

Mount Options for Oracle files when used with NFS on NAS devices [ID 359515.1]

Applies to:

Oracle Server - Enterprise Edition - Version: 10.1.0.2 to 11.2.0.3 - Release: 10.1 to 11.2

Information in this document applies to any platform.

Oracle Clusterware, Oracle Real Application Clusters, NAS

Purpose

The purpose of this bulletin is to document the options with which the NAS systems should be mounted. This note does not cover the new dNFS feature that was introduced in 11g.

Scope and Application

This document is relevant to all environments using Oracle Clusterware & RAC.

Mount Options for Oracle files when used with NFS on NAS devices

RAC

In the table below

- Binaries is the shared mount points where the Oracle Home and CRS_HOME is installed.
- Datafiles includes Online Logs, Controlfile and Datafiles

- nfsvers and vers are identical on those OS platforms that has nfsvers. The ver option is an alternative to the nfsvers option. It is included for compatibility with other operating systems
- Please note that the mount options on each of the following cells are applicable only to those type of files listed in the column heading.
- **For RMAN backup sets, image copies, and Data Pump dump files, the "NOAC" mount option should not be specified - that is because RMAN and Data Pump do not check this option and specifying this can adversely affect performance.**

Operating System	Mount options for Binaries ##	Mount options for Oracle Datafiles	Mount options for CRS Voting Disk and OCR
Sun Solaris *	rw, bg, hard, nointr, rsize=32768, wsize=32768, proto=tcp, noac, vers=3, suid	rw, bg, hard, nointr, rsize=32768, wsize=32768, proto=tcp, noac, forcedirectio, vers=3, suid	rw, bg, hard, nointr, rsize=32768, wsize=32768, proto=tcp, vers=3, noac, forcedirectio
AIX (5L) **	rw, bg, hard, nointr, rsize=32768, wsize=32768, proto=tcp, vers=3, timeo=600	cio, rw, bg, hard, nointr, rsize=32768, wsize=32768, proto=tcp, noac, vers=3, timeo=600	cio, rw, bg, hard, intr, rsize=32768, wsize=32768, tcp, noac, vers=3, timeo=600
HPUX 11.23 *** --	rw, bg, vers=3, proto=tcp, noac, hard, nointr, timeo=600, rsize=32768, wsize=32768, suid	rw, bg, vers=3, proto=tcp, noac, forcedirectio, hard, nointr, timeo=600, rsize=32768, wsize=32768, suid	rw, bg, vers=3, proto=tcp, noac, forcedirectio, hard, nointr, timeo=600, rsize=32768, wsize=32768, suid
Windows	Not Supported	Not Supported	Not Supported
Linux x86 # ****	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, vers=3, timeo=600, actimeo=0	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, actimeo=0, vers=3, timeo=600	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, noac, actimeo=0, vers=3, timeo=600

Linux x86-64 # ****	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, vers=3, timeo=600, actimeo=0	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, actimeo=0, vers=3, timeo=600	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, noac, vers=3, timeo=600, actimeo=0
Linux - Itanium	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, vers=3, timeo=600, actimeo=0	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, actimeo=0, vers=3, timeo=600	rw, bg, hard, nointr, rsize=32768, wsize=32768, tcp, noac, vers=3, timeo=600, actimeo=0

* NFS mount option “forcedirectio” is required on Solaris platforms when mounting the OCR/CRS files when using Oracle 10.1.0.4 or 10.2.0.2 or later (Oracle unpublished bug 4466428)

** AIX is only supported with NAS on **AIX 5.3 TL04** and higher with Oracle 10.2.0.1 and later (NetApp)

*** NAS devices are only supported with **HPUX 11.23** or higher ONLY

**** As per [BUG 11812928](#), the 'intr' & 'nointr' are deprecated in OEL 5.6 kernels and up including Oracle Linux 6. It is harmless to still include it, but the "NFS: ignoring mount option: nointr" will appears. This message can be ingnored.

These mount options are for Linux kernels 2.6 and above for older kernels please check [Note 279393.1](#)

Due to Unpublished bug 5856342, it is necessary to use the following init.ora parameter when using NAS with all versions of RAC on Linux (x86 & X86-64 platforms) until 10.2.0.4. This bug is fixed and included in 10.2.0.4 patchset.

filesystemio_options = DIRECTIO

Single Instance

Operating System	Mount options for Binaries	Mount options for Oracle Datafiles
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Sun Solaris * (8, 9, 10)	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, proto=tcp, suid	rw, bg, hard, rsize=32768, wsize=32768, vers=3, [forcedirectio or llock], nointr, proto=tcp, suid
AIX (5L) **	rw, bg, hard, rsize=32768, wsize=32768, vers=3, intr, timeo=600, proto=tcp	rw, bg, hard, rsize=32768, wsize=32768, vers=3, cio, intr, timeo=600, proto=tcp
HPUX 11.23 ****	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, proto=tcp, suid	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, proto=tcp, suid, forcedirectio
Windows	Not Supported	Not Supported
Linux x86 #	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, tcp	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, tcp, actimeo=0*
Linux x86-64 #	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, tcp	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, tcp, actimeo=0*
Linux - Itanium	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, tcp	rw, bg, hard, rsize=32768, wsize=32768, vers=3, nointr, timeo=600, tcp

* actimeo=0 or noac can be used