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SuperStorage

Computex 2018

Green Computing

We Keep IT Green™

X11 General Purpose Storage Servers

Double-sided Storage

Front

SSG-2029P-E1CR24 H/L

SSG-2029P-ACR24 H/L

SSG-6029P-E1CR12 H/L /T

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Introducing Red Hat Storage One

by Supermicro

Growth

- ✓ Scale-out architecture that grows linearly to accommodate massive data growth
- ✓ 4-24 nodes initial deployment, scales to multiple PBs

Availability

- ✓ No single point of failure
- ✓ Zero data loss

Cost

- ✓ Very cost effective compared to proprietary NAS appliances
- ✓ Simple pricing model with all software features/functionality included

Built to address today's Storage challenges

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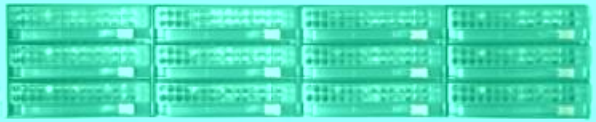
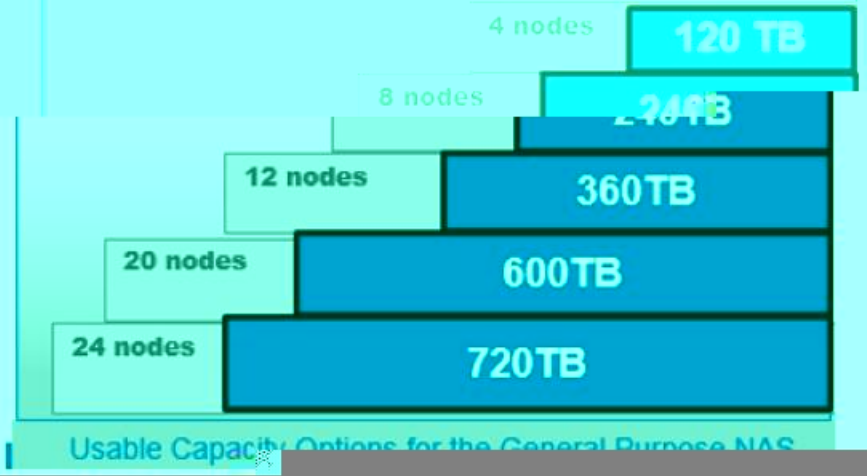
Red Hat Storage One - Solutions

RED HAT STORAGE ONE

Scale-out NAS

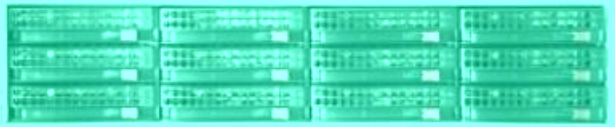


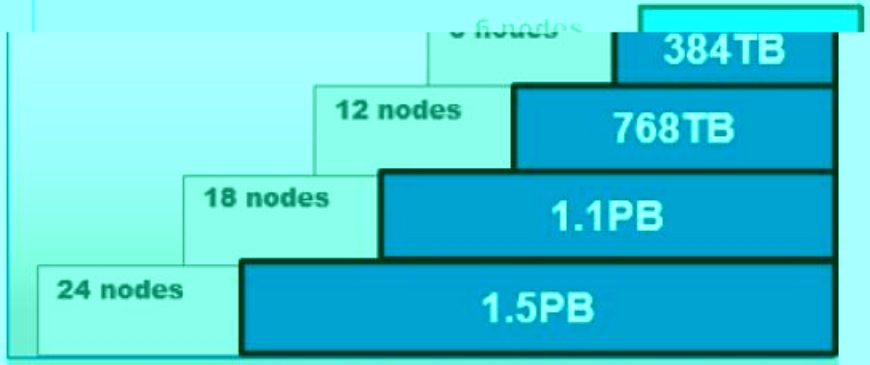


Usable Capacity Options for the General Purpose NAS

RED HAT STORAGE ONE

Content Repo





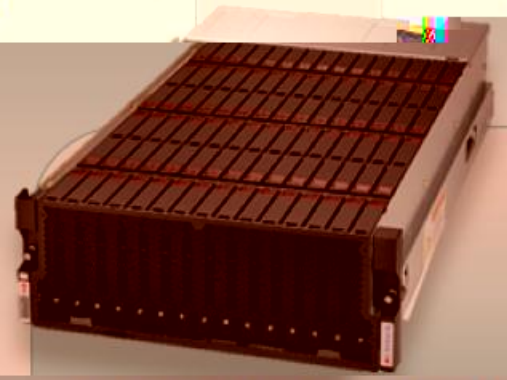
Usable Capacity Options for Content Repository

X11 Dense and Ultra-Dense Storage Servers

Top-Loading

SSG-6049P-E1CR45 L/H
SSG-5049P-E1CR45 L/H (UP)
SSG-6049P-E1CR60 L/H

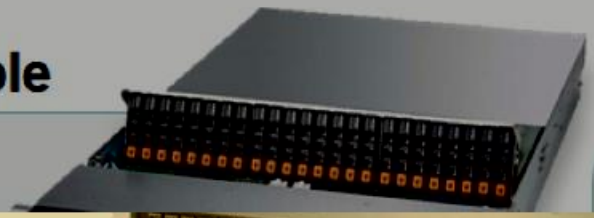
- 4U 45 and 60x Hot-Swap 3.5" SAS3/SATA3 bays (12Gb/sec)
- Up to 6x optional 2.5" NVME bays
- IT mode LSI 3008 (L-series) / 3108 HW RAID (H-series)
- Up to 24x DIMM Slots (DDR4)
- Front 3.5" LCD panel



SSG-6048R-E1CR90L

- 4U 90x Hot-Swap 3.5" 12Gb/s SAS3/SATA3 bays
- X10 version currently shipping

Simply Double



SSG-2029P-NR48L

- All Flash Storage Server
- 2U 48x Hot-Swap 2.5" NVMe bays
- 24x DIMM Slots (DDR4)
- SIOM for flexible networking options

SSG-6029P-E1CR16T

- 2U 16x Hot-Swap 3.5" SAS3/SATA3 bays (12Gb/sec)
- 16x DIMM Slots (DDR4)
- Cable-arm for hot-swap access of second row

SSG-6029P-E1CR24 L/H
SSG-2029P-E1CR48 L/H

- 2U 48x Hot-Swap 2.5" SAS3/SATA3 bays (12Gb/sec) or 2U 24x Hot-Swap 3.5" SAS3/SATA3 bays (12Gb/sec)
- 4x Optional Hybrid NVMe bays
- 24x DIMM Slots (DDR4)
- Cable-arm for hot-swap access of second row

Optional NVMe Bays

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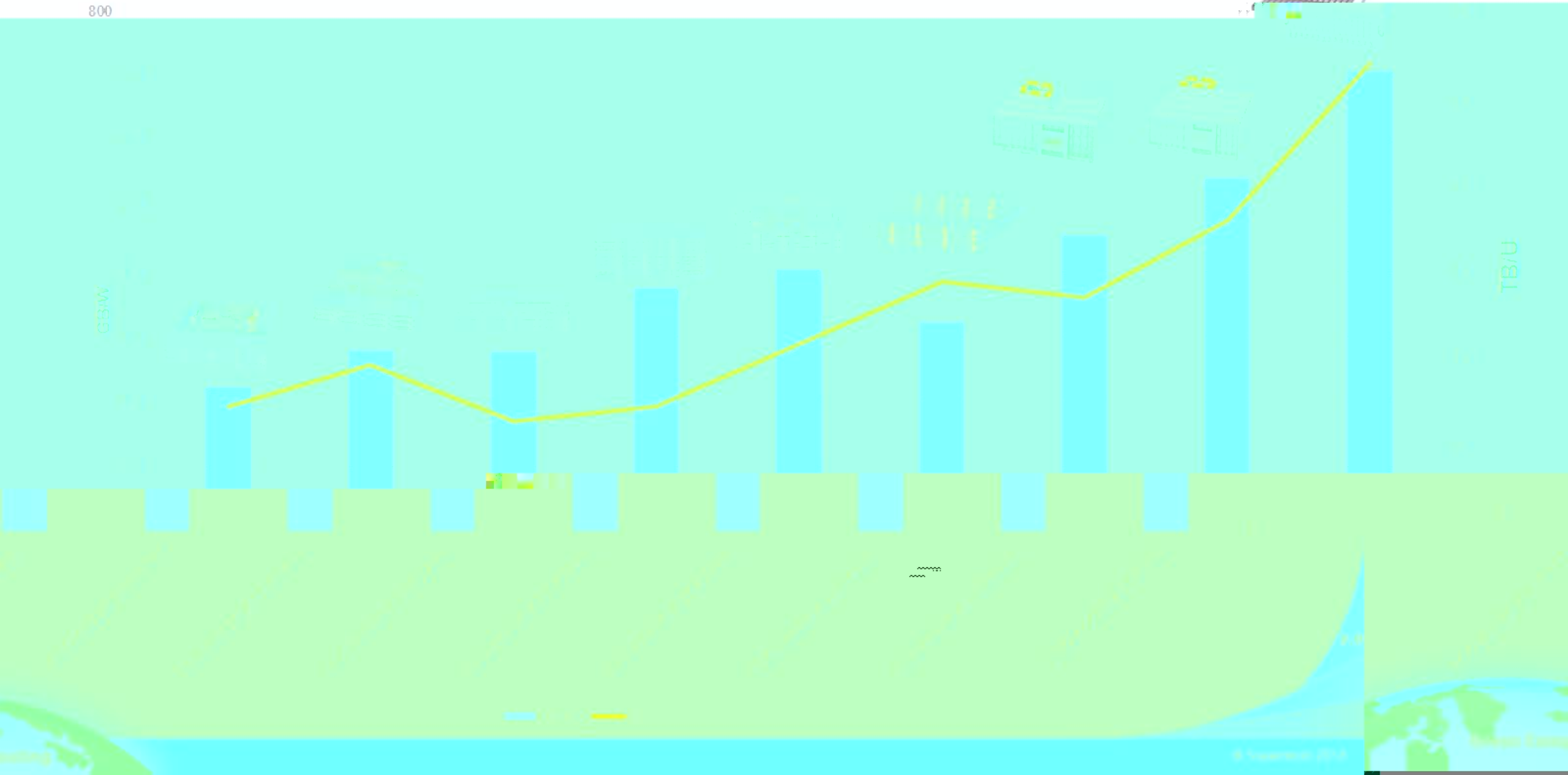
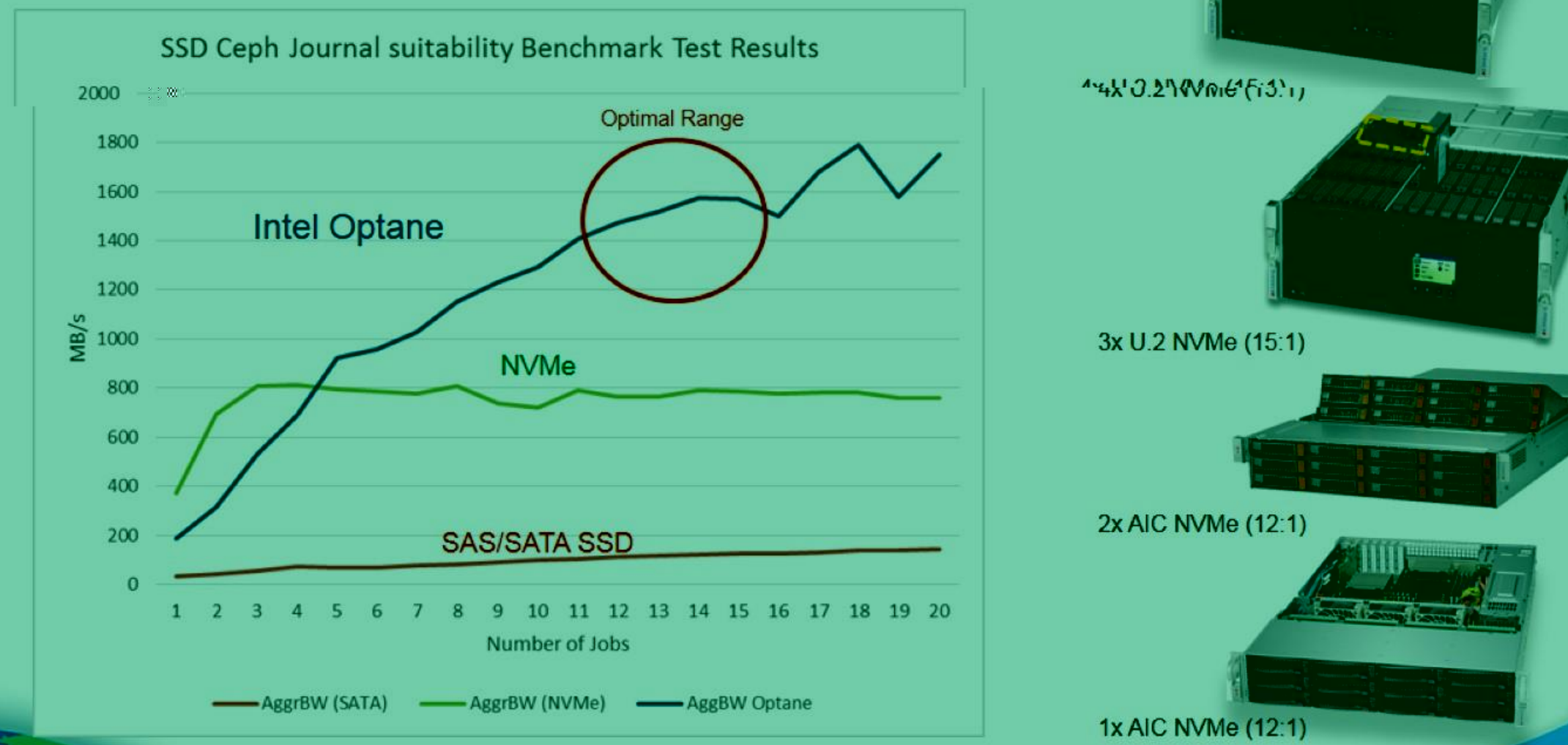
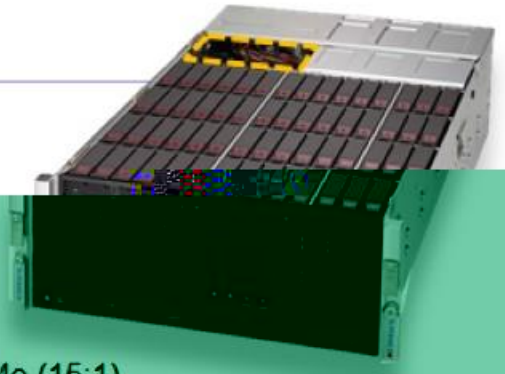
Density Maximized Storage Solutions



Optane for Ceph Journal (cache)

Ratio of HDD to flash device





4x U.2 NVMe (4:1)

3x U.2 NVMe (15:1)

2x AIC NVMe (12:1)

1x AIC NVMe (12:1)

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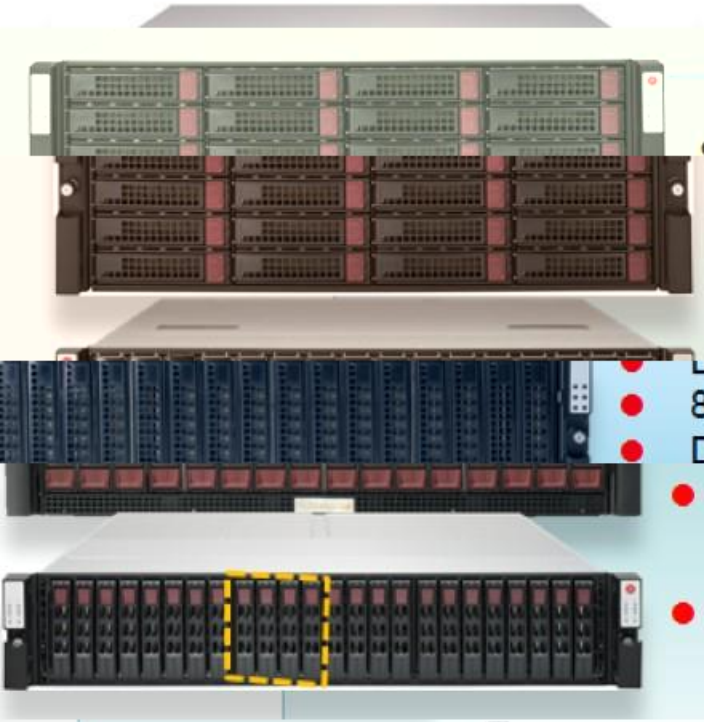
Storage Bridge Bay (SBB)

SAS & Hybrid Architecture



SSG-6048R-D52CR24L
SSG-6038R-DE2CR16L
SSG-2028R-DE2CR24L

- 4U/24, 3U/16, 2U/24 Bay
- Dual Intel Xeon
- 8x DIMM (DDR4)
- Dedicated B2B using x8 PCI-E
- Fully redundant x8 SAS Architecture with built-in JBOD expansion
- 3 PCI-E 3.0 x8 expansion slots per node

All NVMe Flash Architecture

SSG-2029P-DN2CR48L
SSG-2029P-DN2CR24L

- 2U/48 Bay & 2U/24 Bay
- Dual Intel Xeon
- 16x DIMM (DDR4)
- Dedicated B2B (Ethernet)
- SIOM Support
- 2 PCI-E 3.0 x8 + x16 expansion slots per node

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Simple to Deploy, Highly-Available Servers

Fully Redundant Hot-Swap Design

- Redundant Host-swap appliance nodes
- Redundant Hot-swap fans and power supplies

Unified File and Block Connectivity

- Unified File (NFS and SMB) and Block (FC and iSCSI) services
- Full suite of enterprise data services
- Inline data reduction

All-Flash

Hybrid & All-Disk

SuperStorage

Next Generation 1U & 2U All Flash Storage Servers

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NF1 NVMe

The New Generation All-Flash Leader!

- **SSG-1029P-NMR36L**
  - 36 hot-swap NF1 NVMe
  - Up to 10 million IOPS in 1U

Dual Intel Xeon Scalable Processors Up to 205W

Up to 3TB DDR Memory in 24 DIMM slots

- NVMe over Fabric (option)
- M.2 NVMe support
- Optimal thermal and power ef

fficiency

Rear view - JBOF with 4 Hosts

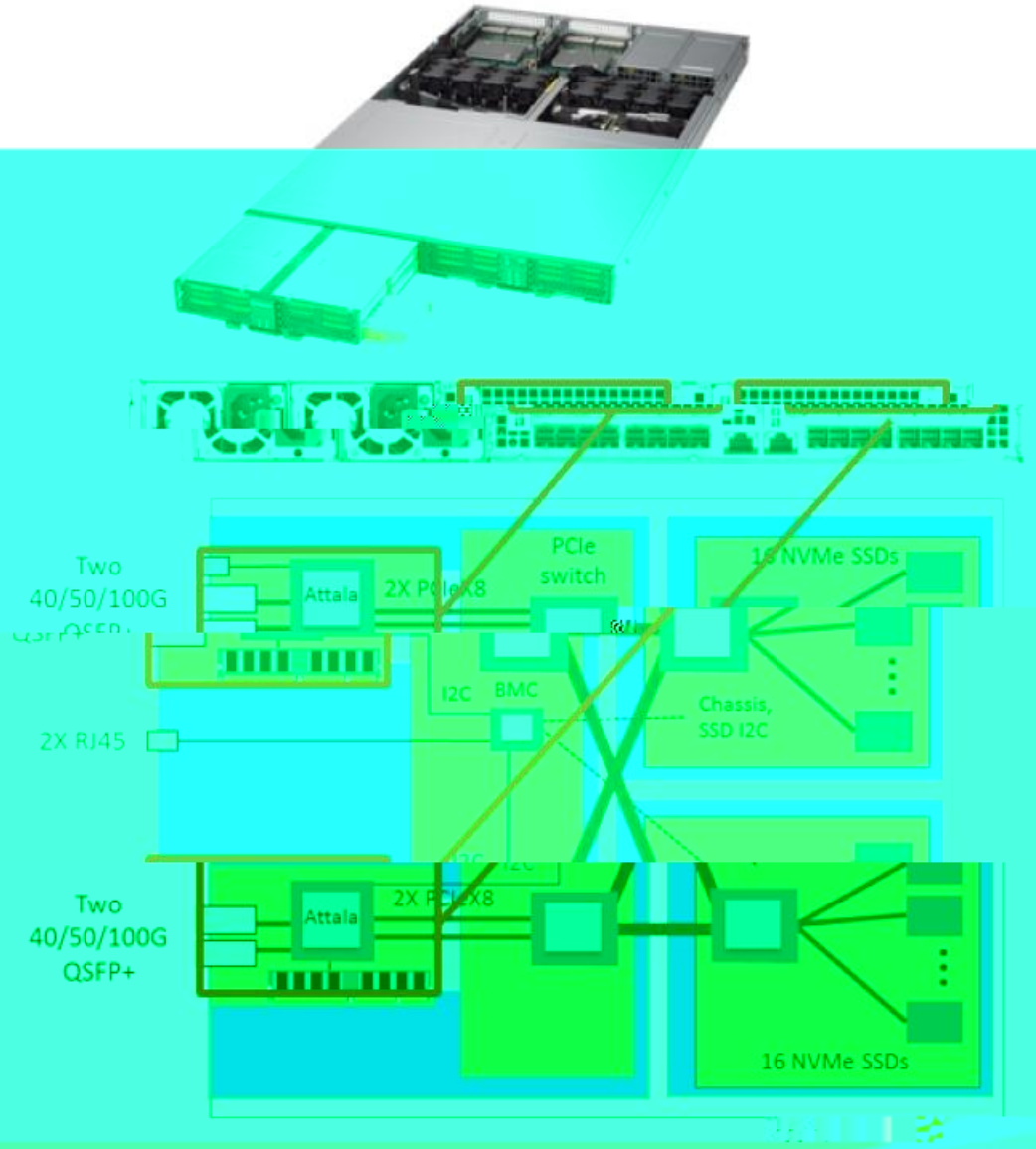
Recommended Configuration with 4 Hosts

- X11 2U BigTwin 4 Node with 24 NVMe SSDs + 1U JBOF with 32 NVMe SSDs
- In only 3U, you will have:
  - 56 NVMe SSDs
  - 8 Skylake Processors

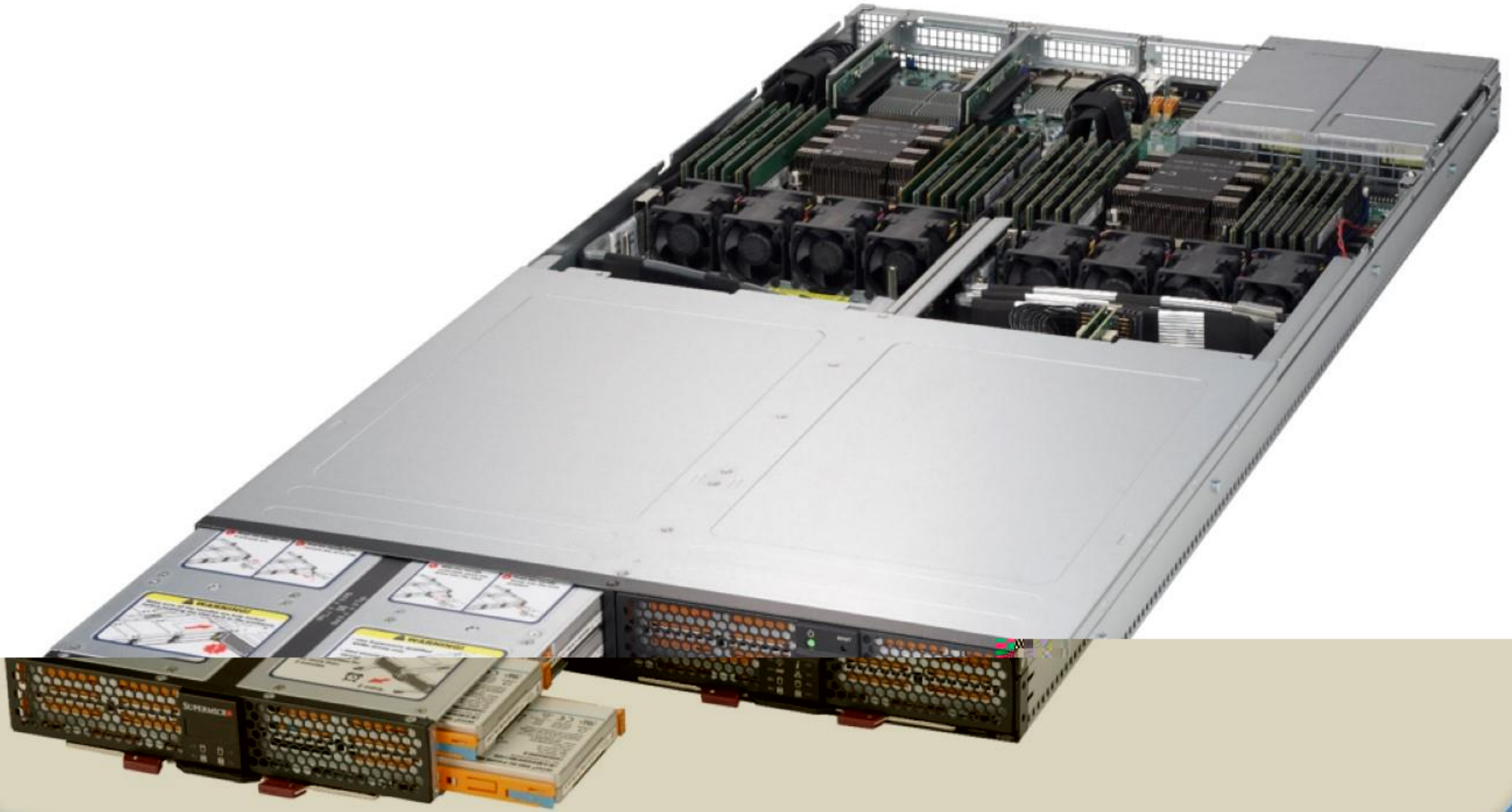
NVMe Over Fabric Solution

Attala AOC features:

- 100% Standards-based Networking
  - RoCEv2, NVMe-oF, Redfish, Swordfish
- Performance & QoS
  - Only add'l 5 µsec; 400-500Gb/s, 9-11M IOPS; per-namespace IOPS/throughput QoS controls; future NV-DIMM namespaces
- Enterprise features
  - Export full and sub-SSDs; tenant policy filter; multi—host sharing & reservations; admin SMART diagnostics
  - Data protection with HW-based mirroring
- Full link redundancy
  - Attala FPGAs create multi-paths on any network port to same SSD to support host-based MPIO
- Full management solution
  - NIC/card transmit front-end of entire data node: hardware management, orchestration of resources
  - Real-time telemetry of health & performance monitoring
- Single-port SSD support



Dual Processor 1U 32 NVMe



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Ruler JBOF and Server

SSG-136T36R-NR32R

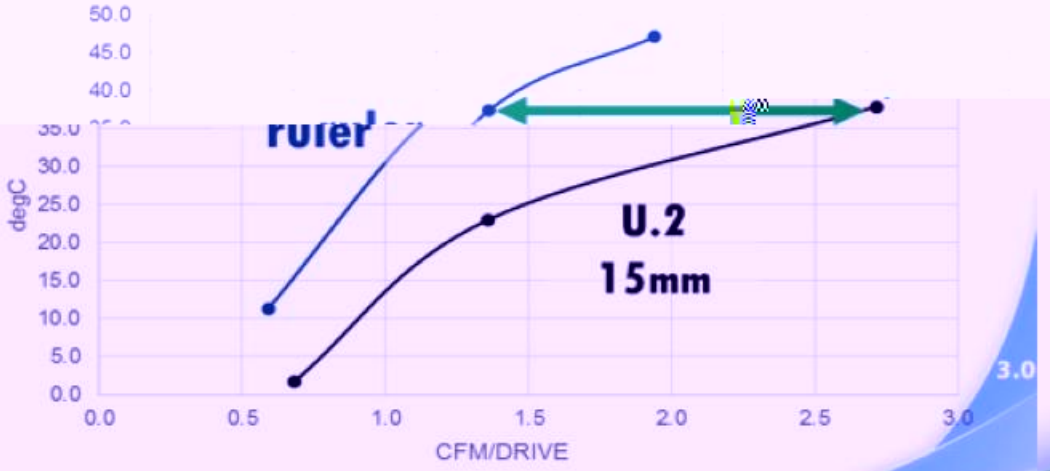
- *1U 32 Ruler JBOF*
- Up to 8 host connections
- Up to 1 Petabyte in 1U
- Optional NVMe over Fabric
- HPC / Data Analytics

SYS-1029P-NR32R

- *1U 32 Ruler Server*
- DP w/ 24DIMM
- High Throughput Ingest
- HPC / Data Analytics
- Content Delivery Network
- Top of Rack Storage

Why Ruler SSD?

- Fully front Serviceable -Fits into 1U
- Maximize drive capacity
- Maximize capacity per 1U
  - Optimize thermal efficiency
  - Drive down TCO



NF1 – 1U/36 All-Flash Server

Next Generation All-Flash Leader!

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Key Feature – Easy hot-swap serviceability

12x 3.5” Hot-swap storage drawer
With internal rail and cable management

FRONT

Chassis remains stationery in rack

1U rear I/O : Standard rack cabling
and serviceability

Back

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