

## Header Data

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## Symptom

### Migrating From Software Owner 'ora<dbsid>' To Software Owner 'oracle'

Until Oracle Database 11g, Oracle Database software for SAP standard installations with an Oracle single instance database on file system is always installed with software owner and database administrator 'ora<dbsid>' (user concept 'SAP Classic', SAP Note [1915323](#)). Starting Oracle Database 12c, the Oracle Database software for SAP standard installations on Unix and Linux platforms can also be installed by software owner 'oracle' (user concept 'Oracle Standard', see SAP Note [1915323](#)).

When you upgrade the Oracle database of an existing SAP system to 12c, you can migrate the user concept for this SAP system from 'SAP Classic' with software owner 'ora<dbsid>' to 'Oracle Standard' with software owner 'oracle' as part of the database upgrade. This SAP Note describes the steps of this migration procedure.

This SAP Note is valid for SAP standard installations with an Oracle single instance database on file system on Unix and Linux platforms.

## Other Terms

Oracle software owner  
 'oracle:oinstall'  
 'ora<dbsid>:dba'  
 Database Upgrade Assistant (DBUA)

## Reason and Prerequisites

Starting with Oracle Database 12c, Oracle Database software is installed by software owner 'oracle'. Details and additional explanations are described in SAP Note [1915323](#).

## Solution

### Migrating From Software Owner 'ora<dbsid>' To Software Owner 'oracle'

#### Restrictions and Prerequisites

It is not possible to upgrade an Oracle database with DBUA when the source and target Oracle homes are owned by different software owners. In order to upgrade an Oracle database with DBUA, source and target Oracle homes must have the same software owner (Reference: [Oracle Database Online Documentation 12c Release 1](#), book '[Database 2 Day DBA](#)', chapter '[Upgrading a database](#)', section '[Starting DBUA](#)').

#### Migration Options

The Oracle software owner can be migrated to 'oracle' before, during or after the database upgrade.

When to Migrate	Description
Before database upgrade to 12c	<ol style="list-style-type: none"> <li>1. Migrate the old Oracle home (10.2, 11.2) to software owner 'oracle'</li> <li>2. Install the new Oracle home (12.1) as software owner 'oracle'</li> <li>3. Perform database upgrade as software owner 'oracle'</li> </ol> <p>This approach requires 2 downtimes of the SAP system:            (1) downtime #1 for migrating the software owner            (2) downtime #2 for upgrading the database            If this is acceptable then migrating the software owner to 'oracle' as a separate step is recommended.</p>
During the database upgrade	<ol style="list-style-type: none"> <li>1. Install the new Oracle home (12.1) as software owner 'oracle'</li> <li>2. Migrate the old Oracle home (10.2, 11.2) to software owner 'oracle'</li> <li>3. Perform database upgrade as software owner 'oracle'</li> </ol> <p>This approach requires only one downtime for the SAP system.            If the number of SAP system downtimes is critical then this approach should be chosen.</p>
	<ol style="list-style-type: none"> <li>1. Install the new Oracle home (12.1) as software owner 'ora&lt;dbsid&gt;'</li> <li>2. Perform database upgrade as software owner 'ora&lt;dbsid&gt;'</li> </ol>

After database upgrade to 12c	<p>3. Migrate the new Oracle home (12.1) to software owner 'oracle'</p> <p>You can decide to implement user concept 'Oracle Standard' independent of the database upgrade at a later point in time.</p>
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## Recommendations

- In order to reduce the number of post-upgrade steps it is recommended to migrate the software owner before the database upgrade to 12c as part of the upgrade preparations.
- In order to change the owner of the existing Oracle home, you can use the Oracle home cloning method that is described in SAP Note [1983457](#) or you can use your own method or scripts for cloning Oracle homes.
- When you change the software owner of an Oracle home, you should also change ORACLE\_BASE from the pre-12c SAP default '/oracle' to the new SAP default '/oracle/<DBSID>'. For details, see SAP Note [1521371](#). Subdirectories of ORACLE\_BASE that were created by Oracle such as \$ORACLE\_BASE/admin, \$ORACLE\_BASE/cfgtoollogs, \$ORACLE\_BASE/checkpoints, \$ORACLE\_BASE/diag don't need to be copied or moved from the old ORACLE\_BASE to the new ORACLE\_BASE directory as they will be automatically created in the new ORACLE\_BASE directory. It is recommended to keep the directories for a while in the old ORACLE\_BASE.
- If you configure sudo for Oracle accounts 'ora<dbsid>' and 'oracle' you can easier run commands and scripts with 'root' privilege.

## Software Owner Migration Before Database Upgrade

The following table describes the order of the steps to migrate the software owner as a separate 'pre-upgrade' step.

Step	Task	Description
1	Stop the SAP system	Log on as SAP administrator and stop the SAP system. To stop the SAP system, run 'stopsap r3'. To stop SAP system and database, run 'stopsap'
2	Stop the Database	Log on as database administrator and stop the database.
3	Stop the Database Listener	Log on as database administrator 'ora<dbsid>' and stop the listener that is running from the database Oracle home.  \$ lsnrctl stop <listener_name>  Verify that no database processes are running any more as user ora<dbsid>.  \$ ps -ef   grep ora<dbsid>
4	Create Oracle Software Owner account ' <a href="#">oracle</a> '	Log on as 'root' and create OS group 'oinstall' and the new Oracle software owner 'oracle'.  You can use the following corresponding platform-specific OS commands.  <u>Linux/Solaris/HPUX:</u> root># groupadd oinstall root># useradd -g oinstall -G dba,oper -c "Oracle Software Owner" -m -s "/bin/sh" oracle root># passwd oracle root># su - oracle -c "id; pwd"  <u>AIX:</u> root># mkgroup oinstall root># useradd -g oinstall -G dba,oper -c "Oracle Software Owner" -m -s "/bin/sh" oracle root># passwd oracle root># su - oracle -c "id; pwd"  Make sure that '/usr/local/bin' is added to PATH (required for executing oraenv, coraenv, see SAP Note <a href="#">1554661</a> ).  Check the user limits for user 'oracle and make sure that they are sufficiently dimensioned (eg. "ulimit -a", see SAP Note <a href="#">546006</a> ). In addition check that other user specific OS settings like largefiles (SAP Note <a href="#">546006</a> ) or largepages (use_large_pages, SAP Note 1672954) are configured accordingly.
5	Modify SAP administrator account ' <a href="#">&lt;sapsid&gt;adm</a> '	On the database server, log on as 'root' and add the '<sapsid>adm' account as a member to OS group 'oinstall' (required to run SAP BR*TOOLS).  In addition to the standard groups (such as sapsys, dba, oper, sapinst), <sapsid>adm also belongs to the OS group "oinstall" (SAP Note <a href="#">1598594</a> ).  <u>Linux:</u> [root]# groupmod -A <sapsid>adm oinstall  If 'groupmod -A' is not supported by your OS, use 'usermod -G' to add <sapsid>adm to the 'oinstall' group. You must specify all groups <sapsid>adm is a already member of. [root] usermod -G sapsys,sapinst,dba,oper,oinstall <sapsid>adm  <u>Solaris 11:</u> [root]# groupmod -U +<sapsid>adm oinstall  <u>For Solaris 10 use:</u> [root]# usermod -G <standard groups>,oinstall <sapsid>adm <standard groups>: list of standard OS groups (such as sapsys, dba, oper, sapinst) already assigned to <sapsid>adm Example: usermod -G sapsys,sapinst,dba,oper,oinstall <sapsid>adm

		<p>AIX: [root]# chgrpmem -m + &lt;sapsid&gt;adm oinstall</p> <p>HPUX: [root]# groupmod -a -l &lt;sapsid&gt;adm oinstall</p>
6	Modify Database Administrator account ' <a href="#">ora&lt;dbsid&gt;</a> '	<p><u>Configure OS user '<a href="#">ora&lt;dbsid&gt;</a>'</u></p> <ol style="list-style-type: none"> <li>1. Change user home directory from '/oracle/&lt;DBSID&gt;' to the standard user home directory '/home/ora&lt;dbsid&gt;'</li> <li>2. Change group membership of 'ora&lt;dbsid&gt;' to primary group 'dba' and secondary groups 'oper', 'oinstall'</li> <li>3. Move 'ora&lt;dbsid&gt;' profiles and scripts (.profile .login .bashrc .cshrc .sap* .dbenv* .j2eeenv* startdb stopdb) from old user home to new user home directory</li> <li>4. Change ownership of files in the new home directory</li> </ol> <p><u>Linux/Solaris/AIX/HPUX:</u></p> <p>Log on as 'root' and run the following commands:</p> <pre>[root]# mkdir -p /home/ora&lt;dbsid&gt; [root]# chown ora&lt;dbsid&gt;:dba /home/ora&lt;dbsid&gt; [root]# usermod -d /home/ora&lt;dbsid&gt; ora&lt;dbsid&gt; [root]# usermod -g dba -G oper,oinstall ora&lt;dbsid&gt; [root]# cd /oracle/&lt;DBSID&gt; [root]# mv .profile .login .bashrc .cshrc .sap* .dbenv* .j2eeenv* /home/ora&lt;dbsid&gt; [root]# mv startdb stopdb /home/ora&lt;dbsid&gt; [root]# chown -R ora&lt;dbsid&gt;:dba /home/ora&lt;dbsid&gt;</pre> <p>When finished, log on as ora&lt;dbsid&gt; and check/verify the environment.</p> <pre>[ora&lt;dbsid&gt;] \$ id [ora&lt;dbsid&gt;] \$ env</pre>
7	Check Oracle environment consistency	<p>When you log on as any of the Oracle database administrator accounts (see <a href="#">table</a> above) to perform an administrative task on database &lt;DBSID&gt;, the Oracle environment must be identical.</p> <p>If the Oracle environment (e.g. env. var. ORACLE_HOME) for database &lt;DBSID&gt; set for user 'oracle' differs from the Oracle environment for user '&lt;sapsid&gt;adm', the SAP system will not be able to connect to the database.</p> <p>Log on as 'oracle', '&lt;sapsid&gt;adm' and 'ora&lt;dbsid&gt;' and verify that environment variables ORACLE_BASE, ORACLE_HOME and ORACLE_SID are set identical.</p> <p><u>OS account 'oracle'</u> For this account the Oracle environment for &lt;DBSID&gt; can be set using the Oracle script 'oraenv' (see SAP Note <a href="#">1554661</a>) if the corresponding entry for &lt;DBSID&gt; exists in oratab (location of oratab: /etc or /var/opt/oracle, depending on OS). Note: ORACLE_BASE is not set when you use the 10g version of 'oraenv' script. ORACLE_BASE is set in 'oraenv' script version 11g and higher. Example for oratab entry for database &lt;DBSID&gt;: &lt;DBSID&gt;:/oracle/&lt;DBSID&gt;/112_64:N</p> <p><u>OS accounts 'ora&lt;dbsid&gt;' / '&lt;sapsid&gt;adm'</u> For these accounts the Oracle environment is set in the SAP scripts '.dbenv*'</p>
8	Change Ownership of Database Files and Directories	<p>In this step you change permissions and ownership of Oracle database files and directories from 'ora&lt;dbsid&gt;' to 'oracle'.</p> <p><u>Change File Permissions and Ownership with script '<a href="#">orasid2oracle.sh</a>'</u></p> <p>You find the script '<a href="#">orasid2oracle.sh</a>' attached to this SAP Note. Download the script and extract it. For help, you can run the script as './orasid2oracle.sh -help'.</p> <p>Option #1: run script as 'ora&lt;dbsid&gt;' with sudo</p> <ol style="list-style-type: none"> <li>1. Log on to the database server as 'ora&lt;dbsid&gt;'.</li> <li>2. For help, run the script as follows: <b>sudo ./orasid2oracle.sh -help</b></li> <li>3. Perform a test run of the script: <b>sudo SAPDATA_HOME=\$SAPDATA_HOME ORACLE_BASE=\$ORACLE_BASE DB_SID=\$DB_SID ./orasid2oracle.sh -v</b></li> <li>4. Run the script with '-exec' option to perform the changes: <b>sudo SAPDATA_HOME=\$SAPDATA_HOME ORACLE_BASE=\$ORACLE_BASE DB_SID=\$DB_SID ./orasid2oracle.sh -v -exec</b></li> <li>5. Check whether you need to change the ownership of additional non-standard directories!</li> </ol> <p>Option #2: run script as 'root'</p> <ol style="list-style-type: none"> <li>1. Log on to the database server as 'root'.</li> <li>2. Set environment variables SAPDATA_HOME, ORACLE_BASE and DB_SID <b>[root]# export SAPDATA_HOME=&lt;SAPDATA_HOME&gt;</b> <b>[root]# export ORACLE_BASE=&lt;ORACLE_BASE&gt;</b> <b>[root]# export DB_SID=&lt;DBSID&gt;</b></li> <li>3. For help, run: <b>[root]# ./orasid2oracle.sh -help</b></li> <li>4. Perform a test run of the script: <b>[root]# ./orasid2oracle.sh -v</b></li> <li>5. Run the script with '-exec' option to perform the changes:</li> </ol>

**[root]# ./orasid2oracle.sh -v -exec**

6. Check whether you need to change the ownership of additional, non-standard directories!

Note: if needed, you can revert the ownership back from 'oracle:install' back to 'ora<dbsid>:dba' with the following command:

**[root]# orasid2oracle.sh -owner ora<dbsid> -group dba -v -exec**

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Change Ownership of Oracle Home (Software Owner)

There are 3 different ways to change the software owner of an Oracle Home from 'ora<dbsid>' to 'oracle':

- I. Approach (1) (recommended): You can change the software owner of the existing Oracle home from 'ora<dbsid>' to 'oracle'.  
You can use the Oracle Home Cloning Tool from SAP Note [1983457](#) for this approach. **This approach is recommended.**
- II. Approach (2): You can copy the existing Oracle home with software owner 'ora<dbsid>' to a new Oracle home with the new software owner 'oracle'.  
You can use the Oracle Home Cloning Tool from SAP Note [1983457](#) for this approach. This detailed steps of this approach are not described here.
- III. Approach (3): You can install a new Oracle home from scratch with the new software owner 'oracle'.  
This detailed steps of this approach are not described here.

Note:  
If you have already installed a 12c Oracle home, you should not overwrite the 12c version scripts of 'oraenv', 'coraenv' and 'dbhome' in /usr/local/bin by older 11g version scripts when you run the root.sh script from the cloned 11g Oracle home. If you did so, you can just re-run the root.sh script from the 12c Oracle home.

Detailed Steps for Approach (1) using SAP Note 1983457

Note: if sudo is configured, you can use 'sudo' to run the generated scripts from the required OS account (root or oracle).

```
OS> sudo -u root <script>
OS> sudo -u oracle <script>
```

1. Log on as the old software owner 'ora<dbsid>' and start 'clone\_assistant.sh' to generate the scripts. For help how to answer the questions, have a look at the sample attached to this SAP note.  
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<dbsid>', 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

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Start the Database Listener

You can start the listener either as software owner 'oracle' or as database administrator 'ora<dbsid>'.

Starting the listener as Software Owner 'oracle'

1. Log on to the database server as 'oracle'
2. Set the Oracle environment for the database <DBSID>  
OS> . oraenv
3. Start the database listener  
OS> lsnrctl start <listener\_name>  
OS> lsnrctl status <listener\_name>

Starting the listener as ora<dbsid>

1. Log on to the database server as 'ora<dbsid>'
2. Oracle environment for <DBSID> is already set
3. Start the database listener  
OS> lsnrctl start <listener\_name>  
OS> lsnrctl status <listener\_name>

Notes

- Make sure that the user who starts the listener has write permissions in ADR\_BASE (/oracle/<DBSID>/saptrace/diag/tnslsnr/...)
- It is recommended to always use the same user for starting the listener
- The default listener name is 'LISTENER'. If your listener is configured with a non-default name, you find the name in the listener.ora (in <ORACLE\_HOME>/network/admin)
- You must use the same user to start and stop the listener. Otherwise you will get the following error:  
TNS-01190: The user is not authorized to execute the requested listener command

11	Start the Database	<p>Log on as database administrator and start the database. If starting the instance fails with an error, check section '<a href="#">Troubleshooting</a>' for help.</p> <p>The database instance should be started from one of the database administration OS accounts &lt;sapsid&gt;adm or ora&lt;dbSID&gt;.</p> <p>If you start the database instance as software owner 'oracle', you have to ensure that the Oracle environment (ORACLE_HOME, ORACLE_SID, ORACLE_BASE) is identical to the Oracle environment (ORACLE_HOME, ORACLE_SID, ORACLE_BASE) of &lt;sapsid&gt;adm. If ORACLE_HOME differs, you will get an ORA-01033: ORACLE initialization or shutdown in progress error when starting SAP.</p>
12	Check Database Connectivity	<p>Log on as SAP administrator &lt;sapsid&gt;adm and connect to the database.</p> <p>To check connectivity to the database, run 'R3trans -d' or connect from sqlplus.</p> <p>If you receive 'ORA-01033: ORACLE initialization or shutdown in progress' error although the instance is running, you should check from which OS user and Oracle environment the instance was started.</p> <p>Afterwards you should run the same check for database administrator ora&lt;dbSID&gt;.</p>
13	Start the SAP system	<p>Log on as SAP administrator &lt;sapsid&gt;adm and start the SAP system.</p> <p>To start the SAP system, run 'startsap r3'. To start SAP system and database, run 'startsap'</p>
14	Configure SAP BR*Tools for user 'oracle'	<p>Configure SAP BR*Tools for user 'oracle' as described in SAP Note <a href="#">1598594</a>.</p> <p><u>Prerequisites:</u></p> <ul style="list-style-type: none"> <li>• Oracle database software is installed with software owner 'oracle'.</li> <li>• SAP BR*Tools Release 7.40 (SAP Note <a href="#">1914631</a>, SAP Note <a href="#">2087004</a>)</li> <li>• SPFILE for database &lt;DBSID&gt; is configured</li> </ul> <p><u>Recommendations:</u></p> <p>It is recommended to install the current version of SAP BR*Tools Release 7.40 before upgrading the database to 12c. For configuration of SAP BR*Tools 7.40 with Oracle Instant Client 12c, see SAP Note <a href="#">819829</a>.</p> <p>If you have installed SAP BR*Tools Release 7.2x, then you must upgrade SAP BR*Tools to 7.40 after the database upgrade to 12c.</p> <p><u>Summary from SAP Note <a href="#">1598594</a>:</u></p> <ol style="list-style-type: none"> <li><u>1. Set File Permissions for SAP BR*Tools</u> As 'root', set permissions of SAP BR*Tools that are installed in /usr/sap/&lt;SAPSID&gt;/SYS/exe/run as follows: [root]# chown oracle:oinstall brarchive brbackup brconnect brrecover brrestore brspace [root]# chmod 6774 brarchive brbackup brconnect brrecover brrestore brspace</li> <li><u>2. Create Directory sapprof</u> As 'root', create 'sapprof' profile directory /oracle/&lt;DBSID&gt;/sapprof and move init&lt;DBSID&gt;.sap from &lt;ORACLE_HOME&gt;/dbs to 'sapprof' directory. [root]# mkdir -p &lt;SAPDATA_HOME&gt;/sapprof [root]# mv &lt;ORACLE_HOME&gt;/dbs/init&lt;DBSID&gt;.sap &lt;SAPDATA_HOME&gt;/sapprof [root]# mv &lt;ORACLE_HOME&gt;/dbs/init&lt;DBSID&gt;.ora &lt;SAPDATA_HOME&gt;/sapprof [root]# chown -R oracle:oinstall &lt;SAPDATA_HOME&gt;/sapprof</li> <li><u>3. Create Database Profile</u> As 'oracle', create a new database profile init&lt;DBSID&gt;.ora in the \$ORACLE_HOME/dbs directory that contains only the "spfile" parameter. Sample entry for release 11.2: spfile=/oracle/&lt;DBSID&gt;/112_64/dbs/spfile&lt;DBSID&gt;.ora Sample entry for release 10.2: spfile=/oracle/&lt;DBSID&gt;/102_64/dbs/spfile&lt;DBSID&gt;.ora</li> <li><u>4. Create a new database user 'OPS\$ORACLE'</u> SQL&gt; connect / as sysdba SQL&gt; create user ops\$oracle identified externally; SQL&gt; grant sapdba to ops\$oracle;</li> <li><u>5. Verify Configuration</u> Verify that SAP BR*Tools are working correctly with the new file ownership and can connect to the database As '&lt;sapsid&gt;adm', you can test as follows: OS&gt; brconnect -u / -f check OS&gt; brbackup -u / -q</li> </ol>

## Software Owner Migration During Database Upgrade

The first table describes upgrade preparation steps that can be performed while the SAP system is still up and running.

Step	Task	Description
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1	Create Oracle Software Owner account ' <a href="#">oracle</a> '	see above, step #4
2	Install Oracle Database 12c software	Install the new Oracle home as new Oracle software owner 'oracle'. Apply current SAP Bundle Patch (SBP).  Note: in order to successfully install the new Oracle home as 'oracle' it might be necessary to change permissions of 'oracle' and 'oracle/<DBSID>' for writing  Example: chmod g+w /oracle/<DBSID>
3	Perform pre-upgrade checks	See SAP note 1915315.

The following 2nd table describes the steps to migrate the software owner during SAP system downtime. When finished, the database will be upgraded as described in the corresponding SAP Upgrade Guide.

Step	Task	Description
1	Stop the SAP system	see above - begin of SAP system downtime
2	Stop the Database	see above
3	Stop the Database Listener	see above
4	Modify SAP administrator account ' <a href="#">&lt;sapsid&gt;adm</a> '	see above
5	Modify Database Administrator account ' <a href="#">ora&lt;dbsid&gt;</a> '	see above
6	Check Oracle environment consistency	see above
7	Change Ownership of Database Files and Directories	see above
8	Change Ownership of Oracle Home (Software Owner)	see above
9	Start the Database Listener	see above
10	Start the Database	see above
11	Check Database Connectivity	see above
12	Configure SAP BR*Tools for user 'oracle'	see above
13	Upgrade the Oracle database	see SAP database upgrade documentation
14	Start the SAP system	see above - end of SAP system downtime

### Software Owner Migration After Database Upgrade

The database has been upgraded to the new Oracle release. The steps to migrate the software owner are identical to approach #1 described above except that you change the ownership of the new Oracle home, not the old Oracle home.

## Appendix

### Troubleshooting

Symptom	Cause/Solution
<p><u>Error during database startup</u>  ORA-00221: error on write to control file  ORA-00206: error in writing (block 1, # blocks 1) of control file  ORA-00202: control file: '/oracle/DQ1/sapdata1/cntrl/cntrlDQ1.dbf'  ORA-27041: unable to open file  Linux-x86_64 Error: 13: Permission denied  Additional information: 3</p> <p>ORA-01110: data file 1:  '/oracle/DQ1/sapdata1/system_1/system.data1'  ORA-01114: IO error writing block to file 1 (block # 1)  ORA-27041: unable to open file  Linux-x86_64 Error: 13: Permission denied  Additional information: 3</p>	<p>Cause:  Incorrect file permissions for database files / control files</p> <p>Solution:  \$ chown -R oracle:oinstall sapdata*</p>
	<p>Cause #1:  Incorrect file permissions for SAPTRACE directory  Solution #1:  \$ chown -R oracle:oinstall saptrace</p> <p>Cause #2:</p>

<p><u>Error during database startup</u>  ORA-09925: Unable to create audit trail file  Linux-x86_64 Error: 13: Permission denied  Additional information: 9925</p>	<p>Incorrect audit trace file destination  Solution #2:  Check database parameter audit_file_dest in SPFILE and set to correct value</p> <p>Cause #3:  No write permissions in default audit file destinations.  &lt;ORACLE_BASE&gt;/admin/&lt;ORACLE_SID&gt;/adump directory does not exist  Solution #3:  Create default audit file destinations with correct permissions for oracle:oinstall</p> <pre>[root]# cd &lt;ORACLE_BASE&gt; [root]# mkdir -p admin/&lt;ORACLE_SID&gt;/adump [root]# chown -R oracle:oinstall admin/&lt;ORACLE_SID&gt;/adump</pre> <p>1st default: &lt;ORACLE_BASE&gt;/admin/&lt;ORACLE_SID&gt;/adump  2nd default: &lt;ORACLE_HOME&gt;/rdbms/audit  3rd default: AUDIT_FILE_DEST (only when instance is started)</p>
<p><u>Error during database startup</u>  ORA-00221: error on write to control file  ORA-00206: error in writing (block 1, # blocks 1) of control file  ORA-00202: control file: '/oracle/DQ1/origlogA/cntrl/cntrlDQ1.dbf'  ORA-27041: unable to open file  Linux-x86_64 Error: 13: Permission denied  Additional information: 3</p>	<p>Cause:  Incorrect file permissions for redo log files / control files</p> <p>Solution:  \$ chown -R oracle:oinstall origlog*  \$ chown -R oracle:oinstall mirrlog*</p>
<p><u>Error during database operation</u>  Mon Sep 15 16:09:01 2014  ARCH: Archival stopped, error occurred. Will continue retrying  ORACLE Instance DQ1 - Archival Error  ORA-16038: log 1 sequence# 65 cannot be archived  ORA-19504: failed to create file ""  ORA-00312: online log 1 thread 1:  '/oracle/DQ1/origlogA/log_g11m1.dbf'  ORA-00312: online log 1 thread 1:  '/oracle/DQ1/mirrlogA/log_g11m2.dbf'  ARCH: Archival stopped, error occurred. Will continue retrying  ORACLE Instance DQ1 - Archival Error  ORA-16014: log 1 sequence# 65 not archived, no available destinations  ORA-00312: online log 1 thread 1:  '/oracle/DQ1/origlogA/log_g11m1.dbf'  ORA-00312: online log 1 thread 1:  '/oracle/DQ1/mirrlogA/log_g11m2.dbf'</p>	<p>Cause:  Incorrect file permissions for archive destination</p> <p>Solution  \$ chown -R oracle:oinstall oraarch</p>
<p><u>Error during clone Oracle Home operation</u></p> <pre>% ./config04_clone_oh.sh</pre> <p>DESCRIPTION: This script runs the clone command (clone.pl) for the Oracle home.</p> <p>Cloning Oracle home /oracle/QO1/112_64  ./config04_clone_oh.sh[56]: /oracle/QO1/112_64/clone/bin/clone.pl: cannot execute  OUI finished with return code 126  %</p>	<p>Cause:  Incorrect ownership of files in Oracle Home.  Files in Oracle home still belong to ora&lt;dbsid&gt;, not to 'oracle'.</p> <p>The script config03_set_swowner.sh did not recursively change the ownership to 'oracle' because variable C_ORACLE_HOME uses the Runtime Oracle Home &lt;OHRDBMS&gt; instead of Installation Oracle Home &lt;IHRDBMS&gt;.</p> <pre>% ls -l /oracle/QO1/112_64/clone/bin/clone.pl -rwxr-xr-x 1 oraqo1 dba 17067 Mar 16 2011 /oracle/QO1/112_64/clone/bin/clone.pl %</pre> <p>Solution #1:  Check config03_set_swowner.sh and change C_ORACLE_HOME to Installation Oracle Home</p> <p>Example: config03_set_swowner.sh  #export C_ORACLE_HOME=/oracle/&lt;SID&gt;/112_64  export C_ORACLE_HOME=/oracle/&lt;SID&gt;/11204</p> <p>Rerun the script.</p> <pre>% ls -l /oracle/QO1/112_64/clone/bin/clone.pl ls -l /oracle/QO1/112_64/clone/bin/clone.pl -rwxr-xr-x 1 oracle oinstall 17067 Mar 16 2011 /oracle/QO1/112_64/clone/bin/clone.pl %</pre> <p>Solution #2:  Rerun the assistant 'clone_assistant.sh'. When you enter the path for Oracle home, make sure that you use the &lt;IHRDBMS&gt;, not the &lt;OHRDBMS&gt;.</p>

Database System	ORACLE 12.1
	ORACLE 12.2

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## Validity

This document is not restricted to a software component or software component version

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## References

### This document is referenced by:

SAP Notes (1)

1915323 [OS User Concept for Oracle Database 12c Release 1](#)

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## Attachments

File Name	File Size (KB)	Mime Type
<a href="#">sample_clone_assistant.txt</a>	4	text/plain
<a href="#">orasid2oracle.zip</a>	4	application/x-zip-compressed