RED HAT STORAGE ONE

RED HAT STORAGE ONE FOR GENERAL-PURPOSE NAS BY SUPERMICRO

A Red Hat and Supermicro solution for software-defined storage

DATASHEET

SOLUTION HIGHLIGHTS

- Easily and rapidly deploy up to 720TB of software-defined Red Hat Gluster Storage.
- Deliver tested, tuned, and self-configuring general-purpose network-attached storage (NAS) storage clusters.
- Experience one-stop procurement with four-hour 24x7x365 single-vendor support.
- Enjoy enterprise-class reliability, resiliency, and a full storage feature set.

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Flexible and scalable software-defined storage has already revolutionized storage deployment in the public cloud. Many organizations now embrace a software-defined approach on-premise that combines enterprise-grade storage reliability with optimized performance for specific workloads—while running on cost-effective, industry-standard servers. At the same time, many desire a simpler software-defined storage solution that is easier to evaluate, procure, deploy, and support.

Red Hat® Storage One by Supermicro provides an integrated, preloaded, preconfigured, and fully supported hardware and software solution that is optimized for specific workload categories. All Red Hat Storage One solutions include the following as a single Supermicro part number:

- Standard storage servers optimized and configured for a particular workload category.
- Preloaded, licensed, preconfigured, and workload-optimized storage software.
- Rapid deployment with a quick-deploy utility that makes mountable file systems ready in minutes.
- Full, single-vendor support for both hardware and software.

RED HAT STORAGE ONE FOR GENERAL-PURPOSE NAS BY SUPERMICRO

Red Hat Storage One for General-Purpose Network-Attached Storage (NAS) by Supermicro dramatically simplifies storage deployment (Figure 1) and provides a ready-to-use Network File System (NFS) or high-performance POSIX-compatible Filesystem in Userspace (FUSE) distributed file system, supporting:

- Highly concurrent usage from hundreds to thousands of users.
- Multisite geo-replication for disaster recovery support.
- Common enterprise-ready features such as snapshots, self-healing, and Nagios-ready monitoring.

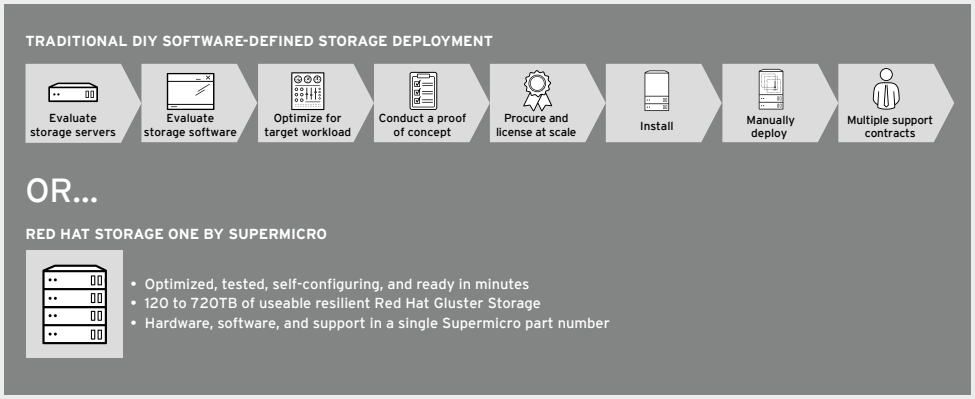

Figure 1. Red Hat Storage One for General-Purpose NAS by Supermicro dramatically simplifies deployment.

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Red Hat Gluster Storage

Red Hat Storage One for General-Purpose NAS is powered by Red Hat Gluster Storage. Designed for petabyte scale and beyond, Red Hat Gluster Storage is backed by vibrant open source community innovation and can be deployed on bare-metal, virtual, container, and cloud environments.

CLUSTER SPECIFICATIONS	
Minimum cluster	• 4 nodes, 288TB/120TB raw/usable capacity
Maximum cluster	• 24 nodes, 1.728PB/720TB raw/usable capacity
Cluster deployment size increment	• 2 nodes, 60TB usable capacity
Replication factor	• 2x (with arbiter for split brain protection)
Top of Rack (ToR) switch ports required per node	• Up to 4x 10Gb SFP+ ports (storage network) • 1x 1/10Gb RJ-45 (Gluster management network) • 1x IPMI RJ-45 port (optional out-of-band management)
Red Hat Gluster Storage	• Version 3.3.x
Client support	• NFS client, Server Message Block (SMB), Red Hat Enterprise Linux® Gluster-native client using FUSE
Protocol support	• NFS v3, NFS v4.0, SMB 2.0, SMB 3.0, FUSE
Maximum Read Throughput, 4-24 nodes (4MB files)	• FUSE Native Clients: 3.6-15.2 GB/s • NFS v4 Clients: 3.4-14.4 GB/s • SMB v3 Clients: 3.3-13.8 GB/s
Maximum Write Throughput, 4-24 nodes (4MB files)	• FUSE Native Clients: 0.9-4.0 GB/s • NFS v4 Clients: 0.9-3.7 GB/s • SMB v3 Clients: 0.9-3.8 GB/s
Maximum Read Throughput, 4-24 nodes (4GB files)	• FUSE Native Clients: 4.3-18.1 GB/s • NFS v4 Clients: 2.3-9.5 GB/s • SMB v3 Clients: 3.9-16.4 GB/s
Maximum Write Throughput, 4-24 nodes (4GB files)	• FUSE Native Clients: 1.5-6.5 GB/s • NFS v4 Clients: 1.3-5.4 GB/s • SMB v3 Clients: 1.6-6.9 GB/s
High availability	• No single point of failure • Pacemaker (NFS) or built-in (Gluster-native client) provides highly available mount points • 2x replication over RAID6 bricks ensures continued availability across disk, server, and network failures
Disaster recovery	• Multisite geo-replication (not configured by default) • Snapshots (not configured by default)
Data encryption	• In-flight and at-rest encryption (not configured by default)
SERVER SPECIFICATIONS	
Base server model	• SSG-6029P-RHS172 (1 year support) • SSG-6029P-RHS372 (3 year support) • SSG-6029P-RHS572 (5 year support)
Rack units	• 2 rack units

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Processor	• Dual-socket Intel SKL 411, 8-core/16-thread 2.1GHz, 11M 9.6GT, 85W, 3647 UO
RAM	• 128GB (4x 32GB)
I/O controller	• Broadcom 3108 HW RAID card with 2GB cache (16 drive license)
Media drive bays	• 12x 3.5-inch large form factor (LFF)
SSD media drives	• 1x PCIe 375GB Intel Optane SSD
Network interfaces	• 4x 10Gb SFP+ ports • 2x 1/10Gb RJ-45 ports • 1x dedicated IPMI RJ-45 port
ENVIRONMENTAL SPECIFICATIONS (PER SERVER)	
Physical dimensions	• 17.2" x 3.5" x 24.8"
Power supply	• 1200W redundant Titanium Level (96%)
Typical power consumption	• 477W
Typical thermal rating	• 2037 BTU/hour
Min/max operating temperature	• 10C to 35C / 50F to 95F

Figure 2 illustrates the rear-panel configuration on each Supermicro storage server, featuring four 10GbE ports for storage network attachment and two 10GbE ports for connection to a management network. Dual redundant SSD boot drives and redundant power supplies contribute to high-availability storage solutions.

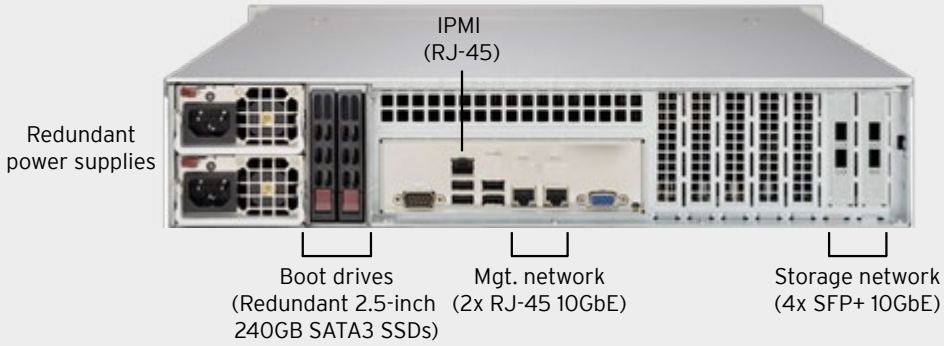

Figure 2. Rear-panel configuration of Supermicro storage servers feature ample network options.

ABOUT RED HAT

Red Hat is the world's leading provider of open source software solutions, using a community-powered approach to provide reliable and high-performing cloud, Linux, middleware, storage, and virtualization technologies. Red Hat also offers award-winning support, training, and consulting services. As a connective hub in a global network of enterprises, partners, and open source communities, Red Hat helps create relevant, innovative technologies that liberate resources for growth and prepare customers for the future of IT.

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