

# SUSE Enterprise Storage™

**SUSE Enterprise Storage™, an intelligent software-defined storage management solution, powered by Ceph technology, enables organizations to deliver a unified, highly scalable, resilient and cost-efficient storage that is able to seamlessly adapt to changing business and data demands.**

## Product Overview

SUSE Enterprise Storage enables IT to transform their enterprise storage infrastructure to deliver a unified, highly scalable storage that is cost-efficient and able to seamlessly adapt to changing business and data demands. It is an intelligent software-defined storage solution that delivers a self-healing and self-managed distributed storage cluster designed to scale from terabytes to petabytes. 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) servers 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 tens of terabytes to petabytes.*
- **Self-Easy to manage: Self-healing and self-managed, combined intuitive interfaces**
- **Unified:** *Supports object, block and file storage within a single cluster*
- **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

### HIGHLY SCALABLE AND RESILIENT

SUSE Enterprise Storage delivers a single unified software-defined storage cluster that provides applications with object, block and file system storage designed with no single points of failure to maximize system resiliency, with unlimited scalability from terabytes to petabytes and to maximize application availability following hardware failures.

## REDUCED IT COSTS

Traditional storage solutions are expensive to scale in capacity or performance. SUSE Enterprise Storage helps keep CAPEX costs down by leveraging commodity gear that is 30-50% less than proprietary solutions, helps reduce IT operational expense with a single tool for managing a storage cluster for your heterogeneous server environment and helps optimize infrastructure without growing your IT staff by automatically re-balancing data placement without any manual intervention.

## SEAMLESSLY ADAPT TO CHANGING DEMANDS

SUSE Enterprise Storage enables you to be highly responsive to emerging business and data needs. It can automatically respond to changing demands with self-managed and self-healing storage that optimizes for system performance, enables you to easily provision and seamlessly deliver additional storage without disruption and provides maximum flexibility by using off-the-shelf commodity hardware that you can re-purpose if business priorities change.

## Key Features

SUSE Enterprise Storage provides industry-leading storage functionality including:

- *Optimized for large data bulk and archive storage*
- *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, block and file system storage*
- *Block and object replication*
- *OpenAttic management interface ([www.openATTIC.org](http://www.openATTIC.org))*
- *Non disruptive scalability of capacity online*

- *Heterogeneous Operating System Access (iSCSI)*
- *Data "at rest" encryption*
- *Rolling Upgrades*

## System Requirements

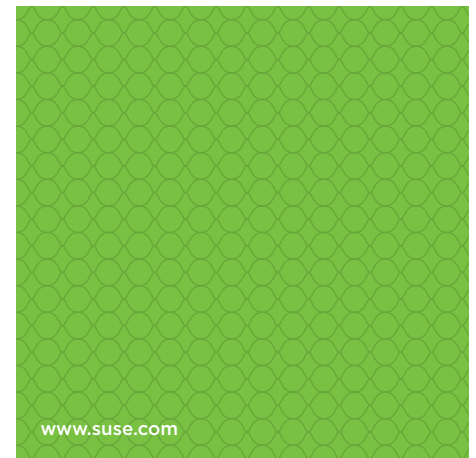
Minimal recommendations per storage node:

- *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 RAID 0*
- *OSD disks should be exclusively used by SUSE Enterprise Storage*
- *Dedicated disk/SSD for the operating system, preferably in a RAID 1 configuration*
- *Additional 4 GB of RAM if cache tiering is used*

Minimum recommendations for monitor nodes:

- *3 SUSE Enterprise Storage monitor nodes recommended*
- *2 GB of RAM per monitor node*
- *SSD or fast hard disk in a RAID 1 configuration*
- *On installations with fewer than seven monitor nodes, these can be hosted on the system disk of the OSD nodes*
- *Monitor 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*
- *Bonded network interfaces for redundancy*

For detailed product specifications, system requirements and minimum recommended cluster size configurations, visit: [www.suse.com/products/](http://www.suse.com/products/)



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