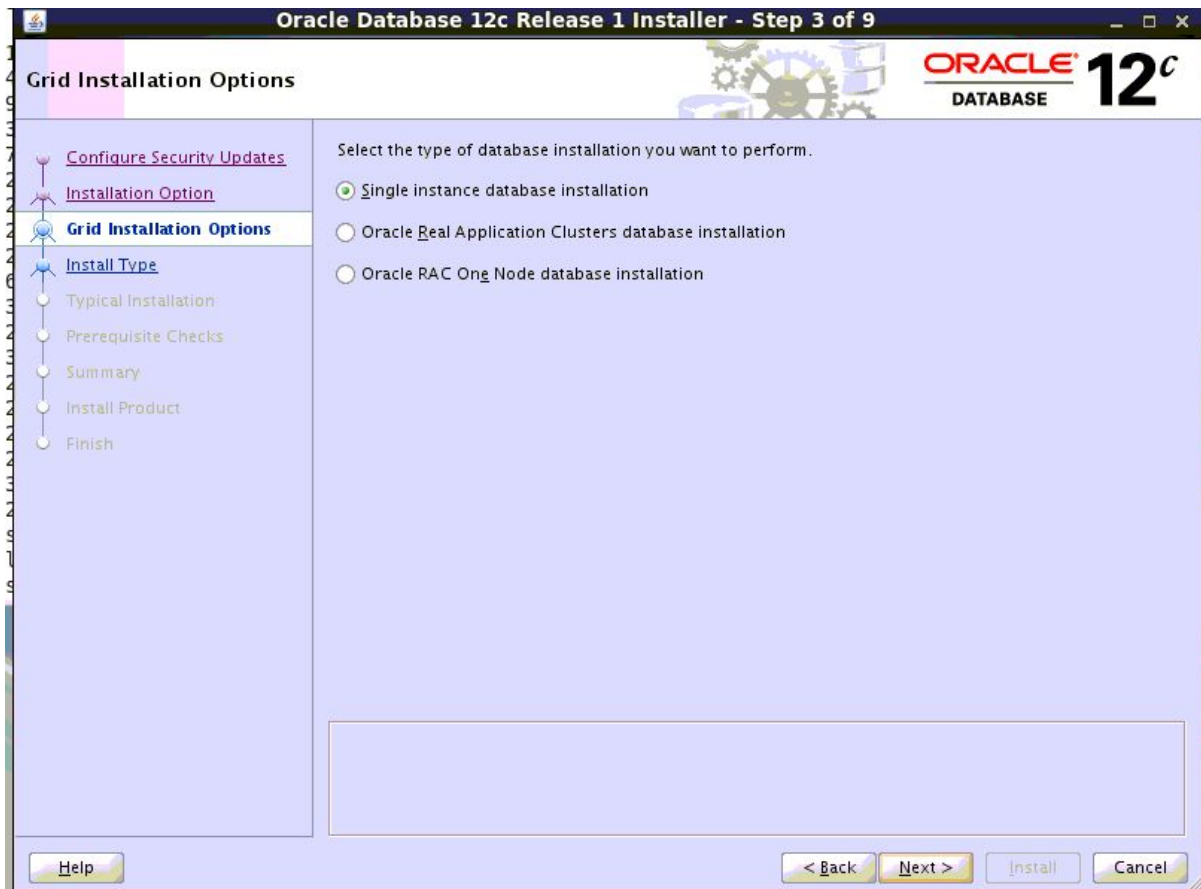
```
willssrm:oracle 59> ./RUNINSTALLER █
```

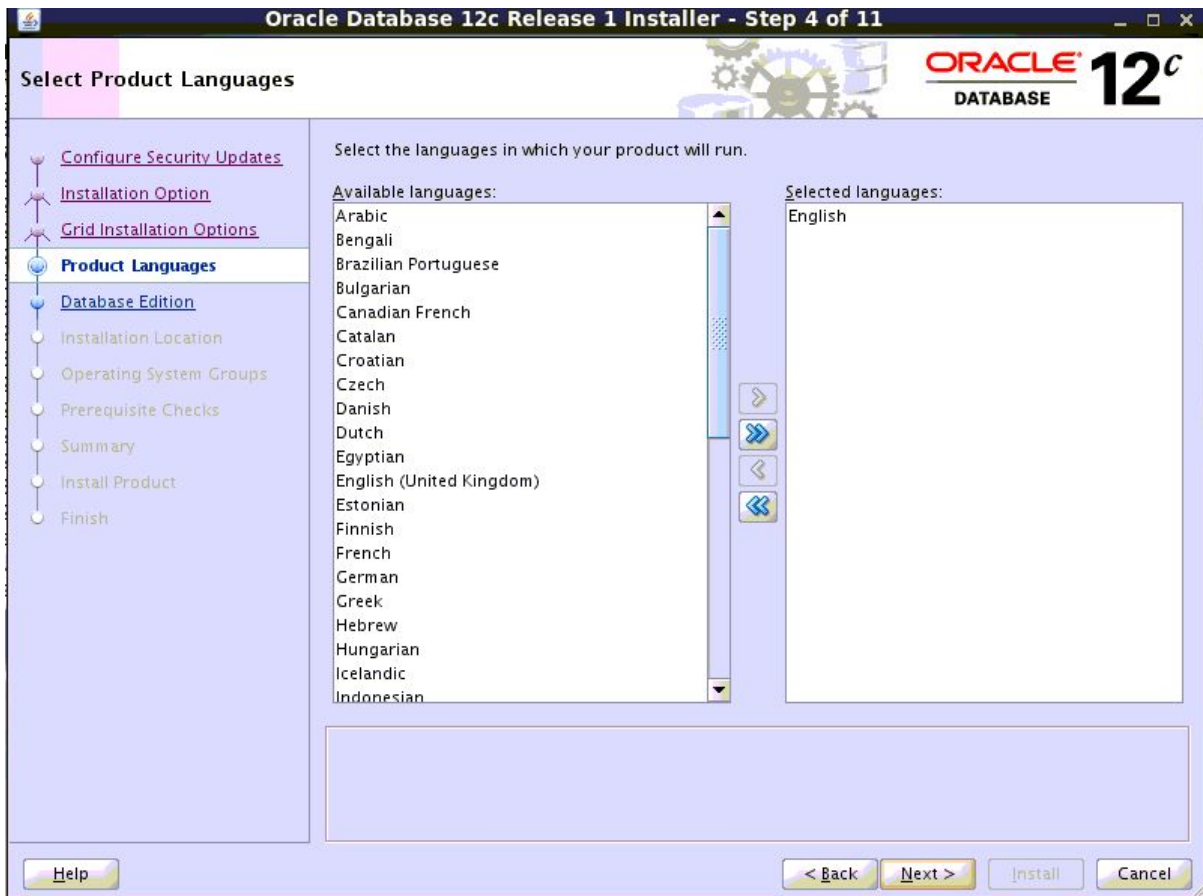
```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
    at oracle.install.iwv.db.driver.DBInstaller.startup(DBInstaller.java:130
)
    at oracle.install.iwv.db.driver.DBInstaller.main(DBInstaller.java:161)
.
. (INFO)    - Oracle Universal Installer finished.
. (INFO)    - Name of OUI session log file not found.
.
. Performing clean up tasks ...
. Clean up tasks completed.
.
. Post-installation tasks are not executed.
. Reason: error during installation
. Post-installation tasks have been skipped.
.
. Installation Results
. (ERROR)   - Oracle Database software installation finished with errors.
. The Oracle executable /oracle/SRM/12102/bin/oracle is empty or does not exist.
. Possible cause(s): link error, installation was cancelled or interrupted, or fatal error.
. (INFO)    - You can find the installation summary log at /home/oracle/12cinstall_12102.log
. (EXIT)    - Exiting with exit code 2.
willsysrm:oracle 60>
```

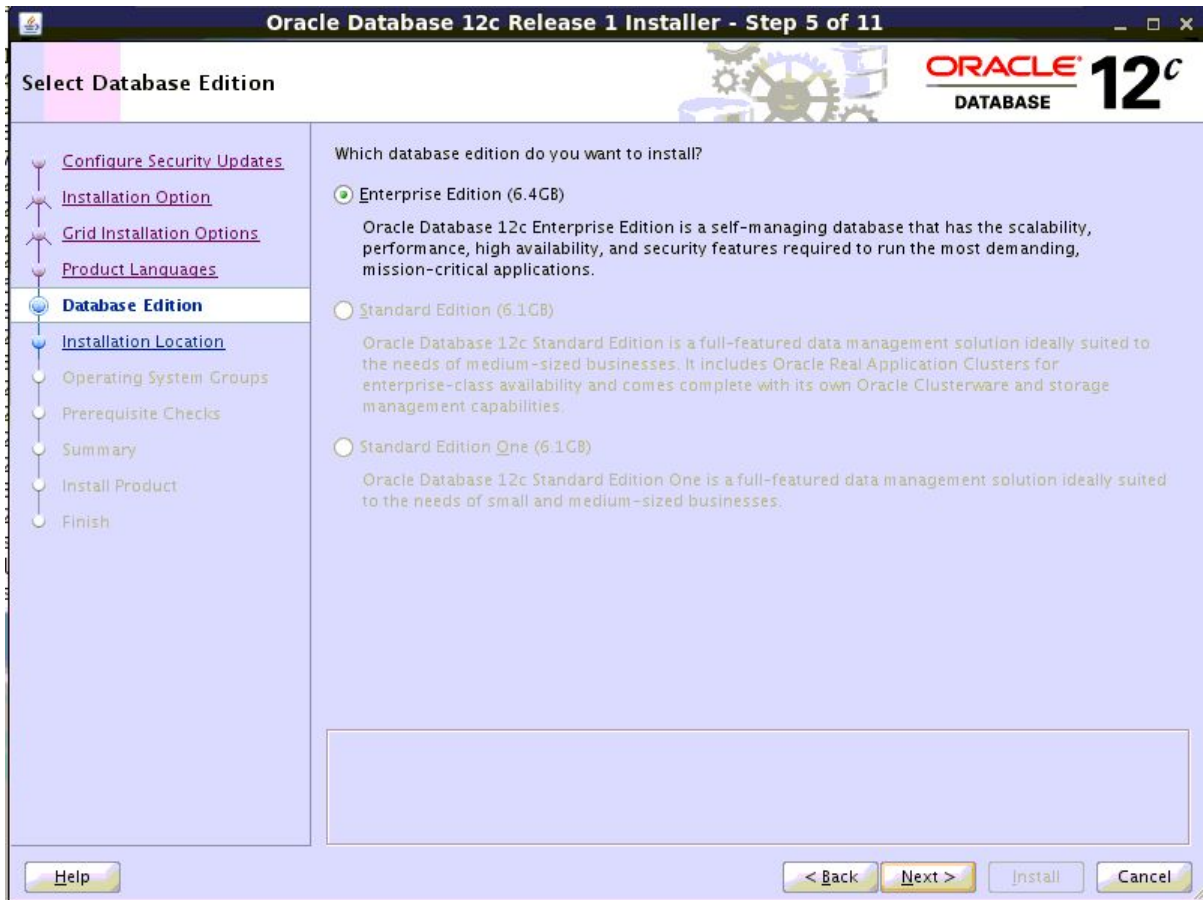
Set display variable and run gaian





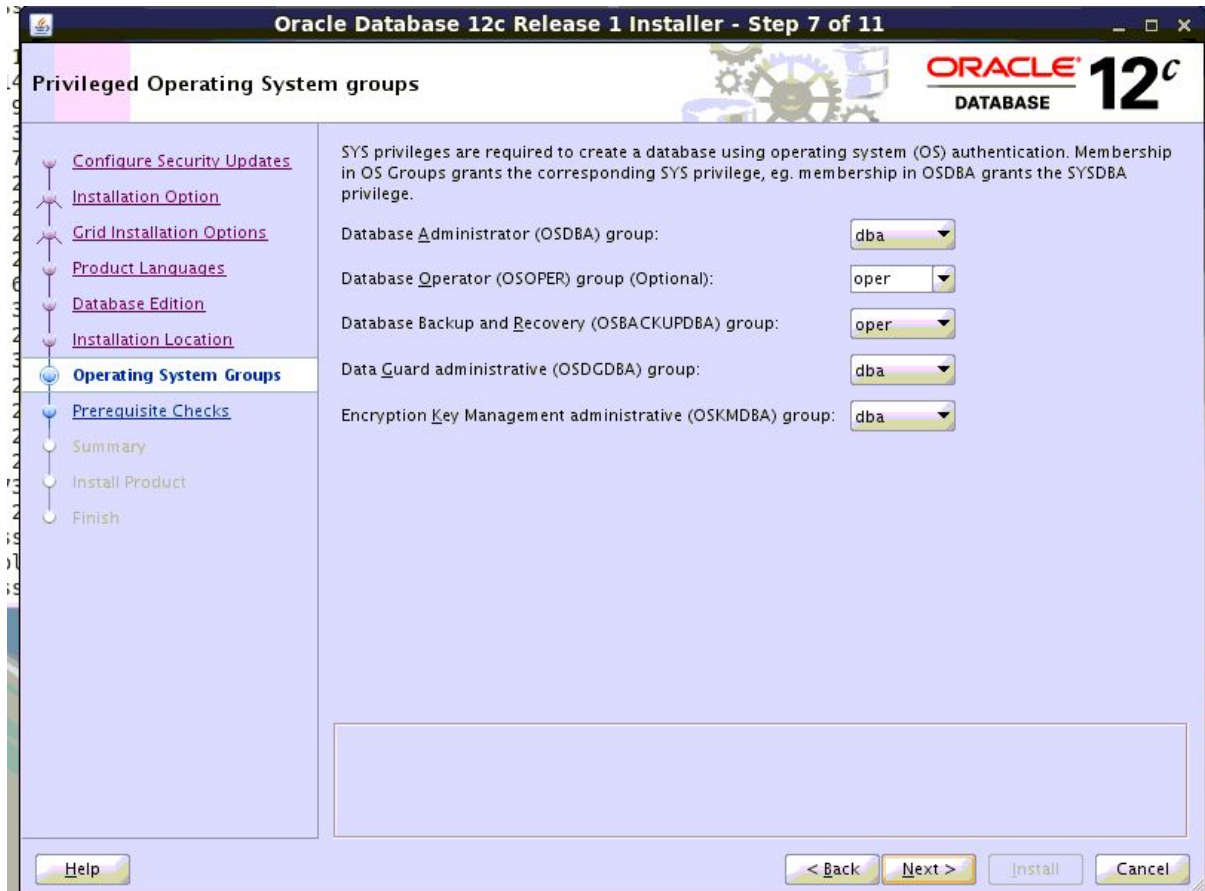












Oracle Database 12c Release 1 Installer - Step 8 of 11

Perform Prerequisite Checks

ORACLE 12c DATABASE

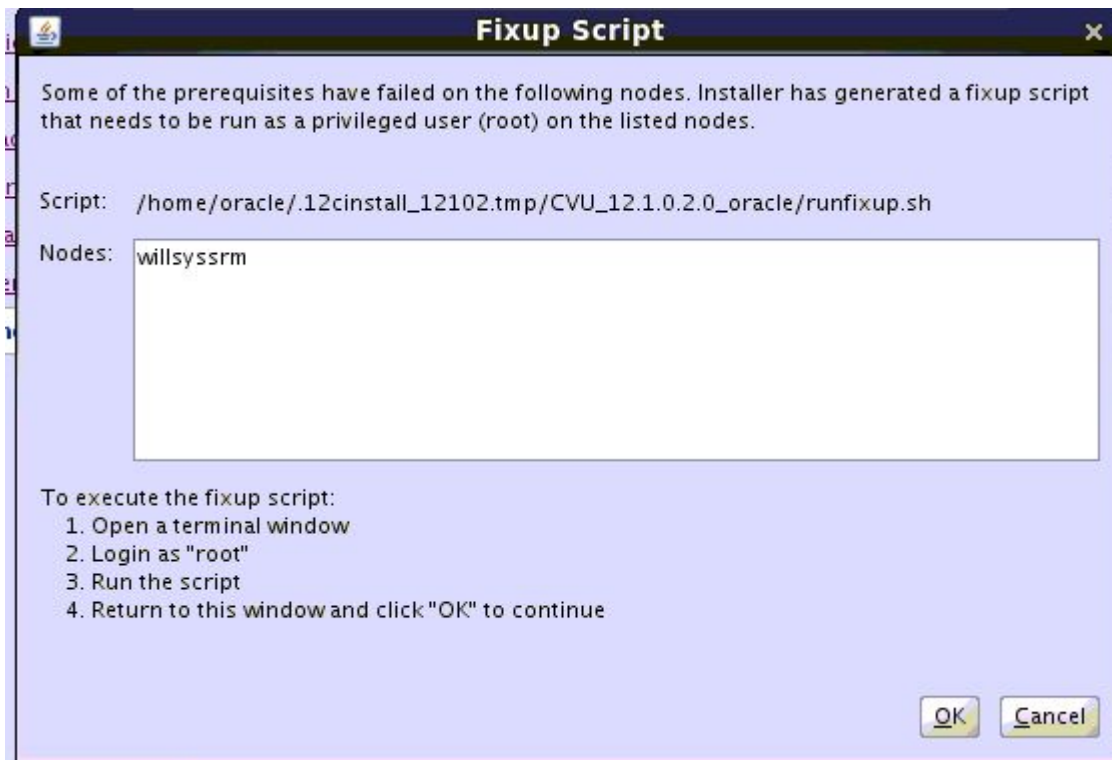
Verification Result

Some of the minimum requirements for installation are not completed. Review and fix the issues listed in the following table, and recheck the system.

Ignore All

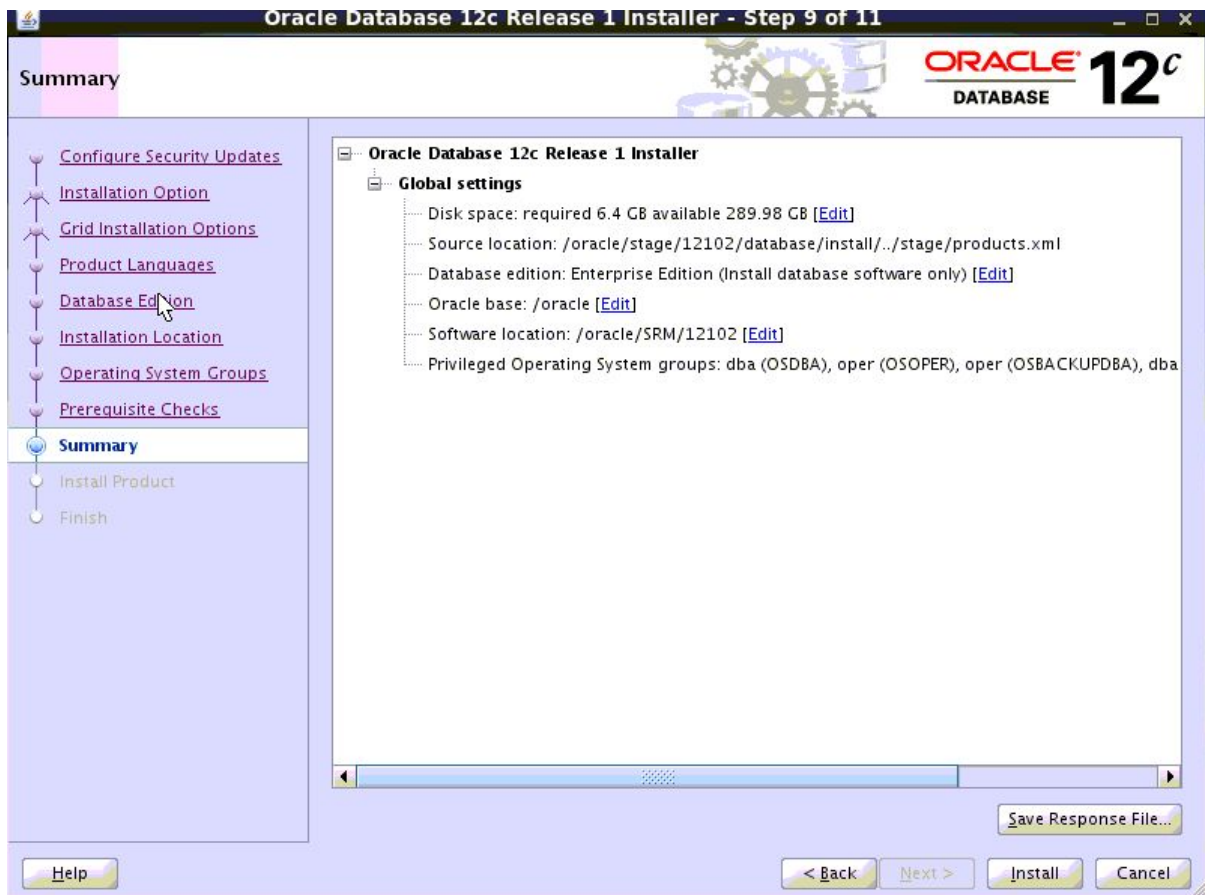
Checks	Status	Fixable
Group Membership: oinstall	Failed	Yes
Hard Limit: maximum open file descriptors	Failed	Yes

This is a prerequisite condition to test whether user "oracle" is a member of the group "oinstall". [\(more details\)](#)

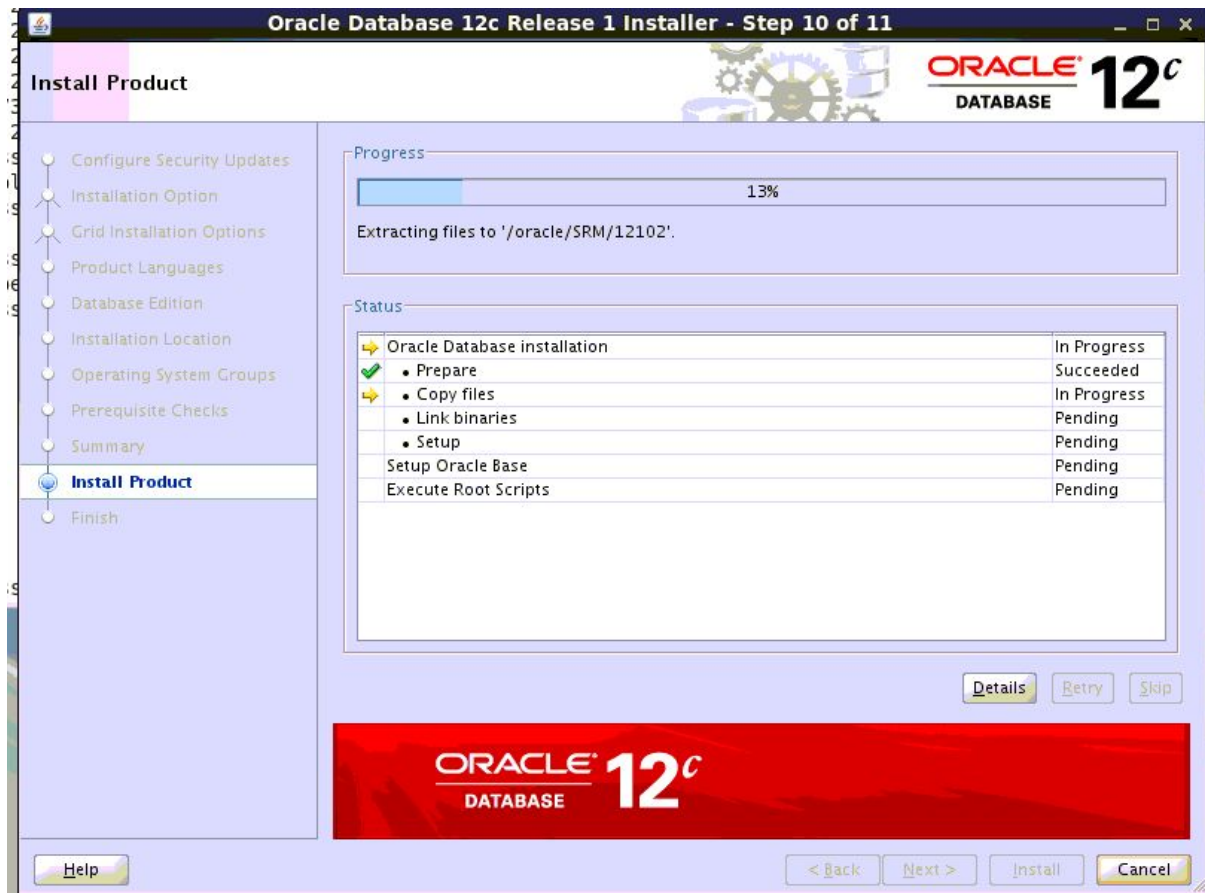


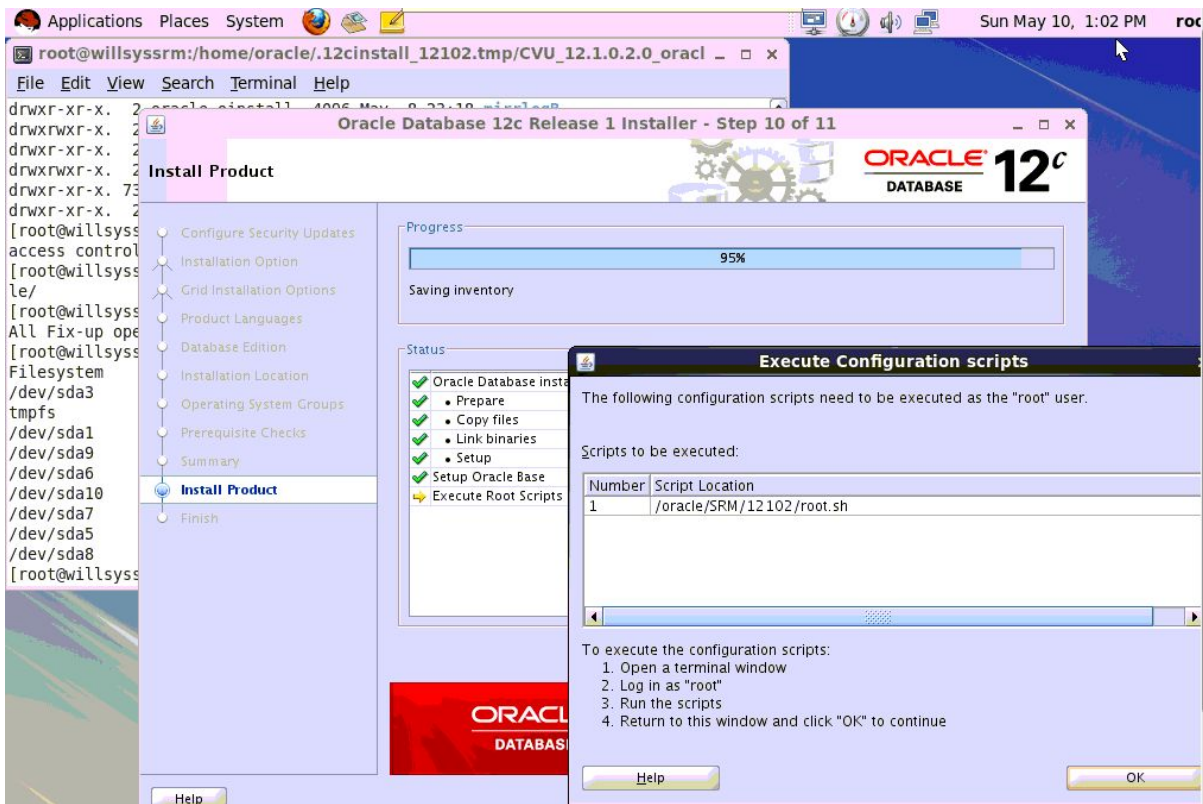
```
[root@willsysrm SRM]# cd /home/oracle/.12cinstall_12102.tmp/CVU_12.1.0.2.0_oracle/
[root@willsysrm CVU_12.1.0.2.0_oracle]# ./runfixup.sh █
```

```
[root@willsysrm CVU_12.1.0.2.0_oracle]# ./runfixup.sh
All Fix-up operations were completed successfully.
[root@willsysrm CVU_12.1.0.2.0_oracle]# █
```









```
[root@willsysrm 12102]# ./root.sh
Performing root user operation.

The following environment variables are set as:
  ORACLE_OWNER= oracle
  ORACLE_HOME= /oracle/SRM/12102

Enter the full pathname of the local bin directory: [/usr/local/bin]:
The file "dbhome" already exists in /usr/local/bin. Overwrite it? (y/n)
[n]: y
  Copying dbhome to /usr/local/bin ...
The file "oraenv" already exists in /usr/local/bin. Overwrite it? (y/n)
[n]: y
  Copying oraenv to /usr/local/bin ...
The file "coraenv" already exists in /usr/local/bin. Overwrite it? (y/n)
[n]: y
  Copying coraenv to /usr/local/bin ...

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.
[root@willsysrm 12102]#
```





## Running DBUA

Run the pre-upgrade scripts

Download the scripts from SAP note 1915315 and copy the folder sap to /oracle/SRM/12102/

```
drwxr-xr-x. 3 root  root  4096 May 10 13:18 sap
[root@willsysrm 12102]# chmod -R 775 sap/
[root@willsysrm 12102]# chown -R oracle:srmadm sap
[root@willsysrm 12102]# █
```

Login as user "oracle"

Navigate to the directory `cd /oracle/SRM/12102/sap/ora_upgrade/pre_upgrade/` and run `@pre_upgrade_tasks.sql` and `@pre_upgrade_checks.sql`

```
willsysrm:oracle 57> sqlplus "/as sysdba"
```

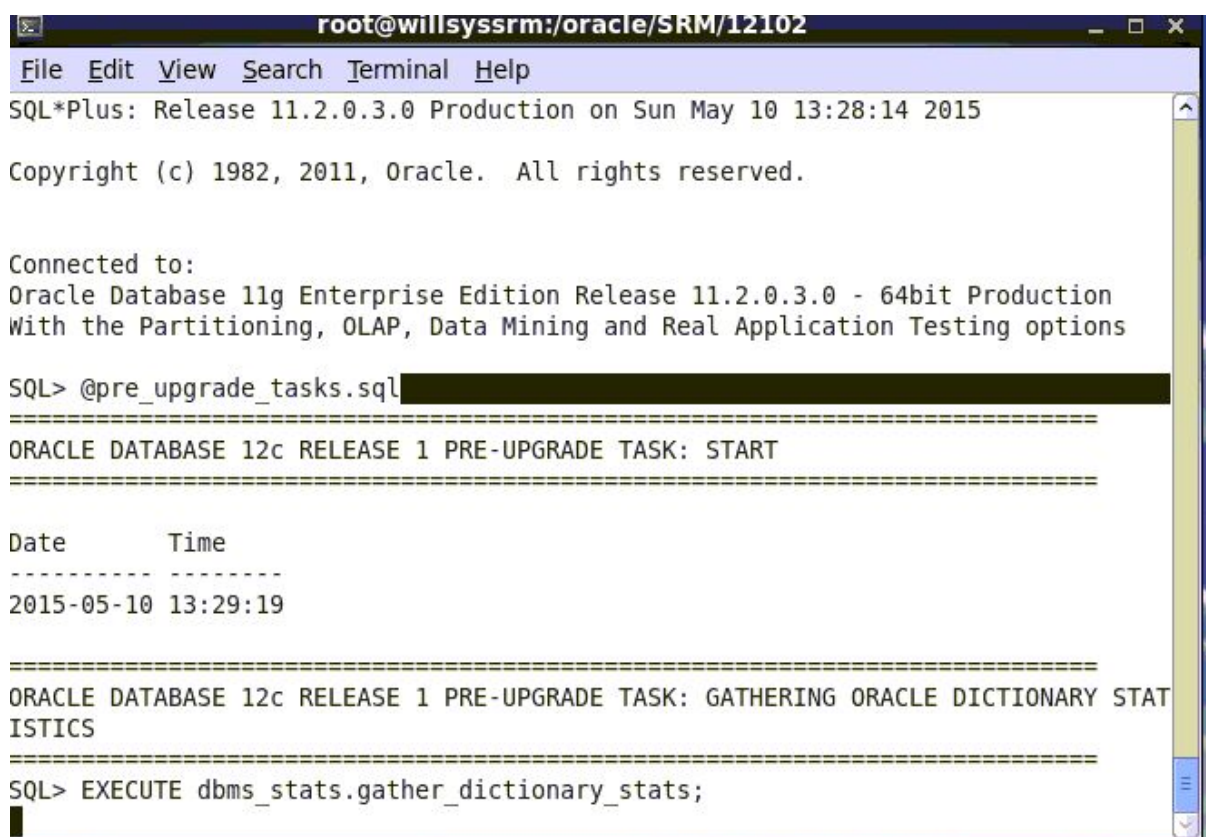
```
SQL*Plus: Release 11.2.0.3.0 Production on Sun May 10 13:28:14 2015
```

```
Copyright (c) 1982, 2011, Oracle. All rights reserved.
```

```
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
```

```
SQL> @pre_upgrade_tasks.sql
```



```
root@willsysrm:/oracle/SRM/12102
File Edit View Search Terminal Help
SQL*Plus: Release 11.2.0.3.0 Production on Sun May 10 13:28:14 2015
Copyright (c) 1982, 2011, Oracle. All rights reserved.

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

SQL> @pre_upgrade_tasks.sql
=====
ORACLE DATABASE 12c RELEASE 1 PRE-UPGRADE TASK: START
=====

Date          Time
-----
2015-05-10 13:29:19

=====
ORACLE DATABASE 12c RELEASE 1 PRE-UPGRADE TASK: GATHERING ORACLE DICTIONARY STATISTICS
=====
SQL> EXECUTE dbms_stats.gather_dictionary_stats;
```

```
root@willsyssrm:/oracle/SRM/12102
File Edit View Search Terminal Help

Function dropped.

PL/SQL procedure successfully completed.

=====
ORACLE DATABASE 12c RELEASE 1 PRE-UPGRADE TASK: PURGING DATABASE RECYCLEBIN
=====
SQL> PURGE DBA_RECYCLEBIN;

DBA Recyclebin purged.

SQL> SET ECHO OFF

=====
ORACLE DATABASE 12c RELEASE 1 PRE-UPGRADE TASK: FINISHED
=====

Date      Time
-----
2015-05-10 13:29:37

SQL> 
```

```
root@willsysrm:/oracle/SRM/12102
File Edit View Search Terminal Help

Function dropped.

PL/SQL procedure successfully completed.

=====
ORACLE DATABASE 12c RELEASE 1 PRE-UPGRADE TASK: PURGING DATABASE RECYCLEBIN
=====
SQL> PURGE DBA_RECYCLEBIN;

DBA Recyclebin purged.

SQL> SET ECHO OFF

=====
ORACLE DATABASE 12c RELEASE 1 PRE-UPGRADE TASK: FINISHED
=====

Date          Time
-----
2015-05-10 13:29:37

SQL> @pre_upgrade_checks.sql
```

```

root@willsysrm:/oracle/SRM/12102
File Edit View Search Terminal Help
*****
***      Oracle Database Object ID Checker for SAP      ***
*****
DATABASE NAME           : SRM
DATABASE CREATION TIME  : 2015-MAY-08 23:17:35
DATABASE AGE            : 0 years 1 days

DATAOBJ# (current max.) : 83702
OBJECT ID (current max.) : 83698
OBJECT ID (system limit) : 4254950911
OBJECT ID (check limit)  : 3221225472

Checking whether object id is above critical value of 3221225472

*****
***                        OK                        ***
*****
Object ID numbers are not critical.

For further information see SAP Note 2137109

SQL> █
  
```

Oracle database upgrade.  
Shut down the SAP system

Make sure that oratab contains the entry <DBSID>:<Oracle\_home>:N Example  
>

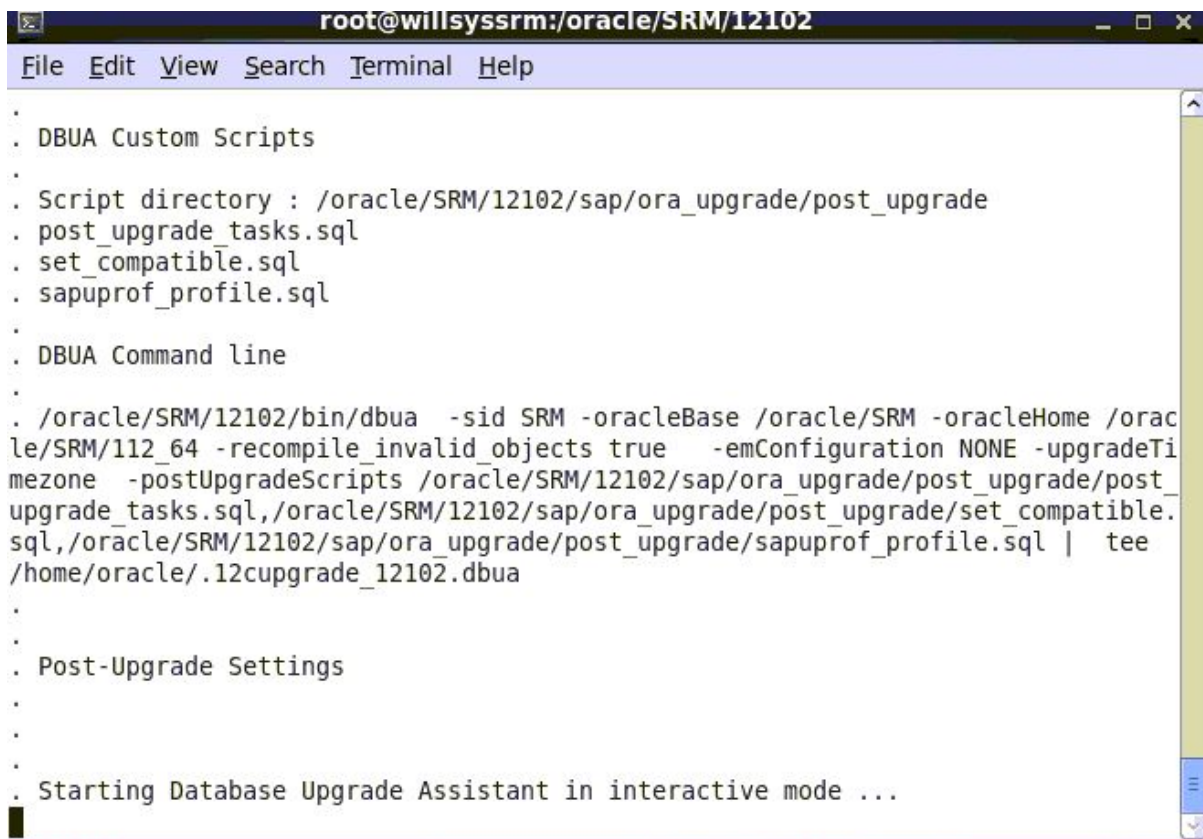
Oracle 11g: OQ1:/oracle/OQ1/112\_64:N the  
Navigate to the directory /oracle/SRM/12102/sap/ora\_upgrade/post\_upgrade

```

willsysrm:oracle 64> setenv ORACLE_HOME_SRC=/oracle/SRM/112_64
setenv: Variable name must contain alphanumeric characters.
willsysrm:oracle 65> setenv ORACLE_HOME_SRC /oracle/SRM/112_64
willsysrm:oracle 66> setenv ORACLE_HOME_TGT /oracle/SRM/12102
willsysrm:oracle 67> setenv DB_SID SRM
  
```

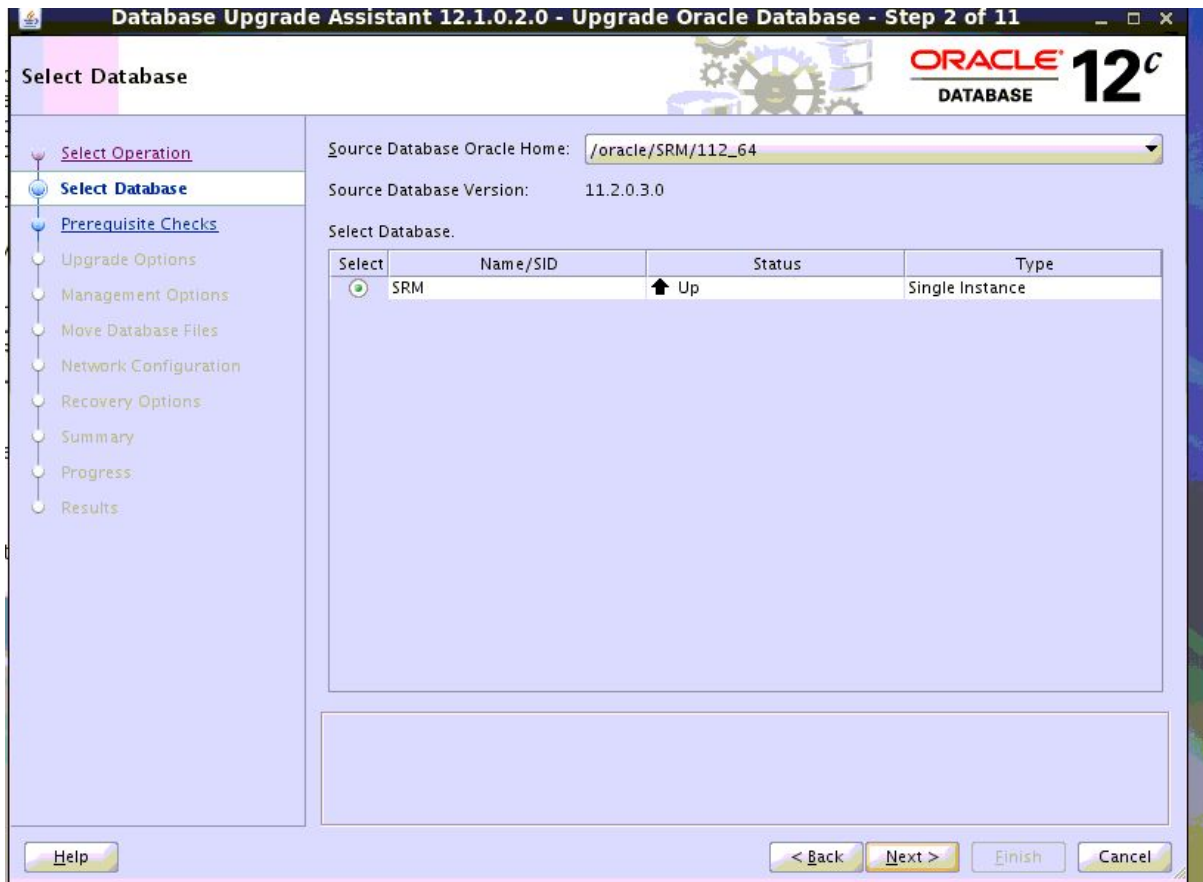
```
willsysrm:oracle 60> cd ora_upgrade/post_upgrade/  
willsysrm:oracle 61> ls -lrt  
total 240  
-rwxrwxr-x. 1 oracle srmadm 4979 Mar  5 17:31 set_compatible.sql  
-rwxrwxr-x. 1 oracle srmadm 9351 Mar  5 17:31 sapupprof_profile.sql  
-rwxrwxr-x. 1 oracle srmadm 53210 Mar  5 17:31 post_upgrade_tasks.sql  
-rwxrwxr-x. 1 oracle srmadm 71441 Mar  5 17:31 post_upgrade_checks.sql  
-rwxrwxr-x. 1 oracle srmadm 96178 Mar  5 17:31 dbua.sap.sh
```

```
willsysrm:oracle 72> ./dbua.sap.sh
```

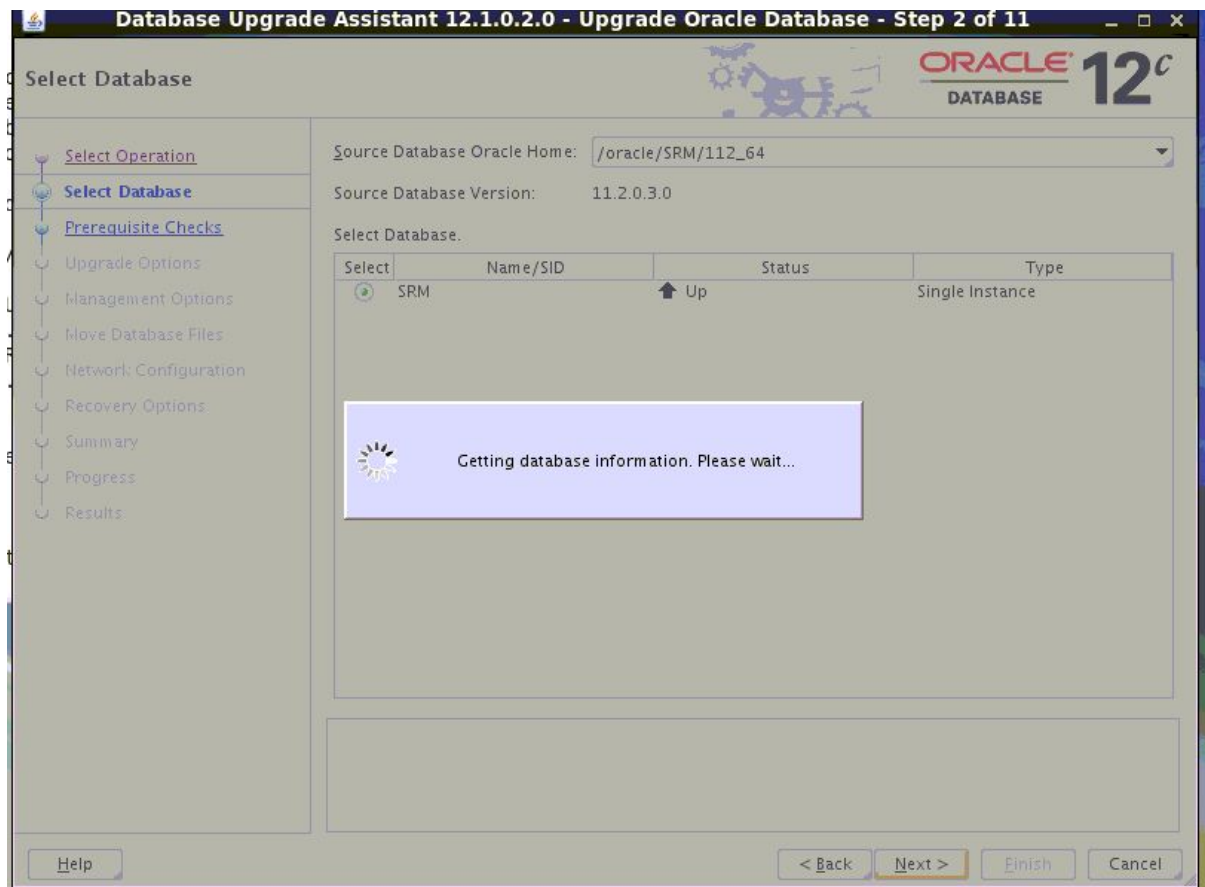


```
root@willsysrm:/oracle/SRM/12102  
File Edit View Search Terminal Help  
. .  
. DBUA Custom Scripts  
. .  
. Script directory : /oracle/SRM/12102/sap/ora_upgrade/post_upgrade  
. post_upgrade_tasks.sql  
. set_compatible.sql  
. sapupprof_profile.sql  
. .  
. DBUA Command line  
. .  
. /oracle/SRM/12102/bin/dbua -sid SRM -oracleBase /oracle/SRM -oracleHome /oracle/SRM/112_64 -recompile_invalid_objects true -emConfiguration NONE -upgradeTimezone -postUpgradeScripts /oracle/SRM/12102/sap/ora_upgrade/post_upgrade/post_upgrade_tasks.sql,/oracle/SRM/12102/sap/ora_upgrade/post_upgrade/set_compatible.sql,/oracle/SRM/12102/sap/ora_upgrade/post_upgrade/sapupprof_profile.sql | tee /home/oracle/.12cupgrade_12102.dbua  
. .  
. .  
. Post-Upgrade Settings  
. .  
. .  
. Starting Database Upgrade Assistant in interactive mode ...
```

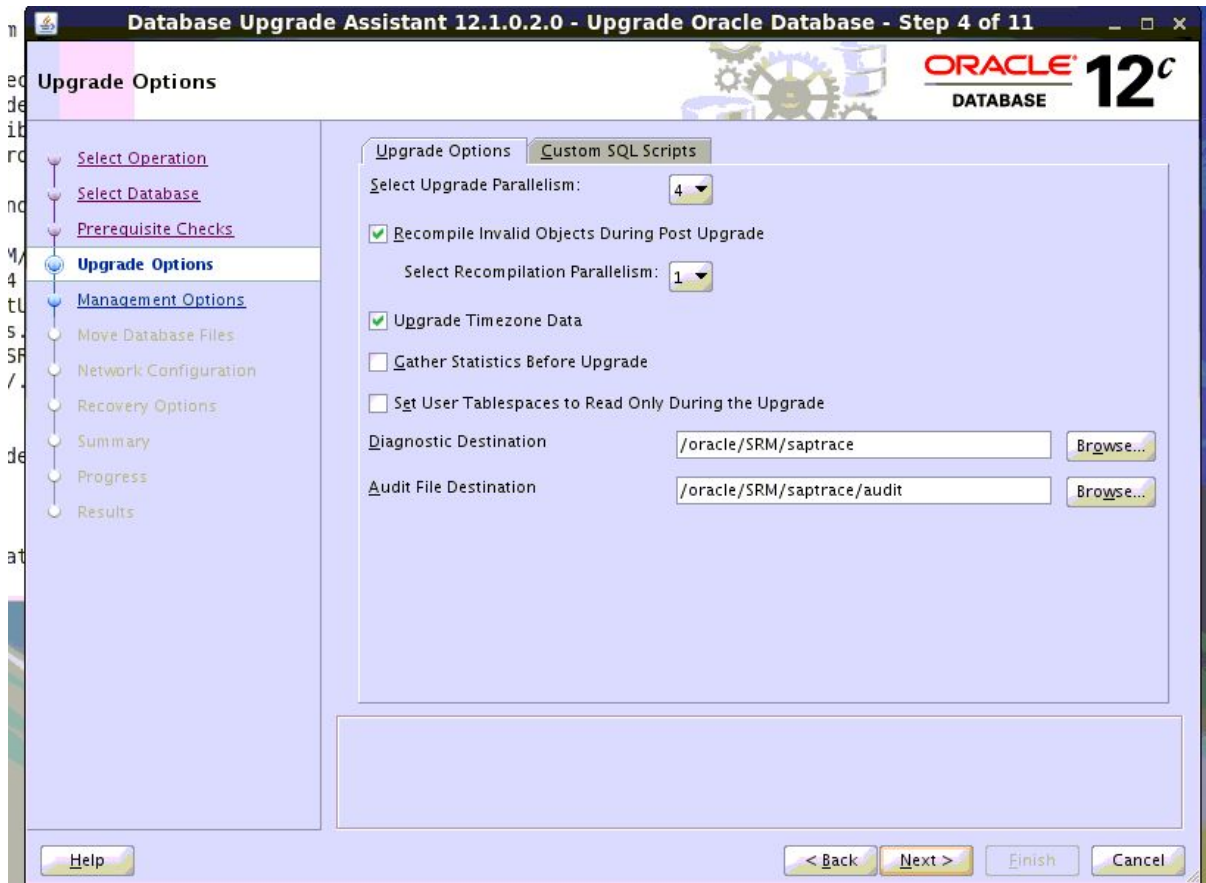


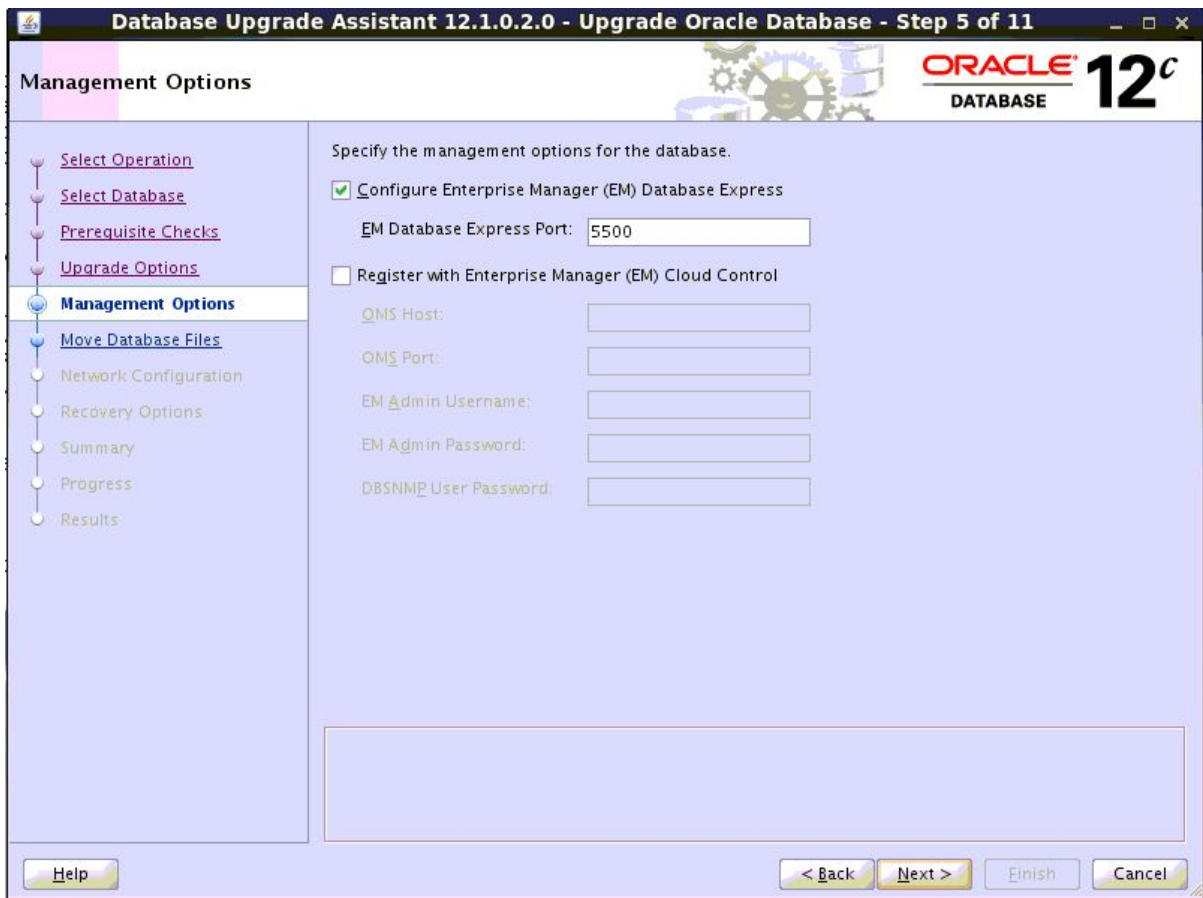


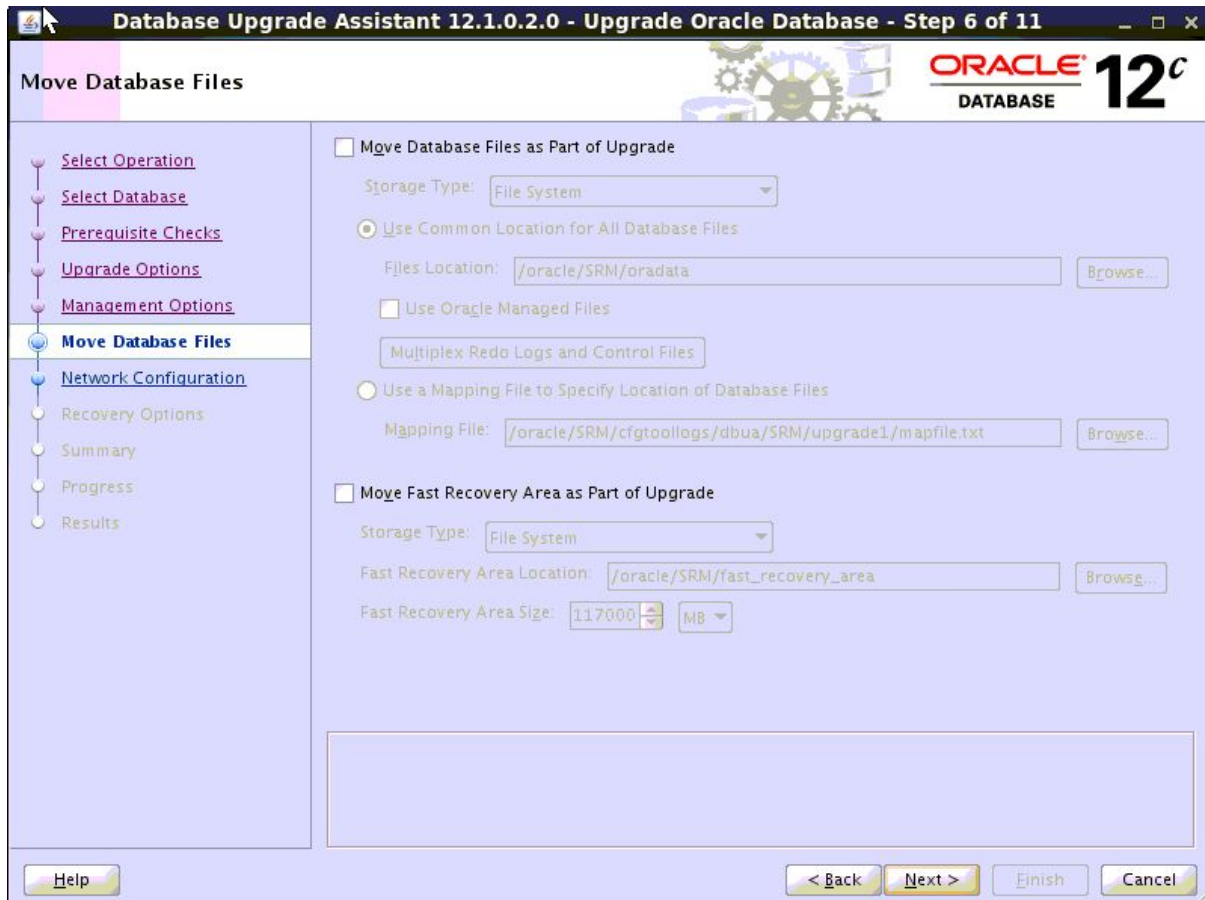












Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 7 of 11

Network Configuration

ORACLE DATABASE 12<sup>c</sup>

- Select Operation
- Select Database
- Prerequisite Checks
- Upgrade Options
- Management Options
- Move Database Files
- Network Configuration**
- Recovery Options
- Summary
- Progress
- Results

Listener Selection

Select the listeners to which this database needs to be registered. If any of the selected listeners are from source Oracle home, they will be migrated and restarted in target Oracle home.

Select Listeners.

Select	Name	Port	Oracle Home	Status	Migrate

Create a New Listener

Listener Name:

Listener Port:

Target Oracle Home: /oracle/SRM/12102

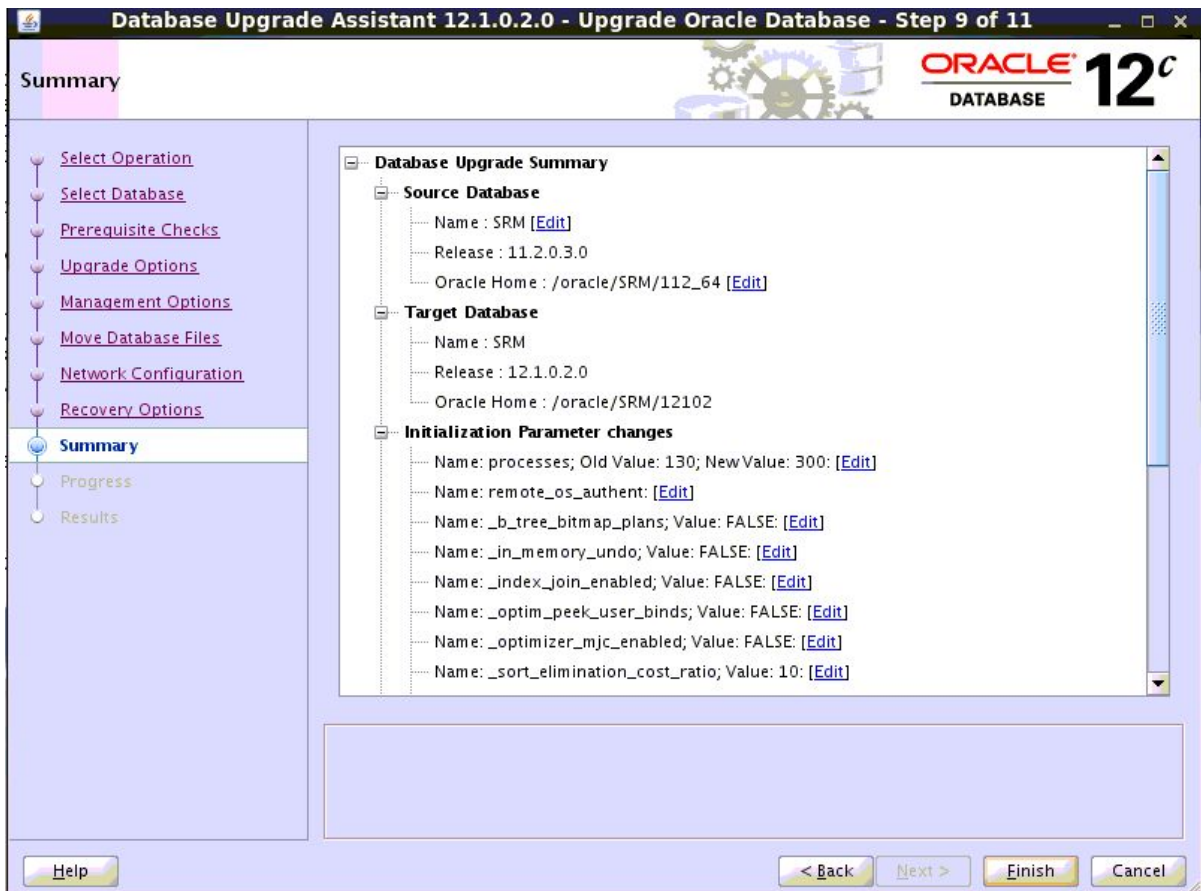
Help      < Back      Next >      Finish      Cancel



The screenshot shows the Oracle 12c Database Recovery Options wizard. The title bar includes the Oracle 12c Database logo. On the left, a navigation pane lists steps: Select Operation, Select Database, Prerequisite Checks, Upgrade Options, Management Options, Move Database Files, Network Configuration, Recovery Options (highlighted), Summary, Progress, and Results. The main area is titled "Recovery Options" and contains the instruction: "Select an option to recover the database in case of upgrade failure." The options are: 

- Use RMAN Backup
  - Create a New Offline RMAN Backup
    - Backup Location: /oracle/SRM/admin/SRM/backup [Browse...]
  - Use Latest Available RMAN Backup
    - Latest RMAN Backup Timestamp: N/A [View/Edit Restore Script]
- Use Flashback and Guaranteed Restore Point
  - Create a New Guaranteed Restore Point
  - Use Available Guaranteed Restore Point: [dropdown]
- I have my own backup and restore strategy

A large empty text box is located below the options. At the bottom, there are buttons for Help, < Back, Next >, Finish, and Cancel.



**Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 9 of 11**

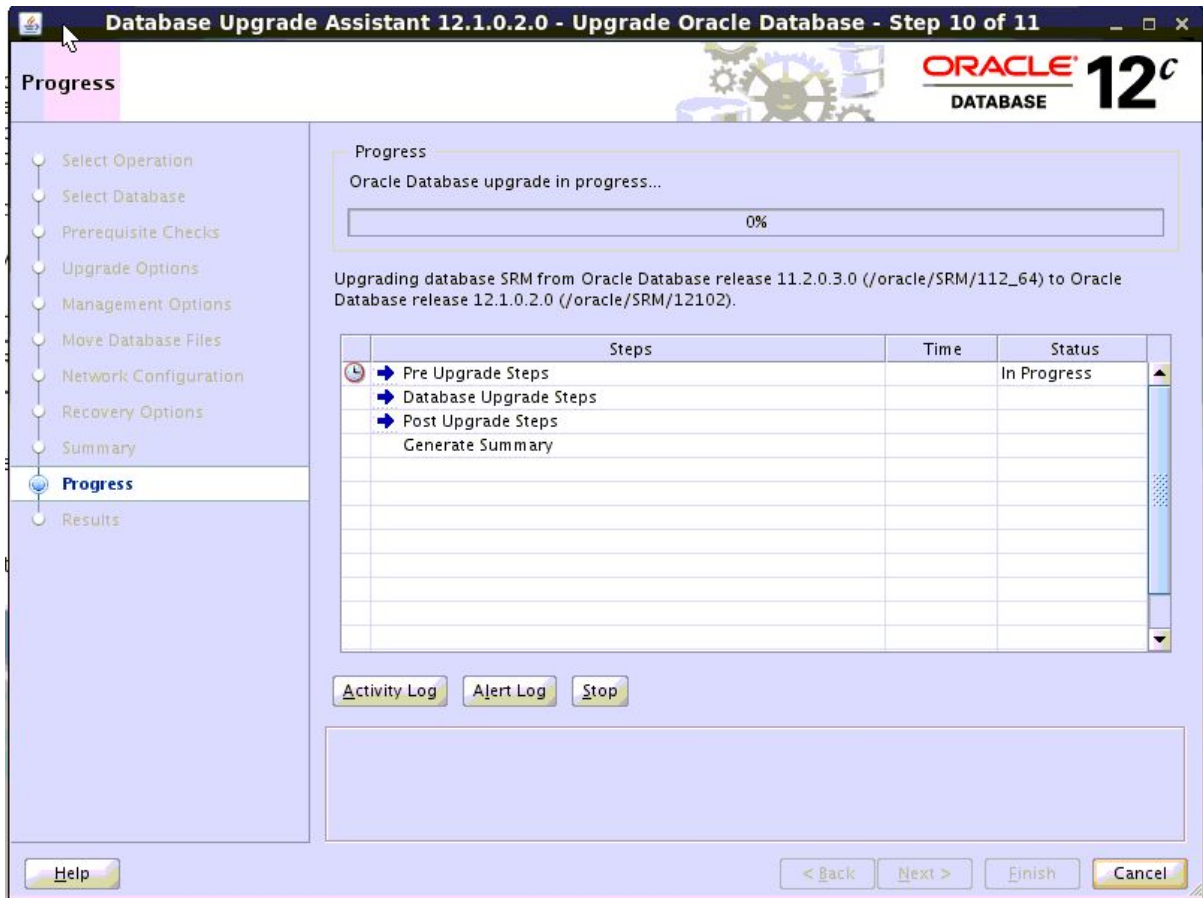
**Summary**

**Database Upgrade Summary**

- Source Database**
  - Name : SRM [Edit]
  - Release : 11.2.0.3.0
  - Oracle Home : /oracle/SRM/112\_64 [Edit]
- Target Database**
  - Name : SRM
  - Release : 12.1.0.2.0
  - Oracle Home : /oracle/SRM/12102
- Initialization Parameter changes**
  - Name: processes; Old Value: 130; New Value: 300: [Edit]
  - Name: remote\_os\_authent: [Edit]
  - Name: \_b\_tree\_bitmap\_plans; Value: FALSE: [Edit]
  - Name: \_in\_memory\_undo; Value: FALSE: [Edit]
  - Name: \_index\_join\_enabled; Value: FALSE: [Edit]
  - Name: \_optim\_peek\_user\_binds; Value: FALSE: [Edit]
  - Name: \_optimizer\_mjc\_enabled; Value: FALSE: [Edit]
  - Name: \_sort\_elimination\_cost\_ratio; Value: 10: [Edit]

Buttons: Help, < Back, Next >, Finish, Cancel





**Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 10 of 11**

**ORACLE 12<sup>c</sup> DATABASE**

**Progress**

Oracle Database upgrade in progress...

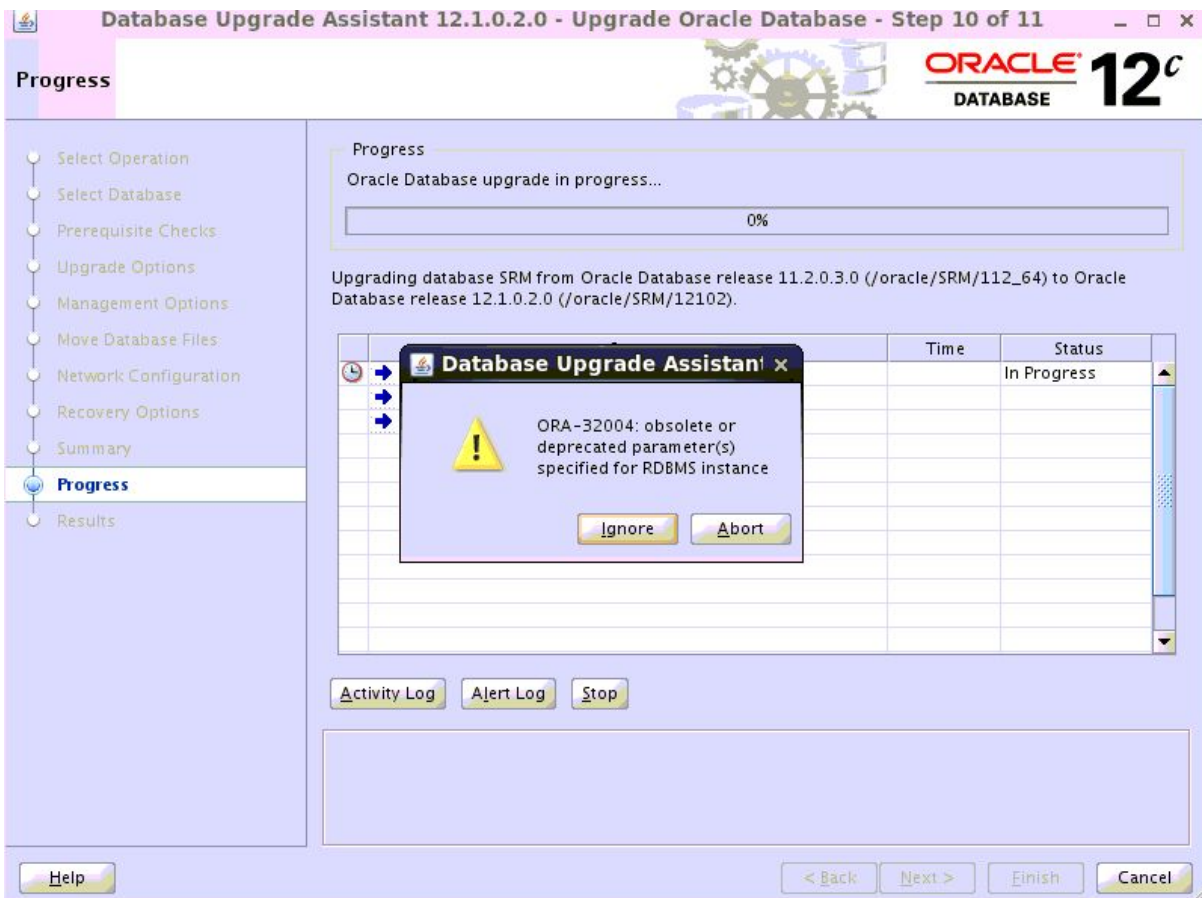
0%

Upgrading database SRM from Oracle Database release 11.2.0.3.0 (/oracle/SRM/112\_64) to Oracle Database release 12.1.0.2.0 (/oracle/SRM/12102).

Steps	Time	Status
Pre Upgrade Steps		In Progress
Database Upgrade Steps		
Post Upgrade Steps		
Generate Summary		

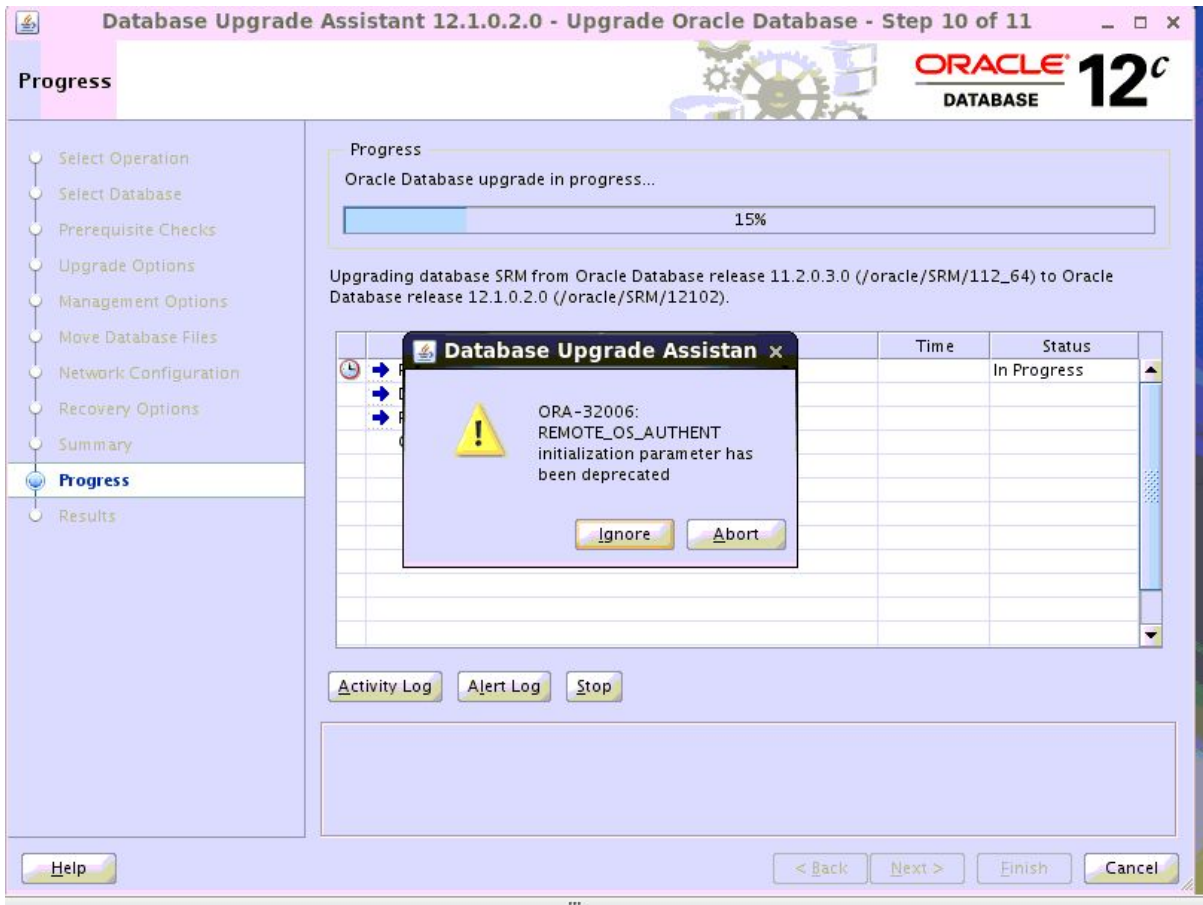
Activity Log | Alert Log | Stop

Help | < Back | Next > | Finish | Cancel



The screenshot shows the Oracle Database Upgrade Assistant interface. The title bar reads "Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 10 of 11". The "Progress" section on the left lists various steps, with "Progress" selected. The main area shows a progress bar at 0% and a message: "Upgrading database SRM from Oracle Database release 11.2.0.3.0 (/oracle/SRM/112\_64) to Oracle Database release 12.1.0.2.0 (/oracle/SRM/12102)". An error dialog box is displayed with the message: "ORA-32004: obsolete or deprecated parameter(s) specified for RDBMS instance". The dialog box has "Ignore" and "Abort" buttons. Below the dialog box is a table with columns "Time" and "Status", showing "In Progress". At the bottom, there are buttons for "Activity Log", "Alert Log", "Stop", "Help", "< Back", "Next >", "Finish", and "Cancel".

ignore



Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 10 of 11

Progress

Oracle Database upgrade in progress...

15%

Upgrading database SRM from Oracle Database release 11.2.0.3.0 (/oracle/SRM/112\_64) to Oracle Database release 12.1.0.2.0 (/oracle/SRM/12102).

	Time	Status
		In Progress

ORA-32006:  
REMOTE\_OS\_AUTHENT  
initialization parameter has  
been deprecated

Ignore Abort

Activity Log Alert Log Stop

Help < Back Next > Finish Cancel

ignore

Database Upgrade Assistant 12.1.0.2.0 - Upgrade Oracle Database - Step 10 of 11

**Progress**

Upgrade is complete. Click "Upgrade Results" to see the results of the upgrade.

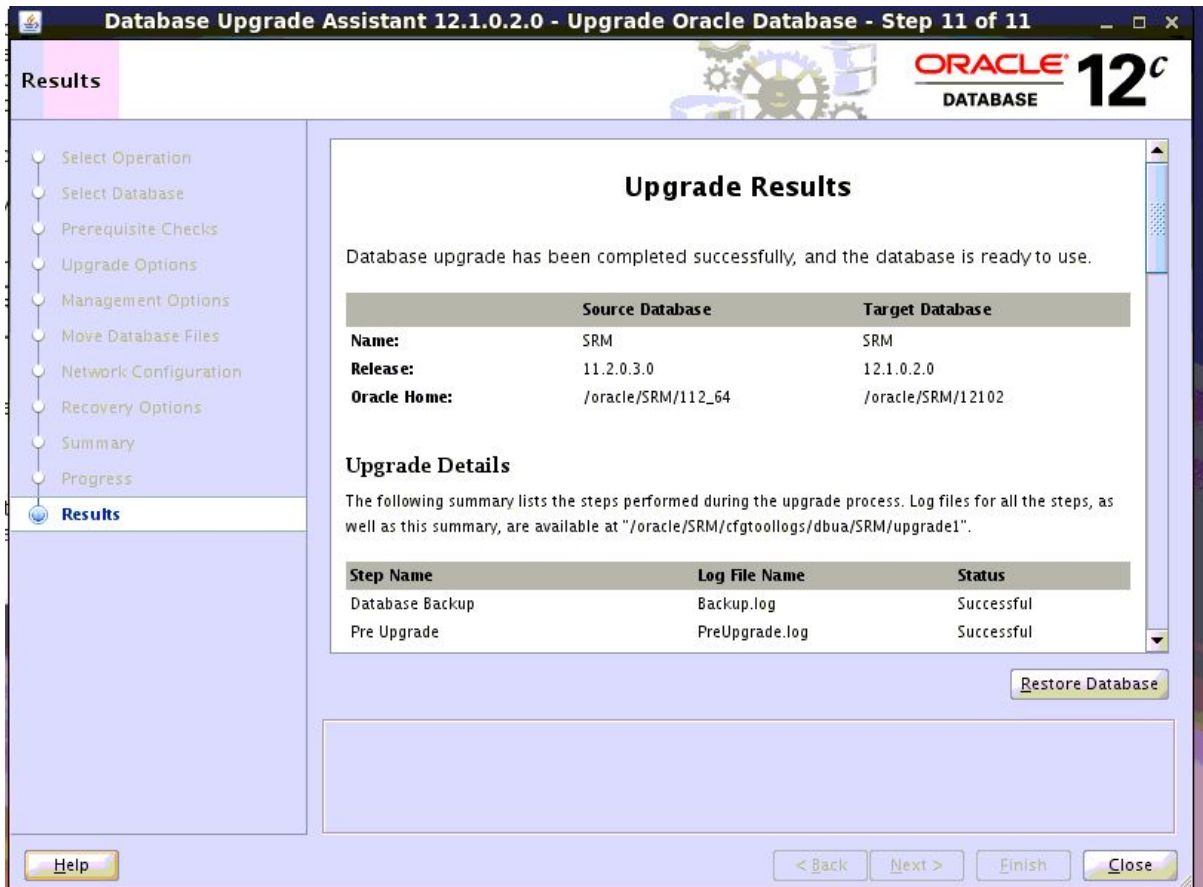
100%

Upgrading database SRM from Oracle Database release 11.2.0.3.0 (/oracle/SRM/112\_64) to Oracle Database release 12.1.0.2.0 (/oracle/SRM/12102).

Steps	Time	Status
Pre Upgrade Steps	0:39:25	Finished
Database Upgrade Steps	1:10:23	Finished
Post Upgrade Steps	0:23:26	Finished
Generate Summary	0:0:10	Finished

Activity Log | Alert Log | Upgrade Results

Help | < Back | Next > | Finish | Cancel



**Upgrade Results**

Database upgrade has been completed successfully, and the database is ready to use.

	Source Database	Target Database
<b>Name:</b>	SRM	SRM
<b>Release:</b>	11.2.0.3.0	12.1.0.2.0
<b>Oracle Home:</b>	/oracle/SRM/112_64	/oracle/SRM/12102

**Upgrade Details**

The following summary lists the steps performed during the upgrade process. Log files for all the steps, as well as this summary, are available at "/oracle/SRM/cfgtoollogs/dbua/SRM/upgrade1".

Step Name	Log File Name	Status
Database Backup	Backup.log	Successful
Pre Upgrade	PreUpgrade.log	Successful

Restore Database

Help < Back Next > Finish Close

Log on as user ora<dbsid> and sap<sid> and adapt the variables listed in the .dbenv\* files

```
File Edit View Search Terminal Help
setenv dbs_ora_tnsname $DB_SID
setenv dbs_ora_schema SAPSR3
setenv ORACLE_SID $DBSID
setenv ORACLE_BASE /oracle
# check for running user and set for orasid ORA_NLS10
set USER = `id | awk -F\(| '{print $2}' | awk -F\) '{print $1}'`
set TRUL = `tr "ABCDEFGHGIJKLMNOPQRSTUVWXYZ" "abcdefghijklmnopqrstuvwxyz"`
set ORASID = "ora`echo $DB_SID | $TRUL`"
if ( $USER != $ORASID ) then
    setenv TNS_ADMIN /usr/sap/SRM/SYS/profile/oracle
    set ADD=/oracle/client/11x_64/instantclient
    set _t=/oracle/SRM/112_64/bin/sqlplus
    set _f=/sapmnt/SRM/profile/DEFAULT.PFL
    set SAPDBHOST=""
    if ( -r "$_f" ) then
        set SAPDBHOST=`awk -F= '/^[ ]*SAPDBHOST[ ]*=/ {print $2; exit}' $
        _f | awk '{print $1}'`
    endif
    if ( -r "$_t" || `uname -n` == "$SAPDBHOST" ) then
        setenv ORACLE_HOME /oracle/SRM/112_64
    endif
else
    setenv ORACLE_HOME /oracle/SRM/112_64
85,22 38%
```

Change oracle home /oracle/<SID>/112\_64 to /oracle/<SID>/121

Log on as the Oracle database software owner  
Try to start listener

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
Copyright (c) 1991, 2014, Oracle. All rights reserved.

Starting /oracle/SRM/121/bin/tnslsnr: please wait...

TNSLSNR for Linux: Version 12.1.0.2.0 - Production
Log messages written to /oracle/diag/tnslsnr/willsysrm/listener/alert/log.xml
Listening on: (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=willsysrm)(PORT=1521)))

Connecting to (ADDRESS=(PROTOCOL=tcp)(HOST=)(PORT=1521))
STATUS of the LISTENER
-----
Alias                LISTENER
Version              TNSLSNR for Linux: Version 12.1.0.2.0 - Production
Start Date           10-MAY-2015 16:32:28
Uptime               0 days 0 hr. 0 min. 3 sec
Trace Level          off
Security              ON: Local OS Authentication
SNMP                 OFF
Listener Log File    /oracle/diag/tnslsnr/willsysrm/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=willsysrm)(PORT=1521)))
The listener supports no services
The command completed successfully
willsysrm:oracle 55>
```

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
Listener Log File /oracle/diag/tnslsnr/willsysrm/listener/alert/log.xml
Listening Endpoints Summary...
  (DESCRIPTION=(ADDRESS=(PROTOCOL=tcp)(HOST=willsysrm)(PORT=1521)))
The listener supports no services
The command completed successfully
willsysrm:oracle 55> sqlplus "/as sysdba"

SQL*Plus: Release 12.1.0.2.0 Production on Sun May 10 16:32:53 2015

Copyright (c) 1982, 2014, Oracle. All rights reserved.

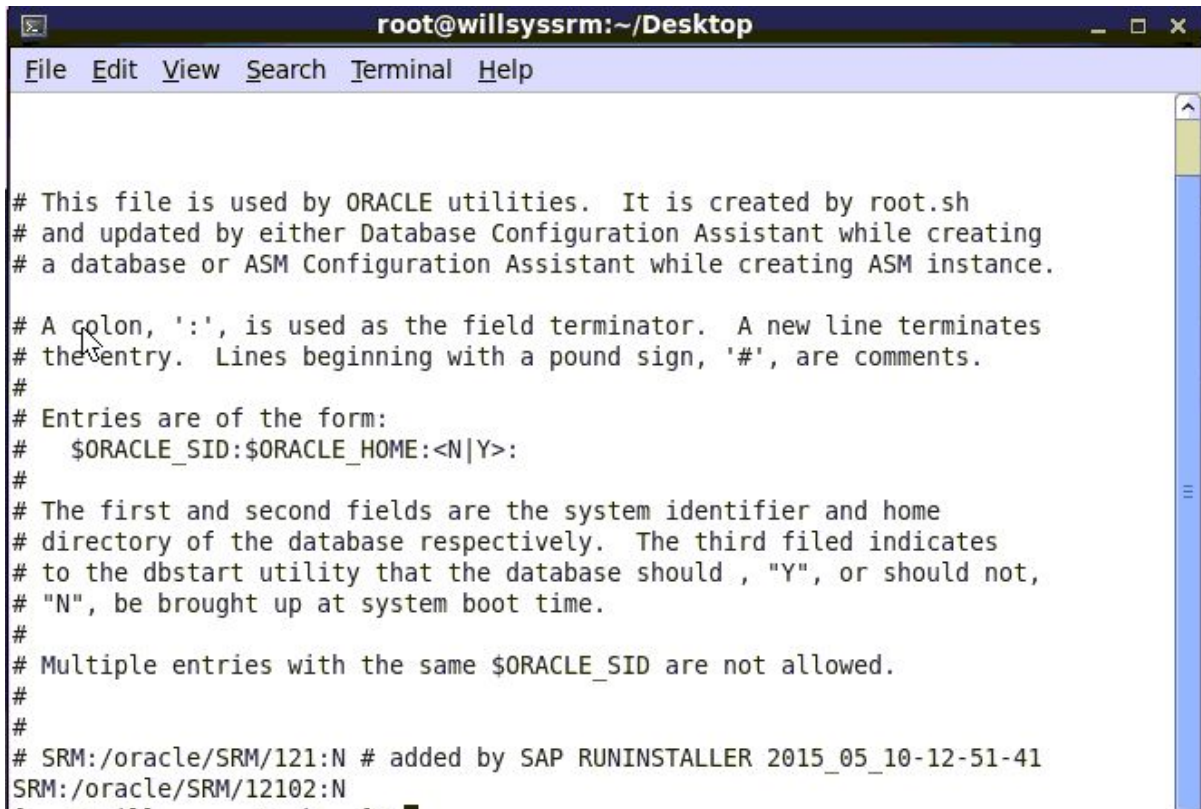
Connected to an idle instance.

SQL> startup
ORACLE instance started.

Total System Global Area 1069547520 bytes
Fixed Size 2932480 bytes
Variable Size 532676864 bytes
Database Buffers 528482304 bytes
Redo Buffers 5455872 bytes
Database mounted.
Database opened.
```

After the database upgrade, change the entry  
<DBSID>:/oracle/<DBSID>/12102:N in /etc/oratab



A screenshot of a terminal window titled "root@willsysrm:~/Desktop". The window has a menu bar with "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal content shows a file with Oracle configuration instructions. The text includes: "# This file is used by ORACLE utilities. It is created by root.sh and updated by either Database Configuration Assistant while creating a database or ASM Configuration Assistant while creating ASM instance.", "# A colon, ':', is used as the field terminator. A new line terminates the entry. Lines beginning with a pound sign, '#', are comments.", "# Entries are of the form: \$ORACLE\_SID:\$ORACLE\_HOME:<N|Y>:", "# The first and second fields are the system identifier and home directory of the database respectively. The third field indicates to the dbstart utility that the database should, 'Y', or should not, 'N', be brought up at system boot time.", "# Multiple entries with the same \$ORACLE\_SID are not allowed.", "# SRM:/oracle/SRM/121:N # added by SAP RUNINSTALLER 2015\_05\_10-12-51-41 SRM:/oracle/SRM/12102:N".

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help

# This file is used by ORACLE utilities. It is created by root.sh
# and updated by either Database Configuration Assistant while creating
# a database or ASM Configuration Assistant while creating ASM instance.

# A colon, ':', is used as the field terminator. A new line terminates
# the entry. Lines beginning with a pound sign, '#', are comments.
#
# Entries are of the form:
# $ORACLE_SID:$ORACLE_HOME:<N|Y>:
#
# The first and second fields are the system identifier and home
# directory of the database respectively. The third field indicates
# to the dbstart utility that the database should, "Y", or should not,
# "N", be brought up at system boot time.
#
# Multiple entries with the same $ORACLE_SID are not allowed.
#
#
# SRM:/oracle/SRM/121:N # added by SAP RUNINSTALLER 2015_05_10-12-51-41
SRM:/oracle/SRM/12102:N
```

## Post-Upgrade Checks:

Login as software owner user “oracle”

Navigate to the path

```
willsysrm:oracle 56> cd /oracle/SRM/12102/sap/ora_upgrade/post_upgrade/  
willsysrm:oracle 57> !sql  
sqlplus "/as sysdba"
```

```
SQL*Plus: Release 12.1.0.2.0 Production on Sun May 10 16:36:58 2015
```

```
Copyright (c) 1982, 2014, Oracle. All rights reserved.
```

```
Connected to:
```

```
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production  
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing opt  
ions
```

```
willsysrm:oracle 58> ls -lrt
```

```
total 424  
-rwxrwxr-x. 1 oracle srmadm 4979 Mar 5 17:31 set_compatible.sql  
-rwxrwxr-x. 1 oracle srmadm 9351 Mar 5 17:31 sapupprof_profile.sql  
-rwxrwxr-x. 1 oracle srmadm 53210 Mar 5 17:31 post_upgrade_tasks.sql  
-rwxrwxr-x. 1 oracle srmadm 71441 Mar 5 17:31 post_upgrade_checks.sql  
-rwxrwxr-x. 1 oracle srmadm 96178 Mar 5 17:31 dbua.sap.sh  
-rw-r-----. 1 oracle srmadm 184798 May 10 15:51 sapupprof_profile.log
```

```
willsysrm:oracle 59> pwd
```

```
/oracle/SRM/12102/sap/ora_upgrade/post_upgrade
```

```
willsysrm:oracle 60> █
```

```
SQL> @set_compatible.sql █
```

```
SQL> @set_compatible.sql
```

```
POST-UPGRADE: Checking for guaranteed restore points
```

```
COMPATIBLE (current value): 12.1.0.2.0
```

```
COMPATIBLE will not be modified.
```

```
PL/SQL procedure successfully completed.
```

```
SQL> @sapupprof_profile.sql
```

```
.
```

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
Executing SQL command 'ALTER USER SAPSR3 PROFILE SAPUPROF'
OK.
.
Checking user profile configuration of SAP accounts ...
USER (PROFILE): SAPSR3 (SAPUPROF)
.
Checking DEFAULT user profile ...
DEFAULT: FAILED_LOGIN_ATTEMPTS=10
DEFAULT: PASSWORD_LIFE_TIME=180
.
Checking SAPUPROF user profile ...
SAPUPROF: FAILED_LOGIN_ATTEMPTS=UNLIMITED (*)
SAPUPROF: PASSWORD_LIFE_TIME=UNLIMITED (*)
SAPUPROF: PASSWORD_REUSE_TIME=DEFAULT
SAPUPROF: PASSWORD_REUSE_MAX=DEFAULT
SAPUPROF: PASSWORD_VERIFY_FUNCTION=DEFAULT
SAPUPROF: PASSWORD_LOCK_TIME=DEFAULT
SAPUPROF: PASSWORD_GRACE_TIME=DEFAULT

PL/SQL procedure successfully completed.
```

```
willssrm:oracle 64> pwd
/oracle/SRM/12102/rdbms/admin
```

```
SQL> @utlu121s.sql
```

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
Final Actions 00:04:06
Post Upgrade 00:03:18

Total Upgrade Time: 00:57:13

PL/SQL procedure successfully completed.

SQL>
SQL> --
SQL> -- Update Summary Table with con_name and endtime.
SQL> --
SQL> UPDATE sys.registry$upg_summary SET reportname = :ReportName,
 2 con_name = SYS_CONTEXT('USERENV','CON_NAME'
),
 3 endtime = SYSDATE
 4 WHERE con_id = -1;

1 row updated.

SQL> commit;

Commit complete.

SQL> █
```

```
root@willssrm:~/Desktop
File Edit View Search Terminal Help
Commit complete.

SQL> exit
Disconnected from Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64
bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing opt
ions
willssrm:oracle 66> pwd
/oracle/SRM/12102/rdbms/admin
willssrm:oracle 67> cd ../../sap/ora_upgrade/post_upgrade/
willssrm:oracle 68> !sql
sqlplus "/as sysdba"

SQL*Plus: Release 12.1.0.2.0 Production on Sun May 10 16:52:35 2015

Copyright (c) 1982, 2014, Oracle. All rights reserved.

Connected to:
Oracle Database 12c Enterprise Edition Release 12.1.0.2.0 - 64bit Production
With the Partitioning, OLAP, Advanced Analytics and Real Application Testing opt
ions

SQL> @post_upgrade_tasks.sql
```

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
SQL> ALTER SYSTEM SET EVENT = '10027','10028','10142','10183','10191','10995 level 2','38068 level 100','38085','38087','44951 level 1024' COMMENT = 'SAP RECOMMENDED SETTINGS' SCOPE=SPFILE
.
=====
TASK: Setting Parameter LOG_BUFFER (SAP Note 1888485)
=====
.
Number of CPUs          : 2
Size of redo log files: 209715200
.
SQL> ALTER SYSTEM SET LOG_BUFFER = 1048576 COMMENT = 'SAP RECOMMENDED SETTINGS' SCOPE=SPFILE
.
Profile parameter LOG_BUFFER set to 1048576
FINISHED
*****
Oracle Database 12.1 Post-Upgrade Tasks Tool for SAP
*****
PL/SQL procedure successfully completed.
```

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
SQL> ALTER SYSTEM SET EVENT = '10027','10028','10142','10183','10191','10995 level 2','38068 level 100','38085','38087','44951 level 1024' COMMENT = 'SAP RECOMMENDED SETTINGS' SCOPE=SPFILE
.
.
=====
TASK: Setting Parameter LOG_BUFFER (SAP Note 1888485)
=====
.
Number of CPUs          : 2
Size of redo log files: 209715200
.
SQL> ALTER SYSTEM SET LOG_BUFFER = 1048576 COMMENT = 'SAP RECOMMENDED SETTINGS' SCOPE=SPFILE
.
Profile parameter LOG_BUFFER set to 1048576
FINISHED
*****
Oracle Database 12.1 Post-Upgrade Tasks Tool for SAP
*****
PL/SQL procedure successfully completed.
SQL> @post_upgrade_checks.sql
```

```
root@willsysrm:~/Desktop
File Edit View Search Terminal Help
No invalid objects found.
.
*****
Generic Database Configuration Warnings
*****
.
*****
SAP-Specific Database Configuration Warnings
*****
WARNING: ----> The retention time for the Automatic Workload Repository (AWR)
                is not configured as recommended.
                Current AWR retention is set to 8 days.
                Recommended AWR retention is 42 or more days.
                See SAP note 1326067.
.
*****
FINISHED - Oracle Database 12.1 Post-Upgrade Information Tool for SAP
*****
PL/SQL procedure successfully completed.
```

Update of oracle client to 12x:

Navigate to the /oracle/client directory

Make a directory by name 12x

Provide permissions and ownership

```
[root@willsysrm ~]# cd /oracle/client/
[root@willsysrm client]# ls -lrt
total 4
lrwxrwxrwx. 1 root  sapinst  21 May  8 23:16 10x_64 -> /oracle/client/11x_64
lrwxrwxr-x. 4 srmadm sapsys 4096 May  9 15:00 11x_64
[root@willsysrm client]# mkdir 12x
[root@willsysrm client]# chown -R srmadm:sapsys 12x/
```

Copy the oracle client software to /oracle/client/12x

```
[root@willsysrm OCL_LINUX_X86_64]# cp -pr OCL12164.SAR /oracle/client/12x/
[root@willsysrm OCL_LINUX_X86_64]# cd /oracle/client/12x/
[root@willsysrm 12x]# ls -lrt
total 66812
-rwxr-xr-x. 1 root root 68413276 Dec 10 16:47 OCL12164.SAR
[root@willsysrm 12x]# chmod -R 775 OCL12164.SAR
[root@willsysrm 12x]# chown -R srmadm:sapsys OCL12164.SAR
[root@willsysrm 12x]# su - srmadm
willsysrm:srmadm 26>
```

Unacar the OCL12164.SAR

```
willsysrm:srmadm 28> SAPCAR -xvf OCL12164.SAR
```



```
root@willsysrm:/oracle/client/12x
SAPCAR: processing archive OCL12164.SAR (version 2.01)
x dbclient.lst
x instantclient_12102
x instantclient_12102/adrci
x instantclient_12102/genezi
x instantclient_12102/libclntsh.so.12.1
x instantclient_12102/libclntshcore.so.12.1
x instantclient_12102/libipc1.so
x instantclient_12102/libmq11.so
x instantclient_12102/libnnz12.so
x instantclient_12102/libociei.so
x instantclient_12102/libons.so
x instantclient_12102/ojdbc14.jar
x instantclient_12102/ojdbc5.jar
x instantclient_12102/ojdbc6.jar
x instantclient_12102/ojdbc7.jar
x instantclient_12102/uidrvci
x instantclient_12102/libclntsh.so.11.1
x instantclient_12102/libclntsh.so.10.1
x instantclient_12102/libclntsh.so
x instantclient_12102/libnnz10.so
x instantclient_12102/SAPIC_README
SAPCAR: 21 file(s) extracted
willsysrm:sermadm 29>
```

Check and create the symbolic links:

**cd /oracle/client/12x**

**ln -s instantclient\_12102 instantclient**

```
willsysrm:sermadm 32> ln -s instantclient_12102 instantclient
```

Create the symbolic link for BR\*Tools 7.40:

Enter this command to change directory:

**cd /oracle/client**

If the link or directory 11x\_64 already exists, rename it, as in this example:  
**mv 11x\_64 11x\_64\_save**

Create the symbolic link:

**ln -s /oracle/client/12x /oracle/client/11x\_64**

```
willsysrm:srmdm 32> ln -s instantclient_12102 instantclient
willsysrm:srmdm 33> cd /oracle/client/
willsysrm:srmdm 34> ls -lrt
total 8
lrwxrwxrwx. 1 root  sapinst  21 May  8 23:16 10x_64 -> /oracle/client/11x_64
drwxrwxr-x. 4 srmdm  sapsys 4096 May  9 15:00 11x_64
drwxr-xr-x. 3 srmdm  sapsys 4096 May 10 17:06 12x
willsysrm:srmdm 35> mv 11x_64 11x_64_save
```

```
drwxrwxr-x. 4 srmdm  sapsys 4096 May  9 15:00 11x_64_save
drwxr-xr-x. 3 srmdm  sapsys 4096 May 10 17:06 12x
[root@willsysrm client]#
```

```
[root@willsysrm client]# ln -s /oracle/client/12x /oracle/client/11x_64
```

replace /oracle/client/11x\_64 ... or /oracle/client/10x\_64 with /oracle/client/12x  
in profiles .dbenv both in sidadm and orasid

changing ownership of brtools

```
[root@willsysrm run]# ls -lrt br*
-rwxr-xr-x. 1 srmdm  sapsys 6286056 Mar 29 2014 brrestore
-rwxr-xr-x. 1 srmdm  sapsys 6867850 Mar 29 2014 brtools
-rwsrwxr--. 1 orasrm  sapsys 9449108 Apr  1 2014 brarchive
-rwsrwxr--. 1 orasrm  sapsys 9580729 Apr  1 2014 brbackup
-rwsrwxr--. 1 orasrm  sapsys 11482442 Apr  1 2014 brconnect
-rwxr-xr-x. 1 srmdm  sapsys 10035235 Apr  1 2014 brrecover
-rwxr-xr-x. 1 srmdm  sapsys 11922446 Apr  1 2014 brspace
[root@willsysrm run]# chown -R oracle:oinstall br*
```

```
[root@willsysrm run]# ls -lrt brtools
-rwxr-xr-x. 1 srmdm  sapsys 6867850 Mar 29 2014 brtools
[root@willsysrm run]#
```

```
root@willsyssrm:/usr/sap/SRM/SYS/exe/run
BR0801I BRCONNECT 7.20 (36)
BR0252E Function fopen() failed for '/oracle/SRM/sapprof/initSRM.sap' at locati
n BrInitSapRead-1
BR0253E errno 2: No such file or directory
BR0159E Error reading BR*Tools profile /oracle/SRM/sapprof/initSRM.sap
BR0280I BRCONNECT time stamp: 2015-05-10 17.26.19
BR0301E SQL error -1017 at location db_connect-2, SQL statement:
'CONNECT /'
ORA-01017: invalid username/password; logon denied
```

Copy the init<SID>.sap to /oracle/SRM/sapprof

```
[root@willsyssrm dbs]# cp -pr initSRM.sap /oracle/SRM/sapprof/
[root@willsyssrm dbs]# cd /oracle/SRM/sapprof/
[root@willsyssrm sapprof]# ls -lrt
total 28
-rw-r-xr-x. 1 oracle oinstall 27970 May  9 00:11 initSRM.sap
[root@willsyssrm sapprof]# chmod -R 775 initSRM.sap
[root@willsyssrm dbs]# cp -pr initSRM.ora /oracle/SRM/sapprof/
```

Create OP\$ORACLE database user ;

```
SQL> create user ops$oracle identified externally;

User created.

SQL> commit;

Commit complete.

SQL> grant sapdba to ops$oracle;

Grant succeeded.

SQL> commit;

Commit complete.

SQL>
```



---

ORACLE 12C UPGRADE

**Confidential Document**

check the brconnect:

upgrade you brtools to 740



### Related Content:

<http://service.sap.com>

<http://support.sap.com>

[www.help.sap.com](http://www.help.sap.com)

[www.sdn.sap.com/irj/sdn/index](http://www.sdn.sap.com/irj/sdn/index).

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