



The ActiveScale™ P100 is a modular cloud object storage system that allows you to scale-out or geo-spread to over 23PB (raw), so you can easily keep up with data growth, storage management needs and deliver on business objectives. For large-scale data that requires long-term retention with easy and fast retrieval, the ActiveScale P100 is designed to facilitate a "Data Forever" architecture for investment protection and ease of operation.

Simple to Install and Use

For large-scale data, the ActiveScale P100 presents an Amazon S3™-compliant object interface that can easily integrate with existing S3-aware applications. Real-time system management is provided by ActiveScale SM which manages an entire namespace, not just one rack. Additionally, ActiveScale CM cloud-based analytics provides historical and predictive capabilities to better monitor large-scale storage efficiently and effectively.

Simple Scalability

The ActiveScale P100 is based on a modular storage node architecture that starts with 864 terabytes (TB) of raw storage and scales up in increments of 864TB to over 2PB. Additionally, the system can scale out or geo-spread to over 23PB now with 3 geo scale out. Each system delivers up to 8GB/sec throughput or scale-out performance of up to 20GB/sec for high productivity and supports a performance option for even better performance. Grow your system without re-balancing and avoid forklift upgrades with patented dynamic data placement. IT staff can easily add capacity and performance to keep up with high data growth rates, and manage it with ease.

Outstanding Availability and Durability

Advanced system availability is essential for a world-class cloud infrastructure. The ActiveScale P100 can be deployed in a 3-site configuration to geographically disperse data for extreme availability. Even with a data center outage, the 3-site configuration delivers continuous data availability for uninterrupted operations with strong consistency at a lower cost than traditional replicated architectures. Where 3-site configurations are not appropriate, 2-site asynchronous replication is also available as an eventual consistency option. For even greater availability, you can also replicate objects to Amazon Web Services for an offsite copy of valuable data for additional flexibility you can create a hybrid cloud configuration and optimize Amazon Web Services™ for analytics jobs. Data durability comes from advanced erasure coding and patented **BitSpread**® technology. In addition, **BitDynamics**™ provides high data integrity using background verification and assurance. Facilitating a Data Forever Architecture can take advantage of object versioning to control how objects are managed over their lifetime for a convenient way to manage long lived data.

Changing the Economics of Storage

Through vertical integration and innovation, ActiveScale P100 delivers large-scale capacity and growth at less than a DIY cost for significant CAPEX savings. Utilizing our patented helium-filled hard drives, ActiveScale benefits from low power and significantly less cooling than traditional drives, providing a lower OPEX. Value is more than low TCO, you can increase the value of your data by utilizing the portfolio of solution partners available for ActiveScale. With Pay-as-You-Grow utility pricing, IT staff no longer needs to buy ahead of consumption and can better match budget and capacity needs. The outstanding economics, simplicity of use and easy growth make the ActiveScale System a wise storage investment.

Highlights

- **Easy to Deploy:** Rack space, power and network connections are all that is needed
- **Easy to Scale:** Increase capacity with both scale-up and scale-out configurations
- **Extreme Data Durability:** Data protection with BitDynamics, BitSpread, versioning, and advanced erasure coding
- **System Availability:** Geo-spread or local and AWS™ asynchronous replication to protect data
- **Excellent TCO:** Low acquisition cost, power/TB, and operating costs with high density
- **Management:** ActiveScale SM & CM manage your entire namespace for efficient petabyte-scale storage management

Applications/Environment



Finance

- Data lakes for analytics
- Fast recovery from outages



Media & Entertainment

- Production Media Archive
- On-premises S3 Media Target



Life Sciences and Health Care

- Genome data banks
- Bioimaging



Backup and Archive

- Tape consolidation
- Active data repository



Analytic Storage Tier

- Data lake repository

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		23.3/15.6–16.5PB	
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 Console, CLI, RESTful API		
System analytics	ActiveScale CM, a cloud-based storage analytics service		
Interface transfer rate (MB/s, max) 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 configurations		
Data durability	Up to 19 nines (99.999999999999999%)		
Connectivity			
Protocols	RESTful S3		
Client connectivity	60Gbps/base (6×10Gb/sec)		
Physical Size²			
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	208–240V, single-phase or three-phase with redundancy and intelligent power		
Environmental²			
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 Rack not included, customer must supply rack and PDU

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