



Shut down the controllers - AFF A700 and FAS9000

ONTAP Systems

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Shut down the controllers - AFF A700 and FAS9000

Option 1: Shut down the controllers

You must shut down the node or nodes in the chassis prior to moving them to the new chassis.

About this task

- If you have a cluster with more than two nodes, it must be in quorum. If the cluster is not in quorum or a healthy node shows `false` for eligibility and health, you must correct the issue before shutting down the impaired node.

[ONTAP 9 System Administration Reference](#)

- If AutoSupport is enabled, suppress automatic case creation by invoking an AutoSupport message:

```
system node autosupport invoke -node * -type all -message  
MAINT=number_of_hours_downh
```

The following AutoSupport message suppresses automatic case creation for two hours: `cluster1:*>`
`system node autosupport invoke -node * -type all -message MAINT=2h`

Steps

1. If your system has two controller modules, disable the HA pair.

If your system is running clustered ONTAP with...	Then...
Two nodes in the cluster	<code>cluster ha modify -configured false storage failover modify -node node0 -enabled false</code>
More than two nodes in the cluster	<code>storage failover modify -node node0 -enabled false</code>

2. Halt the node, pressing `y` when you are prompted to confirm the halt: `system node halt -node
node_name`

The confirmation message looks like the following:

```
Warning: Rebooting or halting node  
"node_name" in an HA-enabled cluster may result in client disruption or  
data access  
failure. To ensure continuity of service, use the "storage  
failover takeover" command. Are you sure you want to halt node  
"node_name"? {y|n}:
```



You must perform a clean system shutdown before replacing the chassis to avoid losing unwritten data in the nonvolatile memory (NVMEM). If the NVMEM LED is flashing, there is content in the NVMEM that has not been saved to disk. You need to reboot the node and start from the beginning of this procedure. If repeated attempts to cleanly shut down the node fail, be aware that you might lose any data that was not saved to disk.

- Where applicable, halt the second node to avoid a possible quorum error message in an HA pair configuration: `system node halt -node second_node_name -ignore-quorum-warnings true`

Option 2: Shut down a node in a two-node MetroCluster configuration

To shut down the impaired node, you must determine the status of the node and, if necessary, switch over the node so that the healthy node continues to serve data from the impaired node storage.

About this task

- If you are using NetApp Storage Encryption, you must have reset the MSID using the instructions in the "Returning SEDs to unprotected mode" section of the *ONTAP 9 NetApp Encryption Power Guide*.

[ONTAP 9 NetApp Encryption Power Guide](#)

- You must leave the power supplies turned on at the end of this procedure to provide power to the healthy node.

Steps

- Check the MetroCluster status to determine whether the impaired node has automatically switched over to the healthy node: `metrocluster show`
- Depending on whether an automatic switchover has occurred, proceed according to the following table:

If the impaired node...	Then...
Has automatically switched over	Proceed to the next step.
Has not automatically switched over	Perform a planned switchover operation from the healthy node: <code>metrocluster switchover</code>
Has not automatically switched over, you attempted switchover with the <code>metrocluster switchover</code> command, and the switchover was vetoed	Review the veto messages and, if possible, resolve the issue and try again. If you are unable to resolve the issue, contact technical support.

- Resynchronize the data aggregates by running the `metrocluster heal -phase aggregates` command from the surviving cluster.

```
controller_A_1::> metrocluster heal -phase aggregates
[Job 130] Job succeeded: Heal Aggregates is successful.
```

If the healing is vetoed, you have the option of reissuing the `metrocluster heal` command with the `-override-vetoes` parameter. If you use this optional parameter, the system overrides any soft vetoes that prevent the healing operation.

4. Verify that the operation has been completed by using the `metrocluster operation show` command.

```
controller_A_1::> metrocluster operation show
Operation: heal-aggregates
State: successful
Start Time: 7/25/2016 18:45:55
End Time: 7/25/2016 18:45:56
Errors: -
```

5. Check the state of the aggregates by using the `storage aggregate show` command.

```
controller_A_1::> storage aggregate show
Aggregate      Size Available Used% State   #Vols  Nodes      RAID
Status
-----
...
aggr_b2        227.1GB   227.1GB   0% online      0 mcc1-a2
raid_dp, mirrored, normal...
```

6. Heal the root aggregates by using the `metrocluster heal -phase root-aggregates` command.

```
mcc1A::> metrocluster heal -phase root-aggregates
[Job 137] Job succeeded: Heal Root Aggregates is successful
```

If the healing is vetoed, you have the option of reissuing the `metrocluster heal` command with the `-override-vetoes` parameter. If you use this optional parameter, the system overrides any soft vetoes that prevent the healing operation.

7. Verify that the heal operation is complete by using the `metrocluster operation show` command on the destination cluster:

```
mcclA::> metrocluster operation show
  Operation: heal-root-aggregates
    State: successful
Start Time: 7/29/2016 20:54:41
End Time: 7/29/2016 20:54:42
Errors: -
```

8. On the impaired controller module, disconnect the power supplies.

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