4.2.1 Autonomic Ownership Takeover Manager considerations

The Autonomic Ownership Takeover Manager (AOTM) is an optional function which, following a TS7700 cluster failure, automatically enables one of the methods for ownership takeover without operator intervention, which improves the availability of the TS7700. It uses the TS3000 System Console that is associated with each TS7700 to provide an alternative path to check the status of a peer TS7700.

Without AOTM, an operator must determine whether one of the TS7700 clusters failed, and then enable one of the ownership takeover modes. This operation is required to access the virtual volumes that are owned by the failed cluster.

Note: It is important that write ownership takeover is enabled only when a cluster fails, and not when a problem exists only with communication between the TS7700 clusters.

If it is enabled and the cluster in question continues to operate, data might be modified independently on other clusters, which results in a corruption of the data. Although no data corruption issue exists with the read ownership takeover mode, it is possible that the remaining clusters might not have the latest version of the virtual volume and present previous data.

Even if AOTM is not enabled, it is advised that it be configured. Doing so provides protection from a manual takeover mode being selected when the other cluster is still functional.

With AOTM, one of the takeover modes is enabled if normal communication between the clusters is disrupted and the cluster to perform takeover can verify that the other cluster failed or is otherwise not operating. If a TS7700 suspects that the cluster that owns a volume it needs failed, it asks the TS3000 System Console to which it is attached to query the System Console that is attached to the suspected failed cluster.

If the remote system console can validate that its TS7700 failed, it replies and the requesting TS7700 enters the default ownership takeover mode. If it cannot validate the failure, or if the system consoles cannot communicate, an ownership takeover mode can be enabled only by an operator.

To take advantage of AOTM, the customer should provide IP communication paths between the TS3000 System Consoles at the cluster sites. For AOTM to function properly, it should not share paths as the Grid interconnection between the TS7700s.

Note: When the TSSC code level is Version 5.3.7 or higher, the AOTM and Call Home IP addresses can be on the same subnet. However, earlier levels of TSSC code require the AOTM and Call Home IP addresses to be on different subnets. It is advised to use different subnets for those interfaces.

AOTM can be enabled through the MI interface, and it is also possible to set the default ownership takeover mode.

4.2.2 Defining grid copy mode control

When upgrading a stand-alone cluster to a grid, FC4015, Grid Enablement must be installed on all clusters in the grid. Also, you must set up the Copy Consistency Points in the Management Class (MC) definitions on all clusters in the new grid. The data consistency point is defined in the MC's construct definition through the MI. You can perform this task only for an existing grid system.