

Solution Highlights

Use StorageX to independently stage the transition of each NetApp storage system in a SnapMirror relationship.

- Transition each NetApp 7-mode system to cDOT when the system is eligible
- Maintain replication protection using StorageX replication between 7-mode and cDOT systems
- After source and target are both on cDOT systems, re-establish SnapMirror

StorageX Mobility Platform

Mobility is a constant with unstructured data, because of growth, system refresh, tiering, archiving, and optimization. StorageX is a true enterprise solution for file mobility, offering:

- Fully automated, policy-based migration engine
- Intuitive user interface with design validation
- Scale-out replication agent architecture with integrated SMB and NFS support
- Migration process and QoS capabilities minimize user disruption
- Reporting on migration progress & completion

StorageX-based Migration

NetApp 7-mode to Cluster Mode (cDOT)

- 1:1 migration orchestration of data, share/export configurations, volumes, metadata, and permissions
- Transformative Migrations
 - QTree breakout to volumes
 - 32-bit to 64-bit aggregate conversion
 - Selective migration
 - Permissions management and cleanup
- Data movers: NetApp SnapMirror or Data Dynamics replication agent

Competitive Storage to NetApp

- Intuitive migration projects
- SMB and NFS standards-based migration

StorageX-based Replication

StorageX can establish and orchestrate replications with NetApp SnapMirror or can use Data Dynamics replication agents

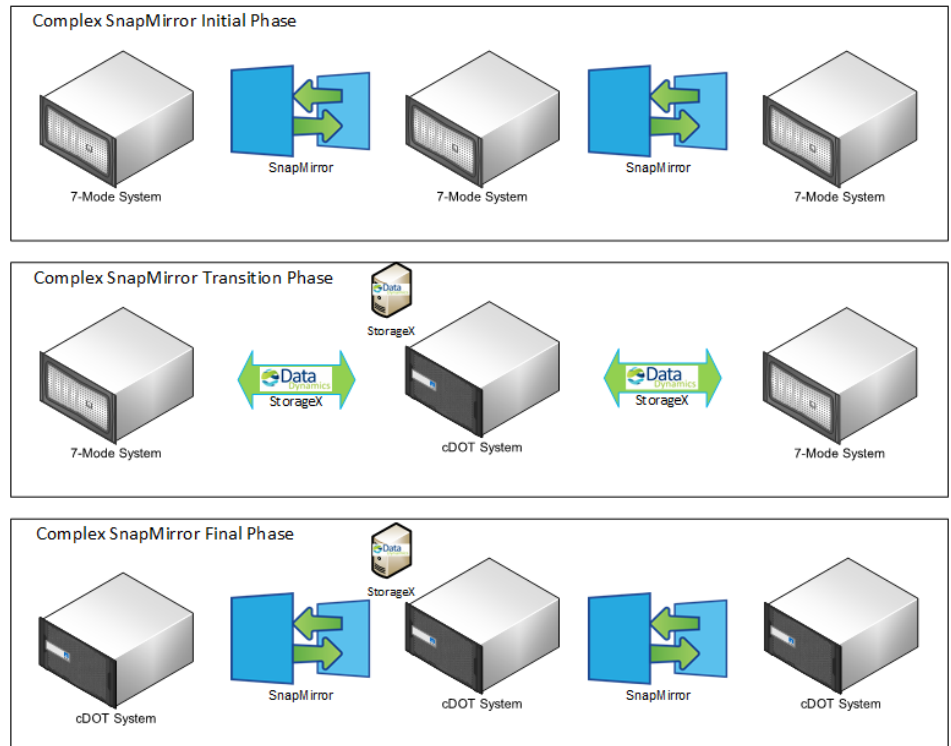
The Challenge

Current SnapMirror technology prohibits replication from NetApp Cluster Mode (cDOT) to legacy 7-mode hardware. This limitation has created a significant challenge in environments with either Cascaded SnapMirror relationships or complex mesh replication relationships. The challenge forces customers to either migrate the entire estate in order to maintain a Disaster Recovery (DR) relationship using SnapMirror or delay the purchase of NetApp cDOT platforms until such times as budgets permit the ability to migrate all the 7-mode filers. Since most customers have various depreciation and maintenance cycles on different systems, there is a large financial impact to either migrate in bulk or avoid the transition completely.

Cascaded SnapMirror Relationships

Cascaded SnapMirror relationships are used to replicate data from one source down to multiple targets. Relationships are set up as hops, where data is replicated from primary to secondary, then from secondary to tertiary, and so on. Usually, all of the hardware is not on the same refresh cycle. This forces the conversion from 7-mode to cDOT to be delayed until all of the hardware has reached the end of the cycle, as it not possible to replicate from a cDOT environment back to a 7-mode environment.

StorageX can be used in this case to eliminate the dependency on SnapMirror. Converting from a SnapMirror relationship to StorageX replication allows for individual nodes in a cascaded relationship to be upgraded from 7-mode to cDOT. StorageX will act as the replicating technology for the duration of the conversion. Once all of the hardware has been upgraded/transitioned from 7-mode to cDOT, then SnapMirror can be reinserted. StorageX will manage the replication during the transition phase.



Mesh/Spider-web SnapMirror Relationships

In many large customers with dozens of filers and multiple sites, you will often encounter a “mesh” architecture of SnapMirror relationships. The customer has created this mesh by replicating from a given source to wherever space was available, at the discretion of the administrator who was provisioning the space. These relationships pose a challenge, as the hardware is usually on different refresh cycles. SnapMirror will not function if any node which was upgraded needs to replicate back to a 7-mode node for DR.

Mesh/Spider-web SnapMirror Relationships (cont.)

StorageX can be used in this scenario to replace SnapMirror for the cases where replication is needed from an upgraded cDOT node to a legacy 7-mode node. StorageX will orchestrate the transition from 7-mode to cDOT, leveraging either SnapMirror or StorageX replication when necessary. Once the transition from 7-mode to cDOT has been completed for a given node, any replication relationship back to a 7-mode system can be converted to StorageX replication. This will keep DR/Replication in place until all nodes have been upgraded to cDOT, and at that time the StorageX replication relationships can be converted back to SnapMirror.

Automated, Policy-Based File Data Mobility and Management

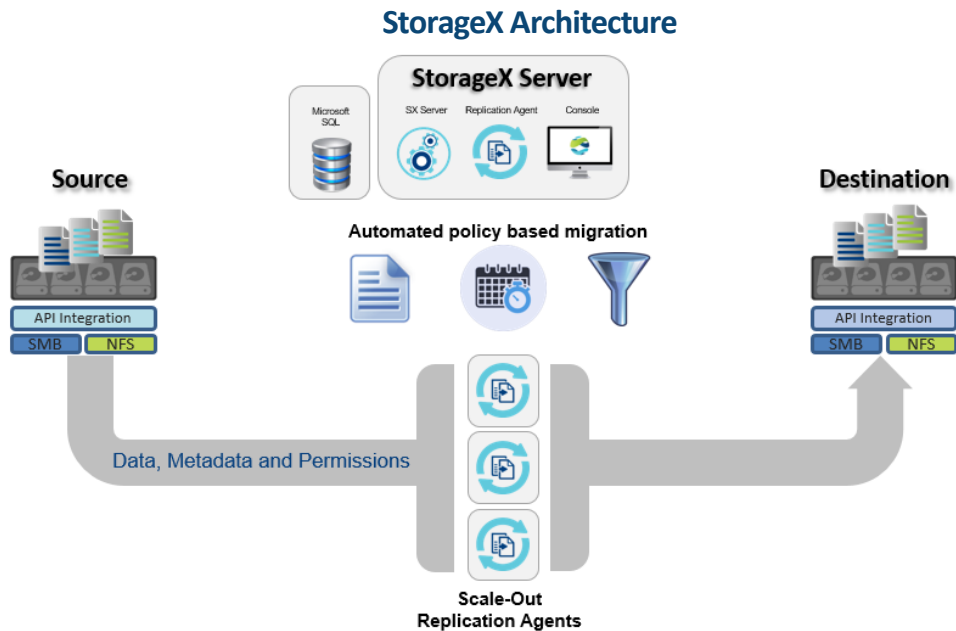
StorageX automates data discovery, policy-based mobility and management for migration, consolidation, tiering, and archiving of unstructured data in complex file storage environments.

The policy-based approach to file storage management maximizes the value of data to business and minimizes risk, user downtime, cutover windows, and other disruptions related to file storage migrations, rebalancing, consolidations, and tech refreshes.

Architecture

The StorageX architecture starts with the StorageX server, which runs on a physical or virtual machine. It contains a console that can centralize the management of all policies, a Microsoft SQL Server database that keeps track of all policies and projects, and scale-out virtual server-based StorageX replication agents that execute copy jobs and manage multi-threading. The architecture is fully out-of-band, with the StorageX server interacting with NAS systems via policies rather than holding or modifying data itself. The StorageX server and StorageX Console run on Windows 2008 or later. StorageX replication agents run on Windows 2008 or later or Red Hat Enterprise Linux 6 or 7.

API integration with NetApp SnapMirror allows array-based migrations to be managed within the same console as host-based migrations.



About Data Dynamics

Data Dynamics is a leading provider of unstructured data management solutions that enable the agile discovery, analysis, optimization, migration and management of large data assets across the information lifecycle. Its award-winning StorageX product suite eliminates multi-vendor storage silos providing enterprises with an intelligent, policy-based, cloud storage management platform to empower data portability, usability and insight for business agility and operational efficiency. StorageX has been adopted by hundreds of enterprise customers, Fortune 500 companies, and large municipal governments to increase storage portability for the simplified adoption of next-generation heterogeneous datacenter and cloud infrastructures.

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