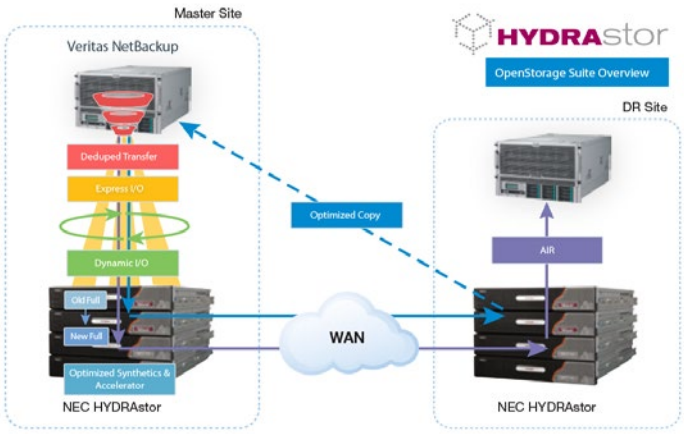
HYDRAstor® OpenStorage Suite

Advanced Integration for Veritas™ NetBackup™



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

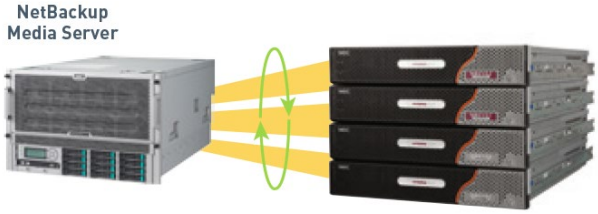
NEC's HYDRAstor grid storage platform's deep integration with Vertias NetBackup using OpenStorage Suite improves throughput, maximizes storage capacity utilization, prevents I/O bottlenecks, reduces network bandwidth consumption, and optimizes overall backup workload.

AT A GLANCE

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

SOLUTION

Dynamic I/O – Adaptive Load Balancing



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

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

Express I/O – High Speed Data Transport

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

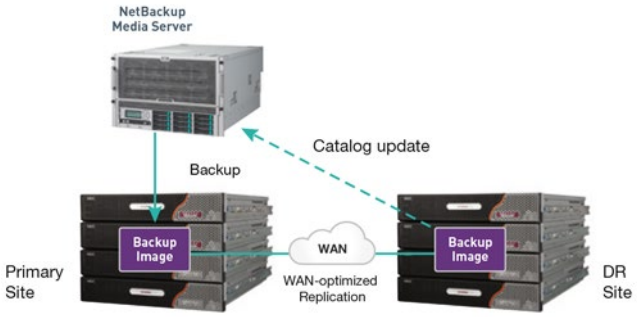
Deduped Transfer – Source Side Dedupe

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

Optimized Synthetics & Accelerator – Storage-Synthesized Full Backup

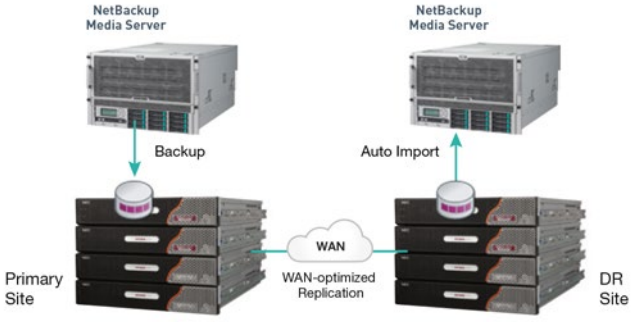
HYDRAstor's OpenStorage Optimized Synthetics and Accelerator extend the synthetic full backup functionality of NetBackup, minimizing the backup window by offloading synthetic full backup processing to HYDRAstor. Controlled by the backup server, Optimized Synthetics synthesizes a new full backup using 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. Optimized Synthetics and Accelerator enable the user to eliminate weekly full backup 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.

Optimized Copy – WAN-Optimized Copy Services



HYDRAstor's OpenStorage Optimized Copy leverages HYDRAstor's RepliGrid WAN-optimized replication technology to efficiently copy backup images to remote systems. Optimized Copy automates the copy process and updates the NetBackup catalog, while minimizing required bandwidth and simplifying administration workflows. Multiple systems can leverage Optimized Copy to aggregate disaster recovery protection to create a single scalable system that improves overall productivity and efficiency. HYDRAstor's superior scalability enables consolidation of copies from multiple sites in a single global deduplicated system for optimal capacity utilization and administrative efficiency. With in-flight data encryption, data can be protected from unauthorized access during the transfer.

OST AIR – WAN-Optimized Auto Image Replication



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

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