 注意：在oracle12c之前move datafile都必须offline相应的tablespace，oracle 12c可以online move datafile

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| **How to move a datafile from a file system to ASM (Doc ID 390274.1)** | [To Bottom](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=355339776664558&id=390274.1&_adf.ctrl-state=1a6wgrt1m6_222%20\o%20To%20Bottom) |  |





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| **In this Document**   |  |  | | --- | --- | |  | [Goal](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=355339776664558&id=390274.1&_adf.ctrl-state=1a6wgrt1m6_222%20\l%20GOAL) | |  | [Solution](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=355339776664558&id=390274.1&_adf.ctrl-state=1a6wgrt1m6_222%20\l%20FIX) |  |  |  | | --- | --- | |  |  | |  |  |  |  |  | | --- | --- | |  | [**How to move a datafile from a file system to ASM**](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=355339776664558&id=390274.1&_adf.ctrl-state=1a6wgrt1m6_222%20\l%20aref_section23) | |  | [References](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=355339776664558&id=390274.1&_adf.ctrl-state=1a6wgrt1m6_222%20\l%20REF) |     **APPLIES TO:**  Oracle Database - Enterprise Edition - Version 10.1.0.5 to 10.2.0.5.0 [Release 10.1 to 10.2]  Information in this document applies to any platform.  \*\*\*Checked for relevance on 14-Oct-2014\*\*\*    **GOAL**  This note will guide a DBA in moving a datafile currently located on file system to an ASM diskgroup using Rman Copy command when the database is Mounted or Open.  **SOLUTION**    NOTE:  in 11g and higher, you can use:  How to Move a Datafile from Filesystem to ASM Using ASMCMD CP Command. ([Note 1610615.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&sourceId=390274.1&id=1610615.1))    **How to move a datafile from a file system to ASM**  **Moving a datafile from the file system can be achived in two ways.**    i. While the database is shutdown (in mount stage).  ii. While the database is running (with the selected tablespace offline).  -------------------------------------------------------------------------------------------------------------------------------  **i.  While the database is shutdown (in mount stage).**    Moving oracle datafile while the database is in mount stage is performed in the following way:    1. Shutdown and mount the database.  [oracle@linux] sqlplus '/as sysdba'  SQL> shutdown immediate;  SQL> startup mount;  2. Ensure you have enough space in the ASM diskgroup to copy the datafile.       First identify the size of the datafile you wish to move.  SQL> select file#, name, (bytes/1048576) File\_Size\_MB from v$datafile;  FILE#   NAME                         FILE\_SIZE\_MB  -----   ---------------------------- --------------  ...  4       /oradata/PROD/users01.dbf    2500  ...  \* In this example we will be moving users01.dbf    [oracle@linux] export ORACLE\_SID=+ASM  SQL> select NAME, STATE, TOTAL\_MB, FREE\_MB from v$asm\_diskgroup;  NAME                           STATE       TOTAL\_MB   FREE\_MB  ------------------------------ ----------- ---------- ----------  DGROUP1                        MOUNTED     100        3  DGROUP2                        MOUNTED     4882       4830  3. Connect to RMAN and copy the datafile from the filesystem to the select ASM diskgroup.  [oracle@linux] rman target=/  RMAN> copy datafile 4 to '+DGROUP2';  Starting backup at 2006/09/05 12:14:23  using target database controlfile instead of recovery catalog  allocated channel: ORA\_DISK\_1  channel ORA\_DISK\_1: sid=31 devtype=DISK  channel ORA\_DISK\_1: starting datafile copy  input datafile fno=00004 name=/oradata/PROD/users01.dbf  output filename=+DGROUP2/PROD/datafile/users01.258.600351265 tag=TAG20060905T121424 recid=10 stamp=600351264  channel ORA\_DISK\_1: datafile copy complete, elapsed time: 00:05:01  Finished backup at 2006/09/05 12:19:24  4.  Update the controlfile with the new location of the datafile.  [oracle@linux] rman target /    RMAN> switch datafile 4 to copy;  datafile 4 switched to datafile copy "+DGROUP2/PROD/datafile/users01.258.600351265".  5. The file is now if the new location.  SQL> select name from v$datafile;  NAME  --------------------------------------------------------------------------------  ..  +DGROUP2/PROD/datafile/users01.258.600351265  ..  6. The database may now be opened.    **While the database is running (with the select tablespace offline).**    In order to move a datafile on a running active database the tablespace where the datafile resides must be placed offline.  1. Identify the tablespace which contains the datafile and offline the tablespace.  SQL> select tablespace\_name, file\_name from dba\_data\_files where file\_id=4;  TABLESPACE\_NAME    FILE\_NAME  ------------------ ------------------------------  USERS              /oradata/RMAN/users01.dbf    SQL> alter tablespace USERS offline;    **\* \* \* \* \* Continue with Steps 2 - 5 above. \* \* \* \* \***    6. After you have successfully completed the above steps (2 -5) place the tablespace online;  SQL> alter tablespace USERS online;       The datafile has now been successfully moved to the ASM diskgroup.  **REFERENCES**  [NOTE:390416.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&sourceId=390274.1&id=390416.1) - How to move a datafile from ASM to the file system  [NOTE:944831.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&sourceId=390274.1&id=944831.1) - How to Copy Archivelog Files From ASM to Filesystem and vice versa  [NOTE:345180.1](https://support.oracle.com/epmos/faces/DocumentDisplay?parent=DOCUMENT&sourceId=390274.1&id=345180.1) - How to duplicate a controlfile when ASM is involved  NOTE:1610615.1 - How to Move a Datafile from Filesystem to ASM Using ASMCMD CP Command. |