



wafI events

ONTAP EMS reference

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Table of Contents

wafl events	1
wafl.32bit events	1
wafl.32bit.formatUnsupported	1
wafl.8 events	1
wafl.8.0.mirror.upgrade.fail	1
wafl.access events	2
wafl.access.fenced.file	2
wafl.afs events	2
wafl.afs.first.disabled	2
wafl.aggr events	3
wafl.aggr.addup.offline	3
wafl.aggr.arl.callbacks	3
wafl.aggr.btidb.build	3
wafl.aggr.crt.offline	4
wafl.aggr.dump.metadir.rm	4
wafl.aggr.giveback.callbacks	5
wafl.aggr.giveback.times	5
wafl.aggr.hya.eviction.fail	6
wafl.aggr.hya.full.high	6
wafl.aggr.hya.full.low	6
wafl.aggr.mcc.callbacks	7
wafl.aggr.nospc.del.snapshot	7
wafl.aggr.overcommitted.vsm	8
wafl.aggr.recompact.complete	8
wafl.aggr.recompact.estimate	9
wafl.aggr.relocation.times	9
wafl.aggr.reserve.set	9
wafl.aggr.reserve.short	10
wafl.aggr.rsv.low.nomount	10
wafl.aggr.snapReserve	11
wafl.aggr.uncompact.complete	11
wafl.aggr.uncompact.rep.error	11
wafl.aggr.uncompact.skipped	12
wafl.aggregate events	12
wafl.aggregate.busy	12
wafl.aggregate.online.phases	13
wafl.aggregate.online.replay	13
wafl.aggrtrans events	13
wafl.aggrtrans.corrupted	14
wafl.aggrtrans.dirtyFS	14
wafl.aggrtrans.dirtyFS.cont	14
wafl.aggrtrans.outofspace.nodereboot	15
wafl.aggrtrans.outofspace.normal	15

wafl.aggrtrans.outofspace.offline	15
wafl.aggrtrans.outofspace.remount.needed	16
wafl.aggrtrans.outofspace.warn	16
wafl.aggrtrans.revert.to.snap	17
wafl.aggrtrans.snap.delErr	17
wafl.aggrtrans.snapshot.32b	17
wafl.air events	18
wafl.air.info	18
wafl.analytics events	18
wafl.analytics.air.uh	18
wafl.analytics.corruption	19
wafl.analytics.discardNotOk	19
wafl.analytics.enterOverload	19
wafl.analytics.exitOverload	20
wafl.analytics.init.fail	20
wafl.analytics.languishing	21
wafl.analytics.offErr	21
wafl.analytics.recover	21
wafl.analytics.rename.scan	22
wafl.analytics.rescan	22
wafl.analytics.scan.fail	23
wafl.analytics.sp.valid.fail	23
wafl.analytics.sp.valid.skip	24
wafl.analytics.state.change	24
wafl.analytics.tooMuchMemory	24
wafl.analytics.tz.changed	25
wafl.analytics.updateDiscard	25
wafl.ap events	26
wafl.ap.info	26
wafl.arl events	26
wafl.arl.vol.limitChkFailed	26
wafl.asserts events	27
wafl.asserts.disabled	27
wafl.atime events	27
wafl.atime.updates.restarted	27
wafl.atime.updates.stopped	27
wafl.atime.updates.will.stop	28
wafl.attr events	28
wafl.attr.topK.clear.fail	28
wafl.attr.topK.init.fail	29
wafl.attr.topK.scan.fail	29
wafl.bad events	30
wafl.bad.aggr.buftree.type	30
wafl.bad.vol.buftree.type	30
wafl.bagofbits events	31

wafl.bagofbits.name	31
wafl.blkreclaim events	31
wafl.blkreclaim.abort	31
wafl.blkreclaim.complete	32
wafl.blkreclaim.noscan	32
wafl.blkreclaim.reset	32
wafl.br events	33
wafl.br.redir.invalid	33
wafl.br.redir.nospace	33
wafl.buf events	34
wafl.buf.badHeader	34
wafl.buf.freeingFreeBlock	34
wafl.c2c events	35
wafl.c2c.increase.vol.max.size.failed	35
wafl.c2c.od.restore.scan.cloud.config.failed	35
wafl.c2c.od.restore.scan.initiated	36
wafl.c2c.od.restore.scan.restart.failed	36
wafl.c2c.restore.scan.abort	36
wafl.c2c.restore.scan.done	37
wafl.c2c.restore.scan.failed	37
wafl.c2c.rst.fsize.exceeded	38
wafl.ca events	38
wafl.ca.cap.tier.usage.limit	38
wafl.ca.cloud.retrieval.policy	39
wafl.ca.cloud.write.disabled	39
wafl.ca.cloud.write.enabled	40
wafl.ca.cs.hdr.cfg.mismatch	40
wafl.ca.GET.latency.thresh	41
wafl.ca.GET.timeout.failure	41
wafl.ca.latency.threshold	42
wafl.ca.mcc.tlog.drain.event	42
wafl.ca.migrate.aggr.nospace	43
wafl.ca.name.fmt.mismatch	43
wafl.ca.object.check.done	43
wafl.ca.object.check.start	44
wafl.ca.object.storage.class.updated	44
wafl.ca.objtag.retry.limit	44
wafl.ca.objtag.skip.retry	45
wafl.ca.objtag.unsupported	45
wafl.ca.promote.none.nospc	46
wafl.ca.promote.snap.nospc	46
wafl.ca.remove.object.tag	47
wafl.ca.repaired.metafile	47
wafl.ca.resync.complete	48
wafl.ca.resync.read.fail	48

wafl.ca.resync.read.set.err.obj	48
wafl.ca.revert.ufmt.paused	49
wafl.ca.slothdr.repair.done	49
wafl.ca.slothdr.repair.start	50
wafl.ca.tier.aggr.spc.limit	50
wafl.ca.tier.max.size.limit	50
wafl.ca.tiering.policy	51
wafl.ca.tlogput.modified	51
wafl.ca.total.space.incons	52
wafl.catalog events	52
wafl.catalog.invalid	52
wafl.cbini events	53
wafl.cbini.iron.mirror.config.changed	53
wafl.cbini.iron.objslothdr.invalid.entry.threshold.reached	53
wafl.cbini.label.total.physical.size.overcounted	53
wafl.cbini.objslothdr.iron.skip.resync.in.progress	54
wafl.cde events	54
wafl.cde.decompression.fail	54
wafl.cdemap events	55
wafl.cdemap.repaired.metafile	55
wafl.check events	55
wafl.check.info	55
wafl.check.lostnfound.error	55
wafl.cleanup events	56
wafl.cleanup.after.giveback	56
wafl.cleanup.after.relocate	56
wafl.cleanup.after.sendhome	57
wafl.clone events	57
wafl.clone.invalid.inherited.counters	57
wafl.clone.no.basesnap	58
wafl.clone.quota.error.ignored	58
wafl.clone.snapSpcGuar	58
wafl.clone.snapsplit.nospace	59
wafl.clone.split.start.vol.fenced	59
wafl.clone.unrecoverable	60
wafl.compaction events	60
wafl.compaction.CP.value	60
wafl.compress events	61
wafl.compress.auto.disable	61
wafl.compress.cde.auto.enablement	61
wafl.compress.cde.event	61
wafl.compress.enable.failed	62
wafl.compress.fail.rootVol	62
wafl.compress.mark.cg.bad.hw	63
wafl.compress.mark.cg.bad.sw	63

wafl.compress.scan.checkpoint.deleted	64
wafl.convert events	64
wafl.convert.directory.failed	64
wafl.cop events	65
wafl.cop.flowcontrol.end	65
wafl.cop.flowcontrol.start	65
wafl.cop.high.concurrency	65
wafl.cp events	66
wafl.cp.toolong	66
wafl.csm events	67
wafl.csm.sessionStopped	67
wafl.data events	67
wafl.data.compaction.event	67
wafl.delete events	67
wafl.delete.bad.indirect	68
wafl.delete.fenced.file	68
wafl.delete.specdev	69
wafl.descend events	69
wafl.descend.fail	69
wafl.dir events	70
wafl.dir.convert	70
wafl.dir.convert.denied.2big	70
wafl.dir.depth.max	71
wafl.dir.duplicate.hash	71
wafl.dir.entries.warning	71
wafl.dir.fileId.err	72
wafl.dir.link.max	72
wafl.dir.link.reachingLimit	73
wafl.dir.link.trap	74
wafl.dir.link.warning	74
wafl.dir.nt.max	75
wafl.dir.nt.warning	75
wafl.dir.size.max	75
wafl.dir.size.max.warning	76
wafl.dir.size.warning	76
wafl.dir.surppair.filename	77
wafl.dirent events	77
wafl.dirent.illegal.encoding	77
wafl.disable events	78
wafl.disable.vol.guarantee	78
wafl.dosname events	78
wafl.dosname.repair.fail	78
wafl.dosname.repair.success	79
wafl.enc events	79
wafl.enc.aggrMFRecreated	79

wafl.enc.aggrMFReread	79
wafl.encrypted events	80
wafl.encrypted.aggr.created	80
wafl.encrypted.aggr.modified	80
wafl.encryption events	81
wafl.encryption.unsupported	81
wafl.err events	81
wafl.err.L1.compacted.block	81
wafl.extent events	82
wafl.extent.size.reset	82
wafl.failed events	82
wafl.failed.mount	82
wafl.failed.mount.bad.fsid	82
wafl.fc events	83
wafl.fc.recl.csm.disconnect	83
wafl.fgmember events	83
wafl.fgmember.rollback	84
wafl.filecg events	84
wafl.fileCG.vvol.size.exceeded	84
wafl.fs events	84
wafl.fs.corrupt.fr.pct.changed	84
wafl.fs.file.guarnt.upgraded	85
wafl.fs.upgrade.fr.pct.changed	85
wafl.fsa events	86
wafl.fsa.autosize.valid.fail	86
wafl.gd events	87
wafl.gd.alloc.size.rsrv.fail	87
wafl.gd.convert.scan.running	87
wafl.gd.convert.unknown.pvbn	88
wafl.giveback events	88
wafl.giveback.create.fail	88
wafl.giveback.fence.fail	89
wafl.giveback.iron.fail	89
wafl.giveback.sp.fail	90
wafl.giveback.statusvol.fail	90
wafl.giveback.vetoedByNvsave	90
wafl.gs events	91
wafl.gs.metafile.load.failed	91
wafl.gs.modify.op.failed	91
wafl.gs.remove.rename.op.failed	92
wafl.gs.resync.gen.check.failed	92
wafl.hya events	93
wafl.hya.aggr.policy.init	93
wafl.hya.bc.add.cbi	93
wafl.hya.bc.del.flexvol	94

wafl.hya.bc.free.cbi	94
wafl.hya.cache.ret.policy	95
wafl.hya.policy.init.skipped	95
wafl.hya.rcache.policy	95
wafl.hya.sizer.warning	96
wafl.hya.wcache.policy	96
wafl.i2p events	97
wafl.i2p.entries.mismatch	97
wafl.i2p.fix.parent.pointer	97
wafl.ialloc events	98
wafl.ialloc.is.disabled	98
wafl.inaccessible events	98
wafl.inaccessible.userdata	98
wafl.incomplete events	99
wafl.incomplete.i2p	99
wafl.incons events	99
wafl.incons.compr.metadata	99
wafl.incons.compressed.buf	100
wafl.incons.objslothdr.buf.fixup.required	101
wafl.incons.snap.metadata	101
wafl.incons.tlog	101
wafl.incons.userdata.vol	102
wafl.inconsistent events	102
wafl.inconsistent.acl	102
wafl.inconsistent.acl.data	103
wafl.inconsistent.compacted.block	103
wafl.inconsistent.container	104
wafl.inconsistent.dir	104
wafl.inconsistent.dirent	105
wafl.inconsistent.ino	106
wafl.inconsistent.ino.tid	106
wafl.inconsistent.snapshot	106
wafl.inconsistent.stream	107
wafl.inconsistent.threshold.reached	107
wafl.inconsistent.vol	108
wafl.inconsistent.vol.nomnt	109
wafl.ino events	109
wafl.ino.upgrade.aborted	109
wafl.ino.upgrade.cantAbort	109
wafl.ino.upgrade.completed	110
wafl.ino.upgrade.disabled	110
wafl.ino.upgrade.rem.mdata	111
wafl.ino.upgrade.resumed	111
wafl.ino.upgrade.stalled	111
wafl.ino.upgrade.started	112

wafl.ino.upgrade.susp	112
wafl.ino.upgrade.susp.nospc	113
wafl.inode events	113
wafl.inode.cache.highLoad	113
wafl.inode.fileAttr.fail	113
wafl.inode.fill.noDisblRsvFO	114
wafl.inofile events	114
wafl.inofile.buf.badHeader	115
wafl.iron events	115
wafl.iron.7mode	115
wafl.iron.abort.noConToCloud	116
wafl.iron.abort.offline	116
wafl.iron.abort.offlineFail	116
wafl.iron.abort.offlineMsg	117
wafl.iron.backup.exists	117
wafl.iron.backup.expired	118
wafl.iron.backup.expiring	118
wafl.iron.backup.impossible	118
wafl.iron.backup.removed	119
wafl.iron.backup.rst.failed	119
wafl.iron.backup.rst.noExist	120
wafl.iron.backup.rst.success	120
wafl.iron.backup.snaprsv.inc	120
wafl.iron.backup.snaprsv.rst	121
wafl.iron.backup.success	121
wafl.iron.backup.useimage	122
wafl.iron.backup.verify.data	122
wafl.iron.badfsid	123
wafl.iron.completion.times	123
wafl.iron.cont.corrupt	123
wafl.iron.current.phase	124
wafl.iron.dp.mirror.broken	124
wafl.iron.grow.fs.failed	125
wafl.iron.i2p.dir.convert	125
wafl.iron.incompleteVol	126
wafl.iron.invalid.vvol	126
wafl.iron.lost.blocks	126
wafl.iron.manualUpgradeRequired	127
wafl.iron.mount.inconsistency	127
wafl.iron.mount.inconsistent	128
wafl.iron.mount.times	128
wafl.iron.mounted.volume	128
wafl.iron.mw.ioc.not.supported	129
wafl.iron.nvsave.disable.selection	129
wafl.iron.oc.abort.bad_blk	130

wafl.iron.oc.abort.clog_full	130
wafl.iron.oc.committedChangeLog	130
wafl.iron.oc.deletedChangeLog	131
wafl.iron.oc.errorCommitLog	131
wafl.iron.oc.noCorruption	131
wafl.iron.oc.rejectChangeLog	132
wafl.iron.oc.root.committedChanges	132
wafl.iron.oc.root.lowMemory	132
wafl.iron.oc.root.noCorruption	133
wafl.iron.oc.root.rejectedChanges	133
wafl.iron.offline.destroying	133
wafl.iron.optcommit.upgradeScan	134
wafl.iron.outofspace	134
wafl.iron.parallel.mount.notify	135
wafl.iron.parent.volume.selected	135
wafl.iron.pending.delete.vvol	135
wafl.iron.ral.exception	136
wafl.iron.ral.inode.loaded	136
wafl.iron.readonly	137
wafl.iron.readonlyQtrees	137
wafl.iron.rebuild.dir.volful	137
wafl.iron.salvaged.rootdir	138
wafl.iron.scan.skipped	138
wafl.iron.scan.stats	139
wafl.iron.scanning.status	139
wafl.iron.slow	139
wafl.iron.start	140
wafl.iron.unrecoverable	140
wafl.iron.upgradeRequired	141
wafl.iron.volumes.selected.not.exist	141
wafl.latest events	142
wafl.latest.physical.snapid.info	142
wafl.lmgr events	142
wafl.lmgr.meta.mv	142
wafl.lmgr.meta.rm	143
wafl.lookup events	143
wafl.lookup.smDirErr	143
wafl.make events	144
wafl.make.container.dense.failed	144
wafl.maxdirsize events	144
wafl.maxdirsize.boot.notice	144
wafl.mcc events	145
wafl.mcc.config.notFound	145
wafl.mcc.exceed.volcnt.limit	145
wafl.mcc.nso.left.behind	145

wafl.mcc.nso.veto.cmode.vols	146
wafl.mcc.sb.left.behind	146
wafl.mcc.sb.nso.veto.create	147
wafl.mcc.sb.nso.veto.fence	147
wafl.mcc.sb.nso.veto.iron	148
wafl.mcc.sb.nso.veto.lock	148
wafl.mcc.sb.nso.veto.nvsave	148
wafl.mcc.sb.nso.veto.revert	149
wafl.mcc.so.replay.disabled	149
wafl.mcc.so.start	150
wafl.mcc.so.vols.mounted	150
wafl.mcc.subphase.times	150
wafl.mcc.total.maxvvol	151
wafl.mcc.volLimit.exceeded	151
wafl.mem events	152
wafl.mem.stomper	152
wafl.memory events	152
wafl.memory.status	152
wafl.memory.statusLowMemory	152
wafl.memory.statusVeryLowMemory	153
wafl.metadata events	153
wafl.metadata.rsrv.decreased	153
wafl.metadata.rsrv.increased	153
wafl.metafile events	154
wafl.metafile.reg.unknown	154
wafl.metafile.reg.unused	154
wafl.mirror events	155
wafl.mirror.access.denied	155
wafl.mirror.upgrade.fail	155
wafl.mount events	156
wafl.mount.inconsistent	156
wafl.mount.info	156
wafl.mount.transient.error	156
wafl.mp events	157
wafl.mp.vldb.update.failed	157
wafl.needs events	157
wafl.needs.blog	157
wafl.nfsv4 events	158
wafl.nfsv4.acl.not.mapped	158
wafl.no events	158
wafl.no.large.vvol.size.set	158
wafl.ntfsunixsecurityops events	159
wafl.ntfsUnixSecurityOps	159
wafl.nvlog events	159
wafl.nvlog.stats.createError	159

wafl.nvlog.stats.writeError	159
wafl.nvlog.versionFail	160
wafl.nvsave events	160
wafl.nvsave.deletion.status	160
wafl.nvsave.overwritingstale	161
wafl.nvsave.replaying	161
wafl.nvsave.replaying.fail	162
wafl.nvsave.replaying.partial	162
wafl.nvsave.replaying.pass	163
wafl.nvsave.saving	163
wafl.nvsave.saving.fail	164
wafl.nvsave.saving.pass	164
wafl.objstore events	165
wafl.objstore.ownership.conflict	165
wafl.offline events	165
wafl.offline.infoError	165
wafl.offline.openfiles	166
wafl.offline.proc.file	166
wafl.offline.proc.file.unres	167
wafl.offline.quiesce.aborted	167
wafl.offline.quiesced	167
wafl.offline.versionMismatch	168
wafl.offline.volref.msg	168
wafl.ondemand events	169
wafl.ondemand.aggr.rsv.fail	169
wafl.ondemand.destroy.pending	169
wafl.ondemand.done	170
wafl.ondemand.dst.fsize.exceeded	170
wafl.ondemand.dstPresent	171
wafl.ondemand.errPaused	171
wafl.ondemand.jobLookupFailed	171
wafl.ondemand.metafileErr	172
wafl.ondemand.repaired.metafile	172
wafl.ondemand.space.rsv.fail	173
wafl.ondemand.srcJobRecFail	173
wafl.ondemand.srcJobRecovery	173
wafl.ondemand.srcRecovered	174
wafl.ondemand.started	174
wafl.ondemand.volBusy	175
wafl.online events	175
wafl.online.admin.vol	175
wafl.online.fail.vmalign	176
wafl.online.infoError	176
wafl.online.mode.corrupted	176
wafl.online.notCompatibleVer	177

wafl.online.toomany	177
wafl.online.unknownVersion	178
wafl.online.unsup.deployment	178
wafl.online.vbnMismatch	178
wafl.onoff events	179
wafl.onOff.mirType.inv	179
wafl.playlist events	179
wafl.playlist.bad_fh	180
wafl.playlist.create.failure	180
wafl.playlist.no_playlist	180
wafl.pnso events	181
wafl.pnso.offload.engine.error	181
wafl.pvbn events	181
wafl.pvbn.check.done	181
wafl.pvbn.check.found.mismatch	182
wafl.pvbn.check.found.unknown	182
wafl.pvbn.check.no.snapshot	182
wafl.qat events	183
wafl.qat.offload.engine.error	183
wafl.qtree events	183
wafl.qtree.id.mismatch	183
wafl.qtree.invalid.state	184
wafl.qtree.metafile.corrupt	184
wafl.qtree.qsmBreak.base	185
wafl.qtree.qsmBreak.iron	185
wafl.qtree.qsmBreak.wc	186
wafl.quota events	187
wafl.quota.control.inconsistent	187
wafl.quota.control.invalid	187
wafl.quota.db.createFail	187
wafl.quota.db.missing	188
wafl.quota.db.noMemory	188
wafl.quota.db.scanFailed	189
wafl.quota.group.exceeded	189
wafl.quota.groupQtree.correct	190
wafl.quota.groupQtree.exceeded	190
wafl.quota.names.createFail	191
wafl.quota.ntfs.defaultAclFail	191
wafl.quota.off.vol.fail	191
wafl.quota.qtree.correct	192
wafl.quota.qtree.exceeded	192
wafl.quota.sec.change	193
wafl.quota.user.exceeded	193
wafl.quota.user.exceeded.win	194
wafl.quota.userQtree.correct	194

wafl.quota.userQtree.correct.win	195
wafl.quota.userQtree.exceeded	195
wafl.quota.userQtree.exceeded.win	196
wafl.raid events	196
wafl.raid.cft.aggr.snapshot.missing	196
wafl.raid.incons.buf	197
wafl.raid.incons.clear.error	197
wafl.raid.incons.dir.block	198
wafl.raid.incons.set.err.obj	198
wafl.raid.incons.set.error	199
wafl.raid.incons.snapmap	199
wafl.raid.incons.snapmap.chk	200
wafl.raid.incons.snapshot	200
wafl.raid.incons.ssd.cached.buf	201
wafl.raid.incons.userdata	201
wafl.raid.incons.xidata	202
wafl.rclm events	203
wafl.rclm.est.scan.done	203
wafl.readdir events	203
wafl.readdir.expired	203
wafl.readdir.sparse	204
wafl.reallocate events	204
wafl.reallocate.aggr.interrupt	204
wafl.reallocate.check.high	205
wafl.reallocate.check.highAdvise	205
wafl.reallocate.check.value	205
wafl.reallocate.full.done	206
wafl.reallocate.full.interrupt	206
wafl.reallocate.path.invalid	207
wafl.reallocate.recheck.ok	207
wafl.reallocate.scan.exists	207
wafl.reallocate.scan.noStart	208
wafl.reallocate.scan.remove	208
wafl.reallocate.schedule.invalid	208
wafl.relocate events	209
wafl.relocate.statusvol.fail	209
wafl.relocate.vetoedByNvsave	209
wafl.relocating events	210
wafl.relocating.fence.fail	210
wafl.relocating.iron.fail	210
wafl.relocating.sp.fail	211
wafl.repl events	211
wafl.repl.badTimestamp	211
wafl.repl.maxdirsize.notice	212
wafl.repl.raid.incons.set.error	212

wafl.repl.src.inconsistent	213
wafl.repl.zombie.scan.susp	213
wafl.replay events	214
wafl.replay.aggr.early.mt	214
wafl.replay.completed	214
wafl.replay.early.mounted	214
wafl.replay.nvlog.ignore.entries	215
wafl.replay.nvlog.not.needed	215
wafl.replay.resource.limited	216
wafl.replay.swizzle.fsid	216
wafl.root events	217
wafl.root.autocreate	217
wafl.root.content.changed	217
wafl.root.create	217
wafl.root.mark.error	218
wafl.root.overwritesUnsafe	218
wafl.s2c events	219
wafl.s2c.snap.check.failed	219
wafl.s2c.snap.lang.mismatch	219
wafl.scan events	219
wafl.scan.abort.nospace	219
wafl.scan.autocommit.disable	220
wafl.scan.blkreclaim.activeDelta	220
wafl.scan.blockcheck.done	221
wafl.scan.br.realloc.done	221
wafl.scan.br.redir.abort	222
wafl.scan.br.redir.done	222
wafl.scan.br.redir.noStart	222
wafl.scan.cantStart	223
wafl.scan.ckpt.init.failed	223
wafl.scan.ckpt.remove.failed	224
wafl.scan.clone.split.abort	224
wafl.scan.clone.split.cantLock	225
wafl.scan.clone.split.complete	225
wafl.scan.clone.split.fail	226
wafl.scan.css.undo.complete	226
wafl.scan.deswizzle.aborted	227
wafl.scan.deswizzle.check.referenced	227
wafl.scan.deswizzle.exception	227
wafl.scan.deswizzle.failed	228
wafl.scan.done	228
wafl.scan.filecheck.done	229
wafl.scan.i2p.cantAbort	229
wafl.scan.iron.done	229
wafl.scan.iron.snapshot	230

wafl.scan.iv.metatype.done	230
wafl.scan.iv.metatype.dud	231
wafl.scan.iv.metatype.start	231
wafl.scan.l1.uncompact.done	232
wafl.scan.l1.uncompact.nobt	232
wafl.scan.l1.uncompact.nospc	233
wafl.scan.layout.advise	233
wafl.scan.layout.advise.ino	234
wafl.scan.layout.cantWrite	234
wafl.scan.layout.write	234
wafl.scan.log.cantWrite	235
wafl.scan.lost.obj.recovery	235
wafl.scan.ownblocks.done	236
wafl.scan.quota.init.cantAbort	236
wafl.scan.realloc.oldsnaps	237
wafl.scan.reallocDisallowed	237
wafl.scan.relocation.nospaceFree	237
wafl.scan.relocation.nospaceSnap	238
wafl.scan.snap.vbnOutOfRange	238
wafl.scan.split.inofile.cantAbort	239
wafl.scan.typebits.diffFail	239
wafl.scan.typeBitsMismatch	240
wafl.scan.uncompact.aborted	240
wafl.scan.vbn.outOfRange	241
wafl.scan.wafliron.cantAbort	241
wafl.seclabel events	241
wafl.seclabel.syncsm.mutex	241
wafl.sfsr events	242
wafl.sfsr.abort.ino	242
wafl.sfsr.abort.inoDeleted	242
wafl.sfsr.done	243
wafl.sfsr.lun.error	243
wafl.sfsr.lun.name.error	244
wafl.sfsr.lun.restore.error	244
wafl.sfsr.sr.disabled	245
wafl.shutdown events	245
wafl.shutdown.notClean	245
wafl.sidl events	246
wafl.sidl.blkincons.recovery	246
wafl.sidl.l0incons.recovery	246
wafl.sidl.space.disable	247
wafl.sis events	247
wafl.sis.clone.autodelete.file	247
wafl.sis.clone.autodelete.threshold	248
wafl.sis.clone.backup.file.cleanup.failed	248

wafl.sis.clone.backup.file.restore.failed	249
wafl.sis.clone.create.failed	249
wafl.sis.clone.unlock.snapshot	250
wafl.slice events	250
wafl.slice.invalid.stream	250
wafl.sm events	251
wafl.sm.vvol.read.failed	251
wafl.snap events	251
wafl.snap.autoDel.policyChg	251
wafl.snap.autoDelete	252
wafl.snap.autoDelete.createStateSnap.fail	252
wafl.snap.autoDelete.fail	252
wafl.snap.create	253
wafl.snap.create.skip.reason	253
wafl.snap.delete	254
wafl.snap.delete.32bit	254
wafl.snap.delete.pending	255
wafl.snap.deleteError	255
wafl.snap.sched.notok	256
wafl.snaplock events	256
wafl.snaplock.scan.complete	256
wafl.snaprestore events	257
wafl.snaprestore.badVersion	257
wafl.snaprestore.cancel.invalid	257
wafl.snaprestore.cancel.prevcp	258
wafl.snaprestore.defer.prevcp	258
wafl.snaprestore.revert	258
wafl.snaprestore.stale	259
wafl.snapshot events	259
wafl.snapshot.badFilesize	259
wafl.snapshot.badLevel	260
wafl.snapshot.ecv.fail	260
wafl.snapshot_xlation_duplicate_entry events	261
wafl.snapshot_xlation_duplicate_entry	261
wafl.snapshot_xlation_setupfailed events	261
wafl.snapshot_xlation_setupfailed	261
wafl.spacemgmt events	262
wafl.spacemgmt.policyChg	262
wafl.spacetax events	262
wafl.spacetax.disabled	262
wafl.sparse events	262
wafl.sparse.meta.rm	262
wafl.spcmgmt events	263
wafl.spcmgmt.policyConflict	263
wafl.spcres events	263

wafl.spcres.not.changed	263
wafl.spinhi events	264
wafl.spinhi.new.err.code	264
wafl.split events	264
wafl.split.inofile.scan.complete	264
wafl.stream events	265
wafl.stream.check.complete	265
wafl.stream.check.invalid.file	265
wafl.stream.check.start	266
wafl.svo events	266
wafl.svo.checkFailed	266
wafl.svo.optionSet	267
wafl.takeover events	267
wafl.takeover.nvram.missing	267
wafl.takeover.nvram.warn	267
wafl.takeover.vol.mType.inv	268
wafl.takeover.vol.nomount	268
wafl.takeover.vol.offline	269
wafl.takeover.vols.mounted	269
wafl.timer events	269
wafl.timer.disk.io.stalled	269
wafl.trans events	270
wafl.trans.ssd.cache.disable	270
wafl.transition events	270
wafl.transition.cp.completed	270
wafl.unable events	271
wafl.unable.markinconsistent	271
wafl.upgrade events	271
wafl.upgrade.useActiveInofile	271
wafl.vol events	272
wafl.vol.access.denied	272
wafl.vol.add	272
wafl.vol.add.keyinfo.into.vldb	273
wafl.vol.appdm.upgrade.nospc	273
wafl.vol.autoSize.done	273
wafl.vol.autoSize.fail	274
wafl.vol.autoSize.shrink.cap	274
wafl.vol.bgTruncate.full	275
wafl.vol.blks_used.done	275
wafl.vol.clearing.in.nvfailed.state	276
wafl.vol.clone.split.nospace	276
wafl.vol.clone.unlock.snapshot.destroy.failed	277
wafl.vol.clone.unlock.snapshot.failure	277
wafl.vol.clone.unlock.snapshot.offline.failed	277
wafl.vol.clone.unlock.snapshot.start	278

wafl.vol.clone.unlock.snapshot.success	278
wafl.vol.create.clusterVolOnCFOaggr	279
wafl.vol.deswizzle.done	279
wafl.vol.fix.comp.algo.list	279
wafl.vol.fsp.full	280
wafl.vol.full	280
wafl.vol.guarantee.fail	281
wafl.vol.guarantee.stayoff	281
wafl.vol.inode.space.usage	282
wafl.vol.invalid.nomount	282
wafl.vol.invalidate.fh	283
wafl.vol.mirrorType.invalid	283
wafl.vol.mislabeled.root	283
wafl.vol.nvfail.offline	284
wafl.vol.nvfail.recovery.needed	284
wafl.vol.offline	285
wafl.vol.offline.callbacks	285
wafl.vol.outOfInodes	286
wafl.vol.outOfPrlnodes	286
wafl.vol.quiesce.giveback	287
wafl.vol.quiesce.iron	287
wafl.vol.quiesce.notdrain	287
wafl.vol.quiesce.notFlex	288
wafl.vol.quiesce.notMounted	288
wafl.vol.quiesce.relocating	288
wafl.vol.quiesce.rootVol	289
wafl.vol.quiesce.statusvol	289
wafl.vol.quiesce.timeoutcb	290
wafl.Vol.QuiesceTO.AbrtScan	290
wafl.Vol.QuiesceTO.CIntReqs	291
wafl.Vol.QuiesceTO.RalDrain	291
wafl.Vol.QuiesceTO.RefDrain	291
wafl.Vol.QuiesceTO.RefsDrain	292
wafl.Vol.QuiesceTO.SAN.Ntfy	292
wafl.Vol.QuiesceTO.ZmbDrain	293
wafl.vol.rekey.stat	294
wafl.vol.runningOutOfInodes	294
wafl.vol.setting.in.nvfailed.state	295
wafl.vol.snap_create.done	295
wafl.vol.spcsl0.conflict	296
wafl.vol.tooFullForUnlink	296
wafl.vol.unable.autogrow	296
wafl.vol.walloc.rsv.dbg.reset	297
wafl.vol.walloc.rsv.dbg.warn.blkcnt	297
wafl.vol.walloc.rsv.failmount	298

wafl.vol.walloc.rsv.offline	298
wafl.vol.walloc.rsv.root	298
wafl.volinfo events	299
wafl.volinfo.fsinfo.error	299
wafl.volmove events	299
wafl.volmove.dst.amd.corrupt	299
wafl.volref events	300
wafl.volref.subsystem.string	300
wafl.voltrans events	300
wafl.voltrans.clear.noi2p	300
wafl.voltrans.clear.svo	300
wafl.voltrans.dircopy.fail	301
wafl.voltrans.flexcache	301
wafl.voltrans.inconsistent.state	302
wafl.voltrans.qtree.novfiler	302
wafl.voltrans.qtree.replica	302
wafl.voltrans.sfsr.pending	303
wafl.voltrans.snapids	303
wafl.voltrans.snapshot.32bit	304
wafl.voltrans.ss.lun.clone	304
wafl.voltrans.vol.32bit	304
wafl.voltrans.was.offline	305
wafl.voltrans.was.restricted	305
wafl.volume events	306
wafl.volume.charmap.loadfail	306
wafl.volume.clone.created	306
wafl.volume.clone.fractional_rsrv.changed	307
wafl.volume.clone.snap.cpcount.load.failure	307
wafl.volume.clone.split.started	307
wafl.volume.clone.with.uid.gid	308
wafl.volume.find.valid_base.snap.failure	308
wafl.volume.inuse	309
wafl.volume.inuse.by	309
wafl.volume.sidl.enableErr	309
wafl.volume.sidl.offline	310
wafl.volume.slag.loadfailed	310
wafl.volume.snap.autoDelete	311
wafl.volume_snap events	311
wafl.volume_snap.autoDelete.fail	311
wafl.vv events	312
wafl.vv.bad.DSIDorMSID	312
wafl.vv.clone.splitBusySnap	312
wafl.vv.clone.splitNoScan	312
wafl.vv.dup.DSID2	313
wafl.vv.dup.UUID	313

wafl.vv.raidfile.open	314
wafl.vv.raidfile.readOnly	314
wafl.vv.raidfile.update	314
wafl.vv.regen.instance.uuid	315
wafl.vv.rename.dup	315
wafl.vv.set.size	316
wafl.vv.softlocks.noParent	316
wafl.vv.vol.config	316
wafl.vv.vol.maxvols	317
wafl.vvclock events	317
wafl.vvclock.string	317
wafl.vvol events	318
wafl.vvol.create.encrypted	318
wafl.vvol.delete.metadata.recrm	318
wafl.vvol.delete.metadata.rename	319
wafl.vvol.delete.metadata.rm	319
wafl.vvol.delete.recovered	320
wafl.vvol.destroyed	320
wafl.vvol.encrypted.offline	320
wafl.vvol.excessive.contsize	321
wafl.vvol.excessive.volsize	321
wafl.vvol.invalid.DSID	322
wafl.vvol.move.encrypted	322
wafl.vvol.offline	323
wafl.vvol.offline.err	323
wafl.vvol.offline.persist	323
wafl.vvol.online	324
wafl.vvol.ownVserver.changed	324
wafl.vvol.renamed	325
wafl.vvol.restrict	325
wafl.vvol.vvlabel.error	325
wafl.vvol.xfer.nospacedestErr	326
wafl.watch events	327
wafl.watch.cache.limit.near	327
wafl.write events	327
wafl.write.fail.cifsSpace	327
wafl.write.fail.spcres	328
wafl.zombie events	328
wafl.zombie.susp.aggr.limit	328
wafl.zombie.susp.vol.limit	329

wafl events

wafl.32bit events

wafl.32bit.formatUnsupported

Severity

ERROR

Description

This message occurs when an aggregate or volume with a 32-bit or mixed format file system is found. These formats are unsupported in this version of Data ONTAP®, and the volume cannot be brought online.

Corrective Action

Contact NetApp technical support.

Syslog Message

%s %s%s%s has an unsupported 32-bit or mixed format file system (Snapshot copy ID %u).

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

wafl.8 events

wafl.8.0.mirror.upgrade.fail

Severity

ERROR

Description

This message occurs when WAFL® unexpectedly encounters a Data ONTAP® 8.0.x logical mirror volume during an upgrade. This logical mirror volume should have been deleted prior to the upgrade.

Corrective Action

Avoid this event by destroying all Data ONTAP 8.0.x logical mirror volumes prior to the upgrade. This event resulted in the volume being marked offline, corrupt, and unrecoverable. Because the current version of Data ONTAP does not support logical mirror volume, the volume cannot be recovered by file system repair mechanisms such as wafliron and cannot be brought online.

Syslog Message

Data ONTAP 8.0.x mirror (type %d) cannot be upgraded by the current version of Data ONTAP. Logical mirror volume '%s' was marked offline, corrupt, and unrecoverable. Read the upgrade notes for this release. Such volumes should be deleted prior to the upgrade.

Parameters

type (INT): Mirror type in Data ONTAP 8.0.x.

vol (STRING): Volume name.

wafl.access events

wafl.access.fenced.file

Severity

NOTICE

Description

This message occurs when the user attempts to access a fenced file. Depending on the type of fence, reads and/or writes will not be permitted for the file.

Corrective Action

(None).

Syslog Message

The file with inode %d on volume %s cannot be accessed because it is fenced by %s operation.

Parameters

fid (INT): Inode number of the fenced file.

vol (STRING): Name of the volume that contains the fenced file.

owner (STRING): Name of the operation that fenced the file.

wafl.efs events

wafl.efs.first.disabled

Severity

NOTICE

Description

This message occurs when the deswizzle scanner fails to enable the wafl.deswizzle.efs.first feature on the aggregate because block reallocation redirection cannot be enabled on the aggregate. The deswizzle scanner will run without the wafl.deswizzle.efs.first feature for any volume in the aggregate.

Corrective Action

(None).

Syslog Message

efs.first option cannot be enabled on aggregate %s, for volume %s because it is not possible to enable block reallocation on the aggregate.

Parameters

aggr (STRING): Aggregate name.

vol (STRING): Volume name.

wafl.aggr events

wafl.aggr.addup.offline

Severity

ERROR

Description

This message occurs when an aggregate is taken offline due to the aggregate has savings because of aggregate deduplication and this version of ONTAP does not support aggregate level deduplication.

Corrective Action

Confirm that a version of Data ONTAP which supports aggregate level deduplication is in use.

Syslog Message

Aggregate name:'%s' has aggregate level deduplication enabled. It is not supported in current Data ONTAP version and was taken offline.

Parameters

name (STRING): Aggregate name.

wafl.aggr.arl.callbacks

Severity

NOTICE

Description

This message occurs during an aggregate relocation operation, when the system ignores outstanding oplock recalls so that the relocation can progress.

Corrective Action

(None).

Syslog Message

Ignoring %d locks during aggregate relocation of %s %s%s%s%s.

Parameters

count (INT): Number of ignored locks.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the aggregate.

aggr (STRING): Name of the aggregate.

app (STRING): Application UUID.

aggrident (STRING): Unique identifier of the aggregate in case the aggregate name itself is insufficient.

wafl.aggr.btiddb.build

Severity

INFORMATIONAL

Description

This message occurs at the completion of an aggregate buftreeid database construction. It records the time spent, inode scanned, msg restart count, and the result.

Corrective Action

(None).

Syslog Message

Buftreeid database for aggregate '%s' UUID '%s' was built in %llu msec, after scanning %d inodes and restarting %d times with a final result of %s.

Parameters

aggrName (STRING): Name of the aggregate.

uuid (STRING): UUID of the aggregate.

buildtime (LONGINT): Total time taken for buftreeid database construction.

inodes (INT): Total inodes seen for buftreeid database construction.

restarts (INT): Number of message restarts for buftreeid database construction.

success (STRING): Whether the constructino was a success or failure.

wafl.aggr.crt.offline

Severity

ERROR

Description

This message occurs when an aggregate is taken offline due to the aggregate was migrated from 7-Mode controller and this version of ONTAP does not support aggregate transition.

Corrective Action

Confirm that a version of Data ONTAP which supports 7-mode controller migration is in use.

Syslog Message

Aggregate name:'%s' UUID: '%s' was migrated from 7-Mode controller. It is not supported in current Data ONTAP version and was taken offline.

Parameters

name (STRING): Aggregate name.

UUID (STRING): Aggregate UUID.

wafl.aggr.dump.metadir.rm

Severity

INFORMATIONAL

Description

This message occurs when the system cannot remove the dump metadirectory, which was created by a backup job for a mirror. The dump metadirectory is created on the aggregate where the mirror resides, because mirrors are RO volumes. The metadirectory is per-session, which means that the metadirectory is removed at the end of every normal backup. Therefore, the metadirectory will be deleted the next time a backup of the same volume is completed normally.

Corrective Action

(None).

Syslog Message

Could not remove %s in aggregate %s for volume %s with UUID %s: %s

Parameters

path (STRING): Path of the dump metadirectory.

aggr (STRING): Aggregate where the dump metadirectory resides.

vol (STRING): Volume that the dump metadirectory was created for.

voluuid (STRING): UUID of the volume that the dump metadirectory was created for.

err (STRING): Error indicating why the deletion of the dump metadirectory failed.

wafl.aggr.giveback.callbacks

Severity

NOTICE

Description

This message occurs during a giveback operation, when the system ignores outstanding oplock recalls so that the giveback can progress.

Corrective Action

(None).

Syslog Message

Ignoring %d locks when giving back %s %s%s%s%s.

Parameters

count (INT): Number of ignored locks.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the aggregate.

aggr (STRING): Name of the aggregate.

app (STRING): Application UUID.

aggrident (STRING): Unique identifier of the aggregate in case the aggregate name itself is insufficient.

wafl.aggr.giveback.times

Severity

INFORMATIONAL

Description

Issued upon successful completion of giveback of an SFO HA-policy aggregate to record sub-phase timings for different phases of wafl giveback.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggrName (STRING): The name of the Aggregate.

timesString (STRING): Report of sub phase times in SHCommit_wafl routine.

wafl.aggr.hya.eviction.fail

Severity

ERROR

Description

This message occurs when Flash Pool (tm) eviction cannot remove or update a read-cached block due to the corruption of its metadata.

Corrective Action

Run wafliron on the containing aggregate to correct the Flash Pool metadata. For more information or assistance, contact NetApp technical support.

Syslog Message

Eviction for aggregate %s found mismatch for SSD pvbn %llu, HDD pvbn %llu, found SSD pvbn %llu.

Parameters

aggr (STRING): Aggregate name.

expected_ssd_pvbn (LONGINT): SSD block number expected in the cache metadata for the original block.

hdd_pvbn (LONGINT): HDD block number of the original block.

cachemap_ssd_pvbn (LONGINT): SSD block number found in the cache metadata for the original block.

wafl.aggr.hya.full.high

Severity

ERROR

Description

This message occurs when a hybrid aggregate unexpectedly runs low on SSD free space. Contact NetApp technical support.

Corrective Action

(Call support).

Syslog Message

Hybrid aggregate %s SSD free space unexpectedly ran critically low. Contact NetApp technical support.

Parameters

vol (STRING): Hybrid aggregate name.

wafl.aggr.hya.full.low

Severity

ERROR

Description

This message occurs when a hybrid aggregate unexpectedly runs low on SSD free space. Contact NetApp technical support.

Corrective Action

(Call support).

Syslog Message

Hybrid aggregate %s SSD free space unexpectedly ran low. Contact NetApp technical support.

Parameters

vol (STRING): Hybrid aggregate name.

wafl.aggr.mcc.callbacks

Severity

NOTICE

Description

This message occurs during a MetroCluster(tm) aggregate switchback operation, when the system ignores outstanding oplock recalls, which can take a long time. This is to allow the switchback operation to make progress.

Corrective Action

(None).

Syslog Message

Ignoring recalling %d locks for aggregate %s %s%s%s%s, so that the MetroCluster switchback can make progress.

Parameters

count (INT): Number of ignored locks.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the aggregate.

aggr (STRING): Name of the aggregate.

app (STRING): Application UUID.

aggrident (STRING): Unique identifier of the aggregate in case the aggregate name itself is insufficient.

wafl.aggr.nospc.del.snapshot

Severity

NOTICE

Description

This message occurs when Snapshot copies of an aggregate are autodeleted to free up space for newer writes.

Corrective Action

(None).

Syslog Message

Autodeletion of Snapshot copies for aggregate "%s" was triggered due to: %s. Available space: %d%%, space used by Snapshot copies: %d%%.

Parameters

aggr (STRING): Name of the aggregate.

reason (STRING): The reason why autodeletion of Snapshot copies was triggered.

avail_pct (INT): Percentage of available space in the aggregate.

snap_used_pct (INT): Percentage of space used by Snapshot copies in the aggregate.

wafl.aggr.overcommitted.vsm

Severity

ERROR

Description

This message occurs when there is not enough free space in the aggregate to guarantee free space in all the SnapMirror® destinations.

Corrective Action

Increase the free space in the aggregate by shrinking existing FlexVol(tm) volumes or adding more disk space.

Syslog Message

Not enough free space in aggregate %s to guarantee free space in all SnapMirror destinations.

Parameters

aggr_name (STRING): Aggregate name.

wafl.aggr.recompact.complete

Severity

INFORMATIONAL

Description

This message occurs when the "aggr recompact" scanner has finished.

Corrective Action

(None).

Syslog Message

%s scanner finished on %s %s%s%s%s. %s tried on %ld blocks.

Parameters

opname (STRING): Opname for the scanner.

voltype (STRING): Volume type on which scanner was run.

aggr_owner (STRING): Owner of the volume.

aggr_name (STRING): Volume name.

app (STRING): Application UUID.

uuid (STRING): Volume uuid .

opname1 (STRING): Opname for the scanner.

val (LONGINT): Number of vbn's acted on.

wafl.aggr.recompact.estimate

Severity

INFORMATIONAL

Description

This message occurs when the "aggr recompact analyze" command has finished and analyzed how many compacted blocks are worth recompacting.

Corrective Action

(None).

Syslog Message

Recompact analyze scan finished on aggregate %s%. Block fragmentation distribution is [%ld%%, %ld%%, %ld%%, %ld%%] for %lu compacted blocks. Average compaction ratio for the aggregate is %lu.%02lu:1 approximately.

Parameters

aggr_owner (STRING): Owner of the aggregate.
aggr_name (STRING): Aggregate name.
val_low (LONGINT): Percentage of blocks less than 25% full.
val_mid (LONGINT): Percentage of blocks less than 50% full.
val_high (LONGINT): Percentage of blocks less than 75% full.
val_full (LONGINT): Percentage of blocks greater than 75% full.
val_total (LONGINT): Total number of compacted blocks.
avg_compaction (LONGINT): Average compaction ratio.
avg_compaction1 (LONGINT): Average compaction ratio.

wafl.aggr.relocation.times

Severity

INFORMATIONAL

Description

This message occurs when an aggregate relocation is complete to record timing information about the relocation process.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggName (STRING): Name of the aggregate.
timesString (STRING): Report of aggregate relocation phase timing.

wafl.aggr.reserve.set

Severity

NOTICE

Description

This message occurs during mounting a volume, boot or takeover/giveback. This message indicates that the aggregate reserve was set to the saved value.

Corrective Action

(None).

Syslog Message

Aggregate reserve for aggregate %s was set to %d.

Parameters

aggr (STRING): Name of the aggregate.

value (INT): New aggregate reserve.

wafl.aggr.reserve.short

Severity

ERROR

Description

This message occurs when we try to set an aggregate reserve. This message indicates that there is not enough space to honor the saved value of aggregate reserve.

Corrective Action

Try creating space in the aggregate by shrinking or destroying volumes, adding disks or changing the guarantee type of volumes in the aggregate to NONE

Syslog Message

Aggregate reserve for aggregate %s could not be set as we are short by %s.

Parameters

aggr (STRING): Name of the aggregate.

short_by (STRING): How much disk space we are short by.

wafl.aggr.rsv.low.nomount

Severity

EMERGENCY

Description

This message occurs when an aggregate consumes almost all of its free space reserve and should not be brought back online without assistance from technical support to address the free space issue.

Corrective Action

Contact NetApp technical support.

Syslog Message

Failing mount of aggregate %s. Free space reserve is too low. Contact NetApp technical support for assistance.

Parameters

aggr (STRING): Aggregate name.

wafl.aggr.snapReserve

Severity

NOTICE

Description

This message occurs when the system boot process detects that the aggregate snapshot spill percentage has been modified by bootargs.

Corrective Action

(None).

Syslog Message

Aggregate snapshot spill percentage is set to %d%%.

Parameters

aggr_snap_spill_pct (INT): Aggregate snapshot spill percentage.

wafl.aggr.uncompact.complete

Severity

INFORMATIONAL

Description

This message occurs when the "aggr uncompact" scanner has finished.

Corrective Action

(None).

Syslog Message

Uncompact scanner finished on %s %s%s%s%s. Uncompacted %ld blocks.

Parameters

voltype (STRING): Volume type on which scanner was run.

aggr_owner (STRING): Owner of the volume.

aggr_name (STRING): Volume name.

app (STRING): Application UUID.

uuid (STRING): Volume uuid .

val (LONGINT): Number of vbn's acted on.

wafl.aggr.uncompact.rep.error

Severity

ERROR

Description

This message occurs when the "aggr uncompact scan" command fails to uncompact some blocks because of RAID errors. The system cannot be restored to the previous release until the problem is corrected.

Corrective Action

Uncompaction of blocks with RAID errors can be done safely only on flex volumes. Run the "vol efficiency undo -data-compaction" command on the flex volume that reported RAID errors.

Syslog Message

RAID errors found when uncompaction scan was run on aggregate %s. Run uncompaction scan on flex volume %s.

Parameters

aggr_owner (STRING): Owner of the aggregate.

aggr_name (STRING): Aggregate name.

vvol_name (STRING): Flex volume name.

wafl.aggr.uncompact.skipped

Severity

NOTICE

Description

This message occurs when uncompact scanner has to abort due to some error conditions.

Corrective Action

(None).

Syslog Message

Skipping uncompact scan on aggregate %s. Volume %s encountered error %d.

Parameters

aggr_name (STRING): Aggregate name.

vvol_name (STRING): Flex volume name.

error_code (INT): Error code for the abort.

wafl.aggregate events

wafl.aggregate.busy

Severity

NOTICE

Description

This message occurs when an operation is run on an aggregate while the aggregate or any volume of the aggregate is busy. The message prints the reason for aggregate or volume being busy.

Corrective Action

(None).

Syslog Message

%s: %s '%s' is busy. Reason: %s.

Parameters

operation (STRING): Name of the operation.
voltype (STRING): Aggregate or volume.
aggrname (STRING): Aggregate or volume name.
reason (STRING): Reason for the aggregate or volume being busy.

wafl.aggregate.online.phases

Severity

INFORMATIONAL

Description

Issued upon successful completion of aggregate online to record the sub-phase times for different phases of online.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggrName (STRING): The name of the Aggregate.
uuid (STRING): The UUID of the Aggregate.
phase1 (LONGINT): Total time taken for aggregate online phase1.
phase2 (LONGINT): Total time taken for aggregate online phase2.
phase3 (LONGINT): Total time taken for aggregate online phase3.

wafl.aggregate.online.replay

Severity

INFORMATIONAL

Description

Issued upon aggr online nvlog replay completion.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggrName (STRING): The name of the Aggregate.
uuid (STRING): The UUID of the Aggregate.
time (LONGINT): Total time taken for nvlog replay.

wafl.aggrtrans events

wafl.aggrtrans.corrupted

Severity

ALERT

Description

This message occurs when an aggregate transition operation encounters a corrupted aggregate.

Corrective Action

Delete the corrupted aggregate in maintenance mode. Alternatively, return the disks to a 7-Mode environment to fix the corrupted aggregate.

Syslog Message

Aggregate transition encountered a corrupted aggregate %s.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.dirtyFS

Severity

NOTICE

Description

This message occurs when an aggregate transition operation fails because the aggregate was not cleanly shut down.

Corrective Action

Retry the aggregate transition to bypass this specific error. Alternatively, return the disks to a 7-Mode environment, cleanly shut down the system, and then try the transition again.

Syslog Message

Aggregate %s was not cleanly shut down and could not be transitioned.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.dirtyFS.cont

Severity

NOTICE

Description

This message occurs when an aggregate transition continues to operate on an aggregate that was not cleanly shut down.

Corrective Action

(None).

Syslog Message

Aggregate %s was not cleanly shut down and is continuing transition.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.outofspace.nodereboot

Severity

ALERT

Description

This message occurs when a transitioned aggregate reaches a space limitation during the precommit phase and cannot be taken offline. The node is automatically rebooted to ensure that data integrity is preserved. After the reboot, the aggregate is online and its FlexVol® volumes are offline.

Corrective Action

Add disks to the aggregate to ensure that enough free space is available. Alternatively, commit the current transition session.

Syslog Message

Transitioned aggregate %s is critically low on available space, initiating node reboot.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.outofspace.normal

Severity

NOTICE

Description

This message occurs when a previously full transitioned aggregate contains enough free space and is back to normal operation.

Corrective Action

(None).

Syslog Message

Transitioned aggregate %s now contains enough free space and is now back to normal.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.outofspace.offline

Severity

EMERGENCY

Description

This message occurs when a transitioned aggregate reaches a space limitation during the precommit phase and is taken offline.

Corrective Action

Add disks to the aggregate to ensure that enough free space is available. Alternatively, commit the current transition session.

Syslog Message

Transitioned aggregate %s is critically low on available space, going offline.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.outofspace.remount.needed

Severity

NOTICE

Description

This message occurs when a previously full transitioned aggregate is online and must be remounted to bring its volumes back online.

Corrective Action

Take offline the transitioned aggregate, and then bring online the aggregate again to bring its volumes back online.

Syslog Message

Transitioned aggregate %s must be remounted (offline and online) to bring its volumes back online.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.outofspace.warn

Severity

ERROR

Description

This message occurs when a transitioned aggregate is low on free space. The message is periodically displayed before the aggregate goes offline due to being out of space.

Corrective Action

Add disks to the aggregate to resume normal operations. Alternatively, commit the current transition session.

Syslog Message

Pre-commit transitioned aggregate %s is low on free space at about %d percent used.

Parameters

aggrname (STRING): Name of the aggregate.

percent (INT): Percentage of aggregate that is used.

wafl.aggrtrans.revert.to.snap

Severity

NOTICE

Description

This message occurs when an aggregate transition operation fails because the aggregate is set to revert to a Snapshot copy.

Corrective Action

Return the disks to a 7-Mode environment, bring the aggregate online to finish restoring to the Snapshot® copy, and then try the transition again.

Syslog Message

Aggregate %s is reverting to a Snapshot copy and cannot be transitioned.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.aggrtrans.snap.delErr

Severity

ERROR

Description

This message occurs when an aggregate transition commit operation fails to delete the pinned Snapshot® copy.

Corrective Action

Manually delete the pinned Snapshot copy using the node scoped command "snap delete -A". If manual deletion fails, contact technical support.

Syslog Message

Aggregate transition commit operation fails to delete the pinned Snapshot® copy "%s" on aggregate %. Error: %s.

Parameters

name (STRING): Name of the Snapshot copy.

aggrname (STRING): Name of the aggregate.

err (STRING): Error description.

wafl.aggrtrans.snapshot.32b

Severity

ERROR

Description

This message occurs when an aggregate transition fails due to detection of a 32-bit Snapshot copy on the transition aggregate.

Corrective Action

Retry aggregate transition using "-ignore-errors" parameter to automatically delete all the 32-bit Snapshot copies as part of aggregate transition.

Syslog Message

Aggregate transition failed due to unsupported 32-bit snapshots on aggregate %s uuid %s.

Parameters

aggrname (STRING): Name of the aggregate.

aggruuid (STRING): Unique identifier of the aggregate.

wafl.air events

wafl.air.info

Severity

ERROR

Description

Generic wafl air message

Corrective Action

(None).

Syslog Message

%s

Parameters

msg (STRING): The message from AIR module

wafl.analytics events

wafl.analytics.air.uh

Severity

ALERT

Description

This message occurs when the system detects an inconsistency in the file system analytics database. As a consequence, file system analytics has been disabled.

Corrective Action

Turn file system analytics on again for the volume to initiate new consistent analytics.

Syslog Message

The system detected an inconsistency in the file system analytics database associated with volume %s:%s.

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volname (STRING): Volume name.

wafl.analytics.corruption

Severity

ALERT

Description

This message occurs when a file system analytics record is corrupted. Instances of this message indicate low accuracy of the analytics data reported for the volume.

Corrective Action

Please contact NetApp technical support for assistance.

Syslog Message

A file system analytics record identified by analytics filehandle "%s" on the volume with DSID "%lu" was corrupted due to an unexpected error.

Parameters

afh (STRING): Key identifies the corrupted file system analytics record.

dsid (LONGINT): DSID of the volume affected by the corrupted record.

wafl.analytics.discardNotOk

Severity

ERROR

Description

This message occurs when the analytics subsystem discards a pending reminder work request due to an internal error. Repeated instances of this message indicate low accuracy of the analytics data reported for the volume.

Corrective Action

Taking the volume offline and bringing it back online might resolve the issue. Find the name of the Vserver and volume using the "volume show -dsid <dsid>" command. Take the volume offline using the "volume offline" command, and then bring it back online by using the "volume online" command. If the problem persists or further assistance is needed, contact NetApp technical support.

Syslog Message

An analytics reminder work request was discarded due to an unexpected error. The corresponding volume DSID is "%lu". The error returned was: %s

Parameters

dsid (LONGINT): Data set ID (DSID) of the volume affected by the discarded reminder work request.

error (STRING): Error returned by reminder processing.

wafl.analytics.enterOverload

Severity

NOTICE

Description

This message occurs when the analytics subsystem is not keeping up with the amount of work being generated by the system. This could be an indication of an overloaded system in general. Analytics

accounting might lag, and reported data might not be as current as the data that the subsystem usually reports.

Corrective Action

The system should attempt to resolve the problems by itself. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

The analytics subsystem is not keeping up with the amount of work being generated by the system.

Parameters

(None).

wafl.analytics.exitOverload

Severity

NOTICE

Description

This message occurs when the analytics subsystem is performing normally and has caught up with its pending work.

Corrective Action

(None).

Syslog Message

The analytics subsystem is performing normally.

Parameters

(None).

wafl.analytics.init.fail

Severity

ALERT

Description

This message occurs when a volume fails to have a file system analytics database initialized.

Corrective Action

Disable then re-enable file system analytics for the volume. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

Failed to initialize a file system analytics database for volume %s:%s, %s.

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volname (STRING): Volume name.

error (STRING): Error message.

wafl.analytics.languishing

Severity

ALERT

Description

This message occurs when the analytics subsystem is unable to make progress, which could be an indication of an unhealthy node or a larger systemic issue.

Corrective Action

NetApp technical support

Syslog Message

The analytics subsystem has languished for more than 900 seconds.

Parameters

(None).

wafl.analytics.offErr

Severity

ALERT

Description

This message occurs when file system analytics fails to turn off. This can cause incorrect file system analytics results.

Corrective Action

Use the "volume show -dsid <dsid>" command to find the volume on which file system analytics failed to turn off, and then use the "volume analytics off" command to attempt to turn off file system analytics. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

File system analytics failed to turn off on the volume with DSID "%lu". Error: %d. Context: %s.

Parameters

dsid (LONGINT): Data Set ID (DSID) of the volume on which file system analytics failed to turn off.

error (INT): Error code returned when file system analytics failed to turn off.

context (STRING): Which operation attempted to turn off the file system analytics.

wafl.analytics.recover

Severity

ALERT

Description

This message occurs when a volume fails to recover the File System Analytics state after failing to start the initialization scanner. As a consequence, File System Analytics information might be unavailable or might not accurately reflect the volume's content.

Corrective Action

Use the "volume analytics off" command to disable File System Analytics on the volume, and then use the "volume analytics on" command to enable File System Analytics. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

The File System Analytics state for volume DSID (%lu) was not recovered after the initialization scanner failed to start. Reason: %s.

Parameters

dsid (LONGINT): Unique identifier (DSID) of the volume.
error (STRING): Error message.

wafl.analytics.rename.scan

Severity

NOTICE

Description

This message occurs when a rename scan starts while file system analytics is in the "initializing" state. Rename scans can occur to update the file system analytics database when a multipart inode or a directory is renamed or relocated to a different directory.

Corrective Action

(None).

Syslog Message

A file system analytics rename scan has been initiated for the rename of a %s identified by file system analytics filehandle "%s" on the volume with DSID "%lu".

Parameters

file_type (STRING): Identifies whether the scan is initiated for a multipart inode or a directory.
fh (STRING): Filehandle of the multipart inode or directory that is being renamed.
dsid (LONGINT): Data Set ID (DSID) of the volume the multipart inode or directory that is being renamed belongs to.

wafl.analytics.rescan

Severity

ALERT

Description

This message occurs when the system detects an inconsistency in the file system analytics database. As a consequence, file system analytics information might be unavailable or might not accurately reflect the volume's content.

Corrective Action

Turn file system analytics off and then on again for the volume. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

The system detected an inconsistency in the file system analytics database associated with volume %s:%s.

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.
volname (STRING): Volume name.

wafl.analytics.scan.fail

Severity

ALERT

Description

This message occurs when the "volume analytics on" command fails due to an internal error.

Corrective Action

Resolve the error if possible. Disable file system analytics using the "volume analytics off" command and then re-enable file system analytics using the "volume analytics on" command. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

File system analytics scan failed for volume "%s:%s. Error: %s".

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.
volname (STRING): Volume name.
error (STRING): Error message.

wafl.analytics.sp.valid.fail

Severity

ERROR

Description

This message occurs when enabling file system analytics on a volume fails because there is insufficient space in the volume.

Corrective Action

Increase the volume size or free up space on the volume. Use the "volume modify" command to increase volume size.

Syslog Message

Enabling file system analytics on %s "%s" in SVM "%s" with "%s" %s fails because there is insufficient free space.

Parameters

volDesc (STRING): In this message a volume that has not transitioned is described as a "volume".
volName (STRING): Volume name.
vserverName (STRING): Name of the storage virtual machine (SVM) on which the volume resides.
percentUsed (STRING): Percentage of used space in the volume.
usageDesc (STRING): Contains "usage" for a FlexVol volume, and "usage in one of the FlexGroup volume

constituents" for a FlexGroup volume.

wafl.analytics.sp.valid.skip

Severity

NOTICE

Description

This message occurs when enabling file system analytics on the volume fails because there is insufficient space in the volume. The enablement is allowed because the "-skip-space-validation" parameter is specified.

Corrective Action

Increase the volume size or free up space on the volume. Use the "volume modify" command to increase volume size.

Syslog Message

Enabling file system analytics on volume "%s" in SVM "%s" skips the space validation.

Parameters

volName (STRING): Volume name.

vserverName (STRING): Name of the storage virtual machine (SVM) on which the volume resides.

wafl.analytics.state.change

Severity

NOTICE

Description

This message occurs when the file system analytics state has been changed on a volume.

Corrective Action

(None).

Syslog Message

The file system analytics state of volume "%s:%s" (DSID: "%lu") has changed to "%s". Reason: %s.
Rulegen: %lu.

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's storage VM (SVM).

volname (STRING): Volume name.

dsid (LONGINT): Unique identifier (DSID) of the volume.

state (STRING): File system analytics state: on or off.

reason (STRING): The reason that the file system analytics state was changed.

rulegen (LONGINT): File system analytics rules generation number.

wafl.analytics.tooMuchMemory

Severity

ALERT

Description

This message occurs when the analytics subsystem has an excessive amount of pending work, causing memory usage to be higher than expected.

Corrective Action

Contact NetApp technical support. for assistance.

Syslog Message

Reminder table size is "%lu", which is above the design limit of "%lu". System memory: "%lu". Time since last merge: "%lu".

Parameters

tablesize (LONGINT): Current size of analytics subsystem reminder table.

limit (LONGINT): Design limit size of analytics subsystem reminder table.

system_memory (LONGINT): Total system memory on this node.

last_merge (LONGINT): Milliseconds since the analytics subsystem last processed a work request.

wafl.analytics.tz.changed

Severity

ERROR

Description

This message occurs when the system timezone is changed while file system analytics is enabled on the node. As a consequence, file system analytics information might not accurately reflect the volume's content.

Corrective Action

Use the "volume analytics show -state on" command to find the volumes with file system analytics enabled, then use the "volume analytics off" and "volume analytics on" commands for each volume where file system analytics is enabled.

Syslog Message

The system timezone has been changed while file system analytics is enabled.

Parameters

(None).

wafl.analytics.updateDiscard

Severity

ALERT

Description

This message occurs when a file system analytics update is discarded. Instances of this message indicate low accuracy of the analytics data reported for the volume.

Corrective Action

Turning file system analytics off and turning it back on again might resolve the issue. Find the name of the Vserver and volume using the "volume show -dsid <dsid>" command. Turn file system analytics off using the "volume analytics off" command, and then turn it back on by using the "volume analytics on" command. If the problem persists or further assistance is needed, contact NetApp technical support.

Syslog Message

A file system analytics update was discarded due to an unexpected error. Analytics filehandle "%s" on the volume with DSID "%lu" was to be updated by file operation "%s".

Parameters

fh (STRING): File handle that the operation targeted.
dsid (LONGINT): DSID of the volume affected by the discarded update.
operation (STRING): Operation that was being performed when this error occurred.

wafl.ap events

wafl.ap.info

Severity

NOTICE

Description

adaptive playlist message

Corrective Action

(None).

Syslog Message

%s

Parameters

msg (STRING): The message from wafl adaptive playlist

wafl.arl events

wafl.arl.vol.limitChkFailed

Severity

ERROR

Description

This message occurs during the relocation of an aggregate, when the destination node fails the volume count limit and volume size limit checks.

Corrective Action

Ensure that the destination node supports the volume size and volume count limits, or select a different destination node and retry the operation.

Syslog Message

Aggregate '%s': Volume limits check failed on destination node %s.

Parameters

vol (STRING): Name of the aggregate.
reason (STRING): Activity that is preventing the aggregate relocation operation.

wafl.asserts events

wafl.asserts.disabled

Severity

INFORMATIONAL

Description

This message occurs on development kernels when some of the asserts are disabled.

Corrective Action

(None).

Syslog Message

Warning: Some of the asserts are disabled on the filer.

Parameters

(None).

wafl.atime events

wafl.atime.updates.restarted

Severity

NOTICE

Description

This message occurs when the access time updates of all the files in the volumes of an aggregate start because the aggregate has enough free space. Access time updates of all the files were stopped when the aggregate ran out of space. The aggregate now has enough space to start the access time updates.

Corrective Action

(None).

Syslog Message

Access time updates of all the files in the volumes of aggregate "%s" have started.

Parameters

aggregate_name (STRING): Aggregate name for which access time updates of all the files in the volumes start.

wafl.atime.updates.stopped

Severity

ALERT

Description

This message occurs when the access time updates of all the files in the volumes of an aggregate stop because the aggregate has consumed its entire free space.

Corrective Action

Create space by increasing the aggregate size or by deleting some volumes or moving volumes to other aggregates. Use the "storage aggregate show-space" command to view the current space usage of the aggregate. To increase an aggregate's size, add disks by using the "storage aggregate add-disks" command. Aggregate Snapshot® copies are deleted automatically to make some space when the aggregate is full.

Syslog Message

Access time updates of all the files in the volumes of aggregate "%s" have been stopped.

Parameters

aggregate_name (STRING): Aggregate name for which access time updates of all the files in the volumes stop.

wafl.atime.updates.will.stop

Severity

ALERT

Description

This message occurs when the aggregate is nearly full. The access time updates of all the files in the volumes of an aggregate stop when the aggregate consumes its entire free space.

Corrective Action

Create space by increasing the aggregate size or by deleting some volumes or moving volumes to other aggregates. Use the "storage aggregate show-space" command to view the current space usage of the aggregate. To increase an aggregate's size, add disks by using the "storage aggregate add-disks" command. Aggregate Snapshot® copies are deleted automatically to make some space when the aggregate is full.

Syslog Message

Access time updates of all the files in the volumes of aggregate "%s" stop when the aggregate becomes full.

Parameters

aggregate_name (STRING): Aggregate name for which access time updates of all the files in the volumes stop.

wafl.attr events

wafl.attr.topK.clear.fail

Severity

ALERT

Description

This message occurs when the large directory report fails to be cleared for a volume when this feature was turned off due to an internal error. Report on large directories may be unavailable or incorrect when it is turned on again.

Corrective Action

The system should attempt to resolve the problems by itself. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

Clearing the large directory report failed for volume "%s:%s. Error: %s"

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volname (STRING): Volume name.

error (STRING): Error message.

wafl.attr.topK.init.fail

Severity

ALERT

Description

This message occurs when the large directory report fails to be initialized for a volume due to an internal error. Report on large directories may be unavailable or incorrect.

Corrective Action

The system should attempt to resolve the problems by itself. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

Initializing the large directory report failed for volume "%s:%s. Error: %s"

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volname (STRING): Volume name.

error (STRING): Error message.

wafl.attr.topK.scan.fail

Severity

ALERT

Description

This message occurs when scanning analytics database for large directories data fails due to an internal error. Report on large directories may be unavailable or incorrect.

Corrective Action

The system should attempt to resolve the problems by itself. If problems persist or further assistance is needed, contact NetApp technical support.

Syslog Message

Scanning analytics database for large directory report failed for volume "%s:%s. Error: %s"

Parameters

vserveruuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volname (STRING): Volume name.
error (STRING): Error message.

wafl.bad events

wafl.bad.aggr.buftree.type

Severity

EMERGENCY

Description

This message occurs when you attempt to bring an aggregate online whose file system buftree type and RAID label format are inconsistent. Buftree type indicates whether the filesystem is a 32-bit or a 64-bit. Attempting to online this aggregate can cause data corruption or a system panic.

Corrective Action

Contact NetApp technical support

Syslog Message

Aggregate %s: Inconsistency found with the file system buftree type and RAID label format (large aggr: %d, fs: 0x%x, RAID: %d).

Parameters

name (STRING): The aggregate name.
large (INT): Flag showing if the aggregate size is bigger than 16 TB.
fsbuftree (INT): File system buftree type.
raidsfmt (INT): RAID buftree format.

wafl.bad.vol.buftree.type

Severity

EMERGENCY

Description

This message occurs when you attempt to bring online a volume whose file system and volume descriptor buftree type show inconsistency. The buftree type shows whether the file system is a 32-bit or 64-bit. Bringing online such a volume can cause data corruption or system panic.

Corrective Action

(Call support).

Syslog Message

Volume %s: Inconsistency found with the file system buftree type and volume descriptor buftree type (large vol: %d, fs: 0x%x, label: 0x%x, RAID: %d). Bringing the volume online can cause data corruptions or system panic. Contact NetApp technical support.

Parameters

volname (STRING): Volume name.
large (INT): Flag showing if the volume size is bigger than 16 TB.
fsbuftree (INT): File system buftree type.
labelfmt (INT): Volume descriptor buftree type.

raidefmt (INT): RAID buftree type.

wafl.bagofbits events

wafl.bagofbits.name

Severity

ERROR

Description

This message occurs when a read directory request from an NFSv4 client is made to a Unicode-based directory in which directory entries with no NFS alternate name contain non-Unicode characters.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Access the parent directory from an NFSv3 client and rename the entry using Unicode characters.

Syslog Message

Cannot provide directory entry to NFSv4 client for file ID:%d in volume %s%s because it contains non-Unicode characters with no NFS alternate name.

Parameters

fileid (INT): File ID of the entry in the directory for which non-Unicode characters are present.

vol (STRING): Volume in which the directory entry with non-unicode characters is present.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) when the volume name itself is insufficient.

wafl.blkreclaim events

wafl.blkreclaim.abort

Severity

INFORMATIONAL

Description

This message occurs to inform you that the block reclamation scanner was aborted.

Corrective Action

You can disable this message as follows: setflag wafl_blk_reclaim_scan_log 0

Syslog Message

Block reclamation scanner was aborted on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume when the volume name alone is insufficient.

wafl.blkreclaim.complete

Severity

INFORMATIONAL

Description

This message occurs when the block reclamation scanner is complete.

Corrective Action

Disable this message by running the 'setflag wafl_blk_reclaim_scan_log 0' command.

Syslog Message

Block reclamation scanner was completed on %s %s%s%s%. The scanner took %ld ms.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

run_time (LONGINT): Total run time of the scanner.

wafl.blkreclaim.noscan

Severity

INFORMATIONAL

Description

This event is issued to inform the user that the block reclamation scanner was not started.

Corrective Action

This message may be disabled with: setflag wafl_blk_reclaim_scan_log 0

Syslog Message

Block reclamation scanner not started on %s %s%s%s%.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.blkreclaim.reset

Severity

INFORMATIONAL

Description

This message occurs to inform you that the block reclamation scanner was reset.

Corrective Action

You can disable this message as follows: `setflag wafl_blk_reclaim_scan_log 0`

Syslog Message

Block reclamation scanner was reset on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume when the volume name alone is insufficient.

wafl.br events

wafl.br.redir.invalid

Severity

ALERT

Description

This event is issued if block reallocation has not been performed on an aggregate but a reallocated block was found that subsequently needs to be redirected. Block reallocation operates in two phases: first the blocks on an aggregate are moved (reallocated), later, when the block is read, the old pointers to the block are updated (redirected). This event is issued when the second phase is required without the first phase occurring. Since this may indicate on-disk data corruption, the aggregate has been taken offline.

Corrective Action

(Call support).

Syslog Message

Invalid redirection: aggr:%s vol:%s

Parameters

aggr (STRING): The name of the aggregate

vol (STRING): The name of the volume

wafl.br.redir.nospace

Severity

NOTICE

Description

This message occurs when there's not enough free space to complete a redirect scan on a volume. The redirect scan improves performance by updating information that was changed because of block reallocation, but is not required for normal operation. This message is usually caused because reallocated blocks are shared between the active file system and a Snapshot(tm) copy and cannot be updated without using more blocks than are currently available.

Corrective Action

Create more free space in the volume by deleting Snapshot copies.

Syslog Message

The redirect scanner cannot complete its scan on '%s%s%s' because there is not enough disk space.
Remove Snapshot copies.

Parameters

volname (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier the volume in cases where the volume name itself is insufficient.

wafl.buf events

wafl.buf.badHeader

Severity

EMERGENCY

Description

This message occurs when the system encounters a bad header in the Snapshot(tm) copy of the active map block of the filesystem.

Corrective Action

Delete the bad Snapshot copy. For a SnapMirror® target, rebuild from source or resynchronize, after deleting the Snapshot copy. If the problem persists or if you need further assistance, contact NetApp technical support.

Syslog Message

Bad header in Snapshot copy of active map in %s %s%s%s, Snapshot copy %d, fbn %llu.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

snaplId (INT): Snapshot(tm) copy identifier.

fbn (LONGINT): File block number.

wafl.buf.freeingFreeBlock

Severity

EMERGENCY

Description

This message occurs when the system encounters a "freeing free block" error due to file system corruption.

Corrective Action

(Call support).

Syslog Message

Freeing free block at VBN %llu in %s %s%s%s%s. WAFL inconsistent. Contact NetApp technical support.

Parameters

vbn (LONGINT): Virtual block number of the block that is freed.

voltype (STRING): Type of the volume.

volowner (STRING): Owner of the volume.

volname (STRING): Name of the volume (again). This is returned from WAFL_VOL_PRINT_NAME_STRINGS.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

vendor (STRING): Name of the vendor.

wafl.c2c events

wafl.c2c.increase.vol.max.size.failed

Severity

ERROR

Description

This message occurs when attempt to increase volume max size limit during c2c restore fails due to an error.

Corrective Action

(None).

Syslog Message

Attempt to increase max size limit for volume:%s failed with Error:%d.

Parameters

vvolname (STRING): Name of the volume.

errorCode (INT): Error code

wafl.c2c.od.restore.scan.cloud.config.failed

Severity

NOTICE

Description

This message occurs when cloud config is unavailable and SMC on-demand restore from object store failed to start.

Corrective Action

(None).

Syslog Message

Phase:%s of the on-demand restore process for volume:%s with FSID:0x%x has failed. Attempt to restart SMC on-demand restore on this volume will continue in the background.

Parameters

restore_phase (STRING): Specifies the phase for which the restore has been failed.
vol (STRING): Volume name.
fsid (INT): File system identifier of the volume.

wafl.c2c.od.restore.scan.initiated

Severity

NOTICE

Description

This message occurs when an on-demand restore from object store has been initiated.

Corrective Action

(None).

Syslog Message

Phase:%s of the on-demand restore process for volume:%s with FSID:0x%x has initiated.

Parameters

restore_phase (STRING): Specifies the phase for which the restore has been initiated.
vol (STRING): Volume name.
fsid (INT): File system identifier of the volume.

wafl.c2c.od.restore.scan.restart.failed

Severity

ALERT

Description

This message occurs when SMC lazy restore scan restart attempt for transient error failed.

Corrective Action

(None).

Syslog Message

Restart Phase:%s of the on-demand restore process for volume:%s with FSID:0x%x has failed and error number %d. For more information or assistance, contact NetApp technical support.

Parameters

restore_phase (STRING): Specifies the phase for which the restore has been failed.
vol (STRING): Volume name.
fsid (INT): File system identifier of the volume.
error (INT): Error number.

wafl.c2c.restore.scan.abort

Severity

NOTICE

Description

This message occurs when an operation to restore file(s)/volume from a cloud storage was aborted.

Corrective Action

(None).

Syslog Message

%s %s%s%s, %s Restore from cloud storage aborted.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

restore_type (STRING): Indicates whether the operation is Full Volume, Single File or On-demand Restore.

wafl.c2c.restore.scan.done

Severity

NOTICE

Description

This message occurs when an operation to restore file(s)/volume from a cloud storage was completed successfully.

Corrective Action

(None).

Syslog Message

%s %s%s%s, %s Restore from cloud storage completed.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

restore_type (STRING): Indicates whether the operation is Full Volume, Single File or On-demand Restore.

wafl.c2c.restore.scan.failed

Severity

ERROR

Description

This message occurs when there is an error during restoring of file(s) or Volume from a Cloud storage.

Corrective Action

(None).

Syslog Message

Restoring file with inode %d from cloud has failed with error %d for the volume %s with FSID 0x%x during %s Restore.

Parameters

fileid (INT): File identifier.

error (INT): Error Code.

vol (STRING): Volume name.

fsid (INT): File system identifier of the volume.

restore_type (STRING): Indicates whether the operation is Full Volume, Single File or On-demand Restore.

wafl.c2c.rst.fsize.exceeded

Severity

NOTICE

Description

This message occurs when the size of a file being restored exceeds the maximum file size allowed by the system during the restoration of either files or a volume from cloud storage. The restore operation will fail for that particular file or volume.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s, FSID 0x%x, Restoring file with file ID %d from cloud has failed because the file size exceeded the maximum file size allowed on the current system, which is %lu bytes. The size of the file being restored is %lu bytes.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume if the volume name itself is insufficient.

fsid (INT): File system identifier of the volume.

fileid (INT): File identifier.

maxsize (LONGINT): Maximum file size allowed on this system.

filesize (LONGINT): Size of the file being restored.

wafl.ca events

wafl.ca.cap.tier.usage.limit

Severity

ERROR

Description

This message occurs when the space used in the capacity tier of a FabricPool aggregate has exceeded or is projected to exceed the size limit set on the capacity tier. The projected usage is calculated based on the cold data already identified for tiering. The system will continue to serve data while space exists in the performance tier, but cold data will not be tiered to the capacity tier.

Corrective Action

Perform one or more of the following actions:

- o Free space in the capacity tier of the aggregate by moving volumes, removing volumes, or deleting data.
- o Increase the size limit set on the capacity tier.

Syslog Message

Aggregate %s capacity tier usage (%llu MB) has exceeded its size limit (%llu MB).

Parameters

aggregate (STRING): Aggregate name.

capacityTierUsage (LONGINT): Current capacity tier usage in MB.

capacityTierSizeLimit (LONGINT): Capacity tier size limit in MB.

wafl.ca.cloud.retrieval.policy

Severity

NOTICE

Description

This message occurs when the cloud retrieval policy for a volume in a FabricPool has been modified.

Corrective Action

(None).

Syslog Message

Cloud retrieval policy on volume '%s%s%s%s' has been modified to %s.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Identifier of the volume.

cloud_retrieval_policy (STRING): Cloud retrieval policy configured on the volume.

wafl.ca.cloud.write.disabled

Severity

NOTICE

Description

This message occurs when the cloud write option is disabled on a volume in a FabricPool aggregate.

Corrective Action

(None).

Syslog Message

The Cloud Write option is disabled on volume %s.

Parameters

vol (STRING): Name of the volume.

wafl.ca.cloud.write.enabled

Severity

NOTICE

Description

This message occurs when the cloud write option is enabled on a volume in a FabricPool aggregate.

Corrective Action

(None).

Syslog Message

The Cloud Write option is enabled on volume %s.

Parameters

vol (STRING): Name of the volume.

wafl.ca.cs.hdr.cfg.mismatch

Severity

ALERT

Description

This message occurs when the system detects that the IDs recorded in the configuration map for FabricPool object stores for a specific aggregate do not match the configuration IDs currently in use by the aggregate itself. This mismatch might affect the reporting of statistics and counters for FabricPool object stores.

Corrective Action

Run the "aggr wafliron start <aggr_name>" command on the aggregate specified to fix the inconsistency.

Syslog Message

Aggregate "%s" with bin ID "%d" has configuration IDs in the FabricPool statistics file (configuration ID 1: %d, configuration ID 2: %d) that are different from the configuration IDs of the object stores in the configuration map (primary configuration ID: %d, mirror configuration ID: %d).

Parameters

aggr (STRING): Name of the aggregate.

bin (INT): Bin ID of the object stores.

cfg_id_1 (INT): Configuration ID 1, as reported by the aggregate.

cfg_id_2 (INT): Configuration ID 2, as reported by the aggregate.

primary_cfg_id (INT): Configuration ID of the primary object store.

mirror_cfg_id (INT): Non-zero configuration ID of the mirror object store, or zero if no such store exists.

wafl.ca.GET.latency.thresh

Severity

ALERT

Description

This message occurs when the measured latency for a GET request from a cloud provider, for a specific aggregate and object store, exceeds the maximum threshold specified for that object store. This can impact performance and lead to request timeouts.

Corrective Action

Ensure that the configuration of your object store has not changed, and that login and connectivity information are still accurate. If the condition persists, contact NetApp technical support.

Syslog Message

Measured latency for GET request from cloud (%d msec) exceeds the threshold (%d msec) (aggregate: %s, aggregate UUID: %s, object store: %s, object store provider: %s, object name: %s, offset: %d, length: %d).

Parameters

latency_msec (INT): Latency cycles specified in milliseconds.

threshold_msec (INT): Threshold value in milliseconds for the latency.

aggr (STRING): Name of the containing aggregate.

aggr_uuid (STRING): Universal unique identifier (UUID) of the aggregate.

config_name (STRING): Object store configuration name.

objstore_name (STRING): Object store provider name.

object_name (STRING): Object name.

offset (INT): Offset for GET request.

len (INT): Request length for GET request.

wafl.ca.GET.timeout.failure

Severity

EMERGENCY

Description

This message occurs when ONTAP fails to read a block from a cloud object because the underlying GET request times out.

Corrective Action

Ensure that the configuration of your object store has not changed, and that login and connectivity information are still accurate. If the condition persists, contact NetApp technical support.

Syslog Message

Failed to read an object from cloud due to GET request timeout (aggregate: %s, aggregate UUID: %s, object store: %s, object store provider: %s, object name: %s, offset: %d, length: %d).

Parameters

aggr (STRING): Name of the containing aggregate.

aggr_uuid (STRING): Universal unique identifier (UUID) of the aggregate.

config_name (STRING): Object store configuration name.

objstore_name (STRING): Object store provider name.

object_name (STRING): Object name.
offset (INT): Offset for GET operation.
len (INT): Request length for GET operation.

wafl.ca.latency.threshold

Severity

NOTICE

Description

This message occurs when the measured I/O latency from a cloud provider, for a specific aggregate and object store, exceeds the maximum threshold. This can impact performance and lead to request timeouts.

Corrective Action

(None).

Syslog Message

Measured latency from cloud (%d msec) exceeds the threshold (%d msec) (aggregate: %s, aggregate UUID: %s, object store: %s, S3 request: %s, object store provider: %s).

Parameters

latency_msec (INT): Latency cycles specified in milliseconds.
threshold_msec (INT): Threshold value in milliseconds for the latency.
aggr (STRING): Name of the containing aggregate.
aggr_uuid (STRING): Universal unique identifier (UUID) of the aggregate.
config_name (STRING): Object store configuration name.
op_name (STRING): S3 or Azure blob operation name.
objstore_name (STRING): Object store provider name

wafl.ca.mcc.tlog.drain.event

Severity

NOTICE

Description

This message occurs when tiering is enabled or disabled on a FabricPool in a MetroCluster(tm) configuration, when one or more mirrored plexes transitions from normal to degraded state or vice versa. Enabling or disabling tiering does not impact data availability or client read/write performance.

Corrective Action

(None).

Syslog Message

Mirrored plex "%s" on FabricPool "%s" is in "%s" state. Tiering is %s.

Parameters

plex_name (STRING): Name of the plex.
aggregate_name (STRING): Name of the FabricPool.
plex_state (STRING): Operational state of the plex.
message (STRING): Indicates whether tiering is enabled or disabled.

wafl.ca.migrate.aggr.nospace

Severity

NOTICE

Description

This message occurs when one or more FabricPool aggregates does not have space for hot data to be migrated back to the performance tier.

Corrective Action

Either free space in the performance tier of the aggregate (by moving volumes, removing volumes, or deleting data), or add space to the performance tier of the aggregate by adding disks.

Syslog Message

Aggregate %s: Current available space in the performance tier is below %d%. Data migration from the capacity tier to the performance tier is stopped.

Parameters

aggr (STRING): Aggregate name.

threshold_percentage (INT): Percentage of aggregate space that must be unused for migration to occur.

wafl.ca.name(fmt.mismatch)

Severity

ERROR

Description

This message occurs when the system detects an internal discrepancy on the name format version used by the FabricPool. Cloud operations on the FabricPool is affected.

Corrective Action

Run the 'debug vreport show' command to see the object name format version discrepancy. Follow the vreport guidance to fix the issue.

Syslog Message

Name format version discrepancy detected for FabricPool "%s". Operations to the object store affected.

Parameters

aggr (STRING): Name of the FabricPool.

wafl.ca.object.check.done

Severity

INFORMATIONAL

Description

This event is issued to indicate that the object check operation on a FabricPool aggregate completed successfully.

Corrective Action

(None).

Syslog Message

Object check operation completed on FabricPool %s. Total lost objects: %d.

Parameters

aggr (STRING): Name of the containing aggregate.

num_lost_objs (INT): Number of lost objects identified.

wafl.ca.object.check.start

Severity

INFORMATIONAL

Description

This message occurs when object check operation on a FabricPool aggregate is started successfully.

Corrective Action

(None).

Syslog Message

Object check operation was started on FabricPool %s. Output will be saved at %s.

Parameters

aggr (STRING): Name of the containing aggregate.

logfile (STRING): Path for the logfile for object check output.

wafl.ca.object.storage.class.updated

Severity

NOTICE

Description

This message occurs when the object storage class is updated on a volume in a FabricPool aggregate.

Corrective Action

(None).

Syslog Message

The tiering storage class on volume %s is updated from %s to %s.

Parameters

vol (STRING): Name of the volume.

old_storage_class (STRING): Old tiering storage class.

new_storage_class (STRING): Updated tiering storage class.

wafl.ca.objtag.retry.limit

Severity

NOTICE

Description

This message occurs when the object tagging scanner fails to update tags on an object in the object store even after retrying for the maximum allowed attempts. The scanner is aborted for the current scan and will attempt to tag the object again the next time the scanner runs. The scanner is invoked every minute to check whether there are objects to be tagged.

Corrective Action

(None).

Syslog Message

Failed to update object tags in the object store even after multiple retry attempts, aggregate = %s, object ID =%lu, object name =%s, retries attempted = %d.

Parameters

aggregate_name (STRING): Aggregate name.
object_id (LONGINT): Object ID.
object_name (STRING): Object name.
num_retries (INT): Number of retries attempted.

wafl.ca.objtag.skip.retry

Severity

NOTICE

Description

This message occurs when the object tagging scanner fails to update tags on an object in the object store even after retrying for the maximum allowed attempts. The scanner continues to update tags on other objects instead of aborting the scan due to repeated failures over one or more objects.

Corrective Action

(None).

Syslog Message

Failed to update object tags in the object store even after multiple retry attempts. Tagging skipped on object: aggregate = %s, object ID =%lu, object name =%s, retries attempted = %d.

Parameters

aggregate_name (STRING): Aggregate name.
object_id (LONGINT): Object ID.
object_name (STRING): Object name.
num_retries (INT): Number of retries attempted.

wafl.ca.objtag.unsupported

Severity

NOTICE

Description

This message occurs when object tags are added or updated on a FabricPool volume. This message indicates that objects tiered from this volume will not be tagged in the object store.

Corrective Action

(None).

Syslog Message

Object tagging is supported only for a StorageGRID® object store in this version of ONTAP® software. Objects in %s object store (%s) attached to FabricPool %s will not be tagged in this version.

Parameters

provider_name (STRING): Object store name.

object_store_type (STRING): Object store type (primary or mirror).

aggregate (STRING): Name of the FabricPool.

wafl.ca.promote.none.nospc

Severity

NOTICE

Description

This message occurs when a FabricPool volume with tiering policy set to "none" and cloud retrieve policy set to "promote" does not have enough free space available to fetch all the data from the cloud. The scanner to fetch the data will abort and be periodically rescheduled until the space is available.

Corrective Action

Ensure the aggregate has the estimated amount of space needed available.

Syslog Message

Aggregate %s, Volume %s: Current available space in the performance tier is %llu bytes. There needs to be at least %llu bytes free in the aggregate to fetch an estimated %llu bytes from the cloud. Data migration from the capacity tier to the performance tier is paused.

Parameters

aggr (STRING): Aggregate name.

vol (STRING): Volume name.

avail_space (LONGINT): Free space in aggregate.

space_needed (LONGINT): Estimated amount of physical space that must be free to accommodate data fetched from the cloud.

cloud_space_to_fetch (LONGINT): Estimated amount of physical space to fetch from the cloud.

wafl.ca.promote.snap.nospc

Severity

NOTICE

Description

This message occurs when a FabricPool volume with tiering policy set to "snapshot_only" and cloud retrieve policy set to "promote" does not have enough free space available to fetch the AFS data from the cloud. The scanner to fetch the data will abort and be periodically rescheduled until the space is available.

Corrective Action

Ensure the aggregate has the estimated amount of space needed available.

Syslog Message

Aggregate %s, Volume %s: Current available space in the performance tier is %llu bytes. There needs to be at least %llu bytes free in the aggregate to fetch AFS data from the cloud. Data migration from the capacity tier to the performance tier is paused.

Parameters

aggr (STRING): Aggregate name.

vol (STRING): Volume name.

avail_space (LONGINT): Free space in aggregate.

space_needed (LONGINT): Minimum amount of physical space that must be free to accommodate AFS data fetched from the cloud.

wafl.ca.remove.object.tag

Severity

NOTICE

Description

This message occurs when the system encounters a bad header in the block that stores the tag values associated with the objects that belong to the volume. As a result of this corruption, all the tags information stored in the block is cleared.

Corrective Action

(None).

Syslog Message

Clearing all tags due to inconsistencies found in the object tag metafile associated with volume %s.

Parameters

volname (STRING): Volume name.

wafl.ca.repaired.metafile

Severity

ERROR

Description

This message occurs when an inconsistency is discovered in one of the FabricPool metafile blocks. The inconsistency is automatically repaired upon detection.

Corrective Action

(None).

Syslog Message

Inconsistent block (%s) found in %s metafile on FabricPool aggregate (%s). Repaired.

Parameters

state (STRING): A description of the metafile block that was found to be inconsistent.

metafile_name (STRING): Name of the metafile.

aggr (STRING): Name of the FabricPool aggregate.

wafl.ca.resync.complete

Severity

NOTICE

Description

This message occurs when Data ONTAP® completes the resync process from the primary object store to the mirror object store for a mirrored FabricPool aggregate.

Corrective Action

(None).

Syslog Message

FabricPool mirror resync process is completed for FabricPool %s (uuid %s) from primary object store (config id %u) to mirror object store (config id %u).

Parameters

aggr (STRING): Name of the containing aggregate.

aggr_uuid (STRING): Universal Unique ID (UUID) of the aggregate.

primary_config_id (INT): Primary object store config id.

mirror_config_id (INT): Mirror object store config id.

wafl.ca.resync.read.fail

Severity

ALERT

Description

This message occurs when FabricPool mirror resynchronize attempt receives too many consecutive timeout failures while reading a single object from the primary. The mirror will stay in a degraded state until all objects can be read and copied to the mirror.

Corrective Action

Verify that your intercluster LIF is online and functional by using the "network interface show" command. Also, check network connectivity to the object store server by using the "ping" command over the destination node intercluster LIF. Additionally, ensure that the configuration of your object store has not changed, and that login and connectivity information is still accurate. If the condition persists, contact NetApp technical support.

Syslog Message

Unable to read cloud object from capacity tier (objid %llu, btuuuid %s, seqno %llu) during FabricPool mirror resync.

Parameters

object_id (LONGINT): Object identifier.

btuuuid (STRING): Buftree UUID.

seqno (LONGINT): Sequence number.

wafl.ca.resync.read.set.err.obj

Severity

ALERT

Description

This message occurs when Data ONTAP® marks all blocks in an object in a capacity tier object with an error due to FabricPool mirror resync read errors. This is useful for tracking generation of some pseudobad blocks due to resync read issues.

Corrective Action

Contact NetApp technical support..

Syslog Message

Unable to read cloud object from capacity tier (objid %llu, btuuid %s, seqno %llu) during FabricPool mirror resync. As a result, all blocks in this object are marked with error (%u).

Parameters

object_id (LONGINT): Object identifier.

btuuid (STRING): Buftree UUID.

seqno (LONGINT): Sequence number.

error (INT): Error on the block.

wafl.ca.revert.ufmt.paused**Severity**

ERROR

Description

This message occurs when the revert operation to convert a unified object format is paused either because there are one or more offline volumes in the FabricPool aggregate or because the tiering of unified format objects to the object store is pending.

Corrective Action

Bring the volumes online in the aggregate to resume the unified object format revert operation. Use the "volume object-store tiering show" command to check the tiering status of a volume.

Syslog Message

The operation to revert the object format to the native format paused on aggregate "%s" because there are offline volumes or the tiering of unified format objects to the object store is pending.

Parameters

aggregate_name (STRING): Aggregate name.

wafl.ca.slothdr.repair.done**Severity**

INFORMATIONAL

Description

This event is issued to indicate that the slothdr repair operation for a FabricPool aggregate completed successfully.

Corrective Action

(None).

Syslog Message

Slothdr metafile repair operation completed for FabricPool %s.

Parameters

aggr (STRING): Name of the containing aggregate.

wafl.ca.slothdr.repair.start**Severity**

INFORMATIONAL

Description

This message occurs when an operation to repair the slothdr metafile for a FabricPool aggregate is started successfully.

Corrective Action

(None).

Syslog Message

Slothdr metafile repair operation was started for FabricPool %s.

Parameters

aggr (STRING): Name of the containing aggregate.

wafl.ca.tier.aggr.spc.limit**Severity**

ERROR

Description

This message occurs when the FabricPool aggregate does not have enough free space to tier cold data to the capacity tier. The system will continue to serve data, but cold data will not be tiered.

Corrective Action

Either free space in the performance tier of the aggregate by moving volumes, removing volumes, or deleting data, or add space to the performance tier of the aggregate by adding disks.

Syslog Message

Aggregate %s: Current available space in the performance tier is below %d%. Data tiering from the performance tier is stopped.

Parameters

aggr (STRING): Aggregate name.

threshold_percentage (INT): Percentage of aggregate space that must be unused for tiering to occur.

wafl.ca.tier.max.size.limit

Severity

ERROR

Description

This message occurs when the capacity tier of a FabricPool aggregate reaches the maximum supported capacity tier size. The system will continue to serve data, but cold data will not be migrated to the capacity tier.

Corrective Action

This state can be corrected by performing one or more of the following actions: o Free space in the capacity tier of the aggregate by moving volumes, removing volumes, or deleting data.

Syslog Message

Aggregate %s capacity tier usage (%llu MB) has reached the maximum capacity tier size limit (%llu MB).

Parameters

aggregate (STRING): Aggregate name.

capacityTierUsage (LONGINT): Current capacity tier usage in MB.

maxCapacityTierSizeLimit (LONGINT): Maximum capacity tier size in MB.

wafl.ca.tiering.policy

Severity

NOTICE

Description

This message occurs when the tiering policy for a volume in a FabricPool has been modified.

Corrective Action

(None).

Syslog Message

Tiering policy on volume '%s%s%s%s' has been modified to %s.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

tiering_policy (STRING): Tiering policy configured on the volume.

wafl.ca.tlogput.modified

Severity

INFORMATIONAL

Description

This message occurs when the FabricPool Put operation settings are modified by an administrator.

Corrective Action

(None).

Syslog Message

FabricPool Put operation settings were modified. New Values, bytes-limit: %llu, latency-limit: %llu, preserved: %u,%u

Parameters

bytes_limit (LONGINT): The put-rate-bytes-limit value.
latency_limit (LONGINT): The put-latency-limit value.
preserve (INT): The preserve setting value.
can_preserve (INT): Non-Zero if the node supports preserving settings.

wafl.ca.total.space.incons

Severity

ERROR

Description

This message occurs when the counter tracking the total amount of space used in an object store bucket becomes inconsistent due to other inconsistencies in the object metadata.

Corrective Action

For more information or assistance, contact NetApp technical support.

Syslog Message

Inconsistency was found in the total object store space used by FabricPool aggregate "%s". Skipped space adjustments have caused overcounting by as much as %llu bytes.

Parameters

aggrname (STRING): Name of the aggregate.
space_delta (LONGINT): The estimated amount of space in bytes that could be overcounted as a result of other inconsistencies.

wafl.catalog events

wafl.catalog.invalid

Severity

NOTICE

Description

This event indicates that WAFL catalog block in nvram is invalid during nvram replay.

Corrective Action

(None).

Syslog Message

Wafl Catalog invalid.

Parameters

(None).

wafl.cbin events

wafl.cbin.iron.mirror.config.changed

Severity

INFORMATIONAL

Description

This message occurs when cloud mirror configuration changes during the WAFLiron operation on a FabricPool aggregate with unified format enabled.

Corrective Action

Run wafliron again on the aggregate.

Syslog Message

The wafliron cannot update total physical size on bin label as cloud mirror configuartion has changed on aggregate %s. Please run wafliron again on the aggregate.

Parameters

aggregate_name (STRING): Aggregate name.

wafl.cbin.iron.objslothdr.invalid.entry.threshold.reached

Severity

INFORMATIONAL

Description

This message occurs when number of invalid entries in objslothdr metafile reaches the upper threshold during the WAFLiron operation on a FabricPool aggregate with unified format enabled.

Corrective Action

Run the fixup tool on the Fabricpool aggregate and after the fixup tool finishes, run wafliron again on the aggregate.

Syslog Message

The wafliron cannot update total physical size on bin label as number of invalid entries in slothdr metafile reached the upper threshold on aggregate %s. Please run the fixup tool on the aggregate before running wafliron again.

Parameters

aggregate_name (STRING): Aggregate name.

wafl.cbin.label.total.physical.size.overcounted

Severity

INFORMATIONAL

Description

This message occurs when overcounting of total physical size on the bin label happens due to invalid entries in slothdr metafile belonging to a Fabricpool aggregate with unified format enabled.

Corrective Action

Run the fixup tool on the Fabricpool aggregate and after the fixup tool finishes, run wafliron again on the aggregate.

Syslog Message

The total physical size on bin label belonging to Fabricpool aggregate %s might be overcounted as there were %llu invalid entries in slothdr metafile. The current physical used is %llu. Previously physical used was %llu. For further assistance, contact NetApp technical support.

Parameters

aggregate_name (STRING): Aggregate name.

invalid_entry_count (LONGINT): Number of invalid entries present in slothdr metafile.

physical_used (LONGINT): Current total physical used in capacity tier.

old_physical_used (LONGINT): Previous total physical used in capacity tier.

wafl.cbin.objslothdr.iron.skip.resync.in.progress

Severity

INFORMATIONAL

Description

This message occurs when wafliron skips ironing objslothdr metafile on a FabricPool aggregate with unified format enabled as resync operation is in progress.

Corrective Action

Run wafliron again once resync operation is complete.

Syslog Message

Wafliron has skipped ironing objslothdr metafile on aggregate %s as resync operation is in progress on this aggregate. Please run wafliron after resync operation is complete.

Parameters

aggregate_name (STRING): Aggregate name.

wafl.cde events

wafl.cde.decompression.fail

Severity

ERROR

Description

This message occurs when the WAFL® kernel cannot decompress a compressed user data block. This is an abnormal condition that can lead to inconsistencies in the user data.

Corrective Action

Contact NetApp technical support. for assistance.

Syslog Message

Failed to decompress a block on volume "%s" (vvbn=%llu pvbn=%llu). Details: %s.

Parameters

vol (STRING): Volume name.

vvbn (LONGINT): Virtual volume block number for which decompression failed.

pvbn (LONGINT): Physical volume block number for which decompression failed.

details (STRING): Additional information.

wafl.cdemap events

wafl.cdemap.repaired.metafile

Severity

ERROR

Description

This message occurs when an inconsistency is discovered in one of the metafile blocks. The inconsistency is automatically repaired upon detection.

Corrective Action

(None).

Syslog Message

Inconsistent block (%s) found in %s metafile on aggregate (%s). Repaired.

Parameters

state (STRING): A description of the metafile block that was found to be inconsistent.

metafile_name (STRING): Name of the metafile.

aggr (STRING): Name of the aggregate.

wafl.check events

wafl.check.info

Severity

ERROR

Description

Generic wafl check message

Corrective Action

(None).

Syslog Message

%s

Parameters

msg (STRING): The message from wafl check

wafl.check.lostnfound.error

Severity

NOTICE

Description

WAFL failed to cleanup the lostnfound directory present in the metadir of the given volume.

Corrective Action

(None).

Syslog Message

Failed to cleanup lostnfound from the metadir of volume %s (reason: %s)

Parameters

vol (STRING): The volume name

err (STRING): The error string

wafl.cleanup events

wafl.cleanup.after.giveback

Severity

INFORMATIONAL

Description

This message occurs after WAFL® completes the post-giveback cleanup. The cleanup includes freeing memory resources allocated for the partner file system.

Corrective Action

(None).

Syslog Message

(None).

Parameters

delay (LONGINT): Amount of time (in milliseconds) WAFL took to perform the post giveback cleanup. 1518 blocks

wafl.cleanup.after.relocate

Severity

INFORMATIONAL

Description

This message occurs after WAFL® completes the aggregate relocation cleanup. The cleanup includes freeing memory resources allocated for the partner file system.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggrName (STRING): Name of the aggregate.

delay (LONGINT): Amount of time (in milliseconds) WAFL took to perform the post aggregate relocation cleanup.

wafl.cleanup.after.sendhome

Severity

INFORMATIONAL

Description

This message occurs after WAFL® completes the aggregate post-giveback cleanup. The cleanup includes freeing memory resources allocated for the partner file system.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggrName (STRING): Name of the aggregate.

delay (LONGINT): Amount of time (in milliseconds) WAFL took to perform the aggregate post-giveback cleanup.

wafl.clone events

wafl.clone.invalid.inherited.counters

Severity

ERROR

Description

This message alerts about invalid inherited counters for the clone flexible volume.

Corrective Action

(Call support).

Syslog Message

clone inherited counters for clone flexible volume %s on aggregate %s are invalid. The clone volume will be offlined. It is recommended to online parent volume if not already onlined. Once the parent volume is onlined, the clone also be onlined. Contact technical support for assistance.

Parameters

clonename (STRING): Clone flexible volume name.

aggrname (STRING): Aggregate name.

wafl.clone.no.basesnap

Severity

ERROR

Description

This message alerts you about a missing clone flexible volume base Snapshot(tm) copy and strongly recommends that you take the clone flexible volume offline and destroy it.

Corrective Action

Take the clone flexible volume offline immediately. If you know that the clone does not contain any valuable data, you can safely destroy and re-create it.

Syslog Message

Base Snapshot copy for clone flexible volume %s on aggregate %s is missing. It is strongly recommended that you take the clone offline and destroy it. Failure to do so might lead to clone panic at any time.

Parameters

clonename (STRING): Clone flexible volume name.

aggrname (STRING): Aggregate name.

wafl.clone.quota.error.ignored

Severity

ERROR

Description

This message occurs when a clone op cannot fail due to quota error because either quota accounting is ignored by the user (e.g, sfsr) or the clone op cannot fail (eg, split), so it ignores the quota error it received during quota check.

Corrective Action

None required.

Syslog Message

Sis clone running in (vol='%s', volident='%s') ignored quota error '%u' during '%s' operation.

Parameters

vol (STRING): Volume name.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

error_code (INT): A numerical error code indicating the reason why the quota check failed.

op_type (STRING): Type of sis clone operation (create/split).

wafl.clone.snapSpcGuar

Severity

INFORMATIONAL

Description

This event is issued if an attempt is made to delete a snapshot in a clone volume that would require the space guarantee on the clone to exceed the available space in the aggregate. A clone volume initially shares one or more snapshots with its parent volume. This allows the space guarantee to be optimized,

reducing the space requirement in the aggregate. If a shared snapshot is deleted then extra space is required in the aggregate to ensure the space guarantee for the volume can be enforced. If the freespace in the aggregate is too small to allow this then the snap delete is rejected.

Corrective Action

This state can be corrected by performing one or more of the following actions:

- o Change the space guarantee on the volume so that less space is required in the aggregate.
- o Free space in the aggregate by shrinking or removing volumes.
- o Add space to the aggregate, e.g. by adding disks.

Syslog Message

Snapshot '%s' in clone volume '%s%s%s' cannot be deleted, there is insufficient space in the aggregate to enforce the space guarantee (%s)

Parameters

snap_name (STRING): The snapshot name

vol_name (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

guarantee (STRING): The current guarantee

wafl.clone.snapsplit.nospace

Severity

NOTICE

Description

This message occurs when there is not enough free space to complete a file clone split operation from the Snapshot(tm) copy. The clone file might become unreadable when the parent Snapshot copy is automatically deleted.

Corrective Action

Increase the space available to the volume by either adding disks or by freeing space in the volume to allow the split operation to continue.

Syslog Message

File clone split from Snapshot copy of '%s%s%s' cannot be completed due to lack of disk space.

Parameters

name (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.clone.split.start.vol.fenced

Severity

NOTICE

Description

This event indicates that vol clone split start was called for a fenced volume after iron completion.

Corrective Action

(None).

Syslog Message

Volume clone split start called for fenced volume '%s%s%s'.

Parameters

volname (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.clone.unrecoverable

Severity

ALERT

Description

This message occurs during boot when a clone is marked unrecoverable due to its missing base Snapshot(tm) copy.

Corrective Action

If you know that the clone does not contain any valuable data, you can safely destroy and re-create it. If it contains any valuable data, you can recover only the data which was written after the volume clone was created. Trying to access the data which was shared with the base snapshot (original data) will result in error.

Syslog Message

Base Snapshot copy for clone %s on aggregate %s is missing. Marking it unrecoverable.

Parameters

clonename (STRING): Clone name.

aggrname (STRING): Aggregate name.

wafl.compaction events

wafl.compaction.CP.value

Severity

INFORMATIONAL

Description

This message occurs when the aggregates compaction CP value is changed.

Corrective Action

(None).

Syslog Message

Compaction CP count in aggregate "%s" changed from %ld to %ld at aggregate's CP count %ld.

Parameters

volname (STRING): Volume name on which value was changed.
oldval (LONGINT): Old value of CP count.
newval (LONGINT): New value of CP count.
fs_cpcount (LONGINT): CP count of aggregate fsinfo.

wafl.compress events

wafl.compress.auto.disable

Severity

NOTICE

Description

This message occurs when compression is automatically disabled on a space guarantee volume because it is not supported on this platform.

Corrective Action

(None).

Syslog Message

WAFL compression automatically disabled in %s "%s".

Parameters

volume_identifier (STRING): Volume identifier.
volume (STRING): Volume name.

wafl.compress.cde.auto.enablement

Severity

NOTICE

Description

This message occurs when WAFL compression on container file level is automatically enabled on a volume.

Corrective Action

(None).

Syslog Message

WAFL auto adaptive compression automatically enabled in %s "%s".

Parameters

volume_identifier (STRING): Volume identifier.
volume (STRING): Volume name.

wafl.compress.cde.event

Severity

NOTICE

Description

This message occurs when WAFL compression on container file level is enabled or disabled on a volume.

Corrective Action

(None).

Syslog Message

WAFL container compression state changed in %s "%s" to "%s".

Parameters

volume_identifier (STRING): Volume identifier.

volume (STRING): Volume name.

message (STRING): Whether enable or disable.

wafl.compress.enable.failed

Severity

INFORMATIONAL

Description

This event is issued when FAS compression can not be enabled on a volume. The following reasons might be causing the problem: FAS compression might not be supported on the software release you're running; the volume is not a flexible volume or it is a root volume or snaplock volume; the compression/de-compression scanner is already active; or a clone operation is already underway.

Corrective Action

(None).

Syslog Message

Compression could not be enabled on volume "%s" at this time. Check the volume configuration and retry.

Parameters

vol (STRING): Volume name.

wafl.compress.fail.rootVol

Severity

NOTICE

Description

This message occurs when an administrator attempts to enable compression on the root volume. Compression cannot be enabled on the root volume.

Corrective Action

(None).

Syslog Message

'%s' is the root volume and compression cannot be enabled on the root volume.

Parameters

vol (STRING): Volume name.

wafl.compress.mark.cg.bad.hw

Severity

ALERT

Description

This message occurs when the FAS compression writes bad blocks for an inconsistent or corrupted compression group due to hardware errors.

Corrective Action

Restore the corrupted file from the Snapshot copy, or contact NetApp technical support

Syslog Message

FAS compression: Writing bad blocks, at fbn:%llu level:%u in %s inode (fileid:%d snapid:%u) in volume %s%s%s%s.

Parameters

fbn (LONGINT): File block number.

level (INT): Buffer level.

ino_type (STRING): Inode type

fileid (INT): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.compress.mark.cg.bad.sw

Severity

ERROR

Description

This message occurs when the FAS compression writes bad blocks for an inconsistent or corrupted compression group due to software errors.

Corrective Action

Restore the corrupted file from the Snapshot copy, or contact NetApp technical support

Syslog Message

FAS compression: Writing bad blocks, at fbn:%llu level:%u in %s inode (fileid:%d snapid:%u) in volume %s%s%s%s.

Parameters

fbn (LONGINT): File block number.

level (INT): Buffer level.

ino_type (STRING): Inode type

fileid (INT): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.compress.scan.checkpoint.deleted

Severity

NOTICE

Description

This event is generated when the FAS compression of existing data for volume deletes checkpoint.

Corrective Action

(None).

Syslog Message

vol compress: Checkpoint deleted for compression of existing data for volume "%s%s%s".

Parameters

vol (STRING): Name of the compressed volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.convert events

wafl.convert.directory.failed

Severity

ERROR

Description

This message occurs when a directory cannot be safely converted to Unicode format. The directory contains files or subdirectories that must first be renamed.

Corrective Action

Use the "volume file show-inode" command with the directory inode number and volume name information to find the path of the directory that could not be converted. There are some files or subdirectories within this parent directory that have names like "{123456789}". File names like these can make it unsafe for ONTAP® software to automatically convert a directory to Unicode format. To convert the directory, first rename the files or subdirectories in this parent directory that have names matching this pattern. To perform these renames, make sure that the volume has the "-convert-unicode" property set to "false", and then rename the content using an NFSv3 client.

Syslog Message

Volume "%s:%s" was unable to convert directory %u to Unicode.

Parameters

vserver_uuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volume (STRING): Volume name that the directory is in.

directory_inum (LONGINT): The Inode number (fileid) of the directory.

wafl.cop events

wafl.cop.flowcontrol.end

Severity

NOTICE

Description

This message occurs when the system is out of the flow control mode which was earlier initiated as a high number of volumes were receiving modify operations concurrently beyond a certain threshold.

Corrective Action

(None).

Syslog Message

The node is out of the flow control mode which was earlier initiated as a high number volumes were receiving modify operations concurrently beyond a certain threshold (%lu).

Parameters

high_concurrency_flowcontrol_thres (LONGINT): System defined threshold beyond which high-concurrency flow control mode is triggered.

wafl.cop.flowcontrol.start

Severity

NOTICE

Description

This message occurs when the system is in a very high concurrency mode; i.e., when a high number of volumes receive modify operations concurrently beyond a certain threshold. The system is automatically getting into a flow control mode, where it may hold ops on certain volumes for longer time in order to reduce high-concurrency related impacts.

Corrective Action

If the flow control situation is long-lived, and the delays are not acceptable, the concurrency level among the volumes need to be brought down by moving the volumes (preferably the ones encountering delays) out of this node.

Syslog Message

Very high number of volumes (%lu) are receiving modify operations concurrently. The node is in a flow control mode (threshold: %lu). As a result few volumes may experience higher delay in latency.

Parameters

concurrent_vvols_cnt (LONGINT): Number of volumes actively receiving modify operations.
high_concurrency_flowcontrol_thres (LONGINT): System defined threshold beyond which high-concurrency flow control mode is triggered.

wafl.cop.high.concurrency

Severity

NOTICE

Description

This message occurs when the system is in high-concurrency mode; i.e., when a high number of FlexVol® volumes receive modify operations concurrently during a monitoring interval. High concurrency might cause degradation in performance.

Corrective Action

(None).

Syslog Message

A high number of FlexVol volumes are receiving modify operations concurrently. Interval (ms): %lu, Aggregate: %s, Frequency: %lu out of %lu times, Threshold criteria: more than %u FlexVol volumes were concurrently receiving modify operations, Distribution: %s.

Parameters

monitoring_interval (LONGINT): Duration of monitoring interval in milliseconds.

aggr (STRING): Name of the aggregate.

cp_above_vvol (LONGINT): Number of Consistency Points (CPs) with FlexVol volumes participating above the vvol_threshold value in this monitoring interval.

total_cp_in_interval (LONGINT): Number of CPs that happened in the monitoring interval.

vvol_threshold (INT): Minimum number of FlexVol volumes in a CP to call it a "highly concurrent CP".

histogram (STRING): A histogram [b1 : v1, b2 : v2, ..., b8 : v8], where "b" represents bin ID and "v" represents count of the corresponding bin ID.

wafl.cp events

wafl.cp.toolong

Severity

ERROR

Description

This message occurs when a WAFL® consistency point (CP) takes longer than 30 seconds. A CP lasting more than 30 seconds might cause client latency and potentially a client outage.

Corrective Action

For additional information about this specific CP, see the kernel log file and the corresponding CM archive. For further information about correcting the problem, search the knowledgebase of the NetApp technical support support web site for the "wafl.cp.toolong" keyword.

Syslog Message

Aggregate %s experienced a long CP.

Parameters

aggname (STRING): Name of the aggregate.

repeats (INT): Number of consecutive long CPs on this volume.

cp_count (INT): CP count on the volume corresponding to the long CP.

total_ms (INT): Total time taken by the CP, in milliseconds.

total_dbufs (LONGINT): Total number of dirty buffers in the CP.

tetrises (INT): Number of tetrises that were written across all raidgroups in volume.

blocks (LONGINT): Number of blocks that were written across all raid groups in the volume.

rgid (INT): ID of the raid group with the highest average tetris write time.

clean (INT): Milliseconds to write allocate (clean) all normal files.

flush (INT): Milliseconds to write all remaining blocks to disk.

wafl.csm events

wafl.csm.sessionStopped

Severity

INFORMATIONAL

Description

This message occurs when the Cluster Session Manager (CSM) session is stopped as part of the shutdown process.

Corrective Action

(None).

Syslog Message

(None).

Parameters

(None).

wafl.data events

wafl.data.compaction.event

Severity

NOTICE

Description

This message occurs when data compaction functionality is enabled or disabled on a volume.

Corrective Action

(None).

Syslog Message

WAFL volume data compaction state changed in %s "%s" to "%s".

Parameters

volume_identifier (STRING): Volume identifier.

volume (STRING): Volume name.

message (STRING): Whether enable or disable.

wafl.delete events

wafl.delete.bad.indirect

Severity

NOTICE

Description

This message occurs when the system encounters a lost indirect block while deleting a file. As a result, some space occupied by the file being deleted might not be reclaimed.

Corrective Action

Run wafliron to fix any space accounting discrepancies.

Syslog Message

Lost indirect block encountered while deleting inode %d (level %d, vbn %llu) on %s %s%s%s%s. Contact NetApp technical support.

Parameters

ino (INT): Inode number of the file.

level (INT): Indirection level of the block.

vbn (LONGINT): Block number of the block within the volume.

type (STRING): Type of the object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Name of the volume containing the file.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.delete.fenced.file

Severity

NOTICE

Description

This message occurs when the user attempts to delete a fenced file. Depending on the type of fence, reads and/or writes will not be permitted for the file.

Corrective Action

Use the "volume file show-inode" command to confirm the file name that matches the inode, for example, "volume file show-inode -vserver 'vserver that fenced file is stored on' -volume 'volume that fenced file is stored on' -inode-number 'inode number of fenced file'". Clear the fenced status by using the "iofence clear 'file path name'" diagnostic privilege nodeshell command, and then the file can be deleted from the NFS/CIFS client.

Syslog Message

The file with inode %d on volume %s cannot be deleted because it is fenced by %s operation.

Parameters

fid (INT): Inode of the fenced file.

vol (STRING): Name of the volume that contains the fenced file.

owner (STRING): Name of the operation that fenced the file.

wafl.delete.specdev

Severity

INFORMATIONAL

Description

This message occurs when the system encounters a block or character device during zombie delete processing.

Corrective Action

(None).

Syslog Message

Block or character device encountered in zombie path: inode: %d, type: %d, size: %lld, block count: %llu. Possible inconsistency detected on %s %s%s%s%s.

Parameters

ino (INT): Inode number.

inotype (INT): Inode type.

size (LONGINT): Size.

blocks (LONGINT): Block count.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

vendor (STRING): Vendor contact information.

wafl.descend events

wafl.descend.fail

Severity

ERROR

Description

This message occurs when there is an error during descendency checking. This message can occur when accessing a directory in a Snapshot(tm) copy that is being deleted.

Corrective Action

This condition might be transient; try the operation again. If the problem persists, contact NetApp technical support.

Syslog Message

Descendency check failure: {x%x %d %d %d %d} parent of {x%x %d %d %d %d}. Contact NetApp technical support.

Parameters

pfh0 (INT): Parent file handle's flags.

pfh1 (INT): Parent file handle's snapid.

pfh2 (INT): Parent file handle's fileid.

pfh3 (INT): Parent file handle's generation.
pfh4 (INT): Parent file handle's FSID.
cfh0 (INT): Child file handle's flags.
cfh1 (INT): Child file handle's snapid.
cfh2 (INT): Child file handle's fileid.
cfh3 (INT): Child file handle's generation.
cfh4 (INT): Child file handle's FSID.
vendor (STRING): Vendor contact information.

wafl.dir events

wafl.dir.convert

Severity

NOTICE

Description

This message indicates that CIFS directory conversion is in progress and WAFL will not hang due to timeout. Directory conversion happens the first time a volume with 8.3-format names is accessed by a CIFS client.

Corrective Action

(None).

Syslog Message

WAFL %s directory conversion in progress.

Parameters

type (STRING): Type of directory operation (revert/convert).

wafl.dir.convert.denied.2big

Severity

ERROR

Description

This message occurs when access to a directory is rejected because an attempted operation requires the directory to be converted to Unicode format and the directory is too large to be converted quickly. Directory conversion is required for a directory with 8.3-format names to be accessed by a CIFS or NFSv4 client.

Corrective Action

Use the "volume modify" command to enable the "convert_icode" option on the volume experiencing the rejected access, and then retry the access attempt. Note that this might result in system performance degradation or temporary loss of service while the conversion occurs. Search on "Converting existing directories to Unicode format" for more information.

Syslog Message

Access to large directory on volume MSID:%u, file ID:%u rejected for requiring conversion.

Parameters

msid (LONGINTHEX): Volume master data set identifier (MSID) of the volume experiencing the rejected

access.

fileid (INT): File identifier of the directory experiencing the rejected access.

wafl.dir.depth.max

Severity

ERROR

Description

This message occurs when a directory depth reaches its maximum depth limit. The default maximum depth is 2000.

Corrective Action

Reduce the depth of the directory, by moving directory hierarchy to higher levels.

Syslog Message

Directory depth for inum %d in volume %s%s exceeds the maximum directory depth limit. To fix this issue, please reduce the directory depth.

Parameters

fileid (INT): Fileid of the directory for which directory depth reached its maximum limit.

vol (STRING): Volume in which directory depth reached its maximum limit.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier in cases where volume name itself is insufficient.

wafl.dir.duplicate.hash

Severity

NOTICE

Description

This message occurs when a directory entry has a duplicate index hash for longname and dosname/altname is deleted from the directory.

Corrective Action

(None).

Syslog Message

An entry with duplicate index hash is found in directory inum %d in volume %s%s%s. Directory index clears to fix this issue.

Parameters

fileid (INT): File ID of the directory.

vol (STRING): Volume name.

app (STRING): Application universal unique identifier(UUID).

volident (STRING): Unique volume identifier in cases where volume name itself is insufficient.

wafl.dir.entries.warning

Severity

ALERT

Description

This message occurs when directory entries have exceeded the currently configured maximum directory size (maxdirsize) percentage.

Corrective Action

Execute the "volume file show-inode" command with the volume name and file ID to determine the file path and then reduce the number of files in the directory. If the number of files cannot be reduced, maxdirsize can be increased. Read the documentation and knowledge base articles to ensure ramifications of increasing maxdirsize are understood as once increased, performance impacts may be observed. The value for maxdirsize can be increased (but not decreased) by executing (privilege; advanced) "volume modify -volume vol_name -maxdir-size new_value". If you need to increase the value of maxdirsize, contact NetApp technical support.

Syslog Message

Directory entries for File ID "%d" in volume "%s%s%s" have reached "%d" percentage of the maxdirsize limit.

Parameters

fileid (INT): File ID of the directory

vol (STRING): Name of the volume in which the directory is located.

app (STRING): Universally unique identifier (UUID) of the application.

volident (STRING): Volume UUID where the directory is located.

percent (INT): Percentage of the directory entries filled.

wafl.dir.fileId.err

Severity

ERROR

Description

This event is issued when directory prefetch results in inconsistent file identifier data. The fh[0] to fh[4] parameters represent the encoded filehandle value.

Corrective Action

If this error condition occurs, contact NetApp technical support for further assistance.

Syslog Message

wafl_prefetch_dir_inos: inconsistent fileid %d in %s directory {x%x %d %d %d}.

Parameters

fileid (INT): The file identifier

ino_type (STRING): The inode type

fh0 (INT): fh[0]

fh1 (INT): fh[1]

fh2 (INT): fh[2]

fh3 (INT): fh[3]

fh4 (INT): fh[4]

wafl.dir.link.max

Severity

ERROR

Description

This message occurs as a warning when a parent directory reaches its maximum link limit within a specified time interval and the no of parent directory reached maximum hard link limit reached the upper limit. A directory has only one parent directory, which counts as a hard link. All other hard links are from the directories contained within this directory. The link to the parent directory cannot be removed.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Reduce the hard link count of this directory by moving some of its subdirectories to another directory, or remove some of its subdirectories.

Syslog Message

This is the last warning for failure to create a new sub-directory since parent directory with fileid %d in volume %s%s has reached its sub-directory limit.

Parameters

fileid (INT): File ID of the parent directory that has reached its maximum hard link limit.

vol (STRING): Name of the volume in which the parent directory resides.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory resides, when the volume name alone is insufficient.

wafl.dir.link.reachingLimit

Severity

ERROR

Description

This message occurs when a parent directory surpasses 90% of its maximum hard link limit. The total hard link count for a directory is the number of its subdirectories plus other hard links to the directory.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Move some of the parent directory's subdirectories to a different directory. Take care not to create too many new subdirectories in the parent directory that is reaching its limit until you reduce the hard link count.

Syslog Message

The directory with fileid %d in volume %s%s%s is approaching the maximum link limit of %d. Reduce the number of links to the existing parent directory.

Parameters

fileid (INT): File ID of the parent directory that has surpassed 90% of its maximum hard link limit.

vol (STRING): Name of the volume in which the parent directory resides.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory resides, when the volume name alone is insufficient.

maxLink (INT): Maximum number of hard links for the parent directory.

wafl.dir.link.trap

Severity

ALERT

Description

This message occurs as a warning when a directory has reached its maximum hard link limit and the specified time interval is exceeded.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Reduce the hard link count of this directory by moving some of its subdirectories to another directory, or remove some of its subdirectories.

Syslog Message

(None).

Parameters

fileid (INT): File ID of the parent directory that has reached its maximum hard link limit.

vol (STRING): Name of the volume in which the parent directory resides.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory resides, when the volume name alone is insufficient.

maxLink (INT): Maximum number of hard links allowed.

wafl.dir.link.warning

Severity

ERROR

Description

This event occurs as a warning when a parent directory reached its maximum hard link limit within a specified time interval and the no of parent directory reached maximum hard link limit is below the upper limit.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. create new subdirectories in a different parent directory. Alternatively, move some of the current parent directory's subdirectories to a different directory.

Syslog Message

A request to make a subdirectory in parent directory with fileid %d in volume %s%s could not be handled because the parent directory has reached its link limit; use a different parent directory or reduce the number of hard links by moving some of its subdirectories to a different directory.

Parameters

fileid (INT): File ID of the parent directory that has reached its maximum hard link limit.

vol (STRING): Name of the volume in which the parent directory resides.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory resides, when the volume name alone is insufficient.

wafl.dir.nt.max

Severity

ERROR

Description

This message occurs when an inode has reached its maximum number of NT streams.

Corrective Action

Reduce the number of streams on the file.

Syslog Message

Inode "%d" in volume "%s%s%s" has reached its maximum number of NT streams.

Parameters

fileId (INT): File identifier.

vol (STRING): Name of the volume in which the inode resides.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the inode is present.

wafl.dir.nt.warning

Severity

NOTICE

Description

This message occurs when an inode is nearing its maximum number of NT streams.

Corrective Action

(None).

Syslog Message

Inode "%d" in volume "%s%s%s" is nearing its maximum number of NT streams.

Parameters

fileId (INT): File identifier.

vol (STRING): Name of the volume in which the inode resides.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the inode is present.

wafl.dir.size.max

Severity

EMERGENCY

Description

This message occurs after a directory has reached its maximum directory size (maxdirsize) limit.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Reduce the number of files in the directory. If not possible, use the (privilege:advanced) option

"volume modify -volume vol_name -maxdir-size new_value" to increase the maximum number of files per directory. However, doing so could impact system performance. If you need to increase the maximum directory size, contact NetApp technical support.

Syslog Message

Directory size for fileid "%d" in volume "%s%s" reached the maxdirsize limit.

Parameters

fileid (INT): File ID of the directory that has reached maximum size for directories in its volume.

vol (STRING): Volume in which the directory is present.

app (STRING): Application universal unique identifier(UUID).

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory resides, when the volume name alone is insufficient.

wafl.dir.size.max.warning

Severity

ERROR

Description

This message occurs when the size of a directory has reached or surpassed a configured percentage (default: 90%) of its current maximum directory size (maxdirsize) limit, and the current maxdirsize is less than the default maxdirsize, which is 1% of total system memory.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Reduce the number of files in the directory. If not possible, use the (privilege:advanced) option "volume modify -volume vol_name -maxdir-size new_value" to increase the maximum number of files per directory. However, doing so could impact system performance. If you need to increase the maximum directory size, contact technical support.

Syslog Message

Directory size for file ID "%d" in volume "%s%s" is approaching the maximum directory size (maxdirsize) limit.

Parameters

fileid (INT): File ID of the directory that has reached or is approaching the current maximum size for directories in its volume.

vol (STRING): Name of the volume in which the directory is located.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory is located, when the volume name alone is insufficient.

wafl.dir.size.warning

Severity

ALERT

Description

This message occurs when the size of a directory surpasses a configured percentage (default: 90%) of its current maximum directory size (maxdirsize) limit.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Reduce the number of files in the directory. If not possible, use the (privilege:advanced) option "volume modify -volume vol_name -maxdir-size new_value" to increase the maximum number of files per directory. However, doing so could impact system performance. If you need to increase the maximum directory size, contact NetApp technical support.

Syslog Message

Directory size for file ID "%d" in volume "%s%s" is approaching the maximum directory size (maxdirsize) limit.

Parameters

fileid (INT): File ID of the directory that has surpassed 90% of current maximum size for directories in its volume.

vol (STRING): Name of the volume in which the directory is located.

app (STRING): Application universal unique identifier(UUID).

volident (STRING): Unique volume identifier (UUID) of the volume in which the parent directory is located, when the volume name alone is insufficient.

wafl.dir.surpair.filename

Severity

ERROR

Description

This message occurs as a warning when a file name with surrogate pair characters in UTF-16 encoding fails to be created in a parent directory.

Corrective Action

To allow names with surrogate pairs to be created, use the following command: "setflag wafl_reject_surrogate_pair 0". If the option needs to be set across reboots, set the bootarg 'wafl-accept-surrogate-pair?' to "true" at the LOADER prompt.

Syslog Message

Failed to create a file with surrogate pair characters in the name in the directory %s.

Parameters

dir (STRING): Parent directory.

wafl.dirent events

wafl.dirent.illegal.encoding

Severity

ERROR

Description

This message occurs when a user attempts to use a directory entry name that is not supported by the virtual server's language setting.

Corrective Action

Use directory entry name with encoding that matches the virtual server's language setting.

Syslog Message

The encoding of directory entry name %s doesn't match the virtual server's language code %s.

Parameters

filename (STRING): The filename

langcode (STRING): Language code

wafl.disable events

wafl.disable.vol.guarantee

Severity

NOTICE

Description

This message occurs when the volume guarantee of a flexible volume is disabled due to aggregate space being physically overallocated.

Corrective Action

Remount the aggregate after creating space by increasing the aggregate size or by deleting/moving some volumes to the other aggregates. Use the "storage aggregate show-space" command to view the current space usage of the aggregate. To increase an aggregate's size, add disks by using the "storage aggregate add-disks" command. Aggregate Snapshot copies are deleted automatically to make some space when the aggregate is full.

Syslog Message

Volume guarantee on volume "%s" is disabled after the aggregate "%s" becomes physically overallocated.

Parameters

vol (STRING): Volume name whose guarantee is getting disabled.

aggr (STRING): The aggregate name on which the volume whose guarantee is getting disabled resides.

wafl.dosname events

wafl.dosname.repair.fail

Severity

ERROR

Description

This message occurs when the system cannot correct duplicate dosnames present in a directory.

Corrective Action

From the NFS client, check the directory for file or subdirectory names like {}. Rename these, and then run (privilege diag) the "wafl dosname" node shell command on the directory.

Syslog Message

Dosname repair failed for file ID: %d volume %s:%s.

Parameters

fileid (INT): Directory file ID where dosname repair failed.

vserver_uuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volume (STRING): Volume name.

wafl.dosname.repair.success

Severity

NOTICE

Description

This message occurs when the "wafl dosname" command is completed successfully.

Corrective Action

(None).

Syslog Message

"wafl dosname" command successfully completed on volume %s:%s. Total files corrected: %d.

Parameters

vserver_uuid (STRING): Universal Unique ID (UUID) of the volume's Vserver.

volume (STRING): Volume name.

total (INT): Total number of directory entries changed.

wafl.enc events

wafl.enc.aggrMFRereated

Severity

NOTICE

Description

This message occurs when the system detects a corrupted WAFL aggregate encryption keys metafile and creates a corrected replacement.

Corrective Action

(None).

Syslog Message

"Recreated aggregate %s encryption keys metafile."

Parameters

aggr (STRING): Aggregate name.

wafl.enc.aggrMFRereateFail

Severity

ALERT

Description

This message occurs when the system detects a corrupted WAFL aggregate encryption keys metafile and is unable to create a corrected replacement. The system might not be able to mount volumes.

Corrective Action

Contact NetApp technical support.

Syslog Message

"Failed to recreate aggregate %s encryption key metafile."

Parameters

aggr (STRING): Aggregate name.

wafl.encrypted events

wafl.encrypted.aggr.created

Severity

NOTICE

Description

This message occurs when a NetApp® Aggregate Encryption (NAE) aggregate is created.

Corrective Action

(None).

Syslog Message

NAE aggregate "%s" is created.

Parameters

Aggregate (STRING): Name of the aggregate.

KeyID_1 (STRING): Aggregate key ID of key1.

KeyID_2 (STRING): Aggregate key ID of key2.

KeyID_3 (STRING): Aggregate key ID of key3.

KeyID_4 (STRING): Aggregate key ID of key4.

wafl.encrypted.aggr.modified

Severity

NOTICE

Description

This message occurs when an aggregate is converted to a NetApp® Aggregate Encryption (NAE) aggregate.

Corrective Action

(None).

Syslog Message

Aggregate "%s" is converted to a NAE aggregate.

Parameters

Aggregate (STRING): Name of the aggregate.

KeyID_1 (STRING): Aggregate key ID of key1.

KeyID_2 (STRING): Aggregate key ID of key2.

KeyID_3 (STRING): Aggregate key ID of key3.

KeyID_4 (STRING): Aggregate key ID of key4.

wafl.encryption events

wafl.encryption.unsupported

Severity

ALERT

Description

This message occurs when the system takes offline an encrypted virtual volume because encryption became unsupported.

Corrective Action

Reenable support for encryption by setting the bootarg

"bootarg.disable.volume.softwareencryption.support" to "false", reboot the system and then bring online the encrypted volume.

Syslog Message

Keeping encrypted volume "%s" (UUID: %s) offline because encryption has become unsupported.

Parameters

uuid (STRING): UUID of the volume.

vol (STRING): Volume name.

wafl.err events

wafl.err.L1.compacted.block

Severity

NOTICE

Description

This message occurs when a level 1 indirect block with given block number is not found in a compacted block.

Corrective Action

(None).

Syslog Message

Block number 0x%llx is not found in the compacted block.

Parameters

vvbn (LONGINT): Volume block number.

wafl.extent events

wafl.extent.size.reset

Severity

NOTICE

Description

This message occurs when the volume extent option is set and WAFL® encounters an invalid extent size. This message indicates that the extent size was reset to a valid default value.

Corrective Action

(None).

Syslog Message

Extent size for volume %s was reset to %d.

Parameters

vol (STRING): Name of the volume.

extent_size (INT): New extent size.

wafl.failed events

wafl.failed.mount

Severity

EMERGENCY

Description

This message occurs when the ONTAP® kernel cannot mount a volume because of file system inconsistency.

Corrective Action

Contact NetApp technical support.

Syslog Message

WAFL inconsistent: Mount failed for volume %s%s%s%s.

Parameters

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.failed.mount.bad.fsid

Severity

EMERGENCY

Description

This message occurs when DATA ONTAP® cannot mount a volume because of a hardware failure in the disk subsystem. The failure invalidates and clears the unique identifier (FSID) that was assigned to the volume at the time of creation, resulting in an invalid FSID value of 0 and making the volume inaccessible for clients. The volume will be left in the offline state without any data loss.

Corrective Action

Check for disk failures and replace any failed disks. A subsequent mount call for the volume, either from the boot path or an admin level online request, would be able to read a valid FSID now, thus solving this problem. For more information or assistance, contact NetApp technical support.

Syslog Message

Invalid file system identifier (FSID): Mount failed for volume %s%s%s%s.

Parameters

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume when the volume name itself is insufficient.

wafl.fc events

wafl.fc.recl.csm.disconnect

Severity

EMERGENCY

Description

This message occurs when a FlexCache® origin node detects that its FlexCache volume has disconnected while a lock reclaim operation is in progress.

Corrective Action

Verify that the intercluster LIFs on both nodes are operational.

Syslog Message

FlexCache origin node with UUID %s detected potential disconnect with FlexCache with UUID %s while processing lock reclaims for the volume with MSID %u hosted on Vserver with UUID %s.

Parameters

localbladeuuid (STRING): Universally unique identifier (UUID) of the origin node.

bladeuuid (STRING): UUID of the FlexCache Cache node.

msid (LONGINT): Volume master data set identifier (MSID) of the FlexCache volume.

vserveruuid (STRING): UUID of the FlexCache Vserver.

wafl.fgmember events

wafl.fgmember.rollback

Severity

ERROR

Description

This message occurs when a member of a FlexGroup experiences an unexpected rollback in its state due to a loss of the NVRAM log for the member. This indicates that the volume might have inconsistencies between members.

Corrective Action

Run the fgiron tool against the FlexGroup to ensure consistency.

Syslog Message

FlexGroup %u member %u/%u detected a rollback.

Parameters

FlexGroupMSID (LONGINTHEX): Volume master data set identifier (MSID) of the FlexGroup that experienced a rollback due to NVRAM loss.

FlexGroupMemberMSID (LONGINTHEX): Volume master data set identifier (MSID) of the FlexGroup member that experienced a rollback due to NVRAM loss.

FlexGroupMemberDSID (LONGINTHEX): Volume data set identifier (DSID) of the FlexGroup member that experienced a rollback due to NVRAM loss.

wafl.filecg events

wafl.fileCG.vvol.size.exceeded

Severity

ERROR

Description

This message occurs when a volume with file-based compression(either secondary compression or 8k/16K/32K adaptive compression) have nominal size greater than 300TB.

Corrective Action

(None).

Syslog Message

Nominal size of the "%s" volume exceeded the 300TB limit.

Parameters

vvolname (STRING): Name of the volume.

wafl.fs events

wafl.fs.corrupt.fr.pct.changed

Severity

NOTICE

Description

This message occurs during volume mount, when the fractional reservation value for a volume is found to be corrupted. This is necessary because the storage system software only supports fractional reservation values of 0% and 100%. The guarantee type setting of a volume determines what the correct fractional reservation must be. For volumes with a guarantee type of VOLUME or NONE the value must be corrected to be 0%. For volumes with a guarantee type of FILE the value must be set to 100%.

Corrective Action

(None).

Syslog Message

The corrupted fractional reservation value for volume '%s%s%s' with guarantee type '%s' has been changed from %d% to %d%.

Parameters

vol (STRING): Name of the volume whose fractional reservation value was changed.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

guarantee_type (STRING): Guarantee type of the volume.

old_fr_pct (INT): Old fractional reservation value of the volume.

new_fr_pct (INT): New fractional reservation value of the volume.

wafl.fs.file.guarnt.upgraded

Severity

ERROR

Description

This message occurs during a volume upgrade, when the space guarantee style for a volume is changed to either "none" or "volume" (guarantee is disabled). This is necessary because Data ONTAP® no longer supports "file" space guarantee style for flexible volumes.

Corrective Action

Use the "volume show -volume <volume-name> -fields space-guarantee" command to display the volume's new space guarantee style. To modify the style to "volume", ensure that there is enough space in the aggregate, and then enter the "volume modify -vserver <vserver-name> -space-guarantee volume <volume-name>" command. To modify the style to "none" enter the "volume modify -vserver <vserver-name> -space-guarantee none <volume-name>" command.

Syslog Message

The space guarantee type for volume '%s%s%s' has been upgraded from file to %s.

Parameters

vol (STRING): Name of the volume whose file guarantee was changed.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

new_guarantee_type (STRING): New space guarantee type chosen for the volume.

wafl.fs.upgrade.fr.pct.changed

Severity

NOTICE

Description

This message occurs during a volume upgrade, when the fractional reservation value for a volume is checked and corrected. This is necessary because the storage system software only supports fractional reservation values of 0% and 100%. The guarantee type setting of a volume determines what the fractional reservation value must be. For volumes with a guarantee type of VOLUME or NONE the value must be set to 0%. For volumes with a guarantee type of FILE the value must be set to 100%.

Corrective Action

(None).

Syslog Message

The fractional reservation value for volume '%s%s%s' with guarantee type '%s' has been changed from %d%% to %d%%.

Parameters

vol (STRING): Name of the volume whose fractional reservation value was changed.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

guarantee_type (STRING): Guarantee type of the volume.

old_fr_pct (INT): Old fractional reservation value of the volume.

new_fr_pct (INT): New fractional reservation value of the volume.

wafl.fsa events

wafl.fsa.autosize.valid.fail

Severity

ERROR

Description

This message occurs when enabling file system analytics on a volume with autosize enabled fails because there is insufficient space in the volume.

Corrective Action

Increase the volume size or free space on the volume until there is at least 8% free space for transitioned volumes or 5% for non-transitioned ones. Use the "volume modify" command to increase volume size.

Syslog Message

Enabling file system analytics on %s "%s" in SVM "%s" with "%s" usage while its size is "%s" fails because there is insufficient space.

Parameters

volDesc (STRING): This message contains "transitioned volume" when the volume is a transitioned volume, otherwise, it contains "volume".

volName (STRING): Volume name.

vserverName (STRING): Name of the storage virtual machine (SVM) on which the volume resides.

spaceUsed (STRING): Space usage in the volume, represented in bytes.

volSize (STRING): Volume size, represented in bytes.

wafl.gd events

wafl.gd.alloc.size.rsrv.fail

Severity

ERROR

Description

This message occurs when reserving allocation size fails for a file using granular data because there is no space available in the volume.

Corrective Action

Create space by increasing the volume or aggregate sizes, or by deleting data or deleting Snapshot copies. To increase a volume's size, use the "volume size" command. To delete a volume's Snapshot copies, use the "volume snapshot delete" command. To increase an aggregate's size, add disks by using the "storage aggregate add-disks" command. Aggregate Snapshot copies are deleted automatically when the aggregate is full.

Syslog Message

Reserving allocation size for fileid "%d" on volume "%s%s%s%s" fails because there is no space available in the volume.

Parameters

fileid (INT): File identifier.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application universal unique identifier (UUID).

volident (STRING): Volume identifier that uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.gd.convert.scan.running

Severity

NOTICE

Description

This message occurs when converting a file to use granular data fails because a scanner is currently running on the volume. The conversion cannot be completed until the scan is complete or filesystem inconsistencies can occur. Granular data conversion is required for non-disruptive file moves that occur as part of volume rebalancing.

Corrective Action

Retry the operation after some time to allow the scan to complete. If the problem persists, contact NetApp technical support for assistance.

Syslog Message

Granular data conversion failed for fileid "%d" on volume "%s%s%s%s" because scan "%s" is currently running on the volume.

Parameters

fileid (INT): File identifier.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Volume identifier that uniquely identifies the volume in cases where the volume name itself is insufficient.

scantype (STRING): Type of scan.

wafl.gd.convert.unknown.pvbn

Severity

NOTICE

Description

This message occurs when converting a file to use granular data fails because the file contains unresolved physical block numbers (PVBNs). Unresolved PVBNs occur when you move a volume to a different aggregate. PVBNs are resolved by a background process following the volume move.

Corrective Action

Retry the operation after some time to allow the background process to complete.

Syslog Message

Granular data conversion failed for fileid "%d" on volume "%s%s%s%s" because the inode contains unresolved PVBNs.

Parameters

fileid (INT): File identifier.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Volume identifier that uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.giveback events

wafl.giveback.create.fail

Severity

ERROR

Description

This message occurs when the system cannot perform a giveback due to vol create, and must abort giveback.

Corrective Action

A volume is being created. Wait for volume creation to finish and then retry giveback.

Syslog Message

%s %s%s%s%s is being created; canceling giveback.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.giveback.fence.fail

Severity

ERROR

Description

This message occurs when the system cannot perform a giveback operation because a fence is set on one of the volumes in the aggregate. The giveback operation is aborted.

Corrective Action

A volume in the aggregate is currently fenced for group operations. Retry giveback after any group SnapRestore® or mirror transfers are complete. If the problem persists, contact technical support.

Syslog Message

%s %s%s%s%s has a fence set; canceling giveback.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.giveback.iron.fail

Severity

ERROR

Description

This message occurs when the system cannot perform a giveback due to wafliron, and must abort giveback.

Corrective Action

(Call support).

Syslog Message

%s %s%s%s%s has vol wafliron start underway; canceling giveback.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.giveback.sp.fail

Severity

ERROR

Description

This message occurs when the system cannot perform a giveback operation because a secure purge operation is being performed on one of the volumes in the aggregate. The giveback operation is aborted.

Corrective Action

A volume in the aggregate is undergoing a secure purge operation. Retry giveback after this operation is complete, or after you abort the operation by using the "volume encryption secure-purge abort" command. If the problem persists, contact NetApp technical support.

Syslog Message

A secure purge operation is in progress on %s %s%s%s. Canceling giveback.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.giveback.statusvol.fail

Severity

ERROR

Description

This message occurs when the system cannot perform a giveback due to the volume being used to host wafliron status files.

Corrective Action

Use "aggr wafliron show" command to monitor the status of wafliron and retry giveback after the completion of wafliron that uses the status files hosting volume.

Syslog Message

%s %s%s%s is being used by wafliron to host status files. Canceling giveback.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.giveback.vetoedByNvsave

Severity

ERROR

Description

This message occurs when a high-availability (HA) giveback is vetoed because there are NVSave files for an aggregate or a flexible volume that must be replayed before the aggregate or flexible volume can be given back.

Corrective Action

Retry the giveback operation after the NVSave files either are replayed (by bringing the aggregate or flexible volume online) or are deleted from the root volume. Successful replay, for example, is indicated by the EMS message 'wafl.nvsave.replaying.pass'.

Syslog Message

Giveback vetoed because NVSave files are present for %s FSID %d name %s%s%s. UUID is %s.

Parameters

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

fsid (INT): File system identifier.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

UUID (STRING): UUID of the volume.

wafl.gs events

wafl.gs.metafile.load.failed

Severity

ERROR

Description

This message occurs when wafl is unsuccessful to check and load Granular Set metafile for the volume.

Corrective Action

Issue volume offline followed by volume online and confirm this error message does not happen again. For more information or assistance, contact NetApp technical support.

Syslog Message

Wafl failed to load metafile that stores wafl copy of SnapMirror CG.

Parameters

volume (STRING): Volume name.

error (INT): Error code.

wafl.gs.modify.op.failed

Severity

NOTICE

Description

This message occurs when WAFL® prohibits loading a file for a modify operation on a read-only consistency group.

Corrective Action

NONE.

Syslog Message

Failed to load file ID %u on volume %s%s%s%s FSID:%u for a modify operation because it is part of a read-only sync relationship.

Parameters

fileid (INT): File identifier.

volowner (STRING): Owner of the volume.

volname (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient. Consists of the Vserver name and UUID.

fsid (INT): File system ID of the volume.

wafl.gs.remove.rename.op.failed

Severity

NOTICE

Description

This message occurs when WAFL® prohibits a rename operation or an unlink operation on a file part of a consistency group.

Corrective Action

NONE.

Syslog Message

Failed to load file ID %u on volume %s%s%s%s FSID:%u for a rename operation or an unlink operation because it is part of a sync relationship.

Parameters

fileid (INT): File identifier.

volowner (STRING): Owner of the volume.

volname (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient. Consists of the Vserver name and UUID.

fsid (INT): File system ID of the volume.

wafl.gs.resync.gen.check.failed

Severity

NOTICE

Description

This message occurs when WAFL® prohibits modification to a file that is part of a consistency group and the operation does not have the right generation enforcement parameters. This can occur if the operation happened before the SnapMirror® relationship was established.

Corrective Action

NONE.

Syslog Message

Unexpected operation on consistency group file ID %u on volume %s%s%s%\$s FSID:%u. This can occur if the operation happened before the SnapMirror relationship was established.

Parameters

fileid (INT): File identifier.

volowner (STRING): Owner of the volume.

volname (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient. Consists of the Vserver name and UUID.

fsid (INT): File system ID of the volume.

wafl.hya events

wafl.hya.aggr.policy.init

Severity

INFORMATIONAL

Description

This message occurs when the default caching policies are to be configured on all volumes contained in this aggregate.

Corrective Action

(None).

Syslog Message

Attempting to configure the default caching policies on all volumes in the aggregate '%s %s'.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

wafl.hya.bc.add.cbi

Severity

INFORMATIONAL

Description

This message occurs when a hybrid aggregate adds one counter file block (CBI - counter block index).

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggr (STRING): Aggregate name.
aggr_uuid (STRING): Universal Unique ID (UUID) of the aggregate.
volume (STRING): Volume name.
volume_uuid (STRING): UUID of the volume.
btid (INT): Buftree ID.
cbi (INT): CBI value.
volume_info (STRING): Volume type information.

wafl.hya.bc.del.flexvol

Severity

INFORMATIONAL

Description

This message occurs when a hybrid aggregate block accounting module receives a FlexVol® deletion notification.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggr (STRING): Aggregate name.
aggr_uuid (STRING): UUID of the aggregate.
volume (STRING): Volume name.
volume_uuid (STRING): UUID of the volume.
volume_info (STRING): Volume type information.
btid (INT): Buftree ID.
cbi (INT): CBI (counter block index) value.
ctr0 (LONGINT): Counter 0, total used blocks by this buftree ID at the time of the delete event.

wafl.hya.bc.free.cbi

Severity

INFORMATIONAL

Description

This message occurs when a hybrid aggregate block accounting module frees a CBI (counter block index).

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggr (STRING): Aggregate name.
aggr_uuid (STRING): UUID of the aggregate.
btid (INT): Buftree ID.

cbi (INT): CBI value.

ctr0 (LONGINT): Counter 0, total used blocks by this buftree ID at the time of the free event.

wafl.hya.cache.ret.policy

Severity

INFORMATIONAL

Description

This message occurs when the cache retention priority policy for a volume in a hybrid aggregate has been modified.

Corrective Action

(None).

Syslog Message

Cache retention priority policy on volume '%s%s%s' has been modified to %s.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

cache_retention_priority (STRING): Cache retention priority policy configured on the volume.

wafl.hya.policy.init.skipped

Severity

INFORMATIONAL

Description

This message occurs when cache policies could not be configured because of an invalid volume state.

Corrective Action

(None).

Syslog Message

Default caching policies were not set on volume '%s%s%s'.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.hya.rcache.policy

Severity

INFORMATIONAL

Description

This message occurs when the read caching policy for a volume in a hybrid aggregate has been modified.

Corrective Action

(None).

Syslog Message

Read caching policy on volume '%s%s%s' has been modified to '%s'.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

read_policy (STRING): Read caching policy configured on the volume.

wafl.hya.sizer.warning

Severity

NOTICE

Description

This message occurs when Flash Pool (tm) AWA (Automatic Workload Analyzer) encounters an abnormal condition such as low sampling rate or low memory resource.

Corrective Action

Contact NetApp technical support for assistance in resolving this issue.

Syslog Message

(None).

Parameters

aggr (STRING): Aggregate name.

aggr_uuid (STRING): UUID of the aggregate.

vol (STRING): Name of the volume.

event_info (STRING): Flash Pool (tm) Sizer warning information.

wafl.hya.wcache.policy

Severity

INFORMATIONAL

Description

This message occurs when write caching policy for a volume in a hybrid aggregate has been modified.

Corrective Action

(None).

Syslog Message

Write caching policy on volume '%s%s%s' has been modified to '%s'.

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
write_policy (STRING): Write caching policy configured on the volume.

wafl.i2p events

wafl.i2p.entries.mismatch

Severity

NOTICE

Description

This message occurs when the ONTAP® kernel detects that an i2p metafile on one of the snapshot has more entries than necessary for an inode.

Corrective Action

(None).

Syslog Message

There are more entries in the i2p metafile than there should be in volume %s%s%s%s, for inode %d in snapshot %d.

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier for the volume in cases where the volume name itself is insufficient.
fileid (INT): Identifying number for the suspect inode.
snapid (INT): The snapshot identifier.

wafl.i2p.fix.parent.pointer

Severity

NOTICE

Description

This message occurs when an inode-to-parent (i2p) scan detects and rectifies an incorrect parent inode number or cookie in an inode while fixing i2p data in a converted directory.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s: Inode %u, fixing parent pointer, was: (parent: %u, cookie: 0x%x).

Parameters

type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

inode (INT): Inode number.

old_parent_inode (INT): Existing parent inode number.

old_cookie (INT): Existing parent cookie.

wafl.ialloc events

wafl.ialloc.is.disabled

Severity

NOTICE

Description

This message occurs when an inode allocation in a stripe is disabled.

Corrective Action

(None).

Syslog Message

Inode allocation in stripe is disabled for %s inode space.

Parameters

ino_type (STRING): Inode type.

wafl.inaccessible events

wafl.inaccessible.userdata

Severity

ERROR

Description

This message occurs when an access request is received for inaccessible user data (area blocked by wafliron).

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Recover the file from a backup. For a SnapMirror® target, rebuild from the source or resynchronize. If the block is in a Snapshot copy, delete the Snapshot copy. Contact NetApp technical support for more options.

Syslog Message

Inaccessible user data block at FBN %llu Level %u in %s inode (file ID:%s Snapshot copy ID:%u file_type:%d disk_flags:0x%x) in volume %s%s%s%s.

Parameters

fbn (LONGINT): File block number.

level (INT): Buffer level.

file_space (STRING): File space.

fileid (STRING): Identifying number for the suspect inode.
snapshotid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy
type (INT): File type.
flags (LONGINT): Inode disk flags.
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.incomplete events

wafl.incomplete.i2p

Severity

ERROR

Description

This event occurs when the WAFL® kernel detects incomplete inode to path information for an inode on disk. This will cause the inode to path database to be reconstructed.

Corrective Action

No immediate action is required. The Inode to Path database will be reconstructed in the background. Please contact NetApp technical support or disable i2p using the volume option no_i2p.

Syslog Message

Incomplete Inode to Path information detected in volume %s%s%s%s. I2P data will be reconstructed.

Parameters

owner (STRING): The owner of the volume
vol (STRING): The name of the volume
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
func (STRING): The internal function name
fileid (INT): The identifying number for the suspect inode
snapshotid (INT): Snapshot identifier (0) - active file system (non-zero) - refers to snapshot
reason (STRING): An indication of the nature of the event.

wafl.incons events

wafl.incons.compr.metadata

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects inconsistent compression metadata for a compression group.

Corrective Action

If the Snapshot copy ID (snapshotid) is 0, the inconsistency is in the active file system and you need to run wafliron. To run wafliron, first find the aggregate the volume belongs to by running the "volume show

-volume [vol_name]" command. Then enter diag mode by using the "set diagnostic" command, and start wafliron by running the command: "storage aggregate wafliron start -aggregate [aggr_name]". If the snapid is not 0, then run the "snapshot show -volume [vol-name] -instance" command, and then delete the Snapshot copy whose Snap ID field matches the given snapid.

Syslog Message

WAFL inconsistent: bad compression indirect found (level:%u compression group first vbn:%llu) in %s inode (fileid:%d snapid:%u) in volume %s%s%s%s.

Parameters

level (INT): Metadata level.

cg_first_vbn (LONGINT): First block of the compression group in which the inconsistency was found.

ino_type (STRING): Inode type.

fileid (INT): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.incons.compressed.buf

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects an inconsistent compressed block on a disk.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Restore the inconsistent file from the Snapshot copy.

Syslog Message

WAFL inconsistent: bad compressed block at VBN %llu (vvbn:%llu fbn:%llu level:%u compression group first vbn:%llu compression group size %d) in %s inode (fileid:%d snapid:%u) in volume %s%s%s%s.

Parameters

vbn (LONGINT): Volume block number.

vvbn (LONGINT): Virtual block number.

fbn (LONGINT): File block number.

level (INT): Buffer level.

cg_first_vbn (LONGINT): First block of the compression group in which the inconsistency was found.

cg_size (INT): Number of allocated blocks in the compression group.

ino_type (STRING): Inode type.

fileid (INT): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.incons.objslothdr.buf.fixup.required

Severity

INFORMATIONAL

Description

This message occurs when number of inconsistent objslothdr entries are more than threshold on a FabricPool aggregate with unified format enabled.

Corrective Action

For further assistance, contact NetApp technical support.

Syslog Message

Number of inconsistent objslothdr entries(%d) are more than threshold. For further assistance, contact NetApp technical support.

Parameters

invalid_entry_count (INT): Number of invalid entries present in slothdr metafile.
aggregate_name (STRING): Aggregate name.

wafl.incons.snap.metadata

Severity

ERROR

Description

This message occurs when a Snapshot(tm) copy or its metadata is found to be inconsistent.

Corrective Action

Delete the inconsistent Snapshot copy by using the "volume snapshot delete" command.

Syslog Message

WAFL inconsistent: Inconsistent Snapshot copy found in volume %s%s%s%s with Snapshot copy ID %. Reason: %s.

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
snapid (INT): Snapshot copy identifier.
reason (STRING): Reason the Snapshot copy is bad.

wafl.incons.tlog

Severity

ERROR

Description

This message occurs when an object cannot be written to the object store due to a corrupted data block within one of the metafiles.

Corrective Action

Contact NetApp technical support for further assistance.

Syslog Message

Inconsistency found in the staging metafile in FabricPool aggregate %s. Skip writing object to object store due to bad block (pvbn %llu).

Parameters

aggrname (STRING): Name of the aggregate.

pvbn (LONGINT): Unloadable block number that resulted in skipping a write of the corresponding object to the object store.

wafl.incons userdata.vol

Severity

ALERT

Description

This message occurs when the WAFL® kernel discovers an inconsistent volume with bad user data blocks.

Corrective Action

The volume has an inconsistent user data block. Use the fileid and volume name information to run the 'inodepath' command. The 'inodepath' command will output the path name for the fileid. Recover the file from a backup. For a SnapMirror® target, rebuild from the source or resynchronize. If the block is in a Snapshot(tm) copy, delete the Snapshot copy. Then contact NetApp technical support.

Syslog Message

WAFL inconsistent: %s %s%s%s has an inconsistent user data block. Note: Any new Snapshot copies might contain this inconsistency.

Parameters

type (STRING): Container type (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

vendor (STRING): Vendor name.

wafl.inconsistent events

wafl.inconsistent.acl

Severity

ERROR

Description

This message occurs when the ONTAP® kernel detects an inconsistent WAFL® Access Control List (ACL) on disk. Access to this ACL is disabled until you repair it by running wafliron.

Corrective Action

Contact NetApp technical support.

Syslog Message

WAFL inconsistent: bad ACL (xfileid:%u snapid:%u) for inode (fileid:%u) in volume %s%s%s%s.

Parameters

xfileid (INT): Identifying number for the suspect ACL.

snapid (INT): Snapshot(tm) copy identifier (0) - active file system (non-zero) - refers to Snapshot copy.

fileid (INT): Identifying number for the inode.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.inconsistent.acl.data

Severity

ERROR

Description

This message occurs when Data ONTAP detects inconsistent Access Control List (ACL) data on disk.

Corrective Action

The volume has inconsistent Access Control List (ACL) data. Use the "volume file show-inode" command with the file ID and volume name information to find the file path. .Rebuild ACL for the file.

Syslog Message

WAFL inconsistent: bad ACL data (acl_fileid:%u acl_snapid:%u) for inode (fileid:%u snapid:%u file_type:%d disk_flags:0x%x) in volume %s%s%s%s%s.

Parameters

acl_fileid (INT): Identifying number for the ACL inode

acl_snapid (INT): Snapshot(tm) copy identifier for ACL inode: (0) - active file system (non-zero) - refers to Snapshot copy

fileid (INT): Identifying number for the inode that owns the ACL.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

type (INT): File type.

flags (LONGINT): Inode disk flags.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.

inotype (STRING): The inode space (public or private)

wafl.inconsistent.compacted.block

Severity

NOTICE

Description

This message occurs when an inconsistency is detected in a compacted block.

Corrective Action

(None).

Syslog Message

Inconsistent compacted block %llu in %s "%s". %s

Parameters

pvbn (LONGINT): Volume block number.

volume_identifier (STRING): Volume identifier.

volume (STRING): Volume name.

message (STRING): Type of inconsistency in compacted block.

wafl.inconsistent.container

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects a block in a FlexVol® volume that is inaccessible. Access to this block is disabled until you repair it by running wafliron.

Corrective Action

The volume is inconsistent. Run wafliron as soon as possible to clear this inconsistency. For a SnapMirror® target, rebuild from the source or resynchronize. If the inode is in a Snapshot(tm) copy, delete the Snapshot copy, then contact NetApp technical support.

Syslog Message

WAFL inconsistent: Volume %s%s%s%s has unreachable block at vvbn %llu (pvbn %llu).

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

vvbn (LONGINT): Virtual block number.

pvbn (LONGINT): Physical block number.

wafl.inconsistent.dir

Severity

ALERT

Description

This event occurs when the WAFL® kernel detects an inconsistent directory on disk. Access to this directory is disabled until you repair it by running wafliron.

Corrective Action

The volume is inconsistent. Run wafliron as soon as possible to clear this inconsistency; for a snapmirror target, rebuild from source or resync or if inode is in a snapshot, delete the snapshot. Then contact NetApp

technical support.

Syslog Message

WAFL inconsistent: %s: bad directory (%s fileid:%u, snapid: %u, type:%u, size:%u) in volume %s%s%s%s.

Parameters

func (STRING): The internal function name
ino_type (STRING): The inode type
fileid (INT): The identifying number for the suspect inode
snapid (INT): Snapshot identifier (0) - active file system (non-zero) - refers to snapshot
type (INT): The type of inode that's supposed to be a directory of some type
size (INT): The possibly corrupt size of the suspect inode.
owner (STRING): The owner of the volume
vol (STRING): The name of the volume
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.inconsistent.dirent

Severity

EMERGENCY

Description

This event occurs when an inconsistent directory entry has been detected. Access to this directory entry is disabled.

Corrective Action

If this error condition occurs, contact NetApp technical support for further assistance.

Syslog Message

WAFL inconsistent: %s: bad entry {x%x %d snapid: %d %d %d} <%.*s> in %s directory {x%x %d snapid: %d %d %d} in volume %s%s%s%s.

Parameters

func (STRING): The internal function name
fh0 (INT): fh[0]
fh1 (INT): fh[1] - snapid (0) - active file system (non-zero) - refers to snapshot
fh2 (INT): fh[2]
fh3 (INT): fh[3]
fh4 (INT): fh[4]
name (STRINGARRAY): The name of the directory entry
ino_type (STRING): The inode type
dfh0 (INT): dfh[0]
dfh1 (INT): dfh[1] - snapid in filehandle (0) - active file system (non-zero) - refers to snapshot
dfh2 (INT): dfh[2]
dfh3 (INT): dfh[3]
dfh4 (INT): dfh[4]
owner (STRING): The owner of the volume
vol (STRING): The name of the volume
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.inconsistent.ino

Severity

ERROR

Description

This message occurs when the ONTAP® kernel detects an inconsistent inode on disk. Access to this inode is disabled until you repair it by running wafliron.

Corrective Action

Contact NetApp technical support.

Syslog Message

WAFL inconsistent: %s: bad inode (%s fileid: %u snapid: %u) in volume %s%s%s%s.

Parameters

func (STRING): Internal function name.

ino_type (STRING): Inode type.

fileid (INT): Identifying number for the suspect inode.

snapshot (INT): Snapshot(tm) copy identifier (0) - active file system (non-zero) - refers to Snapshot copy.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.

wafl.inconsistent.ino.tid

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects an inconsistent inode on a disk with a bad qtree ID.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. The volume is inconsistent. Run wafliron as soon as possible to clear this inconsistency. For a SnapMirror target, rebuild from the source or resynchronize. If the inode is in a Snapshot copy, delete the Snapshot copy. Then contact technical support.

Syslog Message

WAFL inconsistent: bad qtree ID in inode (fileid:%u snapid:%u) in volume %s%s. Turning quotas off on the volume.

Parameters

fileid (INT): Identifying number for the suspect inode

snapshot (INT): Snapshot(tm) copy identifier (0) - active file system (non-zero) - refers to Snapshot copy

owner (STRING): Owner of the volume

vol (STRING): Name of the volume

wafl.inconsistent.snapshot

Severity

ERROR

Description

This event occurs when the WAFL kernel discovers that a snapshot has either an invalid inofile, fsinfo, or snapmap file, or the snapshot vbn stored is invalid.

Corrective Action

Delete the snapshot. For a snapmirror target, rebuild from source or resync.

Syslog Message

WAFL inconsistent: deleting bad snapshot in volume %s%s%s%s, snapid %d, reason: %s

Parameters

owner (STRING): The owner of the volume

vol (STRING): The name of the volume

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

snapid (INT): The snapshot identifier

reason (STRING): The reason the snapshot is bad

wafl.inconsistent.stream

Severity

ERROR

Description

This event occurs when the WAFL® kernel detects an inconsistent stream information on disk. Access to the stream is disabled until you repair it by running wafliron.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. The volume is inconsistent. Run wafliron as soon as possible to clear this inconsistency; for a snapmirror target, rebuild from source or resync or if the inode is in a snapshot, delete the snapshot. Then contact NetApp technical support.

Syslog Message

WAFL inconsistent: bad stream (sfileid:%u snapid: %u) for inode (fileid:%u) in volume %s%s%s%s.

Parameters

sfileid (INT): The identifying number for the suspect stream

snapid (INT): Snapshot identifier (0) - active file system (non-zero) - refers to snapshot

fileid (INT): The identifying number for the inode

owner (STRING): The owner of the volume

vol (STRING): The name of the volume

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.inconsistent.threshold.reached

Severity

EMERGENCY

Description

This event occurs when the number of inconsistencies the WAFL® kernel detected and avoided reached the threshold.

Corrective Action

The volume is inconsistent. Run wafliron as soon as possible to clear this inconsistency; for a snapmirror target, rebuild from source or resync or if the inode is in a snapshot, delete the snapshot. Then contact NetApp technical support.

Syslog Message

WAFL inconsistent: The threshold for number of %s inconsistencies was reached. Volume %s %s%s%s will be taken offline. Contact NetApp technical support.

Parameters

reason (STRING): Reason : snapshot/inode/block

type (STRING): The container type (volume / aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

vendor (STRING): The vendor name

wafl.inconsistent.vol

Severity

ERROR

Description

This event occurs when the WAFL® kernel discovers an inconsistent volume.

Corrective Action

The volume is inconsistent. Run wafliron as soon as possible to clear this inconsistency; For a SnapMirror® target, rebuild from source or resynchronize. If the inode is in a Snapshot copy, delete the Snapshot copy. Then contact NetApp technical support.

Syslog Message

WAFL inconsistent: %s %s%s%s is inconsistent. Note: Any new Snapshot copies might contain this inconsistency.

Parameters

type (STRING): The container type (volume / aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

vendor (STRING): The vendor

wafl.inconsistent.vol.nomnt

Severity

ERROR

Description

This message occurs when the ONTAP® kernel discovers an inconsistent volume and determines that the volume should not be mounted.

Corrective Action

Contact NetApp technical support.

Syslog Message

%s %s%s is not mounted.

Parameters

type (STRING): Container type (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

wafl.ino events

wafl.ino.upgrade.aborted

Severity

INFORMATIONAL

Description

This message occurs when an inode upgrade for the specified WAFL volume or aggregate is aborted.

Corrective Action

(None).

Syslog Message

Inode upgrade of volume or aggregate '%s %s' has been aborted.

Parameters

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.ino.upgrade.cantAbort

Severity

NOTICE

Description

This message occurs when an attempt to abort the inode upgrade scan by using the "wafl scan abort" command. The inode upgrade scan cannot be interrupted.

Corrective Action

Wait for the inode upgrade to finish or use the "{ vol | aggr } inode-upgrade suspend" command to stop the scan.

Syslog Message

User cannot abort the inode upgrade scan. Use the '{ vol | aggr } inode-upgrade suspend' command.

Parameters

(None).

wafl.ino.upgrade.completed

Severity

INFORMATIONAL

Description

This message occurs when the inode upgrade of the specified WAFL volume or aggregate is complete.

Corrective Action

(None).

Syslog Message

An inode upgrade to version %d for volume or aggregate '%s %s' has completed.

Parameters

to_version (INT): Version the inode upgraded to.

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.ino.upgrade.disabled

Severity

ALERT

Description

This message occurs when the inode upgrade is disabled on the node via the "wafl_v4ino_upgrade_disable" bootarg. All aggregates and volumes are still usable, but there might be some features that cannot be enabled on certain volumes until the inode upgrade is completed on those volumes.

Corrective Action

Contact technical support for assistance.

Syslog Message

Inode upgrade is disabled on this node.

Parameters

(None).

wafl.ino.upgrade.rem.mdata

Severity

INFORMATIONAL

Description

This message occurs when inode upgrade metadata was removed either by administrator actions or due to wafliron.

Corrective Action

(None).

Syslog Message

Inode upgrade metadata for volume or aggregate '%s %s' has been removed.

Parameters

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.ino.upgrade.resumed

Severity

INFORMATIONAL

Description

This message occurs when an inode upgrade of the specified WAFL volume or aggregate is resumed.

Corrective Action

(None).

Syslog Message

An inode upgrade for volume or aggregate '%s %s' was resumed.

Parameters

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.ino.upgrade.stalled

Severity

NOTICE

Description

This message occurs when the administrator suspended an inode upgrade for the specified WAFL volume or aggregate sometime in the past. The volume or aggregate is still usable, but there might be some features that cannot be enabled until the inode upgrade is complete.

Corrective Action

Use the command 'volume inode-upgrade resume "volume"' or 'storage aggregate inode-upgrade resume "aggregate"' to resume the upgrade.

Syslog Message

Inode upgrade of volume or aggregate '%s %s' is suspended.

Parameters

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.ino.upgrade.started

Severity

INFORMATIONAL

Description

This message occurs when the inode upgrade for the specified WAFL volume or aggregate begins.

Corrective Action

(None).

Syslog Message

An inode upgrade from version %d for volume or aggregate '%s %s' has begun.

Parameters

from_version (INT): Current inode version.

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.ino.upgrade.susp

Severity

INFORMATIONAL

Description

This message occurs when an inode upgrade for the specified WAFL volume or aggregate is suspended by the administrator or because wafliron is running. The volume or aggregate is still usable, but there might be some features that cannot be enabled until the inode upgrade is complete.

Corrective Action

(None).

Syslog Message

An inode upgrade for volume or aggregate '%s %s' was suspended. Reason %s. Metadata was %s.

Parameters

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

reason (STRING): Reason the upgrade was suspended.

metadata_removed (STRING): A string indicating whether metadata was removed as part of the suspension.

wafl.ino.upgrade.susp.nospc

Severity

ERROR

Description

This message occurs when an inode upgrade for the specified WAFL volume or aggregate is suspended due to a lack of space. The volume or aggregate is still usable, but there might be some features that cannot be enabled until the inode upgrade is complete.

Corrective Action

Ensure that the volume or aggregate has at least as many bytes available for use as indicated by 'space_required'. Simply add the space to the volume and the upgrade is automatically retried.

Syslog Message

An inode upgrade for volume or aggregate '%s %s' was suspended due to a lack of space (space required: %d bytes).

Parameters

owner (STRING): Owner of the volume or aggregate.

volname (STRING): Name of the volume or aggregate.

space_required (LONGINT): Estimated amount of disk space required, in bytes, to complete the upgrade.

wafl.inode events

wafl.inode.cache.highLoad

Severity

INFORMATIONAL

Description

This message occurs when the in-memory inode cache is under high load and fully utilized. The system will likely experience high cache miss rates and some file system operations might experience delays due to increased disk activity, but that is the extent of the problem.

Corrective Action

(None).

Syslog Message

(None).

Parameters

(None).

wafl.inode.fileAttr.fail

Severity

ERROR

Description

This message occurs when the system discover that an inode to file attribute translation is unsuccessful due to an unexpected file type. The fh parameters represent the filehandle.

Corrective Action

The filesystem being accessed is inconsistent. If the filesystem is read-write and if the system is booted in read-only mode then reboot in normal (read-write) mode and run wafliron as soon as possible to clear this inconsistency. For all other cases contact NetApp technical support.

Syslog Message

wafl_inode_to_file_attr: unexpected file type 0%o in %s {x%x %d %d %d}.

Parameters

type (INT): The unexpected type

ino_type (STRING): The inode type

fh0 (INT): fh[0]

fh1 (INT): fh[1]

fh2 (INT): fh[2]

fh3 (INT): fh[3]

fh4 (INT): fh[4]

wafl.inode.fill.noDisbIRsvFO

Severity

NOTICE

Description

This message occurs when the system cannot disable the fill reservation for a file or LUN. This happens when the file or LUN is the destination of an ongoing file operation that is currently in the Allocation_Map phase.

Corrective Action

Verify that the indicated file operation has completed the Allocation_Map phase and rerun the original command.

Syslog Message

Cannot disable fill reservation for inode %u in volume %s%s%s due to %s job %s-%u.

Parameters

ino (INT): Inode number.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

type (STRING): Operation type: file copy, file move, LUN copy, or LUN move.

job_uuid (STRING): Job UUID of the file operation.

file_index (INT): File index of the file operation.

wafl.inofile events

wafl.inofile.buf.badHeader

Severity

ERROR

Description

This event can occur when a snapshot's inofile buffer header has the wrong magic or file block number.

Corrective Action

Contact customer support.

Syslog Message

Bad header in snapshot %s inofile in %s %s%s%s%s, snapid %d, fbn %llu, vbn %llu, cp_count %u was magic 0x%x, fbn %llu, cp_count %u

Parameters

ino_type (STRING): The type of inofile
type (STRING): The type of object (volume/aggregate)
owner (STRING): The owner of the volume
vol (STRING): The name of the volume
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
snapid (INT): The snapshot identifier
fbn (LONGINT): The file block number
vbn (LONGINT): The volume block number
cp_count (INT): The volume CP count
omagic (INT): The magic number in the header
ofbn (LONGINT): The file block number in the header
ocp_count (INT): The CP count in the header

wafl.iron events

wafl.iron.7mode

Severity

ERROR

Description

This message occurs when wafliron is running on a transitioned aggregate in precommit phase and there are 7-Mode volumes present. Wafliron ignores the 7-Mode volumes.

Corrective Action

Run the "storage transition aggregate start" command to convert the aggregate to a cluster aggregate.

Syslog Message

Transitioned aggregate %s has 7-Mode volumes which cannot be ironed.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.iron.abort.noConToCloud

Severity

EMERGENCY

Description

This message occurs when the file system consistency checker (wafliron) aborts because the connection to the cloud service provider is not available.

Corrective Action

Restore the connection to the cloud service provider, then retry the "aggr wafliron start <aggr_name>" command.

Syslog Message

File system consistency checker aborted on aggregate "%s". The connection to the cloud service provider is not available.

Parameters

aggrname (STRING): Aggregate name.

wafl.iron.abort.offline

Severity

NOTICE

Description

This message occurs when wafliron is aborted and the aggregate or volume is taken offline. This will occur if the aggregate or volume is inconsistent at the time of abort or if wafliron was invoked in optional commit mode. If wafliron was invoked in optional commit mode, all changes are rejected because they might not be consistent.

Corrective Action

No corrective action is required for this notification event. Wafliron automatically takes an inconsistent aggregate or volume offline. Wafliron automatically takes the aggregate offline in optional commit mode.

Syslog Message

Wafliron was aborted on %s%s '%s'; the aggregate or volume was taken offline.

Parameters

volinfo (STRING): Descriptive information about the volume, such as whether it was inconsistent when taken offline.

voltype (STRING): Aggregate or flexible volume.

aggrname (STRING): Aggregate or flexible volume name.

wafl.iron.abort.offlineFail

Severity

NOTICE

Description

This message occurs when wafliron is aborted and taking an inconsistent aggregate or volume offline was not successful.

Corrective Action

(Call support).

Syslog Message

Wafliron abort failed to take offline inconsistent %s '%s': %s.

Parameters

voltype (STRING): Aggregate or flexible volume.

aggrname (STRING): Aggregate or flexible volume name.

errmsg (STRING): Error message.

wafl.iron.abort.offlineMsg

Severity

NOTICE

Description

This message occurs when the wafliron operation is aborted. Taking the aggregate offline was not successful.

Corrective Action

(None).

Syslog Message

Wafliron abort on %s '%s': %s.

Parameters

voltype (STRING): Aggregate.

aggrname (STRING): Aggregate name.

errmsg (STRING): Error message.

wafl.iron.backup.exists

Severity

NOTICE

Description

This message occurs when a SnapIron backup image already exists on the volume. Wafliron will continue to run without creating another SnapIron backup image.

Corrective Action

(Call support).

Syslog Message

A SnapIron backup image %s already exists on %s.

Parameters

vol (STRING): Volume name.

name (STRING): Name of the backup image.

wafl.iron.backup.expired

Severity

INFORMATIONAL

Description

This message occurs when a SnapIron backup image expires and will be deleted.

Corrective Action

(None).

Syslog Message

The SnapIron backup image %s of %s expired.

Parameters

name (STRING): Name of the backup image being deleted.

vol (STRING): Volume name.

wafl.iron.backup.expiring

Severity

NOTICE

Description

This message occurs when a SnapIron backup image is close to expiring.

Corrective Action

Pay attention to the integrity of the data on this volume before the backup image expires and is subsequently deleted by automatic deletion of aggregate Snapshot copies. Contact NetApp technical support.

Syslog Message

The SnapIron backup image %s of %s will expire in %d hour(s).

Parameters

name (STRING): Name of the backup image.

vol (STRING): Volume name.

hours (INT): Number of hours remaining from the lifetime of the backup image.

wafl.iron.backup.impossible

Severity

NOTICE

Description

This message occurs when wafliron encounters a problem when creating a SnapIron backup image. The message explains the reason. Wafliron will continue to run without the SnapIron backup image.

Corrective Action

(None).

Syslog Message

Wafliron could not create a SnapIron backup image on %s, %s.

Parameters

vol (STRING): Volume name.

reason (STRING): Reason for not being able to create a SnapIron backup image.

wafl.iron.backup.removed

Severity

NOTICE

Description

This message occurs when a SnapIron backup image is removed. Wafliron will continue to run without a SnapIron backup image if it is running.

Corrective Action

(None).

Syslog Message

The SnapIron backup image %s of %s was deleted.

Parameters

name (STRING): Name of the backup image being deleted.

vol (STRING): Volume name.

wafl.iron.backup.rst.failed

Severity

ALERT

Description

The message occurs when the system cannot restore the aggregate from the wafliron backup image. The active file system will be loaded.

Corrective Action

Contact NetApp technical support.

Syslog Message

Failed to restore %s %s%s%s%s from its wafliron backup image (ID %d). The active file system will be loaded.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

id (INT): Backup image ID.

reason (STRING): Reason for the failure.

wafl.iron.backup.rst.noExist

Severity

NOTICE

Description

The message occurs when the system cannot restore the aggregate from the wafliron backup image because the image does not exist. The active file system will be loaded.

Corrective Action

(None).

Syslog Message

Could not restore %s %s%s%s from its wafliron backup image because the image does not exist. The active file system will be loaded.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.iron.backup.rst.success

Severity

INFORMATIONAL

Description

The message occurs when the system restores the aggregate from its wafliron backup image.

Corrective Action

(None).

Syslog Message

Restored %s %s%s%s from its wafliron backup image (ID %d).

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

id (INT): Backup image ID.

wafl.iron.backup.snaprsv.inc

Severity

INFORMATIONAL

Description

This message occurs when wafliron tries to increase the Snapshot(tm) reserve of the aggregate temporarily to allow keeping the SnapIron backup image longer. The message shows whether the attempt was successful.

Corrective Action

(None).

Syslog Message

The attempt to increase Snapshot copy reserve of %s temporarily from %d percent by %d %s.

Parameters

vol (STRING): Volume name.

rsv (INT): Old value of the aggregate Snapshot reserve, in percentage.

delta (INT): Change in the new value of the aggregate Snapshot copy reserve, in percentage. If the Snapshot copy reserve was successfully increased, it will be returned to its original value automatically after the SnapIron backup image expires, the new snapshot reserve space becomes full again, or the snapshot is deleted. In the latter case, the SnapIron backup image will be deleted by automatic deletion of aggregate Snapshot copies.

result (STRING): Whether the attempt was successful.

wafl.iron.backup.snapsv.rst

Deprecated

This is deprecated as success doesn't require any action failure can never happen.

Severity

NOTICE

Description

This message occurs when the Snapshot(tm) reserve of the aggregate, which was temporarily increased by wafliron, is restored to its original value.

Corrective Action

If wafliron fails to return the volume's Snapshot copy reserve to the original value, contact NetApp technical support.

Syslog Message

The reset of Snapshot reserve value of %s by %d from %d was %s.

Parameters

vol (STRING): Volume name.

val (INT): Current value of the aggregate Snapshot copy reserve, in percentage.

delta (INT): Change in the value of the aggregate Snapshot reserve, in percentage.

result (STRING): Whether the attempt was successful.

wafl.iron.backup.success

Severity

INFORMATIONAL

Description

This message occurs when wafliron creates a SnapIron backup image.

Corrective Action

(None).

Syslog Message

Wafliron created SnapIron backup image %s on volume %s, ID %d.

Parameters

name (STRING): Backup image name.

vol (STRING): Volume name.

id (INT): Backup image ID.

wafl.iron.backup.useimage

Severity

INFORMATIONAL

Description

This message occurs when wafliron is using a SnapIron backup image to check the file system.

Corrective Action

(None).

Syslog Message

Wafliron is using SnapIron backup image of %s (ID %u).

Parameters

vol (STRING): Volume name.

id (INT): ID of SnapIron backup image.

wafl.iron.backup.verify.data

Severity

NOTICE

Description

This message occurs when wafliron creates a SnapIron backup image and you need to verify whether user data is stored in the aggregate or volume as soon as possible.

Corrective Action

Validate the user data stored in the aggregate or volume as soon as possible, before the SnapIron backup image is deleted. Contact NetApp technical support.

Syslog Message

Verify user data of %s.

Parameters

vol (STRING): Volume name.

wafl.iron.badfsid

Severity

ALERT

Description

This message occurs when a flexible volume has an invalid file system ID(FSID). Wafliron skips this volume.

Corrective Action

Contact NetApp technical support.

Syslog Message

Flexible volume %s%s%s on aggregate %s has an invalid FSID (%08x).

Parameters

volname (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

aggrname (STRING): Aggregate name.

fsid (INT): File system identifier.

wafl.iron.completion.times

Severity

INFORMATIONAL

Description

This event provides the time taken to complete the different phases of Wafliron.

Corrective Action

(None).

Syslog Message

%s phase of %s %s took %s.

Parameters

p (STRING): Name of the iron phase.

ty (STRING): Type of the volume.

v (STRING): Name of the volume.

t (STRING): Time taken for the phase.

wafl.iron.cont.corrupt

Severity

ALERT

Description

This message occurs when a volume granular wafliron operation running on an aggregate finds corruption in the container file of a volume on which wafliron is not being run.

Corrective Action

Contact NetApp technical support..

Syslog Message

Volume granular wafliron is in progress on aggregate %s. Corruption was found in volume %s container file with file id %d in which wafliron might have not run.

Parameters

aggr_name (STRING): Name of the aggregate on which wafliron is running.

vol_name (STRING): Name of the volume in which corruption was found in the container file.

container_file_id (INT): File id of container file of the volume in which corruption was found.

wafl.iron.current.phase

Severity

INFORMATIONAL

Description

This message specifies the phase name that wafliron is currently working on.

Corrective Action

(None).

Syslog Message

wafliron is active on %s %s : %s.

Parameters

ty (STRING): Type of the volume.

v (STRING): Name of the volume.

phase (STRING): Name of the current wafliron phase.

wafl.iron.dp.mirror.broken

Severity

ERROR

Description

This message occurs when a Data Protection mirrored volume is broken from its SnapMirror® relationship as a result of starting wafliron with the '-include-mirrors' option. When this happens, the Volume Location Database (VLDB), which is managed by the management host, must also be updated manually after wafliron finishes to avoid any discrepancy between the VLDB and Dblade.

Corrective Action

Run the 'debug vreport' command to resolve the inconsistency in the VLDB. Step 1) run 'debug vreport show' to show the object name. Step 2) run 'debug vreport fix -type volume -object object-name'.

Syslog Message

Wafliron broke the SnapMirror® relationship for volume '%s%s%s'. Use the 'debug vreport' command to resolve inconsistencies before reestablishing the SnapMirror relationship.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.iron.grow.fs.failed

Severity

ERROR

Description

This message occurs when WAFL® cannot grow a volume or aggregate because wafliron is running and the root volume does not have enough free space to grow the iron status files.

Corrective Action

Check the free space in the root volume. Abort wafliron or grow the root volume to accommodate the grown status files

Syslog Message

WAFL failed to grow %s %s due to a failure in growing wafliron status files in the root volume.

Parameters

voltype (STRING): Volume type: volume or aggregate.

volname (STRING): Name of the volume or aggregate.

wafl.iron.i2p.dir.convert

Severity

INFORMATIONAL

Description

This message occurs to inform you why wafliron is starting the inode-to-parent (i2p) initialization scan. The i2p scan updates the information in the volume necessary to perform i2p path name translations. The reason i2p information needs updating is that the volume contains converted directories, and the entries in the converted directories need their i2p information updated. This message does not indicate anything abnormal or problematic.

Corrective Action

(None).

Syslog Message

Found converted directories in %s %s%s%s%s that require their entry's inode-to-parent (i2p) information updated. Starting the i2p initialization scanner to update the entries in the converted directories. This is normal.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.iron.incompleteVol

Severity

ALERT

Description

This wafliron event indicates that a volume is partially created and might be in an inconsistent state. Wafliron is marking the volume as unrecoverable. For instance, if filer panics before snap restore completes when a clone volume is created it may leave the volume partially created.

Corrective Action

If the volume is known not to contain any valuable data, it can be safely destroyed and recreated.

Syslog Message

Flexible volume %s%s on aggregate %s is partially created. Marking it unrecoverable. You may destroy this volume and recreate it.

Parameters

volname (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

aggrname (STRING): Aggregate name

wafl.iron.invalid.vvol

Severity

ERROR

Description

This wafliron message indicates that a volume is invalid. Wafliron cannot run on invalid volumes. A volume can become invalid as a result of an aborted 'vol copy' operation or SnapMirror® initial transfer. To bring the volume back online, you must re-create it through a completed 'vol copy' operation or SnapMirror transfer.

Corrective Action

If you know that the volume does not contain any valuable data, you can safely destroy and re-created it.

Syslog Message

Flexible volume %s%s%s on aggregate %s is invalid. Wafliron cannot run on invalid volumes.

Parameters

volname (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

aggrname (STRING): Aggregate name.

wafl.iron.lost.blocks

Severity

INFORMATIONAL

Description

This message indicates that wafliron is running on a particular inode.

Corrective Action

(None).

Syslog Message

Wafliron on %s %s%s%s is verifying %lld %s inode now.

Parameters

voltype (STRING): Volume type.

volname (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

inode_number (LONGINT): Number of inode buftrees not verified.

ino_type (STRING): The inode type.

wafl.iron.manualUpgradeRequired

Severity

ERROR

Description

This event is issued when wafliron can't run on the volume because it's not upgraded yet. This happens when system was upgraded with an offline or restricted volume (possibly due to corruption) and wafliron is started after the upgrade with the volume offline or restricted.

Corrective Action

Manually online the volume and then restart wafliron. Or fix any corruption on an inconsistent volume and bring it online before a kernel upgrade.

Syslog Message

Wafliron cannot run on volume '%s' that is in an older format. Manually online the volume and retry wafliron.

Parameters

volname (STRING): Volume name.

wafl.iron.mount.inconsistency

Severity

ERROR

Description

This message occurs when wafliron finds some WAFL® inconsistency issues on an aggregate during mount.

Corrective Action

Run the 'storage aggregate wafliron review <aggregate-name>' command to review the issues that wafliron found. If you need assistance resolving any of the issues, contact NetApp technical support.

Syslog Message

wafliron on aggregate %s found some WAFL inconsistency issues during mount.

Parameters

aggrname (STRING): Aggregate name.

wafl.iron.mount.inconsistent

Severity

ALERT

Description

This wafliron message indicates that the FlexVol® volume cannot be mounted; the volume is marked as inconsistent.

Corrective Action

Re-run wafliron with the '-prev_cp' option set to restore the FlexVol volume to the closest Consistency Point(CP)/Snapshot(tm) copy.

Syslog Message

wafliron could not mount volume %s due to %s. Volume is marked as inconsistent.

Parameters

vvolname (STRING): Volume name.

reason (STRING): Reason for the failure.

wafl.iron.mount.times

Severity

INFORMATIONAL

Description

This message prints the mount times taken by the different phases of aggregate mount during wafliron. This message occurs after wafliron completion or through a wafliron status message.

Corrective Action

(None).

Syslog Message

%s mount phase of %s %s took %s.

Parameters

phase (STRING): Name of the mount phase.

voltype (STRING): Type of the volume (aggeregate/flexvol).

volname (STRING): Name of the volume or aggregate.

time (STRING): Time taken for the phase.

wafl.iron.mounted.volume

Severity

INFORMATIONAL

Description

This message is used to print on the console that the volume is mounted during wafliron.

Corrective Action

(None).

Syslog Message

Wafliron mounted volume %s.

Parameters

vol (STRING): Name of the volume.

wafl.iron.mw.ioc.not.supported**Severity**

ERROR

Description

This event is issued when IOC is issued on metawafl aggregate.

Corrective Action

(Call support).

Syslog Message

Iron optional commit is not supported on metawafl aggregate '%s'. Please run wafliron.

Parameters

volname (STRING): Volume name.

wafl.iron.nvsave.disable.selection**Severity**

INFORMATIONAL

Description

This message is used to print on the console that the wafliron cannot run in volume select mode on the aggr as the aggregate has nvsave file records.

Corrective Action

(None).

Syslog Message

The aggr %s has nvlog records in the system. Wafliron cannot run in volume selection mode. Volumes will be brought online in random order.

Parameters

aggr (STRING): Name of the aggregate.

wafl.iron.oc.abort.bad_blk

Severity

EMERGENCY

Description

This message occurs when the system aborts wafliron in optional commit mode on the volume due to a bad block in the change log and lost write context status files.

Corrective Action

Refer to the Recovery Decision Tree.

Syslog Message

Aborting wafliron in optional commit mode because a bad block was found in volume '%s'.

Parameters

volname (STRING): Volume name.

wafl.iron.oc.abort.clog_full

Severity

EMERGENCY

Description

This message occurs when the system aborts an optional commit wafliron operation on a volume because the change log file was full, due to extensive filesystem consistency changes.

Corrective Action

Contact NetApp technical support.

Syslog Message

Aborting wafliron in optional commit mode on aggregate '%s'. The change log is full.

Parameters

volname (STRING): Volume name.

wafl.iron.oc.committedChangeLog

Severity

NOTICE

Description

This wafliron event indicates that optional commit change log files have been committed to disk.

Corrective Action

This happens when the user explicitly commits the changes to disk.

Syslog Message

Committed change log files for aggregate %s.

Parameters

volname (STRING): Volume name

wafl.iron.oc.deletedChangeLog

Severity

EMERGENCY

Description

This wafliron event indicates that optional commit change log files have been deleted.

Corrective Action

This happens when the change log files have been written to disk, or have been rejected.

Syslog Message

Deleted change log files for aggregate %s.

Parameters

volname (STRING): Volume name

wafl.iron.oc.errorCommitLog

Severity

EMERGENCY

Description

This wafliron event indicates that optional commit change log files' commit process has encountered an error.

Corrective Action

Corrective action may include offline the aggregate and running wafliron in optional commit mode again.

Syslog Message

Error committing change log files for aggregate %s.

Parameters

aggrname (STRING): Aggregate name

wafl.iron.oc.noCorruption

Severity

NOTICE

Description

This wafliron event indicates that optional commit did not find any corruption in the aggregate that it is being run on.

Corrective Action

No corrective action is required for this notification event. Wafliron will automatically online the aggregate.

Syslog Message

Wafliron did not find any corruption on aggregate %s. The aggregate and its volumes will be offline automatically.

Parameters

aggrname (STRING): Aggregate name

wafl.iron.oc.rejectChangeLog

Severity

NOTICE

Description

This wafliron event indicates that optional commit change log files have been rejected (not committed).

Corrective Action

No corrective action required for this notification event.

Syslog Message

Rejecting change log files for aggregate %s.

Parameters

aggrname (STRING): Aggregate name

wafl.iron.oc.root.committedChanges

Severity

NOTICE

Description

This wafliron event indicates that optional commit changes have been committed to disks of the root aggregate/tradvol.

Corrective Action

No corrective action required.

Syslog Message

Committed changes for %s '%s'. The system will reboot now.

Parameters

voltype (STRING): Volume type - aggregate or tradvol

volname (STRING): Volume name

wafl.iron.oc.root.lowMemory

Severity

EMERGENCY

Description

Wafliron Optional Commit on the Root has exhausted available memory and cannot continue. Options will be presented to the administrator to either abort the changes or write to disk.

Corrective Action

Changes will have to be committed to disk for wafliron to continue or will have to be rejected.

Syslog Message

Wafliron Optional Commit on '%s' has run out of available memory and cannot continue. Please either commit to continue Wafliron by writing changes to disk or reject the changes (which will reboot the system).

Parameters

volname (STRING): Volume name

wafl.iron.oc.root.noCorruption

Severity

NOTICE

Description

This wafliron message indicates that the optional commit operation does not find any corruption in the root aggregate that it is being run on.

Corrective Action

No corrective action is required.

Syslog Message

Wafliron did not find any corruption on aggregate %s. The system will reboot now.

Parameters

aggrname (STRING): Root aggregate name.

wafl.iron.oc.root.rejectedChanges

Severity

NOTICE

Description

This wafliron event indicates that optional commit changes have been rejected.

Corrective Action

No corrective action required.

Syslog Message

Rejected changes for %s '%s'. The system will reboot now.

Parameters

voltype (STRING): Volume type - aggregate or tradvol

volname (STRING): Volume name

wafl.iron.offline.destroying

Severity

INFORMATIONAL

Description

This message occurs when a volume is being destroyed and cannot be ironed/onlined.

Corrective Action

(None).

Syslog Message

Volume '%s%s%s' is being destroyed and was taken offline.

Parameters

volname (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.iron.optcommit.upgradeScan

Severity

ERROR

Description

This message occurs when wafliron optional commit is started in a volume that has an upgrade still in progress.

Corrective Action

Wait for the upgrade scanner to finish for this volume, then restart wafliron.

Syslog Message

Wafliron optional commit cannot run in volume '%s' that still has an upgrade in progress. Run the advanced CLI command 'wafl scan status' to check whether an upgrade is still in progress.

Parameters

volname (STRING): Volume name.

wafl.iron.outofspace

Severity

ERROR

Description

This message occurs when an aggregate is out of space. Wafliron omits the volumes in this aggregate when managing the aggregate.

Corrective Action

Run the "storage transition commit start" command to commit the aggregate transition and delete the pinned Snapshot® copy.

Syslog Message

Volumes in the aggregate %s are kept offline since aggregate is out of space. Wafliron omits volumes in this aggregate.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.iron.parallel.mount.notify

Severity

NOTICE

Description

This message indicates that wafliron parallel mount is proceeding for the flexible volumes in an aggregate. All sparse volumes are mounted in parallel first, followed by non-clone flexible volumes in parallel. Each clone is mounted following its parent volume.

Corrective Action

(None).

Syslog Message

Wafliron parallel mount enabled. Wafliron is mounting flexible volumes in parallel in the aggregate %s.

Parameters

aggr (STRING): Aggregate name

wafl.iron.parent.volume.selected

Severity

INFORMATIONAL

Description

This message occurs when the parent of a clone volume is added to the list of volumes wafliron will mount first because the clone volume is on the list.

Corrective Action

(None).

Syslog Message

Volume %s in aggregate %s was added to the list of volumes that wafliron will mount first because its clone volume %s is present in this list.

Parameters

parent_volume (STRING): Name of the parent volume.

aggr (STRING): Name of the aggregate.

clone_volume (STRING): Name of the clone volume.

wafl.iron.pending.delete.vvol

Severity

ERROR

Description

This wafliron event indicates that a volume is awaiting deletion and cannot be ironed/onlined. Its deletion also cannot be canceled while iron is running, so its retention time may need to be extended in order to

keep the volume.

Corrective Action

If you do not want the volume to be deleted while iron is running, check the retention time and consider extending it.

Syslog Message

Flexible volume %s%s%s on aggregate %s is awaiting deletion. Wafliron cannot run on such volumes.

Parameters

volname (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

aggrname (STRING): Aggregate name.

wafl.iron.ral.exception

Severity

ERROR

Description

This message occurs when wafliron is loading an inode that has a remote entry, but the corresponding remote volume is not reachable.

Corrective Action

Inspect the status of the FlexGroup remote volume, which might be down due to network errors, cluster node failures, or corruption in one or more of its constituent aggregates. Also check the health and connectivity of all nodes that are hosting these aggregates.

Syslog Message

Wafliron could not load inode "%d" on volume "%s" because the remote volume is not accessible.

Parameters

inode (INT): Inode that could not be loaded.

volume (STRING): Volume being inspected by wafliron.

wafl.iron.ral.inode.loaded

Severity

NOTICE

Description

This message occurs when wafliron succeeds in loading an inode in a FlexGroup origin volume that was not reachable earlier.

Corrective Action

NONE.

Syslog Message

After several retries, wafliron has processed inode "%d" in volume "%s".

Parameters

inode (INT): Inode loaded after retries.
volume (STRING): Volume being inspected by wafliron.

wafl.iron.readonly

Severity

NOTICE

Description

This message occurs during wafliron volume initialization, indicating that read-only volumes might not be checked.

Corrective Action

Use either the "-f" or the "-include-mirrors" option to run wafliron on SnapMirror® destination volumes. For more information or assistance, contact NetApp technical support.

Syslog Message

%s%s%s: Readonly volumes require additional command options to be checked using wafliron

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.iron.readonlyQtrees

Severity

NOTICE

Description

This message occurs during wafliron volume initialization, indicating that volumes with read-only qtrees might not be checked.

Corrective Action

Use either the "-f" or the "-include-mirrors" option to run wafliron on SnapMirror® destination volumes.

Syslog Message

%s%s%s: Volumes containing readonly qtrees require additional command options to be checked using wafliron

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.iron.rebuild.dir.volful

Severity

ERROR

Description

This message occurs while running wafliron, when there might not be enough free space on the volume to rebuild a damaged directory.

Corrective Action

Increase the size of the volume or free space on the aggregate that contains the volume.

Syslog Message

Volume %s might run out of space while wafliron is rebuilding the damaged directory %d. The required space is %d MB.

Parameters

vol (STRING): Name of the volume.

fileid (INT): Identifying number for the damaged directory.

spaceNeeded (INT): Amount of spaced needed, in megabytes.

wafl.iron.salvaged.rootdir

Severity

INFORMATIONAL

Description

This message occurs when wafliron detects a corrupted rootdir in an index-dir-enabled volume and re-creates it with all valid entries in the rootdir. The old corrupted rootdir has been converted into a regular file and linked to the /lost+found directory.

Corrective Action

Remove the file from the /lost+found directory.

Syslog Message

Rootdir of volume %s has been corrected and contains all valid names. The contents of the old rootdir have been copied to file i#%d.* in the /lost+found directory.

Parameters

volume (STRING): Name of the volume.

fileid (INT): File ID of the regular file that contains the old rootdir contents as is.

wafl.iron.scan.skipped

Severity

NOTICE

Description

This event occurs when non-specified or read only volumes are not processed during a wafliron run on their containing aggregate.

Corrective Action

(None).

Syslog Message

Aggregate %s, wafliron completed - Read only, offline, old version or non-specified volume(s) %s not checked.

Parameters

aggr (STRING): The aggr name

vvol (STRING): Flexible volumes not processed

wafl.iron.scan.stats

Severity

INFORMATIONAL

Description

This message prints the wafliron scan details about various data objects: for example, files, directories, blocks.

Corrective Action

(None).

Syslog Message

%llu %s done.

Parameters

count (LONGINT): Number of data objects scanned so far.

object (STRING): Name of the data object.

wafl.iron.scanning.status

Severity

INFORMATIONAL

Description

This message prints wafliron scanning status.

Corrective Action

(None).

Syslog Message

Scanning (%d%% done).

Parameters

percentage (INT): Scanning percentage.

wafl.iron.slow

Severity

ERROR

Description

This message occurs when a "wafliron start" or a "wafliron show" command is issued and the aggregate that hosts wafliron status files for the aggregate on which wafliron is running contains only one data disk.

Corrective Action

1. Use the "-status-files-vserver" and "-status-files-volume" parameters of the "aggr wafliron start" command to host status files on a non-root aggregate volume, that has an adequate number of data disks that can accommodate the extra workload. 2. Add more disks to the root aggregate using "aggr add" command.

Syslog Message

Aggregate %s: wafliron performance will be significantly impacted because aggregate %s contains only one data disk. Running wafliron with status files hosted on a non-root aggregate volume that has an adequate number of data disks, or adding more disks to the root aggregate is recommended.

Parameters

aggr_name (STRING): Name of the aggregate on which wafliron is running.

status_vol_aggr_name (STRING): Name of the aggregate containing the volume hosting the wafliron status files.

wafl.iron.start

Severity

INFORMATIONAL

Description

This message occurs when the system starts the wafliron process on a volume.

Corrective Action

(None).

Syslog Message

Starting wafliron on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

optcommit (STRING): Whether wafliron is running in optional-commit mode. If this mode is used, the decision to commit changes is made by the user after wafliron is complete.

prev_cp (STRING): Whether the prev_cp feature of wafliron is being used and, if so, which consistency point the user chose at the prompt.

backup (STRING): Whether the backup feature of wafliron is being used and, if so, what option {no|yes|force|use} is selected. Only applicable to aggregates.

wafl.iron.unrecoverable

Severity

ALERT

Description

This message occurs when a volume is unrecoverable and cannot be ironed or brought online.

Corrective Action

Contact NetApp technical support.

Syslog Message

Flexible volume %s%s on aggregate %s is unrecoverable.

Parameters

volname (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

aggrname (STRING): Aggregate name.

wafl.iron.upgradeRequired

Severity

NOTICE

Description

This message occurs during volume or aggregate initialization if wafliron is enabled and does not support the volume or aggregate file system version. The message indicates that a volume or aggregate upgrade is required and is being attempted without wafliron checking. A wafliron check of the volume or aggregate might be possible after a successful upgrade.

Corrective Action

(None).

Syslog Message

%s '%s%s%s%s' has not been upgraded. Upgrade will proceed without wafliron. The WAFL version on the %s is '%d'; the current WAFL version is '%d'.

Parameters

Type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume or aggregate.

vol (STRING): Name of the volume or aggregate.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume or aggregate in cases where the volume or aggregate name itself is insufficient.

type (STRING): Type of object (volume or aggregate).

vol_wafl_version (INT): WAFL® version on the volume or aggregate.

current_wafl_version (INT): Current WAFL version.

wafl.iron.volumes.selected.not.exist

Severity

INFORMATIONAL

Description

This message is used to print on the console that the volumes selected for ironing on the aggregate do not exist in the aggregate.

Corrective Action

(None).

Syslog Message

Some of the volumes selected for ironing do not exist in the aggregate %s.

Parameters

aggr (STRING): Name of the aggregate.

wafl.latest events

wafl.latest.physical.snapid.info

Severity

INFORMATIONAL

Description

This message occurs when WAFL® detects an inconsistent physical Snapshot(tm) copy ID for the latest Snapshot copy on a volume or an aggregate.

Corrective Action

(None).

Syslog Message

Corrected the latest_snapid for %s %s from %d to %d.

Parameters

type (STRING): Type of object (volume or aggregate).

volume (STRING): Volume or aggregate name.

invalid_latest_snapid (INT): Invalid latest Snapshot copy ID stored on disk.

corrected_latest_snapid (INT): The corrected latest Snapshot copy ID.

wafl.lmgr events

wafl.lmgr.meta.mv

Severity

NOTICE

Description

The appliance file lock state for a volume could not be moved during a file system check operation (wafliron).

Corrective Action

(None).

Syslog Message

Move of file lock manager state for volume fsid %08x (uuid %s) for file system check received error %s

Parameters

fsId (INT): File system identifier of the volume.
uuid (STRING): Uuid of the volume.
err (STRING): Error message.

wafl.lmgr.meta.rm

Severity

NOTICE

Description

The appliance file lock state for a volume could not be removed.

Corrective Action

(None).

Syslog Message

Cannot remove lock manager host metafile %s in recycle bin: error %s

Parameters

path (STRING): Metadata file path.
err (STRING): Error message.

wafl.lookup events

wafl.lookup.smDirErr

Severity

ERROR

Description

This message occurs when the system encounters an unexpected deleted directory entry in a snapmirrored qtree. This message can occur when accessing a directory in a snapmirrored qtree.

Corrective Action

This condition is transient. Wait for any in-progress SnapMirror(tm) operations to finish and try the operation again.

Syslog Message

wafl_nfs_lookup: unexpected deleted directory entry in snapmirrored qtree %d: {x%x %d %d %d %d}
<%.*s> in {x%x %d %d %d %d}.

Parameters

qtree (INT): Qtree identifier.
fh0 (INT): Directory file handle's flags.
fh1 (INT): Directory file handle's snapid.
fh2 (INT): Directory file handle's fileid.
fh3 (INT): Directory file handle's generation.
fh4 (INT): Directory file handle's FSID.
name (STRINGARRAY): Name of the directory.
dfh0 (INT): Requested file handle's flags.

dfh1 (INT): Requested file handle's snapid.
dfh2 (INT): Requested file handle's fileid.
dfh3 (INT): Requested file handle's generation.
dfh4 (INT): Requested file handle's FSID.

wafl.make events

wafl.make.container.dense.failed

Severity

NOTICE

Description

This message occurs when container cant be made dense

Corrective Action

(None).

Syslog Message

Container cannot be made dense for %s "%s" due to "%s".

Parameters

volume_identifier (STRING): Volume identifier.
volume (STRING): Volume name.
message (STRING): Reason for failure to make container dense

wafl.maxdirsize events

wafl.maxdirsize.boot.notice

Severity

NOTICE

Description

This event occurs for each volume that has a maxdirsize greater than the default during boot.

Corrective Action

Use (privilege:advanced) option "volume modify -volume vol_name -maxdir-size new_value" to set the volume's maxdirsize to the default maxdirsize. However, doing so could impact system performance. If you need to increase the maximum directory size, work with technical support.

Syslog Message

%s%s%s: This volume's maxdirsize (%uKB) is higher than the default (%uKB). There may be a performance penalty when doing operations on large directories.

Parameters

owner (STRING): The volume owner
vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name alone is insufficient.
current_maxdirsize (INT): Default maximum directory size value.

default_maxdirsize (INT): Default maximum directory size value.

wafl.mcc events

wafl.mcc.config.notFound

Deprecated

Deprecated as of version 9.4 as this debug EMS not supported now.

Severity

ERROR

Description

This message occurs when WAFL® does not find the MetroCluster configuration information on this node.

Corrective Action

Run the 'metrocluster check' command to verify the MetroCluster configuration.

Syslog Message

(None).

Parameters

(None).

wafl.mcc.exceed.volcnt.limit

Severity

ERROR

Description

This message occurs when the MetroCluster® volume count limit for this node is reached. No additional volumes can be created on this node unless some existing volumes are moved or destroyed.

Corrective Action

Either destroy some existing volumes or perform a 'volume move' operation to move some existing volumes to a storage aggregate located on a different node to make room for the new ones. Alternatively, you can also create new volumes on a different node to avoid moving or deleting the existing volumes.

Syslog Message

MCC volume count limit of %d reached for this node.

Parameters

max_volcnt (INT): Volume count limit for this node.

wafl.mcc.nso.left.behind

Severity

ERROR

Description

This message occurs when the system aborts a negotiated switchover because an online left-behind aggregate was found on this node.

Corrective Action

Check whether there exists any online left-behind aggregates on this node from a previous switchover or takeover operation. If such an aggregate exists, then perform the corrective actions specified in the earlier EMS messages for the left-behind aggregate to return it to its original owner, and then retry the operation. You can use the "override-vetoes" option to proceed without performing the corrective action.

Syslog Message

One or more online left-behind aggregates exist. Negotiated switchover is canceled.

Parameters

(None).

wafl.mcc.nso.veto.cmode.vols

Severity

ERROR

Description

This message occurs when the system aborts negotiated switchover because a cluster volume was found on an aggregate with Controller Failover (CFO) HA policy.

Corrective Action

Retry the negotiated switchover operation after the volume is deleted or moved to an aggregate with SFO HA policy. The override-vetoes option may be used to proceed without deleting or moving the volume.

Syslog Message

%s %s%s%s%s has a CFO HA policy and contains one or more cluster volumes. Negotiated switchover canceled.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.mcc.sb.left.behind

Severity

ERROR

Description

This message occurs when WAFL® leaves behind an aggregate during MetroCluster(tm) switchback because this aggregate does not meet all the WAFL veto criteria for switchback.

Corrective Action

Correct the issue that caused the aggregate to be left behind, based on the specific reason identified in an earlier EMS message. After correcting the issue, run the 'metrocluster switchback' command to return the

aggregate to its original owner.

Syslog Message

Aggregate %s was left behind during switchback.

Parameters

vol (STRING): Name of the aggregate that was left behind.

wafl.mcc.sb.nso.veto.create

Severity

ERROR

Description

This message occurs when the system aborts a switchback or negotiated switchover because a volume create operation is running.

Corrective Action

Retry the switchback or negotiated switchover operation after the volume create operation is complete.

Syslog Message

%s %s%s%s%s is being created. Switchback or negotiated switchover canceled.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.mcc.sb.nso.veto.fence

Severity

ERROR

Description

This message occurs when the system aborts a switchback or negotiated switchover operation because a volume has a fence set.

Corrective Action

A volume in the aggregate is currently fenced for group operations. Retry the switchback or negotiated switchover operation after any group SnapRestore® or mirror transfers are complete. If the problem persists, contact technical support.

Syslog Message

%s %s%s%s%s has a fence set. Switchback or negotiated switchover canceled.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.mcc.sb.nso.veto.iron

Severity

NOTICE

Description

This message occurs when the system aborts a switchback or negotiated switchover because wafliron is running.

Corrective Action

Retry the switchback or negotiated switchover operation after wafliron is finished.

Syslog Message

%s %s%s%s% is running wafliron. Switchback or negotiated switchover canceled.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.mcc.sb.nso.veto.lock

Severity

ERROR

Description

This message occurs when WAFL® vetoes a switchback or negotiated switchover operation because the system cannot obtain an aggregate level lock.

Corrective Action

Retry the switchback or negotiated switchover operation after waiting for other operations on the aggregate to finish.

Syslog Message

Switchback or negotiated switchover vetoed because the system could not obtain a lock on aggregate %s.

Parameters

vol (STRING): Aggregate name.

wafl.mcc.sb.nso.veto.nvsave

Severity

ERROR

Description

This message occurs when WAFL® vetoes a switchback or negotiated switchover operation because there are NVSave files for an aggregate or a flexible volume that must be replayed before the aggregate or flexible volume can be switched back.

Corrective Action

Retry the switchback or negotiated switchover operation after replaying NVSave files (by bringing the aggregate or flexible volume online) or deleting them from the root volume.

Syslog Message

Switchback or negotiated switchover vetoed due to presence of NVSave files for '%s' (FSID %d, UUID %s).

Parameters

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

fsid (INT): File system identifier.

UUID (STRING): UUID of the Volume.

wafl.mcc.sb.nso.veto.revert

Severity

ERROR

Description

This message occurs when the system aborts a switchback or negotiated switchover because a volume revert operation is running.

Corrective Action

Retry the switchback or negotiated switchover operation after the volume revert operation is complete.

Syslog Message

%s %s%s%s%s is being reverted. Switchback or negotiated switchover canceled.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.mcc.so.replay.disabled

Severity

NOTICE

Description

This message occurs during MetroCluster(tm) switchover processing on a simulator. WAFL® replay is disabled on simulators.

Corrective Action

(None).

Syslog Message

MetroCluster switchover: WAFL replay disabled on simulators.

Parameters

(None).

wafl.mcc.so.start

Severity

INFORMATIONAL

Description

This message occurs when WAFL starts switchover operation.

Corrective Action

(None).

Syslog Message

WAFL starts switchover operation (force-nvfail-all=%s).

Parameters

force_nvfail_all (STRING): Switchover command option.

wafl.mcc.so.vols.mounted

Severity

INFORMATIONAL

Description

This message occurs when the volumes are mounted during switchover.

Corrective Action

(None).

Syslog Message

(None).

Parameters

(None).

wafl.mcc.subphase.times

Severity

INFORMATIONAL

Description

Issued upon completion of the WAFL portion of a MetroCluster operation with sub-phase timings in milliseconds.

Corrective Action

(None).

Syslog Message

(None).

Parameters

operation (STRING): Operation that was completed, such as switchover or switchback.

subPhaseTimes (STRING): Report of sub-phase times for the WAFL portion of the MetroCluster operation.

wafl.mcc.total.maxvvol

Severity

NOTICE

Description

This message occurs in a MetroCluster(tm) configuration when the system cannot configure a FlexVol® volume because the maximum number of volumes has been reached.

Corrective Action

Check whether there exists a left-behind aggregate on this node from a previous switchover or takeover operation. If such an aggregate exists, then perform the corrective actions specified in the earlier EMS messages for the left-behind aggregate to return it to its original owner. Otherwise, either destroy some existing volumes or perform a 'volume move' operation to move some existing volumes to a storage aggregate located on a different node to make room for the new ones.

Syslog Message

Cannot configure FlexVol volume '%s' (UUID %s) in aggregate '%s': There are too many FlexVol volumes on the system.

Parameters

vol (STRING): FlexVol volume name.

uuid (STRING): FlexVol volume unique ID.

aggregate (STRING): Aggregate name.

wafl.mcc.volLimit.exceeded

Deprecated

Deprecated as of version 9.2 as the additional volume count soft limit for MCC is removed. The regular MCC limit based on the setting of node-object-limit is still in place.

Severity

ERROR

Description

This message occurs when the total volume count exceeds the limit supported on this node.

Corrective Action

Bring the number of volumes below the supported limit on this node, either by performing a 'volume move' operation to move the extra volumes to a storage aggregate located on a different node, or by destroying some or all of the unused extra volumes on this node.

Syslog Message

There are more volumes (%d) than the maximum number of volumes (%d) supported on this node for host: %s.

Parameters

numVols (INT): Current number of volumes.

limit (INT): Maximum number of volumes supported.

host (STRING): Host on this node for which the volume limit has been exceeded.

wafl.mem events

wafl.mem.stomper

Severity

NOTICE

Description

This event indicates whether memory stomper code is running or not.

Corrective Action

(None).

Syslog Message

You are %s running in corruption detection diagnostic mode with degraded performance.

Parameters

onoff (STRING): The stomper code is on/off

wafl.memory events

wafl.memory.status

Severity

INFORMATIONAL

Description

This message occurs periodically to inform the administrator about the amount of WAFL memory that is currently available.

Corrective Action

(None).

Syslog Message

%dMB of memory is currently available for the WAFL file system.

Parameters

mem (INT): Available WAFL memory, in megabytes (MB).

wafl.memory.statusLowMemory

Severity

NOTICE

Description

This message occurs when WAFL is low on memory.

Corrective Action

(None).

Syslog Message

WAFL is running low on memory, with %dMB remaining.

Parameters

mem (INT): Available WAFL memory, in megabytes (MB).

wafl.memory.statusVeryLowMemory

Severity

ALERT

Description

This message occurs when WAFL is very low on memory.

Corrective Action

(None).

Syslog Message

WAFL is running very low on memory, with %dMB remaining.

Parameters

mem (INT): Available WAFL memory, in megabytes (MB).

wafl.metadata events

wafl.metadata.rsrv.decreased

Severity

NOTICE

Description

This message occurs when the space reserved for volume metadata is decreased when the value of "space-guarantee" for a FlexClone volume is changed from "volume" to "none". After the decrease in the metadata reserve, the freed up space is added to the space available in the aggregate.

Corrective Action

(None).

Syslog Message

Metadata reserve for volume "%s" has decreased.

Parameters

volume_name (STRING): Volume name.

wafl.metadata.rsrv.increased

Severity

NOTICE

Description

This message occurs when the space reserved for volume metadata is increased when the value of "space-guarantee" for a FlexClone volume is changed from "none" to "volume" or when a FlexClone volume is split from its parent volume. This metadata reserve is required to store volume metadata inside an aggregate.

Corrective Action

(None).

Syslog Message

Metadata reserve for volume "%s" has increased.

Parameters

volume_name (STRING): Volume name.

wafl.metafile events

wafl.metafile.reg.unknown

Severity

NOTICE

Description

This message occurs when a metafile to be created is not documented, has information about it missing, or has not been identified and associated with an entry from the wiki page: MetafileRegistration. METAFILE_UNKNOWN is used as a placeholder in these cases.

Corrective Action

If you are familiar with this metafile, its purpose, or others who have worked with this file, please contact dl-replication-developer.

Syslog Message

%s is declared as METAFILE_UNKNOWN. If you are familiar with this metafile, its purpose, or others who have worked with this file, please contact dl-replication-developer.

Parameters

path (STRING): Filepath of the metafile

wafl.metafile.reg.unused

Severity

NOTICE

Description

This message occurs when a metafile believed to be unused or obsolete is about to be created.

Corrective Action

The information in the wiki page: MetafileRegistration and metafiles.h needs to be corrected. Please contact dl-replication-developer.

Syslog Message

%s is declared as METAFILE_UNUSED. The information in the wiki page: MetafileRegistration and metafiles.h needs to be corrected. Please contact dl-replication-developer.

Parameters

path (STRING): Filepath of the metafile

wafl.mirror events

wafl.mirror.access.denied

Severity

ERROR

Description

This message occurs when the system rejects client access to a primordial volume. A primordial volume is a volume that has been configured as the destination of a SnapMirror® relationship but has not yet been initialized through that relationship.

Corrective Action

You can avoid this event by using the 'volume unmount' command to unmount the volume from the namespace, or by using the 'snapmirror initialize' command to initialize the SnapMirror relationship to the volume.

Syslog Message

Access to SnapMirror volume '%s' was denied because SnapMirror initialization was not complete (exported Snapshot copy identifier '%d' is invalid).

Parameters

vol (STRING): Volume name.

snapshotid (INT): Exported Snapshot(tm) copy identifier.

wafl.mirror.upgrade.fail

Severity

ERROR

Description

This message occurs when WAFL® unexpectedly encounters a Data ONTAP® 10.0.x mirrored volume during an upgrade. This mirrored volume should have been deleted or broken off from its mirroring relationship prior to the upgrade.

Corrective Action

Avoid this event by destroying all Data ONTAP 10.0.x mirrored volumes prior to the upgrade. This event resulted in the volume being marked offline, corrupt, and unrecoverable. Because the current version of Data ONTAP does not recognize this mirrored volume, the volume cannot be recovered by file system repair mechanisms such as wafliron and cannot be brought online.

Syslog Message

Data ONTAP 10.0.x mirror (type %d) cannot be upgraded by the current version of Data ONTAP. Mirrored volume '%s' was marked offline, corrupt, and unrecoverable. Read the upgrade notes for this release. Such

mirrored volumes should be deleted or broken off from their mirroring relationships prior to the upgrade.

Parameters

type (INT): Mirror type in Data ONTAP 10.0.x.

vol (STRING): Volume name.

wafl.mount events

wafl.mount.inconsistent

Severity

ERROR

Description

This message occurs when the FlexVol® volume cannot be mounted; the volume is marked as inconsistent.

Corrective Action

Unable to mount the volume. Run wafliron to diagnose the volume.

Syslog Message

WAFL: Unable to mount volume %s due to %s. Volume is marked as inconsistent.

Parameters

vvolname (STRING): Volume name.

reason (STRING): Reason for the inability to mount the volume.

wafl.mount.info

Severity

NOTICE

Description

mount message

Corrective Action

(None).

Syslog Message

%s

Parameters

msg (STRING): Message from wafl vol mount path which prints how many messages were sent to WAFL.

wafl.mount.transient.error

Severity

ERROR

Description

This message occurs when the FlexVol® volume cannot be mounted due to transient errors; the volume is taken offline.

Corrective Action

First, attempt to bring the volume online manually by using the "volume online" command. If the issue persists, determine whether the volume is a NetApp® Aggregate Encryption (NAE) volume by using the "volume show -encryption-type aggregate" command. If so, remount the aggregate of the volume by taking it offline (using the "aggr offline" command), and then bringing it online again (using the "aggr online" command). If the issue still persists, Contact NetApp technical support.

Syslog Message

WAFL: Unable to mount volume %s, UUID %s due to %s. Volume is taken offline due to transient errors.

Parameters

vvolname (STRING): Volume name.

uuid (STRING): UUID of the volume.

reason (STRING): Reason for the failure to mount the volume.

wafl.mp events

wafl.mp.vldb.update.failed

Severity

ERROR

Description

This message occurs when the value of the "multipart enabled" setting in the RAID label changes during the restoration of a Snapshot copy, and an attempt to update the value in the Volume Location Database (VLDB) to match the new RAID label value fails.

Corrective Action

Perform the following steps using the 'debug vreport' command to resolve the inconsistency in the VLDB. 1. Run the "debug vreport show" command to show the object name. 2. Run the "debug vreport fix -type volume -object object-name" command.

Syslog Message

Updating the VLDB "granular-data" property of volume "%s" with DSID "%08x" to "%s" failed. Reason: %s.

Parameters

vol (STRING): Name of the volume.

dsid (LONGINT): Unique identifier (DSID) of the volume.

value (STRING): New value to be set.

errmsg (STRING): Error message.

wafl.needs events

wafl.needs.blog

Severity

ERROR

Description

This message occurs when batched_free_log needs to be turned on to allow performing one of the

requested actions, such as "Dense Undo", "Dense Revert", and "Clone Split".

Corrective Action

Contact NetApp technical support..

Syslog Message

batched_free_log needs to be turned on.

Parameters

(None).

wafl.nfsv4 events

wafl.nfsv4.acl.not.mapped

Severity

ERROR

Description

This message occurs when the system cannot map an ID stored in the Access Control Entry (ACE) to a valid UNIX® User ID/Group ID (UID/GID) pair. This failure makes this ACE an invalid one, resulting in a possible loss of access to the file or directory for which this ACE was set.

Corrective Action

Contact NetApp technical support.

Syslog Message

ID in NFS Access Control Entry (ACE) on inode number %x, file system ID %x could not be mapped to a user or group. Possible loss of access can result.

Parameters

inum (INT): Inode number.

fsid (INT): File system ID.

wafl.no events

wafl.no.large.vvol.size.set

Severity

ERROR

Description

This message occurs when a volume doesn't have 'large_size_enabled' flag set even when the nominal size crosses the 100TB limit.

Corrective Action

(None).

Syslog Message

Nominal size of the "%s" volume exceeded either 100TB limit.

Parameters

vvolname (STRING): Name of the volume.

wafl.ntfsunixsecurityops events

wafl.ntfsUnixSecurityOps

Severity

NOTICE

Description

This message occurs when a UNIX-type permissions or ownership change is attempted by an NFS client on an NTFS (Windows) volume, but changes of this type are prohibited by an export policy rule.

Corrective Action

Use the "vserver show -fields uuid" command to find the Vserver name corresponding to the Vserver's UUID. Use the "volume file show-inode" command with the file ID and volume name information to find the file or directory path and consider using Windows client to set file or directory attributes.

Syslog Message

NFS client attempted prohibited change of UNIX permissions for file ID: %d, on NTFS volume : %s%s%

Parameters

fileid (INT): File ID of the entry in the directory.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Vserver's Universal Unique Identifier (UUID).

wafl.nvlog events

wafl.nvlog.stats.createError

Severity

NOTICE

Description

This event is issued to indicate that the system is unable to create nvlog stats file.

Corrective Action

(None).

Syslog Message

Can't create nvlog replay stats file

Parameters

(None).

wafl.nvlog.stats.writeError

Severity

NOTICE

Description

This event is issued to indicate the system is unable to write to nvlog stats file.

Corrective Action

(None).

Syslog Message

Nvlog replay stats fio_write failed

Parameters

(None).

wafl.nvlog.versionFail

Severity

ALERT

Description

This message occurs when the nvlog version found in the NV log is not recognized by the current version of Data ONTAP®.

Corrective Action

This might be the result of an upgrade or revert attempt after a dirty boot. If so, try the upgrade or revert after a clean shutdown. If the problem persists, or if this was not due to an upgrade or revert, contact NetApp technical support.

Syslog Message

Could not replay WAFL NV log: nvlog format is of a prior or future release (%d, %d).

Parameters

version (INT): WAFL® NV log version in the NV log.

myversion (INT): Kernel WAFL NV log version.

wafl.nvsave events

wafl.nvsave.deletion.status

Severity

INFORMATIONAL

Description

This message occurs when one or more NVSave files are deleted from the local root volume or the partner root volume while in takeover mode, or from the partner node when the partner node is not in takeover mode.

Corrective Action

(None).

Syslog Message

Deleted NVSave files corresponding to %s %s with FSID %d, HA policy %d, CP_count %d %s on %s node. UUID is %s.

Parameters

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.
vol_name (STRING): Volume name.
fsid (INT): File system identifier.
ha_policy (INT): High-availability (HA) policy of the parent aggregate.
CP_count (INT): Volume's WAFL® consistency point (CP) count.
status (STRING): Whether deletion failed or succeeded.
node (STRING): Whether deletion was attempted on a local or partner node.
UUID (STRING): UUID of Volume.

wafl.nvsave.overwritingstale

Severity

NOTICE

Description

This message occurs during replay of the WAFL® nvlog, when the system discovers records associated with an offline volume. These records need to be stored in a system file on the root volume for future replay. However, a previously saved replay file already exists for this volume in the root volume. The system overwrites the stale replay file if the Consistency Point (CP) count stored in the file is less than that in nvlog.

Corrective Action

(None).

Syslog Message

Detected stale system nvlog replay file for a nonexistent volume with FSID '%d' in the '%s' root volume for WAFL nvlog %d. This stale file was overwritten because of "%s".

Parameters

fsid (INT): File system ID (FSID) of the missing volume.
host (STRING): Owner of the root volume to which the detected nvlog records are successfully stored.
log (INT): WAFL NV log section in which nvlog records for the volume are located.
error (STRING): Reason for overwriting the existing nvsave file.

wafl.nvsave.replaying

Severity

NOTICE

Description

This message occurs when a volume comes online and detects relevant nvlog data to be replayed from the system file in the root volume.

Corrective Action

(None).

Syslog Message

Relevant nvlog data detected for volume %s%s%s%, FSID %d, CP count %d in WAFL NV log %d.
Replaying nvlog records for the volume from a system file in the root volume.

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
fsid (INT): File system ID (FSID) of the missing volume.
cp_count (INT): Consistency Point (CP) count found in the system nvlog file.
log (INT): WAFL nvlog section in which nvlog records for the volume are located.
vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

wafl.nvsave.replaying.fail

Severity

EMERGENCY

Description

This message occurs when a volume comes online and fails to replay relevant nvlog data from the system file in the root volume. The nvlog data for the volume might be lost.

Corrective Action

Take appropriate recovery action to recover from data loss, if any.

Syslog Message

Relevant nvlog data detected for volume %s%s%s%, FSID %d, CP count %d. Failed to replay nvlog records in WAFL nvlog %d for the volume from a system file in the root volume due to error: %s.

Parameters

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
fsid (INT): File system ID (FSID) of the missing volume.
cp_count (INT): Consistency Point (CP) count found in the system nvlog file that could not be replayed.
log (INT): WAFL® nvlog section in which nvlog records for the volume are located.
error (STRING): Reason for the failure.
log0_replay_time (LONGINT): Milliseconds to replay nvlog records from the first NVSave file.
log0_cp_time (LONGINT): Milliseconds to complete the WAFL CP after nvlog records from the first NVSave file are replayed.
log1_replay_time (LONGINT): Milliseconds to replay nvlog records from the second NVSave file.
log1_cp_time (LONGINT): Milliseconds to complete the WAFL CP after nvlog records from the second NVSave file are replayed.
vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

wafl.nvsave.replaying.partial

Severity

NOTICE

Description

This message occurs when a volume comes online and does a partial replay of the nvlog data from the system file in the root volume. The reason for the partial replay is listed.

Corrective Action

(None).

Syslog Message

%s. Nvlog records from the system file in the root volume for volume with FSID %d might have been partially replayed.

Parameters

reason (STRING): Reason for the partial replay.

fsid (INT): File system ID (FSID) of the volume.

wafl.nvsave.replaying.pass

Severity

NOTICE

Description

This message occurs when a volume comes online and successfully replays relevant nvlog data from the system file in the root volume.

Corrective Action

(None).

Syslog Message

Relevant nvlog data detected for volume %s%s%s%s, FSID %d, CP count %d. Successfully replayed nvlog records for the volume from a system file in the root volume.

Parameters

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

fsid (INT): File system ID (FSID) of the missing volume.

cp_count (INT): Consistency Point (CP) count found in the system nvlog file.

log0_replay_time (LONGINT): Milliseconds to replay nvlog records from the first NVSave file.

log0_cp_time (LONGINT): Milliseconds to complete WAFL® CP after nvlog records from the first NVSave file are replayed.

log1_replay_time (LONGINT): Milliseconds to replay nvlog records from the second NVSave file.

log1_cp_time (LONGINT): Milliseconds to complete the WAFL CP after nvlog records from the second NVSave file are replayed.

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

wafl.nvsave.saving

Severity

NOTICE

Description

This message occurs during replay of the WAFL® nvlog, when records associated with a nonexistent or currently offline volume are discovered. These records will be stored in a system file on the root volume and will be replayed when the offline volume comes online.

Corrective Action

(None).

Syslog Message

Replay detected nvlog records for a nonexistent or offline volume with FSID %d and CP count %d in WAFL nvlog %d. The nvlog records will be stored in a system file in the "%s" root volume for possible future replay.

Parameters

fsid (INT): File system ID (FSID) of the missing volume.

cp_count (INT): Volume's WAFL Consistency Point (CP) count found in the nvlog.

log (INT): WAFL nvlog section in which nvlog records for the volume are located.

host (STRING): Owner of the root volume on which the detected nvlog records are stored.

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

wafl.nvsave.saving.fail

Severity

EMERGENCY

Description

This message occurs when, during replay of the WAFL® nvlog, records associated with a non-existent or offline volume are discovered, but not successfully saved to a system file on the root volume. Data loss is possible when the volume comes back online.

Corrective Action

Nvlog records for an offline volume were not successfully saved, data loss is possible when the volume comes back online. Take appropriate recovery action to recover from data loss, if any, when the volume comes back online.

Syslog Message

Replay detected nvlog records for a nonexistent volume with FSID %d and CP count %d in WAFL nvlog %d. Failed to store nvlog records in a system file in the "%s" root volume due to error: %s.

Parameters

fsid (INT): File system ID (FSID) of the missing volume.

cp_count (INT): Volume's WAFL Consistency Point (CP) count found in the nvlog.

log (INT): WAFL nvlog section in which nvlog records for the volume are located.

host (STRING): Owner of the root volume on which the detected nvlog records were intended to be stored.

error (STRING): Error code.

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

wafl.nvsave.saving.pass

Severity

NOTICE

Description

This message occurs when, during replay of the WAFL® nvlog, records associated with a currently offline volume are discovered and successfully stored in a system file on the root volume. These records are replayed when the volume comes back online.

Corrective Action

The nvlog records for an offline volume are successfully saved on the root volume. These records are replayed when the volume comes back online.

Syslog Message

Replay detected nvlog records for an offline volume with FSID %d and CP count %d in WAFL nvlog %d.
The nvlog records were successfully stored in a system file on the "%s" root volume in %llu milliseconds.

Parameters

fsid (INT): File system ID (FSID) of the missing volume.

cp_count (INT): Volume's WAFL Consistency Point (CP) count found in the system nvlog file.

log (INT): WAFL NV log section in which nvlog records for the volume are located.

host (STRING): Owner of the root volume on which the detected nvlog records are successfully stored.

timetaken (LONGINT): Time taken to save the nvlog records, in milliseconds.

vol_type (STRING): Whether this message refers to NVSave files for an aggregate or a flexible volume.

wafl.objstore events

wafl.objstore.ownership.conflict

Severity

ALERT

Description

This message occurs when FabricPool aggregate and SnapMirror® tries to share the same underlying objectstore connection pools in a platform where the sharing is not supported.

Corrective Action

For more information or assistance, contact NetApp technical support.

Syslog Message

FabricPool aggregate and SnapMirror® cannot share the underlying objectstore connection pool.

Objectstore Config id: %u, current owner: %u.

Parameters

primary_config_id (INT): Primary object store config id.

current_owner (INT): Existing owner. FabricPool(1)/SnapMirror(2).

wafl.offline events

wafl.offline.infoError

Severity

ALERT

Description

This message occurs when the system attempts to place a volume online, but cannot read the volinfo or fsinfo data for the volume.

Corrective Action

Volume is inconsistent. Contact NetApp technical support.

Syslog Message

Either both volinfo blocks or fsinfo block on %s %s%s%s%s are/is invalid.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume, for cases when the volume name is insufficient.

wafl.offline.openfiles

Severity

NOTICE

Description

This message occurs when wafliron detects a failure while trying to perform an operation because files are open.

Corrective Action

No corrective action is required for this notification event.

Syslog Message

'%s %s' might not be '%s%s' because of '%u' open file'%s'.

Parameters

voltype (STRING): Aggregate.

volname (STRING): Volume name.

operation (STRING): Operation.

suffix (STRING): Suffix.

uses (INT): Number of open files.

plural (STRING): Plural.

wafl.offline.proc.file

Severity

NOTICE

Description

This message occurs when wafliron detects a failure while trying to perform an operation because a process has open files.

Corrective Action

No corrective action is required for this notification event.

Syslog Message

The '%s' process has '%u' file'%s' open.

Parameters

procname (STRING): Process name.

openfiles (INT): Number of open files.

plural (STRING): Plural.

wafl.offline.proc.file.unres

Severity

NOTICE

Description

This message occurs when wafliron detects a failure while trying to perform an operation because a process has unresolved open files.

Corrective Action

No corrective action is required for this notification event.

Syslog Message

Could not resolve '%u' of '%s's' open file names.

Parameters

openfiles (INT): Number of open files.

procname (STRING): Process name.

wafl.offline.quiesce.aborted

Severity

NOTICE

Description

This message occurs when wafliron detects a failure while waiting for a volume reference lock to be taken.

Corrective Action

No corrective action is required for this notification event.

Syslog Message

The wait for uses of '%s %s' to quiesce was aborted.

Parameters

voltype (STRING): Aggregate.

aggrname (STRING): Aggregate name.

wafl.offline.quiesced

Severity

NOTICE

Description

This message occurs when wafliron detects a success while waiting for a volume reference lock to be taken.

Corrective Action

No corrective action is required for this notification event.

Syslog Message

Uses of '%s %s' preventing '%s' have quiesced.

Parameters

voltype (STRING): Aggregate.

aggrname (STRING): Aggregate name.

operation (STRING): Operation.

wafl.offline.versionMismatch

Severity

EMERGENCY

Description

This message occurs when the system is inspecting an offline volume by reading the super block and discovers that there is a version mismatch.

Corrective Action

Confirm that the correct Data ONTAP® version is in use; if not, reboot or upgrade to the correct version as necessary. For more information or assistance, contact NetApp technical support.

Syslog Message

This version of Data ONTAP does not recognize the filesystem of offline %s %s%s%s%s. The volume is probably from a later version of the software.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

wafl.offline.volref.msg

Severity

NOTICE

Description

This message indicates the volume reference message that prevents the operation on an aggregate.

Corrective Action

No corrective action is required for this notification event.

Syslog Message

'%s' prevents '%s' of '%s %s'.

Parameters

volreftext (STRING): Volume reference message text.
operation (STRING): Operation.
voltype (STRING): Aggregate.
aggrname (STRING): Aggregate name.

wafl.ondemand events

wafl.ondemand.aggr.rsv.fail

Severity

ERROR

Description

This message occurs when Data ONTAP® fails to reserve space for a file operation due to lack of space on the aggregate.

Corrective Action

Create free space on the aggregate by either adding more disks or manually deleting data. If this condition persists, contact NetApp technical support for further assistance.

Syslog Message

Insufficient space on aggregate '%s %s' to perform file operation on volume '%s%s%s' (failed to re-create %s flexible space pool).

Parameters

owner (STRING): Owner of the aggregate.
aggr (STRING): Name of the aggregate.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
fsptype (STRING): Type of the flexible space pool.

wafl.ondemand.destroy.pending

Severity

NOTICE

Description

This message occurs when a file operation cannot be immediately destroyed because the destination file has been captured in one or more snapshots.

Corrective Action

Delete the snapshots that have captured the destination file.

Syslog Message

%s

Parameters

destroy_info (STRING): Status of the file operation.

wafl.ondemand.done

Severity

NOTICE

Description

This message occurs when a file operation is completed.

Corrective Action

(None).

Syslog Message

%s

Parameters

done_info (STRING): Status of the completed file operation.

wafl.ondemand.dst.fsize.exceeded

Severity

NOTICE

Description

This message occurs when the size of a file or LUN being moved or copied exceeds the maximum file or LUN size allowed by the system. The ondemand operation will fail for that particular file or LUN.

Corrective Action

(None).

Syslog Message

%s destination job %s-%d. %s %s%s%s%s, FSID 0x%x, The file operation with file ID %d has failed because the file size exceeded the maximum file size allowed on the current system, which is %lu bytes. The size of the file being copied or moved is %lu bytes.

Parameters

job_type (STRING): Operation type.

job_uuid (STRING): Unique ID (UUID) of the file operation source job.

file_index (INT): Unique identifier for the file in the source job.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume if the volume name itself is insufficient.

fsid (INT): File system identifier of the volume.

fileid (INT): File identifier.

maxsize (LONGINT): Maximum file size allowed on this system.

filesize (LONGINT): Size of the file being copied or moved.

wafl.ondemand.dstPresent

Severity

INFORMATIONAL

Description

This message occurs when a file shows up in the public name space of destination volume during file operation.

Corrective Action

(None).

Syslog Message

%s

Parameters

file_info (STRING): Destination file's UUID and index.

wafl.ondemand.errPaused

Severity

ALERT

Description

This message occurs when a file or LUN operation is paused due to an error condition.

Corrective Action

Based on the information in the event, resolve the problem that is causing the error condition, if possible. The operation is retried automatically on an hourly interval, or you can unpause the operation by using the appropriate command: file copy modify, file move modify, lun copy resume, or lun move resume. If the error condition persists, contact NetApp technical support.

Syslog Message

%s

Parameters

error_info (STRING): Error information for the paused operation.

wafl.ondemand.jobLookupFailed

Severity

ERROR

Description

This message occurs when an ondemand msg returns an error and, upon trying to check if snapshots are fenced during the cleanup process, cannot find the associated job.

Corrective Action

Check if snapshots can be taken on the volume. If not, try to abort the previous job using either 'file copy destroy' or 'file move destroy'. If neither suggestions are successful, contact technical support for assistance.

Syslog Message

OnDemand lookup job failed: %s

Parameters

job_lookup_info (STRING): Information regarding the OnDemand msg.

wafl.ondemand.metafileErr

Severity

ERROR

Description

This message occurs when the special-purpose metafile that Data ONTAP® creates to store information on file operations cannot be read. The volume has been left offline as a consequence.

Corrective Action

Issue the 'volume online' command to attempt to bring the affected volume back online. If this condition persists, contact NetApp technical support for further assistance.

Syslog Message

OnDemand metafile load error, volume '%s%s%s': %s

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

error_info (STRING): Error information.

wafl.ondemand.repaired.metafile

Severity

ERROR

Description

This message occurs when an inconsistency is discovered in the OnDemand metafile header or entry. The inconsistency is automatically repaired upon detection.

Corrective Action

(None).

Syslog Message

%s certification failed: %s, %s, %s, %s, %s, fbn (%llu), record_index (%llu)

Parameters

fh (STRING): File handle of ondemand metafile which is repaired.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

condition (STRING): The initial metadata validation test that failed.

source (STRING): The location of the failing metadata validation test.

fbn (LONGINT): File block number (fbn) of the repaired block.

record_index (LONGINT): Index of the record entry in the repaired block.

wafl.ondemand.space.rsv.fail

Severity

ERROR

Description

This message occurs when Data ONTAP® fails to reserve space for a file operation due to lack of space on the volume.

Corrective Action

Manually delete data to create free space on the volume, and then modify the job to unpause the data scanner by using the "volume file [copy|move] modify -job-uuid <job_uuid> -file-index <file_index> -scanner -paused false" command. If this condition persists, contact NetApp technical support for further assistance.

Syslog Message

Insufficient space on '%s%s%s' to perform file operation %s-%d (failed to re-create %s flexible space pool).

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

job_uuid (STRING): Unique ID (UUID) of the file operation.

file_index (INT): Unique identifier for the file in the job.

fsptype (STRING): Type of the flexible space pool.

wafl.ondemand.srcJobRecFail

Severity

ERROR

Description

This message occurs when the system fails to repair a corrupted record in the special-purpose metafile that holds information about file operations.

Corrective Action

The source job recovery will be reattempted the next time the volume comes online. To explicitly reattempt the recovery, take the source volume offline and then bring it back online. If this error condition persists, contact NetApp technical support.

Syslog Message

Volume %s%s%s: %s

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

result (STRING): Result of the failed recovery.

wafl.ondemand.srcJobRecovery

Severity

NOTICE

Description

This message occurs when the system repairs a corrupted record in the special-purpose metafile that holds information about file operations. If the file operation associated with the recovered source job is still in progress, the file operation can be resumed. Otherwise, the original source file can be recovered to lost+found by using the "file source recover" command.

Corrective Action

(None).

Syslog Message

Recovered file operation source job %s-%d in volume "%s%s%s".

Parameters

job_uuid (STRING): Unique ID (UUID) of the file operation source job.

file_index (INT): Unique identifier for the file in the source job.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.ondemand.srcRecovered

Severity

INFORMATIONAL

Description

This message occurs when a file operation source recovery is completed.

Corrective Action

(None).

Syslog Message

Recovered %s source job %s-%d to {DSID:%d:%s}.

Parameters

type (STRING): Operation type.

job_uuid (STRING): Unique ID (UUID) of the file operation source job.

file_index (INT): Unique identifier for the file in the source job.

dsid (INT): Data set identifier (DSID) of the volume where the recovery was performed.

path (STRING): Path to the recovered object.

wafl.ondemand.started

Severity

NOTICE

Description

This message occurs when an OnDemand file or LUN operation is started. The "operation_info" parameter contains information on the type and identity of the started operation.

Corrective Action

(None).

Syslog Message

OnDemand operation started: %s

Parameters

operation_info (STRING): Initial status of the OnDemand operation.

wafl.ondemand.volBusy

Severity

ERROR

Description

This message occurs when a volume operation fails because the volume is the source or destination of one or more file operations. Continuing with the volume operation could potentially disrupt file operations.

Corrective Action

Make sure that file operations are making progress, and if they are paused unpause them. Retry the volume operation after the completion of the file operations.

Syslog Message

Volume %s%s%s can not be offline, until all pending file operations are completed.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.online events

wafl.online.admin.vol

Severity

INFORMATIONAL

Description

This message occurs when a cluster admin volume comes online during MetroCluster™ switchover.

Corrective Action

None.

Syslog Message

Cluster admin volume %s DSID (%08x) in aggregate %s is online.

Parameters

vol (STRING): Name of the volume.

dsid (LONGINT): Unique identifier (DSID) of the volume.

aggr (STRING): Name of the containing aggregate.

wafl.online.fail.vmalign

Severity

EMERGENCY

Description

This message occurs when a virtual volume cannot be brought online because it has the 'vm-align' option set, which is not supported in this release of Data ONTAP®.

Corrective Action

Install a version of Data ONTAP that supports the 'vm-align' option, available from your vendor.

Syslog Message

Volume '%s%s%s%' is being taken offline because it has the 'vm-align' option set, which is not supported in this version of Data ONTAP.

Parameters

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.online.infoError

Severity

ALERT

Description

This message occurs when there is a problem reading the volinfo or fsinfo data while trying to mount an online volume.

Corrective Action

(Call support).

Syslog Message

Neither volinfo block of %s %s%s%s%s is valid OR the fsinfo block is invalid.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

wafl.online.mode.corrupted

Severity

ALERT

Description

This event is issued when there is an inconsistency in the mode bits that indicate whether this volume is in a clustered or nonclustered environment.

Corrective Action

Run wafliron on the containing aggregate to fix up the mode bits.

Syslog Message

The mode bits that indicate whether the %s "%s' volume is in a clustered or nonclustered environment are inconsistent.

Parameters

type (STRING): Type of object (flexible volume).

vol (STRING): Name of the flexible volume.

wafl.online.notCompatibleVer

Severity

EMERGENCY

Description

This message occurs when a volume or aggregate cannot be brought online because SnapLock® is not supported on this version of Data ONTAP®.

Corrective Action

Install a version of Data ONTAP that is supported with SnapLock, available from your vendor.

Syslog Message

%s %s%s%s%s is being taken offline. SnapLock is not supported on this version of Data ONTAP.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

wafl.online.toomany

Severity

ALERT

Description

This message occurs when an attempt to bring a volume online fails because the maximum number of volumes are already online for this node.

Corrective Action

Take a currently mounted volume on this node offline so that you can bring the new volume online.

Syslog Message

%s %s%s cannot be brought online because the maximum online count has been reached.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

wafl.online.unknownVersion

Severity

ALERT

Description

This message occurs when mounting an online volume reveals that the volume version is not recognized by the current version of Data ONTAP®.

Corrective Action

Confirm that the correct Data ONTAP version is in use; if not, reboot or upgrade to the correct version as necessary. For more information or assistance, contact NetApp technical support.

Syslog Message

This version of Data ONTAP does not recognize the filesystem of %s %s%s%s%s. The volume is being taken offline.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

wafl.online.unsup.deployment

Severity

ALERT

Description

This message occurs when the system determines that the deployment in which this aggregate was created does not match the current (clustered or nonclustered) deployment of Data ONTAP®.

Corrective Action

Bring the aggregate online on a node that matches the clustered or nonclustered deployment in which it was created.

Syslog Message

This deployment of Data ONTAP does not support the file system of '%s %s'. It is being taken offline.

Parameters

type (STRING): Type of object (aggregate).

vol (STRING): Name of the aggregate.

wafl.online.vbnMismatch

Severity

EMERGENCY

Description

This message occurs when there is an error in the block number data associated with a volume, for example, if WAFL® and RAID have different values for the size of the volume.

Corrective Action

Run wafliron on the volume. For more information or assistance, contact NetApp technical support.

Syslog Message

There is a block number error in either the fsinfo block or disk labels on %s %s%s%s%s. The volume is being taken offline.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

wafl.onoff events

wafl.onOff.mirType.inv

Severity

ERROR

Description

This message occurs when WAFL® attempts to bring online or take offline a mirror volume that does not have a valid mirror-type attribute. This situation might be a direct result of an upgrade to a version of Data ONTAP® that requires the mirror-type attribute or as a result of a corruption.

Corrective Action

This condition cannot be fixed by file system repair mechanisms such as wafliron. The data is not lost, but it is inaccessible to the administrator. To access the data, contact NetApp technical support. Alternatively, the administrator can destroy the mirror volume by using the 'volume delete -vserver vserver_name -volume vol_name' command.

Syslog Message

The mirror type associated with the mirror volume %s %s%s%s%s is invalid.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name by itself is insufficient.

wafl.playlist events

wafl.playlist.bad_fh

Severity

INFORMATIONAL

Description

This event indicates bad playlist file handle

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggr_name (STRING): Aggregate name

vol_name (STRING): Volume name

wafl.playlist.create.failure

Severity

INFORMATIONAL

Description

This event indicates that playlist creation failed.

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggr_name (STRING): Aggregate name

vol_name (STRING): Volume name

wafl.playlist.no_playlist

Severity

INFORMATIONAL

Description

This event indicates no playlist was found for a volume

Corrective Action

(None).

Syslog Message

(None).

Parameters

aggr_name (STRING): Aggregate name
vol_name (STRING): Volume name

wafl.pnso events

wafl.pnso.offload.engine.error

Severity

ALERT

Description

This message occurs when hardware offload engine requests failed with EIO error.

Corrective Action

Contact NetApp technical support.

Syslog Message

%s [%d]

Parameters

msg (STRING): Error message to be displayed.
err (INT): Error code received.

wafl.pvbn events

wafl.pvbn.check.done

Severity

INFORMATIONAL

Description

This event is issued to inform the user that the pvbn check has completed. It lists detailed information on what work was performed.

Corrective Action

This message may be disabled by passing -s to wafl scan pvbn_check when starting the scanner.

Syslog Message

PVBN check has completed on %s, snapid %d. inos: %d, pvbns: %llu, unks: %llu, errs: %llu.

Parameters

vol (STRING): The volume name
snapid (INT): ID of the snapshot that has been completely scanned
inos (INT): How many inodes were checked
pvbns (LONGINT): How many block pointers were checked
unks (LONGINT): How many pvbn unknowns were encountered
errs (LONGINT): How many pvbn mismatches were encountered

wafl.pvbn.check.found.mismatch

Severity

EMERGENCY

Description

This event is issued to inform the user that the pvbn check has found a pvbn mismatch.

Corrective Action

This message may be disabled by passing -s to wafl scan pvbn_check when starting the scanner.

Syslog Message

PVBN check has found a pvbn mismatch on %s, snapid=%d, %s ino=%d, level=%d, fbn=%llu, index=%d, pvbn=%llu, pvbn2=%llu.

Parameters

vol (STRING): The volume name

snapid (INT): ID of the snapshot being scanned

ino_type (STRING): The inode type

inum (INT): Inum being scanned

level (INT): Level of the buftree being scanned

fbn (LONGINT): Block number containing unknown

index (INT): Index in block that is unknown

pvbn (LONGINT): PVBN as found in the buftree

pvbn2 (LONGINT): PVBN as found in the container indirect

wafl.pvbn.check.found.unknown

Severity

NOTICE

Description

This event is issued to inform the user that the pvbn check has found a pvbn unknown.

Corrective Action

This message may be disabled by passing -s to wafl scan pvbn_check when starting the scanner.

Syslog Message

PVBN check has found a pvbn unknown on %s, snapid=%d, %s ino=%d, level=%d, fbn=%llu, index=%d.

Parameters

vol (STRING): The volume name

snapid (INT): ID of the snapshot being scanned

ino_type (STRING): The inode type

inum (INT): Inum being scanned

level (INT): Level of the buftree being scanned

fbn (LONGINT): Block number containing unknown

index (INT): Index in block that is unknown

wafl.pvbn.check.no.snapshot

Severity

INFORMATIONAL

Description

This event is issued to inform the user that the snapshot being scanned by the pvbn checker no longer exists.

Corrective Action

This message may be disabled by passing -s to wafl scan pvbn_check when starting the scanner.

Syslog Message

PVBN check on %s aborted, snapshot with snapid %d is gone.

Parameters

vol (STRING): The volume name

snapid (INT): ID of the snapshot that no longer exists

wafl.qat events

wafl.qat.offload.engine.error

Severity

ALERT

Description

This message occurs when hardware offload engine (QAT) has failed to process a request.

Corrective Action

Contact NetApp technical support.

Syslog Message

%s [%d]

Parameters

msg (STRING): Error message to be displayed.

err (INT): Error code received.

wafl.qtree events

wafl.qtree.id.mismatch

Severity

ERROR

Description

This message occurs when a qtree ID derived from a WAFL® buffer does not match the given tree ID in a Snapshot(tm) copy.

Corrective Action

Delete the Snapshot copy containing the qtree for non SnapMirror® DP volumes. For SnapMirror DP volumes, run wafliron with the "-include-mirrors" option set to true to fix the entry. For example, run the "wafliron start -aggr aggr_name -include-mirrors true" command, where aggr_name is the aggregate for the given volume.

Syslog Message

Qtree ID %d is recorded as ID %d in %s %s%s%s in Snapshot copy %d.

Parameters

tid (INT): Source tree identifier.

id (INT): Qtree root identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

snapId (INT): Snapshot copy identifier.

wafl.qtree.invalid.state

Severity

ERROR

Description

This message occurs when the qtree file in a Snapshot(tm) copy is in an invalid state.

Corrective Action

Delete the Snapshot copy containing the qtree for non SnapMirror® DP volumes. For SnapMirror DP volumes, run wafliron with the "-include-mirrors" option set to true to fix the entry. For example, run the "wafliron start -aggr aggr_name -include-mirrors true" command, where aggr_name is the aggregate for the given volume.

Syslog Message

Qtree file in %s %s%s%s is in an invalid state %d in Snapshot copy %d.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume in cases in which the volume name alone is insufficient.

reason (INT): State of the qtree file.

snapId (INT): Snapshot copy identifier.

wafl.qtree.metafile.corrupt

Severity

ERROR

Description

This message occurs when the qtree metafile in a Snapshot(tm) copy is inconsistent.

Corrective Action

Run wafliron to fix the inconsistent volume. Use the "-include-mirrors" option if the volume is a SnapMirror® DP volume. For example, run the "wafliron start -aggr aggr_name -include-mirrors true" command, where aggr_name is the aggregate for the given volume.

Syslog Message

Qtree metafile inconsistent in volume %s%s%s, Snapshot copy %d.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume in cases in which the volume name alone is insufficient.

snapId (INT): Snapshot copy identifier.

wafl.qtree.qsmBreak.base

Severity

ERROR

Description

This message occurs when the SnapMirror® information of the qtree is being removed as result of WAFL_check operation.

Corrective Action

Use the "snapmirror resync" or "snapmirror initialize" to reestablish the SnapMirror relationship.

Syslog Message

Breaking SnapMirror qtree %d in %s %s%s%s%s: base Snapshot(tm) copy no longer exists. Use the "snapmirror resync" or "snapmirror initialize" to reestablish the SnapMirror relationship.

Parameters

qtree (INT): Qtree identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.qtree.qsmBreak.iron

Severity

ERROR

Description

This message occurs when the SnapMirror® information of the qtree is being removed as result of a wafliron operation.

Corrective Action

Use the "snapmirror resync" or "snapmirror initialize" command to reestablish the SnapMirror relationship.

Syslog Message

Breaking SnapMirror qtree %d in %s %s%s%s%s: wafliron broke all SnapMirror relationships in %s %s%s%s%s. Use the "snapmirror resync" or "snapmirror initialize" command to reestablish the SnapMirror relationship.

Parameters

qtree (INT): Qtree identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident1 (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

type2 (STRING): Type of object (volume or aggregate).

owner2 (STRING): Volume owner.

vol2 (STRING): Volume name.

app2 (STRING): Application UUID.

volident2 (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.qtree.qsmBreak.wc

Severity

ERROR

Description

This message occurs when snapmirror information of the qtree is being removed as result of wack

Corrective Action

Use the "snapmirror resync" or "snapmirror initialize" command to reestablish the SnapMirror relationship.

Syslog Message

Breaking SnapMirror qtree %d in %s %s%s%s%s: WAFL_check broke all SnapMirror relationships in %s %s%s%s%s. Use the "snapmirror resync" or "snapmirror initialize" command to reestablish the SnapMirror relationship.

Parameters

qtree (INT): Qtree identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident1 (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

type2 (STRING): Type of object (volume or aggregate).

owner2 (STRING): Volume owner.

vol2 (STRING): Volume name.

app2 (STRING): Application UUID.

volident2 (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.quota events

wafl.quota.control.inconsistent

Severity

ERROR

Description

This message occurs when the quota control file is inconsistent, or when it is consistent but the qtree metadata file refers to a vFiler(tm) unit that no longer exists.

Corrective Action

Reinitialize quotas for the volume.

Syslog Message

Quota: /vol/%s%s%s or a quota tree on it referred to a nonexistent vFiler unit. Quota: Quotas have been turned off.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.quota.control.invalid

Severity

ERROR

Description

This message occurs when the system discovers that an invalid quota control file exists.

Corrective Action

Reinitialize quotas for the volume.

Syslog Message

Quota: Invalid quota control file on %s %s%s%s%s. Quota: Quotas have been turned off.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.quota.db.createFail

Severity

NOTICE

Description

This message occurs when the system cannot create the quota database file.

Corrective Action

(None).

Syslog Message

Quota: Could not create the quota database on %s %s%s%s%s (volume might be full).

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.quota.db.missing

Severity

ERROR

Description

This message occurs when the system is unable to locate a quota usage database.

Corrective Action

Reinitialize quotas for the volume.

Syslog Message

WAFL: No quota usage database on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.quota.db.noMemory

Severity

ERROR

Description

This message occurs when the system cannot allocate the quota usage database during initialization.

Corrective Action

Add more memory or upgrade the hardware.

Syslog Message

WAFL: Could not obtain memory during load of quota usage database. The quota system was not started on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.quota.db.scanFailed

Severity

ERROR

Description

This event is issued when the system tries and fails to start the scanner necessary to complete a "quota on" command.

Corrective Action

Quota initialization has failed due to lack of resources. Re-running a "quota on" after some time should solve the problem.

Syslog Message

wafl: quota initialization could not be started on %s %s%s%s%s due to lack of resources. Please wait and re-run "quota on".

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.quota.group.exceeded

Severity

NOTICE

Description

This event is issued when a group quota has been exceeded on a volume. This event will not be repeated for this group for a set time for until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage by members of this group on this volume or increase the quota and run 'quota resize'.

Syslog Message

gid %d: disk quota exceeded on volume %s%s%s%s. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

id (INT): The group identifier

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

mins (INT): Number of minutes warnings will be suppressed

wafl.quota.groupQtree.correct

Severity

NOTICE

Description

This message occurs when a group quota has been corrected.

Corrective Action

(None).

Syslog Message

(None).

Parameters

id (INT): Group identifier.

tid (INT): Qtree identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume in cases in which the volume name alone is insufficient.

vwarn (STRING): vFiler warning suffix.

wafl.quota.groupQtree.exceeded

Severity

NOTICE

Description

This event is issued when a group quota has been exceeded on a tree. This event will not be repeated for this group and tree for a set time or until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage by members of this group in this tree or increase the quota and run 'quota resize'.

Syslog Message

gid %d tid %d: disk quota exceeded on volume %s%s%s%.s. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

id (INT): The group identifier

tid (INT): The tree identifier

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
mins (INT): Number of minutes warnings will be suppressed

wafl.quota.names.createFail

Severity

NOTICE

Description

This message occurs when the system cannot create the quota names file.

Corrective Action

(None).

Syslog Message

quota: Could not create new quota names file on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.quota.ntfs.defaultAclFail

Severity

NOTICE

Description

This message indicates that the system was unable to set the default ACL on an NTFS volume.

Corrective Action

Set the security style to NTFS again or re-create the volume.

Syslog Message

Unable to set default ACL on NTFS %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.quota.off.vol.fail

Severity

ERROR

Description

This message occurs when the system could not turn off quotas on the volume.

Corrective Action

Use the 'quota off' command to turn off quotas on the volume.

Syslog Message

Quotas could not be turned off on volume %s%.

Parameters

owner (STRING): Owner of the volume

vol (STRING): Name of the volume

wafl.quota.qtree.correct

Severity

NOTICE

Description

This message occurs when a tree quota has been corrected.

Corrective Action

(None).

Syslog Message

(None).

Parameters

tid (INT): Qtree identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume in cases in which the volume name alone is insufficient.

vfwarn (STRING): vFiler warning suffix.

wafl.quota.qtree.exceeded

Severity

NOTICE

Description

This event is issued when a tree quota has been exceeded on a volume. This event will not be repeated for this tree for a set amount of time or until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage in this tree or increase the quota and run 'quota resize'.

Syslog Message

tid %d: tree quota exceeded on %s %s%s%s%s. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

tid (INT): The tree identifier
type (STRING): The type of object (volume/aggregate)
owner (STRING): The volume owner
vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
mins (INT): Number of minutes warnings will be suppressed
object_uuid (STRING): Volume instance UUID of the resource object.

wafl.quota.sec.change

Severity

INFORMATIONAL

Description

This message indicates that the security style for a directory has been changed.

Corrective Action

(None).

Syslog Message

security style for /vol/%s%s%s/%s changed from %s to %s

Parameters

vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.
dir (STRING): Directory name.
ostyle (STRING): Former security style.
nstyle (STRING): New security style.

wafl.quota.user.exceeded

Severity

NOTICE

Description

This event is issued when a user quota has been exceeded on a volume. This event will not be repeated for this user and volume for a set time or until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage by this user on this volume or increase the quota and run 'quota resize'.

Syslog Message

uid %d: disk quota exceeded on volume %s%s%s%s. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

id (INT): The user identifier
owner (STRING): The volume owner
vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
mins (INT): Number of minutes warnings will be suppressed

wafl.quota.user.exceeded.win

Severity

NOTICE

Description

This event is issued when a user quota has been exceeded on a volume. This event will not be repeated for this user and volume for a set time or until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage by this user on this volume or increase the quota and run 'quota resize'.

Syslog Message

disk quota exceeded on volume %s%s%s for Windows user ID: %s. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

owner (STRING): The volume owner
vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
id (STRING): Windows user identifier
mins (INT): Number of minutes warnings will be suppressed

wafl.quota.userQtree.correct

Severity

NOTICE

Description

This message occurs when a user quota has been corrected.

Corrective Action

(None).

Syslog Message

(None).

Parameters

id (INT): User identifier.
tid (INT): Qtree identifier.
type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume in cases in which the volume name alone is insufficient.

vfwarn (STRING): vFiler warning suffix.

wafl.quota.userQtree.correct.win

Severity

NOTICE

Description

This message occurs when a user quota has been corrected and the user ID is a SID.

Corrective Action

(None).

Syslog Message

(None).

Parameters

id (STRING): Windows identifier value.

tid (INT): Qtree identifier.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume in cases in which the volume name alone is insufficient.

vfwarn (STRING): vFiler warning suffix.

wafl.quota.userQtree.exceeded

Severity

NOTICE

Description

This event is issued when a user quota has been exceeded on a tree. This event will not be repeated for this user and tree for a set time or until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage by this user in this tree or increase the quota and run 'quota resize'.

Syslog Message

uid %d tid %d: disk quota exceeded on volume %s%s%s%. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

id (INT): The user identifier

tid (INT): The tree identifier

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

mins (INT): Number of minutes warnings will be suppressed

wafl.quota.userQtree.exceeded.win

Severity

NOTICE

Description

This event is issued when a user quota has been exceeded on a tree. This event will not be repeated for this user and tree for a set time or until a 'quota resize' is performed. The amount of time is set by the 'quota logmsg' command.

Corrective Action

Reduce usage by this user in this tree or increase the quota and run 'quota resize'.

Syslog Message

tid %d: disk quota exceeded on volume %s%s%s%s for Windows user ID: %s. Additional warnings will be suppressed for approximately %d minutes or until a 'quota resize' is performed.

Parameters

tid (INT): The tree identifier

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

id (STRING): Windows user identifier

mins (INT): Number of minutes warnings will be suppressed

wafl.raid events

wafl.raid.cft.aggr.snapshot.missing

Severity

ERROR

Description

This message occurs during an aggregate transition workflow when an aggregate Snapshot® copy created in a 7-Mode environment is missing.

Corrective Action

Return the disks to the 7-Mode environment, create the Snapshot copy for the aggregate, and then repeat the transition workflow.

Syslog Message

Aggregate transition failed for aggregate %s due to unavailability of the 7-Mode aggregate snapshot.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.raid.incons.buf

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects an inconsistent block on a disk. Access to the block is disabled until corrective action is taken.

Corrective Action

Use the "volume file show-inode" command with the file ID and volume name information to find the file path. If the volume is inconsistent, run wafliron as soon as possible to clear the inconsistency. For a SnapMirror® target, rebuild from the source or resynchronize. If the block is in a Snapshot copy, delete the Snapshot copy. If the problem persists, contact NetApp technical support for more options.

Syslog Message

WAFL inconsistent: bad block at VBN %llu (vvbn:%llu fbn:%llu level:%u) in %s inode (fileid:%s snapid:%u fixable:%d file_type:%d disk_flags:0x%x error:%u raid_set:%d) in volume %s%s%s%s.

Parameters

vbn (LONGINT): Volume block number.

vvbn (LONGINT): Virtual block number.

fbn (LONGINT): File block number.

level (INT): Buffer level.

file_space (STRING): File space.

fileid (STRING): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

fixable (INT): Boolean value indicating whether iron can repair this block.

type (INT): File type.

flags (LONGINT): Inode disk flags.

error (INT): Error on the block.

raid_set (INT): Boolean indicating whether RAID set the error.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.raid.incons.clear.error

Severity

NOTICE

Description

This message occurs when Data ONTAP® resets the error on a data block.

Corrective Action

Contact NetApp technical support.

Syslog Message

Resetting error (%u) on data block in %s inode (fileid:%u snapid:%u fbn:%llu level:%u) in volume %s%s%s%s

Parameters

error (INT): Error number that was reset.
inotype (STRING): Inode space (public or private).
fileid (INT): Identifying number for the inode.
snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy
fbn (LONGINT): File block number.
level (INT): Buffer level.
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.

wafl.raid.incons.dir.block

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects an inconsistent directory block on disk, causing some entries on the directory not to appear. The message indicates the fileid and Snapshot(tm) copy of the block being accessed.

Corrective Action

The volume has a bad directory block. Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Recover the directory from a backup. For a SnapMirror® target, rebuild from the source or resynchronize. If the block is in a Snapshot copy, delete the Snapshot copy. Then contact NetApp technical support.

Syslog Message

WAFL inconsistent: bad directory block in inode (fileid:%u snapid:%u) in volume %s%s%s%s.

Parameters

fileid (INT): Identifying number for the suspect inode
snapid (INT): Snapshot copy identifier: (0) - active file system. (non-zero) - refers to Snapshot copy.
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.raid.incons.set.err.obj

Severity

ALERT

Description

This message occurs when Data ONTAP® marks a block in a capacity tier object with an error. This is useful for tracking movement of pseudobad and unverified blocks.

Corrective Action

Contact NetApp technical support..

Syslog Message

Data block at VBN %llu tiered to capacity tier (objid %llu, slot %u, btuuid %s, seqno %llu) and marked with error (%u). Block previously had error (%u).

Parameters

vbn (LONGINT): Volume block number.
object_id (LONGINT): Object identifier.
slot (INT): Slot number.
btuuid (STRING): Buftree UUID.
seqno (LONGINT): Sequence number.
error (INT): Error on the block.
prev_error (INT): Previous error on the block.

wafl.raid.incons.set.error

Severity

ALERT

Description

This message occurs when Data ONTAP® marks an on-disk data block with an error. This is useful for tracking pseudo bad and unverified blocks.

Corrective Action

Contact NetApp technical support.

Syslog Message

Data block in %s inode (fileid: %u snapid: %u fbn: %llu level: %u) in volume %s%s%s%s marked with error (%u) by %s. Block previously had error (%u).

Parameters

inotype (STRING): Inode space (public or private).
fileid (INT): Identifying number for the inode.
snapshot (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy
fbn (LONGINT): File block number.
level (INT): Buffer level.
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.
error (INT): Error on the block.
module (STRING): Module that is marking the block with the error.
prev_error (INT): Previous error on the block.

wafl.raid.incons.snapmap

Severity

NOTICE

Description

This message occurs when WAFL detects a RAID inconsistency error in a snapmap block. The message recommends to delete the snapshot in which inconsistent snapmap resides.

Corrective Action

(None).

Syslog Message

Snapshot(**snapshotid %u**) block accounting metadata is corrupted. To avoid trapping unnecessary blocks in the snapshot, please delete the snapshot.

Parameters

snapshotid (INT): Snapshot copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

wafl.raid.incons.snapmap.chk

Severity

NOTICE

Description

This message occurs when the WAFL® kernel detects a RAID inconsistency error in a Snapshot(tm) copy active map block, even though the block content passes a metadata check.

Corrective Action

Contact NetApp technical support.

Syslog Message

(None).

Parameters

fbn (LONGINT): File block number.

level (INT): Buffer level.

snapshotid (INT): Snapshot copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.

wafl.raid.incons.snapshot

Severity

ERROR

Description

This message occurs when WAFL® detects a RAID inconsistency error in a snapshot. The message indicates what snapshots have the inconsistent block, and how to recover from the inconsistency.

Corrective Action

Delete the specified snapshot(s) during the next reboot, either by using the boot menu command 'boot_snap_delete' or by using the CLI command 'vol online -r'.

Syslog Message

VBN %llu has RAID inconsistency errors on volume %s. This block is in use by one or more snapshots. These snapshots should be deleted in the next boot. The affected snapshot IDs are: %s.

Parameters

vbn (LONGINT): Virtual block number.
volname (STRING): Name of the volume.
snapstring (STRING): The string containing the list of snapid(s) of the snapshots that have the inconsistent blocks.

wafl.raid.incons.ssd.cached.buf

Severity

NOTICE

Description

This message occurs when the WAFL® kernel detects an inconsistent cached block on a ssd disk in a hybrid aggregate. Any access to this block will result in the io getting redirected to the source location on hdd disk.

Corrective Action

An error on a cached ssd block will not result in bad data being served to the reader: the io will be redirected to hdd and the correct data will be served. So, no corrective action is necessary for this case. But, if there are many errors on data cached on ssd disks, then the ssd disks may be verified for disk consistency.

Syslog Message

WAFL inconsistent: bad cached ssd block %llu (vvbn:%llu fbn:%llu level:%u) in %s inode (fileid:%s snapid:%u file_type:%d disk_flags:0x%x error:%u) in volume %s%s%s%s. IO will be redirected to the source hdd block %llu.

Parameters

vbn (LONGINT): Volume SSD block number.
vvbn (LONGINT): Virtual block number.
fbn (LONGINT): File block number.
level (INT): Buffer level.
file_space (STRING): File space: private or public.
fileid (STRING): Identifying number for the inode.
snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy
type (INT): File type.
flags (LONGINT): Inode disk flags.
error (INT): Error on the block.
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.
hdd_vbn (LONGINT): Volume HDD block number.

wafl.raid.incons.userdata

Severity

ERROR

Description

This message occurs when the WAFL® kernel detects an inconsistent user data block on a disk. Access to this block is disabled until you recover it from a backup.

Corrective Action

The volume has an inconsistent user data block. Use the "volume file show-inode" command with the file ID and volume name information to find the file path. Recover the file from a backup. For a SnapMirror® target, rebuild from the source or resynchronize. If the block is in a Snapshot(tm) copy, delete the Snapshot copy. Contact NetApp technical support for more options.

Syslog Message

WAFL inconsistent: inconsistent user data block at VBN %llu (vvbn:%llu fbn:%llu level:%u) in %s inode (fileid:%s snapid:%u file_type:%d disk_flags:0x%x error:%u raid_set:%d) in volume %s%s%s%s.

Parameters

vbn (LONGINT): Volume block number.

vvbn (LONGINT): Virtual block number.

fbn (LONGINT): File block number.

level (INT): Buffer level.

file_space (STRING): File space.

fileid (STRING): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

type (INT): File type.

flags (LONGINT): Inode disk flags.

error (INT): Error on the block.

raid_set (INT): Boolean indicating whether RAID set the error.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.raid.incons.xidata

Severity

EMERGENCY

Description

This message occurs when the WAFL® kernel detects an inconsistent extended inode data block on disk.

Corrective Action

Contact NetApp technical support.

Syslog Message

WAFL inconsistent: bad extended inode data block at VBN %llu (vvbn:%llu fbn:%llu) in inode (fileid:%u snapid:%u disk_flags:0x%x error:%u raid_set:%d) in volume %s%s%s%s.

Parameters

vbn (LONGINT): Volume block number.

vvbn (LONGINT): Virtual block number.

fbn (LONGINT): File block number.

fileid (INT): Identifying number for the suspect inode.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

flags (LONGINT): Inode disk flags.

error (INT): Error on the block.

raid_set (INT): Boolean indicating whether RAID set the error.

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

inotype (STRING): Inode space (public or private).

wafl.rclm events

wafl.rclm.est.scan.done

Severity

NOTICE

Description

This message occurs when an attempt to estimate the space that can be reclaimed for the aggregate was completed successfully.

Corrective Action

(None).

Syslog Message

Estimate Reclaim Scanner done for %s with estimated free logical blocks=%llu, physical blocks=%llu, duration=%ld ms.

Parameters

aggr (STRING): Aggregate name.

logical_free_blk (LONGINT): Estimated number of reclaimable logical blocks found by the scanner.

physical_free_blk (LONGINT): Estimated number of reclaimable physical blocks found by the scanner.

run_time (LONGINT): Duration of the scan in milliseconds.

wafl.readdir events

wafl.readdir.expired

Severity

ERROR

Description

This message occurs when a REaddir file operation has exceeded the timeout that it is allowed to run in WAFL. This can be the result of very large or sparse directories, and corrective action is recommended.

Corrective Action

You can find information specific to recent directories that have had REaddir file operations expire by using the 'diag' privilege nodeshell CLI command: "wafl readdir notice show" If a directory is indicated as sparse, it is recommended that you copy the contents of the directory to a new directory to remove the sparseness of the directory file. If a directory is not indicated as sparse and the directory is large, it is recommended that you reduce the size of the directory file by reducing the number of file entries in the directory.

Syslog Message

A REaddir file operation has expired for the directory associated with volume "%s%s/%s" Snapshot copy ID %d and inode %d.

Parameters

volume (STRING): Volume name that the directory is in.
app (STRING): Application universal unique identifier (UUID).
volident (STRING): Volume identifier to uniquely identify the volume in cases where the volume name alone is insufficient.
snapid (LONGINT): Snapshot(tm) copy ID that the directory is in.
directory_inum (LONGINT): The inode number (file ID) of the directory.
object_uuid (STRING): Volume instance UUID of the resource object.

wafl.readdir.sparse

Severity

NOTICE

Description

This message occurs when a REaddir file operation detects that a directory is sparse while iterating over its directory entries. Iterating over sparse directories could negatively impact performance on the node.

Corrective Action

You can find information specific to directories that have had REaddir file operations detect a sparse directory by using the 'diag' privilege nodeshell CLI command: "wafl readdir notice show" It is recommended that you copy the contents of the directory to a new directory to remove the sparseness of the directory file.

Syslog Message

A REaddir file operation has detected that a directory associated with volume %s%s/%s Snapshot ID %d and inode %d is sparse.

Parameters

volume (STRING): Volume name that the directory is in.
app (STRING): Application UUID.
volident (STRING): Volume identifier to uniquely identify the volume in cases where the volume name alone is insufficient.
snapid (LONGINT): Snapshot(tm) copy ID the that the directory is in.
directory_inum (LONGINT): The inode number (fileid) of the directory.

wafl.reallocate events

wafl.reallocate.aggr.interrupt

Severity

INFORMATIONAL

Description

This message occurs when an aggregate reallocation scan is interrupted. The scan was scheduled using the 'reallocate -A' command.

Corrective Action

None required.

Syslog Message

Aggregate reallocation scan on '%s' was interrupted.

Parameters

path (STRING): Scan path.

wafl.reallocate.check.high

Severity

INFORMATIONAL

Description

This event is issued if an allocation check scan (issued before reallocation starts) returns indicating that the path requires reallocation.

Corrective Action

None required. The reallocation scan will automatically be started.

Syslog Message

Allocation check on '%s' is %d, hotspot %d (threshold %d), so will reallocate.

Parameters

path (STRING): The scan path

optim (INT): The current optimization of the path

hot_spot (INT): The current hot-spot optimization of the path

threshold (INT): The reallocation threshold of the path

wafl.reallocate.check.highAdvise

Severity

INFORMATIONAL

Description

This event is issued if an allocation check scan returns indicating that the path would benefit from reallocation.

Corrective Action

Consider reallocating the path (see na_reallocate(1))

Syslog Message

Allocation check on '%s' is %d, hotspot %d (threshold %d), consider running reallocate.

Parameters

path (STRING): The scan path

optim (INT): The current optimization of the path

hot_spot (INT): The current hot-spot optimization of the path

threshold (INT): The reallocation threshold of the path

wafl.reallocate.check.value

Severity

INFORMATIONAL

Description

This event is issued to report the optimization of a path.

Corrective Action

None required.

Syslog Message

Allocation measurement check on '%s' is %d.

Parameters

path (STRING): The scan path

optim (INT): The path optimization.

wafl.reallocate.full.done**Severity**

INFORMATIONAL

Description

This event is issued to report the completion of a full, one-time, reallocation scan.

Corrective Action

None required.

Syslog Message

Full reallocation on '%s' is complete.

Parameters

path (STRING): The scan path

wafl.reallocate.full.interrupt**Severity**

INFORMATIONAL

Description

This event is issued to report that a full, one-time, reallocation scan was interrupted.

Corrective Action

None required.

Syslog Message

Full reallocation on '%s' was interrupted.

Parameters

path (STRING): The scan path

wafl.reallocate.path.invalid

Severity

ERROR

Description

This event is issued if an invalid scan path is detected.

Corrective Action

Check why the scan path is invalid, including file removal or volume offline. If the condition is persistent remove the associated reallocation scan.

Syslog Message

Unavailable/invalid reallocation path '%s' detected.

Parameters

path (STRING): The scan path

wafl.reallocate.recheck.ok

Severity

INFORMATIONAL

Description

This event is issued if an allocation recheck scan (issued after reallocation has completed) returns indicating the optimization is under the threshold.

Corrective Action

None required.

Syslog Message

Allocation check on '%s' is under threshold.

Parameters

path (STRING): The scan path

wafl.reallocate.scan.exists

Severity

INFORMATIONAL

Description

This event is issued if an attempt is made to add a new reallocation scan but a scan job already exists for the supplied path.

Corrective Action

Check the path is correct. If it is correct then delete the previous reallocation job, and add a new one. Use the 'reallocate status' command to list reallocation jobs.

Syslog Message

A reallocation scan for %s already exists.

Parameters

path (STRING): The path with the scan.

wafl.reallocate.scan.noStart

Severity

NOTICE

Description

Reallocation tasks, such as measuring the layout of a file or performing block reallocation, may be performed using an asynchronous WAFL scanner. This event is issued if an error occurs unexpectedly while trying to start such a WAFL scanner.

Corrective Action

(Call support).

Syslog Message

realloc: unable to start '%s' scanner for '%s': %d (%s)

Parameters

scan_type (STRING): The type of scan operation.

path (STRING): The scan path or aggregate name.

err_code (INT): A numerical error code indicating the reason why the scanner could not be started.

err_string (STRING): A string interpreting the err_code.

wafl.reallocate.scan.remove

Severity

INFORMATIONAL

Description

This event is issued when a reallocation job is persistently removed from the system.

Corrective Action

None required.

Syslog Message

Reallocation scan for '%s' is being removed.

Parameters

path (STRING): The path with the scan.

wafl.reallocate.schedule.invalid

Severity

ERROR

Description

This event is issued if an invalid reallocation schedule is detected.

Corrective Action

Correct the schedule syntax then retry the operation

Syslog Message

Invalid schedule: %s

Parameters

reason (STRING): The reason why the schedule is invalid

wafl.relocate events

wafl.relocate.statusvol.fail

Severity

ERROR

Description

This message occurs when the system cannot perform an aggregate relocation because one or more of its volumes are used by wafliron to host status files. The relocation is aborted.

Corrective Action

Use "aggr wafliron show" command to monitor the status of wafliron and retry aggregate relocation after wafliron is complete.

Syslog Message

%s %s%s%s%s is being used by wafliron to host status files. Canceling aggregate relocation.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.relocate.vetoedByNvsave

Severity

ERROR

Description

This message occurs when an aggregate relocation is vetoed because there are NVSave files for an aggregate or a flexible volume that must be replayed before the aggregate or flexible volume can be relocated.

Corrective Action

Retry the aggregate relocation after the NVSave files either are replayed (by bringing the aggregate or flexible volume online) or deleted from the root volume. Successful replay, for example, is indicated by the EMS message 'wafl.nvsave.replaying.pass'.

Syslog Message

Aggregate relocation vetoed because NVSave files are present for %s FSID %d name %s%s%s. UUID is %s.

Parameters

vol_type (STRING): Whether this message applies to an aggregate or a flexible volume.

fsid (INT): File system identifier.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases in which the volume name itself is insufficient.

UUID (STRING): UUID of the volume.

wafl.relocating events

wafl.relocating.fence.fail

Severity

ERROR

Description

This message occurs when the system cannot perform an aggregate relocation because a fence is set on one of the volumes in the aggregate. The relocation is aborted.

Corrective Action

A volume in the aggregate is currently fenced for group operations. Retry aggregate relocation after any group SnapRestore® or mirror transfers are complete. If the problem persists, contact technical support.

Syslog Message

%s %s%s%s%s has a fence set. Canceling aggregate relocation.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.relocating.iron.fail

Severity

ERROR

Description

This message occurs when the system cannot perform an aggregate relocation because wafliron is active. The relocation is aborted.

Corrective Action

Retry aggregate relocation after wafliron is finished.

Syslog Message

%s %s%s%s%s is running vol wafliron. Canceling aggregate relocation.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.relocating.sp.fail

Severity

ERROR

Description

This message occurs when the system cannot perform an aggregate relocation because a secure purge operation is in progress on one of the volumes in the aggregate. The relocation is aborted.

Corrective Action

A volume in the aggregate is currently going through a secure purge operation. Retry aggregate relocation after this operation is complete, or after you abort the operation by using the "volume encryption secure-purge abort" command. If the problem persists, contact NetApp technical support.

Syslog Message

A secure purge operation is in progress on %s %s%s%s. Canceling aggregate relocation.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.repl events

wafl.repl.badTimestamp

Severity

NOTICE

Description

This message occurs when a replication operation receives a timestamp with an invalid nanoseconds portion, and clears it.

Corrective Action

(None).

Syslog Message

Encountered invalid %s time on inode %u of volume %u.

Parameters

type (STRING): Type of timestamp.
inode_num (INT): Identifier of the affected file.
fsid (INT): Identifier of the volume.

wafl.repl.maxdirsize.notice

Severity

NOTICE

Description

This message occurs when WAFL® sets the maximum directory size of a SnapMirror® destination volume to a value higher than its default during a SnapMirror transfer.

Corrective Action

(None).

Syslog Message

The maxdirsize (%u KB) of volume %s (FSID %u) is higher than the default (%u KB). There might be a performance penalty when doing operations on large directories. This was generated for a SnapMirror relationship with ID %s.

Parameters

current_maxdirsize (INT): Current maximum directory size value.

vol (STRING): Name of the volume.

volFsid (INT): File system ID (FSID) of the volume.

default_maxdirsize (INT): Default maximum directory size value.

SnapMirrorID (STRING): Unique ID of the SnapMirror relationship for this operation, which can be used to match this message with messages for the same relationship in other logs (for example, the SnapMirror log at /mroot/etc/log/snapmirror_audit).

wafl.repl.raid.incons.set.error

Severity

INFORMATIONAL

Description

This message occurs when Replication propagates RAID error from the source and marks an on-disk data block on the destination with the same error as the source. This is useful for tracking pseudo bad and unverified blocks error propagation.

Corrective Action

Contact NetApp technical support.

Syslog Message

Data block in %s inode (fileid: %u snapid: %u fbn: %llu level: %u) in volume %s%²s%²s%²s marked with error (%u) by %s as a result of Raid Error Propagation from Source. Block previously had error (%u).

Parameters

inotype (STRING): Inode space (public or private).

fileid (INT): Identifying number for the inode.

snapshot (INT): Snapshot identifier: (0) - active file system (non-zero) - refers to snapshot

fbn (LONGINT): File block number.
level (INT): Buffer level.
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.
error (INT): Error on the block.
module (STRING): Module that is marking the block with the error.
prev_error (INT): Previous error on the block.

wafl.repl.src.inconsistent

Severity

ERROR

Description

This message occurs when the replication source engine encounters a disk error in the file system metadata. Replication transfer will abort.

Corrective Action

Run wafliron to fix the active file system. To continue replication transfer, delete the Snapshot(tm) copies containing this bad block.

Syslog Message

%s: %s%s%s%s: WAFL metadata inconsistent due to disk errors. (vvbn:%u level:%u file_type:%d).
Aborting transfer.

Parameters

vol_type (STRING): Whether the block was being accessed for a volume or an aggregate.
owner (STRING): String indicating the owner of the affected volume or aggregate.
vol (STRING): Name of the volume or aggregate.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.
vvbn (INT): Virtual Volume Block Number.
level (INT): Buffer level.
file_type (INT): File type.

wafl.repl.zombie.scan.susp

Severity

INFORMATIONAL

Description

This message occurs when a logical break zombie restart is going through a scan of composite zombies and it suspends the incoming client composite delete requests.

Corrective Action

(None).

Syslog Message

The deletion of file with fileid %d is suspended because volume %s (FSID %u) is going through a logical break. The file delete will be resumed after logical break is complete.

Parameters

fileid (INT): File identifier.
vol (STRING): Name of the volume.
volFsid (INT): File system ID (FSID) of the volume.

wafl.replay events

wafl.replay.aggr.early.mt

Severity

NOTICE

Description

This message occurs when a partner aggregate is mounted early before replay.

Corrective Action

(None).

Syslog Message

Partner aggregate %s is mounted early before WAFL NV log replay.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.replay.completed

Severity

NOTICE

Description

This message occurs when WAFL® replay is complete following an abrupt failure, such as a panic. This event logs the time spent in the various phases of WAFL replay.

Corrective Action

(None).

Syslog Message

(None).

Parameters

log (STRING): Entry count, bytes used, and duration of operation replay.
catalog (STRING): Catalog statistics for WAFL replay.
swarm (STRING): Information about the cost of operations during WAFL replay.
nvce (STRING): Information about number of nvce hits, skips and misses during WAFL replay.

wafl.replay.early.mounted

Severity

NOTICE

Description

This message occurs when partner aggregates are mounted early before replay.

Corrective Action

(None).

Syslog Message

%d of %d partner aggregates are mounted early before WAFL NV log replay.

Parameters

early_aggrs (INT): Number of aggregates mounted early.

total_aggrs (INT): Total number of data aggregates being replayed.

wafl.replay.nvlog.ignore.entries

Severity

NOTICE

Description

This message occurs when entries are being ignored during replay.

Corrective Action

(None).

Syslog Message

%s Ignoring entries in %s log %d for %s %s%s%s%s FSID 0x%x. Volume CP count:%d, Log count: %d.

Parameters

reason (STRING): Reason for ignoring entries.

log_host (STRING): Host in replay.

log (INT): Log section identifier.

voltype (STRING): Volume type: volume or aggregate.

volowner (STRING): Owner of the volume: local or partner.

app (STRING): Application UUID.

volname (STRING): Name of the volume or aggregate.

server_uuid (STRING): Vserver's Universal Unique Identifier (UUID), if any.

FSID (INT): File system identifier.

vol_cp_count (INT): Consistency Point (CP) count on the volume.

log_cp_count (INT): CP count found in the nvlog.

wafl.replay.nvlog.not.needed

Severity

NOTICE

Description

This message occurs when all entries in a log were ignored, so no replay was performed.

Corrective Action

(None).

Syslog Message

No replay was required for %s log %d.

Parameters

log_host (STRING): Host in replay.

log (INT): Log section identifier.

wafl.replay.resource.limited

Severity

NOTICE

Description

This message occurs when the WAFL replay admin cannot obtain all of the system resources required to allocate the optimal number of replay messages.

Corrective Action

(None).

Syslog Message

(None).

Parameters

log_no (INT): The NVLOG log number.

host (INT): The host in replay.

msgs_wanted (INT): The number of replay messages requested.

msgs_allocated (INT): The number of replay messages allocated.

wafl.replay.swizzle.fsid

Severity

INFORMATIONAL

Description

The volume was using the old FSID at the time the operations were recorded in the NVLog. Now that the filer is about to replay logged operations, the filer will use the new FSID for the volume. No corrective action is required.

Corrective Action

(None).

Syslog Message

FSID collision mapping created during replay for %s %s%s%s old fsid:%x, new fsid:%x, uuid:%s.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

app (STRING): Application UUID.

volident (STRING): Unique Identifier of the volume in cases where the volume name itself is insufficient.

old_fsid (INTHEX): Old filesystem identifier

new_fsid (INTHEX): New filesystem identifier

uuid (STRING): UUID of the volume

wafl.root events

wafl.root.autocreate

Severity

NOTICE

Description

This event is issued when no online root volume is found. It is used to indicate that auto creation of a root volume will happen.

Corrective Action

(None).

Syslog Message

No online root volume found on root aggregate %s. Automatically creating one.

Parameters

aggr (STRING): The root aggregate name

wafl.root.content.changed

Severity

ERROR

Description

This message occurs when the contents of the root volume are changed to those of a previous point in time. One of the following operations or events can cause the contents of the root volume to change: - The root volume is changed from the boot menu. - The nvlog is jettisoned. - The system is booted with prev_cp. - The 'wafliron -prev_cp' command is used and the changes are committed. - A SnapRestore® operation is done on the root volume.

Corrective Action

Verify that all recent configuration changes are still in effect.

Syslog Message

Contents of the root volume '%s' might have changed. Verify that all recent configuration changes are still in effect.

Parameters

vol (STRING): Name of the root volume.

wafl.root.create

Severity

INFORMATIONAL

Description

This message occurs when the system creates a root volume.

Corrective Action

(None).

Syslog Message

New root volume %s created.

Parameters

vol (STRING): Name of the root volume.

wafl.root.mark.error

Severity

NOTICE

Description

This event is issued when there is an error in syncing the vvol raid label of a newly created root volume.

Corrective Action

(None).

Syslog Message

Error setting volume %s as root. Changes may not be saved.

Parameters

vol (STRING): The root volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.root.overwritesUnsafe

Severity

ERROR

Description

This message occurs when the root volume is not volume guaranteed or does not guarantee overwrites for space reserved files.

Corrective Action

Set the Space Guarantee on the root volume to "volume" and the Fractional Reserve on the root volume to 100%.

Syslog Message

Root volume %s does not protect overwrites in space reserved files.

Parameters

vol (STRING): Root volume name.

wafl.s2c events

wafl.s2c.snap.check.failed

Severity

ERROR

Description

This message occurs when SnapMirror® logical transfer is not possible due to incompatible Snapshot copy.

Corrective Action

Create new Snapshot copy on the source volume and use that for Logical transfer.

Syslog Message

SnapMirror operation failed in volume '%s%s%s' for Snapshot ID %d because %s.

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

snapId (INT): Identifier for the Snapshot(tm) copy.

reason (STRING): Specific reason for failure.

wafl.s2c.snap.lang.mismatch

Severity

ERROR

Description

This message occurs when SnapMirror® restore cannot proceed due to language mismatch at source and destination end.

Corrective Action

Create new volume with correct language settings.

Syslog Message

SnapMirror operation failed in %s because of language mismatch between source and destination. Language at destination: '%s'. Language at source: '%s'.

Parameters

vol (STRING): Name of the volume.

src_lang_setting (STRING): Language setting at source.

dest_lang_setting (STRING): Language setting at destination.

wafl.scan events

wafl.scan.abort.nospace

Severity

ERROR

Description

This message occurs when the system is aborting the WORM clear scan because there is no space available in the volume.

Corrective Action

Create space by increasing the volume or aggregate sizes, or by deleting data or deleting Snapshot copies. To increase a volume's size, use the "volume size" command. To delete a volume's Snapshot copies, use the "volume snapshot delete" command. To increase an aggregate's size, add disks by using the "storage aggregate add-disks" command. Aggregate Snapshot copies are deleted automatically when the aggregate is full.

Syslog Message

Aborting WAFL %s scanner on volume %s because there is no space available in the volume.

Parameters

type (STRING): String to indicate the scanner that is aborted.

vol (STRING): Volume name.

wafl.scan.autocommit.disable

Severity

INFORMATIONAL

Description

This event is issued to inform the user that the system is aborting the autocommit scanner on a Snaplock volume.

Corrective Action

(None).

Syslog Message

Aborting autocommit scan on %s %s%s%s%s.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner of the snaplock volume where the autocommit scanner was aborted.

vol (STRING): The name of the snaplock volume where the autocommit scanner was aborted.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the snaplock volume where the autocommit scanner was aborted in cases where volume name itself is insufficient.

wafl.scan.blkreclaim.activeDelta

Severity

ERROR

Description

This event indicates a flexible mirror volume is unable to relinquish free blocks to its containing aggregate. As a result, the containing aggregate may run out of space if this state persists beyond the following incremental transfer.

Corrective Action

Monitor the state after the next incremental update for this volume and the space available in its containing aggregate

Syslog Message

Flexible volume '%s%s' cannot release free blocks to its containing aggregate '%s'.

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

aggr (STRING): The aggregate name

wafl.scan.blockcheck.done

Severity

NOTICE

Description

This event is issued when the 'aggr block_check' tool finishes scanning an aggregate.

Corrective Action

(None).

Syslog Message

Writing WAFL aggr block_check log %s

Parameters

filename (STRING): The name of the log file.

wafl.scan.br.realloc.done

Severity

INFORMATIONAL

Description

This message occurs when a block reallocation scan is complete on an aggregate. The block reallocation scan improves WAFL® write efficiency by reducing free space fragmentation. It runs automatically when aggregate reallocation is scheduled using the 'reallocate -A' command.

Corrective Action

(None).

Syslog Message

Block reallocation scan on aggregate %s is complete.

Parameters

aggr (STRING): Aggregate name.

wafl.scan.br.redir.abort

Severity

INFORMATIONAL

Description

This message occurs when a redirect scan is aborted on a volume or aggregate. The redirect scan improves performance following block reallocation by updating metadata that was changed during reallocation. It runs automatically when aggregate reallocation is scheduled using the 'reallocate -A' command.

Corrective Action

(None).

Syslog Message

Redirect scan on %s %s%s%s%s has been aborted.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume or aggregate owner.

vol (STRING): Volume or aggregate name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.scan.br.redir.done

Severity

INFORMATIONAL

Description

This message occurs when a redirect scan is complete on a volume or aggregate. The redirect scan improves performance following block reallocation by updating metadata that was changed during reallocation. It runs automatically when aggregate reallocation is scheduled using the 'reallocate -A' command.

Corrective Action

(None).

Syslog Message

Redirect scan on %s %s%s%s%s is complete. The scanner took %ld ms.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume or aggregate owner.

vol (STRING): Volume or aggregate name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

run_time (LONGINT): Total run time of the scanner.

wafl.scan.br.redir.noStart

Severity

NOTICE

Description

This message occurs when a redirect scan cannot be started on a volume or aggregate. The redirect scan improves performance following block reallocation by updating metadata that was changed during reallocation. It runs automatically when aggregate reallocation is scheduled using the 'reallocate -A' command.

Corrective Action

(None).

Syslog Message

Redirect scan on %s %s%s%s%s could not be started.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume or aggregate owner.

vol (STRING): Volume or aggregate name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.scan.cantStart

Severity

INFORMATIONAL

Description

The message occurs when the scan could not start because the maximum number of scans of the specified type are already running.

Corrective Action

The maximum number of scan operations has been reached. Please wait until the current scan operations have completed before trying any new ones.

Syslog Message

Cannot start scan %s on %s %s%s%s%s because maximum number of scans (%d) already running.

Parameters

scantype (STRING): The type of scan

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

max (INT): The maximum number of scans that can run

wafl.scan.ckpt.init.failed

Severity

NOTICE

Description

This message occurs when the creation of Scan Checkpoint Metafile fails.

Corrective Action

(None).

Syslog Message

On %s %s%s%s%s, FSID 0x%x, Creation of Scan Checkpoint Metafile failed with error %d.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

valident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

fsid (INT): File system identifier of the volume.

error (INT): Error number.

wafl.scan.ckpt.remove.failed

Severity

NOTICE

Description

This message occurs when the removal of Scan Checkpoint in Metafile fails.

Corrective Action

(None).

Syslog Message

On %s %s%s%s%s, FSID 0x%x, Removal of Scan Checkpoint failed with error %d.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

valident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

fsid (INT): File system identifier of the volume.

error (INT): Error number.

wafl.scan.clone.split.abort

Severity

INFORMATIONAL

Description

This event is issued to indicate that an operation to split a clone flexible volume from its parent volume was aborted.

Corrective Action

(None).

Syslog Message

%s %s%s%s, clone split operation stopped.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.clone.split.cantLock

Severity

ERROR

Description

This event is issued when the system cannot create a volume reference to complete a clone split operation. Check the type to determine if the reference is for the volume or for its enclosing aggregate.

Corrective Action

Determine why the volume reference failed, and retry the operation if necessary.

Syslog Message

Unable to lock %s %s%s to complete clone split operation.

Parameters

type (STRING): The type of object (volume/aggregate)

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.clone.split.complete

Severity

INFORMATIONAL

Description

This event is issued to indicate that an operation to split a clone flexible volume from its parent volume completed successfully.

Corrective Action

(None).

Syslog Message

Clone split complete for %s %s%s%s

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.clone.split.fail

Severity

INFORMATIONAL

Description

This event is issued to indicate that an operation to split a clone flexible volume from its parent volume has failed.

Corrective Action

(None).

Syslog Message

%s %s%s%s, clone split operation failed.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.css.undo.complete

Severity

INFORMATIONAL

Description

This event is issued to indicate that an operation to undo sharing-by-split in a flexible volume has completed.

Corrective Action

(None).

Syslog Message

Clone sharing-by-split undo complete for %s %s%s

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.deswizzle.aborted

Severity

ERROR

Description

This message occurs when the deswizzler scanner encounters an error and aborts.

Corrective Action

Correct the issue based on the reason the deswizzler scanner aborted.

Syslog Message

The deswizzler scanner running on volume %s (Snapshot ID %d) was aborted. Reason: "%s".

Parameters

vol (STRING): Volume that was being deswizzled.

snapid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

reason (STRING): Reason the deswizzler scanner aborted.

wafl.scan.deswizzle.check.referenced

Severity

INFORMATIONAL

Description

This event is triggered when deswizzling a block already pointed to by pvbn in an older snapshot. If snap1 is not 0 (i.e. not the active fs), there is a strong possibility this may lead to a corruption.

Corrective Action

(None).

Syslog Message

(None).

Parameters

vol (STRING): The volume name

snap1 (INT): The snapshot of the block being deswizzled.

snap2 (INT): The next older snapshot.

cp1 (INT): CP count of snap1.

cp2 (INT): CP count of snap2.

ino_type (STRING): The inode type

inum (INT): Inode containing the block being deswizzled.

fbn (LONGINT): FBN of the block in the inode.

level (INT): Level of the block.

vvbn (LONGINT): VVBN of the block in snap1.

pvbn1 (LONGINT): PVBN of the block in snap1.

pvbn2 (LONGINT): PVBN of the block in snap2.

parent (LONGINT): VVBN of the parent block in snap2.

wafl.scan.deswizzle.exception

Severity

ERROR

Description

This message occurs when the deswizzler scanner encounters an exception.

Corrective Action

(None).

Syslog Message

The deswizzler scanner running on volume %s (Snapshot ID %d) was excepted. Error: "%d".

Parameters

vol (STRING): Volume that was being deswizzled.

snapshotid (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

error (INT): Message status.

wafl.scan.deswizzle.failed**Severity**

ERROR

Description

This message occurs when the deswizzler scanner has encounters a volume inconsistency and stops running.

Corrective Action

An inconsistency was found in the specified Snapshot copy. Delete the Snapshot copy. To ensure that the active file system is intact, you might want to run wafliron.

Syslog Message

The deswizzler scanner on flexvol %s, Snapshot copy %s (ID %d) encountered a volume inconsistency and stopped running on the volume.

Parameters

vol (STRING): Volume that was being deswizzled.

snapshotname (STRING): Inconsistent Snapshot(tm) copy name.

snapshotid (INT): Inconsistent Snapshot(tm) copy snapshotid.

wafl.scan.done**Severity**

NOTICE

Description

This message occurs when a WAFL® scan is completed.

Corrective Action

(None).

Syslog Message

Completed %s on %s %s%s%s%s.

Parameters

scantype (STRING): Type of scan.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.scan.filecheck.done

Severity

NOTICE

Description

This event is issued when the 'file check' diagnostic tool finishes scanning a file for corrupt data blocks.

Corrective Action

(None).

Syslog Message

Writing WAFL filecheck log %s

Parameters

filename (STRING): The name of the log file.

wafl.scan.i2p.cantAbort

Severity

INFORMATIONAL

Description

This message occurs during an attempt to abort the I2P scan by using the "wafl scan abort" command while running clustered Data ONTAP®. The I2P scan cannot be interrupted.

Corrective Action

(None).

Syslog Message

You cannot abort an I2P scan on a cluster volume.

Parameters

(None).

wafl.scan.iron.done

Severity

INFORMATIONAL

Description

This message informs the user that the system has completed a wafliron scan.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s, wafliron %s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

status (STRING): Status string.

wafl.scan.iron.snapshot

Severity

INFORMATIONAL

Description

This message informs the user that the system has started wafliron scan on the snapshot.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s, wafliron started on snapshot %d.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

snapid (INT): The snapshot Identifier.

wafl.scan.iv.metatype.done

Severity

INFORMATIONAL

Description

This message occurs when the system completes a WAFL_FLAG_IV_METATYPE inode flag scan on the Infinite Volume namespace constituent.

Corrective Action

(None).

Syslog Message

The WAFL_FLAG_IV_METATYPE inode flag scanner has completed the scan on %s %s%s%s%s. The scanner scanned %d inodes, tagged %d inodes with the inode flag, and took %ld msecs to complete the scan.

Parameters

type (STRING): Type of object (volume).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.
inodes_visited (INT): Total number of inodes visited by the scanner.
inodes_tagged (INT): Total number of inodes tagged with the WAFL_FLAG_IV_METATYPE inode flag by the scanner.
run_time (LONGINT): Total run time of the scanner in milliseconds.

wafl.scan.iv.metatype.dud

Severity

ERROR

Description

This message occurs when the system tries and fails to start the WAFL_FLAG_IV_METATYPE inode flag scan on the Infinite Volume namespace constituent. This might cause errors in file operations over NFS/CIFS in the Infinite Volume until the scanner is restarted and the scan is completed.

Corrective Action

The scanner will restart automatically in cases where the failure to start occurs due to a storage failover event, an in-progress node revert operation, or a node reboot. In other cases, contact NetApp technical support for assistance.

Syslog Message

Failed to launch the WAFL_FLAG_IV_METATYPE inode flag scanner on %s %s%s%s%s. The error code returned was %d (%s).

Parameters

type (STRING): Type of object (volume).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.
err_code (INT): Numerical error code indicating the reason the scan could not be launched.
err_string (STRING): String interpreting the error code.

wafl.scan.iv.metatype.start

Severity

INFORMATIONAL

Description

This message occurs when the system starts a WAFL_FLAG_IV_METATYPE inode flag scan on the Infinite Volume namespace constituent.

Corrective Action

(None).

Syslog Message

The WAFL_FLAG_IV_METATYPE inode flag scanner has started running on %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

wafl.scan.l1.uncompact.done

Severity

NOTICE

Description

This message occurs when the operation to uncompact indirect blocks in a FlexVol® volume is complete.

Corrective Action

(None).

Syslog Message

L1 uncompact operation complete for %s (UUID: %s). %d indirect blocks were uncompacted.

Parameters

name (STRING): Volume name.

vol_uuid (STRING): Volume UUID.

count (INT): Number of indirect blocks being uncompacted.

wafl.scan.l1.uncompact.nobt

Severity

ERROR

Description

This message occurs when an indirect block uncompact operation is attempted on a volume before block type metadata initialization is complete.

Corrective Action

Check whether the block type scan is still running on the volume. Try the indirect block uncompact operation on the volume after the block type scan is complete.

Syslog Message

Indirect block uncompact scan can't be started on volume %s (UUID: %s) because block type initialization is not complete on the volume. Try again after block type scan is complete on the volume.

Parameters

name (STRING): Volume name.

vol_uuid (STRING): Volume UUID.

wafl.scan.l1.uncompact.nospc

Severity

ERROR

Description

This message occurs when there is not enough free space to uncompact the indirect blocks during the volume uncompact operation.

Corrective Action

Create space by increasing the volume size, or by deleting data or deleting Snapshot(tm) copies. To increase a volume's size, use the "volume size" command. To delete a volume's Snapshot copies, use the "volume snapshot delete" command.

Syslog Message

Indirect block uncompact scan for volume %s (UUID: %s) stopped because of insufficient free space.

Parameters

name (STRING): Volume name.

vol_uuid (STRING): Volume UUID.

wafl.scan.layout.advise

Severity

INFORMATIONAL

Description

This event is issued to advise the operator of optimal settings for their layout ratio.

Corrective Action

(None).

Syslog Message

WAFL layout ratio for %s %s%s%s%s is %d.%02d. A ratio of 1 is optimal. Based on your free space, %d.%02d is expected.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

ratio1 (INT): The ratio integer

ratio2 (INT): The ratio fraction of 100

eratio1 (INT): The expected ratio integer

eratio2 (INT): The expected ratio fraction of 100

wafl.scan.layout.advise.ino

Severity

INFORMATIONAL

Description

This event is issued to advise the operator of optimal settings for their layout ratio.

Corrective Action

(None).

Syslog Message

WAFL layout ratio for %s %s%s%s%s, %s inode %u is %d.%02d. A ratio of 1 is optimal. Based on your free space, %d.%02d is expected.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

inotype (STRING): The inode space (public or private)

ino (INT): The inode value

ratio1 (INT): The ratio integer

ratio2 (INT): The ratio fraction of 100

eratio1 (INT): The expected ratio integer

eratio2 (INT): The expected ratio fraction of 100

wafl.scan.layout.cantWrite

Severity

ERROR

Description

This message occurs when the system cannot write out the WAFL®scan layout log.

Corrective Action

The most likely cause of a failure in writing the file is lack of space on the specified volume. Use the 'df' command to check available space. If the volume is full, free some space on the volume, and then restart the command.

Syslog Message

Cannot write WAFL scan layout log %s.

Parameters

filename (STRING): Name of the log file.

wafl.scan.layout.write

Severity

NOTICE

Description

This event is issued when the system initiate writing of the scan layout log.

Corrective Action

(None).

Syslog Message

Writing WAFL layout log %s

Parameters

filename (STRING): The name of the log file

wafl.scan.log.cantWrite

Severity

NOTICE

Description

This message occurs when the system cannot write out the scan report log.

Corrective Action

If the error is due to lack of space, add more space or free space in the volume. If the problem persists, contact NetApp technical support.

Syslog Message

Cannot write WAFL vbntoino log %s: %d (%s).

Parameters

filename (STRING): Name of the log file.

err_code (INT): A numerical error code indicating the reason why the log was not written.

err_string (STRING): A string interpreting the error code.

wafl.scan.lost.obj.recovery

Severity

NOTICE

Description

This message occurs after a lost object recovery scanner has been completed or aborted.

Corrective Action

None.

Syslog Message

Lost object recovery scanner on volume "%s%s%s" is %s. (num_lost=%llu, num_inserted=%llu, num_deleted=%llu, num_skipped=%llu, num_objs_in_namespace=%llu)

Parameters

volname (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

state (STRING): State of the scan, either aborted or completed
num_lost (LONGINT): Number of objects found that were not in the namespace.
num_inserted (LONGINT): Number of objects fixed by adding them back into the namespace.
num_deleted (LONGINT): Number of objects fixed by deletion.
num_skipped (LONGINT): Number of inodes skipped during scanning due to some error.
num_objs_in_namespace (LONGINT): Number of objects that were found to exist already in the namespace.

wafl.scan.ownblocks.done

Severity

INFORMATIONAL

Description

This message occurs when a scan operation to check owned blocks is complete.

Corrective Action

(None).

Syslog Message

Completed %s on %s %s%s%s%s. The scanner took %ld ms.

Parameters

op (STRING): Name of the operation.
type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
run_time (LONGINT): Total run time of the scanner.

wafl.scan.quota.init.cantAbort

Severity

INFORMATIONAL

Description

This message occurs during an attempt to abort the quota initialization scan by using the "wafl scan abort" command. The quota initialization scan cannot be interrupted.

Corrective Action

Wait for the quota initialization to complete or use the "quota off" command.

Syslog Message

User cannot abort quota initialization scan. Please use 'quota off' command.

Parameters

(None).

wafl.scan.realloc.oldsnaps

Severity

ERROR

Description

This message occurs when a block reallocation scanner cannot move blocks trapped in aggregate Snapshot® copies, because the Snapshot copies are older than the value in 'wafl_bldr_max_snap_age' flag (default is 360 seconds). You can display the value of this flag by using 'printflag wafl_bldr_max_snap_age'.

Corrective Action

Delete all aggregate Snapshot copies or Snapshot schedules before running a block reallocation scan. In the case of RaidSyncmirror aggregates, ensure that the resyncsnaptime option has a value that is less than in the 'age' parameter.

Syslog Message

Block reallocation scan on aggregate %s found snapshots older than %d seconds.

Parameters

aggr (STRING): Aggregate name.

age (INT): Maximum allowed age of aggregate Snapshot copies, (in seconds), for block reallocation scan.

wafl.scan.reallocDisallowed

Severity

ERROR

Description

This event is issued when an attempt is made to reallocate a file or LUN that cannot be reallocated. Examples of such files/LUNs include file in snapshots, or Qtree Snapmirror destinations.

Corrective Action

File/LUN reallocation should be specified on files/LUNs in the active filesystem that are not part of a QSM destination.

Syslog Message

Reallocation disallowed on %s inode %d in volume %s%: readonly or snapshot.

Parameters

inotype (STRING): The inode space (public or private)

inode (INT): The inode that could not be reallocated.

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.relocation.nospaceFree

Severity

ERROR

Description

This event is issued to indicate there is not enough free space to rewrite the blocks during file or volume reallocation.

Corrective Action

Free space in the volume, or increase the size of a flexible volume, then retry the operation.

Syslog Message

Reallocate scan for volume %s%s has stopped because there is insufficient free space.

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.relocation.nospaceSnap

Severity

ERROR

Description

This event is issued to indicate there is not enough snapshot free space to rewrite the blocks during file or volume reallocation.

Corrective Action

Remove snapshots in the volume, or increase the size of a flexible volume, then retry the operation.

Syslog Message

Reallocate scan for volume %s%s has stopped because there is insufficient snapshot free space.

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.scan.snap.vbnOutOfRange

Severity

ERROR

Description

This messges occurs when scanners find an out-of-range block number in the Snapshot(tm) copy.

Corrective Action

Delete the specified Snapshot copy.

Syslog Message

Out of range block number error detected at %s %s%s%s%s in Snapshot copy %d, during block type scan.

Delete the specified Snapshot copy.

Parameters

type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
snapId (INT): Identifier for the Snapshot copy.

wafl.scan.split.inofile.cantAbort

Severity

INFORMATIONAL

Description

This message occurs during an attempt to abort the split inofile scan by using the "wafl scan abort" command. The split inofile scan cannot be interrupted.

Corrective Action

(None).

Syslog Message

User cannot abort the split inofile scan.

Parameters

(None).

wafl.scan.typebits.diffFail

Severity

ALERT

Description

This message occurs when the type bit scan encounters an unexpected error from the snapdiff APIs. This can imply that prev_snapid snapshot might be corrupt.

Corrective Action

Contact NetApp technical support for corrective steps.

Syslog Message

Aborting the type bit scan due to error %d on volume %s while running a diff operation on inode %u of %s space between Snapshot ID %u and Snapshot ID %u after fbn %llu.

Parameters

error (INT): Error number.
volname (STRING): Volume name.
inum (INT): File ID under scan.
ino_type (STRING): Inode type.
snapId (INT): Identifier for the Snapshot(tm) copy under scan.
prev_snapId (INT): Identifier for the reference Snapshot copy.
start_fbn (LONGINT): Starting file block number (fbn) of the diff operation.
vendor (STRING): Name of the vendor.

wafl.scan.typeBitsMismatch

Severity

NOTICE

Description

This message occurs when scanners find a type bits mismatch for a block number. This might indicate a file system inconsistency in a file system or Snapshot(tm) copy.

Corrective Action

(Call support).

Syslog Message

Type bits mismatch found at %s %s%s%s%s in Snapshot copy %d, vbn %llu, during block type scan. On-disk type bits %d, expected type bits %d.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Node that owns the object.

vol (STRING): Name of the object.

app (STRING): Application UUID.

valident (STRING): To uniquely identify the object in cases where the object name itself is insufficient.

snapId (INT): Identifier for the Snapshot copy.

vbn (LONGINT): Block number of the block within the volume.

diskbits (INT): On-disk type bits of the block.

expectedbits (INT): Expected type bits of the block.

wafl.scan.uncompact.aborted

Severity

ERROR

Description

This message occurs when the uncompactation scanner is aborted.

Corrective Action

(None).

Syslog Message

%s scanner aborted on %s %s%s%s%s with error: %s. %s was tried on %ld blocks before failure.

Parameters

opname (STRING): Opname for the scanner.

voltype (STRING): Volume type on which scanner was run.

aggr_owner (STRING): Owner of the volume.

aggr_name (STRING): Volume name.

app (STRING): Application UUID.

uuid (STRING): Volume uuid.

abort_reason (STRING): Reason for stoppping scan.

opname1 (STRING): Opname for the scanner.

val (LONGINT): Number of vbn acted on.

wafl.scan.vbn.outOfRange

Severity

NOTICE

Description

This message occurs when scanners find an out-of-range block number in the active file system.

Corrective Action

(None).

Syslog Message

Out-of-range block number error detected at %s %s%s%s%s, during block type scan.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.scan.wafliron.cantAbort

Severity

INFORMATIONAL

Description

This message occurs during an attempt to abort the wafliron scan by using the "wafl scan abort" command. The wafliron scan cannot be interrupted.

Corrective Action

Wait for the wafliron scan to finish or use "aggr wafliron stop" to stop the scan.

Syslog Message

User cannot abort wafliron scan. Please use 'vol wafliron stop' command.

Parameters

(None).

wafl.seclabel events

wafl.seclabel.syncsm.mutex

Severity

NOTICE

Description

This message occurs when the mutual exclusion has failed between the SnapMirror Synchronous and NFS v4.2 Security Labels features. This happens when an existing volume participating in a SnapMirror relationship receives an NFS "open", "create", or "setattr" operation carrying a security label. The system will not let a security label operation continue on a volume that participates in a SnapMirror Synchronous

relationship, so the system administrator must either stop mirroring the volume or drop the security label operation completely.

Corrective Action

(None).

Syslog Message

An incompatible NFS v4.2 security label operation was received on a file in volume "%s" having a SnapMirror Synchronous relationship. To allow NFS operations carrying security label on the volume, the mirroring must be stopped first: FSID "%d" SNAPID "%d" FILEID "%llu": "%s"

Parameters

volname (STRING): Volume name.

fsid (INT): File System ID (FSID) of the volume.

snapid (INT): Snapshot copy ID.

fileid (LONGINT): File ID.

error_msg (STRING): Detailed error message to provide context while debugging the issue. The relevant input/output parameters of the message are also included to aid in debugging.

wafl.sfsr events

wafl.sfsr.abort.ino

Severity

NOTICE

Description

This event is issued when the system is forced to abort a file restore.

Corrective Action

(None).

Syslog Message

Single-file snaprestore of inode %u (snapid %d, %s %s%s%s%s) to inode %u prematurely halted.

Parameters

srcIno (INT): The source inode number

snapId (INT): The snapshot identifier

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volIdent (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

dstIno (INT): The target inode number

wafl.sfsr.abort.inoDeleted

Severity

NOTICE

Description

This event is issued when the system is forced to abort a file restore. The inode was deleted.

Corrective Action

(None).

Syslog Message

Single-file snaprestore of inode %u (snapid %d, %s %s%s%s%s) to inode %u aborted. File was deleted.

Parameters

srcIno (INT): The source inode number
snapshotId (INT): The snapshot identifier
type (STRING): The type of object (volume/aggregate)
owner (STRING): The volume owner
vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
dstIno (INT): The target inode number

wafl.sfsr.done

Severity

INFORMATIONAL

Description

This message occurs when a file restore operation has completed.

Corrective Action

(None).

Syslog Message

Single-file snaprestore of inode %u (snapid %d, %s %s%s%s%s) to inode %u has completed.

Parameters

srcIno (INT): Source inode number.
snapshotId (INT): Snapshot™ identifier.
type (STRING): Type of object (volume/aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.
dstIno (INT): Target inode number.

wafl.sfsr.lun.error

Severity

ERROR

Description

This message occurs when the system attempts to restore a file onto a LUN. This is not a supported action; files cannot be restored onto a LUN.

Corrective Action

No corrective action is possible; files cannot be restored onto a LUN.

Syslog Message

Attempted to restore a file onto a LUN, but files cannot be restored onto a LUN. (vol='%'s', volident='%'s', snapname='%'s', filename='%'s')

Parameters

vol (STRING): Volume name.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

snapname (STRING): Name of the Snapshot(tm) copy that the file is being restored from.

filename (STRING): Name of the file that cannot be restored onto a LUN.

wafl.sfsr.lun.name.error

Severity

ERROR

Description

This event is issued when a LUN is being restored to a new location and the path to the new location contains invalid characters. The valid characters for the last component in the lun path are A-Z, a-z, 0-9, '-', '.', '_', '{' and '}'.

Corrective Action

Make sure that the last component of the path to the new location contains characters from A-Z, a-z, 0-9, '-', '.', '_', '{' and '}'.

Syslog Message

Can't restore LUN due to invalid restore path. The last component of the restore path can only contain characters from A-Z, a-z, 0-9, '-', '.', '_', '{' and '}'.

Parameters

(None).

wafl.sfsr.lun.restore.error

Severity

ERROR

Description

This message occurs when the system attempts to restore a LUN to something other than qtree root. This is not a supported action; LUNs can only be restored into qtree roots.

Corrective Action

No corrective action is possible; LUNs can only be restored into qtree roots.

Syslog Message

Attempted to restore a LUN to something other than a qtree root, but LUNs can only be restored into qtree roots. (vol='%'s', volident='%'s', snapname='%'s', filename='%'s')

Parameters

vol (STRING): Volume name.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

snapshotname (STRING): Name of the Snapshot(tm) copy that the LUN is being restored from.

filename (STRING): Name of the file that the LUN is being restored from.

wafl.sfsr.sr.disabled

Severity

ERROR

Description

This event is generated when a single-file snap restore (sfsr) operation on a file with a space reservation fails because there is not enough space on the volume to restore the file with its space reservation. If there was room for the file without a space reservation, then the file was restored with its space reservation disabled.

Corrective Action

If this event happened because the single-file snaprestore (sfsr) failed then space on the volume must be freed and the sfsr redone. If the sfsr was otherwise successful then space on the volume must be freed and reservations re-enabled by using "file reservation file-path enable".

Syslog Message

Single-file snaprestore of inode %u on %s %s%s%s did not restore space reservations due to lack of disk space.

Parameters

srcIno (INT): The source inode number

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.shutdown events

wafl.shutdown.notClean

Severity

NOTICE

Description

This message occurs during shutdown, to indicate that a volume has not been marked clean. By itself, this is not necessarily a problem. When this event occurs in conjunction with WAFL inconsistency panics or higher-severity EMS events, this message can indicate a potential source of the inconsistencies.

Corrective Action

No immediate action is required. If this message occurs in conjunction with WAFL inconsistency panics or other EMS messages, contact NetApp technical support.

Syslog Message

%s %s%s%s not marked clean (volume state is %s).

Parameters

type (STRING): Type of object (volume/aggregate).
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.
state (STRING): State of the volume.

wafl.sidl events

wafl.sidl.blkincons.recovery

Severity

NOTICE

Description

This message occurs when a volume or aggregate with single instance data logging enabled encounters a problem in a metafile required for the functioning of the single instance data logging feature. The system will attempt automatic recovery within the next couple of Consistency Points (CPs). During the period of recovery, write performance could be lower than usual.

Corrective Action

(None).

Syslog Message

%s:%s encountered a problem in a metafile (sidl). The system will automatically repair the problem.

Parameters

object_type (STRING): Identifier for the type of object to which this event applies (aggregate or volume).
object_name (STRING): Name of the object.
fileid (INT): File identifier of the metafile.
l0_blk_cnt (LONGINT): Number of L0 blocks present.
exp_blk_cnt (LONGINT): Number of L0 blocks expected.
cpcount (INT): CP that performs automatic recovery.

wafl.sidl.l0incons.recovery

Severity

NOTICE

Description

This message occurs when a volume or aggregate with single instance data logging enabled encounters a problem in a metafile required for the functioning of the single instance data logging feature. The system will attempt automatic recovery within the next couple of Consistency Points (CPs). During the period of recovery, write performance could be lower than usual.

Corrective Action

(None).

Syslog Message

%s:%s encountered a problem in a metafile (sidl). The system will automatically repair the problem.

Parameters

object_type (STRING): Identifier for the type of object to which this event applies (aggregate or volume).

object_name (STRING): Name of the object.

fbn (LONGINT): File block number (fbn) where the problem was encountered.

fileid (INT): File identifier of the metafile.

vbn (LONGINT): Value of the volume block number (vbn) that had a problem.

where (STRING): The module that generated the event (write or refill).

cpcount (INT): CP that performs automatic recovery.

wafl.sidl.space.disable

Severity

NOTICE

Description

This message occurs when a volume or aggregate disables the single instance data logging feature because the volume or aggregate is too close to full. During the period when single instance data logging is disabled, write performance could be lower than usual.

Corrective Action

Decrease the space utilization in the volume or aggregate either by deleting data or by growing the volume or aggregate.

Syslog Message

%s:%s has disabled the single instance data logging feature. Write performance could be lower than usual.

Parameters

object_type (STRING): Identifier for the type of object to which this event applies (aggregate or volume).

object_name (STRING): Name of the object.

cpcount (INT): Consistency Point (CP) at which the event is generated.

wafl.sis events

wafl.sis.clone.autodelete.file

Severity

NOTICE

Description

This message occurs when a file clone is autodeleted

Corrective Action

(None).

Syslog Message

'%s' is sent for auto deletion.

Parameters

path (STRING): File path.

wafl.sis.clone.autodelete.threshold

Severity

NOTICE

Description

This message occurs when file clone create operation fails because volume crossed autodelete threshold.

Corrective Action

Increase the space available to the volume by either adding disks or by freeing space in the volume to allow the cloning operation to continue.

Syslog Message

File clone creation cannot be completed because volume crossed autodelete threshold.

Parameters

name (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

wafl.sis.clone.backup.file.cleanup.failed

Severity

ERROR

Description

This message occurs when clone create gets an error while cleaning up the backup file of the pre-existing clone.

Corrective Action

A backup of the pre-existing clone file is saved at the backup file location. Its cleanup needs manual intervention.

Syslog Message

File clone create for the source %s and clone %s returned error while cleaning up the backup file %s of the pre-existing clone with error: %d. Backup file should be deleted to reclaim space.

Parameters

src_filename (STRING): Source filename.

clone_filename (STRING): Clone filename.

backup_filename (STRING): Backup filename.

error (INT): Error returned from FlexClone® subsystem.

wafl.sis.clone.backup.file.restore.failed

Severity

ERROR

Description

This message occurs when clone create errors out while restoring the backup file to the pre-existing clone.

Corrective Action

Clone create failed after deleting the pre-existing clone. A backup of the pre-existing clone file is saved at the backup file location. It can be used to recover the pre-existing clone file.

Syslog Message

File clone create for the source %s and clone %s failed while restoring the backup file %s to the pre-existing clone with error: %d. Backup file can be moved to the pre-existing clone location for recovering the clone file.

Parameters

src_filename (STRING): Source filename.
clone_filename (STRING): Clone filename.
backup_filename (STRING): Backup filename.
error (INT): Error returned from FlexClone® subsystem.

wafl.sis.clone.create.failed

Severity

INFORMATIONAL

Description

This message occurs when attempts to create a file clone fail.

Corrective Action

(None).

Syslog Message

File clone create of clone file %s (fileid: %d) from source file %s (fileid: %d) in volume %s failed with error: %s at line %d with src_fsid %d, dst_fsid %d, src_snapid %d, dir_fileid %d, type %s, category %s.

Parameters

clone_filename (STRING): Clone filename.
dst_fileid (INT): File identifier for destination file.
src_filename (STRING): Source filename.
src_fileid (INT): File identifier for source file.
volname (STRING): Volume name.
error (STRING): Error returned from the FlexClone® subsystem.
line_number (INT): Line number where the error has occurred.
src_fsid (INT): File system identifier of source volume.
dst_fsid (INT): File system identifier of destination volume.
snapid (INT): Snapshot copy identifier.
dir_fileid (INT): File identifier for the directory.
type (STRING): Type of Cloning.
category (STRING): Clone create requestor information.

wafl.sis.clone.unlock.snapshot

Severity

NOTICE

Description

This event is issued when the volume options are set such that the autodelete destroy policy is allowed to destroy backing snapshots for sis clones. The snapshot autodelete destroy policy is used as a last resort to recover space in a thin provisioned aggregate. The disruptive effect of destroying sis clone backing snapshots should be understood when setting this policy.

Corrective Action

(None).

Syslog Message

Unlocked sis clone backing snapshot in volume %s. Clone files based on snapshot (%d, %d) might become inconsistent.

Parameters

name (STRING): The volume name

snapid (INT): Snapshot(tm) copy identifier.

cp_cnt (INT): The CP(Consistency Point) count. The (snapid, cp_count) pair uniquely identifies a Snapshot copy.

wafl.slice events

wafl.slice.invalid.stream

Severity

NOTICE

Description

This message occurs when an invalid slice stream was not fixed by wafliron because the associated slice base file was not recognized at the time wafliron ran. Once this invalid stream file is removed, 'wafl slice_repair' can recreate and repair the stream file.

Corrective Action

A slice stream file in the slicevol is not valid. Please remove the file and rerun 'wafl slice_repair' to create a valid slice stream file - Use the (privilege :diag) "rm -x [stream_file_name] [slice_base_path]" command to remove the invalid slice stream file in the slicevol. Then use the (privilege:diag) "wafl slice_repair[slice_base_path] start" command to repair the stream file. If the problem persists, contact NetApp technical support.

Syslog Message

Invalid slice stream file: %s (fileid %d) in the slice base path %s in volume %s%s%s detected. Please run the following commands in the diag mode: %s to fix it.

Parameters

stream_name (STRING): The name of an invalid slice stream file.

stream_fileid (INT): The file ID of an invalid slice stream file.

base_path (STRING): The slice base file path that is being repaired.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Vserver's Universal Unique Identifier (UUID).

repair_cmd (STRING): The repair command to restore the stream file to be valid.

wafl.sm events

wafl.sm.vvol.read.failed

Severity

ALERT

Description

This message occurs when SnapMirror® fails to read a block from the container file of a FlexVol® SnapMirror source volume. This error typically means that there is some corruption in the FlexVol volume.

Corrective Action

Contact NetApp technical support for assistance.

Syslog Message

SnapMirror encountered an error while reading the block at VVBN %llu in volume '%s%s%s'.

Parameters

vvbn (LONGINT): Virtual volume block number (VVBN) on which the read failed.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume, if the volume name itself is insufficient.

wafl.snap events

wafl.snap.autoDel.policyChg

Severity

NOTICE

Description

This message occurs when the system detects a possible change in the autodelete or autosize policy of the volume. This can happen when a version of Data ONTAP® is loaded that might not support the reclaim policy currently set in the active filesystem.

Corrective Action

Unrecognized reclaim policy settings are cleared in the active file system. If you subsequently load a version of Data ONTAP® that recognizes the reclaim policy settings, you need to reestablish the policy settings using 'snap autodelete' or 'vol autosize' commands.

Syslog Message

Reclaim policy might have changed in %s %s%s%s%. Check the 'snap autodelete' or 'vol autosize' command settings.

Parameters

type (STRING): Container type, either volume or aggregate.
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

wafl.snap.autoDelete

Severity

INFORMATIONAL

Description

This message occurs when the aggregate Snapshot™ copy reserve is full and Snapshot copies are being deleted to free space.

Corrective Action

If aggregate Snapshot copies are being deleted too frequently or while they are still being used, then consider the following options: o Increase the Snapshot copy reserve percentage for the aggregate. o Alter the aggregate Snapshot copy schedule to create less frequent Snapshot copies.

Syslog Message

Deleting Snapshot copy '%s' in aggregate '%s' to free up space.

Parameters

name (STRING): Snapshot copy name.
aggr (STRING): Aggregate name.

wafl.snap.autoDelete.createStateSnap.fail

Severity

INFORMATIONAL

Description

This event indicates that after auto-deletion of all aggregate snapshots, we have failed to take a state snapshot.

Corrective Action

(None).

Syslog Message

Unable to create snapshot '%s' in aggregate '%s': %s

Parameters

name (STRING): The snapshot name
vol (STRING): The volume name
err (STRING): Reason why the operation failed.

wafl.snap.autoDelete.fail

Severity

NOTICE

Description

This event indicates that the automatic deletion of a snapshot in an aggregate has failed. An appliance may automatically delete an aggregate snapshot if the aggregate snap reserve fills.

Corrective Action

The appliance will automatically retry the snapshot deletion shortly after the failure occurs. If the deletion succeeds then no corrective action is necessary. If deletion repeatedly fails then the aggregate could potentially become full. To address this please contact customer support.

Syslog Message

Unable to delete snapshot '%s' in aggregate '%s' to recover space: %s

Parameters

name (STRING): The snapshot name

aggr (STRING): The aggregate name

err (STRING): The reason why the deletion failed.

wafl.snap.create

Severity

NOTICE

Description

This message occurs when a Snapshot™ copy is created successfully.

Corrective Action

(None).

Syslog Message

Snapshot copy %s was created successfully for volume %s%s%s in %ld milliseconds.

Parameters

name (STRING): Snapshot copy name.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

time (LONGINT): Time taken to create the Snapshot copy, in milliseconds.

wafl.snap.create.skip.reason

Severity

ERROR

Description

This message occurs when the creation of a Snapshot(tm) copy is skipped.

Corrective Action

Address the issue identified by the "reason" parameter. For example, if the reason is "Volume is too full",

increase the volume size or free up disk space on the target volume.

Syslog Message

%s %s %s: Skipping creation of %s Snapshot copy (%s).

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier.

snapshot (STRING): Name of the Snapshot copy being created.

reason (STRING): Reason for skipping the Snapshot copy.

wafl.snap.delete

Severity

INFORMATIONAL

Description

This message occurs when a Snapshot™ copy is deleted.

Corrective Action

(None).

Syslog Message

Snapshot copy %s on %s %s%\$%s%\$%s %s was deleted by the Data ONTAP function %s. The unique ID for this Snapshot copy is (%d, %d).

Parameters

snapshot_name (STRING): Name of the deleted Snapshot copy.

type (STRING): Container type (volume or aggregate).

owner (STRING): Volume or aggregate owner.

vol (STRING): Volume or aggregate name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume or aggregate when the volume or aggregate name by itself is insufficient.

vendor (STRING): Vendor name.

caller_func (STRING): Function in Data ONTAP® that invokes the deletion process.

snapid (INT): Numerical ID of the Snapshot copy. The (snapid, cp_count) pair uniquely identifies a Snapshot copy.

cp_count (INT): The CP (consistency point) count. The (snapid, cp_count) pair uniquely identifies a Snapshot copy.

wafl.snap.delete.32bit

Severity

INFORMATIONAL

Description

This message occurs when a Snapshot(tm) copy on an aggregate or volume is deleted because it has an unsupported 32-bit or mixed format file system.

Corrective Action

(None).

Syslog Message

A Snapshot copy on %s %s%s%s%s was deleted because it has an unsupported 32-bit or mixed format file system. The unique ID for this Snapshot copy is (%d, %d).

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

snapid (INT): Numerical ID of the Snapshot copy. As a pair, the values of the "snapid" and "cp_count" parameters uniquely identify a Snapshot copy.

cp_count (INT): CP (consistency point) count. As a pair, the values of the "snapid" and "cp_count" parameters uniquely identify a Snapshot copy.

wafl.snap.delete.pending

Severity

INFORMATIONAL

Description

This message occurs when the deletion of a Snapshot(tm) copy is pending.

Corrective Action

(None).

Syslog Message

Pending Snapshot copy (ID %u) deletion in %s %s%s%s%s.

Parameters

snapid (INT): Snapshot copy ID.

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.snap.deleteError

Severity

INFORMATIONAL

Description

This message occurs when attempts to delete a Snapshot® copy fail.

Corrective Action

(None).

Syslog Message

Unable to remove old Snapshot copy "%s" on %s %s%s%s. Error: %s.

Parameters

name (STRING): Name of the Snapshot copy.

type (STRING): Type of object (volume or aggregate).

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): UUID of the volume, to uniquely identify the volume when the volume name alone is insufficient.

err (STRING): Error description

wafl.snap.sched.notok

Severity

NOTICE

Description

This message occurs when the creation of a Snapshot(tm) copy is skipped:

Corrective Action

(None).

Syslog Message

%s%s%s%s: %s

Parameters

message (STRING): Generic scheduled Snapshot copy failure indication.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.

reason (STRING): Specific reason for the Snapshot failure.

wafl.snaplock events

wafl.snaplock.scan.complete

Severity

NOTICE

Description

This event indicates that the snaplock scan has completed.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s SnapLock scan determined upgraded volume expiry date: %s

Parameters

typestr_cap (STRING): wafl_Volume type, capitalized
owner (STRING): owner string (foreign, partner, et al)
vol_name (STRING): Volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
timebuf (STRING): Text string describing expiration time/date.

wafl.snaprestore events

wafl.snaprestore.badVersion

Severity

ERROR

Description

This message occurs during a Snapshot(tm) copy restore operation, when the system cannot recognize the version of Data ONTAP® from the Snapshot copy it is reverting to. The Snapshot copy is corrupt and cannot be used.

Corrective Action

Cancel the Snapshot copy restore operation, if necessary, and restore to a different Snapshot copy.

Syslog Message

Snapshot copy is from an unrecognizable version of Data ONTAP. (vol='%'s', valident='%'s')

Parameters

vol (STRING): Volume name.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.snaprestore.cancel.invalid

Severity

NOTICE

Description

This message occurs during volume initialization when the system cancels a SnapRestore® process due to an invalid Snapshot™ copy.

Corrective Action

Select a different Snapshot copy and reattempt the restore operation.

Syslog Message

Snapshot is invalid; canceling pending "vol snaprestore" for %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).
owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.snaprestore.cancel.prevcp

Severity

INFORMATIONAL

Description

This message occurs during volume initialization from a previous consistency point (CP) when the system cancels a SnapRestore® process. This happens when booting to a previous CP.

Corrective Action

Retry the SnapRestore operation after the system completes bootup.

Syslog Message

Canceling pending "vol snaprestore" for %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.snaprestore.defer.prevcp

Severity

INFORMATIONAL

Description

This message occurs during a read-only boot to the previous consistency point (CP). In this case, the pending SnapRestore® process is deferred.

Corrective Action

(None).

Syslog Message

Readonly mode; deferring "vol snaprestore" for %s %s%s%s%s.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.snaprestore.revert

Severity

INFORMATIONAL

Description

This message occurs during volume initialization when the system reverts to a previous Snapshot™ copy.

Corrective Action

(None).

Syslog Message

Reverting %s %s%s%s to a previous Snapshot copy with snapid %d.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

snapId (INT): Identifier for the Snapshot copy.

wafl.snaprestore.stale

Severity

ERROR

Description

This message occurs during a Snapshot(tm) copy restore operation, when the system determines that the Snapshot copy it is restoring from is stale. The Snapshot copy is corrupt and cannot be used.

Corrective Action

Cancel the Snapshot copy restore operation, if necessary, and restore from a different Snapshot copy.

Syslog Message

Snapshot copy is stale. (vol='%s', valident='%s')

Parameters

vol (STRING): Volume name.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.snapshot events

wafl.snapshot.badFilesize

Severity

NOTICE

Description

This event is issued when the system discover that a filesize is out of range in a snapshot.

Corrective Action

(None).

Syslog Message

File size out of range in snapshot.

Parameters

(None).

wafl.snapshot.badLevel

Severity

NOTICE

Description

This event is issued when there is an inconsistency in the metadata of an inode in a snapshot. This message is advisory only. The inconsistency will be corrected in memory only, and the data will be made available.

Corrective Action

No action is required; however, the message may repeat until the snapshot is deleted.

Syslog Message

Corrected bad level %d for buftree of %s fileid %d, snapid %d in %s %s%s%s%s

Parameters

level (INT): The level of the buftree of the file

ino_type (STRING): The inode type

fileid (INT): The file identifier

snapid (INT): The snapshot identifier

type (STRING): The type of object (volume/aggregate)

owner (STRING): The owner of the volume

vol (STRING): The name of the volume

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.snapshot.ecv.fail

Severity

ERROR

Description

This message occurs when the system attempts to create a Snapshot(tm) copy on a mixed-version cluster. However, the effective version of the cluster is ONTAP® 9.3 or earlier, and the maximum number of Snapshot copies supported by this effective version has already been reached.

Corrective Action

Upgrade all nodes in the cluster to ONTAP 9.4 or later.

Syslog Message

Snapshot copy create operation failed on volume %s%s%s. Maximum number of Snapshot copies reached on a mixed-version cluster.

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): ID of the volume.

wafl.snapshot_xlation_duplicate_entry events

wafl.snapshot_xlation_duplicate_entry

Severity

ALERT

Description

This message occurs when WAFL® determines that there are duplicate Snapshot(tm) copy entries in the Snapshot copy translation table. Access to this Snapshot copy is disabled until the problem is resolved.

Corrective Action

The Snapshot copy is inaccessible because the corresponding entry in the translation table has been cleared. Contact NetApp technical support resolve the problem.

Syslog Message

WAFL Snapshot copy translation table: Duplicate entry for volume '%s%s%s' that maps physical Snapshot copy '%d' to logical Snapshot copy '%d'.

Parameters

owner (STRING): Owner of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

physical_snapid (INT): Physical Snapshot copy index.

Logical_snapid (INT): Logical Snapshot copy index.

wafl.snapshot_xlation_setupfailed events

wafl.snapshot_xlation_setupfailed

Severity

ERROR

Description

This message occurs when WAFL® cannot setup the Snapshot™ copy translation table. Access to this Snapshot copy is disabled until the problem is resolved.

Corrective Action

The Snapshot copy is inaccessible, possibly due to a resource issue. Contact NetApp technical support.

Syslog Message

WAFL Snapshot copy translation table: Cannot to add entry on volume '%s%s%s' that maps physical Snapshot copy '%d' to logical Snapshot copy '%d'

Parameters

owner (STRING): Owner of the volume.

app (STRING): Application UUID.

volident (STRING): Unique Identifier of the volume in cases where the volume name itself is insufficient.

physical_snapid (INT): Physical Snapshot copy index.

Logical_snapid (INT): Logical Snapshot copy index.

wafl.spacemgmt events

wafl.spacemgmt.policyChg

Severity

NOTICE

Description

This message occurs when autodelete/autosize policy of a volume is changed.

Corrective Action

(None).

Syslog Message

The space management policy for volume %s has changed: %s.

Parameters

vol (STRING): Volume name.

changes (STRING): A string of changes being made.

wafl.spacetax events

wafl.spacetax.disabled

Severity

ERROR

Description

This message occurs when the spacetax feature is disabled for all flexible volumes in the system because of the 'wafl-disable-spacetax?' boot option.

Corrective Action

Reboot with the 'wafl-disable-spacetax?' boot option removed.

Syslog Message

Spacetax disabled for all flexible volumes.

Parameters

(None).

wafl.sparse events

wafl.sparse.meta.rm

Severity

NOTICE

Description

This event is issued when a sparse config metafile can not be removed in recycling bin

Corrective Action

(None).

Syslog Message

Unable to remove sparse metafile %s in recycle bin: error %s

Parameters

path (STRING): The metadata filepath

err (STRING): The error message

wafl.spcmgmt events

wafl.spcmgmt.policyConflict

Severity

NOTICE

Description

This message occurs when a space management strategy or an autosize grow threshold for a volume is being configured and the autogrow or autodelete thresholds conflict with the space-mgmt-try-first policy. The conflict can arise when the autogrow threshold is less than the autodelete threshold and the space-mgmt-try-first policy is configured for "snap_delete". The conflict can also arise when the autogrow threshold is more than the autodelete threshold and space-mgmt-try-first is configured for "volume_grow".

Corrective Action

Consider changing either the space-mgmt-try-first policy with the command "volume modify -volume <volume_name> -space-mgmt-try-first <option>" or the autogrow threshold with the command "volume modify -volume <vol_name> -autosize-grow-threshold-percent <value>", and keep them in sync.

Syslog Message

While configuring "%s" for volume "%s", space_mgmt_try_first policy ("%s") is conflicted with the autogrow threshold (%d%%) and autodelete threshold (%d%%).

Parameters

command (STRING): Command being executed.

volume_name (STRING): Name of the volume.

space_mgmt_try_first (STRING): space-mgmt-try-first policy for volume_grow or snap_delete.

grow_threshold (INT): Used-space threshold, as a percentage, for the automatic growth of the volume.

delete_threshold (INT): Used-space threshold, as a percentage, for the auto-deletion of Snapshot copies.

wafl.spcres events

wafl.spcres.not.changed

Severity

NOTICE

Description

This event indicates that the new space reservation guarantee was unable to be obtained, so the old reservation type was kept unchanged.

Corrective Action

(None).

Syslog Message

Retaining volume reservation on %s%\$ (%s) because new reservation could not be guaranteed.

Parameters

vol_name (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

spcres_desc (STRING): Text string describing space reservation type.

wafl.spinhi events

wafl.spinhi.new.err.code

Severity

NOTICE

Description

This message occurs when a new spinnp error is being propagated to a blade that does not understand that error yet. Nothing bad should happen because the error will receive default error handling when received by that blade. This message is for debugging in case you need to know the original source and reason for the error.

Corrective Action

(None).

Syslog Message

Spinnp operation %s was executed on DSID(%08x), fileid %u, snapid %u, proto %s and returned spinnp error %d to blade UUID %s.'

Parameters

opname (STRING): Spinnp operation name.

dsid (LONGINT): The data set identifier.

fileid (INT): ID of the file specified by the spinnp operation.

snapshot (INT): Snapshot(tm) copy identifier: (0) - active file system (non-zero) - refers to Snapshot copy

proto (STRING): Protocol used on the operation.

spinerror (INT): Spinnp error number.

bladeuuid (STRING): Universally Unique Identifier (UUID) of the blade where this error will be returned.

wafl.split events

wafl.split.inofile.scan.complete

Severity

NOTICE

Description

This event indicates that the split inofile scan has completed.

Corrective Action

(None).

Syslog Message

%s %s%s%s%\$s Split inofile scan completed.

Parameters

typestr_cap (STRING): wafl_Volume type, capitalized

owner (STRING): owner string (foreign, partner, et al)

vol_name (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.stream events

wafl.stream.check.complete

Severity

NOTICE

Description

This message occurs when the "wafl scan stream_check" command is completed successfully.

Corrective Action

(None).

Syslog Message

"wafl scan stream_check" command successfully completed on volume "%s:%s". The total number of invalid stream files detected is %u.

Parameters

volume (STRING): Volume name.

vserver_uuid (STRING): Universal Unique ID (UUID) of the volume's SVM.

total (INT): Total number of invalid stream files detected.

wafl.stream.check.invalid.file

Severity

ERROR

Description

This message occurs when the "wafl scan stream_check" command detects a stream file with the name "." or "..". Files with these names are not allowed. If you have files with these names, you might be unable to access these files.

Corrective Action

Manually delete the base file which in turn will also delete the invalid stream file.

Syslog Message

Detected invalid stream file associated with base file inode "%d" on volume "%s:%s".

Parameters

fileId (INT): The base file inode number that has a stream file with the name "." or "..".

volume (STRING): Volume name.

vserver_uuid (STRING): Universal Unique ID (UUID) of the volume's SVM.

wafl.stream.check.start

Severity

NOTICE

Description

This message occurs when the "wafl scan stream_check" command is started.

Corrective Action

(None).

Syslog Message

"wafl scan stream_check" command successfully started on volume "%s:%s".

Parameters

volume (STRING): Volume name.

vserver_uuid (STRING): Universal Unique ID (UUID) of the volume's SVM.

wafl.svo events

wafl.svo.checkFailed

Severity

NOTICE

Description

This event is generated if a write to a svo enabled volume fails to pass a check

Corrective Action

(None).

Syslog Message

SnapValidator: Validation error %s

v:%s vol:%s%s%s inode:%d length:%d Offset: %lld

Parameters

error (STRING): error that occurred when validating the write

version (STRING): string to describe version of oracle tests that were run

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

inode (INT): The inode number of the file which was being written

length (INT): The length of the invalid write

offset (LONGINT): The offset into the inode where the write sent. Note for Luns this will be to the main inode, and does not include space used by prefix streams.

wafl.svo.optionSet

Severity

INFORMATIONAL

Description

This event is generated when a SnapValidator option is set on a volume

Corrective Action

(None).

Syslog Message

SnapValidator option '%s' set to '%s' on volume '%s%s'

Parameters

opname (STRING): name of the option being set

opvalue (STRING): value of the option being set

vol (STRING): name of the volume the option is being set on

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.takeover events

wafl.takeover.nvram.missing

Severity

INFORMATIONAL

Description

This message occurs when the system does not find any WAFL® nvlog records to replay during takeover processing.

Corrective Action

(None).

Syslog Message

WAFL takeover: No WAFL nvlog records were found to replay.

Parameters

(None).

wafl.takeover.nvram.warn

Severity

ERROR

Description

This message occurs when NVRAM loss is detected during takeover. Some updates might have been lost, but takeover is proceeding.

Corrective Action

(Call support).

Syslog Message

WAFL takeover: Last few seconds of updates to partner might be lost.

Parameters

(None).

wafl.takeover.vol.mType.inv

Severity

ERROR

Description

This message occurs when WAFL® attempts to take over a mirror volume that does not have a valid mirror-type attribute. This situation might be a direct result of an upgrade to a version of Data ONTAP® that requires the mirror-type attribute or as a result of a corruption.

Corrective Action

This condition cannot be fixed by file system repair mechanisms such as wafliron. The data is not lost, but it is inaccessible to the administrator. To access the data, contact NetApp technical support. Alternatively, the administrator can destroy the mirror volume by using the 'volume delete -vserver vserver_name -volume vol_name' command.

Syslog Message

The mirror type associated with the mirror volume %s%s%s is invalid.

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name by itself is insufficient.

wafl.takeover.vol.nomount

Severity

ERROR

Description

This message occurs during a takeover or switchover operation when the system discovers that a partner volume cannot be mounted because it is inconsistent.

Corrective Action

The volume is inconsistent. Run wafliron to clear this inconsistency, and then contact technical support.

Syslog Message

%s partner volume %s%s%s is not mounted because it is inconsistent.

Parameters

operation (STRING): Whether this message refers to takeover or switchover.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.takeover.vol.offline

Severity

ERROR

Description

This message occurs during a takeover or switchover operation when the system discovers that a partner volume cannot be brought online because it is inconsistent. The volume is left unmounted.

Corrective Action

The volume is inconsistent and is left unmounted. Run wafliron to clear this inconsistency, and then contact technical support.

Syslog Message

%s partner volume %s%s%s cannot be brought online because it is inconsistent.

Parameters

operation (STRING): Whether this message refers to takeover or switchover.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identity when the volume name itself is insufficient.

wafl.takeover.vols.mounted

Severity

INFORMATIONAL

Description

This message occurs when the volumes are mounted during takeover.

Corrective Action

(None).

Syslog Message

(None).

Parameters

(None).

wafl.timer events

wafl.timer.disk.io.stalled

Severity

ERROR

Description

This message occurs when disk I/O is stalled, possibly during a disk firmware download operation. If automatic firmware update is enabled, the download operation restarts automatically.

Corrective Action

If disk firmware updates were in progress, verify that the update has automatically resumed by using the "storage download status" command. If the disk firmware updates have not resumed, restart the download by using the "storage download" command.

Syslog Message

All disk I/O stalled.

Parameters

(None).

wafl.trans events

wafl.trans.ssd.cache.disable

Severity

NOTICE

Description

This message occurs when the system transitions a hybrid aggregate from 7-Mode to clustered Data ONTAP. As part of transition, SSD caching is disabled until the transition is committed.

Corrective Action

No action is required. After the transition operation is committed, SSD caching is automatically reenabled.

Syslog Message

SSD caching on hybrid aggregate "%s" has been disabled because a transition operation is in the pre-commit phase.

Parameters

name (STRING): Aggregate name.

wafl.transition events

wafl.transition.cp.completed

Severity

NOTICE

Description

This message occurs at the completion of a WAFL® consistency point (CP) that occurs during a failover transition, such as takeover or giveback. This event logs the time spent and other important performance information.

Corrective Action

(None).

Syslog Message

Transition CP with reason %s for %s volumes with a total of %s dirty buffers took %ums with longest CP phases being %s on aggregate %s.

Parameters

tag (STRING): Reason for the CP occurring and a status code.

vols (STRING): Counts of flexible volumes that participated in the CP.

dirty_bufs (STRING): Number of WAFL buffers that were in use when the CP began and the number required to complete the CP.

total_time (INT): Number of milliseconds that the CP ran for.

top_phases (STRING): Top time consuming phases of the CP.

aggrname (STRING): Name of the aggregate.

wafl.unable events

wafl.unable.markinconsistent

Severity

INFORMATIONAL

Description

This message occurs when the FlexVol® volume cannot be marked as inconsistent.

Corrective Action

(None).

Syslog Message

WAFL: Unable to mark volume %s inconsistent as %s.

Parameters

vvolname (STRING): Volume name.

reason (STRING): Reason for the inability to mark the volume inconsistent.

wafl.upgrade events

wafl.upgrade.useActiveInofile

Severity

NOTICE

Description

This event is issued during an upgrade where the system need to use the active filesystem inofile.

Corrective Action

(None).

Syslog Message

Using active filesystem inofile on upgrade from legacy %s %s%s%s%s.

Parameters

type (STRING): The type of object (volume/aggregate)
owner (STRING): The owner of the volume
vol (STRING): The name of the volume
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vol events

wafl.vol.access.denied

Severity

ERROR

Description

This message occurs when the system rejects client access to a volume.

Corrective Action

You can avoid this event by unmounting the volume.

Syslog Message

Access to volume '%s' was denied, reason=%s'.

Parameters

vol (STRING): Volume name.
reason (STRING): Reason that access was denied.

wafl.vol.add

Severity

INFORMATIONAL

Description

This message indicates that a new volume has been added to the system.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s has been added to the system.

Parameters

type (STRING): Type of object (volume/aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.vol.add.keyinfo.into.vldb

Severity

NOTICE

Description

This message occurs when encryption key-info is added into vldb table.

Corrective Action

(None).

Syslog Message

Key-info is added into vldb for volume %s (dsid %lu, aggr '%s') with index %d, key-id %s.

Parameters

vol (STRING): Volume name.

dsid (LONGINT): Unique identifier (DSID) of the volume.

aggr (STRING): Name of the containing aggregate.

key_idx (INT): Key index.

key_id (STRING): Key id.

wafl.vol.appdm.upgrade.nospc

Severity

ERROR

Description

This message occurs when ONTAP® software cannot increase the size of an AppDM volume by five percent during an upgrade to ONTAP 9.5.

Corrective Action

ONTAP has increased the Snapshot(tm) copy reserve percentage on this AppDM volume from zero to five percent as part of the upgrade to ONTAP 9.5. To retain the same available free space on the volume, consider increasing the size of the volume by five percent by using the "vol modify -size" command. It might be necessary to increase the size of the aggregate first, using the "aggr add-disks" command.

Syslog Message

The file system on %s %s%s%s%s could not be grown 5%% larger as part of the upgrade to ONTAP 9.5.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique volume identifier when the volume name alone is insufficient.

wafl.vol.autoSize.done

Severity

NOTICE

Description

This message occurs when an autosize for a volume is successful. This can happen when the "autosize grow" option is on and the volume reaches the grow threshold percentage.

Corrective Action

(None).

Syslog Message

Volume autosize: Automatic %s of volume '%s%s%s' by %s is complete.

Parameters

event_type (STRING): Type of autosize event.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

size (STRING): Human readable size.

object_uuid (STRING): Volume instance UUID of the resource object.

wafl.vol.autoSize.fail

Severity

NOTICE

Description

This message occurs when automatic sizing of a volume fails.

Corrective Action

Increase the maximum size of the volume while setting the autosize.

Syslog Message

Unable to grow volume '%s%s%s' to recover space: %s.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier the volume in cases where the volume name itself is insufficient.

err (STRING): Reason for the failure.

object_uuid (STRING): Volume instance UUID of the resource object.

wafl.vol.autoSize.shrink.cap

Severity

NOTICE

Description

As a volume grows, there can be an automatic increase in the number of files that it is allowed to contain, but that number is unchanged as the volume shrinks. This number of files puts a constraint on the minimum size of the volume when it is automatically shrunk. This message indicates that the automatic shrinking of a volume did not reach the configuration's minimum size because it is constrained by the number of files the volume is allowed to contain.

Corrective Action

Consider using the command "volume modify <volume-name> -files <new-files-value>" to decrease the number of files that the volume is allowed to contain. You can view the current value of the number of files by using the command "volume show <volume-name> -fields files".

Syslog Message

Volume Autosize: Volume '%s%s%s' could not be auto shrunk below %s to recover space.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

size (STRING): Human-readable minimum size to which the volume can be automatically shrunk.

wafl.vol.bgTruncate.full

Severity

ALERT

Description

This message occurs when a background truncation operation for large files stalls due to insufficient free space for allocating additional metadata on the volume.

Corrective Action

Manually delete Snapshot(tm) copies or increase the volume's size for one-time space issues. For frequent space issues, consider changing autogrow or autodelete settings for the volume in question.

Syslog Message

Insufficient free space available on %s %s%s %s to complete background truncation operation.

Parameters

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Volume identifier.

wafl.vol.blks_used.done

Severity

INFORMATIONAL

Description

This message occurs when the 'blks used' calculation is complete.

Corrective Action

(None).

Syslog Message

(None).

Parameters

type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
run_time (LONGINT): Total run time of the scanner.

wafl.vol.clearing.in.nvfailed.state

Severity

INFORMATIONAL

Description

This message occurs when a volume that was marked as in-nvfailed-state is explicitly cleared.

Corrective Action

(None).

Syslog Message

Volume %s%s%s that was marked as in-nvfailed-state has been cleared.

Parameters

vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): If the volume belongs to a Vserver, the Vserver's Universal Unique Identifier (UUID).

wafl.vol.clone.split.nospace

Severity

NOTICE

Description

This event is issued when there's not enough free space to complete a volume clone split operation. The usual cause for this is when there are many data blocks in the snapshot that is shared between the clone volume and its parent.

Corrective Action

Free space in the clone volume to allow the split operation to take place, for example by deleting all snapshots in the clone volume.

Syslog Message

Volume clone split of '%s%s' cannot be completed, not enough disk space. Consider removing snapshots.

Parameters

name (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vol.clone.unlock.snapshot.destroy.failed

Severity

NOTICE

Description

This event is issued when the volume options are set such that the autodelete destroy policy is allowed to destroy volume clones referring to the snapshot to be deleted. It indicates an attempt to destroy a volume clone has failed.

Corrective Action

(None).

Syslog Message

Volume clone destroy of '%s' failed.

Parameters

name (STRING): The volume clone name

wafl.vol.clone.unlock.snapshot.failure

Severity

NOTICE

Description

This event is issued when the volume options are set such that the autodelete destroy policy is allowed to destroy volume clones referring to the snapshot to be deleted. It indicates the process of destroying volume clones has failed. Some volume clones may have been destroyed or left offline as a result.

Corrective Action

(None).

Syslog Message

Process of destroying volume clones using volume %s snapid %d failed. Some volume clones may have been taken offline or destroyed.

Parameters

name (STRING): The volume name

snapid (INT): Snapshot(tm) copy identifier.

wafl.vol.clone.unlock.snapshot.offline.failed

Severity

NOTICE

Description

This event is issued when the volume options are set such that the autodelete destroy policy is allowed to destroy volume clones referring to the snapshot to be deleted. It indicates an attempt to offline a volume clone has failed.

Corrective Action

(None).

Syslog Message

Volume clone offline of '%s' failed.

Parameters

name (STRING): The volume clone name

wafl.vol.clone.unlock.snapshot.start

Severity

INFORMATIONAL

Description

This message occurs when the volume options are set so that the autodelete destroy policy is allowed to destroy volume clones referring to the Snapshot™ copy to be deleted. The message indicates that the process of destroying volume clones is beginning. The Snapshot autodelete destroy policy is used when all other attempts to recover space in a thin-provisioned aggregate fail. The disruptive effect of destroying volume clones should be understood when setting this policy.

Corrective Action

(None).

Syslog Message

Starting process of destroying volume clones using volume %s snapid %d.

Parameters

name (STRING): Volume name.

snapid (INT): Snapshot copy identifier.

wafl.vol.clone.unlock.snapshot.success

Severity

INFORMATIONAL

Description

This message occurs when the volume options are set so that the autodelete destroy policy is allowed to destroy volume clones referring to the Snapshot™ copy to be deleted. The message indicates that the process of destroying volume clones has successfully completed.

Corrective Action

(None).

Syslog Message

Destroyed all volume clones using using volume %s snapid %d.

Parameters

name (STRING): Volume name.

snapid (INT): Snapshot copy identifier.

wafl.vol.create.clusterVolOnCFOaggr

Severity

ERROR

Description

This message occurs when a volume is created on a Controller Failover (CFO) high-availability (HA) style aggregate. File access delays will occur for a period following giveback.

Corrective Action

To minimize file access delays following giveback, create the volume on an aggregate with a Storage Failover (SFO) HA policy.

Syslog Message

Creating volume '%s' on an aggregate with a CFO HA policy. File access delays will occur for a period following giveback.

Parameters

vol (STRING): Name of the volume.

wafl.vol.deswizzle.done

Severity

INFORMATIONAL

Description

This message occurs when the deswizzle scan is complete.

Corrective Action

(None).

Syslog Message

(None).

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

run_time (LONGINT): Total run time of the scanner.

wafl.vol.fix.comp.algo.list

Severity

NOTICE

Description

This message occurs when CP detects and rectifies an incorrect compression algorithm list in volume.

Corrective Action

(None).

Syslog Message

List of used compression algorithms in the volume %s has been fixed. was %llu, now %llu.

Parameters

vol (STRING): Volume name.

old_val (LONGINT): Old value of compression algorithm list

new_val (LONGINT): New value of compression algorithm list

wafl.vol.fsp.full

Severity

ERROR

Description

This message occurs when an operation requests more space than is available in the Flexible Space Pool.

Corrective Action

Report this condition to NetApp technical support.

Syslog Message

%s %s%s%s%s: insufficient space in FSP %s to satisfy a request of %llu holes and %llu overwrites.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Volume identifier, in order to uniquely identify the volume in cases where volume name alone is insufficient.

fspname (STRING): The name of the flexible space pool.

requested (LONGINT): Amount of space requested from the flexible space pool.

requested_overwrites (LONGINT): Amount of overwrite reserve space requested from the flexible space pool.

wafl.vol.full

Severity

ALERT

Description

This message occurs when an operation requests more space than is available in the relevant volume.

Corrective Action

Consider manually deleting data or increasing the volume's size for one-time space issues. For frequent space issues, consider changing autogrow/autodelete settings.

Syslog Message

Insufficient space on %s %s%s%s%s to perform operation. %s was requested but only %s was available.

Parameters

type (STRING): Type of object (volume/aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Volume identifier, in order to uniquely identify the volume in cases where volume name alone is insufficient.
requested (STRING): Amount of space requested in the volume.
available (STRING): Amount of space available in the volume.

wafl.vol.guarantee.fail

Severity

NOTICE

Description

This message occurs when an attempt is made to apply the space guarantee for a flexible volume, but there is not enough space in the aggregate to do so. The volume will be mounted, but subsequent writes to the volume might fail if the volume's aggregate becomes full.

Corrective Action

Either increase the size of the corresponding aggregate by adding disks, or decrease the total volume space requirements in the aggregate by shrinking or destroying one or more volumes.

Syslog Message

Space for volume %s%s is not guaranteed. %s of additional space is required to enable the guarantee.

Parameters

vol (STRING): Name of the volume whose space guarantee could not be applied.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
short_by (STRING): Amount of additional space required in the volume.

wafl.vol.guarantee.stayoff

Severity

NOTICE

Description

This message occurs when WAFL® would otherwise have attempted to enable a volume's space guarantee, but the last time it tried, an error was encountered (most likely due to insufficient space). This error was recorded in the volume's on-disk RAID label so that the same error would not be repeated on future mounts. The volume will be mounted. However, because the volume is not guaranteed, it is possible that subsequent writes to the volume could fail if the volume's aggregate becomes full.

Corrective Action

Determine the cause of the error the last time WAFL attempted to enable this guarantee, either through logs or by attempting to enable it again manually. Typically, the issue is a lack of space at mount time detected during boot, which can be resolved by increasing the size of the corresponding aggregate (by adding disks or by shrinking or destroying some of the aggregate's volumes). After the issue is resolved, manually attempt to re-enable the guarantee using the 'volume modify' command.

Syslog Message

The space guarantee for volume %s was not enabled because an error occurred the last time a guarantee was enabled on this volume.

Parameters

vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Volume identifier.

wafl.vol.inode.space.usage

Severity

ERROR

Description

This message occurs when public inode space usage exceeds threshold value configured by admin.

Corrective Action

Use the command "volume modify <volume-name> -files <new-files-value>" to increase the number of files that the volume is allowed to contain. View the current value of the file threshold by using the command "volume show <volume-name> -fields files". If volume modify fails, increase volume size and try again.

Syslog Message

The file system on %s is currently using %d% of the files that can be contained on the volume. The admin has configured the threshold for monitoring public inode usage as %d%.

Parameters

type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique volume identifier when the volume name alone is insufficient.
current_infile_used (INT): Current value of inodes in public inode space.
threshold_ems_infile_used_pct (INT): Threshold percent value to monitor inodes usage.

wafl.vol.invalid.nomount

Severity

NOTICE

Description

This event is issued when a volume has not been fully copied and cannot be mounted.

Corrective Action

(None).

Syslog Message

Volume %s is not fully copied and cannot be mounted.

Parameters

vol (STRING): The volume name

wafl.vol.invalidate.fh

Severity

NOTICE

Description

This message indicates that an NVRAM failure is detected, invalidating outstanding filehandles.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s: Invalidating all filehandles due to previous NVRAM failure — Filesystem must be remounted by the client(s)

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.vol.mirrorType.invalid

Severity

ERROR

Description

This message occurs when WAFL® attempts to bring online a mirror volume that does not have a valid mirror-type attribute. This situation might be a direct result of an upgrade to a version of Data ONTAP® that requires the mirror-type attribute or as a result of a corruption.

Corrective Action

This condition cannot be fixed by file system repair mechanisms such as wafliron. The data is not lost, but it is inaccessible to the administrator. To access the data, contact NetApp technical support. Alternatively, the administrator can destroy the mirror volume by using the 'volume delete -vserver vserver_name -volume vol_name' command.

Syslog Message

The mirror type associated with the mirror volume %s %s%s%s%s is invalid.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Owner of the volume.

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name by itself is insufficient.

wafl.vol.mislabeled.root

Severity

NOTICE

Description

This event is issued when a volume or aggregate is labeled as root but was not selected as the root volume or aggregate. It is used to indicate that the label will be removed.

Corrective Action

(None).

Syslog Message

%s '%s%s%s' was incorrectly labeled as root. Removing the label.

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner Can be the empty string

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vol.nvfail.offline**Severity**

EMERGENCY

Description

This message occurs when the system detects an NVRAM failure and the volume is inconsistent. The volume might have data loss due to NVRAM failure. The volume has taken offline.

Corrective Action

Take the appropriate recovery action to recover from the possible data loss. Access to the volume is restricted until you clear the NVFAIL state manually.

Syslog Message

Volume %s%s is offline.

Parameters

owner (STRING): Volume owner.

vol (STRING): Volume name.

wafl.vol.nvfail.recovery.needed**Severity**

NOTICE

Description

This message occurs periodically to inform the administrator that recovery procedures must be performed on a volume that is marked as in-nvfailed-state.

Corrective Action

Take the appropriate recovery action to recover from the possible data loss. Access to the volume is

restricted until you clear the NVFAIL state manually.

Syslog Message

Volume %s%s%s is marked as in-nvfailed-state. The recovery process needs to be initiated on the volume to recover from the NVFAIL event.

Parameters

vol (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): If the volume belongs to a Vserver, the Vserver's Universal Unique Identifier (UUID).

wafl.vol.offline

Severity

INFORMATIONAL

Description

This message indicates that a volume has been taken offline.

Corrective Action

(None).

Syslog Message

%s %s%s%s%s has been taken temporarily offline.

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

instuuid (STRING): Volume Instance UUID

wafl.vol.offline.callbacks

Severity

NOTICE

Description

Data ONTAP was trying to offline a volume and had to ignore the result of file-locking callbacks being sent to clients in order to make progress. This is transparent to clients, as they will retry their original requests, which will be serviced when the volume comes back online.

Corrective Action

(None).

Syslog Message

Ignoring %d callbacks when offlineing %s %s%s%s%s.

Parameters

count (INT): The number of callbacks which were ignored

type (STRING): The type of object (volume or aggregate)

owner (STRING): The owner of the volume

vol (STRING): The name of the volume

app (STRING): Application UUID.

volident (STRING): The unique identifier of the volume in case the volume name itself is insufficient

wafl.vol.outOfInodes

Severity

ERROR

Description

This message occurs when a volume or aggregate reaches its maximum number of files and is out of inodes.

Corrective Action

For a volume, either use the command "volume modify -files" to increase the number the files that the volume is allowed to contain, or delete files from the volume. For an aggregate, add space to the aggregate.

Syslog Message

file system on %s %s%s%s%s is out of inodes because it has reached the maximum number of files

Parameters

type (STRING): Type of object (volume or aggregate)

owner (STRING): Owner of the volume or aggregate

vol (STRING): Name of the volume or aggregate

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume or aggregate in cases where the name itself is insufficient.

wafl.vol.outOfPrInodes

Deprecated

Severity

NOTICE

Description

This event is issued when the system discover that a volume is out of private inodes.

Corrective Action

(None).

Syslog Message

file system on %s %s%s%s%s is out of private inodes

Parameters

type (STRING): The type of object (volume/aggregate)

owner (STRING): The volume owner

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vol.quiesce.giveback

Severity

INFORMATIONAL

Description

This event is issued to indicate a volume quiescing has failed because wafl giveback is running.

Corrective Action

Retry quiescing the volume after giveback has completed.

Syslog Message

Quiescing volume %s failed because wafl giveback is running.

Parameters

vol (STRING): The volume name

wafl.vol.quiesce.iron

Severity

INFORMATIONAL

Description

This event is issued to indicate a volume quiescing has failed because wafl iron is running.

Corrective Action

Retry quiescing the volume after wafl iron has completed.

Syslog Message

Quiescing volume %s failed because wafl iron is running.

Parameters

vol (STRING): The volume name

wafl.vol.quiesce.notdrain

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation fails because of a general failure in draining the suspended messages or outstanding callbacks. This covers unknown cases that wafl.vol.quiesce.timeoutcb does not catch.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because draining message and callbacks failed. The total time spent quiescing the volume was %d milliseconds, %d of which was spent aborting scanners, %d milliseconds were spent flushing client requests for locks and watches, %d milliseconds were spent draining volume

references and %d milliseconds were spent draining callbacks and suspended messages.

Parameters

vol (STRING): Volume name.
ttq (INT): Time spent (in milliseconds) quiescing the volume.
tws (INT): Time spent (in milliseconds) waiting for scanners to abort.
twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.
twvr (INT): Time spent (in milliseconds) waiting for draining of volume references.
twdcm (INT): Time spent (in milliseconds) waiting for draining of suspended messages and callbacks.

wafl.vol.quiesce.notFlex

Severity

INFORMATIONAL

Description

This event is issued to indicate a volume quiescing has failed because it is not a flex vol.

Corrective Action

(None).

Syslog Message

Quiescing volume %s failed because it's not a flexible volume.

Parameters

vol (STRING): The volume name

wafl.vol.quiesce.notMounted

Severity

INFORMATIONAL

Description

This event is issued to indicate a volume quiescing has failed because it is not in mounted state.

Corrective Action

(None).

Syslog Message

Quiescing volume %s failed because it's not mounted. It's in %s state.

Parameters

vol (STRING): The volume name

statename (STRING): The state

wafl.vol.quiesce.relocating

Severity

ERROR

Description

This message occurs when a volume cannot be quiesced because an aggregate relocation operation is running.

Corrective Action

Retry the volume move operation after the aggregate relocation operation is complete.

Syslog Message

Volume %s could not be quiesced because aggregate relocation is running.

Parameters

vol (STRING): Volume name.

wafl.vol.quiesce.rootVol

Severity

INFORMATIONAL

Description

This event is issued to indicate a volume quiescing has failed because it is a root volume.

Corrective Action

(None).

Syslog Message

Quiescing volume %s failed because it's a root volume.

Parameters

vol (STRING): The volume name

wafl.vol.quiesce.statusvol

Severity

ERROR

Description

This message occurs when a volume cannot be quiesced because it is being used to host wafliron status files.

Corrective Action

Use "aggr wafliron show" command to monitor the status of wafliron and retry the operation after wafliron is complete.

Syslog Message

Volume %s could not be quiesced because it is being used by wafliron to host status files.

Parameters

vol (STRING): Volume name.

wafl.vol.quiesce.timeoutcb

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring draining of suspended callbacks or messages fails because of a timeout.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because there are %d outstanding callbacks and %d suspended messages. The time spent waiting for these to drain was %d milliseconds. The time spent quiescing the volume (%d milliseconds) was split between scan aborts (%d), flushing client requests (%d), and draining references (%d).

Parameters

vol (STRING): Volume name.

ncbo (INT): Number of outstanding callbacks.

nsm (INT): Number of suspended messages.

twdcm (INT): Time spent (in milliseconds) waiting for draining of suspended messages and callbacks.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.

twvr (INT): Time spent (in milliseconds) waiting for draining of volume references.

wafl.Vol.QuiesceTO.AbrtScan

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring scanners to abort fails because of a timeout.

Corrective Action

(None).

Syslog Message

Quiescing of the volume %s failed because aborting the scanners resulted in a timeout. The time spent quiescing the volume was %d milliseconds of which %d milliseconds were spent waiting for the scanners to abort.

Parameters

vol (STRING): Volume name.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

wafI.Vol.QuiesceTO.CIntReqs

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring flushing of client requests for locks and watches fails because of a timeout.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because time spent waiting for flushing of client requests for locks and watches (%d milliseconds) resulted in a timeout. The total time spent quiescing the volume was %d milliseconds - %d milliseconds were spent aborting scanners.

Parameters

vol (STRING): Volume name.

twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

wafI.Vol.QuiesceTO.RaIDrain

Severity

NOTICE

Description

This message occurs during a volume move operation, when a volume quiesce attempt fails to drain all of the outstanding remote cached inodes within the allowable time frame. This can occur and might persist on a heavily loaded system, and it prevents the move from being completed. However, as soon as the load drops to a more reasonable level, ONTAP flushes the cached inodes and completes the move without customer intervention.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because it was unable to drain all outstanding remote inodes for the volume. Initially the volume reported %d cached inodes, but timed out with %d cached inodes remaining.

Parameters

vol (STRING): Volume name.

nStart (INT): Number of cached inodes when drain starts.

nEnd (INT): Number of cached inodes when request times out.

wafI.Vol.QuiesceTO.RefDrain

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring draining of volume references fails because of a timeout.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because the time spent draining the references on the volume (%d milliseconds) resulted in a timeout. There are %d references on the volume. One of the owners is %s. The command "wafl vref status" under diag privileges can be used to view all the references on a volume on the node owning the volume. The time spent quiescing the volume (%d milliseconds) was split between scan aborts (%d) and flushing client requests(%d).

Parameters

vol (STRING): Volume name.

twvr (INT): Time spent (in milliseconds) waiting for draining of volume references.

wvc (INT): Number of references on the volume.

vo_1 (STRING): Text string representing the first volume reference owner.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.

wafl.Vol.QuiesceTO.RefsDrain

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring draining of volume references fails because of a timeout. The references are released.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because the time spent draining the references on the volume (%d milliseconds) resulted in a timeout. The time spent quiescing the volume (%d milliseconds), was split between scan aborts (%d) and flushing client requests (%d).

Parameters

vol (STRING): Volume name.

twvr (INT): Time spent (in milliseconds) waiting for draining of volume references.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.

wafl.Vol.QuiesceTO.SAN.Ntfy

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring a notification to the SAN component fails because of a timeout.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because a quiesce notification to the SAN component (%d milliseconds) resulted in a timeout. The time spent quiescing the volume (%d milliseconds) was split between scan aborts (%d), flushing client requests (%d), draining references (%d), draining callbacks and suspended messages (%d), and draining zombies (%d).

Parameters

vol (STRING): Volume name.

twsc (INT): Time spent (in milliseconds) waiting to for quiescing of the SAN component.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.

twvr (INT): Time spent (in milliseconds) waiting for draining of volume references.

twdcm (INT): Time spent (in milliseconds) waiting for draining of suspended messages and callbacks.

twzd (INT): Time spent (in milliseconds) waiting for draining of zombies.

wafI.Vol.QuiesceTO.ZmbDrain

Severity

INFORMATIONAL

Description

This message occurs when a volume quiesce operation requiring draining of zombies fails because of a timeout.

Corrective Action

(None).

Syslog Message

Quiescing of volume %s failed because the time spent draining zombies (%d milliseconds) resulted in a timeout. The time spent quiescing the volume (%d milliseconds) was split between scan aborts (%d), flushing client requests (%d), draining references (%d), and draining callbacks and suspended messages (%d).

Parameters

vol (STRING): Volume name.

twzd (INT): Time spent (in milliseconds) waiting for draining of zombies.

ttq (INT): Time spent (in milliseconds) quiescing the volume.

tws (INT): Time spent (in milliseconds) waiting for scanners to abort.

twcr (INT): Time spent (in milliseconds) flushing client requests for locks and watches.

twvr (INT): Time spent (in milliseconds) waiting for draining of volume references.

twdcm (INT): Time spent (in milliseconds) waiting for draining of suspended messages and callbacks.

wafl.vol.rekey.stat

Severity

NOTICE

Description

This message occurs when rekey scan ends to dump the stats.

Corrective Action

(None).

Syslog Message

Rekey scan is complete on volume '%s' (dsid %lu, aggr '%s'). Scan Stats: max_usecs_in_cpu = %lu, blks_total = %lu, max_blks_rekeyed_in_step = %lu, blks_rekeyed_by_scanner = %lu blks_rekeyed_by_client_io = %lu blks_with_error = %lu blks_skipped_dirty = %lu blks_suspended_fake_dirty = %lu blks_skipped_holes = %lu blks_packed = %lu

Parameters

vol (STRING): Volume name.

dsid (LONGINT): Unique identifier (DSID) of the volume.

aggr (STRING): Name of the containing aggregate.

max_usecs_in_cpu (LONGINT): Max. time (in micro-sec.) scanner runs in CPU.

blks_total (LONGINT): Total number of blocks scanner is expected to process.

max_blks_rekeyed_in_step (LONGINT): Max. number of blocks scanner process in one step.

blks_rekeyed_by_scanner (LONGINT): Number of blocks rekeyed by scanner.

blks_rekeyed_by_client_io (LONGINT): Number of blocks rekeyed by client I/O.

blks_with_error (LONGINT): Number of blocks failed to be loaded by scanner due to error.

blks_skipped_dirty (LONGINT): Number of blocks skipped by scanner because they are already dirty.

blks_suspended_fake_dirty (LONGINT): Number of blocks rekey scanner suspended on because they were fake dirty.

blks_skipped_holes (LONGINT): Number of blocks skipped by scanner because they are holes.

blks_packed (LONGINT): Number of blocks packed.

wafl.vol.runningOutOfInodes

Severity

ERROR

Description

This message occurs when the system detects that a volume is close to reaching its limit on the number of files that it can contain.

Corrective Action

Consider using the "volume modify <volume-name> -files <new-files-value>" command to increase the number of files that the volume is allowed to contain. You can view the current value of the file threshold by using the "volume show <volume-name> -fields files" command.

Syslog Message

The file system on "%s %s%s%s%s" is using 80 percent or more of the files in %s inode space that can be contained on the volume.

Parameters

ino_type (STRING): Inode type
type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique volume identifier when the volume name alone is insufficient.

wafl.vol.setting.in.nvfailed.state

Severity

ERROR

Description

This message occurs when the system detects an NVFAIL event in a volume and marks the volume as in-nvfailed-state.

Corrective Action

Access to the volume is restricted until you clear the NVFAIL state manually. See the Data Protection Online Backup and Recovery Guide.

Syslog Message

Volume %s%s%s is marked as in-nvfailed-state: %s.

Parameters

vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): If the volume belongs to a Vserver, the Vserver's Universal Unique Identifier (UUID).
err (STRING): Error that caused the volume to be marked in in-nvfailed-state.

wafl.vol.snap_create.done

Severity

INFORMATIONAL

Description

This message occurs when the 'snap create' scan is complete.

Corrective Action

(None).

Syslog Message

(None).

Parameters

type (STRING): Type of object (volume or aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.
run_time (LONGINT): Total run time of the scanner.

wafl.vol.spceslo.conflict

Severity

ERROR

Description

This message occurs when the Service Level Objective related to space management (the space SLO setting) for a volume conflicts with other volume settings.

Corrective Action

Try correcting the conflicting volume setting or space SLO by using the "volume modify <volname>" command.

Syslog Message

The space SLO setting %s for volume %s is incompatible with the volume's %s setting (%s)%s.

Parameters

space_slo (STRING): Space SLO of the volume.

vol (STRING): Name of the volume with conflicting settings.

app (STRING): Application UUID.

volident (STRING): String that uniquely identifies the volume when the volume name is insufficient.

setting (STRING): Name of the conflicting volume setting.

value (STRING): Value of the conflicting volume setting.

detail (STRING): Corrective action already taken, if any.

wafl.vol.tooFullForUnlink

Severity

ALERT

Description

This message occurs when an unlink operation requires more space than is available for unlinking in the relevant volume. Clients cannot remove files or directories until free space is added.

Corrective Action

Manually delete Snapshot(tm) copies or increase the volume's size for one-time space issues. For frequent space issues, consider changing autogrow or autodelete settings for the volume or aggregate in question.

Syslog Message

Insufficient free space available on %s %s %s to perform unlink operation.

Parameters

type (STRING): Type of object (volume or aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Volume identifier.

wafl.vol.unable.autogrow

Severity

ERROR

Description

This message occurs when automatically growing a volume fails because the underlying storage of the SVM (Vserver) has reached the SVM's storage limit.

Corrective Action

Increase the storage of the SVM by raising the storage limit. Alternatively, recover storage space by deleting volumes, Snapshot copies, LUNs, or files.

Syslog Message

Auto-grow of volume "%s" failed because the SVM's storage limit has been reached.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

object_uuid (STRING): Volume instance UUID of the resource object.

wafl.vol.walloc.rsv.dbg.reset**Severity**

NOTICE

Description

This event is issued to indicate that the write allocation reserve thresholds for a volume or aggregate have reset to normal. This message is issued on DEBUG builds only.

Corrective Action

(None).

Syslog Message

DBG: Volume %s allocation reserve thresholds reset.

Parameters

vol (STRING): The volume or aggregate name

wafl.vol.walloc.rsv.dbg.warn.blkcnt**Severity**

NOTICE

Description

This event is issued to indicate that the write allocation reserve code has triggered but the volume block counters appear to be in the normal range.

Corrective Action

(None).

Syslog Message

DBG: Volume (or aggregate) %s free space reserve hit %s threshold but block count doesn't match.

Parameters

vol (STRING): The volume or aggregate name
type (STRING): Threshold type: "low" or "high"

wafl.vol.walloc.rsv.failmount

Severity

EMERGENCY

Description

This message occurs when a volume consumes almost all of its free space reserve and should not be brought back online without assistance from technical support to address the free space issue.

Corrective Action

Contact NetApp technical support.

Syslog Message

Failing mount of volume %s. Free space reserve is too low. Contact NetApp technical support for assistance.

Parameters

vol (STRING): Volume name.

wafl.vol.walloc.rsv.offline

Severity

ALERT

Description

This message occurs when a volume or aggregate has consumed almost all of its free space reserve. The system is being shut down and rebooted cleanly and the affected aggregate or volume will be taken offline until the situation can be corrected with help from technical support.

Corrective Action

Contact NetApp technical support..

Syslog Message

Volume %s free space reserve is critically low. Rebooting system to take volume offline. Contact technical support for assistance.

Parameters

vol (STRING): Volume or aggregate name.

wafl.vol.walloc.rsv.root

Severity

ALERT

Description

This message occurs when the root volume has consumed almost its entire free space reserve. This is a highly abnormal condition that can lead to data loss if the free space reserve is completely consumed.

Corrective Action

Increasing the root volume size. Contact NetApp technical support for more information.

Syslog Message

Root volume (or aggregate) %s free space reserve is critically low.

Parameters

vol (STRING): Root volume or aggregate name.

wafl.volinfo events

wafl.volinfo.fsinfo.error

Severity

ALERT

Description

This message occurs when there is an error while reading the volinfo or fsinfo block of a volume.

Corrective Action

Take appropriate action based on the reason for the error.

Syslog Message

%s for %s '%s'

Parameters

reason (STRING): Reason for the error

type (STRING): The type of object (volume/aggregate)

vol (STRING): The name of the volume

wafl.volmove events

wafl.volmove.dst.amd.corrupt

Severity

ALERT

Description

This message occurs when the active map delta file for a volume move destination is corrupt.

Corrective Action

Run wafliron on the volume after the "volume move" operation is complete. For further assistance, contact NetApp technical support.

Syslog Message

Active map delta file for the "volume move" destination "%s" is corrupt.

Parameters

vol (STRING): Volume name.

wafl.volref events

wafl.volref.subsystem.string

Severity

ERROR

Description

This message occurs when wafliron is started on aggregate containing volumes, which are in-use by other subsystems.

Corrective Action

Stop the subsystem which is using this volume/aggregate So that wafliron can be run.

Syslog Message

wafliron: %s %s is being used by '%s'

Parameters

type (STRING): Type of object (volume or aggregate).

vol (STRING): Name of the volume or aggregate.

volref (STRING): volume reference string of the subsystem using this volume/aggregate.

wafl.voltrans events

wafl.voltrans.clear.noi2p

Severity

NOTICE

Description

This message occurs when a volume transition clears the noi2p option on a volume.

Corrective Action

(None).

Syslog Message

Volume transition will disable the noi2p option by default on volume %s.

Parameters

volname (STRING): Name of the volume.

wafl.voltrans.clear.svo

Severity

NOTICE

Description

This message occurs when a volume transition operation clears the SnapValidator for Oracle options on a volume.

Corrective Action

(None).

Syslog Message

Volume transition will disable the SnapValidator® for Oracle (svo) options by default on volume %s.

Parameters

volname (STRING): Name of the volume.

wafl.voltrans.dircopy.fail**Severity**

ALERT

Description

This message occurs when a volume transition convert directory operation fails.

Corrective Action

Check the status of the job by using the "volume transition-convert-dir show" (privilege: diag) command. Retry the volume transition after all volume directory transition operations have finished. If the operation fails on the second attempt, contact NetApp technical support.

Syslog Message

Volume transition-convert-dir operation failed on volume "%s", copying path "%s" to temporary directory "%s". Error code: %d.

Parameters

volname (STRING): Name of the volume.

path (STRING): Path of the directory to be copied.

tempname (STRING): Directory name to use as the temporary target for copy conversion.

errcode (INT): Error code upon completion.

wafl.voltrans.flexcache**Severity**

ERROR

Description

This message occurs during volume transition workflow when the transition volume is a FlexCache® volume. Support for FlexCache is deprecated.

Corrective Action

Delete the FlexCache volume.

Syslog Message

Volume transition failed due to unsupported FlexCache volume %s uuid %s.

Parameters

volname (STRING): Name of the volume.

voluuuid (STRING): Unique identifier for this volume.

wafl.voltrans.inconsistent.state

Severity

ERROR

Description

This message occurs when a volume transition operation fails because the volume is in an inconsistent state.

Corrective Action

Delete the inconsistent volume. Alternatively, return the disks to a 7-Mode environment to repair the volume.

Syslog Message

Volume transition failed for volume %s uuid %s due to its inconsistent state.

Parameters

volname (STRING): Name of the volume.

voluuuid (STRING): Unique identifier for this volume.

wafl.voltrans.qtree.novfiler

Severity

NOTICE

Description

This message occurs when a volume transition operation encounters qtrees not associated with the default vFiler unit.

Corrective Action

(None).

Syslog Message

Volume transition detected non-default vfiler qtrees in volume %s%s%s.

Parameters

volname (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): Uniquely identifies the owning Vserver when the volume name alone is insufficient.

wafl.voltrans.qtree.replica

Severity

ERROR

Description

This message occurs when a volume transition operation is attempted on a volume that is a qtree replica volume. Transitioning volumes that are qtree replica volumes is an unsupported operation. This condition exists because the source volume for the Transition Data Protection (TDP) SnapMirror® relationship is a qtree replica volume.

Corrective Action

Break all of the qtree replica relationships associated with the source volume of the TDP SnapMirror relationship. After that is done, perform a 'snapmirror update' or 'snapmirror resync' operation, and then a 'snapmirror break' operation, to attempt the volume transition operation again.

Syslog Message

The source of volume %s is a qtree replica. It cannot be transitioned to clustered Data ONTAP.

Parameters

volname (STRING): Name of the volume.

wafl.voltrans.sfsr.pending**Severity**

ERROR

Description

This message occurs when a volume transition operation fails because of a pending file restore process.

Corrective Action

Move the disks back to 7-Mode, use ZAPI command 'snapshot-restore-file-info' to ensure that all pending single file restore sessions are completed, and then try the transition again.

Syslog Message

Volume transition failed for volume %s uuid %s due to pending single file restore process.

Parameters

volname (STRING): Name of the volume.

voluuid (STRING): Unique identifier for this volume.

wafl.voltrans.snapids**Severity**

ERROR

Description

This message occurs when a volume transition operation fails because it cannot update the logical SnapID table.

Corrective Action

(None).

Syslog Message

Volume %s failed to update the logical SnapID table and could not be transitioned.

Parameters

volname (STRING): Name of the volume.

wafl.voltrans.snapshot.32bit

Severity

ERROR

Description

This message occurs during volume transition workflow when 32-bit Snapshot copy is detected for the transition volume.

Corrective Action

Retry volume transition to bypass this specific error. All 32-bit Snapshot copies are automatically deleted as part of the volume transition.

Syslog Message

Volume transition failed due to unsupported 32-bit snapshots on volume %s uuid %s.

Parameters

volname (STRING): Name of the volume.

voluuid (STRING): Unique identifier for this volume.

wafl.voltrans.ss.lun.clone

Severity

ERROR

Description

This message occurs when a volume transition operation detects one or more LUN clones backed up by Snapshot® copies within a volume.

Corrective Action

Retry volume transition to bypass this specific error, force the volume online, and continue the transition operation. This results in data loss for all the LUN clones that have Snapshot copies in this volume.

Alternatively, return the disks to a 7-Mode environment, split the LUN clones, and then repeat the transition workflow.

Syslog Message

Volume transition failed for volume %s uuid %s due to one or more snapshot backed lun clones.

Parameters

volname (STRING): Name of the volume.

voluuid (STRING): Unique identifier for this volume.

wafl.voltrans.vol.32bit

Severity

ERROR

Description

This message occurs during volume transition workflow when a 32-bit volume is detected for the transition volume.

Corrective Action

Delete the 32-bit volume. Alternatively, return the disks to a 7-Mode environment and upgrade the 32-bit volume to a 64-bit volume and then repeat the transition workflow.

Syslog Message

Volume transition failed due to unsupported 32-bit volume %s uuid %s.

Parameters

volname (STRING): Name of the volume.

voluuid (STRING): Unique identifier for this volume.

wafl.voltrans.was.offline**Severity**

ERROR

Description

This message occurs when a volume transition operation encounters an offline volume.

Corrective Action

Retry volume transition to bypass this specific error, force the volume online, and continue the transition operation. This might lead to data loss if the offline volume contains uncommitted data.

Syslog Message

Volume transition failed for offline volume %s uuid %s.

Parameters

volname (STRING): Name of the volume.

voluuid (STRING): Unique identifier for this volume.

wafl.voltrans.was.restricted**Severity**

ERROR

Description

This message occurs when a volume transition operation encounters a restricted volume.

Corrective Action

Retry volume transition to bypass this specific error, force the volume online, and continue the transition operation.

Syslog Message

Volume transition failed for restricted volume %s uuid %s.

Parameters

volname (STRING): Name of the volume.

voluuuid (STRING): Unique identifier for this volume.

wafl.volume events

wafl.volume.charmap.loadfail

Severity

ERROR

Description

This message occurs when a volume comes online with a corrupted or unavailable character mapping configuration.

Corrective Action

Remove character mapping by using the "vserver cifs character-mapping delete" command. Then reapply it by using the "vserver cifs character-mapping create" command. For more information, see the "vserver cifs character-mapping" man page. For further assistance, contact NetApp technical support.

Syslog Message

Failed to load character mapping configuration for volume %s. Reason: %s.

Parameters

volname (STRING): Volume for which loading of the character mapping configuration failed.

reason (STRING): Reason for failure.

wafl.volume.clone.created

Severity

INFORMATIONAL

Description

This message occurs when a clone of a flexible volume is created successfully.

Corrective Action

(None).

Syslog Message

Volume clone %s of volume %s was created successfully.

Parameters

clonename (STRING): Volume clone name

volname (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

wafl.volume.clone.fractional_rsrv.changed

Severity

INFORMATIONAL

Description

This message occurs when the space reservation of a flexible volume clone is changed to 100 percent because guarantee of the clone is set to 'file'.

Corrective Action

(None).

Syslog Message

Fractional reservation for clone '%s:%d' was changed to 100 percent because guarantee is set to 'file'.

Parameters

clonename (STRING): Volume clone name.

Ordinal (INT): Volume Ordinal.

wafl.volume.clone.snap.cpcount.load.failure

Severity

ERROR

Description

This message occurs when a clone of a flexible volume fails to load the cp count of its or the parent volume's base snapshots.

Corrective Action

(None).

Syslog Message

Volume clone %s failed to load the cp count of its or the parent volume's base snapshot, with Snap ID %d.

Parameters

clonename (STRING): Volume clone name.

snapid (INT): Snapshot ID of the clone volume's base snapshot.

wafl.volume.clone.split.started

Severity

INFORMATIONAL

Description

This message occurs when an operation to split a flexible volume clone from its parent volume is started successfully.

Corrective Action

(None).

Syslog Message

Clone split was started for volume %s%s%

Parameters

volname (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

wafl.volume.clone.with.uid.gid

Severity

INFORMATIONAL

Description

This message occurs when a clone of a flexible volume is created with a volume-level UID and GID.

Corrective Action

Split the clone volume before creating this as a source of an XDP-type SnapMirror relationship.

Syslog Message

Volume clone %s%s%s was created with vol-level UID and GID. If this clone volume is used as a source of XDP type SnapMirror relationship, then UID and GID of all the transferred file at the destination will be unpredictable.

Parameters

clonename (STRING): Volume clone name.

app (STRING): Application UUID.

vserver_uuid (STRING): Universal Unique ID (UUID) of the clone volume's Vserver.

wafl.volume.find.valid_base.snap.failure

Severity

NOTICE

Description

This event is issued when an error occurs while finding the valid base snapshot for a clone volume.

Corrective Action

None required.

Syslog Message

Encountered error %u while finding the valid base snapshot having snapid %u for clone volume (clonename='%', volident='%s').

Parameters

error_code (INT): A numerical error code indicating the reason why finding valid base snapshot failed for clone volume.

snapid (INT): Snapshot ID of the clone volume base snapshot.

clonename (STRING): Volume clone name.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.volume.inuse

Severity

ALERT

Description

This message occurs when a volume operation fails because the volume is being used in another operation.

Corrective Action

Check the status of the volume and aggregate using the "vol show" and "aggr show" commands. If there are no other operations running on either of them then retry your request. If problems persists, or you need further assistance, contact NetApp technical support.

Syslog Message

%s %s %s operation failed as volume is busy in another operation.

Parameters

type (STRING): Type of object (volume or aggregate).

vol (STRING): Name of the volume.

operation (STRING): Operation.

wafl.volume.inuse.by

Severity

ALERT

Description

This message occurs when a volume operation fails because the volume or parent aggregate is being used by another operation.

Corrective Action

Check the status of the volume and aggregate. Wait for the current operation to finish, and then retry your request. If problems persist or you need further assistance, contact NetApp technical support.

Syslog Message

%s %s %s operation failed because the volume or parent aggregate is locked by operation %s.

Parameters

type (STRING): Type of object (volume or aggregate).

vol (STRING): Name of the volume.

operation (STRING): Operation that failed.

locked_by (STRING): Operation currently locking the volume or parent aggregate.

wafl.volume.sidl.enableErr

Severity

ERROR

Description

This message occurs when an attempt to enable Single Instance Data Logging (SIDL) on a volume fails.

Corrective Action

Use the "volume efficiency show" and "volume show" commands to check the volume for enabled features that are incompatible with SIDL, such as compaction or inline deduplication. After the incompatible features are disabled, wait 10 seconds and then enable SIDL again.

Syslog Message

SIDL was not enabled on volume %s

Parameters

volume (STRING): Volume name.

wafl.volume.sidl.offline

Severity

ERROR

Description

This message occurs when a volume with single instance data logging enabled is taken offline due to the current version of Data ONTAP not supporting that feature. This situation can occur if a volume with the feature enabled is attempted to be onlined using a version of Data ONTAP that doesn't support it.

Corrective Action

To bring the volume online, use a version of Data ONTAP that supports single instance data logging.

Syslog Message

Volume "%s" was taken offline because the current version of Data ONTAP does not support single instance data logging, an enabled feature on this volume.

Parameters

volume (STRING): Volume name.

wafl.volume.slag.loadfailed

Severity

ERROR

Description

This message occurs when a loading or update of Storage-Level Access Guard(SLAG) fails because of an internal error. In this case, SLAG is not activated on the volume or qtree.

Corrective Action

Remove SLAG by using the "vserver security file-directory remove-slag" command, and then reapply it by using the "vserver security file-directory apply" command.

Syslog Message

Failed to load or update SLAG for SLAG level: %d on qtree ID: %d in volume "%s%s%s%s". Error:%d
Reason: %s.

Parameters

loadflag (INT): SLAG load flag.

qtree (INT): Qtree identifier.

owner (STRING): Owner of the volume.
vol (STRING): Name of the volume.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume in cases where the volume name itself is insufficient.
waflerror (INT): WAFL error which caused the failure.
reason (STRING): Reason for the failure.

wafl.volume.snap.autoDelete

Severity

INFORMATIONAL

Description

This message occurs when a Snapshot(tm) copy in the volume is being deleted to free space. Snapshot copies can be deleted automatically from a volume to enforce the corresponding automatic deletion policy.

Corrective Action

(None).

Syslog Message

Deleting Snapshot copy '%s' in volume '%s%s%s' to recover storage.

Parameters

name (STRING): Snapshot copy name.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.volume_snap events

wafl.volume_snap.autoDelete.fail

Severity

INFORMATIONAL

Description

This message occurs when automatic deletion of a Snapshot(tm) copy fails.

Corrective Action

(None).

Syslog Message

Unable to delete Snapshot copy '%s' in volume '%s%s%s' to recover space: %s

Parameters

name (STRING): Snapshot copy name.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Uniquely identifies the volume when the volume name itself is insufficient.
err (STRING): Reason for failure.

wafl.vv events

wafl.vv.bad.DSIDorMSID

Severity

ERROR

Description

This message occurs when Data ONTAP® cannot map a volume to serve a client request because of invalid data Set Identifiers. Protocol access to the volume is disabled.

Corrective Action

Take the volume offline and contact NetApp technical support.

Syslog Message

Cannot map volume '%s%s%s' to serve client requests because of invalid data set identifiers.

Parameters

vol (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vv.clone.splitBusySnap

Severity

NOTICE

Description

This event is to inform the user that a volume clone cannot split from its parent volume due to busy snapshots.

Corrective Action

Determine which snapshots in the clone volume are busy and correct the condition that is causing them to be busy. Then, retry the operation.

Syslog Message

Volume '%s%s%s' has locked snapshots, not splitting.

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vv.clone.splitNoScan

Severity

NOTICE

Description

This event is to inform user that the system is unable to start a volume clone scanner, so the clone volume will not be split from its parent volume.

Corrective Action

This may be a temporary issue. Please retry the volume clone split operation after sometime.

Syslog Message

Unable to start clone split scanner on volume '%s%s%s'.

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vv.dup.DSID2

Severity

ERROR

Description

This message occurs when another volume is already registered with the data set identifier (DSID) assigned to this volume.

Corrective Action

Contact NetApp technical support.

Syslog Message

Duplicate volume '%s%s%s' DSID (%08x) detected in aggregate '%s'.

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

dsid (LONGINT): Data set identifier.

aggr (STRING): Aggregate name.

wafl.vv.dup.UUID

Severity

NOTICE

Description

This message occurs when the system detects and updates a duplicate volume Universally Unique Identifier (UUID).

Corrective Action

(None).

Syslog Message

vvol '%s' in aggregate '%s' duplicate UUID %s was changed to %s.

Parameters

vol (STRING): Volume name.

aggr (STRING): Aggregate name.

old_uuid (STRING): Old duplicated UUID for the volume.
new_uuid (STRING): Replacement UUID for the volume.

wafl.vv.raidfile.open

Severity

NOTICE

Description

This event is to inform user that the system can not open the raid label file for update and the reason.

Corrective Action

(None).

Syslog Message

Unable to open volume descriptor: %s

Parameters

err (STRING): The error message

wafl.vv.raidfile.readOnly

Severity

NOTICE

Description

This event is to inform user that the raid label file can not be updated on a read only volume.

Corrective Action

(None).

Syslog Message

Unable to update volume descriptor, aggregate '%s' is readonly

Parameters

vol (STRING): The volume name

wafl.vv.raidfile.update

Severity

NOTICE

Description

This event is to inform user that while renaming a virtual volume, the system is unable to update the volume's raid label file

Corrective Action

(None).

Syslog Message

%s: Can't rewrite descriptor for volume '%s%s%s', aggregate '%s', error code %d.

Parameters

cmd (STRING): The command name
vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
aggr (STRING): The aggregate name
err (INT): The error code

wafl.vv.regen.instance.uuid

Severity

INFORMATIONAL

Description

This message occurs when the instance UUID and the provenance UUID of a FlexVol(tm) volume have been regenerated.

Corrective Action

(None).

Syslog Message

For FlexVol volume '%s' with FSID 0x%x and instance UUID %s, a new instance UUID and provenance UUID (both being %s) have been generated.

Parameters

vol (STRING): Volume name.
fsid (INT): File system identifier.
oldinstuuid (STRING): Old instance UUID of the volume.
instuuid (STRING): New instance UUID of the volume. This is also the new provenance UUID.

wafl.vv.rename.dup

Severity

NOTICE

Description

This message occurs when a duplicate flexible volume name is changed to a unique name.

Corrective Action

(None).

Syslog Message

Duplicate flexible volume name '%s%s%s' changed to '%s%s%s' in aggregate '%s'.

Parameters

oldname (STRING): Duplicate name.
app (STRING): Application UUID.
volident1 (STRING): If the volume belongs to a vserver, this is that vserver's Universal Unique Identifier (UUID).
newname (STRING): New name.
app2 (STRING): Application UUID.
volident2 (STRING): If the volume belongs to a vserver, this is that vserver's Universal Unique Identifier

(UUID).

aggrname (STRING): Name of the containing aggregate.

wafl.vv.set.size

Severity

NOTICE

Description

This event is issued when setting virtual volume size to the size indicated in fsinfo

Corrective Action

(None).

Syslog Message

Setting volume size for %s%s%s to match nominal size.

Parameters

owner (STRING): The volume owner

name (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vv.softlocks.noParent

Severity

NOTICE

Description

This event is to inform user that to remove softlocks associated with a volume clone, the parent volume must be online

Corrective Action

(None).

Syslog Message

Unable to find parent volume when destroying clone '%s%s%s' softlocks. Ensure the parent volume is online then retry the operation.

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

wafl.vv.vol.config

Severity

NOTICE

Description

This event is issued to inform the user that the system can not configure a virtual volume and the reason.

Corrective Action

(None).

Syslog Message

Unable to configure volume in aggregate '%s': %s

Parameters

vol (STRING): The volume name

err (STRING): The error string

wafl.vv.vol.maxvols

Severity

NOTICE

Description

This message occurs when the system cannot configure a FlexVol® volume because the maximum number of volumes has been reached.

Corrective Action

Destroy some existing volumes to make room for new ones.

Syslog Message

Cannot configure FlexVol volume '%s' (UUID %s) in aggregate '%s': There are too many FlexVol volumes (%d) on the system. The limit for %s is %d.

Parameters

vol (STRING): FlexVol name.

uuid (STRING): FlexVol unique ID.

aggregate (STRING): Aggregate name.

count (INT): Current number of FlexVol volumes.

model (STRING): System model name.

limit (INT): Limit for the number of FlexVol volumes.

wafl.vvclock events

wafl.vvclock.string

Severity

ERROR

Description

This message occurs when an operation is run on an aggregate while the flexible volume level admin (vvc) lock of one of volumes of the aggregate is held by another subsystem. The message prints the name the subsystem that is holding the lock and the type of lock.

Corrective Action

Stop the subsystem that is using this volume/aggregate so that the operation can be run.

Syslog Message

%s: aggregate %s is busy. Reason: vvc lock of the volume %s is held by subsystem %s. %s.

Parameters

operation (STRING): Name of the operation.
aggrname (STRING): Name of the aggregate, one of the volumes of which is holding the vvc lock.
vvolname (STRING): Name of the volume that is holding the vvc lock.
lockerstring (STRING): Name of the subsystem that is holding the vvc lock.
locktype (STRING): vvc lock type:WAFL® or SnapMirror®.

wafl.vvol events

wafl.vvol.create.encrypted

Severity

NOTICE

Description

This message occurs when an encrypted flexible volume is created.

Corrective Action

(None).

Syslog Message

New %s encrypted volume %s is created on aggregate %s.

Parameters

key_type (STRING): This Indicates encryption type of this volume is NetApp Aggregate Encryption (NAE) or NetApp Volume Encryption (NVE).
vol (STRING): Volume name.
aggr (STRING): Name of the containing aggregate.
voluuid (STRING): Volume UUID.
keyid (STRING): Encryption Key ID.
buftreeid (INT): Buftreeid.
cp_count (INT): Consistency Point (CP) at which this volume is created.

wafl.vvol.delete.metadata.recrm

Severity

NOTICE

Description

This message occurs when the system cannot remove volume metadata during a volume delete operation after moving it to recycle bin.

Corrective Action

(None).

Syslog Message

Could not remove volume %s%s%s metadata. Error: %d.

Parameters

vol (STRING): Name of the flexible volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier for the volume when the volume name alone is insufficient.
errorCode (INT): Error number.

wafl.vvol.delete.metadata.rename

Severity

NOTICE

Description

This message occurs when the system cannot rename volume metadata during a volume delete operation.

Corrective Action

(None).

Syslog Message

Could not rename volume %s%s%s metadata. Error: %d.

Parameters

vol (STRING): Name of the flexible volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier for the volume when the volume name alone is insufficient.
errorCode (INT): Error number.

wafl.vvol.delete.metadata.rm

Severity

NOTICE

Description

This message occurs when the system cannot remove volume metadata during a volume delete operation. The system will retry removing the metadata during any operation that brings the containing aggregate online(for example, takeover).

Corrective Action

(None).

Syslog Message

Cannot remove volume %s%s%s metadata. Error: %s(%d).

Parameters

vol (STRING): Name of the flexible volume.
app (STRING): Application UUID.
volident (STRING): Unique identifier for the volume when the volume name alone is insufficient.
reason (STRING): Reason for the failure.
errorCode (INT): Error number.

wafl.vvol.delete.recovered

Severity

INFORMATIONAL

Description

This event occurs when a flexible volume that was queued for delete is recovered.

Corrective Action

(None).

Syslog Message

Volume %s%s%s%s recovered.

Parameters

owner (STRING): String indicating the owner of the affected volume.

vol (STRING): Name of the flexible volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume when the volume name alone is insufficient.

wafl.vvol.destroyed

Severity

NOTICE

Description

This message occurs when a flexible volume is destroyed.

Corrective Action

(None).

Syslog Message

Volume %s%s%s%s destroyed.

Parameters

owner (STRING): String indicating the owner of the affected volume.

vol (STRING): Name of the flexible volume.

app (STRING): Application UUID.

volident (STRING): Unique identifier for the volume when the volume name alone is insufficient.

vol_btid (INT): Internal buftree identifier for the volume.

wafl.vvol.encrypted.offline

Severity

INFORMATIONAL

Description

This message occurs when an encrypted virtual volume is taken offline.

Corrective Action

(None).

Syslog Message

Volume '%s%s%s' is encrypted and was taken offline.

Parameters

name (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

wafl.vvol.excessive.contsize

Severity

ERROR

Description

This message occurs when a flexible volume container that exceeds the maximum size supported on the running platform is detected. This event can be encountered after a headswap to a platform supporting a lower maximum capacity.

Corrective Action

Back up the dataset in the volume as soon as possible and take the volume offline. Alternatively, consider a system or hardware upgrade to a platform that supports a higher maximum capacity.

Syslog Message

Volume '%s' exceeded the maximum container capacity supported on this platform (container blkcnt=%llu, maxlimit=%llu). Back up the dataset and take the volume offline as soon as possible.

Parameters

vol (STRING): The volume name

blkcount (LONGINT): The total blocks capacity of the volume container

maxblkcount (LONGINT): The maximum container capacity supported on the platform

wafl.vvol.excessive.volsize

Severity

ERROR

Description

This message occurs when a flexible volume that exceeds the maximum size supported on the running platform is detected. This event can be encountered after a headswap to a platform supporting a lower maximum capacity.

Corrective Action

If possible, shrink the flexible volume using the 'vol size' command. If not, back up the dataset in the volume as soon as possible and take the volume offline. Alternatively, consider a system or hardware upgrade to a platform that supports a higher maximum capacity.

Syslog Message

Volume '%s' exceeded the maximum volume size supported on this platform (nominal blkcnt=%llu, maxlimit=%llu). Shrink the volume or back up the dataset and take the volume offline as soon as possible.

Parameters

vol (STRING): Volume name

blkcount (LONGINT): Total block count of the volume.

maxblkcount (LONGINT): Maximum block count supported on the platform.

wafl.vvol.invalid.DSID

Severity

ERROR

Description

This message occurs when ONTAP® finds a volume with an invalid data set identifier (DSID). This might have occurred as a result of disk corruption.

Corrective Action

Contact NetApp technical support to have a new DSID assigned to the volume as soon as possible.

Syslog Message

Volume '%s%s%s' has an invalid DSID (0x%*x*).

Parameters

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

dsid (LONGINT): Data set identifier.

wafl.vvol.move.encrypted

Severity

NOTICE

Description

This message occurs when an encrypted destination volume is created as part of volume move operation.

Corrective Action

(None).

Syslog Message

%s encrypted volume %s%s%s is created on aggregate %s as part of a volume move operation.

Parameters

key_type (STRING): This Indicates encryption type of this volume is NetApp Aggregate Encryption (NAE) or NetApp Volume Encryption (NVE).

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

aggr (STRING): Name of the containing aggregate.

voluuid (STRING): Volume UUID.

keyid (STRING): Encryption Key ID.

buftreeid (INT): Buftreeid.

cp_count (INT): Consistency Point (CP) at which this volume is created.

wafl.vvol.offline

Severity

INFORMATIONAL

Description

This message indicates when a virtual volume is taken offline.

Corrective Action

(None).

Syslog Message

Volume '%s%s%s' has been set temporarily offline

Parameters

name (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

instuuid (STRING): Volume Instance UUID

wafl.vvol.offline.err

Severity

NOTICE

Description

This event is issued if the system fail to set the raid label of the virtual volume when it's taken offline.

Corrective Action

(None).

Syslog Message

Error persistently transitioning volume %s%s%s from 'restricted' to 'offline', unable to update descriptor, error %d

Parameters

name (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

error (INT): The error code

wafl.vvol.offline.persist

Severity

INFORMATIONAL

Description

This message occurs when a flexible volume that was marked temporarily offline as part of the volume migration process is now marked persistently offline.

Corrective Action

(None).

Syslog Message

(None).

Parameters

name (STRING): Volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

wafl.vvol.online

Severity

INFORMATIONAL

Description

This event occurs when the state of flexible volume moves to the online state.

Corrective Action

(None).

Syslog Message

(None).

Parameters

vol (STRING): The name of the flexible volume

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

instuuid (STRING): Volume instance UUID

wafl.vvol.ownVserver.changed

Severity

INFORMATIONAL

Description

This message occurs when either a cluster repair tool changes the owning vserver of the volume, or when the volume is transitioned from being a node volume to a cluster volume or vice versa.

Corrective Action

(None).

Syslog Message

Volume '%s%s' owning vserver / name changed to '%s%s%s'.

Parameters

oldname (STRING): Original name of the volume.

oldownerIdent (STRING): Original vserver identifier.

newname (STRING): New name of the volume.

app (STRING): Application UUID.

newownerIdent (STRING): New vserver identifier.

wafl.vvol.renamed

Severity

INFORMATIONAL

Description

This message occurs when the administrator renames a flexible volume.

Corrective Action

(None).

Syslog Message

Volume '%s%s' renamed to '%s%s%s'.

Parameters

oldname (STRING): Original volume name.

volident1 (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

newname (STRING): New volume name.

app (STRING): Application UUID.

volident2 (STRING): Unique identifier of the volume in cases where the volume name itself is insufficient.

wafl.vvol.restrict

Severity

INFORMATIONAL

Description

This event is issued to indicate a flexible volume has been restricted

Corrective Action

(None).

Syslog Message

(None).

Parameters

vol (STRING): The volume name

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.

instuuid (STRING): Volume Instance UUID

wafl.vvol.vvlabel.error

Severity

ERROR

Description

This message occurs when the verification of the vvlabel fails on a flexible volume. This event provides all the information available in the vvlabel so that it can be used later, for recovery.

Corrective Action

Contact NetApp technical support.

Syslog Message

Cannot determine volume label information (%s). (Flexible volume with UUID '%s', unique ID '%d' on aggregate '%s' with raidtree ID '%s')

Parameters

err (STRING): Error string.
voluuid (STRING): UUID of the flexible volume as identified by the metadir.
id_in_aggr (INTHEX): Unique ID within the containing aggregate.
aggr_name (STRING): Containing aggregate name.
aggr_rtid (STRING): RAID tree ID of the aggregate.
version (INTHEX): vvlable version.
mirror_flags (INTHEX): Mirror type flags.
vol_flags (INTHEX): Flags for the volume.
fsid (INTHEX): File system identifier for the volume.
clone_parent (INTHEX): 'id_in_aggr' value of the clone's parent volume.
base_snapid (INTHEX): Clone base Snapshot(tm) copy ID.
vuuid (STRING): UUID of the flexible volume as identified by the vvlable.
vvol_type (INTHEX): Flexible volume's type.
dsid (LONGINTHEX): Volume data set identifier.
msid (LONGINTHEX): Volume master data set identifier.
owneruuid (STRING): UUID of the owning Vserver.
volname (STRINGARRAY): Volume name in raw hexadecimal format.

wafl.vvol.xfer.nospacedestErr

Severity

ERROR

Description

This event indicates that the transfer to a destination flexible volume has failed because the aggregate than contains this volume is out of space.

Corrective Action

Increase space available in the aggregate by either adding disks or freeing space by deleting aggregate snapshots, shrinking flexible volumes or moving flexible volumes to another aggregate. Ensure that there is sufficient space available in the aggregate (using the df -A command) to accommodate the flexible volumes it contains. The vol size command may be used to obtain flexible volume sizes and also to grow or shrink them.

Syslog Message

Transfer to volume '%s%s%s' failed because the containing aggregate, '%s', is out of space.

Parameters

vol (STRING): The volume name
app (STRING): Application UUID.
volident (STRING): To uniquely identify the volume in cases where volume name itself is insufficient.
aggr (STRING): The aggregate name

wafl.watch events

wafl.watch.cache.limit.near

Severity

INFORMATIONAL

Description

This message occurs when WAFL® "change notify" requests approach the size limit of the inode cache pool. This is caused by an excessive number of "change notify" requests being generated by the Server Message Block(SMB) server. If the maximum limit is reached and the limit is not increased, significant system performance degradation could occur.

Corrective Action

Contact NetApp technical support. for assistance.

Syslog Message

Size of "change notify" requests in inode cache pool: %d, approaching the size limit: %d

Parameters

current_size (INT): Current size of the inode cache pool.

max_size (INT): Maximum size of the inode cache pool.

wafl.write events

wafl.write.fail.cifsSpace

Severity

ERROR

Description

This message occurs when a write to a file with CIFS-style space reservations fails due to a lack of space in the volume or aggregate.

Corrective Action

If the volume is a Flexvol® volume, and the volume guarantee is disabled, increase the amount of space available in the aggregate. Otherwise, increase the amount of space available in the volume.

Syslog Message

Write failed to file with CIFS space reservations due to lack of disk space in %s %s%s%s%s (%s%s, inode %u, offset %llu, len %u).

Parameters

type (STRING): Type of object (volume/aggregate).

owner (STRING): Volume owner.

vol (STRING): Volume name.

app (STRING): Application UUID.

volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.

space_info (STRING): Text string specifying whether there is a guarantee.

guarantee_state (STRING): Text string describing the state of the guarantee on the volume (disabled, volume, file, and so on).

ino (INT): Inode number.
offset (LONGINT): Block offset.
len (INT): Length value.

wafl.write.fail.spcres

Severity

ERROR

Description

This message occurs when a write to a space-reserved file fails due to a lack of space in the volume or aggregate. This is possible when the fractional reserve is not 100% or the space guarantee of the containing flexible volume is not guaranteed.

Corrective Action

If the volume is a Flexvol® volume, and the volume guarantee is disabled, increase the amount of space available in the aggregate. Otherwise, increase the amount of space available in the volume.

Syslog Message

Write failed to file with space reservations due to lack of disk space in %s %s%s%s%s (%s%s, inode %u, offset %llu, len %u).

Parameters

type (STRING): Type of object (volume/aggregate).
owner (STRING): Volume owner.
vol (STRING): Volume name.
app (STRING): Application UUID.
volident (STRING): Unique identifier of the volume when the volume name by itself is insufficient.
space_info (STRING): Text string specifying whether there is a guarantee.
guarantee_state (STRING): Text string describing the state of the guarantee on the volume (disabled, volume, file, and so on).
ino (INT): Inode number.
offset (LONGINT): Block offset.
len (INT): Length value.

wafl.zombie events

wafl.zombie.susp.aggr.limit

Severity

NOTICE

Description

This message occurs when the aggregate encounters the zombie throttling limits during zombie delete processing for large number of file deletions.

Corrective Action

(None).

Syslog Message

WAFL® aggregate %s is experiencing zombie throttling possibly due to requests for large number of file deletions. This can be mitigated by a combination of a) reducing the load on the aggregate or b) issuing the

file deletion requests in smaller batches.

Parameters

aggrname (STRING): Name of the aggregate.

wafl.zombie.susp.vol.limit

Severity

NOTICE

Description

This message occurs when the volume encounters the zombie throttling limits during zombie delete processing for large number of file deletions.

Corrective Action

(None).

Syslog Message

WAFL® volume %s%s%s%s is experiencing zombie throttling possibly due to requests for large number of file deletions. This can be mitigated by a combination of a) reducing the load on the volume or b) issuing the file deletion requests in smaller batches.

Parameters

volowner (STRING): Owner of the volume.

volname (STRING): Name of the volume.

app (STRING): Application UUID.

volident (STRING): To uniquely identify the volume in cases where the volume name itself is insufficient.

Consists of the Vserver name and UUID.

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