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| **clone Database from Windows To Linux (Lower patchset to Higher) using RMAN (Doc ID 2143991.1)** |  |  |

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| **In this Document**   |  |  | | --- | --- | |  | [Goal](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=422717113685467&id=2143991.1&_adf.ctrl-state=t24pwfdt8_302 \\l GOAL) |  |  |  | | --- | --- | |  | [Solution](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=422717113685467&id=2143991.1&_adf.ctrl-state=t24pwfdt8_302 \\l FIX) |  |  |  | | --- | --- | |  | [References](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=422717113685467&id=2143991.1&_adf.ctrl-state=t24pwfdt8_302 \\l REF) |   IMG_258  **APPLIES TO:**  Oracle Database - Enterprise Edition - Version 11.2.0.1 and later  Information in this document applies to any platform.  **GOAL**   Steps to clone a database from Windows to Linux using RMAN .  **SOLUTION**    Source database in Windows - DBName - MADRAS (11.2.0.1) Cloned database in Linux - DBName - MADRAS (11.2.0.3)    **Step 1 :- Create a pfile from Source**    ++Take the backup of pfile  from source .  create pfile='<>' from spfile.    **Step 2 :- Shutdown the database immediate and mount it**    ++Take the backup of source database in Mount mode (Always take the cold backup)  SQL>Shutdown immediate ;  SQL>Startup mount ;  SQL> select name,open\_mode from v$database;  NAME OPEN\_MODE  --------- --------------------  MADRAS MOUNTED  SQL> exit    **Step 3 :- Connect to Rman and take a cold backup of Source database**  Rman target /  Recovery Manager: Release 11.2.0.1.0 - Production on Wed May 4 10:06:38 2016  Copyright (c) 1982, 2009, Oracle and/or its affiliates. All rights reserved.  connected to target database: MADRAS (DBID=456504182, not open)  RMAN> backup database format 'd:\bak\full\_%U'; ----Full backup  Starting backup at 04-MAY-16 using target database control file instead of recovery catalog allocated channel: ORA\_DISK\_1 channel ORA\_DISK\_1: SID=63 device type=DISK channel ORA\_DISK\_1: starting full datafile backup set channel ORA\_DISK\_1: specifying datafile(s) in backup set input datafile file number=00001 name=D:\APP\PRADASH\ORADATA\MADRAS\SYSTEM01.DBF input datafile file number=00002 name=D:\APP\PRADASH\ORADATA\MADRAS\SYSAUX01.DBF input datafile file number=00003 name=D:\APP\PRADASH\ORADATA\MADRAS\UNDOTBS01.DBF input datafile file number=00004 name=D:\APP\PRADASH\ORADATA\MADRAS\USERS01.DBF channel ORA\_DISK\_1: starting piece 1 at 04-MAY-16 channel ORA\_DISK\_1: finished piece 1 at 04-MAY-16 piece handle=D:\BAK\FULL\_A5R4O160\_1\_1 tag=TAG20160504T100656 comment=NONE channel ORA\_DISK\_1: backup set complete, elapsed time: 00:02:15 Finished backup at 04-MAY-16  Starting Control File and SPFILE Autobackup at 04-MAY-16 piece handle=D:\APP\PRADASH\FLASH\_RECOVERY\_AREA\MADRAS\AUTOBACKUP\2016\_05\_04\O1\_MF\_S\_910951563\_CLLZ7LMD\_.BKP comment=NONE Finished Control File and SPFILE Autobackup at 04-MAY-16      RMAN> backup current controlfile format 'd:\bak\control\_%U'; --Controlfile backup  Starting backup at 04-MAY-16 using channel ORA\_DISK\_1 channel ORA\_DISK\_1: starting full datafile backup set channel ORA\_DISK\_1: specifying datafile(s) in backup set including current control file in backup set channel ORA\_DISK\_1: starting piece 1 at 04-MAY-16 channel ORA\_DISK\_1: finished piece 1 at 04-MAY-16 piece handle=D:\BAK\CONTROL\_A7R4O1B4\_1\_1 tag=TAG20160504T100940 comment=NONE channel ORA\_DISK\_1: backup set complete, elapsed time: 00:00:07 Finished backup at 04-MAY-16  Starting Control File and SPFILE Autobackup at 04-MAY-16 piece handle=D:\APP\PRADASH\FLASH\_RECOVERY\_AREA\MADRAS\AUTOBACKUP\2016\_05\_04\O1\_MF\_S\_910951563\_CLLZ8V0Q\_.BKP comment=NONE Finished Control File and SPFILE Autobackup at 04-MAY-16    **Step 4 :- Copied the required files to  the destination server (Linux)**    Cloned Server :  ++Copy the pfile backup from source (Windows) to Target (Linux) and modify the location as per your environment .  ++Copy all the backups from source to cloned server .    **Step 5 :- No Mount the Destination database**    Start the cloned database in NOMOUNT mode .  SQL> startup nomount pfile='/u01/oradata/madras/initmadras.ora';      **Step 6 :- Restore the controlfile**    ++Connect through RMAN and restore the controlfile  [oracle@boston madras]$ rman target /  Recovery Manager: Release 11.2.0.3.0 - Production on Wed May 4 10:15:48 2016  Copyright (c) 1982, 2011, Oracle and/or its affiliates. All rights reserved.  connected to target database: MADRAS (not mounted)  RMAN> restore controlfile from '/u01/oradata/madars/bkp/bak/CONTROL\_A7R4O1B4\_1\_1';  Starting restore at 04-MAY-16 using target database control file instead of recovery catalog allocated channel: ORA\_DISK\_1 channel ORA\_DISK\_1: SID=19 device type=DISK  channel ORA\_DISK\_1: restoring control file channel ORA\_DISK\_1: restore complete, elapsed time: 00:00:01 output file name=/u01/oradata/madras/CONTROL01.CTL Finished restore at 04-MAY-16      RMAN> sql 'alter database mount';  sql statement: alter database mount  released channel: ORA\_DISK\_1    **Step 7 :- Run the Rman maintainance command to Mark the unwanted backups as expired**    ++Execute crosscheck command and delete the expired backup .  RMAN> crosscheck backup;    allocated channel: ORA\_DISK\_1 channel ORA\_DISK\_1: SID=19 device type=DISK crosschecked backup piece: found to be 'EXPIRED' backup piece handle=D:\BAK\FULL\_A5R4O160\_1\_1 RECID=375 STAMP=910951617 crosschecked backup piece: found to be 'EXPIRED' backup piece handle=D:\APP\PRADASH\FLASH\_RECOVERY\_AREA\MADRAS\AUTOBACKUP\2016\_05\_04\O1\_MF\_S\_910951563\_CLLZ7LMD\_.BKP RECID=376 STAMP=910951754 Crosschecked 2 objects    RMAN> delete expired backup;  using channel ORA\_DISK\_1  List of Backup Pieces BP Key BS Key Pc# Cp# Status Device Type Piece Name ------- ------- --- --- ----------- ----------- ---------- 375 257 1 1 EXPIRED DISK D:\BAK\FULL\_A5R4O160\_1\_1 376 258 1 1 EXPIRED DISK D:\APP\PRADASH\FLASH\_RECOVERY\_AREA\MADRAS\AUTOBACKUP\2016\_05\_04\O1\_MF\_S\_910951563\_CLLZ7LMD\_.BKP  Do you really want to delete the above objects (enter YES or NO)? yes deleted backup piece backup piece handle=D:\BAK\FULL\_A5R4O160\_1\_1 RECID=375 STAMP=910951617 deleted backup piece backup piece handle=D:\APP\PRADASH\FLASH\_RECOVERY\_AREA\MADRAS\AUTOBACKUP\2016\_05\_04\O1\_MF\_S\_910951563\_CLLZ7LMD\_.BKP RECID=376 STAMP=910951754 Deleted 2 EXPIRED objects          **Step 8 :- Catalog the backuppiece on the Destination server(Linux)**    ++Catalog all the backups copied in the cloned server .  RMAN> catalog backuppiece '/u01/oradata/madars/bkp/bak/FULL\_A5R4O160\_1\_1';  cataloged backup piece backup piece handle=/u01/oradata/madars/bkp/bak/FULL\_A5R4O160\_1\_1 RECID=377 STAMP=910952261  ++Set the newname for datafile location's on cloned server .        **Step 9: -Restore the datafiles to new location**  RMAN> run { set newname for database to '/u01/oradata/madras/datafile\_%U'; restore database; }2> 3> 4>  executing command: SET NEWNAME  Starting restore at 04-MAY-16 using channel ORA\_DISK\_1  channel ORA\_DISK\_1: starting datafile backup set restore channel ORA\_DISK\_1: specifying datafile(s) to restore from backup set channel ORA\_DISK\_1: restoring datafile 00001 to /u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-SYSTEM\_FNO-1 channel ORA\_DISK\_1: restoring datafile 00002 to /u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-SYSAUX\_FNO-2 channel ORA\_DISK\_1: restoring datafile 00003 to /u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-UNDOTBS1\_FNO-3 channel ORA\_DISK\_1: restoring datafile 00004 to /u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-USERS\_FNO-4 channel ORA\_DISK\_1: reading from backup piece /u01/oradata/madars/bkp/bak/FULL\_A5R4O160\_1\_1 channel ORA\_DISK\_1: piece handle=/u01/oradata/madars/bkp/bak/FULL\_A5R4O160\_1\_1 tag=TAG20160504T100656 channel ORA\_DISK\_1: restored backup piece 1 channel ORA\_DISK\_1: restore complete, elapsed time: 00:00:15 Finished restore at 04-MAY-16      RMAN> switch database to copy;    datafile 1 switched to datafile copy "/u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-SYSTEM\_FNO-1" datafile 2 switched to datafile copy "/u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-SYSAUX\_FNO-2" datafile 3 switched to datafile copy "/u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-UNDOTBS1\_FNO-3" datafile 4 switched to datafile copy "/u01/oradata/madras/datafile\_data\_D-MADRAS\_TS-USERS\_FNO-4"    RMAN> exit    ++Once restore done ...open the database with RESETLOG mode along with UPGRADE option .    If cloning the database with  same RDBMS version  as source , open the database in normal RESETLOG mode .    [oracle@boston madras]$ sqlplus / as sysdba  SQL\*Plus: Release 11.2.0.3.0 Production on Wed May 4 10:18:23 2016  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> alter database open resetlogs upgrade;  Database altered.      **Step 10 :- Run the required Upgrade scripts**    **REFERENCES**  [NOTE:2003327.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&sourceId=2143991.1&id=2003327.1) - Restore From Windows To Linux using RMAN Fails    ===================  Note, redo application is not supported between Linux and Windows except with a standby database. This means that the backup must be</em><em> a   cold (consistent) backup, which requires no redo application.  If redo apply is required to recover the database on the new platform it will fail.   Using consistent (cold) backup method should be used for duplicating cross platform.  如上摘自:Restore From Windows To Linux using RMAN Fails (文档 ID 2003327.1) |