



## **Start here - Choose your procedure**

### **ONTAP MetroCluster**

NetApp  
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# Start here - Choose your procedure

## Start here: Choose between controller upgrade, system refresh, or expansion

Depending on the scope of the equipment upgrade, you chose a controller upgrade procedure, a system refresh procedure, or an expansion procedure.

- Controller upgrade procedures apply only to the controller modules. The controllers are replaced with a new controller model.

The storage shelf models are not upgraded.

- In switchover and switchback procedures, the MetroCluster switchover operation is used to provide nondisruptive service to clients while the controller modules on the partner cluster are upgraded.
  - In an ARL-based controller upgrade procedure, the aggregate relocation operations are used to nondisruptively move data from the old configuration to the new, upgraded configuration.
- Refresh procedures apply to the controllers and the storage shelves.

In the refresh procedures, new controllers and shelves are added to the MetroCluster configuration, creating a second DR group, and then data is nondisruptively migrated to the new nodes.

The original controllers are then retired.

- Expansion procedures add additional controllers and shelves to the MetroCluster configuration without removing any.

The procedure you use depends on the type of MetroCluster and number of existing controllers.

Upgrade type	Go to...
Controller upgrade	<a href="#">Choose a controller upgrade procedure</a>
System refresh	<a href="#">Choose a system refresh procedure</a>
Expansion	<ul style="list-style-type: none"><li>• <a href="#">Two-node MetroCluster to four</a></li><li>• <a href="#">Four-node MetroCluster FC to eight</a></li><li>• <a href="#">Four-node MetroCluster IP to eight</a></li></ul>

## Choose a controller upgrade procudure

The controller upgrade procedure you use depends on the platform model, scope of the upgrade, and type of MetroCluster configuration.

### Choosing a procedure that does not use aggregate relocation

Type of upgrade or refresh	MetroCluster type	First ONTAP version support	Procedure
<ul style="list-style-type: none"> <li>Scope: Platform (controller modules) only</li> <li>Method: Automated switchover/switchback</li> </ul>	FC	9.10.1	Upgrading controllers in a four-node MetroCluster FC configuration using switchover and switchback with "system controller replace" commands (ONTAP 9.10.1 and later)
<ul style="list-style-type: none"> <li>Scope: Platform (controller modules) only</li> <li>Method: Automated switchover/switchback</li> </ul>	IP	9.10.1	Upgrade controllers from AFF A700 to AFF A900 in a MetroCluster IP configuration using switchover and switchback (ONTAP 9.10.1 and later)
<ul style="list-style-type: none"> <li>Scope: Platform (controller modules) only</li> <li>Method: Switchover/switchback</li> </ul>	FC	9.8	Upgrading controllers in a MetroCluster FC configuration using switchover and switchback
<ul style="list-style-type: none"> <li>Scope: Platform (controller modules) only</li> <li>Method: Switchover/switchback</li> </ul>	IP	9.8	Upgrading controllers in a MetroCluster IP configuration using switchover and switchback (ONTAP 9.8 and later)

## Choosing a procedure using aggregate relocation

Aggregate relocation procedure	MetroCluster type	First ONTAP version support	Procedure
Using system controller replace commands and swapping the controller module and NVM	FC	9.10.1 and later	Use "system controller replace" commands to upgrade AFF A700 to AFF A900 running ONTAP 9.10.1 RC2 or later
Using system controller replace commands	FC	9.8 and later	Using "system controller replace" commands to upgrade controller hardware running ONTAP 9.8 and later
Using system controller replace commands	FC	9.5 through 9.7	Using "system controller replace" commands to upgrade controller hardware running ONTAP 9.5 to ONTAP 9.7

Aggregate relocation procedure	MetroCluster type	First ONTAP version support	Procedure
Using manual ARL commands	FC	9.8	<a href="#">Manually upgrade controller hardware running ONTAP 9.8 and later</a>
Using manual ARL commands	FC	9.7 and earlier	<a href="#">Manually upgrade controller hardware running ONTAP 9.7 and earlier</a>

## Choosing a system refresh method

The system refresh procedure you use depends on the platform model, scope of the upgrade, and type of MetroCluster configuration.

Scope	Config type	ONTAP support	Go to...
<ul style="list-style-type: none"> <li>• Scope: Platform (controller modules) and storage shelves</li> <li>• Method: Expand the MetroCluster configuration and then remove the old nodes</li> </ul>	FC	9.6 and later	<a href="#">Refreshing a four-node MetroCluster FC configuration</a>
<ul style="list-style-type: none"> <li>• Scope: Platform (controller modules) and storage shelves</li> <li>• Method: Expand the MetroCluster configuration and then remove the old nodes</li> </ul>	IP	9.8	<a href="#">Refreshing a four-node MetroCluster IP configuration (ONTAP 9.8 and later)</a>

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