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(Doc ID 1313687.1)** | [To Bottom](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=440401532014499&amp;id=1313687.1&amp;_adf.ctrl-state=1c2ntnk34w_72)  [To Bottom](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=440401532014499&amp;id=1313687.1&amp;_adf.ctrl-state=1c2ntnk34w_72) |  |        |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **In this Document**   |  |  | | --- | --- | |  | [Goal](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=440401532014499&amp;id=1313687.1&amp;_adf.ctrl-state=1c2ntnk34w_72#GOAL) | |  | [Solution](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=440401532014499&amp;id=1313687.1&amp;_adf.ctrl-state=1c2ntnk34w_72#FIX) | |  |  |  | | --- | --- | |  | [Community Discussions](https://support.oracle.com/epmos/faces/DocumentDisplay?_afrLoop=440401532014499&amp;id=1313687.1&amp;_adf.ctrl-state=1c2ntnk34w_72#aref_section21) |       **Applies to:**  Oracle Database - Enterprise Edition - Version 10.2.0.1 to 12.1.0.2 [Release 10.2 to 12.1]  Information in this document applies to any platform.  **Goal**  The present document provides an example about how to define and associated meaningful device names for Candidate or Member ASM Disks on Linux/Unix using mknod.  **Solution**  Example:  1) Having the next diskgroups mounted on both +ASM1 & +ASM2 instances:  GROUP\_NUMBER NAME STATE TYPE TOTAL\_MB FREE\_MB ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ 1 CRSDG MOUNTED EXTERN 20480 20052 2 DATADG1 MOUNTED EXTERN 102400 77005 3 DATADG2 MOUNTED EXTERN 102400 85268  2) On the +ASM1 instance the diskgroups are mapped to the disks as follow:  GROUP\_NUMBER NAME Logical Disk on +ASM1 Physical Disk on +ASM1 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ 1 CRSDG CRSDG\_0001 /dev/rdisk/disk78 2 DATADG1 DATADG1\_0001 /dev/rdisk/disk79 3 DATADG2 DATADG2\_0001 /dev/rdisk/disk80  3) On the +ASM2 instance the diskgroups are mapped to the disks as follow:  GROUP\_NUMBER NAME Logical Disk on +ASM1 Physical Disk on +ASM1 ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ 1 CRSDG CRSDG\_0001 /dev/rdisk/disk85 2 DATADG1 DATADG1\_0001 /dev/rdisk/disk86 3 DATADG2 DATADG2\_0001 /dev/rdisk/disk87  4) So the disks mapping on each node is different (this is normal since each node/OS could provide a different disk name (e.g. /dev/rdsk## to access the same physical disk) ).  5) If you want to have same disks name on all the nodes & ASM instances to access the same physical disks, then you need to create an alias, either mknod devices or symbolic links on the physical disks (e.g. /dev/rdsk##)  one each node.  For example. assuming you have the next devices on:  Node #1:  crw-rw- 1 root sys 118, 40 Apr 2 15:00 /dev/rdsk/disk78 crw-rw- 1 root sys 118, 0 Apr 2 15:00 /dev/rdsk/disk79 crw-rw- 1 root sys 118, 42 Apr 2 15:00 /dev/rdsk/disk80  Create the alias:  # mkdir /asmdisks # chown oracle:dba  /asmdisks # cd /asmdisks  # mknod asmdisk1 c 118 40 # mknod asmdisk2 c 118 0 # mknod asmdisk3 c 118 42    Then you will have the next alias devices:  /asmdisks/asmdisk1 /asmdisks/asmdisk2 /asmdisks/asmdisk3  You will need to set the correct ownership:  # chown oracle:dba /asmdisks/asmdisk1 # chown oracle:dba /asmdisks/asmdisk2 # chown oracle:dba /asmdisks/asmdisk3  Node #2:  crw-rw- 1 root sys 118, 40 Apr 2 15:00 /dev/rdsk/disk78 crw-rw- 1 root sys 118, 0 Apr 2 15:00 /dev/rdsk/disk79 crw-rw- 1 root sys 118, 42 Apr 2 15:00 /dev/rdsk/disk80  Create the alias:  # mkdir /asmdisks # chown oracle:dba /asmdisks # cd /asmdisks  # mknod asmdisk1 c 118 46 # mknod asmdisk2 c 118 49 # mknod asmdisk3 c 118 15    Then you will have the next alias devices:  /asmdisks/asmdisk1 /asmdisks/asmdisk2 /asmdisks/asmdisk3  You will need to set the correct ownership:  # chown oracle:dba /asmdisks/asmdisk1 # chown oracle:dba /asmdisks/asmdisk2 # chown oracle:dba /asmdisks/asmdisk3  6) Then update the asm\_diskstring pointing to the new alias devices one both ASM instances:  +ASM1 instance:  SQL> alter system set asm\_diskstring = '/asmdisks/asmdisk\*' scope=spfile;  +ASM2 instance:  SQL> alter system set asm\_diskstring = '/asmdisks/asmdisk\*' scope=spfile;  7) Then the next time you restart the ASM instances, they will access the physical disks using the alias located at '/asmdisks/asmdisk\*' on each node.    NOTE: "mknod" alignments will not be persistent across the reboots, either use udev rules or add the list of "mknod" commands used to create the aliases as a startup script in the init, also it should get loaded before the CRS starts.        **Community Discussions**  Still have questions? Use the communities window below to search for similar discussions or start a new discussion on this subject. (Window is the live community not a screenshot)  Click [here](https://community.oracle.com/community/support/oracle_database/storage_management_asm_acfs_dnfs_odm) to open in main browser window | | |