Prepare for MetroCluster maintenance

ONTAP MetroCluster

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Prepare for MetroCluster maintenance

Enable console logging before performing maintenance tasks

Enable console logging on your devices before performing maintenance tasks.

NetApp strongly recommends that you enable console logging on the devices that you are using and take the following actions before performing maintenance procedures:

- Leave AutoSupport enabled during maintenance.
- Trigger a maintenance AutoSupport message before and after maintenance to disable case creation for the duration of the maintenance activity.

  See the Knowledge Base article How to suppress automatic case creation during scheduled maintenance windows.

- Enable session logging for any CLI session. For instructions on how to enable session logging, review the "Logging Session Output" section in the Knowledge Base article How to configure PuTTY for optimal connectivity to ONTAP systems.

Remove ONTAP Mediator or Tiebreaker monitoring before performing maintenance tasks

Before performing maintenance tasks, you must remove monitoring if the MetroCluster configuration is monitored with the Tiebreaker or Mediator utility.

Maintenance tasks include upgrading the controller platform, upgrading ONTAP, and performing a negotiated switchover and switchback.

Steps

1. Collect the output for the following command:

   ```
   storage iscsi-initiator show
   ```

2. Remove the existing MetroCluster configuration from Tiebreaker, Mediator, or other software that can initiate switchover.

If you are using…	Use this procedure…
Tiebreaker	Removing MetroCluster Configurations in the *MetroCluster Tiebreaker Installation and Configuration content*
Mediator	Issue the following command from the ONTAP prompt: `metrocluster configuration-settings mediator remove`

Third-party applications	Refer to the product documentation.

3. After completing maintenance of the MetroCluster configuration, you can resume monitoring with the Tiebreaker or Mediator utility.

If you are using…	Use this procedure
Tiebreaker	Adding MetroCluster configurations in the *MetroCluster Tiebreaker Installation and Configuration* section.
Mediator	Configuring the ONTAP Mediator service from a MetroCluster IP configuration in the *MetroCluster IP Installation and Configuration* section.
Third-party applications	Refer to the product documentation.

MetroCluster failure and recovery scenarios

You should be aware of how the MetroCluster configuration responds to different failure events.

For additional information about recovery from node failures, see the section "Choosing the correct recovery procedure" in the Recover from a disaster.

Event	Impact	Recovery
Single node failure	A failover is triggered.	The configuration recovers through a local takeover. RAID is not impacted. Review system messages and replace failed FRUs as necessary. ONTAP Hardware Systems Documentation
Two nodes fail at one site	Two nodes will fail only if automated switchover is enabled in the MetroCluster Tiebreaker software.	Manual unplanned switchover (USO) if automated switchover in MetroCluster Tiebreaker software is not enabled. ONTAP Hardware Systems Documentation

MetroCluster IP interface—failure of one port	The system is degraded. Additional port failure impacts HA mirroring.	The second port is used. Health Monitor generates an alert if the physical link to the port is broken. Review system messages and replace failed FRUs as necessary. ONTAP Hardware Systems Documentation
MetroCluster IP interface—failure of both ports	HA capability is impacted. RAID SyncMirror of the node stops syncing.	Immediate manual recovery is required as there is no HA takeover. Review system messages and replace failed FRUs as necessary. ONTAP Hardware Systems Documentation
Failure of one MetroCluster IP switch	No impact. Redundancy is provided through the second network.	Replace the failed switch as necessary. Replacing an IP switch
Failure of two MetroCluster IP switches that are in the same network	No impact. Redundancy is provided through the second network.	Replace the failed switch as necessary. Replacing an IP switch
Failure of two MetroCluster IP switches that are at one site	RAID SyncMirror of the node stops syncing. HA capability is impacted and the cluster goes out of quorum.	Replace the failed switch as necessary. Replacing an IP switch
Failure of two MetroCluster IP switches that are at different sites and not on the same network (diagonal failure)	RAID SyncMirror of the node stops syncing.	RAID SyncMirror of the node stops syncing. Cluster and HA capability are not impacted. Replace the failed switch as necessary. Replacing an IP switch

Using the Interoperability Matrix Tool to find MetroCluster information

When setting up the MetroCluster configuration, you can use the Interoperability Tool to ensure you are using supported software and hardware versions.

NetApp Interoperability Matrix Tool

After opening the Interoperability Matrix, you can use the Storage Solution field to select your MetroCluster solution.

You use the **Component Explorer** to select the components and ONTAP version to refine your search.

You can click **Show Results** to display the list of supported configurations that match the criteria.

Where to find procedures for MetroCluster maintenance tasks

You should be sure you select the correct procedure when you perform MetroCluster hardware maintenance tasks.

Maintenance procedures for different types of MetroCluster configurations

- If you have a MetroCluster IP configuration, review the procedures in Maintenance procedures for MetroCluster IP configurations.
- If you have a MetroCluster FC configuration, review the procedures in Maintenance procedures for MetroCluster FC configurations.
- If you cannot find the procedure in the specific section for your configuration, review the procedures in Maintenance procedures for all MetroCluster configurations.

All other maintenance procedures

The following table provides links to procedures related to MetroCluster maintenance that are not located in the three sections listed above:

Component	MetroCluster type (FC or IP)	Task	Procedure
ONTAP software	Both	ONTAP software upgrade	Upgrade, revert, or downgrade

Controller module	Both	FRU replacement (including controller modules, PCIe cards, FC-VI card, and so on) Moving a storage controller module or NVRAM card among the MetroCluster storage systems is not supported.	ONTAP Hardware Systems Documentation
		Upgrade and expansion	MetroCluster Upgrade and Expansion
		Transition from FC to IP connectivity	Transition from MetroCluster FC to MetroCluster IP
Drive shelf	FC	All other shelf maintenance procedures. The standard procedures can be used.	Maintain DS460C DS224C and DS212C disk shelves
	IP	All shelf maintenance procedures. The standard procedures can be used. If adding shelves for an unmirrored aggregate, see Considerations when using unmirrored aggregates	Maintain DS460C DS224C and DS212C disk shelves
	Both	Hot adding IOM12 shelves to a stack of IOM6 shelves	Hot-adding shelves with IOM12 modules to a stack of shelves with IOM6 modules

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