

1. What Makes StorONE Different?

- We Protect Data Not Drives
- Performance and Capacity are Easy, We Deliver Efficiency
- One Platform, All Use Cases, Every Future

2. Can you tell us more about StorONE?

StorONE's storage platform creates virtual storage controllers that abstract data from the physical storage hardware and media. Our platform is a complete rewrite of the legacy storage IO stack and uses new patented storage algorithms to deliver the most efficient storage platform on the market. This efficiency delivers the industry's fastest per drive performance, most secure data protection, and highest data integrity at the lowest total cost of ownership.

A single StorONE platform instance can support a broad spectrum of storage use cases and protocols (block, file, and object). Each virtual storage controller can support an unlimited number of volumes. Even though they can share the storage media for efficiency, each volume is an independent storage entity. IT can fine-tune each volume to the performance, data protection, data integrity, and capacity requirements of the use case that volume is supporting.

The efficiency and abstraction of the platform approach enable customers to address secondary storage challenges cost-effectively, like backup, while also significantly elevating the capabilities of these processes. At the same time, thanks to the platform, they are laying the groundwork for a more strategic vision of storage consolidation to a single platform that leads to the ultimate reduction of upfront and long-term CAPEX and OPEX costs.

3. Why is backup data a primary target of ransomware?

Backup data is a primary target of ransomware because the bad actors that unleash the malware know that infected organizations will need to resort to their backups to avoid paying the ransom. If hackers can encrypt the backup data, the organization cannot recover, and their only choice to get their data back is to pay the ransom. Malware attacks on backup data are successful because many organizations store their backup data on SMB or NFS shares, making it readily accessible to and alterable by malware.

4. What are the main issues with legacy backup storage systems when protecting their customers' backup data?

Most legacy backup storage systems don't provide any form of immutability to the data they are storing. If they do, it is often limited. Many of these systems can't store the data in an immutable format efficiently for a long enough time. Malware has become increasingly pernicious over the last five years. There are ransomware variants that will either wait to start their encryption process or encrypt slowly to avoid detection.

Another significant challenge is recovery. If the organization is trying to recover from a ransomware attack, they likely have encrypted data throughout their production storage environment. Simply restoring over the old, encrypted data is not viable. The customer must first identify and eradicate the malware, which may have replicated and backed up during the normal backup process.

While most backup applications can “instant recover” to available capacity on the backup storage device, the capability may have limited value on legacy backup storage products. First, the backup storage itself may be infected. Second, running these instantly recovered virtual machines or applications on legacy backup storage devices may yield performance so poor that it is unusable.

5. What is SI:Backup?

SI:Backup reimagines backup storage. Instead of a “cheap and deep digital dumping ground,” it leverages StorONE’s Enterprise Storage Platform to deliver a production-class feature set at backup storage prices. SI:Backup utilizes a flash front end for fast and frequent data ingest and high-performance recovery. It then automatically tiers the data to high-density hard disk drives for long-term data retention.

6. What are the main features of SI:Backup?

- Part of our Enterprise Storage Platform - Instead of buying a single-purpose solution for backup storage, SI:Backup can also evolve to solve archive, file, virtualization, and database storage challenges. SI:Backup is the only backup solution that can expand to address all storage use cases without changing software.
- 100% Ransomware Recovery - SI:Backup solution saves every backup in an immutable format. IT can preserve each space-efficient copy for as long as the organization needs to ensure it surpasses any ransomware threats. Organizations can store data for decades in this immutable state without performance impact. Even if the backup software is compromised and directs SI:Backup to delete data, the immutable copies, based on policy, will stay intact for as long as the organization requires. Immutability is available across all protocols. SI:Backup provides the most complete, highest-performing immutable storage on the market.
- Fastest, Safest Recoveries - IT can leverage the backup software application’s Instant Recovery feature or restore natively to the SI:Backup solution, using it as Standby Storage. The solution has no single point of failure (high availability) and can provide a “known-good” recovery environment since all data is available in an immutable state. Only StorONE offers a backup storage solution that can step in for production storage and provide the customer with the necessary performance and features.
- Affordable Long-Term Data Retention - Besides providing lightning-fast backup and recovery, SI:Backup also provides the most affordable data retention while raising the bar for data retention. The solution automatically tiers historical backup data to cost-effective, high-density hard disk drives. As the density of hard disk drives continues to increase, the cost per terabyte will continue to decrease, making non-compromising support of these drives critical:
 1. SI:Backup customers can add newer higher density drives, mixing them with the current drives without data migration or creating a new volume.
 2. The SI Platform makes using hard disk drives risk-free by delivering the most advanced RAID rebuilds in the industry today. Volumes of 18TB and 20TB drives can return to a fully protected state in less than three hours, instead of the four-plus days of competing systems.
 3. As the environment scales, StorONE continues to add protection thanks to its unique storage enclosure redundancy feature, enabling a customer to recover from an entire enclosure or even rack failure without losing data or access to that data.
 4. SI:Backup supports utilizing 90% of the available capacity within the system without impacting performance. Most competing systems experience significant performance degradation as capacity utilization exceeds 55%.

- Secure Long-Term Data Retention – Besides providing affordable data retention, StorONE also provides secure data retention. The StorONE platform provides software-based encryption per volume and supports self-encrypting drives. Our vRAID technology can also seamlessly recover from silent data corruption / “bit-error rot” and uses segment parity to ensure no data is lost due to either of these conditions.

7. How does SI:Backup fill the gap between backup software innovations and storage hardware capabilities?

Backup-server software vendors have innovated in two key areas and SI:Backup enhances those innovations:

- Change Block Tracking (CBT) / Block Level Incremental (BLI) Backups - These backups improve the granularity at which the backup data is captured. BLI/CBT backups transport less data across the network than traditional full/incremental backups. These technologies enable the customer to backup applications and virtual machines more frequently. Instead of receiving one big backup job a night, the backup storage target now receives potentially hundreds of smaller backup jobs per hour. The problem is legacy backup storage can’t keep pace with the constant stream of backups and become the bottleneck.

SI:Backup’s flash tier leverages the Enterprise Storage Platform technology to deliver optimal performance from eight to twelve flash drives. As a result, it can easily keep pace with the high number of backup jobs and allow customers to increase backup frequency, reducing their recovery point objective (RPO) and reducing the chances of data loss during a ransomware attack.

- Instant Recovery - This feature instantiates a virtual machine’s or an application’s data on the backup storage target. When the virtual machine’s or application’s data is instantiated on the backup storage target, that target effectively becomes production storage. The problem is legacy backup storage targets don’t have the performance, availability, or enterprise features to act as production storage. As a result, IT must “restore again” to a production storage system, which may not be available in the case of a ransomware attack or may not be “clean.”

SI:Backup leverages our Enterprise Storage Platform. All instant recoveries occur to the flash tier, and when the data is instantiated, the customer will experience product-class performance. For an extended outage, either due to ransomware or a hardware failure, the customer can restore natively to SI:Backup and benefit from enterprise-class high-performance, high-availability, and data protection.

8. What Makes SI:Backup Standout from its Competitors?

- SI:Backup is part of the StorONE Enterprise Storage Platform - After the organization solves its backup and ransomware recovery challenges, it can use the same software and hardware investment to address other use cases like archiving, file (NAS), virtualization, or databases. They can seamlessly add additional flash as more performance is needed or hard disk drives for more capacity. The whole process is non-disruptive and requires zero data migration.
- SI:Backup delivers the most complete backup data protection and ransomware recovery in the industry - It provides this capability without requiring the organizations to change their existing backup application or the preferred storage protocol.
- SI:Backup is the only solution that, thanks to StorONE’s advanced storage platform technology, provides recovery performance so fast organizations can use their backup storage target as a standby storage system.
- SI:Backup is the most cost-effective backup storage target on the market today. It can deliver hundreds of thousands of IOPS at low latency from just a few flash drives instead of the dozens required by our competition.
- SI:Backup also fully exploits the cost savings of high-density (18TB/20TB) drives without compromising performance or data safety. It provides rapid recovery from drive failure, decades of scalability, and data integrity within a single StorONE instance.

8. What industries can benefit from SI:Backup?

Almost any industry and data center can benefit from SI:Backup. Ransomware attacks specifically target medium-sized businesses, and they need a solution to deliver a complete ransomware recovery strategy. As these organizations continue to digitally transform users and customers become less tolerant of downtime, the ability to leverage the backup storage target as standby storage in the event of the failure of a production storage system is of high value.

Finally, these organizations have a wide variety of use cases, leading them to use many different storage systems, forcing storage costs to spiral out of control. SI:Backup provides the ability to leverage the StorONE platform and, over time, consolidate other storage use cases into it, further reducing the total cost of storage ownership.

9. Where can someone find more information about StorONE in general and SI:Backup in particular?

- [StorONE.com](https://www.storone.com)
- [StorONE SI:Backup Landing Page](#)
- [LightBoard Video - Take Your Backups to the Next Level](#)
- [StorONE Ransomware Webinar with Gal and George](#)

10. Where do you see StorONE in the coming 5-years

StorONE is experiencing rapid growth, enjoying its best year so far. Our customers will continue to optimize their investment in the StorONE Enterprise Storage Platform in the next five years to consolidate all of their various storage workloads. The return on this investment will dramatically reduce storage acquisition and operating costs while greatly simplifying the storage infrastructure.