NetApp

extcache events

ONTAP 9.14.1 EMS reference

NetApp
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extcache.aggregate events

extCache.aggregate.invalidate

Severity

INFORMATIONAL

Description

This message provides diagnostic information about background work taking place in the WAFL® external cache subsystem.

Corrective Action

(None).

Syslog Message

WAFL external cache: %s

Parameters

detail (STRING): Specific diagnostic information related to the aggregate invalidation event.

extcache.configunsupported events

extCache.configUnsupported

Severity

ERROR

Description

This message occurs when the controller contains an external cache hardware configuration that cannot be supported on the controller.

Corrective Action

Consult the release documentation, check the Interoperability Matrix Tool (IMT) for a supported configuration, or contact Contact NetApp technical support. to understand and correct the hardware configuration.

Syslog Message

WAFL external cache hardware configuration is not supported: %s.

Parameters

description (STRING): String providing information about why the configuration is unsupported.

extcache.control events

extCache.control

Severity

NOTICE

Description

This message occurs when the external cache software cannot signal its administrative thread.

Corrective Action

(None).

Syslog Message

WAFL external cache: %s

Parameters

detail (STRING): Specific details of the event.

extcache.disabled events

extCache.disabled

Severity

NOTICE

Description

This message occurs when the external cache is administratively disabled.

Corrective Action

(None).

Syslog Message

WAFL external cache administratively disabled

Parameters

(None).

extcache.enabled events

extCache.enabled

Severity

NOTICE

Description

This message occurs when the external cache is administratively enabled.

Corrective Action

(None).

Syslog Message

WAFL external cache administratively enabled

Parameters

(None).

extcache.io events

extCache.io.BlockChecksumError

Severity

ERROR

Description

This message occurs when the external cache detects a block checksum verification error while performing a read operation. Checksum errors are infrequent. Some combinations of external cache hardware and software handle these errors automatically without the need for adminstrator action. If further action is required, other messages will be generated. The operation will be retried from persistent storage (RAID).

Corrective Action

(None).

Syslog Message

(None).

Parameters

block_num (INT): Block number that failed checksum verification.

extCache.io.extInfo

Severity

NOTICE

Description

This message accompanies read or write errors and prints out any relevant information about the failure.

Corrective Action

(None).

Syslog Message

%s: fbn: %lld, pvbn: %lld, vvbn: %lld, inum: %d, ecbn: %lld, vol: %s, aggr: %s.

Parameters

description (STRING): String providing information about the message.
fileBlockNum (LONGINT): fbn of the block that errored.
physBlockNum (LONGINT): pvbn of the block that errored.
volBlockNum (LONGINT): vvbn of the block that errored.
fileId (INT): Inode number of the file that owns the block.
ECblockNum (INT): The ecbn of the block.
volName (STRING): Name of the volume.
aggrName (STRING): Name of the aggregate.

extCache.io.readError

Severity

NOTICE

Description

This message occurs when the external cache detects an error on a read. Read errors are infrequent and are usually handled automatically by the external cache without the need for administrator action. The operation will be retried from persistent storage (RAID).

Corrective Action

(None).

Syslog Message

WAFL external cache I/O read error: %s, code %d.

Parameters

description (STRING): String providing information about why the operation failed.
detail (INT): Detailed error code about why the operation failed.

extCache.io.writeError

Severity

NOTICE

Description

This message occurs when the external cache detects an error on a write. Write errors are infrequent and are usually handled automatically by the external cache without the need for adminstrator action.

Corrective Action

(None).

Syslog Message

WAFL external cache I/O write error: %s, code %d.

Parameters

description (STRING): String providing information about why the operation failed.
detail (INT): Detailed error code about why the operation failed.

extcache.offline events

extCache.offline

Severity

ERROR

Description

This message occurs when the external cache is automatically taken offline. This can happen after an I/O error on the external cache and may result in degraded performance until the problem is corrected.

Corrective Action

(Call support).

Syslog Message

External cache has been taken offline on error (rc=%d). Check the EMS log for earlier errors.

Parameters

code (INT): A unique error code for this event.

extcache.qos events

extCache.QoS

Severity

INFORMATIONAL

Description

This message occurs when External Cache Quality of Service (QoS) monitoring is enabled/disabled.

Corrective Action

(None).

Syslog Message

External Cache QoS is: %s.

Parameters

description (STRING): State of External Cache QoS

extcache.restart events

extCache.restart

Severity

NOTICE

Description

This message occurs when the external cache encounters an internal consistency issue and triggers an automatic reset.

Corrective Action

(None).

Syslog Message

WAFL external cache reset: %s

Parameters

detail (STRING): String providing additional information about what triggered the reset.

extcache.rw events

extCache.rw.alloc

Severity

NOTICE

Description

This message occurs when an external cache cannot obtain sufficient system resources. This causes the external cache component to be unable to rewarm after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache could not allocate resources: %s.

Parameters

description (STRING): String identifying the specific resources that were not obtained.

extCache.rw.canceled

Severity

NOTICE

Description

This message occurs when the external cache cannot complete cache rewarming. This causes the external cache component to start with no data cached, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache reconstruct was canceled.

Parameters

(None).

extCache.rw.configChange

Severity

INFORMATIONAL

Description

This message occurs when the external cache warming logic detects a change in cache hardware configuration. This causes the external cache component to start with no data cached for any aggregates, which can cause a temporary performance impact. The problem should resolve itself at the next reboot.

Corrective Action

(None).

Syslog Message

WAFL external cache warming aborted due to hardware configuration change.

Parameters

(None).

extCache.rw.emptyCache

Severity

INFORMATIONAL

Description

This message occurs when the external cache warming process terminates due to a lack of active cache entries.

Corrective Action

(None).

Syslog Message

WAFL external cache warming canceled: cache is not in use.

Parameters

(None).

extCache.rw.entry

Severity

NOTICE

Description

This message occurs when the external cache cannot rebuild cache entries from stored data. This event is caused by an internal error and results in a small portion of the cache remaining empty during rewarming.

Corrective Action

(None).

Syslog Message

WAFL external cache experienced an internal error during reconstruct.

Parameters

(None).

extCache.rw.headerInvalid

Severity

NOTICE

Description

This message occurs when the external cache warming process encounters an invalid file header. This causes the external cache component to start with no data cached for one or all aggregates, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache warming encountered an invalid file header: %s.

Parameters

section (STRING): String identifying the header section in question.

extCache.rw.io.readLimit

Severity

NOTICE

Description

This message occurs when the external cache exceeds the allowable threshold for I/O errors on reads. This causes the external cache component to start with no data cached for any aggregates and might result in temporarily degraded performance.

Corrective Action

(None).

Syslog Message

WAFL external cache warming encountered too many read errors: %s (%d).

Parameters

description (STRING): String providing information about the operation.
number (INT): Number of unsuccessful reads detected.

extCache.rw.io.write

Severity

INFORMATIONAL

Description

This message occurs when the external cache detects an I/O error on a write. This causes the external cache component to be unable to reconstruct portions of the cache and might result in slightly degraded performance.

Corrective Action

(None).

Syslog Message

WAFL external cache I/O write: %s, code %d.

Parameters

    description (STRING): String providing information about the operation.
    detail (INT): Detailed error code about the operation.

extCache.rw.io.writeLimit

Severity

    NOTICE

Description

    This message occurs when the external cache exceeds the allowable threshold for I/O errors on writes. This causes the external cache component to start with no cached data for any aggregates and might result in temporarily degraded performance.

Corrective Action

    (None).

Syslog Message

    WAFL external cache warming encountered too many write errors: %s (%d).

Parameters

    description (STRING): String providing information about the operation.
    number (INT): Number of unsuccessful writes detected.

extCache.rw.log.bufLoad

Severity

    NOTICE

Description

    This message occurs when the external cache invalidation log cannot load a WAFL® buffer. This causes the external cache component to be unable to rewarm the aggregate in question after a reboot, which might cause a temporary performance impact.

Corrective Action

    (None).

Syslog Message

    WAFL external cache invalidation log buf could not be loaded: aggregate %s.

Parameters

    aggregate (STRING): String identifying the aggregate that experienced the problem.

extCache.rw.log.disabled

Severity

    NOTICE

Description

    This message occurs when external cache invalidation logging is disabled for an aggregate. This causes the external cache component to be unable to rewarm that aggregate after a reboot, which might cause a

temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache invalidation log disabled: aggregate %s: %s.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the problem.
reason (STRING): String indicating the cause of the problem.

extCache.rw.log.freeSpace

Severity

NOTICE

Description

This message occurs when an external cache log file cannot be written due to lack of free space. This causes the external cache component to be unable to rewarm a specific aggregate or the entire cache after a reboot, which might cause a temporary performance impact.

Corrective Action

Make sufficient space available on the aggregate.

Syslog Message

WAFL external cache log out of space on aggregate %s (needs %d bytes).

Parameters

aggregate (STRING): String identifying the aggregate that experienced the failure.
bytes (INT): Number of free bytes needed to successfully open the log file.

extCache.rw.log.maxSize

Severity

NOTICE

Description

This message occurs when an external cache log file reaches its maximum size. This causes the external cache component to be unable to rewarm a specific aggregate or the entire cache after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache log reached maximum size: aggregate %s, log %s.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the problem.
logtype (STRING): String identifying the log file that reached the maximum size.

extCache.rw.log.open

Severity

NOTICE

Description

This message occurs when the external cache cannot open a log file. This causes the external cache component to be unable to rewarm some or all of the cached aggregates after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache log could not be opened: aggregate %s, log %s.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the problem.
logtype (STRING): String identifying the type of log file that could not be opened.

extCache.rw.log.range

Severity

NOTICE

Description

This message occurs when the external cache invalidation log has a block address that is not within an aggregate's address range. This causes the external cache component to be unable to rewarm the aggregate in question after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache invalidation log block out of range: aggregate %s block %lld.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the failure.
block (LONGINT): Block encountered in the invalidation log.

extCache.rw.log.read

Severity

NOTICE

Description

This message occurs when the external cache cannot read from a log file. This causes the external cache component to be unable to rewarm some or all of the cached aggregates during a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache log could not be read: aggregate %s, log %s.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the problem.
logtype (STRING): String identifying the log file that could not be read.

extCache.rw.log.seek

Severity

NOTICE

Description

This message occurs when the external cache cannot manipulate a log file. This causes the external cache component to be unable to rewarm after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache log could not be read: aggregate %s, log %s.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the problem.
logtype (STRING): String identifying the log file that could not be read.

extCache.rw.log.write

Severity

NOTICE

Description

This message occurs when the external cache cannot write to a log file. This causes the external cache component to be unable to rewarm some or all of the cached aggregates after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache log could not be written: aggregate %s, log %s.

Parameters

aggregate (STRING): String identifying the aggregate that experienced the problem.
logtype (STRING): String identifying the log file that could not be written.

extCache.rw.replay.canceled

Severity

NOTICE

Description

This message occurs when the external cache cannot successfully process the invalidation logs for an individual aggregate. This causes the external cache component to start with no data cached for the aggregate, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache replay canceled for aggregate %s: %s.

Parameters

aggregate (STRING): String identifying the aggregate in question.
description (STRING): String providing information about the operation.

extCache.rw.replay.complete

Severity

INFORMATIONAL

Description

This message occurs when the external cache finishes processing the invalidation logs for an individual aggregate.

Corrective Action

(None).

Syslog Message

WAFL external cache warming replay complete for aggregate %s with invalidation log %d%% full.

Parameters

aggregate (STRING): String identifying the aggregate in question.
percent (INT): Percentage of ilog that is full.

extCache.rw.replay.start

Severity

INFORMATIONAL

Description

This message occurs when the external cache begins processing the invalidation logs for an individual aggregate.

Corrective Action

(None).

Syslog Message

WAFL external cache warming replay has begun for aggregate %s.

Parameters

aggregate (STRING): String identifying the aggregate in question.

extCache.rw.replay.timeout

Severity

NOTICE

Description

This message occurs when the external cache timed out waiting for an aggregate to come online and purged old cache entries for it. This causes the external cache component to start with no data cached for the aggregate, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache replay timed out for aggregate %s.

Parameters

aggregate (STRING): String identifying the aggregate in question.

extCache.rw.snap.canceled

Severity

NOTICE

Description

This message occurs when the external cache cannot save a warming snapshot copy. This causes the external cache component to be unable to rewarm after a reboot, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache snapshot copy canceled: %s.

Parameters

description (STRING): String providing information about why the operation was canceled.

extCache.rw.terminated

Severity

NOTICE

Description

This message occurs when the external cache warming process is terminated. This causes the external cache component to start with no data cached for any aggregates, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache warming process terminated.

Parameters

(None).

extCache.rw.timeout

Severity

NOTICE

Description

This message occurs when the external cache warming process terminates after exceeding its allowed time. This causes the external cache component to start with a subset of cached data, which might cause a temporary performance impact.

Corrective Action

(None).

Syslog Message

WAFL external cache warming process exceeded its maximum allowable time and was aborted.

Parameters

(None).

extcache.unallowed events

extCache.unallowed.option

Severity

NOTICE

Description

This message occurs when an external cache bootarg or setflag is set without the required privilege. The default value is used instead.

Corrective Action

(None).

Syslog Message

WAFL external cache %s %s is set without the required privilege; using the default value.

Parameters

    type (STRING): Whether the option set is a bootarg or a setflag.
    option (STRING): Option name.