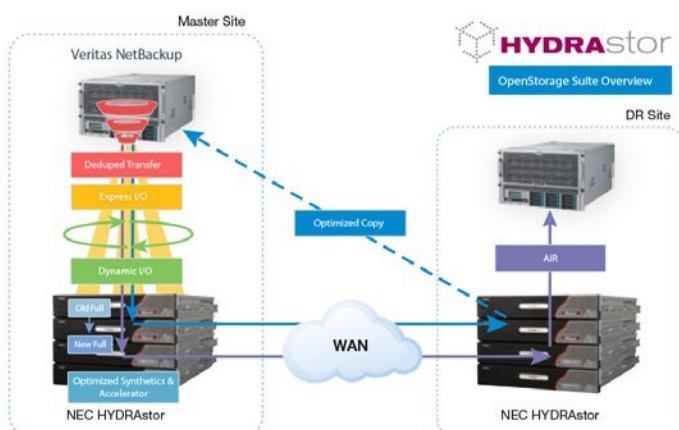


HYDRAsstor® OpenStorage Suite

In Pursuit of Perfection

Advanced Integration for Veritas™ NetBackup™



NEC's HYDRAsstor OpenStorage Suite for Veritas™ NetBackup™ extends the functionality of Veritas NetBackup, leveraging intelligent storage system capabilities via the Veritas OpenStorage API framework.

NEC's HYDRAsstor grid storage platform's deep integration with Veritas NetBackup using OpenStorage Suite improves throughput, maximises storage capacity utilisation, prevents I/O bottlenecks, reduces network bandwidth consumption, and optimises overall backup workload.



AT A GLANCE

- Dynamic I/O – Adaptive Load Balancing
- Express I/O – Lightweight Data Transport
- Deduped Transfer – Source Side Deduplication
- Optimised Synthetics & Accelerator – Storage-Synthesised Full Backup
- Optimised Copy – WAN-Optimised Copy Services
- OST AIR – WAN-Optimised Auto Image Replication



SOLUTION

Dynamic I/O – Adaptive Load Balancing

NetBackup
Media Server



Dynamic I/O enables automatic distribution of backup jobs across nodes to adapt to changing workloads while optimising storage responsiveness and capacity utilisation on the backend via HYDRAsstor's DataRedux™ inline global data deduplication capability.



Enterprises can maximise both throughput and capacity without compromising efficiency by combining the benefits of dynamic front-end load balancing with automatic inline global data deduplication and distribution on the backend.

Express I/O – High Speed Data Transport



HYDRAsstor's OpenStorage Express I/O delivers more efficient data transfer than standard protocols such as NFS and CIFS. Express I/O reduces data access overhead and maximises data throughput and performance. With Express I/O, the maximum performance of HYDRAsstor HS8 reaches up to 61 TB/hr for a single Hybrid Node. Express I/O maximises the efficiency of data transfer and throughput using existing 1GbE or 10GbE networks.

Deduped Transfer – Source Side Dedupe



HYDRAsstor's Deduped Transfer delivers 4-6 times higher performance than standard Express I/O, significantly reducing network bandwidth consumption between the NetBackup media server and HYDRAsstor. Deduped Transfer leverages media server resources for data deduplication pre-processing and sends unique chunks of data from the media server to HYDRAsstor, resulting in significantly higher throughput for backup workloads. With Deduped Transfer, HYDRAsstor can achieve a maximum 72 TB/hr performance with a single HS8 5-generation Hybrid Node.

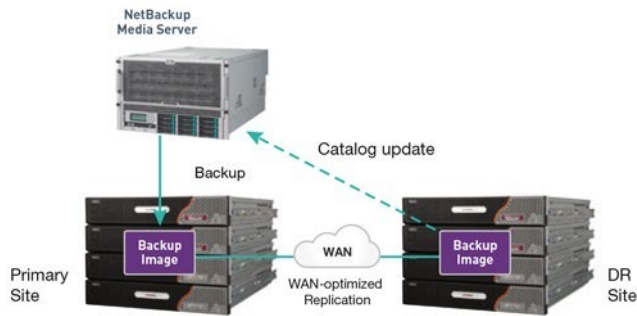
Optimised Synthetics & Accelerator – Storage-Synthesised Full Backup



HYDRAsstor's OpenStorage Optimised Synthetics and Accelerator extend NetBackup's synthetic full backup functionality, minimising the backup window by offloading synthetic full backup processing to HYDRAsstor. Controlled by the backup server, Optimised Synthetics synthesises a new full backup using the last full backup and subsequent incremental backups. Accelerator simplifies the process even further by automating the synthesis of the next full backup as soon as the new incremental backup is received. Optimised Synthetics and Accelerator enable the user to eliminate weekly full backups from the job schedule and maintain an up-to-date full backup image with only daily incremental backups while improving the efficiency of the backup process by reducing backup server workload and network traffic.



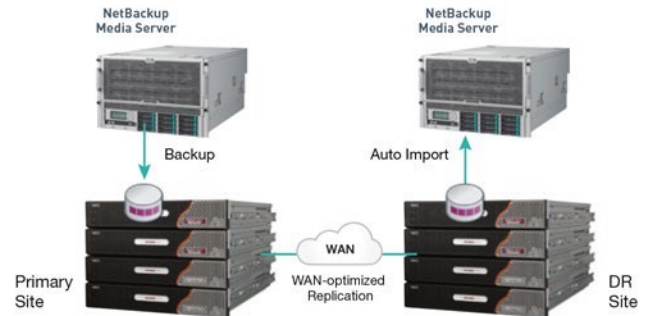
Optimised Copy – WAN-Optimised Copy Services



HYDRAsstor's OpenStorage Optimised Copy leverages HYDRAsstor's RepliGrid WAN-optimised replication technology to copy backup images to remote systems efficiently. Optimised Copy automates the copy process and updates the NetBackup catalog while minimising required bandwidth and simplifying administration workflows. Multiple systems can leverage Optimised Copy to aggregate disaster recovery protection to create a scalable system that improves overall productivity and efficiency. HYDRAsstor's superior scalability enables the consolidation of copies from multiple sites in a single global deduplicated system for optimal capacity utilisation and administrative efficiency.

With in-flight data encryption, data can be protected from unauthorised access during the transfer.

OST AIR – WAN-Optimised Auto Image Replication



HYDRAsstor's OpenStorage Auto Image Replication (AIR) replicates critical backups from the Master site to the DR site, each in a different NetBackup domain maintained by an independent NetBackup catalog. It automates site-to-site disaster recovery by leveraging HYDRAsstor's RepliGrid WAN-optimised replication technology to send unique compressed chunks of data to the remote site. Using AIR, the Backup server at the DR site automatically imports the replicated images and updates its catalogue, enabling quick recovery in case the primary site is completely lost.

