



# **network options commands**

ONTAP 9.11.1 commands

NetApp  
May 23, 2023

# Table of Contents

- network options commands ..... 1
  - network options cluster-health-notifications modify ..... 1
  - network options cluster-health-notifications show ..... 1
  - network options detect-switchless-cluster modify ..... 2
  - network options detect-switchless-cluster show ..... 2
  - network options ipv6 modify ..... 3
  - network options ipv6 show ..... 4
  - network options load-balancing modify ..... 4
  - network options load-balancing show ..... 4
  - network options multipath-routing modify ..... 5
  - network options multipath-routing show ..... 5
  - network options port-health-monitor disable-monitors ..... 6
  - network options port-health-monitor enable-monitors ..... 7
  - network options port-health-monitor modify ..... 8
  - network options port-health-monitor show ..... 9
  - network options send-soa modify ..... 10
  - network options send-soa show ..... 11
  - network options switchless-cluster modify ..... 11
  - network options switchless-cluster show ..... 12

# network options commands

## network options cluster-health-notifications modify

cluster health notification options

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

### Description

This command enables or disables cluster health notifications on the specified node.

### Parameters

**-node {<nodename>|local} - Node**

This parameter specifies the node for which the cluster health notification status will be modified.

**[-enabled {true|false}] - Cluster Health Notifications Enabled**

Setting this parameter to *true* enables cluster health notification. Setting it to *false* disables cluster health notification.

### Examples

The following example modifies the cluster health notification status for a node:

```
cluster1::> network options cluster-health-notifications modify -node
node1 -enabled true
```

## network options cluster-health-notifications show

Display cluster health notification options

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

### Description

The `network options cluster-health-notifications show` command displays whether the node's cluster health notifications are enabled.

### Parameters

**{ [-fields <fieldname>,...]**

If you specify the `-fields <fieldname>, ...` parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

**| [-instance ] }**

If you specify the `-instance` parameter, the command displays detailed information about all fields.

### **[`-node {<nodename>|local}`]] - Node**

This parameter specifies the node for which the cluster health notification status will be displayed.

### **[`-enabled {true|false}`]] - Cluster Health Notifications Enabled**

Selects the entries that match this parameter value.

## **Examples**

The following example displays the cluster health notification status for a node:

```
cluster1::> network options cluster-health-notifications show -node node1
Node: node1
Cluster Health Notifications Enabled: true
```

## **network options detect-switchless-cluster modify**

Modify the status of switchless cluster detection

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### **Description**

This command enables or disables the automatic detection of a switchless cluster. A switchless cluster consists of two nodes where the cluster ports are directly connected without a switch between them.

### **Parameters**

#### **[`-enabled {true|false}`]] - Enable Switchless Cluster Detection**

This parameter specifies whether switchless cluster detection is enabled or not. Setting this parameter to *true* enables switchless cluster detection.

## **Examples**

```
The following example enables switchless cluster detection:
cluster1::*> network options detect-switchless-cluster modify
-enabled true
```

## **network options detect-switchless-cluster show**

Display the status of switchless cluster detection

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

## Description

The network options `detect-switchless-cluster show` command displays whether switchless cluster detection is enabled.

## Examples

The following example displays whether switchless cluster detection is enabled:

```
cluster1::*> network options detect-switchless-cluster show
Enable Detect Switchless Cluster: true
```

## network options ipv6 modify

Modify IPv6 options

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

## Description

This command sets the state of IPv6 options for the cluster.

## Parameters

### **[-enabled <true>] - IPv6 Enabled**

Setting this parameter to *true* enables IPv6 for the cluster. IPv6 cannot be disabled once it is enabled for the cluster. Call technical support for guidance regarding disabling IPv6.

### **[-is-ra-processing-enabled {true|false}] - Router Advertisement (RA) Processing Enabled**

Setting this parameter to *true* enables cluster to process IPv6 router advertisements. Setting it to *false* disables router advertisement processing by the cluster.

## Examples

The following example enables IPv6 for the cluster:

```
cluster1::> network options ipv6 modify -enabled true
```

The following example enables IPv6 Router Advertisement processing for the cluster:

```
cluster1::> network options ipv6 modify -is-ra-processing-enabled true
```

The following example disables IPv6 Router Advertisement processing for the

cluster:

```
cluster1::> network options ipv6 modify -is-ra-processing-enabled
false
```

## network options ipv6 show

Display IPv6 options

**Availability:** This command is available to *cluster* administrators at the *admin* privilege level.

### Description

This command displays the current state of IPv6 options for the cluster.

### Examples

```
cluster1::> network options ipv6 show

IPv6 Enabled: false
Router Advertisement (RA) Processing Enabled: false
```

## network options load-balancing modify

Modify load balancing algorithm

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command sets the state of geometric mean algorithm for load balancing

### Parameters

**[-enable {true|false}] - Geometric Mean Algorithm for load balancing**

Setting this parameter to *true* enables the geometric mean algorithm for load balancing. Setting it to *false* disables the geometric mean algorithm for the cluster.

### Examples

```
The following example will enable the geometric mean algorithm for load
balancing.
cluster1::> network options load-balancing modify -enable true
The following example will disable the geometric mean algorithm for load
balancing.
cluster1::> network options load-balancing modify -enable false
```

## network options load-balancing show

Display load balancing algorithm

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

## Description

This command displays the use of geometric mean load balancing algorithm.

## Examples

```
cluster1::> network options load-balancing show
Geometric Mean Algorithm for load balancing: false
```

## network options multipath-routing modify

Modify multipath-routing

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

## Description

The `network options multipath-routing modify` command is used to modify cluster-wide multipath routing configuration.

## Parameters

### `[-is-enabled {true|false}] - Is Multipath Routing Enabled`

This parameter specifies whether multipath routing configuration is enabled or not. Setting this parameter to `_ true _` enables multipath routing for all nodes in the cluster.

## Examples

```
cluster1::> network options multipath-routing modify -is-enabled true
```

## network options multipath-routing show

Display multipath-routing

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

## Description

The `network options multipath-routing show` command displays the multipath routing configuration for the cluster.

## Examples

```
cluster1::> network options multipath-routing show
Is Multipath Routing Enabled: false
```

## network options port-health-monitor disable-monitors

Disable one or more port health monitors

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command disables the given port health monitors for the given IPspaces in the cluster.

### Parameters

**-ipspace <IPspace> - IPspace Name**

The name of the IPspace for which the specified port health monitors are disabled.

**-health-monitors {l2-reachability|link-flapping|crc-errors|vswitch-link} - List of Port Health Monitors to Disable**

The port health monitors to disable.

### Examples

The following example disables the "l2\_reachability" health monitor for the "Default" IPspace.



The status of the "link\_flapping" monitor is unaffected by the command.



```
cluster1::*> network options port-health-monitor show
```

```
IPspace          Enabled Port Health Monitors
```

```
-----
```

```
Cluster          l2_reachability,  
                 link_flapping
```

```
Default          l2_reachability,  
                 link_flapping
```

```
2 entries were displayed.
```

```
cluster1::*> network options port-health-monitor disableMonitors -ipspace  
Default -health-monitors l2_reachability
```

```
cluster1::*> network options port-health-monitor show
```

```
IPspace          Enabled Port Health Monitors
```

```
-----
```

```
Cluster          l2_reachability,  
                 link_flapping
```

```
Default          link_flapping
```

```
2 entries were displayed.
```

## network options port-health-monitor enable-monitors

Enable one or more port health monitors

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command enables the given port health monitors for the given IPspaces in the cluster.

### Parameters

#### **-ipspace <IPspace> - IPspace Name**

The name of the IPspace for which the specified port health monitors are enabled.

#### **-health-monitors {l2-reachability|link-flapping|crc-errors|vswitch-link} - List of Port Health Monitors to Enable**

The port health monitors to enable. Upon enabling the *l2\_reachability* health monitor, it runs in an "unpromoted" state. While in this state, the monitor does not mark any ports as unhealthy due to the *l2\_reachability* health check. The monitor is promoted in the "Cluster" IPspace when the "Cluster" broadcast domain is found to have passed the *l2\_reachability* health check. An EMS event called "vifmgr.hm.promoted" event is generated when the health monitor is promoted for the IPspace.

## Examples

The following example enables the "l2\_reachability" health monitor for the "Default" IPspace:



The status of the "link\_flapping" monitor is unaffected by the command.

```
cluster1::*> network options port-health-monitor show

IPspace           Enabled Port Health Monitors
-----
Cluster           l2_reachability,
                  link_flapping
Default           link_flapping
2 entries were displayed.

cluster1::*> network options port-health-monitor enableMonitors -ipSpace
Default -health-monitors l2_reachability

cluster1::*> network options port-health-monitor show

IPspace           Enabled Port Health Monitors
-----
Cluster           l2_reachability,
                  link_flapping
Default           l2_reachability,
                  link_flapping
2 entries were displayed.
```

## network options port-health-monitor modify

Modify port health monitors configuration

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command modifies the enabled port health monitors for the given IPspaces in the cluster.

### Parameters

**-ipSpace <IPspace> - IPspace Name**

The name of the IPspace for which enabled port health monitors are modified.

**[-health-monitors {l2-reachability|link-flapping|crc-errors|vswitch-link}] - List of Enabled Port Health Monitors**

All of the port health monitors that you want to enable. This command enables any port health monitors in this list that are currently disabled, and it disables any currently enabled monitors that are not in this list.

Upon enabling the `l2_reachability` health monitor, it runs in an "unpromoted" state. While in this state, the monitor does not mark any ports as unhealthy due to the `l2_reachability` health check. The monitor is promoted in the "Cluster" IPspace when the "Cluster" broadcast domain is found to have passed the `l2_reachability` health check. An EMS event called "vifmgr.hm.promoted" event is generated when the health monitor is promoted for the IPspace.

## Examples

The following example modifies the port health monitor configuration of the "Default" IPspace such that only the "link\_flapping" port health monitor is enabled. enabled for all IPspaces in the cluster.



Only the specified monitor is enabled after the modify command is issued.

```
cluster1::*> network options port-health-monitor show

IPspace          Enabled Port Health Monitors
-----          -
Cluster          l2_reachability,
                  link_flapping
Default          l2_reachability,
                  link_flapping
2 entries were displayed.

cluster1::*> network options port-health-monitor modify -ipspace Default
-health-monitors link_flapping

cluster1::*> network options port-health-monitor show

IPspace          Enabled Port Health Monitors
-----          -
Cluster          l2_reachability,
                  link_flapping
Default          link_flapping
2 entries were displayed.
```

## network options port-health-monitor show

Display port health monitors configuration

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command displays the enabled port health monitors for the IPspaces in the cluster.

## Parameters

**{ [-fields <fieldname>,...]**

If you specify the `-fields <fieldname>`, ... parameter, the command output also includes the specified field or fields. You can use `'-fields ?'` to display the fields to specify.

**| [-instance ] }**

If you specify the `-instance` parameter, the command displays detailed information about all fields.

**[-ipspace <IPspace>] - IPspace Name**

Displays the port health monitors that are enabled only for the given IPspace name.

**[-health-monitors {l2-reachability|link-flapping|crc-errors|vswitch-link}] - List of Enabled Port Health Monitors**

Displays the IPspaces that have the given monitors enabled.

## Examples

The following example lists all port health monitors that are enabled for all IPspaces in the cluster.

```
cluster1::*> network options port-health-monitor show

IPspace           Enabled Port Health Monitors
-----
Cluster           l2_reachability,
                  link_flapping
Default           l2_reachability,
                  link_flapping
2 entries were displayed.
```

## network options send-soa modify

Modify Send SOA settings

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command sets the status of sending statement of authority record in the DNS response.

### Parameters

**[-enable {true|false}] - Enable sending SOA**

Setting this parameter to *true* enables sending the statement of authority (SOA) record in the DNS response. Setting it to *false* disables sending the statement of authority (SOA) record in the DNS response for the cluster.

## Examples

```
The following example will enable the sending of statement of authority (SOA)
```

```
in the DNS response.
```

```
cluster1::> network options send-soa modify -enable true
```

```
The following example will disable the sending of statement of authority (SOA)
```

```
in the DNS response.
```

```
cluster1::> network options send-soa modify -enable false
```

## network options send-soa show

Display Send SOA settings

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command displays whether sending the statement of authority record (SOA) in the DNS response is enabled or not.

## Examples

```
cluster1::> network options send-soa show
Enable sending SOA: true
```

## network options switchless-cluster modify

Modify switchless cluster network options

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

This command sets whether the cluster network is in switchless or switched mode. A switchless cluster is physically formed by connecting two nodes back-to-back, without a switch between them.

### Parameters

**[*-enabled* {*true*|*false*}] - Enable Switchless Cluster**

This parameter specifies whether the switchless cluster is enabled or not. Setting this parameter to *true* enables the switchless cluster.

## Examples

The following example enables the switchless cluster:

```
cluster1::*> network options switchless-cluster modify -enabled
true
```

## network options switchless-cluster show

Display switchless cluster network options

**Availability:** This command is available to *cluster* administrators at the *advanced* privilege level.

### Description

The network options switchless-cluster show command displays the attributes of a switchless cluster.

## Examples

The following example displays the attributes of the switchless cluster:

```
cluster1::*> network options switchless-cluster show
Enable Switchless Cluster: true
```

## Copyright information

Copyright © 2023 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.