



fg events

ONTAP 9.13.1 EMS reference

NetApp
February 12, 2024

Table of Contents

- fg events 1
 - fg.admin events 1
 - fg.aggr events 1
 - fg.convert events 2
 - fg.create events 4
 - fg.inactive events 5
 - fg.inodes events 6
 - fg.member events 7
 - fg.modify events 7
 - fg.move events 8
 - fg.plex events 8
 - fg.provision events 9
 - fg.quota events 9
 - fg.recover events 11
 - fg.space events 12
 - fg.statechange events 13
 - fg.svmdr events 14
 - fg.unconfig events 14
 - fg.unconvert events 15
 - fg.writeback events 16

fg events

fg.admin events

fg.admin.wait.long

Severity

NOTICE

Description

This message occurs when the data component takes longer than 15 seconds to update its view of the FlexGroup volume after an admin operation.

Corrective Action

(None).

Syslog Message

FlexGroup volume "%s" (MSID "%lu") in Vserver "%s" took %lu seconds to update the "%s" property during the "%s" operation.

Parameters

volumeName (STRING): Name of the FlexGroup volume.

volumeMsid (LONGINT): Master Data Set ID (MSID) of the FlexGroup volume.

vserverName (STRING): Name of the Vserver on which the FlexGroup volume resides.

numSeconds (LONGINT): Number of seconds that the data component took to update.

property (STRING): Volume property being updated.

operation (STRING): Admin operation performed before the data component update.

fg.aggr events

fg.aggr.mixed.types.error

Severity

ERROR

Description

This message occurs when the constituents of a FlexGroup volume are located on different types of aggregates (FabricPool-enabled aggregates and non-FabricPool-enabled aggregates) for more than one week. It is reported once per week if a FlexGroup volume remains in this state. Leaving a FlexGroup volume in a mixed-aggregate state might lead to unbalanced data placement and unexpected performance issues.

Corrective Action

Move all the constituents of the FlexGroup volume to the same aggregate type, i.e., either FabricPool-enabled aggregates or non-FabricPool-enabled aggregates, using the 'volume move start' command with the 'allow-mixed-aggr-types' option set to true.

Syslog Message

The constituents of FlexGroup volume '%s' with UUID '%s' have been located on different types of aggregates (FabricPool-enabled aggregates and non-FabricPool-enabled aggregates) for more than one

week.

Parameters

vol (STRING): Name of the FlexGroup volume.
uuid (STRING): UUID of the FlexGroup volume.

fg.aggr.mixed.types.notice

Severity

NOTICE

Description

This message occurs when the constituents of a FlexGroup volume are located on different types of aggregates (FabricPool-enabled aggregates and non-FabricPool-enabled aggregates). It is reported once per hour. Leaving a FlexGroup volume in a mixed-aggregate state might lead to unbalanced data placement and unexpected performance issues.

Corrective Action

Move all the constituents of the FlexGroup volume to the same aggregate type, i.e., either FabricPool-enabled aggregates or non-FabricPool-enabled aggregates, using the 'volume move start' command with the 'allow-mixed-aggr-types' option set to true.

Syslog Message

The constituents of FlexGroup volume '%s' with UUID '%s' are located on different types of aggregates (FabricPool-enabled aggregates and non-FabricPool-enabled aggregates).

Parameters

vol (STRING): Name of the FlexGroup volume.
uuid (STRING): UUID of the FlexGroup volume.

fg.convert events

fg.convert.critical.fail

Severity

ALERT

Description

This message occurs when the conversion of a FlexVol® volume into a FlexGroup fails. The FlexVol volume is inoperable, and can no longer serve data.

Corrective Action

(Call support).

Syslog Message

Conversion of FlexVol volume %s to FlexGroup with MSID %llu failed. Reason: %s. The FlexVol can no longer serve data. Reason: %s.

Parameters

volumeName (STRING): Name of the volume being converted to a FlexGroup.
flexgroupMsid (LONGINTEX): MSID of the new FlexGroup.

reason (STRING): Reason the conversion failed.

rollbackFailedReason (STRING): Reason the conversion could not roll back after failing to convert.

fg.convert.fail

Severity

ERROR

Description

This message occurs when the conversion of a FlexVol® volume into a FlexGroup fails. The FlexVol volume is still operable.

Corrective Action

Ensure that the FlexVol volume is a valid candidate for the convert operation, and then retry the command. If the error persists, contact NetApp technical support.

Syslog Message

Conversion of FlexVol volume %s to FlexGroup with MSID %llu failed. Reason: %s

Parameters

volumeName (STRING): Name of volume being converted to a FlexGroup.

flexgroupMsid (LONGINTEX): MSID of the new FlexGroup.

reason (STRING): Reason why the conversion failed.

fg.convert.ksmf.timeout

Severity

NOTICE

Description

This message occurs when the operation to convert a FlexVol® volume into a FlexGroup times out when updating the volume's RAID label. The system retries the conversion automatically.

Corrective Action

(None).

Syslog Message

Conversion of FlexVol volume %s to FlexGroup with MSID %llu has timed out while updating the volume's RAID label.

Parameters

volumeName (STRING): Name of the volume being converted to a FlexGroup.

flexgroupMsid (LONGINTEX): MSID of the new FlexGroup.

fg.convert.start

Severity

NOTICE

Description

This message occurs when the conversion of a FlexVol® volume to a FlexGroup begins.

Corrective Action

(None).

Syslog Message

Starting conversion of FlexVol volume %s to new FlexGroup with MSID %llu, UUID %s.

Parameters

volumeName (STRING): Name of volume being converted to a FlexGroup.

flexgroupMsid (LONGINTEX): MSID of the new FlexGroup.

flexgroupUuid (STRING): UUID of the new FlexGroup.

fg.convert.success

Severity

NOTICE

Description

This message occurs when the conversion of a FlexVol® volume into a FlexGroup succeeds.

Corrective Action

(None).

Syslog Message

Conversion of FlexVol volume %s to FlexGroup with MSID %llu successful.

Parameters

volumeName (STRING): Name of volume being converted to a FlexGroup.

flexgroupMsid (LONGINTEX): MSID of the new FlexGroup.

fg.create events

fg.create.workflow.non.auto

Severity

NOTICE

Description

This message occurs when a user creates a FlexGroup volume that has a workflow with a type that is not "auto".

Corrective Action

(None).

Syslog Message

FlexGroup volume "%s" in Vserver "%s" was created with workflow type "%s"

Parameters

volumeName (STRING): Name of the FlexGroup volume.

vserverName (STRING): Name of the Vserver on which the FlexGroup volume resides.

workflow (STRING): The type of workflow for the FlexGroup volume.

fg.inactive events

fg.inactive.dc.only.delete

Severity

NOTICE

Description

This message occurs when the system automatically deletes an inactive FlexGroup constituent that existed only in the data component.

Corrective Action

(None).

Syslog Message

Constituent with DISD "%lu" of FlexGroup volume "%s" (MSID "%lu") in Vserver "%s", which exists only in the data component and is inactive, has been automatically deleted.

Parameters

constituentDsid (LONGINT): Data Set ID (DSID) of the deleted constituent.

volumeName (STRING): Name of the FlexGroup volume owning the deleted constituent.

volumeMsid (LONGINT): Master Data Set ID (MSID) of the FlexGroup volume owning the deleted constituent.

vserverName (STRING): Name of the Vserver on which the FlexGroup volume resides.

fg.inactive.delete

Severity

NOTICE

Description

This message occurs when the system automatically deletes an inactive FlexGroup constituent.

Corrective Action

(None).

Syslog Message

Constituent "%lu" (DISD "%lu") of FlexGroup volume "%s" (MSID "%lu") in Vserver "%s" is inactive and has been automatically deleted.

Parameters

flexgroupIndex (LONGINT): FlexGroup index of the deleted constituent.

constituentDsid (LONGINT): Data Set ID (DSID) of the deleted constituent.

volumeName (STRING): Name of the FlexGroup volume owning the deleted constituent.

volumeMsid (LONGINT): Master Data Set ID (MSID) of the FlexGroup volume owning the deleted constituent.

vserverName (STRING): Name of the Vserver on which the FlexGroup volume resides.

fg.inodes events

fg.inodes.member.allOK

Severity

NOTICE

Description

This message occurs when conditions that led to previous "fg.inodes.member.nearlyFull" and "fg.inodes.member.full" events no longer apply for any constituent in this FlexGroup. All constituents within this FlexGroup have sufficient inodes for normal operation.

Corrective Action

(None).

Syslog Message

All constituents in FlexGroup %s (fg-uuid %s) have sufficient inodes for normal operation.

Parameters

object_name (STRING): Human-readable name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

fg.inodes.member.full

Severity

ALERT

Description

This message occurs when a constituent with a FlexGroup has run out of inodes. New files cannot be created on this constituent. This might lead to an overall imbalanced distribution of content across the FlexGroup.

Corrective Action

Adding capacity to the FlexGroup by using the "volume modify -files +X" command is the best way to solve this problem. Alternatively, deleting files from the FlexGroup may work, but it is difficult to determine which files have landed on which constituent.

Syslog Message

Constituent %llu in FlexGroup %s (fg-uuid %s) is out of inodes.

Parameters

constituent_dsid (LONGINT): DSID of the constituent that is out of inodes.

object_name (STRING): Human-readable name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

fg.inodes.member.nearlyFull

Severity

ALERT

Description

This message occurs when a constituent within a FlexGroup is almost out of inodes. This constituent will receive far fewer new create requests than average, which might impact the FlexGroup's overall performance, because those requests are routed to constituents with more inodes.

Corrective Action

Adding capacity to the FlexGroup by using the "volume modify -files +X" command is the best way to solve this problem. Alternatively, deleting files from the FlexGroup might work, although it can be difficult to determine which files have landed on which constituent.

Syslog Message

Constituent %llu in FlexGroup %s (fg-uuid %s) is nearly out of inodes.

Parameters

constituent_dsid (LONGINT): DSID of the constituent that is almost out of inodes.

object_name (STRING): Human-readable name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

fg.member events

fg.member.elastic.sizing

Severity

NOTICE

Description

This message occurs when a FlexGroup constituent undergoes elastic sizing, either to restore balance among constituents or to resize constituents to accommodate space needs.

Corrective Action

(None).

Syslog Message

Constituent %u in FlexGroup %s was resized from %lu to %lu.

Parameters

constituent_dsid (INT): DSID of the constituent undergoing elastic sizing.

object_name (STRING): Name of the FlexGroup.

current_size (LONGINT): Original block size of the FlexGroup constituent.

new_size (LONGINT): New block size of the FlexGroup constituent.

fg.modify events

fg.modify.workflow

Severity

NOTICE

Description

This message occurs when a user modifies the workflow type of a FlexGroup volume.

Corrective Action

(None).

Syslog Message

The workflow type for FlexGroup volume "%s" in Vserver "%s" was modified from "%s" to "%s".

Parameters

volumeName (STRING): Name of the FlexGroup volume.

vserverName (STRING): Name of the Vserver on which the FlexGroup volume resides.

oldWorkflow (STRING): The old workflow type of the FlexGroup volume.

newWorkflow (STRING): The new workflow type for the FlexGroup volume.

fg.move events

fg.move.unmirrored.aggr

Severity

NOTICE

Description

This message occurs when a user moves a FlexGroup constituent to an unmirrored aggregate on nodes in a MetroCluster(tm) configuration. However, unmirrored aggregates, as a rule, do not have synchronous disaster protection.

Corrective Action

(None).

Syslog Message

FlexGroup constituent %s was moved to unmirrored aggregate %s on Vserver %s.

Parameters

volumeName (STRING): Name of the FlexGroup constituent moved to the unmirrored aggregate.

aggregateName (STRING): Name of the unmirrored aggregate.

vserverName (STRING): Name of the Vserver on which the FlexGroup constituent resides.

fg.plex events

fg.plex.del.unmirror.aggr

Severity

NOTICE

Description

This message occurs when a user unmirrors an aggregate (plex delete) that contains a FlexGroup constituent on nodes in a MetroCluster(tm) configuration. However, unmirrored aggregates, as a rule, do not have synchronous disaster protection.

Corrective Action

(None).

Syslog Message

Aggregate %s, which contains a FlexGroup constituent, was unmirrored.

Parameters

aggregateName (STRING): Name of the aggregate that is unmirrored.

fg.provision events

fg.provision.unmirrored.aggr

Severity

NOTICE

Description

This message occurs when a user provisions a FlexGroup on unmirrored aggregates on nodes in a MetroCluster(tm) configuration. However, unmirrored aggregates, as a rule, do not have synchronous disaster protection.

Corrective Action

(None).

Syslog Message

FlexGroup %s was provisioned on unmirrored aggregates on Vserver %s.

Parameters

volumeName (STRING): Name of the FlexGroup created on the unmirrored aggregates.

vserverName (STRING): Name of the Vserver on which the FlexGroup resides.

fg.quota events

fg.quota.cannot.enforce

Severity

NOTICE

Description

This message occurs when a FlexGroup cannot enforce its quota as expected.

Corrective Action

(None).

Syslog Message

FlexGroup %s (fg-uuid %s) cannot enforce quota due to %s.

Parameters

object_name (STRING): Name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

reason (STRING): Reason for lack of quota enforcement.

fg.quota.enforcement.on

Severity

NOTICE

Description

This message occurs when a file operation discovers that the quota enforcement state of a FlexGroup has changed to "on".

Corrective Action

(None).

Syslog Message

FlexGroup %s (fg-uuid %s) quota enforcement state is on.

Parameters

object_name (STRING): Name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

fg.quota.on.failed

Severity

ERROR

Description

This message occurs when enabling quotas (quota on an operation) on a FlexGroup constituent fails.

Corrective Action

Correct the problem based on the reason specified. If the error persists, contact technical support.

Syslog Message

Failed to execute the quota on operation on FlexGroup constituent %s in Vserver %s. Reason: %s.

Parameters

volumeName (STRING): Name of the constituent.

vserverName (STRING): Name of the Vserver.

reason (STRING): Reason for the failure.

fg.quota.usermapping.result

Severity

NOTICE

Description

This message occurs when the quota mapper decides whether to map the Windows quota record and the UNIX quota record of a user into a single multiuser record.

Corrective Action

(None).

Syslog Message

%s (uuid %s) tid %d: %s.

Parameters

constituent_name (STRING): Name of the FlexGroup constituent.
object_uuid (STRING): UUID of the FlexGroup constituent.
qtree (LONGINT): Qtree identifier (tid).
result (STRING): User mapping result.

fg.recover events

fg.recover.fail

Severity

ERROR

Description

This message occurs when the recovery of a FlexGroup volume back into a FlexVol® fails. The FlexGroup volume is still operable.

Corrective Action

Ensure that the FlexGroup volume is a valid candidate for the recovery operation, and then retry the command. If the error persists, contact NetApp technical support.

Syslog Message

Conversion of FlexVol volume %s to FlexGroup with MSID %llu failed. Reason: %s

Parameters

volumeName (STRING): Name of volume being recovered back into a FlexVol.
flexgroupMsid (LONGINTEX): MSID of the recovered FlexVol.
reason (STRING): Reason why the recovery failed.

fg.recover.start

Severity

NOTICE

Description

This message occurs when the recovery of a FlexGroup volume back into a FlexVol® begins.

Corrective Action

(None).

Syslog Message

Starting recovery of FlexGroup volume %s back into a FlexVol® with MSID %llu.

Parameters

volumeName (STRING): Name of volume being recovered back into a FlexVol.
volMsid (LONGINTEX): MSID of the recovered FlexVol.

fg.recover.success

Severity

NOTICE

Description

This message occurs when the recovery of a FlexGroup volume back into a FlexVol® succeeds.

Corrective Action

(None).

Syslog Message

Conversion of FlexVol volume %s to FlexGroup with MSID %llu successful.

Parameters

volumeName (STRING): Name of volume being recovered back into a FlexVol.

volMsid (LONGINTEX): MSID of the recovered FlexVol.

fg.space.events

fg.space.member.allOK

Severity

NOTICE

Description

This message occurs when conditions that led to previous "fg.space.member.nearlyFull" and "fg.space.member.full" events no longer apply. All constituents within this FlexGroup have sufficient space for normal operation.

Corrective Action

(None).

Syslog Message

The FlexGroup %s (fg-uuid %s) no longer has any full constituents.

Parameters

object_name (STRING): Human-readable name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

fg.space.member.full

Severity

ALERT

Description

This message occurs when a constituent within a FlexGroup is now full. Although new files can still be created within the FlexGroup and some files can still be expanded, none of the files that are stored on this constituent can be modified. The user might see random out-of-space errors as a consequence when trying to perform write operations on this FlexGroup.

Corrective Action

Adding capacity to the FlexGroup by using the "volume modify -size +X" command is the best way to solve this problem. Alternatively, deleting files from the FlexGroup might work, but it is difficult to determine which files have landed on which constituent.

Syslog Message

Constituent %llu in FlexGroup %s (fg-uuid %s) is out of space.

Parameters

constituent_dsid (LONGINT): DSID of the constituent that is out of space.
object_name (STRING): Human-readable name of the FlexGroup.
object_uuid (STRING): UUID of the FlexGroup.

fg.space.member.nearlyFull

Severity

ALERT

Description

This message occurs when a constituent within a FlexGroup is nearly out of space. Although files can be created and expanded, if the constituent runs out of space entirely, the user's ability to append to and modify those files that reside on this constituent will be impeded.

Corrective Action

Adding capacity to the FlexGroup by using the "volume modify -size +X" command is the best way to solve this problem. Alternatively, deleting files from the FlexGroup might work, but it is difficult to determine which files have landed on which constituent.

Syslog Message

Constituent %llu in FlexGroup %s (fg-uuid %s) is nearly out of space.

Parameters

constituent_dsid (LONGINT): DSID of the constituent that is nearly out of space.
object_name (STRING): Human-readable name of the FlexGroup.
object_uuid (STRING): UUID of the FlexGroup.

fg.statechange events

fg.stateChange

Severity

NOTICE

Description

This message occurs when the FlexGroup has transitioned from one state to another. This message might not occur immediately after the state transition occurred.

Corrective Action

(None).

Syslog Message

FlexGroup %s (fg-uuid %s) has changed state from %s to %s.

Parameters

object_name (STRING): Human-readable name of the FlexGroup.

object_uuid (STRING): UUID of the FlexGroup.

old_state (STRING): State that the FlexGroup was in before the EMS event.

new_state (STRING): State that the FlexGroup was in at the time of the EMS event.

fg.svmdr events

fg.svmdr.qos.wklds.insuff

Severity

NOTICE

Description

This message occurs during FlexGroup volume replication in an SVM DR setup when the available QoS workloads are insufficient on the secondary cluster.

Corrective Action

Contact NetApp technical support.

Syslog Message

Available QoS workloads are insufficient to support replicated FlexGroup "%s" in Vserver "%s".

Parameters

volume (STRING): FlexGroup name.

vserver (STRING): Vserver name.

fg.unconfig events

fg.unconfig.consts.exist

Severity

ERROR

Description

This message occurs when a FlexGroup detects constituents that are not properly configured and have not been removed after a sufficient timeout. This usually means that a failed attempt to expand the volume also failed to delete constituents.

Corrective Action

Contact NetApp technical support for assistance.

Syslog Message

FlexGroup %s has had constituents that are not properly configured for longer than %d seconds.

Parameters

object_name (STRING): Name of the FlexGroup.

seconds (INT): Timeout period in seconds.

fg.unconvert events

fg.unconvert.critical.fail

Severity

ALERT

Description

This message occurs when a member of a FlexGroup fails to be converted into an independent FlexVol® volume. The original state of this member could not be restored, so the FlexGroup itself is inoperable, and requires repair.

Corrective Action

Contact NetApp technical support.

Syslog Message

FlexGroup member #%u of %u in FlexGroup %s failed to be converted into an independent FlexVol volume. The FlexGroup is inoperable. Reason: %s

Parameters

fgindex (INT): FlexGroup index of the volume being converted to a FlexVol volume.

fgmembers (INT): Total number of members in this FlexGroup.

fgname (STRING): Name of the FlexGroup containing the member being converted to a FlexVol volume.

reason (STRING): Reason why the conversion failed.

fg.unconvert.fail

Severity

ERROR

Description

This message occurs when a member of a FlexGroup has fails to be converted into an independent FlexVol® volume. The FlexGroup is still functional.

Corrective Action

Ensure that the FlexGroup is a valid candidate for the unconvert operation, and then retry the command. If the error persists, contact NetApp technical support.

Syslog Message

FlexGroup member #%u of %u in FlexGroup %s failed to be converted into an independent FlexVol volume. Reason: %s

Parameters

fgindex (INT): FlexGroup index of the volume being converted to a FlexVol volume.

fgmembers (INT): Total number of members in this FlexGroup.

fgname (STRING): Name of the FlexGroup containing the member being converted to a FlexVol volume.

reason (STRING): Reason why the conversion failed.

fg.unconvert.start

Severity

NOTICE

Description

This message occurs when a member of a FlexGroup, usually the root constituent, is being converted to an independent FlexVol® volume.

Corrective Action

(None).

Syslog Message

Starting conversion of FlexGroup member #%u of %u in FlexGroup %s into an independent FlexVol volume.

Parameters

fgindex (INT): FlexGroup index of the volume being converted to a FlexVol volume.

fgmembers (INT): Total number of members in this FlexGroup.

fgname (STRING): Name of the FlexGroup containing the member being converted to a FlexVol volume.

fg.unconvert.success

Severity

NOTICE

Description

This message occurs when a member of a FlexGroup is successfully converted to an independent FlexVol® volume.

Corrective Action

(None).

Syslog Message

FlexGroup member #%u of %u in FlexGroup %s was successfully converted into an independent FlexVol volume.

Parameters

fgindex (INT): FlexGroup index of the volume being converted to a FlexVol volume.

fgmembers (INT): Total number of members in this FlexGroup.

fgname (STRING): Name of the FlexGroup containing the member being converted to a FlexVol volume.

fg.writeback events

fg.writeback.delta.checker

Severity

NOTICE

Description

This message occurs when an inconsistency is discovered during a writeback. The writeback is ignored, so that the inconsistency does not get transferred to the cache origin.

Corrective Action

(None).

Syslog Message

Writeback operation failed for %s at line %d (%s).

Parameters

fh (STRING): File handle of the affected inode.

source (INT): Location of the failing writeback validation test.

state (STRING): Description of the inconsistency.

Copyright information

Copyright © 2024 NetApp, Inc. All Rights Reserved. Printed in the U.S. No part of this document covered by copyright may be reproduced in any form or by any means—graphic, electronic, or mechanical, including photocopying, recording, taping, or storage in an electronic retrieval system—without prior written permission of the copyright owner.

Software derived from copyrighted NetApp material is subject to the following license and disclaimer:

THIS SOFTWARE IS PROVIDED BY NETAPP “AS IS” AND WITHOUT ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY DISCLAIMED. IN NO EVENT SHALL NETAPP BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

NetApp reserves the right to change any products described herein at any time, and without notice. NetApp assumes no responsibility or liability arising from the use of products described herein, except as expressly agreed to in writing by NetApp. The use or purchase of this product does not convey a license under any patent rights, trademark rights, or any other intellectual property rights of NetApp.

The product described in this manual may be protected by one or more U.S. patents, foreign patents, or pending applications.

LIMITED RIGHTS LEGEND: Use, duplication, or disclosure by the government is subject to restrictions as set forth in subparagraph (b)(3) of the Rights in Technical Data -Noncommercial Items at DFARS 252.227-7013 (FEB 2014) and FAR 52.227-19 (DEC 2007).

Data contained herein pertains to a commercial product and/or commercial service (as defined in FAR 2.101) and is proprietary to NetApp, Inc. All NetApp technical data and computer software provided under this Agreement is commercial in nature and developed solely at private expense. The U.S. Government has a non-exclusive, non-transferrable, nonsublicensable, worldwide, limited irrevocable license to use the Data only in connection with and in support of the U.S. Government contract under which the Data was delivered. Except as provided herein, the Data may not be used, disclosed, reproduced, modified, performed, or displayed without the prior written approval of NetApp, Inc. United States Government license rights for the Department of Defense are limited to those rights identified in DFARS clause 252.227-7015(b) (FEB 2014).

Trademark information

NETAPP, the NETAPP logo, and the marks listed at <http://www.netapp.com/TM> are trademarks of NetApp, Inc. Other company and product names may be trademarks of their respective owners.