Performing aggregate healing and restoring mirrors (MetroCluster FC configurations)

ONTAP MetroCluster

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Performing aggregate healing and restoring mirrors (MetroCluster FC configurations)

After replacing hardware and assigning disks, you can perform the MetroCluster healing operations. You must then confirm that aggregates are mirrored and, if necessary, restart mirroring.

Steps

1. Perform the two phases of healing (aggregate healing and root healing) on the disaster site:

```
cluster_B::> metrocluster heal -phase aggregates

cluster_B::> metrocluster heal -phase root aggregates
```

2. Monitor the healing and verify that the aggregates are in either the resyncing or mirrored state:

   `storage aggregate show -node local`

If the aggregate shows this state…	Then…
resyncing	No action is required. Let the aggregate complete resyncing.
mirror degraded	Proceed to Step 3
mirrored, normal	No action is required.
unknown, offline	The root aggregate shows this state if all the disks on the disaster sites were replaced.

```
cluster_B::> storage aggregate show -node local

 Aggregate     Size Available Used% State   #Vols  Nodes      RAID
Status
 --------- -------- --------- ----- ------- ------ ----------
------------
 node_B_1_aggr1
            227.1GB   11.00GB   95% online       1 node_B_1   raid_dp,
                                                              resyncing
 NodeA_1_aggr2
            430.3GB   28.02GB   93% online       2 node_B_1   raid_dp,
                                                              mirror
                                                              degraded
 node_B_1_aggr3
            812.8GB   85.37GB   89% online       5 node_B_1   raid_dp,
                                                              mirrored,
                                                              normal
 3 entries were displayed.

cluster_B::>
```

In the following examples, the three aggregates are each in a different state:

Node	State
node_B_1_aggr1	resyncing
node_B_1_aggr2	mirror degraded
node_B_1_aggr3	mirrored, normal

3. If one or more plexes remain offline, additional steps are required to rebuild the mirror.

In the preceding table, the mirror for node_B_1_aggr2 must be rebuilt.

a. View details of the aggregate to identify any failed plexes:

`storage aggregate show -r -aggregate node_B_1_aggr2`

In the following example, plex /node_B_1_aggr2/plex0 is in a failed state:

```
cluster_B::> storage aggregate show -r -aggregate node_B_1_aggr2

 Owner Node: node_B_1
  Aggregate: node_B_1_aggr2 (online, raid_dp, mirror degraded) (block
checksums)
   Plex: /node_B_1_aggr2/plex0 (offline, failed, inactive, pool0)
    RAID Group /node_B_1_aggr2/plex0/rg0 (partial)
                                                                    Usable
Physical
      Position Disk                     Pool Type     RPM     Size
Size Status
      -------- ------------------------ ---- ----- ------ --------
-------- ----------

   Plex: /node_B_1_aggr2/plex1 (online, normal, active, pool1)
    RAID Group /node_B_1_aggr2/plex1/rg0 (normal, block checksums)
                                                                    Usable
Physical
      Position Disk                     Pool Type     RPM     Size
Size Status
      -------- ------------------------ ---- ----- ------ --------
-------- ----------
      dparity  1.44.8                    1   SAS    15000  265.6GB
273.5GB (normal)
      parity   1.41.11                   1   SAS    15000  265.6GB
273.5GB (normal)
      data     1.42.8                    1   SAS    15000  265.6GB
273.5GB (normal)
      data     1.43.11                   1   SAS    15000  265.6GB
273.5GB (normal)
      data     1.44.9                    1   SAS    15000  265.6GB
273.5GB (normal)
      data     1.43.18                   1   SAS    15000  265.6GB
273.5GB (normal)
 6 entries were displayed.

 cluster_B::>
```

b. Delete the failed plex:

```
storage aggregate plex delete -aggregate aggregate-name -plex plex
```

c. Reestablish the mirror:

```
storage aggregate mirror -aggregate aggregate-name
```

d. Monitor the resynchronization and mirroring status of the plex until all mirrors are reestablished and all aggregates show mirrored, normal status:

```
storage aggregate show
```