

All-Flash High-Performance SAN/NAS Solutions for Virtualization & OLTP

All-flash configurations are designed to deliver maximum IOPS and throughput for mission critical workloads and applications including server virtualization, VDI, and high load OLTP/database use cases.

Performance Range

300K/150K R/W IOPS per Storage Pool based on 20x SSD in RAID10

Appliance Configuration

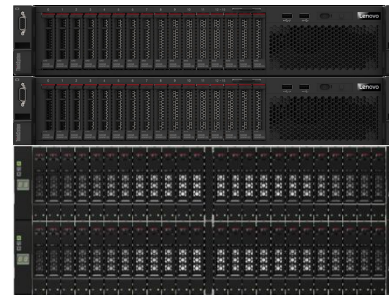
2x QuantaStor SDS Appliances (cluster pair)

- QuantaStor v4 Enterprise Edition
- Lenovo ThinkSystem SR550
- ThinkSystem FH Riser 1 (standard) & Riser 2
- 2x Intel Xeon Gold 5122 Processors
- 256GB RAM (8x 32GB RDIMM)
- 2x 480GB SATA 6G Read Intensive SFF (boot)
- 1x ThinkSystem RAID 930-8i (boot)
- 2x ThinkSystem 430-8e 12Gb SAS HBAs (one per Storage Enclosure)
- 2x Dual-port 10/25/40/50GbE Ethernet Adapters
- 2x Dual-port Qlogic 16Gb FC Adapters (optional)

Configuration Notes

- Recommend RAID10 or RAIDZ1 (2d+1p) layout for maximum IOPS
- Recommend 25GbE or faster NICs
- Read Intensive (RI) SAS SSDs work well for most workloads as wear leveling spans all devices in a given storage pool.
- NIST 800-53, CJIS, HIPAA Compliant
- VMware Certified (iSCSI, FC, NFS) & VAAI Certified
- FIPS 140-2 option available Q3/2018
- Call-home via PagerDuty, Email, SNMP, Slack

All-Flash High-Performance



2x Lenovo ThinkSystem SR550

Up to 8x Lenovo Storage D1224
Disk Expansion Enclosures
2U 24 bay SFF SAS

Storage Enclosure Options



Lenovo Storage D1224
Disk Expansion Enclosures
2U 24 bay SFF SAS

- Add up to 6x additional storage enclosure units (8 total) may be added to each controller pair. Each enclosure is connected to dedicated HBA controller ports on both servers.
- Storage enclosures may be partially populated.
- Growing capacity in increments of 8x, 16x, or 24x drives is recommended.



Lenovo based hardware platform

Hybrid Performance SAN/NAS Solutions for Virtualization & OLTP

Using a combination of HDD with SSD for read and write performance acceleration, QuantaStor hybrid SAN/NAS configurations are ideal for a broad spectrum of general application workloads and use cases including OLTP, VDI and server virtualization.

Performance Range

15K – 30K IOPS per Storage Pool
2GB – 3GB/sec read/write sequential per Storage Pool

Appliance Configuration

2x QuantaStor SDS Appliances (cluster pair)

- QuantaStor v4 Enterprise Edition
- Lenovo ThinkSystem SR550
- ThinkSystem FH Riser 1 (standard) & Riser 2
- 2x Intel Xeon Gold 5118 Processors
- 256GB RAM (8x 32GB RDIMM)
- 2x 480GB SATA 6G Read Intensive SFF (boot)
- 1x ThinkSystem RAID 930-8i (boot)
- 2x ThinkSystem 430-8e 12Gb SAS HBAs (one per Storage Enclosure)
- 2x Dual-port 10/25/40/50GbE Ethernet Adapters
- 2x Dual-port Qlogic 16Gb FC Adapters (optional)

Storage Enclosure Configuration

- Add up to 6x additional storage enclosure units (8 total) may be added to each controller pair. Each enclosure is connected to dedicated HBA controller ports on both servers.
- 2x 800GB SAS Mixed-use SSDs per enclosure for write acceleration
- Storage enclosures may be partially populated.

Configuration Notes

- Storage grid scales to 32x controller pairs (64 appliances total)
- Storage grids may span sites and use different hardware configurations
- Recommend RAID10 or RAIDZ1 (2d+1p) layout for maximum IOPS
- NIST 800-53, CJIS, HIPAA Compliant
- VMware Certified (iSCSI, FC, NFS) & VAAI Certified
- FIPS 140-2 option available Q3/2018
- Encryption, compression, high-availability, remote-replication included
- Call-home via PagerDuty, Email, SNMP and Slack channel

Hybrid Performance



2x Lenovo ThinkSystem SR550

Up to 8x Lenovo Storage D1224
Disk Expansion Enclosures
2U 24 bay SFF SAS

Hybrid Capacity



2x Lenovo ThinkSystem SR550

Up to 6x Lenovo Storage D3284
Disk Expansion Enclosures
5U 84 bay LFF SAS



Lenovo based hardware platform

S3/SWIFT Object Storage for Biotech, Energy, Media & CDN Workloads

Using a combination of HDD with SSD for improved read and write performance acceleration QuantaStor scale-out object storage configurations are ideal for a broad spectrum object storage workloads requiring hyper-scale to 64PB using the S3 and SWIFT REST based protocols. Scale-out object storage configurations can start with as few as three appliances with scale to sixty-four appliances enabling organizations to easily scale on demand with zero downtime.

Appliance Configuration

QuantaStor SDS Object Storage Appliance

- QuantaStor v4 Enterprise Edition
- Lenovo ThinkSystem SR590
- 2x Intel Xeon Gold 5118 Processors
- 128GB RAM (8x 16GB RDIMM)
- 2x 480GB SATA 6G Read Intensive SFF (boot)
- 1x ThinkSystem RAID 930-8i
- 2x Dual-port 10GbE Ethernet Adapters
- 2x NVMe devices (journal)

Storage Grid Configuration:

- 3x QuantaStor SDS Appliances minimum
- 64x QuantaStor SDS Appliances maximum

Configuration Notes

- Usable capacity depends replica count or erasure coding selection. 66% usable is a good estimation guideline (4k+2m).
- Separate front-end and back-end networks are recommended but not required.
- Compression & AES 256 bit encryption included
- SMB/NFS gateway access included
- Integrates with Ceph Luminous, see documentation for S3 API coverage
- Automatable via extensive QuantaStor REST APIs & multi-platform QS CLI
- NIST 800-53, CJIS, HIPAA Compliant
- FIPS 140-2 option available Q3/2018
- Call-home via PagerDuty, Email, SNMP, Slack

S3/SWIFT Object Storage Cluster



Lenovo ThinkSystem SR590

Lenovo ThinkSystem SR590

Lenovo ThinkSystem SR590

Lenovo ThinkSystem SR590

Lenovo ThinkSystem SR590



Lenovo based hardware platform