

Single Instance Repository (SIR)

Data deduplication for FalconStor VTL

FalconStor® Single Instance Repository (SIR) works in conjunction with the industry-leading FalconStor Virtual Tape Library (VTL) to eliminate redundant data, drastically reducing storage and bandwidth requirements.

Highlights

- > No change to data protection policies, procedures, or software required — maximum asset value protection
- > Seamless integration with FalconStor VTL for instant, non-disruptive deployment
- > No agents to install, minimizing deployment complexity and client performance impact
- > Maximum redundancy elimination for minimum resource requirements and lower costs
- > High storage efficiency to keep more data online for longer periods
- > Minimizes costs and time required to move data offsite for optimum disaster recovery (DR)
- > Centralized repository for tape consolidation and simplified management
- > Backup tape format-aware for maximum deduplication efficiency
- > Significant storage and bandwidth reduction
- > N+1 clustering for high performance and minimal downtime
- > Available as software packages or turnkey appliances for deployment versatility

The deduplication process can run at the same time as backup operations, or can be scheduled to run after all backups complete. With this flexible design, resources can be deployed based on user needs, ensuring backup windows can be met. Built-in replication is controlled by the replication policies in FalconStor VTL, requiring no change to operating procedures to take advantage of this massive data reduction. Only unique data blocks are replicated, minimizing the bandwidth and time required to move data offsite.

Configuration versatility

FalconStor SIR deduplication technology is available within FalconStor VTL Storage Appliances. These turnkey appliances include internal storage bays for a self-contained solution. FalconStor SIR is also available as a gateway appliance for connection to external storage resources, and as a software appliance kit (SAK) for use with third-party servers and storage.

Advanced features

Concurrent deduplication

SIR begins deduplicating data as soon as the first backup tape completes, so that backup and deduplication processes can occur together. For enterprise environments, VTL and SIR can be deployed on separate servers, allowing processing resources to be scaled as needed. Deduplication ratios vary based on the amount of redundant data, but a typical backup data reduction is 30:1.

Deduplication policies

You can set policies to determine when deduplication takes place on a tape-by-tape basis. The triggers include time, day, or age of backup as well as server performance thresholds.

Tape format awareness

By understanding the tape format, SIR can identify file boundaries and thus better recognize duplicate data. For recognized tape formats, SIR deduplicates 100% of redundant data blocks in the same backup volume and across multiple backups.

Policy-based replication

Replication policies can be set for an entire library, groups of tapes, or even an individual tape via a VTL policy manager.

Replicate over IP or FC

SIR replicates unique data over IP or Fibre Channel (FC) to another SIR, greatly reducing the amount of data that is transferred. Data objects that already exist in the remote SIR are not replicated.

Interruptible deduplication

While deduplication is taking place, backup software can access the virtual tapes without manual intervention. Attempts to access the virtual tape will pause the deduplication, which will automatically restart when the tape is unmounted.

Many-to-one replication

SIR systems in multiple locations can replicate to a single central repository.

Multi-node performance

Multiple SIR servers can work together to provide access to a unified repository. The design allows performance to scale linearly with additional servers.

High availability

Multiple SIR nodes can be configured as an N+1 cluster for high availability.

Repository protection

Mirroring and replication of the repository are available for repository protection.

Specifications

SIR-G16

SIR-G32

Physical Characteristics		
Form factor	2U	2U
Internal drives	2 (OS only)	2 (OS only)
RAID level	RAID1	RAID1
Maximum capacity	16TB	32TB
Equivalent storage capacity (based on 20:1 deduplication ratio)	320TB	640TB
Host Connections		
iSCSI support	Included	Included
1Gb/s Ethernet ports	4	4
Fibre Channel (FC) support	Included	Included
4Gb/s FC target ports	2	2
Advanced Features		
High Availability (shared storage)	Included	Included
Maximum cluster configuration	1+1	4+1

About FalconStor

FalconStor Software, Inc. (NASDAQ: FALC), the premier provider of TOTALLY Open™ Network Storage Solutions, delivers the most comprehensive suite of products for data protection and storage virtualization. Based on the award-winning IPStor® platform, products include the industry-leading Virtual Tape Library (VTL) with Single Instance Repository (SIR) for deduplication, Continuous Data Protector™ (CDP), Network Storage Server (NSS), and Replication option for disaster recovery and remote office protection. Our solutions are available from major OEMs and solution providers and are deployed by thousands of customers worldwide, from small businesses to Fortune 1000 enterprises.

For more information, visit www.falconstor.com or contact your local FalconStor representative.

Corporate Headquarters
USA
+1 631 777 5188
sales@falconstor.com

European Headquarters
France
+33 1 39 23 95 50
infoeurope@falconstor.com

Asia-Pacific Headquarters
Taiwan
+866 4 2259 1868
infoasia@falconstor.com

