

SUSE Enterprise Storage™

SUSE Enterprise Storage™ software, a software-based storage solution powered by Ceph technology, enables organizations to build cost-efficient and highly scalable storage using commodity off-the-shelf servers and disk drives.

Product Overview

SUSE Enterprise Storage delivers storage functionality comparable to mid and high-end storage products at a fraction of the cost. It is a self-healing, self-managing storage solution that scales from a terabyte to a multi-petabyte storage network. Coupling SUSE Enterprise Storage with commodity off-the-shelf storage building blocks results in industry-leading, cost-efficient storage. iSCSI support allows non-SUSE Enterprise Linux (Linux, UNIX and Windows) server to access block storage from the SUSE Enterprise Storage Cluster. Tight integration with SUSE® Linux Enterprise Server enables IT organizations to easily provision additional storage and seamlessly deliver it to lines of business on demand. Truly unlimited scalability enables enterprise IT organizations to deliver the agility businesses demand by non-disruptively adding capacity at the cost they want to pay. Intelligent, self-healing, self-managing distributed storage enables storage administrators to minimize the amount of time spent managing storage. This enables organizations to support

more capacity per storage administrator or spend more time focused on delivering future innovations to the business.

SUSE Enterprise Storage is built on the open source Ceph software based storage functionality. It is:

- **Scalable:** *SUSE Enterprise Storage is designed as a distributed storage cluster to provide unlimited scalability from terabytes to petabytes.*
- **Self-managing:** *SUSE Enterprise Storage intelligent algorithms store data in a highly distributed manner, continuously monitoring data utilization and re-balancing data placement to optimize system performance with no storage administration involvement.*
- **Highly Available:** *SUSE Enterprise Storage is highly redundant and designed so there are no single points of failure, maximizing system resiliency and availability. Background data scrubbing continuously verifies data integrity. SUSE Enterprise Storage is*

self-healing when hardware failures do occur to minimize storage administration involvement and mitigate the effects of downtime. Optimized data placement enables rapid reconstruction of redundancy following hardware failure with minimized system performance impact.

Key Benefits

REDUCED CAPEX EXPENDITURES

SUSE Enterprise Storage provides significant CAPEX (capital expenditure) savings when compared with traditional enterprise storage appliances. SUSE Enterprise Storage is 30 percent less expensive than the average capacity optimized NAS solution and 50 percent less expensive than deploying the average capacity-optimized, mid-range disk array.

REDUCED OPEX EXPENDITURES

Enterprise storage customers demand simplicity and agility from their storage solution. Multi-vendor, heterogeneous storage environments add significant complexity to the process of managing enterprise data

storage. Traditional proprietary storage solutions have severe limitations in their ability to cost-effectively scale either capacity or performance. These limitations drive OPEX (operating expense) costs higher. SUSE Enterprise Storage provides unlimited scalability to increase capacity, improve performance or both without system disruption. SUSE Enterprise Storage is self-managing and self-healing to minimize storage administration requirements.

REDUCED PROPRIETARY “LOCKED IN” STORAGE SOLUTIONS

The openness of SUSE Enterprise Storage provides maximum flexibility with no “vendor lock-in.” SUSE Enterprise Storage is built upon general-purpose commodity, off-the-shelf hardware. Commodity off-the-shelf hardware provides maximum flexibility and can be repurposed if business priorities change unlike traditional purpose-built proprietary hardware storage solutions.

Key Features

SUSE Enterprise Storage provides industry-leading storage functionality including:

- *Self repairing*
- *Cache tiering for performance*
- *Thin provisioning for optimized utilization*
- *Copy-on-write clones for application rollback*
- *Erasur coding for space-efficient resilience*
- *Unified object and block*
- *No disruptive scalability of capacity online*
- *Heterogeneous Operating System Access (iSCSI)*
- *Data “at rest” encryption*
- *Rolling Upgrades*

SUSE Enterprise Storage System Recommended System Requirements

Minimal recommendations per storage node:

- *2 GB of RAM per Object Storage Device (OSD)*
- *1.5 GHz of a CPU core per OSD*
- *Separate 10 GbE networks (public/client and backend)*
- *OSD disks in JBOD or RAID0 configurations*
- *OSD disks should be exclusively used by SUSE Enterprise Storage*
- *Dedicated disk/SSD for the operating system, preferably in a RAID1 configuration*
- *Additional 4 GB of RAM if cache tiering is used*
- *3 monitor nodes recommended*
- *2 GB of RAM per monitor*
- *SSD or fast HDD in a RAID1 configuration*

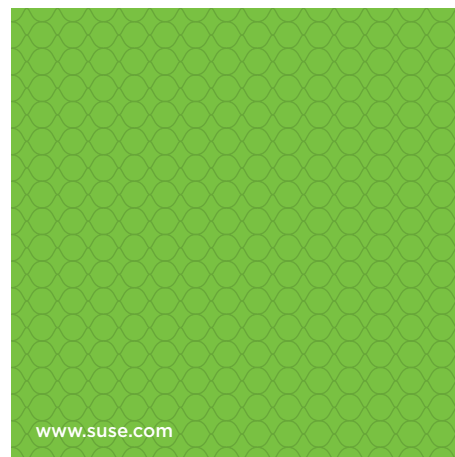
On less than seven node installations, these can be hosted on the system disk of the OSD nodes.

Nodes should be bare-metal, not virtualized, for performance reasons.

Mixing OSDs or monitor nodes with the actual workload is not supported.

Configurations may vary from, and frequently exceed, these recommendations depending on individual sizing and performance needs.

For detailed product specifications and system requirements, visit: www.suse.com/products/



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