



SUSE and Fujitsu Enterprise Storage Sales Play M&P Overview

Products and Solutions

- SUSE Enterprise Storage
- Fujitsu Storage ETERNUS CD10000 reference architectures

State of the Market: Data Explosion

By 2020, the average internet user is expected to create 1.5 gigabytes of traffic a day. Connected airplanes could create 5 terabytes every day, while a smart factory might produce a full petabyte of data every day.¹

IDC estimates that the world will create 180 zettabytes (or 180 trillion gigabytes) of data in 2025, up from less than 10 zettabytes in 2015 and 44 zettabytes in 2020.²

Experts agree that this creates a need for a new kind of storage: software-defined storage.

Positioning Statement

Together, SUSE and Fujitsu offer organizations 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 Cloud and SUSE Enterprise Storage—that enterprise customers can count on for high performance, efficiency and reliability.

¹ *Investor meeting presentation, Intel, February 2017, https://s21.q4cdn.com/600692695/files/doc_presentations/2017/2017_Intel_Investor_Meeting_Krzanich.pdf*

² *www.forbes.com/sites/gilpress/2016/08/05/iot-mid-year-update-from-idc-and-other-research-firms/#415edd7555c5*

| Value Proposition | |
|---|---|
| For You | For Your End Customer |
| Help customers keep up with growing data storage demands on a flexible, cost-effective platform. | Fujitsu and SUSE provide robust storage with unlimited scalability on a highly flexible and cost-effective platform. |
| Key Benefits | |
| For You | For Your End Customer |
| Give your customers the peace of mind of knowing they are getting an enterprise-ready version of Ceph from two organizations deeply involved in the Ceph community. | Get an enterprise-ready version of the open source, software-defined-storage solution Ceph, built by two organizations deeply involved in the Ceph community. |
| Offer cost-sensitive customers a solution with a competitive total cost of ownership. | SUSE Enterprise Storage is priced by node rather than by capacity. Scale your storage without per-gigabyte software pricing weighing you down. |

Key Benefits

| For You | For Your End Customer |
|--|---|
| Add sales of backup, archive and disaster recovery hardware to customer accounts with production systems. | Get an affordable backup solution to help you cope with growing data-storage demands or the need to store multiple backup copies of data. |
| Help customers struggling to find budget or staff to support storage projects by offering a system with easier management. | Streamline storage management so fewer staff members can manage more storage. |

Target Markets

Joint solutions from Fujitsu and SUSE target large enterprises (more than 5,000 employees), with a secondary audience of midsize enterprises or divisions of large enterprises (2,500–4,900 employees). Ideal targets for this solution include:

- Customers who need to scale storage
- Enterprise IT departments running Linux/Windows
- Enterprises looking for a backup solution
- Customers building OpenStack private clouds
- All verticals and regions

Note: The ETERNUS CD10000 reference architecture is currently only available in EMEA.

Workloads and Use Cases

- **Target for compliance archiving** – To remain compliant with various regulations, organizations might be required to store emails, legal documents and other files for specified periods of time. SUSE Enterprise Storage works with archiving systems to meet these specific requirements.
- **Data archive and bulk storage** – Enterprises often have a lot of data that has to be stored for long periods of time, such as old emails, logs, transaction histories, reports and more. SUSE Enterprise Storage on Fujitsu Storage ETERNUS CD10000 provides an affordable way to handle all that data.
- **Target for disaster recovery or disk-based backup** – Enterprises need a storage solution with costs close to tape, but with much higher performance and capacity. SUSE Enterprise Storage on Fujitsu Storage ETERNUS CD10000 provides that and more, with an affordable and scalable way to meet backup windows and recovery times. SUSE and Fujitsu also provide software-defined storage solutions certified with backup vendors such as Commvault.
- **Audio/video streaming** – Content and media businesses need to store high quantities of very large files. These video and content files might also need to be available at all times. SUSE Enterprise Storage on Fujitsu Storage ETERNUS CD10000 offers affordable, scalable storage to fulfill these essential industry demands.

- **Storage for internal/private cloud solution (OpenStack)** – Ceph is the leading solution for OpenStack storage. To support the rapid growth in storage in most private clouds, organizations need to embrace software-defined storage. The combined solution provides a way to do this that smoothly integrates with organizations' OpenStack implementations. You can easily implement a Ceph environment as a storage option of Fujitsu PRIMEFLEX for OpenStack.
- **High performance computing** – The combined solution provides efficient storage for demanding environments such as high performance computing (HPC), where input/output needs can be high and large volumes of data are required.

Unique Differentiators

- Fujitsu and SUSE have been working together for over 15 years.
- Both SUSE and Fujitsu are closely involved in the Ceph open source project and are members of the Ceph advisory board. SUSE is now the number-two contributor to Ceph.
- By buying your solution through Fujitsu, you get a one-stop shop for hardware, software and services.
- The combined SUSE Enterprise Storage and ETERNUS CD10000 reference architecture is based on software-defined and hyperscale principles. It provides a template that enables you to start with a capacity of a few terabytes and can scale up to 50 petabytes or more by adding storage nodes. The reference architecture enables you to create a hyperscale

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stack tailored to your specific requirements without any storage hardware vendor lock-in.

- The combined solution builds on the reduced management of Ceph with a Ceph dashboard that provides efficient monitoring of all nodes and real-time data on performance. The solution can automatically and efficiently move data between all tiers of storage based on policy, limiting the manual work required by your teams.
- Fujitsu and SUSE partner closely on multiple solutions that you can combine with your software-defined-storage infrastructure, including those for SAP HANA and OpenStack cloud.

Differentiators for Fujitsu and Fujitsu ETERNUS CD10000

- 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.
- Fujitsu has significantly increased its presence and participation in open source solutions, with a particular focus in OpenStack.
- With its remote evaluation offering, Fujitsu provides remote access to a complete evaluation environment in the Fujitsu data center, plus consultant support for your proof of concept.

- Fujitsu Financial Services offers a complete portfolio of IT leasing and financing solutions, as well as trade-in and buy-back options.

Differentiators for SUSE Software (Not Unique to Fujitsu)

- SUSE Enterprise Storage, which is based on Ceph, enables you to deploy a unified block, object and file storage environment to reduce the capital and operational costs of storage infrastructure.
- **Scalability and affordability**
 - SUSE Enterprise Storage offers a flexible, cluster-based design for graceful and inexpensive upgrades and near-linear scaling.
 - SUSE Enterprise Storage is the most affordable way to grow your storage because you pay by node, not for every gigabyte you store.
 - Using Ceph, a single system administrator can manage many times more than an administrator in an equivalent block-storage environment.
- **Ease of management**
 - SUSE Enterprise Storage is self-managing and self-healing to reduce your management burden and costs.
 - SUSE Enterprise Storage 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.

■ Performance

- SUSE Enterprise Storage offers site-to-site replication and much faster recovery times when compared to tape backup, making it a viable disaster recovery option.
- SUSE Enterprise Storage enables organizations to quickly and easily leverage public cloud resources as part of their storage infrastructure.
- The latest release of SUSE Enterprise Storage provides faster and more granular backups, and can send these backups to the cloud.
- BlueStore 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.