



SUPERMICRO DELIVERS FILE, BLOCK & OBJECT STORAGE SOLUTIONS WITH OSNEXUS QUANTASTOR

Unify Storage Silos, And Make Storage Management Flexible And Easy



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Solution Overview

The Supermicro OSNexus Storage Solution powered by the QuantaStor storage platform delivers scale-out and scale-up storage capabilities to meet the needs of a broad spectrum of workloads and applications. This includes workloads such as general backup and archive, disaster recovery, virtualization, media & entertainment, ERP, OLTP, etc. In addition, quantaStor installs on all major Supermicro server platforms giving customers the choice and flexibility needed to reduce storage costs and leverage the latest hardware advancements.

SUPERMICRO

Supermicro is a global leader in high performance, green computing server technology and innovation. We provide our global customers with application-optimized servers and workstations customized with blade, storage, and GPU solutions. Our products offer proven reliability, superior design, and one of the industry’s broadest array of product configurations, to fit all computational need.

Grid Technology

QuantaStor’s storage grid technology provides unified management of QuantaStor servers and clusters. The grid management system is built into every system so that administrators can log in and manage their storage grid from any system without installing and maintaining additional software.



Each grid can scale to over 100PB and may contain multiple scale-out and scale-up storage clusters. Storage grids can also span sites and data centers. In addition, QuantaStor has robust access control, encryption, and security compliance features, making it easy to secure.

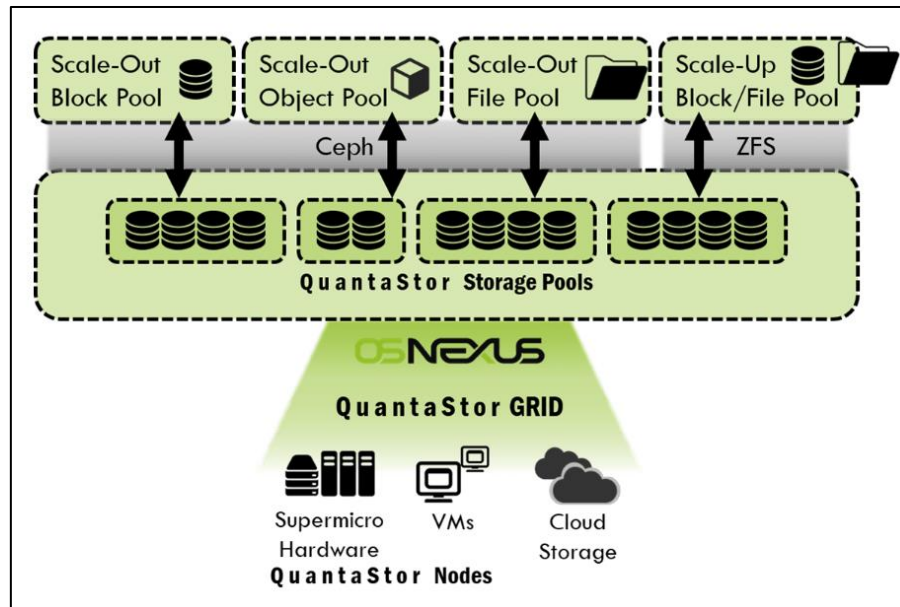


Figure 1: QuantaStor’s hardware integration spans a broad selection of Supermicro servers and JBODs. Grid technology makes it easy to manage all storage systems within and across sites.

Unified File, Block & Object Storage

Some workloads, such as service providers, research data, on-prem cloud, and multi-stream backup, are better suited for use with a scale-out storage architecture, while others are more cost-effective and faster using a scale-up design. For example, all-flash configurations are great for databases and virtualization, and hybrid configurations are ideal for media archives, Veeam backup storage, and home directories. QuantaStor delivers both. Scale-out configurations provide high-performance NAS and S3-compatible object storage with scalability to over 50PB per cluster. Scale-up configurations provide SAN and NAS storage with less hardware, making them more cost-effective but generally limited to 6PB or less per cluster.

End-to-End Encryption and Security

QuantaStor delivers end-to-end security coverage, enabling multi-layer data protection on the wire and for data at rest. With NIST 800-53, 800-171, HIPAA, CJIS compliance, and FIPS 140-2 certification, QuantaStor provides advanced security features required by government and regulated industries.

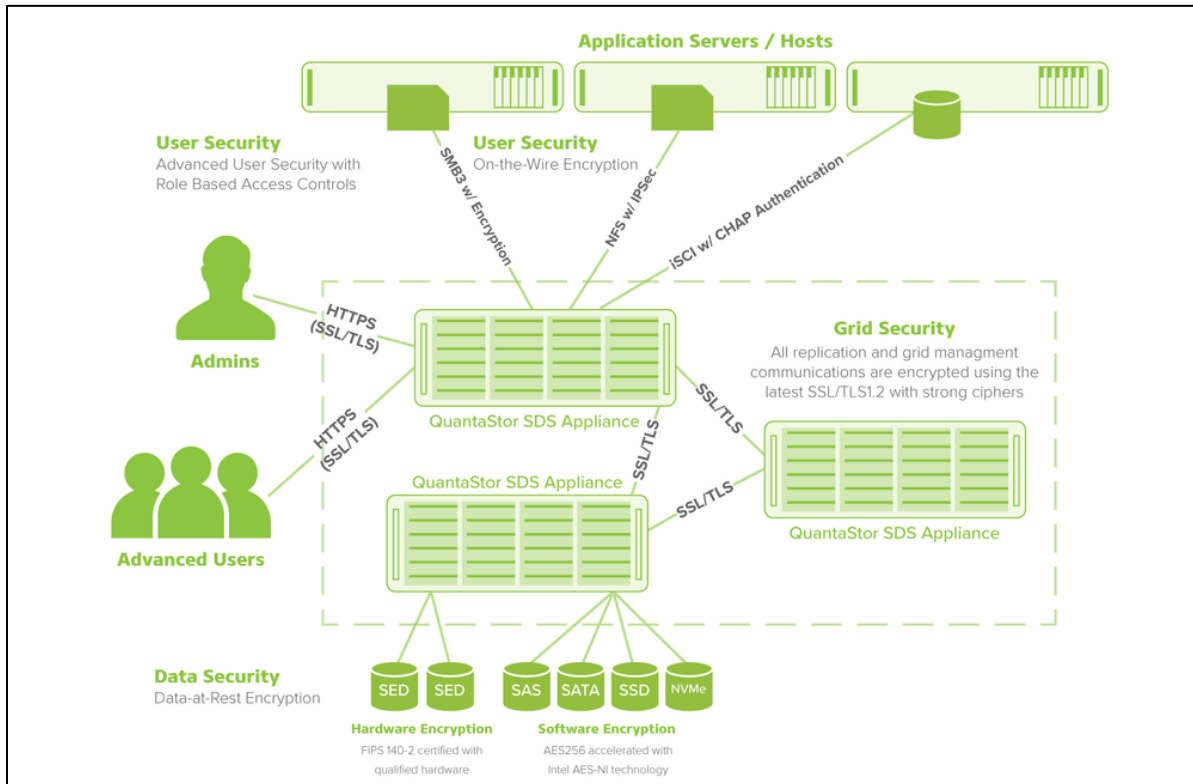


Figure 2: QuantaStor's end-to-end security coverage, enabling multi-layer data protection on the wire and for data at rest. (Image Courtesy of OSNexus)

Open Storage Foundation

OSNexus is dedicated to advancing open-source storage technologies and is a member of the Ceph Foundation and Linux Foundation. QuantaStor integrates with mature enterprise open-source storage technologies like Ceph and OpenZFS to deliver rapid innovations at a lower cost and without the vendor lock-in that comes with proprietary file systems.



Scale-out Solutions

Scale-out solutions provide cost-effective NAS and S3-compatible scale-out object storage that delivers high performance. In addition, scale-out solutions provide the ability to start small and grow to over 50PB in a single cluster.



Supermicro 4U 60/90 bay server, **SSG-640SP-E1CR60/90**, is combined to form a high-density hybrid scale-out file and object storage solutions, designed for service providers, research data, on-prem cloud, and etc.



Supermicro 1U X13 All flash E1.S Petascale Storage Server, **SSG-121E-NES24R**, is ideal for high-performance all-flash scale-out file and object storage solutions, designed for fast ingest, fast throughput.



Supermicro NVMe 2U24 server, **AS-2114S-WN24RT**, is ideal for high-performance all-flash scale-out file and object storage solutions, designed for multi-stream backup, and etc.

Scale-up Solutions

Scale-up storage clusters provide highly-available SAN/NAS storage designed around a two-server cluster model using SAS & NL-SAS shared storage from JBODs/JBOFs. All-flash configurations are great for databases and virtualization. In contrast, hybrid configurations provide low-cost, high-density NAS for various use cases such as media archives, Veeam backup storage, and home directories. All major block (iSCSI/FC/NVMe-oF) and file (SMB3/NFS4) protocols are supported.



Scale-up configurations use two servers as highly-available controllers combined with one or more external JBODs (**12Bays, 24Bays, 44Bays, 60Bays, and up to 90Bays**) with SAS and NL-SAS media, designed for NAS, Small-Med enterprise, and basic virtualization.



Compact all-in-one HA solutions using the Storage Bridge Bay hardware architecture are also available including an all-flash 2U24 NVMe option, **SSG-2029P-DN2R24L**, and a 4U60/90 bay option, **SSG-640SP-DE2CR60/90**, using SAS and NL-SAS media.

For more certified Supermicro servers and details, please check out the solution page at <https://www.supermicro.com/en/solutions/osnexus>.

ABOUT OSNEXUS

OSNexus QuantaStor enables organizations to replace traditional SAN/NAS systems with standard servers to deliver robust, reliable, and highly scalable object, file, and block storage solutions that are easy to manage. To start designing a QuantaStor solution, see our web-based design apps at <https://www.osnexus.com/zfs-designer?conf=smc> for scale-up solutions, and <https://www.osnexus.com/ceph-designer?conf=smc> for scale-out solutions. Go to [osnexus.com/freetrial](https://www.osnexus.com/freetrial) for Trial Edition licenses or write to us at info@osnexus.com for more information. www.osnexus.com