

Sentry™ Infrastructure Services: Data Vaulting

Secure and Efficient Data Protection for Backup, Storage and Recovery



Data protection has never been more critical or more challenging. Sentry Infrastructure Services: Data Vaulting from Fiserv automates and simplifies data backup and recovery. It also enhances the effectiveness and reduces the cost of data protection while supporting compliance with regulations governing the security, storage and accessibility of data.

Financial institutions face explosive growth in the amount of business-critical data they must manage and secure. IT departments must mitigate the ever-present threats of disaster, outages, theft, litigation and human error while ensuring regulatory compliance. Often hampered by limited budgets and resources, they must deal with these challenges across many systems and locations in order to keep data secure and accessible.

Drawbacks of Tape-Based Backup

Tape-based backup is typically slow and cumbersome and information stored on tapes is often vulnerable. Backing up to tape requires a series of manual steps, including the transport or transmission of backup data from Point A to Point B. These manual procedures can inadvertently expose data to loss, theft and physical damage.

Disk-based backup solutions, by contrast, replace manual processes with automated, scheduled backups. Data goes directly to Point B, protected by encryption, with no manual intervention.

Advanced End-to-End Security

Data Vaulting is a disk-based solution used by more than 30,000 organizations worldwide to deliver a cost-effective and convenient alternative to tape-based backup.

Data Vaulting enables you to use the highest level of encryption available, protecting backup data from beginning to end. There are no back door decryption keys, so during restores, decryption does not occur until the encryption key holder enters the correct code.

- **Front-End Encryption** – Prior to leaving the backup server, data is encrypted using the National Institute of Standards and Technology (NIST) 128-bit or 256-bit Advanced Encryption Standard (AES)
- **Over-the-Wire Encryption** – Backups and restores are encrypted, enhancing the security of data transmitted through the internet
- **At-Rest Encryption** – Data remains encrypted while stored in a top-tier, SOC 2 Type 2-certified Fiserv data center



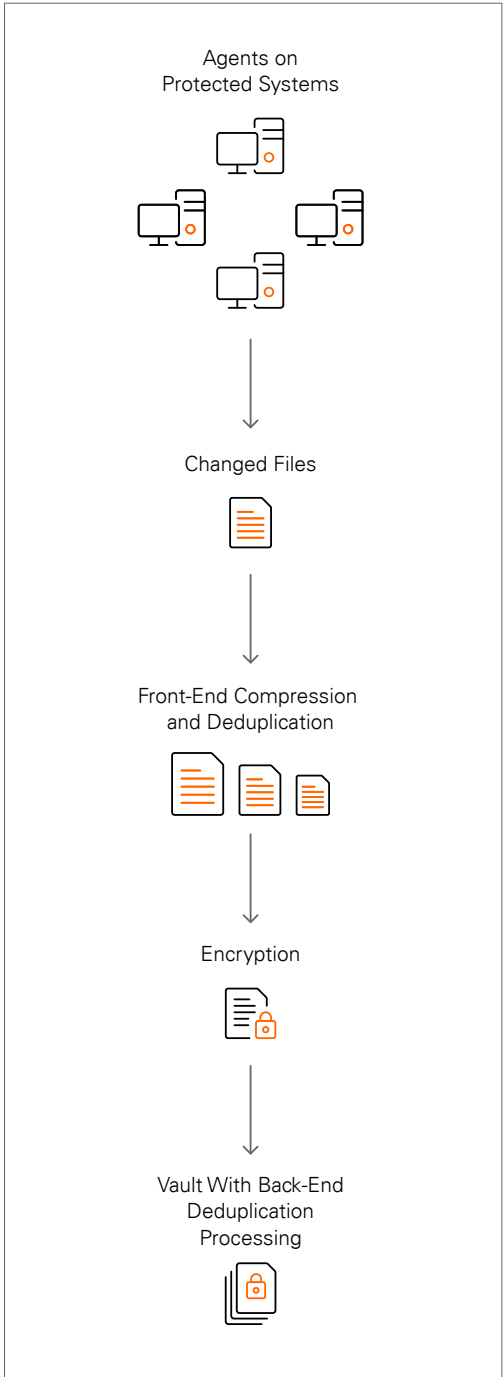
Reduced Storage Costs

As one of the few solutions that combine unique data reduction features on both the front and back ends, Data Vaulting can significantly reduce storage costs. After the initial seed, the software automatically finds and transmits only new or changed data blocks, then dynamically builds virtual synthetic full backups, or what is referred to as a safeset. In addition to delta backups, the solution employs adaptive compression, bandwidth throttling and other WAN-optimization technologies to make backup and storage as efficient as possible.

- **Quick file scan** – A patented process rapidly scans files on every protected system and server to identify new and changed blocks
- **Adaptive compression** – This feature shrinks transmitted data blocks by 50 to 90 percent, using the best compression algorithm based on available CPU and network bandwidth
- **Dynamic bandwidth throttling** – Useful in limited-bandwidth environments or for frequent backups of critical data, this feature allows bandwidth usage for backup jobs to be minimized during peak hours
- **Enhanced CPU utilization** – By automatically splitting backup jobs across multiple CPUs, this capability frees source-system processing power for other tasks.

Data Transfer Process

Data Vaulting can substantially reduce your backup window and storage space requirements.





Flexible Deployment Options

Data Vaulting accommodates multiple deployment options to suit your requirements needs. Our hosted service offers a pay-as-you-go subscription model that leverages cloud computing and involves low up-front costs. Two on-premise deployment options are offered, either of which can be combined with Data Vaulting services for an off-site, replicated copy of your backup data, giving you the best of both worlds – an on-site vault for LAN-speed backup and recovery of data, as well as off-site data protection for disaster recovery purposes.

Key Components

Whichever deployment option you choose, the same key components facilitate secure, automated data backups, as well as convenient management and monitoring of the backup and restore processes.

- **Agents** – Installed on each system you want to protect, agents tracks block- and file-level changes in the backup data and compress and encrypt data prior to pushing it to the vault
- **Management console** – A centralized, web-based management console provides a unified view of all protected machines; within the console, users can easily see the status of their backups, initiate an ad hoc backup, kick off a restore, change retention policies as needed and access various reports

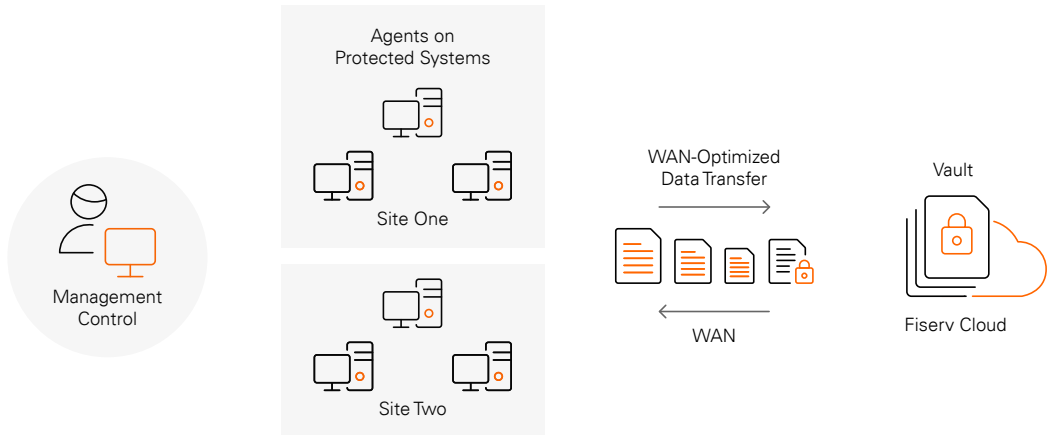
Deployment Options

- **Offsite services** – Ideal for financial institutions with limited IT resources and those that want a secure, off-site cloud storage of their backup data
 - **Onsite deployment of data vaulting software** – Suited for organizations with a large data footprint and those that prefer to fully manage data vaulting internally
 - **Onsite deployment of a data vaulting appliance** – An all-in-one solution that can be easily deployed on-site; a preconfigured backup storage appliance serves as a local vault
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- **Vault** – The vault, residing either locally or within the Fiserv cloud, authenticates and accepts data received from the agents; it is responsible for processing, cataloging and indexing the encrypted data blocks while managing the backup history according to the retention schedule you create



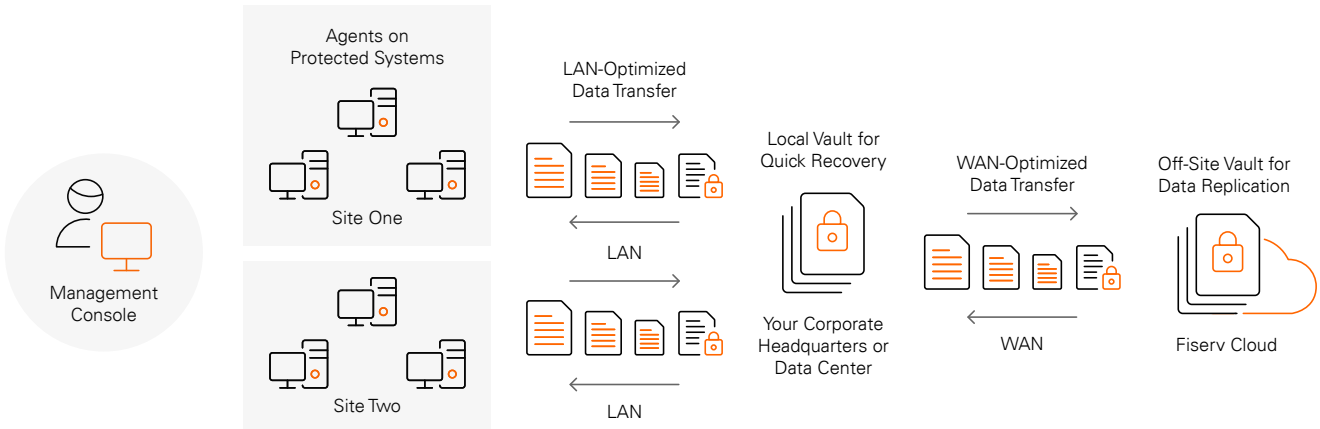
Architecture With Off-Site Vault

Data is stored off-site in the Fiserv cloud – a vault maintained and managed at our state-of-the-art data processing center.



Architecture with Local and Off-Site Vaults

For a hybrid solution, you can back up data to a local vault and add Data Vaulting services for off-site replication.



Broad Platform Support

Data Vaulting enables you to unify data protection and use a single solution that works across virtually every combination of platforms and applications, including Microsoft® Windows®, Novell NetWare, Linux, Sun® Solaris, HP-UX, IBM AIX, IBM i, VMware, Microsoft SharePoint, Microsoft Exchange, Microsoft SQL Server, Microsoft Cluster Services and Oracle. Backup and recovery are not only easy, but cost-effective.

Simplified Compliance

Data Vaulting makes it simpler to keep pace with both industry regulations and internal data retention policies. An intuitive interface enables staff to easily configure retention of data backups, while our encryption capabilities and off-site data storage help protect the confidentiality, accessibility and security of your data.



Fiserv is driving innovation in Payments, Processing Services, Risk & Compliance, Customer & Channel Management and Insights & Optimization. Our solutions help clients deliver financial services at the speed of life to enhance the way people live and work today. Visit fiserv.com to learn more.



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Secure Data Center Storage

Data transmitted to the Fiserv cloud is maintained within our state-of-the-art data processing center infrastructure and replicated to a second center for redundancy. Fiserv processing centers are constructed to carrier-class specifications and compliant with SOC 2 Type 2 and Payment Card Industry (PCI) standards. Your data is stored on hardware that is backed up and monitored around the clock, with robust 24/7 security and controls for temperature and humidity. Fire and earthquake protections are also in place. Each center is supplied with redundant power and internet connections.

A Rock-Solid Partnership

By turning to Fiserv for a data protection solution, you're simply extending your partnership with the financially solid company you already trust for your account processing and, quite likely, a host of other technology and business needs. You'll enjoy the efficiency of dealing with a single vendor for multiple functions, and the peace of mind that comes from our proven track record of industry leadership and stability.

Complements Disaster Recovery

Because it is a disk-based data backup solution, Data Vaulting is a perfect complement to disaster recovery planning. No tapes need to be transported to your recovery hot site for testing or during an actual disaster. Rather, your backup data can be accessed through any internet connection. Especially for those who already rely on Business Continuity Services, choosing Fiserv for data backup and protection makes perfect sense, because if there is a declared disaster, data is already available at the recovery site and can be restored at LAN speeds.

Key Benefits

- Advanced end-to-end encryption during transport and storage and replication of data in a second facility
- Faster access to data with no physical transport of tapes; files are located and streamed over a WAN connection
- Greater efficiency through automated backup
- Reduced disk storage requirements and network bandwidth optimization
- Centralized management through a secure, centralized interface, accessible from anywhere
- Unified data protection across multiple systems and locations
- Cost savings through disk-based backup
- Improved scalability by leveraging the Fiserv cloud
- Streamlined compliance provided by our import tool
- Peace of mind entrusting your critical data to a technology partner you know and trust

Connect With Us

For more information about Sentry Infrastructure Services: Data Vaulting call 800-872-7882, email getsolutions@fiserv.com or visit fiserv.com.