Datasheet

NetApp StorageGRID Webscale SG5600 Appliance

Enterprise-grade object storage in an
easy-to-deploy appliance

Key Benefits

Enterprise-Grade Object Storage
Combining best-in-class E-Series hardware with StorageGRID® Webscale object storage software creates a solution for the most demanding workloads.

Simple to Deploy and Manage
StorageGRID Webscale appliance arrives ready to deploy with onboard embedded compute. Use this modular building block to create new installations or expand existing environments.

Achieve Performance and Density
Fully configured and optimized for StorageGRID Webscale, the SG5600 delivers reliable and consistent performance. Combining compute and storage in a single dense enclosure reduces data center footprint. Choose the 4U 60-drive SG5660 to optimize storage density or the 2U 12-drive SG5612 for compute density.

Optimized Data Protection
Hierarchical erasure coding combines node-level and distributed coding to provide optimized data protection while making sure of consistent performance.

Lower Cost per Gigabyte
Appliance-based configurations reduce the cost of external compute, storage networks, and hypervisor licensing.

The Challenge
Building an object storage solution requires IT staff to design, configure, deploy, and support massive amounts of compute and storage. Creating an optimal solution while balancing cost, performance, and resiliency is a daunting task.

The Solution
The NetApp® SG5600 combines storage and compute into a single chassis to create a building block for enterprise-grade object storage. Preconfigured and fully optimized, the appliance enables administrators to rapidly deploy storage nodes for StorageGRID Webscale:

- Customers can choose the 4U 60-drive or 2U 12-drive appliance. The chassis contains both compute and storage in a single, easy-to-deploy and serviceable form factor. Increased density saves data center rack space and energy, driving further savings.
- StorageGRID Webscale software runs on internal compute for maximum efficiency and performance.
- Guided by active metadata-driven policies, StorageGRID Webscale provides availability, durability, and geo-distribution of objects using advanced N-way replication and distributed coding techniques.
- E-Series SANtricity® provides node-level erasure coding with Dynamic Disk Pools (DDP), allowing the use of large-capacity hard drives while delivering consistent and optimal performance.

Rely on a Proven Solution
When setting out to create an object storage architecture, customers understand they are designing a solution for massive scale and long-term retention. With the proven track record of StorageGRID Webscale software and NetApp E-Series storage, customers can be confident they are building on a rock solid foundation.

The SG5600 combines best-in-class software and hardware into a purpose-built appliance. StorageGRID Webscale is a 10th-generation object store with a track record of production deployments in the most demanding workloads. The E-Series installed base of nearly one million units deployed is a testament to the performance and reliability of the E-Series product line.

Figure 1) The SG5600 is available in both 2U and 4U configurations

Get Flexibility and Resilience
StorageGRID Webscale nodes, whether running on the SG5600 appliance or as virtual machines (VMs), are nodes within a resilient grid. Customers have the flexibility to deploy VM-based storage nodes with full interoperability with the SG5600 appliance. The choice of 2U and 4U models enables customer to further optimize for compute and storage density for varying workloads. Nodes can be added to increase capacity and replaced for maintenance or upgrade without service interruption.

Optimize Data Protection and Efficiency
Building object storage on the strength of E-Series DDP erasure coding provides data protection at the node level. Leveraging this with the geo-distributed coding across nodes and sites provides for geo-protection, optimal efficiency, and data durability. With hierarchical erasure coding, customers can create policy-driven data protection with multiple levels of granularity, choosing a combination of full copies and/or erasure-coded copies to meet SLAs while driving significant cost savings.

With disk failure handled by DDP, system performance is unaffected, and the need to do cross-site repair of objects is greatly reduced, providing consistent performance, while continuing to deliver outstanding availability and reliability.

Reduce Complexity
The SG5600 reduces complexity of balancing compute and storage resources by providing a finely tuned and preconfigured unit. Whether deploying a new StorageGRID Webscale environment or expanding an existing one, customers simply rack and cable the appliance and add it to the grid using the StorageGRID Webscale Installer. Configuration of the appliance is fully automatic.

Combining storage and compute also simplifies support. The SG5600 is backed by the NetApp world-class support and development organization. Advanced features such as AutoSupport™ provide proactive and immediate response to address any issue rapidly.

Increase Cost Savings
The SG5600 is a core building block for enterprise-grade object storage. When StorageGRID Webscale software runs directly on the embedded compute, the need for hypervisor licensing is reduced. Combining storage and compute into a single chassis reduces footprint on the data center floor, resulting in further cost savings.

KEY FEATURES FOR OBJECT STORAGE INFRASTRUCTURE	NETAPP SG5600 PROVIDES
Modular architecture	• Preconfigured and optimized building block • Ability to rapidly expand by simply adding more appliances • Simple installation and management
Cost efficiency	• Space-efficiency: Combine optimized storage and compute into a single chassis • Hierarchical erasure coding • Reduced licensing and management by reducing the need for hypervisors
Consistent performance	• StorageGRID Webscale takes full advantage of dedicated compute • Dynamic Disk Pools provide consistent performance and reduce replication traffic due to disk failure
Enterprise-grade reliability	• Built on the real-world tested foundation of E-Series • 10th-generation object storage
World-class support	• Backed by NetApp Global Support • AutoSupport (ASUP™) provides proactive support for hardware and software

NETAPP SG5600 SPECIFICATIONS

Model	SG5660	SG5612
Raw capacity	4TB drives = 240TB or 6TB drives = 360TB	4TB drives = 48TB or 6TB drives = 72TB
Form factor	4U, 60 drives	2U, 12 drives
Connectivity	10GbE	10GbE

SG5600 DIMENSIONS AND WEIGHT

Model	SG5660	SG5612
Height	7.0" (17.78cm)	3.4" (8.64cm)
Width	19" (48.26cm)	19" (48.26cm)
Depth	32.5" (82.55cm)	21.75" (55.25cm)
Weight	232lb (105.2kg)	59.52lb (27kg)

SG5600 ENVIRONMENTAL (BASED ON E5600)

	SG5660		SG5612	
	Typical	Maximum	Typical	Maximum
KVA	1.115	1.325	0.475	0.625
Watts	1,104	1,312	470	619
BTU	3,767	4,477	1,605	2,111

About NetApp

Leading organizations worldwide count on NetApp for software, systems and services to manage and store their data. Customers value our teamwork, expertise and passion for helping them succeed now and into the future.

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