



Highlights

- **Easy Deployment:** All you need are rack space, power and network connections
- **Dynamic Scalability:** Support rapid growth with scale-up and scale-out configurations
- **Extreme Data Durability:** Prevent data loss and data corruption with BitDynamics, BitSpread, advanced erasure coding and versioning
- **High Availability:** Protect data from system or site outages with 3-geo configurations or 2-site data replication
- **Low TCO:** Leverage vertical integration and high-density, power-efficient drives to slash both CapEx and OpEx
- **Cloud Management:** Drive intelligent petabyte-scale management with ActiveScale SM and CM

Applications/Workloads



Data Protection

- Backup and archive
- Tape consolidation
- Disaster recovery



Analytics and Machine Learning

- Data lakes and big data analytics
- Predictive modeling
- Supply chain optimization



Digital Repositories

- Digital assets
- Sync and share collaboration
- Unstructured data repositories



Media and Entertainment

- Digital media archives
- Cloud bursting
- File ingest

The ActiveScale™ P100 is a modular cloud object storage system that facilitates a “Data Forever” architecture, combining excellent data and investment protection with ease of operation. Enterprises can scale out to over 23PB (raw) – within a single data center or across multiple geographies (geo-spread). The ActiveScale P100 is designed for large-scale unstructured data sets that require long-term retention and fast retrieval, so you can easily keep up with rapid data growth and demanding business objectives.

Simplified Deployment and Operation

The ActiveScale P100 provides an Amazon S3™-compliant object interface that easily integrates with your existing S3-aware applications and enables a hybrid cloud configuration. Unified Data Access provides additional flexibility, enabling your cold NFS files to be ingested and stored cost-effectively in the same highly scalable object storage system. ActiveScale SM offers real-time system management across an entire namespace, not just a single rack. And for strategic management, ActiveScale CM cloud-based analytics provide historical trends and predictive capabilities to drive smarter decisions and optimal business results.

Dynamic Scalability

The ActiveScale P100 is based on a modular storage node architecture that starts with 864TB of raw storage and scales up in increments of 864TB to over 2.5PB in a single instance. Front-end I/O connectivity and back-end storage capacity can be scaled independently to meet your changing application needs. The system can scale out to over 23PB using a 3-site configuration. Each system delivers up to 8GB/sec throughput, with scale-out performance of up to 20GB/sec for high productivity environments. Patented dynamic data placement technology lets you grow your system without re-balancing or forklift upgrades. As a result, IT staff can easily add capacity and performance to keep up with high data growth rates and utilization.

Extreme Availability and Durability

Advanced system availability is essential for a highly resilient cloud infrastructure. When deployed in a 3-site configuration, the ActiveScale solution disperses data geographically for extreme availability, delivering continuous data access even in the event of a data center outage. You can maintain uninterrupted operations and data consistency at significantly lower costs than traditional replication-based architectures. Two-site asynchronous replication is also available for customers without three data centers. Amazon Web Services™ customers also have the flexibility to deploy a hybrid cloud configuration that replicates objects from the ActiveScale P100 to Amazon S3 for backups or analytics jobs. Advanced erasure coding and patented BitSpread® technology deliver extreme data durability – up to 19 nines. In addition, BitDynamics™ provides high data integrity with continuous data monitoring, repair and verification. Object versioning enhances data durability by enabling you to easily recover data from user errors or security threats. Together, these advanced technologies facilitate a highly available Data Forever architecture.

Revolutionizing the Economics of Storage

Vertical integration and innovation – from silicon to systems – enables the ActiveScale P100 to slash CapEx and deliver cloud-scale capacity at a fraction of the cost of DIY systems. Patented helium-filled hard drives help drive down power and cooling costs and overall OpEx compared to systems that use traditional disk drives. ActiveScale solutions are also available with Pay-as-you-Grow pricing, which helps you align IT budgets with capacity requirements and avoid wasted resources. Unprecedented economic value and data durability, combined with outstanding scalability and ease-of-use make the ActiveScale P100 a solution of choice for large-scale object storage.

Specifications

	Base Configuration	Scale-Up Module	Standard Instance Base + 2 scale-up modules
Capacity¹			
Configuration capacity (raw/usable) 12TB HDDs	864/579–614TB	864/579–614TB	2.59/1.74–1.84PB
Maximum namespace (raw/usable) 12TB HDDs		23.3/12.5–13.8PB	
Maximum number of objects	0.6B	0.6B	5.4B
Maximum multi-part object size		50TB	
Software			
Operating system software	ActiveScale OS 5.x		
Management interfaces	Real-time System Management Web UI, CLI, RESTful API		
System analytics	ActiveScale CM, a cloud-based storage analytics service		
Security	Data encryption in flight SSL/TLS using AES-256, Data encryption at rest (AES-256)		
Data protection	BitSpread: Advanced Erasure Coding and Dynamic Data Placement		
SW/FW upgrades	Nondisruptive rolling upgrades		
Characteristics			
Performance	Client throughput performance up to 8GB/sec and up to 20GB/sec in scale-out configuration ²		
Data durability	Up to 19 nines (99.9999999999999999%)		
Connectivity			
Protocols	RESTful S3, NFSv3		
Client connectivity	60Gbps/base (6x10Gb/sec) Maximum connectivity of 120 Gbps with Advanced System Scale-out		
Physical Size³			
Rack space requirements (rack units)	12RU	6RU	24RU
Configuration weight (kg/lbs)	274 kg/605 lbs	191 kg/421 lbs	656 kg/1,447 lbs
Power			
Power consumption – typical/max (W)	1.85/2.03 kW	1.38/1.51 kW	4.61/5.08 kW
Power consumption – typical/max (kVA)	1.89/2.06 kVA	1.39/1.53 kVA	4.67/5.12 kVA
Power characteristics	100–240V, single-phase or three-phase with redundancy and intelligent power		
Environmental			
Cooling	Redundant high efficiency fans		
Temperature range- operating (C/F)	10°C to 35°C/50°F to 95°F		
Temperature range- non-operating (C/F)	-40°C to 70°C/ -40°F to 158°F		
Humidity	20% to 90% (relative humidity)		
Compliance	FCC/ICES-003, CE, VCCI, CISPR 22, CISPR 24, KN22, KN24, EN60950-1 2nd edition, UL60950-1 2nd edition		
BTUs/hr (typical/max)	6.31/6.92 K BTU/h	4.70/5.15 K BTU/h	15.71/17.22 K BTU/h
Carbon footprint (max)	0.001 Metric Tons	0.001 Metric Tons	0.003 Metric Tons

¹ One megabyte (MB) is equal to one million bytes, one gigabyte (GB) is equal to one billion bytes, one terabyte (TB) equals 1,000GB (one trillion bytes) and one petabyte (PB) equals 1,000TB when referring to storage capacity. Usable capacity will vary from the raw capacity due to object storage methodologies and other factors.

² Performance may vary based on network conditions, system configuration, workload, and other factors.

³ Rack not included. Customer must supply rack and PDU.

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