

Fact	Number/State	Comment
Synchronous Deferred on Write Failure option	ON	
Cluster family	Two cluster families, with one cluster family in each site	

Results of this design

MCA has a parameter setting of S/D/S/D:

- For this Copy Consistency Point, the influence of a family is small.
- Data in cache: There is no change to the number of copies available at a certain point in time. Only the copy source is different. Without cluster families defined, all copies were requested from the cluster with the selected I/O cache. With cluster families defined, the copy is requested inside the family from either Cluster 0 (Family A) or Cluster 2 (Family B).
- Mount behavior: No change.
- TVC selection: For a remote mount, normally, the cluster with S is selected. However, a cluster inside the family overrules a cluster outside the family. If Cluster 0 needed a remote mount, the cluster prefers Cluster 1 rather than Cluster 2, even if a physical mount needs to be run.

MCB has a parameter setting of R/R/R/D:

- For this Copy Consistency Point, the introduction of cluster families has the following effect.
- Data in cache: Assume that the Cluster 0 or Cluster 1 TVC was selected as the I/O cache. At RUN, the data is in the cache of Cluster 0, Cluster 1, and Cluster 2. Cluster 3 receives the copy later, but not from the original TVC cache. Instead, Cluster 3 receives the copy from Cluster 2 because it is a member of the same family.

Remember: All RUN copies are processed as defined.

For deferred copies, only one copy is transferred between the two sites. All other deferred copies are produced inside the defined family.

- Mount behavior in normal conditions: The mount behavior itself remains the same as family clusters. It is under your control to select the appropriate scratch mount candidates or to disable virtual drives. Due to the use of SAA, Cluster 0 and Cluster 2 are selected for scratch mounts. For private mounts, DAA selects a cluster according to the rules of DAA.
- TVC selection: Normally, a cluster with R is preferred against a cluster with Deferred. However, if, in a cluster family, a remote mount occurs, the family overrules this behavior. Therefore, if a cluster needs a remote mount, the cluster prefers a cluster inside the family over a cluster with a RUN outside the family. In the example, that can lead to following situation.

Cluster 2 receives a private mount. Assume that Cluster 2 has no valid copy and initiates a remote mount. Without a cluster family, Cluster 0 (TS7720) is selected if Cluster 0 has a valid copy in the cache. Instead, Cluster 2 prefers to select Cluster 3 as the TVC, which might result in a recall from a stacked volume. If the volume is modified, Cluster 3 already has a valid copy and transfers this copy to all other clusters because of the Copy Consistency Point.