# system health commands

ONTAP 9.6 commands

NetApp
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# system health commands

## system health alert delete

Delete system health alert

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

### Description

The `system health alert delete` command deletes all the alerts on the cluster with the specified input parameters.

### Parameters

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

Use this parameter to delete alerts generated on a cluster only on the node you specify.

**`-monitor <hm_type>` - Monitor**

Use this parameter to delete alerts generated on a cluster only on the monitor you specify.

**`-alert-id <text>` - Alert ID**

Use this parameter to delete alerts generated on a cluster only on the alert ID you specify.

**`-alerting-resource <text>` - Alerting Resource**

Use this parameter to delete alerts generated on a cluster on the alerting resource you specify.

### Examples

This example shows how to delete an alert with the specified alert-id:

```
cluster1::> system health alert delete -alert-id DualPathToDiskShelf_Alert
-alerting-resource *
```

## system health alert modify

Modify system health alert

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

### Description

The `system health alert modify` command suppresses alerts generated on the cluster and sets the acknowledgement state for an alert.

## Parameters

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

Use this parameter to specify the node on which you want to change the state.

**`-monitor <hm_type>` - Monitor**

Use this parameter to specify the monitor name on which you want to change the state.

**`-alert-id <text>` - Alert ID**

Use this parameter to specify the alert ID on which you want to change the state.

**`-alerting-resource <text>` - Alerting Resource**

Use this parameter to specify the alerting resource name on which you want to change the state.

**`[-acknowledge {true|false}]` - Acknowledge**

Use this parameter to set the acknowledgement state to true or false.

**`[-suppress {true|false}]` - Suppress**

Use this parameter to set the suppress state to true or false.

**`[-acknowledger <text>]` - Acknowledger**

Use this parameter to set the acknowledger as the filter for setting state.

**`[-suppressor <text>]` - Suppressor**

Use this parameter to set the suppressor as the filter for setting state.

## Examples

This example modifies the alert field states on the cluster:

```
cluster1::> system health alert modify -node * -alert-id
DualPathToDiskShelf_Alert -suppress true
```

# system health alert show

View system health alerts

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

## Description

The `system health alert show` command displays information about all the alerts generated on the system. Using -instance will add detailed information.

## Parameters

**{ [-fields <fieldname>,…]**

Selects the fields that you specify.

**| [-instance ] }**

Displays the following additional information about each alert:

- Node name
- Resource name
- Severity of the alert
- Time of alert generation
- Suppress state of the alert
- Acknowledge state of the alert
- Probable cause for the alert
- Possible effect due to the alert
- Recommended corrective actions to follow

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

Selects the alerts generated for the specified node.

**[-monitor <hm_type>] - Monitor**

Selects the alerts with the specified monitor name.

**[-alert-id <text>] - Alert ID**

Selects the alerts with the specified alert ID.

**[-alerting-resource <text>] - Alerting Resource**

Selects the alerts with the specified alerting resource name.

**[-subsystem <hm_subsystem>] - Subsystem**

Selects the alerts generated on the monitoring subsystem.

**[-indication-time <Date>] - Indication Time**

Selects the alerts with the specified indicated time.

**[-perceived-severity <hm_perceived_sev>] - Perceived Severity**

Selects the alerts with the perceived severity level.

**[-probable-cause <hm_probable_cause>] - Probable Cause**

Selects the alerts that contain the specified probable cause.

**[-probable-cause-description <text>] - Description**

Selects the alerts containing the specified probable cause description.

**[-corrective-actions <text>] - Corrective Actions**

Selects the alerts with the specified recommended corrective action.

**[-possible-effect <text>] - Possible Effect**

Selects the alerts with the specified possible effect.

**[-acknowledge {true|false}] - Acknowledge**

Selects the alerts with the specified acknowledgement status.

**[-suppress {true|false}] - Suppress**

Selects the alerts with the specified suppressor field status of true or false.

**[-policy <text>] - Policy**

Selects the alerts with the specified policy name.

**[-acknowledger <text>] - Acknowledger**

Selects the alerts with the specified acknowledger field.

**[-suppressor <text>] - Suppressor**

Selects the alerts with the specified suppressor field.

**[-additional-info <text>,…] - Additional Information**

Selects the alerts with the specified additional information.

**[-alerting-resource-name <text>] - Alerting Resource Name**

Selects the alerts with the specified alerting resource name.

**[-tags <hm_alert_type>,…] - Additional Alert Tags**

Selects the alerts with the specified keywords.

## Examples

The example below displays information about all the alerts generated in the cluster:

```
cluster1::> system health alert show
Node: node1
           Resource: Shelf ID 2
           Severity: Major
     Suppress: false
  Acknowledge: false
         Tags: quality-of-service, nondisruptive-upgrade
     Probable Cause: Disk shelf 2 does not have two paths to controller
                     node1.
    Possible Effect: Access to disk shelf 2 via controller node1 will be
                     lost with a single hardware component failure (e.g.
                     cable, HBA, or IOM failure).
 Corrective Actions: 1. Halt controller node1 and all controllers attached
to disk shelf 2.
                     2. Connect disk shelf 2 to controller node1 via two
paths following the rules in the Universal SAS and ACP Cabling Guide.
                     3. Reboot the halted controllers.
                     4. Contact support personnel if the alert persists.
```

The example below displays additional information about a specific alert generated in the cluster:

```
cluster1::> system health alert show -monitor node-connect -alert-id
DualPathToDiskShelf_Alert -instance
Node: node1
               Monitor: node-connect
              Alert ID: DualPathToDiskShelf_Alert
     Alerting Resource: 50:05:0c:c1:02:00:0f:02
             Subsystem: SAS-connect
       Indication Time: Mon Mar 21 10:26:38 2011
    Perceived Severity: Major
        Probable Cause: Connection_establishment_error
           Description: Disk shelf 2 does not have two paths to controller
node1.
    Corrective Actions: 1. Halt controller node1 and all controllers
attached to disk shelf 2.
                        2. Connect disk shelf 2 to controller node1 via
two paths following the rules in the Universal SAS and ACP Cabling Guide.
                        3. Reboot the halted controllers.
                        4. Contact support personnel if the alert
persists.
       Possible Effect: Access to disk shelf 2 via controller node1 will
be lost with a single hardware component failure (e.g. cable, HBA, or IOM
failure).
           Acknowledge: false
              Suppress: false
                Policy: DualPathToDiskShelf_Policy
          Acknowledger: -
            Suppressor: -
Additional Information: Shelf uuid: 50:05:0c:c1:02:00:0f:02
                        Shelf id: 2
                        Shelf Name: 4d.shelf2
                        Number of Paths: 1
                        Number of Disks: 6
                        Adapter connected to IOMA:
                        Adapter connected to IOMB: 4d
Alerting Resource Name: Shelf ID 2
 Additional Alert Tags: quality-of-service, nondisruptive-upgrade
```

# system health alert definition show

Display system health alert definition

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

## Description

The `system health alert definition show` command displays information about the various alerts defined in the system health monitor policy file. Using `-instance` will display additional details.

## Parameters

**{ [-fields <fieldname>,…]**

Selects the fields that you specify.

**| [-instance ] }**

Use this parameter to display additional information on each alert definition.

- Node name
- Monitor name
- Subsystem identifier
- Alert ID
- Severity of the alert
- Probable cause
- Probable cause description
- Possible effect due the error state
- Recommended corrective actions to be followed
- Any additional information
- Additional alert tags

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

Selects the alert definitions for the specified node.

**[-monitor <hm_type>] - Monitor**

Selects the alert definitions with the specified monitor name.

**[-alert-id <text>] - Class of Alert**

Selects the alert definitions with the specified alert identifier.

**[-perceived-severity <hm_perceived_sev>] - Severity of Alert**

Selects the alert definitions with the specified perceived severity.

**[-probable-cause <hm_probable_cause>] - Probable Cause**

Selects the alert definitions with the specified probable cause of the alert.

**[-probable-cause-description <text>] - Probable Cause Description**

Selects the alert definitions with the specified probable cause description.

**[-possible-effect <text>] - Possible Effect**

Selects the alert definitions with the specified possible effect.

**[-corrective-actions <text>] - Corrective Actions**

Selects the alert definitions with the specified corrective action.

**[-subsystem <hm_subsystem>] - Subsystem Name**

Selects the alert definitions with the specified subsystem.

**[-additional-information <text>] - Additional Relevant Data**

Selects the alert definitions with the specified additional information.

**[-tags <hm_alert_type>,…] - Additional Alert Tags**

Selects the alert definitions with the specified keywords.

## Examples

The example below displays information about all the definitions in the alert definition file:

```
cluster1::> system health alert definition show
Node          Monitor                Subsystem         Alert ID
------------- ---------------------- -----------------
-----------------------
node-01       system-connect         SAS-connect
DualControllerNonHa_
                                                       Alert
                  Severity: Major
            Probable Cause: Configuration_error
Probable Cause Description: Disk shelf $(sschm_shelf_info.id) is connected
to
                            two controllers
                            ($(sschm_shelf_info.connected-nodes)) that are
                            not an HA pair.
           Possible Effect: Access to disk shelf $(sschm_shelf_info.id)
may
                            be lost with a single controller failure.
        Corrective Actions: 1. Halt all controllers that are connected to
disk shelf $(sschm_shelf_info.id).
                            2. Connect disk shelf $(sschm_shelf_info.id)
to both HA controllers following the rules in the Universal SAS and ACP
Cabling Guide.
                            3. Reboot the halted controllers.
                            4. Contact support personnel if the alert
persists.
           Additional Info: -
                       Tags: quality_of_service, nondisruptive-upgrade
```

The example below displays detailed information about the definitions in the alert definition file:

```
cluster1::> system health alert definition show -instance
Node: krivC-01
                   Monitor: system-connect
            Class of Alert: DualControllerNonHa_Alert
         Severity of Alert: Major
            Probable Cause: Configuration_error
Probable Cause Description: Disk shelf $(sschm_shelf_info.id) is connected
to two controllers ($(sschm_shelf_info.connected-nodes)) that are not an
HA pair.
           Possible Effect: Access to disk shelf $(sschm_shelf_info.id)
may be lost with a single controller failure.
        Corrective Actions: 1. Halt all controllers that are connected to
disk shelf $(sschm_shelf_info.id).
        2. Connect disk shelf $(sschm_shelf_info.id) to both HA
controllers following the rules in the Universal SAS and ACP Cabling
Guide.
        3. Reboot the halted controllers.
        4. Contact support personnel if the alert persists.
            Subsystem Name: SAS-connect
  Additional Relevant Data: -
     Additional Alert Tags: quality_of_service, nondisruptive-upgrade
```

# system health autosupport trigger history show

View system health alert history

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

## Description

The `system health autosupport trigger history show` command displays all the alert triggers in the cluster that generated the AutoSupport messages. The following fields are displayed in the output:

- Node name
- Monitor name
- Subsystem
- Alert identifier
- Alerting resource
- Severity
- If an AutoSupport has been sent due to this alert

## Parameters

**{ [-fields <fieldname>,…]**

Use this parameter to display only the fields you specify.

**| [-instance ] }**

Use this parameter to display additional information about all of the alerts that were generated.

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

Use this parameter to display AutoSupport trigger history on the specified node.

**[-monitor <hm_type>] - Monitor**

Use this parameter to display AutoSupport trigger history with the specified monitor name.

**[-alert-id <text>] - Alert ID**

Use this parameter to display the AutoSupport message that was triggered by the specified alert ID.

**[-alerting-resource <text>] - Alerting Resource**

Use this parameter to display the AutoSupport message that was triggered by the specified alerting resource.

**[-subsystem <hm_subsystem>] - Subsystem**

Use this parameter to display the AutoSupport message that was triggered by the specified subsystem.

**[-indication-time <Date>] - Indication Time**

Use this parameter to display the AutoSupport message that was triggered at the indicated time.

**[-perceived-severity <hm_perceived_sev>] - Perceived Severity**

Use this parameter to display the AutoSupport message that was triggered by alerts with the specified perceived severity.

**[-autosupport-triggered {true|false}] - AutoSupport Triggered**

Use this parameter to display the alerts that generated AutoSupport messages.

**[-probable-cause <hm_probable_cause>] - Probable Cause**

Use this parameter to display the alerts that were generated with the specified probable cause.

**[-corrective-actions <text>] - Corrective Actions**

Use this parameter to display the AutoSupport alerts with the specified corrective actions.

**[-asup-enable {true|false}] - Enable Asup for This Alert**

Use this parameter to enable or disable an AutoSupport message for this alert.

**[-alert-clear-time <Date>] - Alert Clear Time**

Use this parameter to display the alerts that were cleared at a given time.

## Examples

This example displays information about the AutoSupport trigger history

```
cluster1::> system health autosupport trigger history show
Node           Monitor                Subsystem         Alert ID
------------   ---------------------- -----------------
----------------------
node1          node-connect           SAS-connect
DualPathToDiskShelf_
                                                         Alert
     Resource: 50:05:0c:c1:02:00:0f:02
     Severity: Major
    AutoSupport sent: true
```

This example displays info about the autosupport trigger history in detail

```
cluster1::> system health autosupport trigger history show -instance
                      Node: node1
                   Monitor: node-connect
                  Alert ID: DualPathToDiskShelf_Alert
         Alerting Resource: 50:05:0c:c1:02:00:0f:02
                 Subsystem: SAS-connect
           Indication Time: Thu Mar 17 11:59:09 2011
        Perceived Severity: Major
     AutoSupport Triggered: true
            Probable Cause: Connection_establishment_error
        Corrective Actions: 1. Halt controller node1 and all controllers
attached to disk shelf 2.
2. Connect disk shelf 2 to controller node1 via two paths following the
rules in the Universal SAS and ACP Cabling Guide.
3. Reboot the halted controllers.
4. Contact support personnel if the alert persists.
Enable asup for this alert: true
          Alert Clear Time: Wed May 29 16:10:13 2013
```

# system health config show

## Display system health configuration

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

### Description

The `system health config show` command displays the configuration and status of each health monitor in the cluster. The command shows a health status for each health monitor. The health status is an aggregation of the subsystem health for each subsystem that the health monitor monitors. For example, if a health monitor monitors two subsystems and the health status of one subsystem is "ok" and the other is "degraded", the health status for the health monitor is "degraded".

## 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**

Use this parameter to list the health monitors present on the specified node.

**[-monitor <hm_type>] - Monitor**

Use this parameter to display the health monitors with the specified monitor name.

**[-subsystem <hm_subsystem>,…] - Subsystem**

Selects the health monitors with the specified subsystems.

**[-health {ok|ok-with-suppressed|degraded|unreachable|unknown}] - Health**

Selects the health monitors with the specified health status.

**[-mon-version <text>] - Monitor Version**

Selects the health monitors with the specified monitor version.

**[-pol-version <text>] - Policy File Version**

Selects the health monitors with the specified health monitor policy version.

**[-context {Node |Cluster}] - Context**

Selects the health monitors with the specified running context.

**[-aggregator <hm_type>] - Aggregator**

Selects the health monitors with the specified aggregator.

**[-resources <text>,…] - Resource**

Selects the health monitors with the specified resource name.

**[-init-state {Invalid|Initailizing|Initialized|Starting_Discovery|Starting_Re-Discovery|Discovery_Done_Partially|Discovery_Done}] - Subsystem Initialization Status**

Selects the health monitors with the specified subsystem initialization state.

**[-sub-pol-versions <text>] - Subordinate Policy Versions**

Selects the health monitors with the specified subordinate policy version.

## Examples

The example below displays information about health monitor configuration:

```
cluster1::> system health config show
Node           Monitor                 Subsystem         Health
-------------- ----------------------- ----------------- ------------------
node1          node-connect            SAS-connect       degraded
node1          system-connect          SAS-connect       degraded
node1          system                  SAS-connect       degraded
```

The example below displays detailed information about health monitor configuration:

```
cluster1::> system health config show -instance
Node: node1
                               Monitor: node-connect
                             Subsystem: SAS-connect
                                Health: degraded
                       Monitor Version: 1.0
                   Policy File Version: 1.0
                               Context: node_context
                            Aggregator: system-connect
                              Resource: SasAdapter, SasDisk, SasShelf
       Subsystem Initialization Status: initialized
           Subordinate Policy Versions: 1.0 SAS, 1.0 SAS multiple adapters
```

# system health policy definition modify

Modify system health policy definition

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

## Description

The `system health policy definition modify` enables or disables health monitoring policies based on input parameters the user provides.

## Parameters

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

Use this parameter to specify the node on which you want to enable or disable the policy.

**`-monitor <hm_type>` - Monitor**

Use this parameter to specify the monitor name for which you want to be enable or disable the policy.

**`-policy-id <text>` - Policy**

Use this parameter to specify the policy identifier that you want to enable or disable.

**[-enable {true|false}] - Policy Status**

Use this parameter with the value "true" to enable the policy. Set the value to "false" to disable the policy.

**[-asup-enable {true|false}] - Enable AutoSupport for This Alert**

Use this parameter to enable or disable an AutoSupport message for this alert.

## Examples

This example modifies policy state on the cluster:

```
cluster1::> system health policy definition modify -node node1
    -policy-id ControllerToShelfIomA_Policy -enable false -monitor *
```

# system health policy definition show

Display system health policy definitions

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

## Description

The `system health policy definition show` command lists the health monitor policy definitions as described by the health monitor policy file. The command displays the following fields:

- Node name
- Monitor name
- Policy name
- Policy rule expression
- Expression for joining two tables
- Policy status
- Alert identifier
- Responsible resource name

## 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**

Selects policy definitions for the specified node.

**[-monitor <hm_type>] - Monitor**

Selects policy definitions with the specified monitor name.

**[-policy-id <text>] - Policy**

Selects policy definitions with the specified policy identifier.

**[-rule-expression <ArithExpr>] - Rule Expression**

Selects policy definitions with the specified rule of expression.

**[-where <ArithExpr>] - Variable Equivalence**

Selects rules that match the provided expression. This expression is part of the alert definition. It is shown for reference only and cannot be changed.

**[-enable {true|false}] - Policy Status**

Use this parameter with the value set to "true" to select policy definitions that are enabled. Set the value to "false" to select policy definitions that are disabled.

**[-alert-id <text>] - Alert ID**

Selects all policy definitions of the specified alert identifier.

**[-responsible-resource-info <text>] - Table and ID of Resource at Fault**

Selects all policy definitions with the specified responsible resource.

**[-asup-enable {true|false}] - Enable AutoSupport for This Alert**

Selects policy definitions for which AutoSupport messages are either enabled or disabled.

## Examples

The example below displays information about all the policy definitions present in the cluster:

```
cluster1::> system health policy definition show
Node          Monitor                 Policy
------------- ----------------------- -----------------------
node1         node-connect            ControllerToShelfIomA_Policy
Policy Rule Expression: nschm_shelf_info.num-paths == 2
                        nschm_shelf_info.iomb-adapter == NULL
                 Where: -
                Enable: true
              Alert ID: ControllerToShelfIomA_Alert
      Number of Alerts: -
  Responsible Resource: nschm_shelf_info.name
```

The example below displays detailed information about all the policy definitions present in the cluster:

```
cluster1::> system health policy definition show -instance
Node: node1
                          Monitor: node-connect
                           Policy: ControllerToShelfIomA_Policy
                  Rule Expression: nschm_shelf_info.num-paths == 2
nschm_shelf_info.iomb-adapter == NULL
             Variable Equivalence: -
                    Policy Status: true
                         Alert ID: ControllerToShelfIomA_Alert
Table and ID of Resource at Fault: nschm_shelf_info.name
```

# system health status show

## Display system health monitoring status

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

### Description

The `system health status show` command displays the health monitor status. The possible states are:

- ok
- ok-with-suppressed
- degraded
- unreachable

### Examples

This example displays information about health monitoring status:

```
cluster1::> system health status show
  Status
  ---------------
  degraded
```

# system health subsystem show

## Display the health of subsystems

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

### Description

The `system health subsystem show` command displays the health status of each subsystem for which health monitoring is available. This command aggregates subsystem health status from each node in the

cluster. A subsystem's health status changes to "degraded" when a health monitor raises an alert. You can use the system health alert show command to display information about generated alerts.

## 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.

**[-subsystem <hm_subsystem>] - Subsystem**

Selects the specified subsystem.

**[-health {ok|ok-with-suppressed|degraded|unreachable|unknown}] - Health**

Selects subsystems that have the specified health status.

**[-init-state {Invalid|Initailizing|Initialized|Starting_Discovery|Starting_Re-Discovery|Discovery_Done_Partially|Discovery_Done}] - Initialization State**

Selects subsystems that have the specified initialization state.

**[-outstanding-alert-count <integer>] - Number of Outstanding Alerts**

Selects subsystems that have the specified number of outstanding alerts.

**[-suppressed-alert-count <integer>] - Number of Suppressed Alerts**

Selects subsystems that have the specified number of suppressed alerts.

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

Selects subsystems for the specified node.

**[-refresh-interval <[<integer>h][<integer>m][<integer>s]>,…] - Subsystem Refresh Interval**

The refresh interval is in minutes. A value of zero disables the sub-system refresh until a reboot or restart of the subsystem process.

## Examples

The example below displays the health status of each subsystem:

```
cluster1::> system health subsystem show
Subsystem          Health
----------------- ------------------
SAS-connect        degraded
Switch-Health      OK
CIFS-NDO           OK
```

The example below displays detailed information about the health status of each subsystem:

```
cluster1::> system health subsystem show -instance

                             Subsystem: SAS-connect
                                Health: degraded
                  Initialization State: initialized
          Number of Outstanding Alerts: 0
           Number of Suppressed Alerts: 0
                                  Node: node1,node2
            Subsystem Refresh Interval: 30m, 30m
Subsystem: Switch-Health
                                Health: ok
                  Initialization State: initialized
          Number of Outstanding Alerts: 0
           Number of Suppressed Alerts: 0
                                  Node: node1
            Subsystem Refresh Interval: 5m
Subsystem: CIFS-NDO
                                Health: OK
                  Initialization State: initialized
          Number of Outstanding Alerts: 0
           Number of Suppressed Alerts: 0
                                  Node: node1
            Subsystem Refresh Interval: 5m
```

## Related Links

- system health alert show