Virtual Tape Library (VTL) Cluster / Single Instance Repository Cluster Deduplication Gateway

Scalable HA clustered gateways for existing san storage.

The FalconStor® Optimized Backup and Deduplication solution and Single Instance Repository (SIR) cluster gateways enable design flexibility, scalability, high availability (HA), and integrated global deduplication for large enterprise or integrator environments with existing SAN storage. Unlike single-function grid architectures, it is the only solution that scales HA backup nodes and HA cluster deduplication nodes independently, offering the flexibility to add gateways to handle larger data sets and tighter backup windows, or additional cluster deduplication nodes for enhanced performance, scalability, and data retention while offering customizable levels of security. Scaling up to 12PB of shared usable storage with seamless global deduplication across all nodes, Optimized Backup Cluster gateways eliminate individual deduplication silos. This helps IT departments to meet stringent data requirements and ensure continuous operations while containing the cost associated with explosive data growth.

**Highlights**

**GLOBAL DEDUPLICATION**
- Integrated NAS & virtual tape deduplication & compression
- Up to 95% data reduction
- Minimizes costs: power, cooling, floor space, IT resources
- Extends local disk retention for fast data recovery
- Flexible policies: Inline, post-process, Turbo, or no deduplication

**16GB FC & 1/10GbE**
- Accelerates data protection operations, reducing backup windows
- Boosts recovery performance without backup or process changes

**BEST-OF-BREED TAPE MANAGEMENT**
- Bridges disk & tape for physical tape creation
- Policy-based to meet retention & archive requirements
CLOUD SUPPORT
- Utilize the cloud for archive purposes
- Migrate virtual tapes to the cloud via Amazon S3 capability

256-BIT AES ENCRYPTION
- Secures data in flight and at rest*
- Enhances corporate security through tape encryption & shredding

INTEGRATED SECURITY
- Control how long a user account stays active
- Prevent unwanted access with password lockouts
- Require complex passwords for the highest level of security

UP TO 12PB USABLE CAPACITY
- Protects up to 240PB of original data*
- Supports certified SAN storage from Dell, EMC, HP, HDS, IBM, & others

MIXED ENVIRONMENTS
- Enhances deduplication efficiency
- Open systems (Microsoft Windows, UNIX, Linux)
- IBM System i (iSeries), NDMP
- Single deduplication repository supports any combination of backups, archives, database dumps, virtual environments

HA CLUSTER ARCHITECTURE
- Independently scales up to 8 HA VTL nodes & 4+1 HA global deduplication nodes
- Deduplicates data across multiple nodes without predefined node/controller designation
- Increases performance, deduplication efficiency, & scalability

WAN-OPTIMIZED CASCADED REPLICATION
- Simultaneous & parallel cascaded replication for maximum data availability
- Reduces network requirements by up to 95%
- Eliminates tape transport
- Enables tape consolidation at disaster recovery (DR) site
- Supports Fibre Channel (FC) for high-performance disaster recovery
- Optimized multi-threaded architecture for increased scalability & resilience

VERITAS OPEN STORAGE (OST) INTEGRATION
- Support NAS or virtual tape library as the disk storage
- Transparent data replication, including A.I.R.
- Copy-to-tape
- Catalog consistency
- Accelerator and Optimized Synthetic Backup.
- Supports up to 1 million images via VTL interface
<table>
<thead>
<tr>
<th>PHYSICAL CHARACTERISTICS</th>
<th>VTLGA700</th>
<th>VTLGAB45</th>
<th>VTLCA805</th>
<th>VTLCA85S</th>
<th>SIRCA830</th>
<th>SIRCA840</th>
<th>SIRCA850</th>
<th>SIRCA860</th>
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</thead>
<tbody>
<tr>
<td>Appliance type</td>
<td>VTL Gateway</td>
<td>VTL Cluster Gateway</td>
<td>SIR Cluster Gateway</td>
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<tr>
<td>Form factor</td>
<td>2U (Typical)</td>
<td>4U (Typical)</td>
<td>4U (Typical)</td>
<td>2U (Typical)</td>
<td>4U (Typical)</td>
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<tr>
<td>Internal hard drives</td>
<td>2 x 1TB NL SAS, 7.2K RPM,</td>
<td>4 x 1TB NL SAS, 7.2K RPM,</td>
<td>2 x 1TB NL SAS, 7.2K RPM,</td>
<td>2 x 1TB NL SAS, 7.2K RPM,</td>
<td>2 x 1TB NL SAS, 7.2K RPM,</td>
<td>4 x 1TB NL SAS, 7.2K RPM,</td>
<td>4 x 1TB NL SAS, 7.2K RPM,</td>
<td>4 x 1TB NL SAS, 7.2K RPM,</td>
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<tr>
<td>Licensed usable capacity per node</td>
<td>Up to 68TB, upgradable to 192TB w/RAM</td>
<td>Up to 120TB, upgradable to 512TB w/RAM</td>
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<td>Up to 68TB, upgradable to 192TB w/RAM</td>
<td>Up to 120TB</td>
<td>Up to 256TB</td>
<td>Up to 512TB</td>
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<tr>
<td>Logical storage capacity per node*</td>
<td>Up to 1.3PB, upgradable to 3.84PB</td>
<td>Up to 2.4PB, upgradable to 10.24PB</td>
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<td>--</td>
<td>Up to 1.3PB, upgradable to 3.84PB</td>
<td>Up to 2.4PB</td>
<td>Up to 5.17PB</td>
<td>Up to 10.24PB</td>
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<td>Inline sustained ingest speed*</td>
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<tr>
<td>Power supply</td>
<td>2 x hot-plug auto-switching 750W</td>
<td>4 x hot-plug auto-switching 1100W</td>
<td>2 x hot-plug auto-switching 750W</td>
<td>4 x hot-plug auto-switching 1100W</td>
<td>2 x hot-plug auto-switching 750W</td>
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<td>2 x hot-plug auto-switching 750W</td>
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<td>HOST CONNECTIONS</td>
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<td>iSCSI IP support - 1 Gb/s</td>
<td>4 ports</td>
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<td>iSCSI IP support - 10 Gb/s</td>
<td>2 ports</td>
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<tr>
<td>8Gb FC ports</td>
<td>4 ports</td>
<td>8 ports</td>
<td>8 ports</td>
<td>8 ports</td>
<td>4 ports</td>
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<tr>
<td>Symantec OST (FC, NAS)</td>
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<td>ADVANCED FEATURES</td>
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<td>Clustered HA</td>
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<td>Global deduplication</td>
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<td>WAN-optimized replication w/ encryption &amp; compression</td>
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<td>Maximum cluster configuration</td>
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<td>Up to 8 nodes (4 HA pairs)</td>
<td>4+1 HA cluster</td>
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<td>Additional features</td>
<td>Email alerts, import/export, NDMP backup, Secure Tape, tape caching, tape duplication, tape shredding, tape stacking</td>
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*Please contact FalconStor before enabling encryption at rest technology. All capacity and performance numbers are based on a 20:1 deduplication ratio.

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