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

SCALABLE HA CLUSTERED GATEWAYS FOR EXISTING SAN STORAGE

The FalconStor® Virtual Tape Library (VTL) and FalconStor® 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, this cluster gateway is the only solution that scales HA backup nodes and HA cluster deduplication nodes independently, offering the flexibility to add VTL gateways to handle larger data sets and tighter backup windows, or additional cluster deduplication nodes for additional performance, scalability, and data retention. Scaling to over 2PB of shared usable storage with seamless global deduplication across all nodes, FalconStor VTL/SIR gateways eliminate individual deduplication silos. This helps IT departments to meet stringent data requirements and ensure 24/7 operations and business continuity while containing the cost associated with explosive data growth.

Highlights

Global deduplication
- Integrated 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, concurrent, or no deduplication

Up to 2PB usable capacity
- Protects up to 40PB of original data*
- Supports certified SAN storage from Dell, EMC, HP, HDS, IBM, & others
- Scalable node expansion for growth

Mixed environments
- Enhances deduplication efficiency
- Open systems (Microsoft Windows, UNIX, Linux, NetWare)
- IBM System i (iSeries), NDMP

WAN-optimized replication
- Reduces network requirements by 90% or more
- 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 and resilience

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

256-bit AES encryption
- Secures data in flight
- Enhances corporate security through tape encryption & shredding

Best-of-breed tape management
- Bridges disk and tape for physical tape creation
- Policy-based to meet retention and long-term archive requirements

Symantec OpenStorage (OST) integration
- Transparent data replication
- Copy-to-tape
- Catalog consistency
- Optimized Symantec OST APIs
- Supports up to 250,000 images

Learn more about FalconStor VTL

www.falconstor.com/vtl
### Specifications: FalconStor VTL/SIR Cluster Deduplication Gateways

#### Physical Characteristics

<table>
<thead>
<tr>
<th></th>
<th>VTLS Gateway</th>
<th>VTL Cluster Gateway</th>
<th>SIR Cluster Gateway</th>
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</thead>
<tbody>
<tr>
<td><strong>Appliance type</strong></td>
<td>VTLS Gateway</td>
<td>VTL Cluster Gateway</td>
<td>SIR Cluster Gateway</td>
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<tr>
<td><strong>Form factor</strong></td>
<td>2U</td>
<td>2U</td>
<td>2U</td>
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<tr>
<td></td>
<td>4U</td>
<td>4U</td>
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<tr>
<td><strong>Internal hard drives</strong></td>
<td>2 x 1TB NL SAS, 7.2K RPM, 3.5 in (R1)</td>
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<tr>
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<td>2 x 1TB NL SAS, 7.2K RPM, 2.5 in (R1)</td>
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</tr>
<tr>
<td><strong>Licensed usable capacity per node</strong></td>
<td>Up to 68TB; upgradeable to 192TB w/RAM</td>
<td>Up to 120TB; upgradeable to 240TB w/RAM</td>
<td>Up to 68TB; upgradeable to 192TB w/RAM</td>
</tr>
<tr>
<td><strong>Logical storage capacity per node</strong>*</td>
<td>Up to 1.3PB; upgradeable to 3.84PB</td>
<td>Up to 2.56PB</td>
<td>Up to 1.3PB; upgradeable to 3.84PB</td>
</tr>
<tr>
<td><strong>Inline sustained ingest speed</strong>*</td>
<td>1.6GB/s</td>
<td>2GB/s</td>
<td>1.6GB/s</td>
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<tr>
<td><strong>Power supply</strong></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>
</tr>
<tr>
<td><strong>Dimensions (HxWxL)</strong></td>
<td>3.4 x 17.44 x 26.8 in (8.64 x 44.31 x 68.07 cm)</td>
<td>6.8 x 19 x 29.5 in (17.26 x 48.24 x 75 cm)</td>
<td>3.4 x 17.44 x 26.8 in (8.64 x 44.31 x 68.07 cm)</td>
</tr>
<tr>
<td><strong>Weight</strong></td>
<td>71.5 lb (32.5 kg)</td>
<td>105 lb (47.6 kg)</td>
<td>71.5 lb (32.5 kg)</td>
</tr>
</tbody>
</table>

#### Host Connections

- **iSCSI support - 1 Gb/s**: 4 ports
- **iSCSI support - 10 Gb/s**: Optional
- **8Gb FC ports**: 2 ports
- **Symantec OST (FC)**: Included
- **Available host expansion port interface cards**: 3 x 8 Gb/s FC ports; 1 x 10 GbE port
- **Clustered HA**: Included
- **Global deduplication**: Included
- **WAN-optimized replication w/ encryption & compression**: Included
- **Maximum cluster configuration**: Up to 8 nodes (4 HA pairs) 4+1 HA cluster
- **Additional features**: Email alerts, hosts backup, import/export, NDMP backup, Secure Tape, tape caching, tape duplication, tape shredding, tape stacking

#### Advanced Features

- **Environmental Requirements**
  - **Voltage**: 90-264 V, 47-63 Hz, autoranging
  - **BTU/hr**: 2,891
  - **Temperature**: Operating: 50º to 95ºF (10º to 35ºC) Storage: -40º to 149ºF (-40º to 65ºC)
  - **Relative humidity**: Operating: 20% to 80% (noncondensing) with maximum gradation of 10% per hour
  - **Altitude**: -50 to 10,000 feet (-16 to 3,048 meters)

*All capacity and performance numbers are based on a 20:1 deduplication ratio.*

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