system health commands
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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.

[-supressor <text>] - Supressor
  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
    Alert ID: DualPathToDiskShelf_Alert
    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:
clusterl::> 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|Initializing|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:
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
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:
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