



PROFESSIONAL SERVICES TECH NOTE #039

SnapMirror/SnapVault stream reservations

The Concept

The 26 October Tech Note discussed replication deconfliction planning to maximize concurrent replication transfers. Data ONTAP 7.3 provide a mechanism for controlling which replication methods have priority as a system reaches its limit: transfer stream reservations. Each storage controller model has a limit on the concurrent replication streams it can support (see the *Data ONTAP Data Protection Online Backup and Recovery Guide* for the limits of your systems. Note that ONTAP 7.3 has higher limits than 7.2 and earlier and no longer impose penalties for ATA drives). By default, all replication transfers are allocated resources on a first-come first-served basis. Enabling these system options ensures a user specified number of replication resources will always be available for Volume SnapMirror (VSM) or Qtree SnapMirror (QSM)/SnapVault operations.

Examples

fas1> options replication.volume.reserved_transfers N - set the number of reservations for Volume SnapMirror transfers to the value of N (default is 0)

fas1> options replication.logical.reserved_transfers N - set the number of reservations for Qtree SnapMirror/SnapVault transfers to the value of N (default is 0)

What It Means To You

As long as you are running fewer simultaneous replication operations than your system's limits you should not have to use reservations. If you are hitting the limits then these options allow you to choose which type of replication is more important to your business. If you only run SnapVault once a day then it may be important it always runs at the expense of missing one or two hourly Volume SnapMirrors. The downside to settings values for these options higher than zero is they limit the maximum transfers available to the other replication types. For example, a FAS2050 is limited to 8 concurrent VSM streams and 32 QSM/SnapVault streams. If you set the volume reserved transfers to 2, then you are restricted to 30 or less concurrent QSM/SnapVault sessions even when no VSM sessions are active. The best candidates for these options are disaster recovery and NearStore systems.

More Information

See the Data ONTAP 7.3.x Release Notes for more information:

http://now.netapp.com/NOW/knowledge/docs/ontap/rel7311_vs/html/ontap/rnote/rel_notes/concept/c_oc_rn_feat73_replication-operations-vsm-qsm-sv.html

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