



# **Verify cluster and storage health after downgrade or revert**

## **ONTAP 9**

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# Verify cluster and storage health after downgrade or revert

After you downgrade or revert a cluster, you should verify that the nodes are healthy and eligible to participate in the cluster, and that the cluster is in quorum. You should also verify the status of your disks, aggregates, and volumes.

## Verify cluster health

1. Verify that the nodes in the cluster are online and are eligible to participate in the cluster: `cluster show`

```
cluster1::> cluster show
Node                Health  Eligibility
-----
node0               true   true
node1               true   true
```

If any node is unhealthy or ineligible, check EMS logs for errors and take corrective action.

2. Set the privilege level to advanced: `set -privilege advanced`
3. Enter `y` to continue.
4. Verify the configuration details for each RDB process.
- The relational database epoch and database epochs should match for each node.
  - The per-ring quorum master should be the same for all nodes.

Note that each ring might have a different quorum master.

To display this RDB process...	Enter this command...
Management application	<code>cluster ring show -unitname mgmt</code>
Volume location database	<code>cluster ring show -unitname vldb</code>
Virtual-Interface manager	<code>cluster ring show -unitname vifmgr</code>
SAN management daemon	<code>cluster ring show -unitname bcomd</code>

This example shows the volume location database process:

```
cluster1::*> cluster ring show -unitname vldb
```

Node	UnitName	Epoch	DB Epoch	DB Trnxs	Master	Online
node0	vldb	154	154	14847	node0	master
node1	vldb	154	154	14847	node0	secondary
node2	vldb	154	154	14847	node0	secondary
node3	vldb	154	154	14847	node0	secondary

4 entries were displayed.

1. If you are operating in a SAN environment, verify that each node is in a SAN quorum: `event log show -messagename scsiblade.*`

The most recent scsiblade event message for each node should indicate that the scsi-blade is in quorum.

```
cluster1::*> event log show -messagename scsiblade.*
```

Time	Node	Severity	Event
MM/DD/YYYY TIME	node0	INFORMATIONAL	scsiblade.in.quorum: The scsi-blade ...
MM/DD/YYYY TIME	node1	INFORMATIONAL	scsiblade.in.quorum: The scsi-blade ...

2. Return to the admin privilege level: `set -privilege admin`

## Related information

[System administration](#)

# Verify storage health

After you revert or downgrade a cluster, you should verify the status of your disks, aggregates, and volumes.

1. Verify disk status:

To check for...	Do this...
Broken disks	<ol style="list-style-type: none"> <li>a. Display any broken disks: <code>storage disk show -state broken</code></li> <li>b. Remove or replace any broken disks.</li> </ol>

To check for...	Do this...
Disks undergoing maintenance or reconstruction	<p>a. Display any disks in maintenance, pending, or reconstructing states: <code>storage disk show -state maintenance pending reconstructing</code></p> <p>b. Wait for the maintenance or reconstruction operation to finish before proceeding.</p>

- Verify that all aggregates are online by displaying the state of physical and logical storage, including storage aggregates: `storage aggregate show -state !online`

This command displays the aggregates that are *not* online. All aggregates must be online before and after performing a major upgrade or reversion.

```
cluster1::> storage aggregate show -state !online
There are no entries matching your query.
```

- Verify that all volumes are online by displaying any volumes that are *not* online: `volume show -state !online`

All volumes must be online before and after performing a major upgrade or reversion.

```
cluster1::> volume show -state !online
There are no entries matching your query.
```

- Verify that there are no inconsistent volumes: `volume show -is-inconsistent true`

If any inconsistent volumes are returned, you must contact NetApp Support before you precede with the upgrade.

## Related information

[Disk and aggregate management](#)

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