



ActiveScale
P100 System

Highlights

- ▶ **Easy to Deploy:** Rack space, power and network connections are all that is needed
- ▶ **Flexible Scaling:** Increase capacity with both scale-up and scale-out configurations
- ▶ **High Resiliency:** Up to 17 nines of data durability with advanced erasure coding
- ▶ **System Availability:** Geo-spread system design protects data at less cost than traditional replication
- ▶ **Excellent TCO:** Low acquisition cost, power/TB, and operating costs
- ▶ **Management:** ActiveScale SM manages your entire namespace for efficient petabyte-scale storage management

Applications/Environments



Media & Entertainment

- Production Media Archive
- On-premises S3 Media Target



Life Sciences and Health Care

- Genome data banks
- Medical imaging



Backup and Archive

- Tape consolidation
- Active data repository



Analytic Storage Tier

- Big Data repository



Cloud Service Providers

- Backup as a Service
- Storage as a Service

The ActiveScale™ P100 is a modular object storage system that allows you to scale from 720TB (raw) to over 19PB (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 provides outstanding levels of simplicity, scalability, resiliency and affordability.

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 your entire namespace, not just one rack for petabyte-scale environments. Additionally, ActiveScale CM cloud-based analytics provide historical and predictive capabilities to better manage large-scale storage.

Extreme Scalability

The ActiveScale P100 is based on a modular architecture that starts with 720 terabytes (TB) of raw storage and grows in increments of 720TB to over 2PB. Additionally, the system can scale-out to over 19 petabytes. Each base configuration delivers up to 3.5GB/sec throughput for high productivity. 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 data availability and integrity are 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 at a much lower cost compared to classic double or triple mirror replication. Data durability comes from patented **BitSpread**® technology, a rateless erasure code alternative to RAID that sets a new resiliency standard. In addition, **BitDynamics**™ provides high data integrity using continual background verification and assurance. Finally, with the ActiveScale's strong consistency, in contrast with eventual consistency found in many other object storage systems, you don't have to worry about stale data impacting business decisions.

Compelling Total Cost of Ownership

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. Predictable budgets are a good thing, and organizations no longer have to risk unplanned public cloud data download charges by building an on-premises private cloud with ActiveScale P100. The outstanding economics, simplicity of use and easy growth make ActiveScale a wise storage investment.

ActiveScale™ P100 System

Specifications

	Base Configuration	Scale-Up Module	Full Instance
Capacity¹			
Configuration capacity (raw/usable)	720TB/480-508TB	720TB/480-508TB	19.4PB/12.9-13.7PB
1-geo configuration 9 nodes (raw/usable)	6.5PB/4.3-4.6PB		19.4PB/12.9-13.7PB
3-geo configuration 9 nodes (raw/usable)	2.1PB/1.1-1.3PB		19.4PB/10.3-12.4PB
Maximum number of objects	0.6B	0.6B	16.2B
Maximum multi-part object size		50TB	
Software			
Operating system software		ActiveScale OS 5	
Management interfaces		Real-time System Management Console, 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 Rateless Erasure Coding	
SW/FW upgrades		Nondisruptive rolling upgrades	
Reliability			
Data integrity		Tolerates 1000 bit errors per object	
Data durability		Up to 17 nines (99.99999999999999%)	
Connectivity			
Protocols		RESTful S3	
Client connectivity		60Gbps/base (6x10Gb/sec)	
Physical Size²			
Rack space requirements (rack units)	12RU	6RU	216RU
Configuration weight (kg/lbs)	274 kg/605 lbs	191 kg/421 lbs	5904 kg/13016 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		5°C to 35°C	
Temperature range - non-operating		-40°C to 65°C	
		8% to 90% (non-condensing)	
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 MB is equal to one million bytes, one GB is equal to one billion bytes, one TB equals 1,000GB (one trillion bytes) and one 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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