

FALCONSTOR

Modernize IBM i Backups with FalconStor StorSafe VTL

IBM® i POWER SYSTEMS ENVIRONMENTS TODAY

IBM Power® Systems running the IBM i operating system has evolved from the AS/400 which was introduced in 1988. Today, IBM i powers over 500,000 enterprises worldwide running mission-critical business applications based on the DB2 database - applications such as ERP, CRM, HR, banking, insurance, healthcare, and applications used by state and national governments, and is growing.

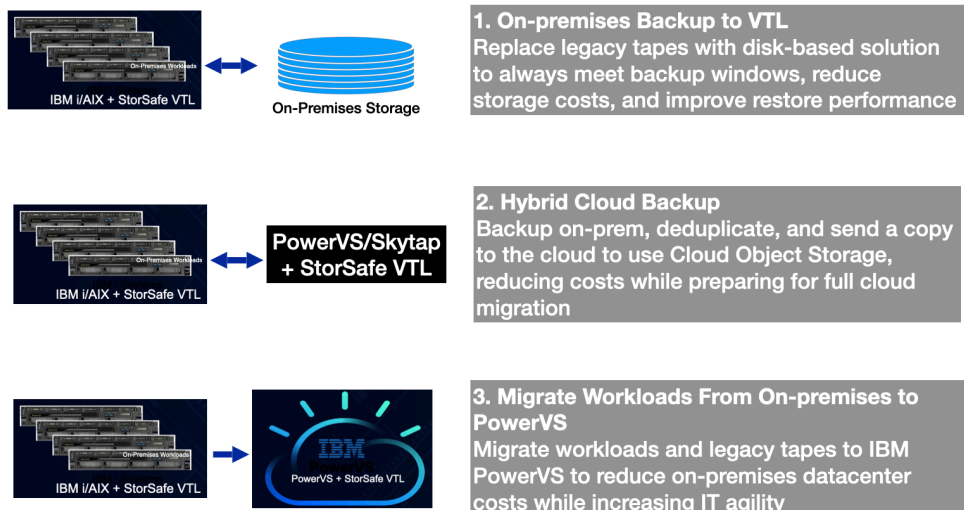
IBM i applications hosted on IBM Power Systems are the most business-critical, so it is vital that every aspect of their operation, including backups, meet exacting service level agreements (SLAs) to meet business objectives, corporate compliance requirements, and regulatory mandates. With exploding data growth, backing up a Power System running IBM i to a tape library can frequently take as long as 12 hours.


Tapes are too slow, unreliable, and offsite storage of backups surfaces additional issues. That's why IBM i customers worldwide have modernized their backup operations to use a virtual tape library (VTL), where backups are deduplicated to keep their size small, then stored on on-premises disk for speed and reliability. For offsite protection, encrypted backups are transmitted offsite using tapes, writing to remote disks, or leveraging a remote cloud.

INTRODUCING FALCONSTOR® STORSAFE® VTL

StorSafe VTL is the ideal solution to modernize IBM i backup environments, allow businesses to meet their backup windows, and provide secure offsite protection of backups. IBM environments have the advantage or a powerful, innovative partner in IBM that understands what they need

IBM Power and StorSafe VTL Use Cases





tactically and strategically. FalconStor adds to this partnership by further enhancing what IBM environments can do for enhanced data protection and migration to Power Systems Virtual Server (PowerVS).

StorSafe VTL is 100% compatible with existing backup software including BRMS, because it emulates all IBM i supported tape drives and libraries in a modern, disk-based solution. StorSafe VTL is a complete software solution that you run on any industry-standard x86 server or VM to create a backup-to-disk target that is accessed over Fibre Channel (FC) or iSCSI. StorSafe VTL scales down and up better than competing technologies using x86 servers and storage you provide to it as a LUN from any vendor's disk array or object storage system.

ON-PREMISES AND OFF-SITE DATA PROTECTION FOR IBM i

StorSafe VTL replaces the physical tape library with a backup-to-disk target that looks like a tape library, so it is 100% compatible with existing backup software and operations. As backups arrive, they are deduplicated inline to reduce their size by up to 95% while achieving industry-leading performance to meet tight backup windows.

When it comes to protecting backup data offsite there are choices: go old school with physical tapes and trucks or run a second instance of StorSafe VTL offsite and efficiently replicate to it continuously so backup data is always protected while retaining its full data reduction of up to 95%.

BENEFITS OF USING STORSAFE VTL FOR IBM i ENVIRONMENTS

StorSafe VTL offers a clean and simple way to modernize backup environments that currently rely on tape, offering the following benefits to IBM i environments:

- Non-disruptive – Appears as a physical tape library to IBM i
- Native emulation of all IBM i tape drives and libraries, including IBM 3580, 3590, 3592, TS1120 tape drives; LTO-1 to LTO-7 tape formats, and IBM 3583, 3584, and 3590 libraries
- Supports all IBM i backup tools and methods (BRMS, LXI MMS, SAVLIB, Robot Save, media policies and IPL) without any process change
- Supports mixed open system, IBM i, and mainframe system environments
- Offers the flexibility to create as many tape targets and libraries as needed
- Higher performance (backups and restores) with connectivity across 16Gb/sec FC links

- Integrated deduplication reduces the size and cost of storing backups while immutable backups provide protection against ransomware
- Scale the power of StorSafe VTL from a single VM to using up to 9 industry-standard servers
- Easily migrate IBM i/AIX workloads to the IBM cloud, on PowerVS, or deploy hybrid cloud backup using PowerVS or other cloud solutions, such as Skytap

COMPARISON OF BACKUP-TO-DISK ARCHITECTURES

There are two different architectures for backup-to-disk targets. The StorSafe VTL approach is 100% software based so customers decide the hardware to use, when to add additional hardware as needs grow, and avoid being locked into a single storage vendor.

Many IT departments have discovered the ease of StorSafe VTL the hard way. That is, they deployed an appliance solution, only to learn that stepping up to a larger backup-to-disk appliance is usually a disruptive, painful, and expensive endeavor. In contrast, with StorSafe VTL they can add up to nine industry-standard servers with on-premises performance benchmarked at 40TB per hour on a single server.

For offsite protection of backup data, StorSafe VTL can create physical tapes, export backups to cloud object storage, or replicate from an on-premises StorSafe VTL to a twin StorSafe VTL running in a cloud for continuous offsite protection of highly deduplicated backup data.

STORSIGHT® USER EXPERIENCE & LICENSE MANAGEMENT



Top StorSight Innovations

1. Visibility across sites and clouds
2. Simplified License Management
3. Centralized Patch Management
4. Full Multi-tenant Security
5. Predictive Analytics

StorSafe VTL includes StorSight, a central management tool. StorSight provides get clear visibility about the status and health of backup operations worldwide, whether on-premises or in the cloud. Predictive analytics give IT administrators enough time to avert problems that might otherwise occur in the future.

Licensing is based on the total capacity FalconStor manages, which determines the monthly subscription price. Plus, licenses are not tied to individual servers. Any number of instances of StorSight, StorSafe VTL, and the FalconStor

high availability solution, StorGuard, can be run at any number of locations, using a portion of the total capacity that is licensed.

Flexible licensing, based on one total capacity number, makes it easier to use FalconStor software in new ways within an organization to meet various needs as they arise within the business. Like any subscription software, all future software updates are included, as is worldwide support.

MSPs OFFER DATA PROTECTION AS A SERVICE

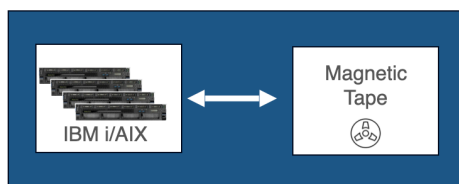
Backup as a Service (BaaS) helps organizations of all sizes modernize backup and archival operations using MSPs. StorSafe VTL allows them to protect mission-critical data within the backup window, ensure backups are securely and efficiently stored on-premises for fast restores, and transmit a copy of backup data offsite for safety without the hassles of tapes.

Adding [FalconStor StorGuard](#), MSPs can expand BaaS to Data Protection as a Service. StorGuard adds a cost-effective high availability solution for any storage array, no matter where it is in its lifecycle.

Discover more about offering BaaS here. [\(ADD LINK TO SOLUTION BRIEF\)](#)

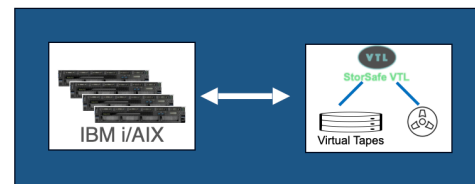
CONCLUSION

StorSafe VTL offers numerous benefits to IBM i environments, especially those relying on physical tape. By modernizing backup operations, organizations reduce storage costs, eliminate cumbersome backup procedures, and position themselves to migrate to PowerVS to gain the benefits of the cloud.



Possible issues include:

- On-premises backups and restores are too slow
- "Forklift upgrades" of backup appliances are cumbersome
- Physical tapes and manual procedures are overwhelming



Benefits include:

- On-premises backups and restores are faster
- Continued use of physical tape if desired
- Easier offsite storage and access
- Replicate to cloud for ransomware protection
- Enables migration to IBM PowerVS

Learn more about StorSafe VTL, StorSight, StorGuard and FalconStor Software at <https://www.falconstor.com/>

Contact FalconStor at <https://www.falconstor.com/contact/>