Software-Defined, Hyperscale Storage with SUSE and Fujitsu ETERNUS CD10000

Volumes of data are growing exponentially and enterprises are turning to software-defined storage (SDS) to handle the onslaught. As your SDS options also expand, it's important to choose a solution that gives you the flexibility and scalability you require—as well as additional features and capabilities that reduce IT complexity and save you time and money. With SUSE Enterprise Storage and the Fujitsu Storage ETERNUS CD10000 reference architecture, you can get that ultimate SDS solution that empowers your enterprise to grow freely.

Software-Defined Storage from SUSE and Fujitsu at a Glance:

- **Get an enterprise-ready version** of the open source, software-defined storage solution Ceph, built by trusted leaders in the Ceph community.
- **Cost-effectively scale your storage** with per-node pricing, so per-gigabyte costs don't weigh you down.
- **Unify file, block and object storage** in one solution.
- **Ease management** with a Ceph Dashboard, self-management and self-healing features.

- Products and Solutions

+ *SUSE Enterprise Storage*
+ *Fujitsu Storage ETERNUS CD10000*

Together, SUSE and Fujitsu have provided more than 15 years of innovative, reliable and open solutions that can simplify complex enterprise IT management and reduce IT expenses. Fujitsu offers on-premises, hosted and cloud-based solutions—featuring SUSE Linux Enterprise Server, SUSE OpenStack and SUSE Enterprise Storage—that enterprise customers can count on for high performance, efficiency and reliability.

Both SUSE and Fujitsu are closely involved in the open source project for Ceph—the SDS technology that forms the foundation of SUSE Enterprise Storage—and are members of the Ceph advisory board. In fact, SUSE is now the number-two contributor to Ceph. The partners have a deep understanding of today's data storage challenges and a wealth of expertise in how to overcome them.

Lately, Fujitsu has made major contributions to Ceph, including joining the performance optimization group to investigate the causes of bottlenecks, providing fix code for I/O performance, and providing faster recovery technology by developing erasure coding, which is a feature that SUSE takes full advantage of in SUSE Enterprise Storage.

Affordable Scalability

SUSE Enterprise Storage enables you to deploy a unified block, object and file storage environment to reduce the capital and operational costs of storage infrastructure.

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The solution has a flexible, cluster-based design for graceful, inexpensive upgrades and near-linear scaling. Pricing is based per node, not per gigabyte, so you can scale more cost-effectively. The ETERNUS CD10000 reference architecture is based on industry-standard servers, helping you avoid hardware vendor lock-in and the cost of proprietary disk arrays.

Simplified Management and Operations

When you purchase the Fujitsu-SUSE storage solution, you get a one-stop shop for hardware, software and services.

The ETERNUS reference architecture consists of pretested configurations with flexible storage systems and server options. The solution creates a highly scalable and stable storage environment. The Ceph-based architecture allows for the easy addition, exchange or upgrade of new storage nodes without any downtime.

SUSE Enterprise Storage is self-managing and self-healing to reduce your management burden and costs. It uses DeepSea to provide easy installation and cluster setup. The Ceph Dashboard provides a single, easy-to-use console for managing the storage cluster, with real-time data on performance and status.

Using Ceph, a single system administrator can manage petabytes of data—many times more than an administrator in an equivalent block-storage environment.

High Performance

The combined SUSE Enterprise Storage and ETERNUS CD10000 reference architecture is based on software-defined and hyperscale principles. It enables you to start with a capacity of a few terabytes and scale up to 50 petabytes or more by adding storage nodes. It is based on the latest version of Ceph and offers containerization support, as well as faster and more granular backup capabilities.

The latest version of SUSE Enterprise Storage offers significant reductions in I/O latency through the use of BlueStore, which can help to reduce data storage overhead by enabling data compression. Erasure coding for replicated block devices and Ceph Filesystem (CephFS) data increases disk space efficiency.

Flexible to Your Data Needs

The Fujitsu-SUSE storage solution is an ideal choice for a variety of uses:

- *Compliance archiving*
- *Data archive and bulk storage*
- *Disaster recovery or disk-based backup*
- *Storage of streaming audio/video libraries*
- *Storage for internal/private cloud solutions (OpenStack)*
- *High performance computing*

The SUSE-Fujitsu Solution in Action

The average organization is often facing multiple storage challenges. Regulations might require it to keep emails for up to 7 years. If the organization has begun hosting video-board meetings and wants to save those files as well, a relatively straightforward compliance task becomes a hyperscale challenge. At the same time, the organization might be gathering piles of unstructured data from customers' online activities.

Building separate hyperscale solutions based on storage arrays would be expensive, not to mention a major implementation challenge. On the Fujitsu ETERNUS CD10000 reference architecture with SUSE Enterprise Storage, however, the task becomes straightforward.

Fujitsu experts can help with the implementation. And a single instance of the solution can provide storage for the multiple use cases above, with storage tiers arranged as needed.

Growing the cluster is as simple as buying additional Fujitsu servers, while automated optimization and self-healing capabilities reduce the burden on IT. And thanks to the cost-effectiveness of SUSE Enterprise Storage, your organization can save a significant amount in storage costs.

Learn More

Learn more about how SUSE and Fujitsu can give you the storage capacity for today's and tomorrow's needs, at suse.com/fujitsu.