



删除恢复

ONTAP MetroCluster

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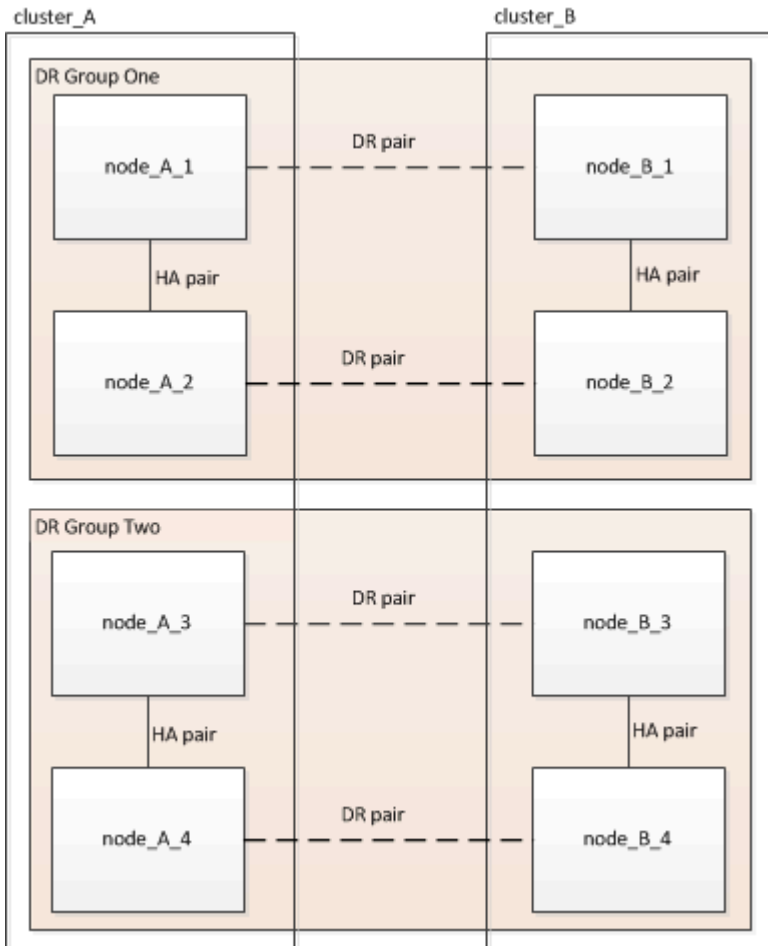
除 DR 恢

从 ONTAP 9.8 始，可以从八节点 MetroCluster 配置中除 DR ，以建四节点 MetroCluster 配置。

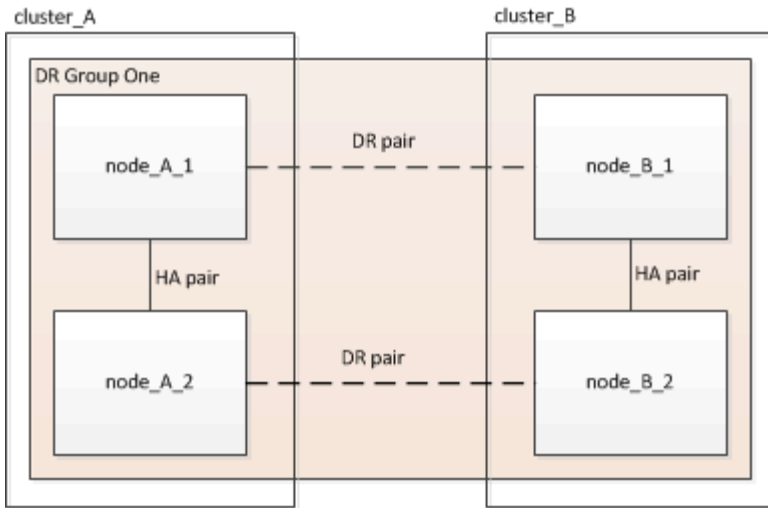
ONTAP 9.8 及更高版本支持此操作。在早期版本的 ONTAP 上，系技支持以除 DR 。

"NetApp 支持"

八节点配置包括八个节点，些节点按个四节点 DR 行。



通除 DR ，配置中仍保留四个节点。



从 2 个集群中删除 DR 节点

- 必须在 2 个集群上执行此操作。
- 只有 ONTAP 9.8 及更高版本才支持 `MetroCluster remove-dr-group` 命令。
 - a. 如果尚未删除 DR 节点，请做好删除准备。
 - i. 将所有数据卷移到 1 个 DR 节点。
 - ii. 将所有 MDV_CRS 元数据卷移到 1 个 DR 节点。按照以下操作中的步骤 1 行操作：["在 MetroCluster 配置中移除元数据卷"](#)
 - iii. 删除要删除的 DR 节点中可能存在的所有 MDV_aud 元数据卷。
 - iv. 删除 DR 节点中要删除的所有数据聚合，如以下示例所示：

```
ClusterA::> storage aggregate show -node ClusterA-01, ClusterA-02
-fields aggregate ,node
ClusterA::> aggr delete -aggregate aggregate_name
ClusterB::> storage aggregate show -node ClusterB-01, ClusterB-02
-fields aggregate ,node
ClusterB::> aggr delete -aggregate aggregate_name
```



不会删除根聚合。

- v. 将所有数据 LIF 移到 1 个 DR 节点中的主节点。+ `network interface show -home-node _old_node_s`

```
network interface modify -vserver svm-name -lif data-lif -home-port port-id
```

- vi. 将集群管理 LIF 移到 1 个 DR 节点中的主节点。

```
network interface show -role cluster-mgmt
```

```
network interface modify -vserver svm-name -lif data-lif -home-port port-id
```

节点管理和集群 LIF 不会移。

i. 如果需要，将 epsilon 到一个 DR 中的点。

```
ClusterA::> set advanced
ClusterA::*> cluster show
Move epsilon if needed
ClusterA::*> cluster modify -node nodename -epsilon false
ClusterA::*> cluster modify -node nodename -epsilon true

ClusterB::> set advanced
ClusterB::*> cluster show
ClusterB::*> cluster modify -node nodename -epsilon false
ClusterB::*> cluster modify -node nodename -epsilon true
ClusterB::*> set admin
```

b. 定义并删除 DR 。

i. 定义要删除的正 DR ：

```
MetroCluster node show
```

ii. 删除 DR 点： + MetroCluster remove-dr-group -dr-group-id 1`

以下示例显示了如何删除 cluster_A 上的 DR 配置

```

cluster_A::*>

Warning: Nodes in the DR group that are removed from the MetroCluster
configuration will lose their disaster recovery protection.

Local nodes "node_A_1-FC, node_A_2-FC" will be removed from
the
MetroCluster configuration. You must repeat the operation on
the
partner cluster "cluster_B" to remove the remote nodes in the
DR group.
Do you want to continue? {y|n}: y

Info: The following preparation steps must be completed on the local
and partner
clusters before removing a DR group.

1. Move all data volumes to another DR group.
2. Move all MDV_CRS metadata volumes to another DR group.
3. Delete all MDV_aud metadata volumes that may exist in the DR
group to
be removed.
4. Delete all data aggregates in the DR group to be removed.
Root
aggregates are not deleted.
5. Migrate all data LIFs to home nodes in another DR group.
6. Migrate the cluster management LIF to a home node in another
DR group.
Node management and inter-cluster LIFs are not migrated.
7. Transfer epsilon to a node in another DR group.

The command is vetoed if the preparation steps are not
completed on the
local and partner clusters.
Do you want to continue? {y|n}: y
[Job 513] Job succeeded: Remove DR Group is successful.

cluster_A::*>

```

c. 在配置集群上重复上述操作。

d. 如果采用 MetroCluster IP 配置，删除旧 DR 节点上的 MetroCluster 连接。

某些命令可以从任一集群发出，并用于跨越整个集群的整个 DR 组。

i. 断开连接：

MetroCluster configuration-settings connection disconnect *dr-group-id*

- ii. 删除旧 DR 节点上的 MetroCluster 接口：

MetroCluster configuration-settings interface delete`

- iii. 删除旧 DR 的配置。+ MetroCluster configuration-settings dr-group delete`

- e. 取消加入旧 DR 中的节点。

必须在每个集群上执行此操作。

- i. 设置高权限：

```
set -privilege advanced
```

- ii. Unjoin the node : + `cluster unjoin -node node-name`

旧 DR 中的一个本地节点重新此操作。

- iii. 设置管理权限：+ `set -privilege admin`

- f. 在新 DR 中重新启用集群 HA：

```
cluster ha modify -configured true
```

必须在每个集群上执行此操作。

- a. 停止，并卸下旧控制器模式和存储架。

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