# OpenStack Acceleration with keeperSAFE

## Using keeperSAFE™ with your OpenStack deployment results in affordable and flexible on-demand scalability and performance.

Keeper Technology meets today's data storage challenges by offering keeperSAFE, a purpose-built unified data storage appliance designed for private cloud architectures. By leveraging open-source software with fully vetted commodity hardware and enhancing the platform with Keeper' exclusive storage management software, keeperSAFE delivers a future-proof data storage solution.

keeperSAFE leads the way in hybrid-cloud data storage, just as OpenStack has led the way in cloud-based computing. Both offer flexibility, scalability, and cost-effectiveness. With a seamless integration with OpenStack, KeeperSAFE adds valuable data security and management capabilities on top of unlimited scalability.

- If you already have an OpenStack environment, keeperSAFE enhances it without costly downtime.

- If you are considering a future OpenStack deployment, but are not quite ready, keeperSAFE today satisfies your contemporary object, block, and NAS data storage needs.

- When you are ready to fully deploy OpenStack, keeperSAFE's secure platform becomes your S3, Swift, Cinder, Glance, and Manila hybrid-cloud storage solution.

Data moves quickly these days. The challenges will only grow as we leap ahead. Within a data-centric enterprise, core operational capabilities become business critical issues, often outside of the relative comfort zone of daily IT operations. Tying data manipulation and information extraction to organizational success or failure requires critical necessities such as:

- Seamless data security, integrity and control
- Elastic and agile data management
- Tight integration with data processing work-flows
- Cost-effective capital and operational qualities
- Consistent data availability, resiliency and durability
- Highly scalable system performance

keeperSAFE sustains legacy connectivity while simultaneously transforming data storage operations within an OpenStack Environment.



keeperSAFE adds unparalleled value to OpenStack, facilitating operational transformation into the future. Your vital data needs to be available at all times, under demanding circumstances and dynamically changing requirements. When integrated into OpenStack, keeperSAFE's native open-source technologies deliver the extra layer of data protection and accessibility your business requires.

# keepertechnology

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## Seamless

The technology within keeperSAFE is deeply integrated into OpenStack, making it easier for you to combine keeperSAFE with your existing or planned OpenStack architecture. keeperSAFE stands in for the components of OpenStack without requiring dedicated storage. It seamlessly interfaces with S3, Cinder, Glance, Swift and Nova.

## Secure

All keeperSAFE appliances utilize SED capable drives, with AES 256-bit encryption, ensuring the ability to comply with company and regulatory policies. By having the individual drives perform the encryption operations, the keeperSAFE controllers simply manage the encryption keys with no effects on performance. FIPS 140-2, Common Criteria Certified.

## Intelligently Efficient

The keeperSAFE infrastructure provisions new OpenStack Instances with increased speed. Copy-on-write clones minimize storage consumption. Instant, on-demand computing capacity is available in seconds instead of minutes, accelerating your work-flows. Cost efficiency also matters, and keeperSAFE also delivers with minimal hands-on maintenance while operating at less than 1/2 cent per GByte per month.

## Highly Available and Protected

keeperSAFE leverages erasure coding to intelligently spread data across multiple storage devices so drives, servers, and even whole racks can fail without loss of service. keeperSAFE hardware and software is upgraded and maintained without interrupting data accessibiliity.

## Scalable Performance

keeperSAFE boosts your OpenStack deployment by dynamically allocating more storage resources as OpenStack scales computing resources, all in real time, all without interruption. keeperSAFE includes 100Gb/40Gb/10Gb switching hardware for front-end data access, increasing performance and speed. Scaling capacity simultaneously adds bandwidth.

## Easy to Manage and Grow

Whether starting out small with a 200 TB system or scaling up to 100 PB, Keeper Technology builds full functionality and accelerated component integration into every keeperSAFE. Scalable cost savings means OpenStack instances built on keeperSAFE block storage support live migration; growing the system to meet your expanding needs or future technology insertion while incurring no downtime or loss of capability. See a 70% savings over traditional or public cloud storage.

Keeper Technology goes above and beyond to equip every KeeperSAFE deployment with a single pane of glass for comprehensive system management featuring built-in predictive analytics all backed by Keeper's expert proactive support :

- Interactive GUI fuses thousands of data points for real-time monitoring.
- Single pane of glass visualizes system health, exposing at-risk components.
- Puts maintenance back on your schedule with Keeper's expert system architecture, configuration, installation, performance tuning, upgrading, and troubleshooting.
- Keeper even offers a dedicated engineering resource to evolve your OpenStack environment as workloads and resources change.