

Database Migration From Windows to Linux Using RMAN

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Database Migration From Windows to Linux Using RMAN

SUMMARY

This document describes the procedure required to migrate a database from Windows to Linux using the RMAN Convert Database command.

Both Windows and Linux platforms have the same endian format, which makes possible to transfer the whole database, making the migration process very straightforward and simple.

To migrate between platforms that have a different endian format, Cross Platform Transportable Tablespaces (XTTS) needs to be used instead.

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The Windows Database

This exercise was done using a small default 10.2.0.4 database

```
SQL> select bytes,file_name from dba_data_files;
```

```
      BYTES FILE_NAME
-----
440401920 G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_SYSTEM_44QYBFPF_.DBF
246415360 G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_UNDOTBS1_44QYCFQW_.DBF
136314880 G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_SYSAUX_44QYCZ3D_.DBF
 5242880 G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_USERS_44QYDHY7_.DBF
```

```
SQL> select name from v$controlfile;
```

```
NAME
-----
G:\TECHNOLOGY\ORCLW\CONTROLFILE\01_MF_44QY9SXR_.CTL
C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\ORCLW\CONTROLFILE\01_MF_44QY9TPX_.CTL
```

```
SQL> select member from v$logfile;
```

```
MEMBER
-----
G:\TECHNOLOGY\ORCLW\ONLINELOG\01_MF_1_44QY9VJL_.LOG
C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\ORCLW\ONLINELOG\01_MF_1_44QY9ZZ7_.LOG
G:\TECHNOLOGY\ORCLW\ONLINELOG\01_MF_2_44QYB14V_.LOG
C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\ORCLW\ONLINELOG\01_MF_2_44QYB5L1_.LOG
G:\TECHNOLOGY\ORCLW\ONLINELOG\01_MF_3_44QYB6OY_.LOG
C:\ORACLE\PRODUCT\10.2.0\FLASH_RECOVERY_AREA\ORCLW\ONLINELOG\01_MF_3_44QYBC2F_.LOG
```

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List of Steps Needed to Complete the Migration

The migration process is simple, but as it has several steps it is convenient to be familiar with them before running it.

1. Check platform compatibility between source and target OS
2. Start the database in read only mode
3. Check database readiness for transport from Windows to Linux using DBMS_TDB.CHECK_DB
4. Check if there are any external objects
5. Execute the Rman Convert database command
6. Copy converted datafiles, generated Transport Script and Parameter File to Linux
7. Edit the init.ora for the new database
8. Edit the Transport Script and Parameter File changing the windows paths to Linux Paths
9. Execute the Transport Script
10. Change the Database ID
11. Check database integrity

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1. Check platform compatibility between source and target OS

You need to check the platforms to be sure they have the same endian format, also you need to save the platform_name string to use it later as part of the convert database syntax in RMAN.

```
SQL> select * from V$DB_TRANSPORTABLE_PLATFORM
 2  where PLATFORM_NAME='Microsoft Windows IA (32-bit)' or
 3         PLATFORM_NAME like 'Linux%'
 4  /
```

PLATFORM_ID	PLATFORM_NAME	ENDIAN_FORMAT
7	Microsoft Windows IA (32-bit)	Little
10	Linux IA (32-bit)	Little
11	Linux IA (64-bit)	Little
13	Linux x86 64-bit	Little

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2. Start the database in read only mode

In order to execute `dbms_tdb.check_db` the database must be opened on read only mode.

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

```
SQL> startup mount;  
ORACLE instance started.
```

```
Total System Global Area 167772160 bytes  
Fixed Size                 1295608 bytes  
Variable Size              71305992 bytes  
Database Buffers          88080384 bytes  
Redo Buffers               7090176 bytes  
Database mounted.
```

```
SQL> alter database open read only;
```

```
Database altered.
```

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3. Check database readiness for transport from Windows to Linux

If the execution of `dbms_tdb.check_db` does not return any exceptions, that means the database is ready for transport to the target platform.

```
SQL> set serveroutput on
SQL> declare
2     db_ready boolean;
3     begin
4         db_ready := dbms_tdb.check_db('Linux IA (32-bit)');
5     end;
6     /
```

PL/SQL procedure successfully completed.

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4. Check if there are any external objects

If there is any external objects take note of them, they will need to be taken care manually

```
SQL> set serveroutput on
SQL> declare
  2 external boolean;
  3 begin
  4     /* value of external is ignored, but with SERVEROUTPUT set to ON
  5     * dbms_tdb.check_external displays report of external objects
  6     * on console */
  7     external := dbms_tdb.check_external;
  8 end;
  9 /
```

The following directories exist in the database:

```
SYS.DATA_PUMP_DIR, SYS.ORACLE_OCM_CONFIG_DIR, SYS.ADMIN_DIR, SYS.WORK_DIR
```

PL/SQL procedure successfully completed.

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5. Using the RMAN CONVERT DATABASE Command

Having executed successfully the checkup steps, the database is open in read only mode, then the convert database command can be executed with Rman.

In this example, I'm not using the ***db_file_name_convert '<source-path> '<target-path>'*** option because the database is using oracle managed files (omf); when using ***omf*** Rman does generate and display the new file names on the output of the convert database command.

At the end of the convert process Rman does display information about how to complete the conversion on the target platform.

```
C:\Documents and Settings\avargas>Rman target sys/oracle@orclw nocatalog

Recovery Manager: Release 10.2.0.4.0 - Production on Mon Jun 9 17:26:22 2008

Copyright (c) 1982, 2007, Oracle. All rights reserved.

connected to target database: ORCLW (DBID=1718464921)
using target database control file instead of recovery catalog

RMAN> CONVERT DATABASE NEW DATABASE 'orcllnx'
2> transport script 'G:\TECHNOLOGY\ORCLLNK\transportscript'
3> to platform 'Linux IA (32-bit)';

Starting convert at 09-JUN-08
allocated channel: ORA_DISK_1
channel ORA_DISK_1: sid=154 devtype=DISK

Directory SYS.DATA_PUMP_DIR found in the database
Directory SYS.ORACLE_OCM_CONFIG_DIR found in the database
```

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```
Directory SYS.ADMIN_DIR found in the database  
Directory SYS.WORK_DIR found in the database
```

```
User SYS with SYSDBA and SYSOPER privilege found in password file
```

```
channel ORA_DISK_1: starting datafile conversion
```

```
input datafile fno=00001 name=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_SYSTEM_44QYBFPF_.DBF
```

```
converted datafile=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_SYSTEM_44TM3OPF_.DBF
```

```
channel ORA_DISK_1: datafile conversion complete, elapsed time: 00:00:55
```

```
channel ORA_DISK_1: starting datafile conversion
```

```
input datafile fno=00002 name=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_UNDOTBS1_44QYCFQW_.DBF
```

```
converted datafile=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_UNDOTBS1_44TM5F98_.DBF
```

```
channel ORA_DISK_1: datafile conversion complete, elapsed time: 00:00:35
```

```
channel ORA_DISK_1: starting datafile conversion
```

```
input datafile fno=00003 name=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_SYSAUX_44QY CZ3D_.DBF
```

```
converted datafile=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_SYSAUX_44TM6JTB_.DBF
```

```
channel ORA_DISK_1: datafile conversion complete, elapsed time: 00:00:25
```

```
channel ORA_DISK_1: starting datafile conversion
```

```
input datafile fno=00004 name=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_USERS_44QYDHY7_.DBF
```

```
converted datafile=G:\TECHNOLOGY\ORCLW\DATAFILE\01_MF_USERS_44TM7BD5_.DBF
```

```
channel ORA_DISK_1: datafile conversion complete, elapsed time: 00:00:01
```

```
Run SQL script G:\TECHNOLOGY\ORCLLNX\TRANSPORTSCRIPT on the target platform to create  
database
```

```
Edit init.ora file C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\INIT_00JIGSKL_1_0.ORA. This  
PFILE will be used to create the database on the target platform
```

```
To recompile all PL/SQL modules, run utlirp.sql and utlrp.sql on the target platform
```

```
To change the internal database identifier, use DBNEWID Utility
```

```
Finished backup at 09-JUN-08
```

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6. Copy Converted Datafiles, Generated Transport Script and Parameter File to the Linux

We need to copy over the generated files to the Linux server, they include all converted datafiles, the transport script and the generated pfile.

If needed create at this point the directories you will need on the Linux server, for dump destination and flash recovery area i.e.:

```
mkdir -p /oradisk/oracle/app/admin/ORCLLNX/adump
mkdir -p /oradisk/oracle/app/admin/ORCLLNX/bdump
mkdir -p /oradisk/oracle/app/admin/ORCLLNX/cdump
mkdir -p /oradisk/oracle/app/admin/ORCLLNX/udump
mkdir -p /oradisk/database/ORCLLNX/FRA
```

You can use ftp to copy the required files to the Linux server.

In my test I will mount on the Linux server the directory for the new database, so I just move over the converted files to a predefined directory.

All converted files have the string 44TM as part of their names, i.e.: O1_MF_SYSTEM_44TM3OPF_.DBF, then, while being at the datafiles location I do execute the move command to the new destination:

```
G:\TECHNOLOGY\ORCLW\DATAFILE>move *44TM* ..\..\ORCLLNX
G:\TECHNOLOGY\ORCLW\DATAFILE\O1_MF_SYSTEM_44TM3OPF_.DBF
G:\TECHNOLOGY\ORCLW\DATAFILE\O1_MF_UNDOTBS1_44TM5F98_.DBF
G:\TECHNOLOGY\ORCLW\DATAFILE\O1_MF_SYSAUX_44TM6JTB_.DBF
G:\TECHNOLOGY\ORCLW\DATAFILE\O1_MF_USERS_44TM7BD5_.DBF
```

Then I need to move the generated pfile also:

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```
G:\TECHNOLOGY\ORCLW\DATAFILE>move  
C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\INIT_00JIGSKL_1_0.ORA  
..\..\ORCLLNX\initORCLLNX.ora
```

Check that all required files are located on the ORCLLNX directory

```
G:\TECHNOLOGY\ORCLW\DATAFILE>dir ..\..\ORCLLNX  
Volume in drive G is TECHNOLOGY  
Volume Serial Number is 1877-B4EA  
  
Directory of G:\TECHNOLOGY\ORCLLNX  
  
06/09/2008 05:27 PM <DIR> .  
06/09/2008 05:27 PM <DIR> ..  
06/09/2008 05:31 PM 2,616 TRANSPORTSCRIPT  
06/09/2008 05:30 PM 440,410,112 O1_MF_SYSTEM_44TM3OPF_.DBF  
06/09/2008 05:31 PM 246,423,552 O1_MF_UNDOTBS1_44TM5F98_.DBF  
06/09/2008 05:31 PM 146,808,832 O1_MF_SYSAUX_44TM6JTB_.DBF  
06/09/2008 05:31 PM 5,251,072 O1_MF_USERS_44TM7BD5_.DBF  
06/09/2008 05:31 PM 1,556 initORCLLNX.ora  
6 File(s) 838,897,740 bytes  
2 Dir(s) 18,968,444,928 bytes free
```

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7. Edit *init.ora* for new database

The Rman convert command executed on Windows generated a parameter file that needs to be edited to be used on the target Linux Server.

The pfile generated by Rman:

```
# Please change the values of the following parameters:
control_files          = "C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\CF_D-
ORCLLNX_ID-1718464921_00JIGSKL"
db_create_file_dest    = "C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\TECHNOLOGY"
db_recovery_file_dest  =
"C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\flash_recovery_area"
db_recovery_file_dest_size= 2147483648
audit_file_dest        = "C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\ADUMP"
background_dump_dest   = "C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\BDUMP"
user_dump_dest         = "C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\UDUMP"
core_dump_dest         = "C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\CDUMP"
db_name                = "ORCLLNX"
# Please review the values of the following parameters:
__shared_pool_size     = 62914560
__large_pool_size      = 4194304
__java_pool_size       = 4194304
__streams_pool_size    = 0
__db_cache_size        = 88080384
remote_login_passwordfile= "EXCLUSIVE"
db_domain              = ""
dispatchers            = "(PROTOCOL=TCP) (SERVICE=orclwXDB)"
# The values of the following parameters are from source database:
processes              = 150
```

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```
sga_target          = 167772160
db_block_size       = 8192
compatible          = "10.2.0.3.0"
db_file_multiblock_read_count= 16
undo_management     = "AUTO"
undo_tablespace     = "UNDOTBS1"
job_queue_processes = 10
open_cursors        = 300
pga_aggregate_target = 16777216
```

The pfile edited to be used on Linux

```
# Please change the values of the following parameters:
```

```
control_files = '/oradisk/database/ORCLLNX/orcllnx_control1.ctl' ,
'/oradisk/database/ORCLLNX/orcllnx_control2.ctl'
db_create_file_dest = '/oradisk/database/ORCLLNX'
db_recovery_file_dest = '/oradisk/database/ORCLLNX/FRA'
db_recovery_file_dest_size= 2147483648
audit_file_dest = '/oradisk/oracle/app/admin/ORCLLNX/adump'
background_dump_dest = '/oradisk/oracle/app/admin/ORCLLNX/bdump'
user_dump_dest = '/oradisk/oracle/app/admin/ORCLLNX/udump'
core_dump_dest = '/oradisk/oracle/app/admin/ORCLLNX/cdump'
db_name = 'ORCLLNX'
```

```
# Please review the values of the following parameters:
```

```
__shared_pool_size = 62914560
__large_pool_size = 4194304
__java_pool_size = 4194304
```

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```
__streams_pool_size      = 0
__db_cache_size          = 88080384
remote_login_passwordfile= 'EXCLUSIVE'
db_domain                 = ''
dispatchers              = '(PROTOCOL=TCP) (SERVICE=orcllnxXDB)'
```

The values of the following parameters are from source database:

```
processes                 = 150
sga_target                = 167772160
db_block_size             = 8192
compatible                = '10.2.0.3.0'
db_file_multiblock_read_count= 16
undo_management           = 'AUTO'
undo_tablespace           = 'UNDOTBS1'
job_queue_processes       = 10
open_cursors              = 300
pga_aggregate_target      = 16777216
```

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8. Edit The Transport Script

Before running the transport script on the target Linux server we need to edit it to set the correct paths for datafiles, controlfiles and dump directories, also we may want to change the value for tuning parameters.

The script generated by Rman:

```
-- The following commands will create a new control file and use it
-- to open the database.
-- Data used by Recovery Manager will be lost.
-- The contents of online logs will be lost and all backups will
-- be invalidated. Use this only if online logs are damaged.

-- After mounting the created controlfile, the following SQL
-- statement will place the database in the appropriate
-- protection mode:
-- ALTER DATABASE SET STANDBY DATABASE TO MAXIMIZE PERFORMANCE

STARTUP NOMOUNT
PFILE='C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\INIT_00JIGSKL_1_0.ORA'
CREATE CONTROLFILE REUSE SET DATABASE "ORCLLNX" RESETLOGS NOARCHIVELOG
    MAXLOGFILES 16
    MAXLOGMEMBERS 3
    MAXDATAFILES 100
    MAXINSTANCES 8
    MAXLOGHISTORY 292
LOGFILE
GROUP 1 SIZE 50M,
GROUP 2 SIZE 50M,
```

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```
GROUP 3 SIZE 50M
DATAFILE
  'C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\DATA_D-ORCLW_I-1718464921_TS-
SYSTEM_FNO-1_07JIGSKL',
  'C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\DATA_D-ORCLW_I-1718464921_TS-
UNDOTBS1_FNO-2_08JIGSMD',
  'C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\DATA_D-ORCLW_I-1718464921_TS-
SYSAUX_FNO-3_09JIGSNG',
  'C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\DATA_D-ORCLW_I-1718464921_TS-
USERS_FNO-4_0AJIGSOA'
CHARACTER SET AL32UTF8
;

-- Database can now be opened zeroing the online logs.
ALTER DATABASE OPEN RESETLOGS;

-- Commands to add tempfiles to temporary tablespaces.
-- Online tempfiles have complete space information.
-- Other tempfiles may require adjustment.
ALTER TABLESPACE TEMP ADD TEMPFILE
  SIZE 20971520 AUTOEXTEND ON NEXT 655360 MAXSIZE 33554431M;
-- End of tempfile additions.
--

set echo off
prompt ~~~~~
prompt * Your database has been created successfully!
prompt * There are many things to think about for the new database. Here
prompt * is a checklist to help you stay on track:
prompt * 1. You may want to redefine the location of the directory objects.
prompt * 2. You may want to change the internal database identifier (DBID)
```

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```
prompt *      or the global database name for this database. Use the
prompt *      NEWDBID Utility (nid).
prompt ~~~~~

SHUTDOWN IMMEDIATE
STARTUP UPGRADE
PFILE='C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\INIT_00JIGSKL_1_0.ORA'
@@ ?/rdbms/admin/utlirp.sql
SHUTDOWN IMMEDIATE
STARTUP PFILE='C:\ORACLE\PRODUCT\10.2.0\DB_1\DATABASE\INIT_00JIGSKL_1_0.ORA'
-- The following step will recompile all PL/SQL modules.
-- It may take several hours to complete.
@@ ?/rdbms/admin/utlirp.sql
set feedback 6;
```

The script edited to be run on Linux:

```
STARTUP NOMOUNT
PFILE='/oradisk/oracle/app/oracle/product/10.2.0/db_1/dbs/initORCLLNX.ORA'
CREATE CONTROLFILE REUSE SET DATABASE "ORCLLNX" RESETLOGS NOARCHIVELOG
    MAXLOGFILES 16
    MAXLOGMEMBERS 3
    MAXDATAFILES 100
    MAXINSTANCES 8
    MAXLOGHISTORY 292
LOGFILE
    GROUP 1 SIZE 50M,
    GROUP 2 SIZE 50M,
    GROUP 3 SIZE 50M
DATAFILE
    '/oradisk/database/ORCLLNX/O1_MF_SYSTEM_44TM3OPF_.DBF',
```

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```
'/oradisk/database/ORCLLNX/O1_MF_UNDOTBS1_44TM5F98_.DBF',
'/oradisk/database/ORCLLNX/O1_MF_SYSAUX_44TM6JTB_.DBF',
'/oradisk/database/ORCLLNX/O1_MF_USERS_44TM7BD5_.DBF'
CHARACTER SET AL32UTF8
;

-- Database can now be opened zeroing the online logs.
ALTER DATABASE OPEN RESETLOGS;

-- Commands to add tempfiles to temporary tablespaces.
-- Online tempfiles have complete space information.
-- Other tempfiles may require adjustment.

ALTER TABLESPACE TEMP ADD TEMPFILE
    SIZE 20971520 AUTOEXTEND ON NEXT 655360 MAXSIZE 33554431M;
-- End of tempfile additions.
--

set echo off

prompt ~~~~~
prompt * Your database has been created successfully!
prompt * There are many things to think about for the new database. Here
prompt * is a checklist to help you stay on track:
prompt * 1. You may want to redefine the location of the directory objects.
prompt * 2. You may want to change the internal database identifier (DBID)
prompt *    or the global database name for this database. Use the
prompt *    NEWDBID Utility (nid).
prompt ~~~~~

SHUTDOWN IMMEDIATE
```

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```
STARTUP UPGRADE
PFILE='/oradisk/oracle/app/oracle/product/10.2.0/db_1/dbs/initORCLLNX.ORA'
@@ ?/rdbms/admin/utlirp.sql
SHUTDOWN IMMEDIATE
STARTUP
PFILE='/oradisk/oracle/app/oracle/product/10.2.0/db_1/dbs/initORCLLNX.ORA';
-- The following step will recompile all PL/SQL modules.
-- It may take several hours to complete.
@@ ?/rdbms/admin/utlirp.sql
set feedback 6;
```

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9. Execute the Transport Script

This is the log of the transport script execution:

```
avargas-pc:/oradisk/database/ORCLLNX> sqlplus / as sysdba

SQL*Plus: Release 10.2.0.4.0 - Production on Wed Jun 11 10:11:54 2008
Copyright (c) 1982, 2007, Oracle. All Rights Reserved.

Connected to:
Oracle Database 10g Enterprise Edition Release 10.2.0.4.0 - Production
With the Partitioning, OLAP, Data Mining and Real Application Testing options

SQL> @transport
SQL> STARTUP NOMOUNT
PFILERE='/oradisk/oracle/app/oracle/product/10.2.0/db_1/dbs/initORCLLNX.ora';
ORACLE instance started.

Total System Global Area 167772160 bytes
Fixed Size 1266368 bytes
Variable Size 71306560 bytes
Database Buffers 88080384 bytes
Redo Buffers 7118848 bytes

SQL> CREATE CONTROLFILE REUSE SET DATABASE "ORCLLNX" RESETLOGS NOARCHIVELOG
2 MAXLOGFILES 16
3 MAXLOGMEMBERS 3
4 MAXDATAFILES 100
5 MAXINSTANCES 8
6 MAXLOGHISTORY 292
```

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```
7 LOGFILE
8   GROUP 1 SIZE 50M,
9   GROUP 2 SIZE 50M,
10  GROUP 3 SIZE 50M
11 DATAFILE
12   '/oradisk/database/ORCLLNX/O1_MF_SYSTEM_44TM3OPF_.DBF',
13   '/oradisk/database/ORCLLNX/O1_MF_UNDOTBS1_44TM5F98_.DBF',
14   '/oradisk/database/ORCLLNX/O1_MF_SYSAUX_44TM6JTB_.DBF',
15   '/oradisk/database/ORCLLNX/O1_MF_USERS_44TM7BD5_.DBF'
16 CHARACTER SET AL32UTF8
17 ;
```

Control file created.

```
SQL>
SQL> -- Database can now be opened zeroing the online logs.
SQL> ALTER DATABASE OPEN RESETLOGS;
```

Database altered.

```
SQL>
SQL> -- Commands to add tempfiles to temporary tablespaces.
SQL> -- Online tempfiles have complete space information.
SQL> -- Other tempfiles may require adjustment.
```

```
SQL> ALTER TABLESPACE TEMP ADD TEMPFILE
2      SIZE 20971520 AUTOEXTEND ON NEXT 655360 MAXSIZE 33554431M;
```

Tablespace altered.

```
SQL> -- End of tempfile additions.
```


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These are the final lines of the logfile:

PL/SQL procedure successfully completed.

SQL>

SQL> DOC

DOC> The following query reports the number of objects that have compiled
DOC> with errors (objects that compile with errors have status set to 3 in
DOC> obj\$). If the number is higher than expected, please examine the error
DOC> messages reported with each object (using SHOW ERRORS) to see if they
DOC> point to system misconfiguration or resource constraints that must be
DOC> fixed before attempting to recompile these objects.

DOC>#

SQL> select COUNT(*) "OBJECTS WITH ERRORS" from obj\$ where status = 3;

OBJECTS WITH ERRORS

0

SQL>

SQL>

SQL> DOC

DOC> The following query reports the number of errors caught during
DOC> recompilation. If this number is non-zero, please query the error
DOC> messages in the table UTL_RECOMP_ERRORS to see if any of these errors
DOC> are due to misconfiguration or resource constraints that must be
DOC> fixed before objects can compile successfully.

DOC>#

SQL> select COUNT(*) "ERRORS DURING RECOMPILATION" from utl_recomp_errors;

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```
ERRORS DURING RECOMPILATION
```

```
-----
```

```
0
```

```
SQL>
```

```
SQL>
```

```
SQL> Rem =====
```

```
SQL> Rem Run component validation procedure
```

```
SQL> Rem =====
```

```
SQL>
```

```
SQL> SET serveroutput on
```

```
SQL> EXECUTE dbms_registry_sys.validate_components;
```

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

```
SQL> SET serveroutput off
```

```
SQL>
```

```
SQL>
```

```
SQL> Rem
```

```
=====
```

```
SQL> Rem END utlrp.sql
```

```
SQL> Rem
```

```
=====
```

```
SQL> set feedback 6;
```

Database Migration From Windows to Linux Using RMAN

10. Change database identifier

To change the database identifier you need to use the NEWDBID utility "nid". It is run from within Sqlplus having the database mounted:

```
sqlplus "/" as sysdba"  
startup mount  
exit
```

To change the DBID

```
cd $ORACLE_HOME/bin  
./nid target=/  

```

To verify the DBID and database name

```
SELECT dbid, name FROM v$_database;
```

DBID Change, Execution Log:

```
avargas-pc:~/app/oracle/product/10.2.0/db_1/bin> sqlplus / as sysdba
```

```
SQL*Plus: Release 10.2.0.4.0 - Production on Wed Jun 11 10:25:09 2008  
Copyright (c) 1982, 2007, Oracle. All Rights Reserved.
```

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

```
SQL> startup mount;  
ORACLE instance started.
```

Database Migration From Windows to Linux Using RMAN

```
Total System Global Area 167772160 bytes
Fixed Size                 1266368 bytes
Variable Size              71306560 bytes
Database Buffers           88080384 bytes
Redo Buffers                7118848 bytes
```

Database mounted.

```
SQL> exit
```

```
Disconnected from Oracle Database 10g Enterprise Edition Release 10.2.0.4.0 -
Production
```

```
With the Partitioning, OLAP, Data Mining and Real Application Testing options
```

```
avargas-pc:~/app/oracle/product/10.2.0/db_1/bin> ./nid target=/
```

```
DBNEWID: Release 10.2.0.4.0 - Production on Wed Jun 11 10:25:50 2008
Copyright (c) 1982, 2007, Oracle. All rights reserved.
```

```
Connected to database ORCLLNK (DBID=1718464921)
```

```
Connected to server version 10.2.0
```

```
Control Files in database:
```

```
    /oradisk/database/ORCLLNK/orcllnx_control1.ctl
```

```
    /oradisk/database/ORCLLNK/orcllnx_control2.ctl
```

```
Change database ID of database ORCLLNK? (Y/[N]) => Y
```

```
Proceeding with operation
```

```
Changing database ID from 1718464921 to 1179074095
```

Database Migration From Windows to Linux Using RMAN

```
Control File /oradisk/database/ORCLLNX/orcllnx_control1.ctl - modified
Control File /oradisk/database/ORCLLNX/orcllnx_control2.ctl - modified
Datafile /oradisk/database/ORCLLNX/O1_MF_SYSTEM_44TM3OPF_.DBF - dbid changed
Datafile /oradisk/database/ORCLLNX/O1_MF_UNDOTBS1_44TM5F98_.DBF - dbid
changed
Datafile /oradisk/database/ORCLLNX/O1_MF_SYSAUX_44TM6JTB_.DBF - dbid changed
Datafile /oradisk/database/ORCLLNX/O1_MF_USERS_44TM7BD5_.DBF - dbid changed
Datafile /oradisk/database/ORCLLNX/ORCLLNX/datafile/o1_mf_temp_44yxofkr_.tmp
- dbid changed
Control File /oradisk/database/ORCLLNX/orcllnx_control1.ctl - dbid changed
Control File /oradisk/database/ORCLLNX/orcllnx_control2.ctl - dbid changed
Instance shut down
```

```
Database ID for database ORCLLNX changed to 1179074095.
All previous backups and archived redo logs for this database are unusable.
Database is not aware of previous backups and archived logs in Recovery Area.
Database has been shutdown, open database with RESETLOGS option.
Successfully changed database ID.
```

```
DBNEWID - Completed succesfully.
```

```
avargas-pc:~/app/oracle/product/10.2.0/db_1/bin> sqlplus / as sysdba
```

```
SQL*Plus: Release 10.2.0.4.0 - Production on Wed Jun 11 10:28:22 2008
Copyright (c) 1982, 2007, Oracle. All Rights Reserved.
Connected to an idle instance.
```

```
SQL> startup mount;
ORACLE instance started.
```

Database Migration From Windows to Linux Using RMAN

```
Total System Global Area 167772160 bytes
Fixed Size                 1266368 bytes
Variable Size              71306560 bytes
Database Buffers           88080384 bytes
Redo Buffers                7118848 bytes
```

Database mounted.

```
SQL> alter database open resetlogs;
Database altered.
```

Database Migration From Windows to Linux Using RMAN

11. Check database integrity

```
SQL> select tablespace_name from dba_tablespaces;
```

```
TABLESPACE_NAME
-----
SYSTEM
UNDOTBS1
SYSAUX
TEMP
USERS
```

```
SQL> select file_name from dba_data_files;
```

```
FILE_NAME
-----
/oradisk/database/ORCLLNX/O1_MF_USERS_44TM7BD5_.DBF
/oradisk/database/ORCLLNX/O1_MF_SYSAUX_44TM6JTB_.DBF
/oradisk/database/ORCLLNX/O1_MF_UNDOTBS1_44TM5F98_.DBF
/oradisk/database/ORCLLNX/O1_MF_SYSTEM_44TM3OPF_.DBF
```

Checking component status after transport:

```
SQL> SELECT COMP_NAME,STATUS FROM DBA_REGISTRY;
```

```
COMP_NAME                                STATUS
-----                                -
Oracle XML Database                       VALID
Oracle Expression Filter                  VALID
```

Database Migration From Windows to Linux Using RMAN

Oracle Rules Manager	VALID
Oracle Workspace Manager	VALID
Oracle interMedia	VALID
Oracle Database Catalog Views	VALID
Oracle Database Packages and Types	VALID
JServer JAVA Virtual Machine	VALID
Oracle XDK	VALID
Oracle Database Java Packages	VALID

End of Report