



## **cpeer events**

### **ONTAP 9.15.1 EMS reference**

NetApp  
June 10, 2024

# Table of Contents

- cpeer events . . . . . 1
- cpeer.access events . . . . . 1
- cpeer.addr events . . . . . 1
- cpeer.authentication events . . . . . 3
- cpeer.create events . . . . . 4
- cpeer.dns events . . . . . 5
- cpeer.duplicate events . . . . . 6
- cpeer.ip events . . . . . 6
- cpeer.localid events . . . . . 7
- cpeer.long events . . . . . 7
- cpeer.modify events . . . . . 8
- cpeer.out events . . . . . 8
- cpeer.passphrase events . . . . . 9
- cpeer.ping events . . . . . 9
- cpeer.pm events . . . . . 10
- cpeer.pp events . . . . . 10
- cpeer.psk events . . . . . 11
- cpeer.receiver events . . . . . 13
- cpeer.recv events . . . . . 13
- cpeer.unavailable events . . . . . 14
- cpeer.xcm events . . . . . 14

# cpeer events

## cpeer.access events

### cpeer.access.restricted

#### Severity

ERROR

#### Description

This message occurs when an access request from a peer cluster is rejected, either because the request is made to a restricted Vserver or to a restricted table.

#### Corrective Action

Check the Vserver peering relationships with the peer cluster. If additional Vserver access is required, use the "vserver peer create" command to initiate the peering relationship with the peer cluster.

#### Syslog Message

An access request from peer cluster %s (IP: %s) was denied. Reason: %s.

#### Parameters

**peer** (STRING): Name of the peer cluster making the request to the local cluster.

**address** (STRING): Source IP address of the incoming request.

**reason** (STRING): Reason for the access restriction.

## cpeer.addr events

### cpeer.addr.bad.dns

#### Severity

ERROR

#### Description

This message occurs when a stable address for the peer cluster cannot be resolved because of a bad name-server. This will make the peer cluster unreachable and cross-cluster operations will fail. Stable addresses are normally provided by the administrator during cluster peer creation.

#### Corrective Action

Delete the incorrect DNS server entry for the local cluster using the 'vserver services dns delete' command. Create a new DNS entry with the correct name-server using the 'vserver services dns create' command. If you need further assistance, contact NetApp technical support.

#### Syslog Message

Failed to resolve address %s of peer cluster %s, Reason:bad name-server.

#### Parameters

**addr** (STRING): Peer cluster stable IP addresses that cannot be contacted.

**peer** (STRING): Name of the peer cluster whose stable address cannot be contacted.

## **cpeer.addr.bad.host**

### **Severity**

ERROR

### **Description**

This message occurs when a stable IP address for the peer cluster is no longer valid. This will make the peer cluster unreachable and cross-cluster operations will fail. Stable addresses are normally provided by the administrator during cluster peer creation.

### **Corrective Action**

Correct the stable IP address using the 'cluster peer modify' command. If you need further assistance, contact NetApp technical support.

### **Syslog Message**

Failed to resolve address %s of peer cluster %s, Reason:invalid address.

### **Parameters**

**addr** (STRING): Peer cluster stable addresses that is not valid.  
**peer** (STRING): Name of the peer cluster whose stable address is not valid.

## **cpeer.addr.stable.down**

### **Severity**

ERROR

### **Description**

This message occurs when a stable address cannot be contacted. Stable addresses are provided by the administrator during peer creation.

### **Corrective Action**

Verify network connectivity between the local cluster and the peer cluster. Check the logs, trace buffers, and UI output for more information about the nature of the failure.

### **Syslog Message**

Stable address %s of cluster %s, in IPspace %s, cannot be contacted.

### **Parameters**

**addr** (STRING): Stable address that cannot be contacted.  
**peer** (STRING): Name of the peer cluster whose address cannot be contacted.  
**ipspace** (STRING): IPspace in which the contact attempt was made.

## **cpeer.addr.warn.host**

### **Severity**

ALERT

### **Description**

This message occurs when a stable IP address for the peer cluster is no longer valid, making the peer cluster unreachable and causing cross-cluster operations to fail.

### Corrective Action

Correct the stable IP address using the "cluster peer modify" command. Valid addresses for the remote ("peer") cluster are given under "Active IP Addresses" when you use the "cluster peer show -instance" command. Verify connectivity by using the "cluster peer ping" command. If you need further assistance, contact NetApp technical support.

### Syslog Message

Address %s is not any of the addresses that peer cluster %s considers valid for the cluster peer relationship; Details: %s

### Parameters

**addr** (STRING): Peer cluster stable address that is not valid.  
**peer** (STRING): Name of the peer cluster whose stable address is not valid.  
**complaint** (STRING): Details, if any, of the issue with the stable address.

## cpeer.authentication events

### cpeer.authentication.create

#### Severity

NOTICE

#### Description

This message occurs when authentication is successfully established with a peer cluster.

#### Corrective Action

(None).

#### Syslog Message

The peering relationship with cluster %s is now authenticated.

#### Parameters

**peer** (STRING): Peer cluster with which this cluster is now mutually authenticated.

### cpeer.authentication.disable

#### Severity

NOTICE

#### Description

This message occurs when authentication is disabled for a cluster peer relationship.

#### Corrective Action

(None).

#### Syslog Message

The peering relationship with cluster %s is now unauthenticated.

#### Parameters

**peer** (STRING): Peer cluster that is now peered to this cluster without authentication.

## **cpeer.authentication.revoke**

### **Severity**

ERROR

### **Description**

This message occurs when authentication is revoked for a cluster peer relationship.

### **Corrective Action**

Modify the relationship to match on both of the peered clusters. To have them agree on an unauthenticated relationship, use the 'cluster peer modify -authentication no-auth' command. To have them agree on an authenticated relationship, use the same passphrase with the 'cluster peer modify -authentication use-auth' command.

### **Syslog Message**

The peering relationship with cluster %s is now revoked and is no longer functional.

### **Parameters**

**peer** (STRING): Peer cluster for which the peering relationship has had its peering authentication revoked.

## **cpeer.authentication.viol**

### **Severity**

NOTICE

### **Description**

This message occurs when a cross-cluster access should be authenticated, but is not. The access has been denied successfully.

### **Corrective Action**

(None).

### **Syslog Message**

Access as peer cluster %s was claimed from network address %s, but has not been granted because %s.

### **Parameters**

**peer** (STRING): Peer cluster on behalf of which this access was made.

**remoteAddress** (STRING): Remote network address of the violating connection.

**reason** (STRING): Justification for the violation claim.

## **cpeer.create events**

### **cpeer.create.reciprocal.fail**

### **Severity**

ERROR

### **Description**

This message occurs when a peer cluster reciprocal join fails.

## Corrective Action

Verify network connectivity between the local cluster and the peer cluster. Check the logs, trace buffers, and UI output for more information about the nature of the failure.

## Syslog Message

Cluster %s attempted to create a reciprocal peer relationship with this cluster but failed.

## Parameters

**peer** (STRING): Peer cluster which executed the reciprocal join.

## cpeer.create.reciprocal.ok

## Severity

NOTICE

## Description

This message occurs when a peer cluster reciprocal join succeeds.

## Corrective Action

(None).

## Syslog Message

Cluster %s is now peered with this cluster.

## Parameters

**peer** (STRING): Peer cluster that executed the reciprocal join.

## cpeer.dns events

### cpeer.dns.family.mismatch

## Severity

ERROR

## Description

This message occurs when an attempt is made to resolve and insert a stable address that is a Domain Name System (DNS) style host name. If it resolves to an address family that does not match the family style specified for the cluster peer relationship, it is indicative of incorrect addresses being provided by the administrator or DNS configuration issues. Stable addresses are typically provided by the administrator during cluster peer creation and can be modified by modifying the peer relationship.

## Corrective Action

Correct the stable IP address by using the 'cluster peer modify' command. Ensure that LIFs of the appropriate address family exist on both the local cluster and the remote peer. Confirm that the DNS services are appropriately specified by using the 'vserver services dns show' command. Also, the DNS server in question should be configured correctly to be able to resolve the DNS style host name to an IP address belonging to the appropriate address family. If you need further assistance, contact NetApp technical support.

## Syslog Message

Host name %s of peer cluster %s resolved to %s, which does not match the peer relationship's selected address type.

## Parameters

**addr** (STRING): Peer cluster host name that is being inserted.

**peer** (STRING): Name of the peer cluster for which an address family mismatch was seen.

**resolved\_address** (STRING): Address resolved to, which belongs to the incorrect address family.

# cpeer.duplicate events

## cpeer.duplicate.remote.addr

### Severity

ERROR

### Description

This message occurs when an IP address from a peer cluster is also in use by the local cluster in the same IPspace. This may prevent the cluster peering relationship from reaching an available state.

### Corrective Action

Replace the duplicate address on the local cluster with a different address.

## Syslog Message

Cannot use address %s from peer cluster %s because it is already in use on the local cluster.";

## Parameters

**address** (STRING): Duplicate address from the peer cluster.

**peer** (STRING): Name of the peer cluster.

# cpeer.ip events

## cpeer.ip.family.mismatch

### Severity

ERROR

### Description

This message occurs when an attempt is made to insert an IP address whose address family does not match the family style specified for the cluster peer relationship. This is indicative of incorrect addresses being provided by the administrator. Stable addresses are typically provided by the administrator during cluster peer creation and can be modified by modifying the peer relationship.

### Corrective Action

Correct the stable IP address by using the 'cluster peer modify' command. Ensure that the LIFs of the appropriate address family exist on both the local cluster and the remote peer. If you need further assistance, contact NetApp technical support.

## Syslog Message

Failed to insert address %s of peer cluster %s, reason: %s



## Parameters

**addr** (STRING): Peer cluster address that is being inserted.

**peer** (STRING): Name of the peer cluster for which an address family mismatch was seen.

**reason** (STRING): Reason that the EMS message was sent.

# cpeer.localid events

## cpeer.localid.bad

### Severity

ERROR

### Description

This message occurs when there is an issue reading the local cluster ID. This indicates a serious problem with the cluster which may affect processes outside of cluster peering.

### Corrective Action

(Call support).

### Syslog Message

Unexpected local cluster ID: %s.

## Parameters

**id** (STRING): The string representation of the bad cluster ID.

# cpeer.long events

## cpeer.long.remote.update

### Severity

ERROR

### Description

This message occurs when a cross-cluster update takes longer than 15 minutes. This indicates a communication failure between the clusters.

### Corrective Action

Ensure cross-cluster network connectivity by performing network diagnostics using the "cluster peer ping" command and either the "network ping" or "network ping6" command. Correct IP address issues by using the "cluster peer modify" command. Ensure that LIFs of the appropriate address family exist on both the local cluster and the remote peer. Confirm that the DNS services are appropriately configured by using the "vserver services dns show" command. You can use "cluster peer show" to list the state of all peer clusters. This is a point-in-time command and the health of remote clusters might not have been updated yet. If you need further assistance, contact NetApp technical support.

### Syslog Message

Cross-cluster update job took longer than 15 minutes. Potential network connectivity issues.

## Parameters

(None).

# cpeer.modify events

## cpeer.modify.address.family

### Severity

NOTICE

### Description

This message occurs when the address family for a peering relationship is modified. The same configuration change should be made at the peered cluster in a timely manner. Peering services are maintained while intercluster LIFs of both address families are configured on each cluster.

### Corrective Action

This is a notification of a configuration change. No corrective action applies.

### Syslog Message

Address family change for peer cluster %s to address family %s.

### Parameters

**peer** (STRING): Name of the peer cluster affected by the address family change.

**family** (STRING): The new address family of the peering relationship.

# cpeer.out events

## cpeer.out.pp.mismatch

### Severity

ERROR

### Description

This message occurs when an outgoing cluster peer request authentication fails due to a passphrase mismatch.

### Corrective Action

For multiple occurrences of this event, verify the peering request with the admin of this local cluster. If the admin is not responsible for the attempts, the local cluster might be under attack.

### Syslog Message

This cluster did not accept a cluster peering authentication offer from cluster %s//%s due to a passphrase mismatch. Acceptance was attempted on session %s, command %s, application %s, location %s, port %s, user name %s, auth\_method %s, and PSK method %s.

### Parameters

**remotename** (STRING): Name of the cluster to which the contact was made.

**remoteuuid** (STRING): UUID of the cluster to which the contact was made.

**session** (STRING): Session ID over which the contact was made.

**command** (STRING): Command ID for which the contact was made.

**application** (STRING): Application used for the contact.

**location** (STRING): Location from which the contact was made.

**port** (STRING): Port over which the contact was made.

**username** (STRING): User name for the contact.

**authMethod** (STRING): Authentication method for the user.  
**offerStyle** (STRING): Style of authentication offer.

## cpeer.passphrase events

### cpeer.passphrase.expired

#### Severity

NOTICE

#### Description

This message occurs when the cluster peer offer for anonymous cluster with system-generated passphrase expired and deleted.

#### Corrective Action

If required, use the "cluster peer create" command with "generate-passphrase" option to generate the additional cluster peer offers.

#### Syslog Message

The cluster peer offer with system-generated passphrase (%s) expired and deleted.

#### Parameters

**passphrase\_details** (STRING): Cluster peer passphrase details.

## cpeer.ping events

### cpeer.ping.family.mismatch

#### Severity

ERROR

#### Description

This message occurs when an attempt is made to check the cluster peering relationship and no intercluster LIFs of the same address family and the correct IPspace are found on this node. Stable addresses are typically provided by the administrator during cluster peer creation and can be modified by modifying the peer relationship. The IPspace for a cluster peer relationship may be supplied when creating or modifying the relationship.

#### Corrective Action

Correct the stable IP address by using the "cluster peer modify" command. Ensure that LIFs of the appropriate address family exist on both the local cluster and the remote peer. Ensure that LIFs of the local cluster exist in the given IPspace.

#### Syslog Message

Failed to find LIFs of type %s on node %s for destination address %s in IPspace %s belonging to destination cluster %s.

#### Parameters

**peering\_family** (STRING): IP address family.  
**node** (STRING): Originating node.  
**dest\_address** (STRING): Destination IP address.

**ipspace** (STRING): IPspace for the relationship.  
**dest\_cluster** (STRING): Destination cluster.

## **cpeer.ping.no.lifs**

### **Severity**

ERROR

### **Description**

This message occurs when an attempt is made to check the cluster peering relationship and no intercluster LIFs in the correct IPspace are found on this node.

### **Corrective Action**

Create intercluster LIFs with the same address family and IPspace as the peering relationship. If the peering relationship is obsolete, remove it by using the "cluster peer delete" command.

### **Syslog Message**

Failed to find intercluster LIFs in IPspace %s on node %s.

### **Parameters**

**ipspace** (STRING): IPspace for the relationship.  
**node** (STRING): Originating node.

## **cpeer.pm events**

### **cpeer.pm.update.warn**

#### **Severity**

ERROR

#### **Description**

This message occurs when the peer manager job experiences a transient failure. The peer manager job periodically contacts one peer cluster and performs updates of cluster-wide state necessary to support cross-cluster enabled features.

#### **Corrective Action**

Verify network connectivity between the local cluster and its peer clusters. It might be necessary to manually correct the peer clusters' configurations using the 'cluster peer modify' command if peer addresses have changed recently. Verify that each cluster is up.

#### **Syslog Message**

Periodic update of peer information from %s failed. The following operations are incomplete: %s

#### **Parameters**

**peer** (STRING): Peer whose updates failed.  
**failures** (STRING): Failed peer updates.

## **cpeer.pp events**

## cpeer.pp.mismatch

### Severity

ERROR

### Description

This message occurs when an incoming cluster peer authentication request fails due to a passphrase mismatch.

### Corrective Action

For multiple occurrences of this event, verify the peering request with the admin of the remote cluster. If the admin is not responsible for the attempts, the local or remote cluster might be under attack.

### Syslog Message

Remote cluster %s//%s did not accept a cluster peering authentication offer (from address %s in IPspace %s) due to a passphrase mismatch. Local offer made on %s, valid for %s, with the %s PSK method.

### Parameters

**remotename** (STRING): Name of the cluster for which the contact was made.  
**remoteuuid** (STRING): UUID of the cluster for which the contact was made.  
**address** (STRING): Network address from which the authentication attempt was made.  
**ipspace** (STRING): IPspace from which the contact attempt was made.  
**offerTime** (STRING): Time at which the offer from the local cluster was generated.  
**offerDuration** (STRING): Duration of the offer from the local cluster.  
**offerStyle** (STRING): Style of authentication offer.

## cpeer.psk events

### cpeer.psk.cluster.revoked

### Severity

ERROR

### Description

This message occurs when the system receives an authentication request for a remote cluster whose peer authentication has been revoked by the local cluster administrator. It might indicate that this system is under attack.

### Corrective Action

ONTAP® software automatically closes the connection from which this incorrect authentication information was received. If this message is repeatedly generated from the same internet address, it might indicate that this system is under attack.

### Syslog Message

ONTAP received a TLS request to authenticate with the pre-shared key of remote cluster %s, but the relationship with the remote cluster has been revoked by the administrator of this cluster. The request was sent from address %s in IPspace %s.

### Parameters

**clustername** (STRING): Name of the remote cluster being probed.  
**sourceIP** (STRING): IP address that is the source of the probe.

**sourceIPspace** (STRING): IPspace in which the probe arrived.

## **cpeer.psk.cluster.unauth**

### **Severity**

ERROR

### **Description**

This message occurs when the system receives an authentication request for a remote cluster whose peer relationship is unauthenticated. It might indicate that this system is under attack. The request was sent from address %s in IPspace %s.

### **Corrective Action**

ONTAP® software automatically closes the connection from which this incorrect authentication information was received. If this message is repeatedly generated from the same internet address, it might indicate that this system is under attack.

### **Syslog Message**

ONTAP received a TLS request to authenticate with a cluster's pre-shared key, but there is no authenticated relationship with this remote cluster. Instead, the relationship is unauthenticated and has no keying information associated with it.

### **Parameters**

**clustername** (STRING): Name of the remote cluster being probed.

**sourceIP** (STRING): IP address that is the source of the probe.

**sourceIPspace** (STRING): IPspace in which the probe arrived.

## **cpeer.psk.disabled**

### **Severity**

NOTICE

### **Description**

This message occurs when the system is unable to find a suitable pre-shared key (PSK) cipher suite required for cluster peering. This is likely because the PSK cipher suites are disabled in the ONTAP security configuration. Cluster peering connections and associated applications may fail as a result.

### **Corrective Action**

View the enabled cipher suites with the "security config show" command. Enable the PSK cipher suites with the "security config modify" command.

### **Syslog Message**

The system was unable to find a suitable pre-shared key (PSK) cipher suite required for cluster peering.

This is likely because the PSK cipher suites are disabled in the ONTAP security configuration. Cluster peering connections and associated applications may fail as a result.

### **Parameters**

(None).

## **cpeer.psk.unknown.cluster**

## Severity

ERROR

## Description

This message occurs when the system receives an authentication request from an unknown cluster. It might indicate that this system is under attack.

## Corrective Action

ONTAP® software automatically closes the connection from which this incorrect authentication information was received. If this message is repeatedly generated from the same internet address, it might indicate that this system is under attack.

## Syslog Message

ONTAP received a TLS request to authenticate with a remote cluster's pre-shared key, but the remote cluster UUID (%s) is unrecognized. The probe arrived from address %s in IPspace %s.

## Parameters

**clusterUUID** (STRING): Cluster UUID being probed.

**sourceIP** (STRING): IP address that is the source of the probe.

**sourceIPspace** (STRING): IPspace in which the probe arrived.

# cpeer.receiver events

## cpeer.receiver.noindex

### Severity

NOTICE

### Description

This message occurs when an incoming cluster peer request using the system-generated passphrase. However, the cluster peer request failed because there is no matching outstanding cluster peer offers for the request in the system.

### Corrective Action

Verify the peer request with peer cluster admin. If required, use the "cluster peer create" command with "generate-passphrase" option to generate the additional cluster peer offers.

### Syslog Message

The cluster peer request from the remote cluster (%s) using the system-generated passphrase (Index: %d) has failed because cluster peer offer with system-generated passphrase is not available for this index.

### Parameters

**remote\_cluster\_details** (STRING): Remote cluster name.

**ppindex** (INT): Cluster peer passphrase index.

# cpeer.recv events

## cpeer.recv.pp.mismatch

**Severity**

NOTICE

**Description**

This message occurs when there is an incoming cluster peer request using the system-generated passphrase. However, the cluster peer request authentication failed due to passphrase mismatch and so the cluster peer offer is deleted.

**Corrective Action**

Verify the peer request with peer cluster admin. If required, use the "cluster peer create" command with "generate-passphrase" option to generate the additional cluster peer offers.

**Syslog Message**

The cluster peer offer with system-generated passphrase was attempted for cluster peering by the remote cluster (%s:%s) with address %s but cluster peer request failed due to passphrase mismatch. So, the offer is deleted.

**Parameters**

**remotename** (STRING): Remote cluster name.  
**remoteuuid** (STRING): Remote cluster UUID.  
**address** (STRING): Remote cluster IP address.

## cpeer.unavailable events

### cpeer.unavailable

**Severity**

ALERT

**Description**

This message occurs when a peer cluster becomes unavailable.

**Corrective Action**

Verify network connectivity between the local cluster and the peer cluster. It might be necessary to manually correct the peer configuration using the 'cluster peer modify' command if peer addresses have changed recently. Verify that the peer cluster is up.

**Syslog Message**

Peer cluster %s is no longer available.

**Parameters**

**peer** (STRING): Peer cluster that became unavailable.

## cpeer.xcm events

### cpeer.xcm.addr.disc.warn

**Severity**

ERROR



## Description

This message occurs when address discovery fails for a peer cluster.

## Corrective Action

Verify network connectivity between the local cluster and the peer cluster. It might be necessary to manually correct the peer configuration using the 'cluster peer modify' command if peer addresses have changed recently. Verify that the peer cluster is up.

## Syslog Message

Address discovery failed for peer cluster %s. Reason: %s.

## Parameters

**peer** (STRING): Peer cluster whose address discovery failed.

**reason** (STRING): Reason for address discovery failure.

## cpeer.xcm.update.warn

### Severity

ERROR

### Description

This message occurs when the cross-cluster manager job experiences a transient failure. The cross-cluster manager job periodically contacts each peer cluster, requests configuration information, and maintains the node-local network configuration for the remote peer cluster.

### Corrective Action

Verify network connectivity between the local cluster and its peer clusters. It might be necessary to manually correct the peer clusters' configurations using the 'cluster peer modify' command if peer addresses have changed recently. Verify that each cluster is up.

### Syslog Message

Periodic update of peer network information failed. The following operations are incomplete: %s.

### Parameters

**failures** (STRING): Failed peer updates.

## 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.