



AgilityStor Easy High Performance Unified Storage

A New, Modern Storage Architecture for the Multi-Petabyte Era and Beyond

Highlights

High Performance Parallel File System

AgilityStor combines a distributed parallel file system with powerful and reliable server and storage hardware. The software provides data redundancy and safety features and pools storage devices into a single, unified storage system that's easy to maintain.

Easy to Manage

AgilityStor's analytics and monitoring tools provide valuable insights into the usage and dynamics of an installation. Analytics include graphs for top users, throughput, IOPS, file stats and creates

Linear Scalability and Performance

- Direct communication from client to storage servers enables linear scalability
- Throughput and IOPS scale linearly with hardware resources
- Single file IO can scale to entire cluster bandwidth. Sub-millisecond latency
- Any number of clients or servers (starting with 4)

Advanced Data Protection

- Erasure coding: space-efficient protection for sequential writes and high-throughput workloads
- Replication: quorum-based replication for strong data consistency
- End-to-end checksums protect data and metadata in transit and at rest
- Automatic fail-over in software, no extra HA setup or cost
- Non-disruptive updates with zero downtime

Extensive Protocol Support

- NFSv3, NFSv4, SMB, S3
- POSIX Parallel Client for Linux, Mac, Windows and HDFS
- Shared ACLs across Linux, NFS, Windows, OS X, and S3 – incl. NFSv4 ACLs
- Tensorflow Plugin

World's Easiest High Performance Unified Storage Solution

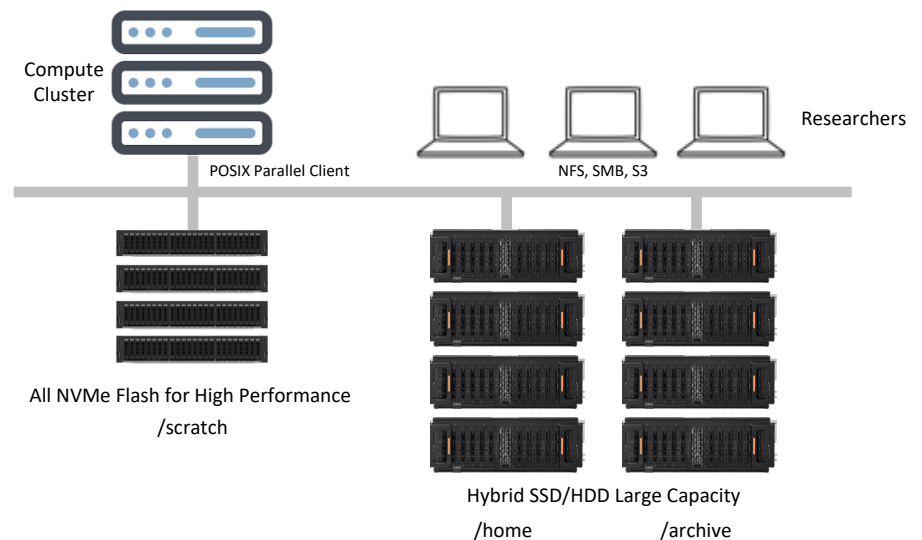
AgilityStor delivers super-easy high-performance storage while maintaining robust data availability in the face of inevitable disk or network failures at scale. AgilityStor is built to handle real-world failures and still remain operational. True end-to-end checksums of every data block assures data integrity, and ultra-low latency and fast meta-data operations keep up with the toughest small-file workloads. Hardware monitoring will offline an errant disk before it causes corruption, and self-healing heuristics route around node failures.

Affordable Performance and Easy Management at Scale

AgilityStor delivers operational ease and flexibility, with user-definable data placement, policy-driven tiering rules, and hardware pinning that give storage admins the freedom to optimize their environment according to workload. AgilityStor is far easier to operate than complex legacy parallel file systems. AgilityStor has unlimited data capacity, provides for non-disruptive live updates, and 1,000+ node scalability. Down the road, new hardware can be seamlessly added to your existing infrastructure, so you'll never outgrow your AgilityStor investment.

Automatic Policy-Based Internal Tiering and Data Driven Workflow Support

AgilityStor file system volumes are dynamically bound to storage resources through policies, which can control data location all the way down to the level of individual files. They enable tiering, isolation of workloads, subdivision into partitions, or taking advantage of heterogeneous hardware resources. When policies change, data placement is adapted accordingly without affecting service quality. AgilityStor supports and facilitates automated, data driven workflows. Cold data is transparently moved from fast to bulk storage for economic preservation. Placement policies also define data protection, striping, and block size.



AgilityStor Multi-tier, Single Namespace Architecture
Ingest, Process, Archive, and Share – On a Single Unified Storage System

Leading-Edge Security

- At-rest data encryption
- Integrated certificate management
- Management authentication via LDAP, OpenStack Keystone or integrated user management
- NFSv4 ACLs
- Multi-tenancy on the logical and physical level

High IOPS

Consistent sub-millisecond latency

Self Healing

“Lights-out” data center resiliency

End-to-End Checksum

End-to-end CRC assures data integrity, eliminates “bit rot”

Leadership Reliability

AgilityStor is delivered fully integrated, with top quality, industry standard hardware for maximum performance, reliability and data protection

Expert Architectural Solution Design, Tuning, and Implementation

Applied Data Systems performs extensive analysis of existing and future needs, comprehensive solution architecture and validated hardware and software build that ships fully integrated

Flexible Building Blocks

AgilityStor is delivered as a modular, repeatable, and highly supportable solution consisting of best of breed industry standard components

White Glove Installation and Support

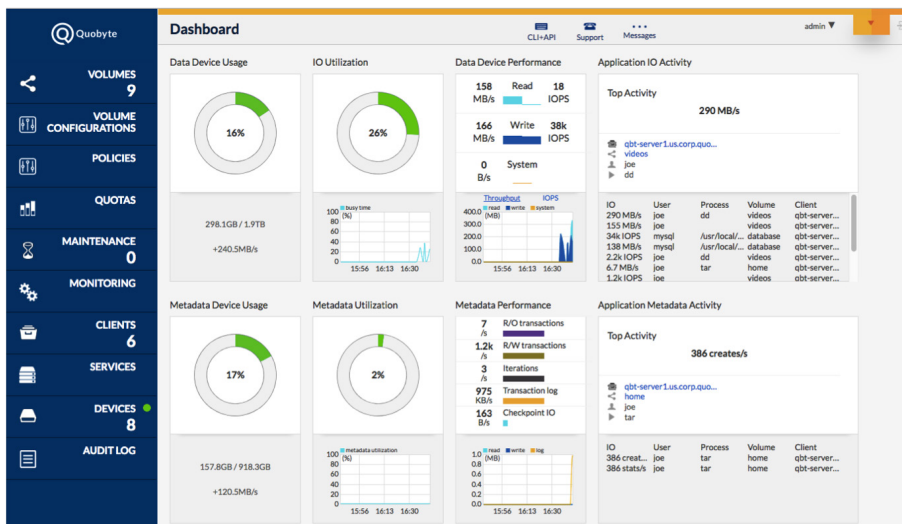
AgilityStor is expertly installed and supported by Applied Data Systems who is the single point of contact for all support issues

Exclusively Focused on Technical Computing and Data Management

Applied Data Systems is 100% focused on technical computing, specializing in CPU and GPU computing, low latency networking and high-performance storage

Integrated Monitoring and Analytics

Graphical administration and monitoring provide easy management, avoiding the notorious complexity of legacy parallel file systems. Included are graphs for top consumers, throughput, IOPS, file stats and creates. Built-in monitoring, alerting, and automation along with an interface to external monitoring systems make AgilityStor a complete system out-of-the-box.



Built-In Hardware Management

Make your admins happy with SMART monitoring and hardware watchdogs. Automatic scrubbing, detection, and repair of corrupted data, and drain a server with one click. Our device inspector detects and initializes new devices. AgilityStor’s device lifecycle management and workflows enable lights-out operations.

Specifications

Interfaces	Native Client: Standard Protocols: Plugin:	Linux, Mac, Windows, HDFS NFSv3, NFSv4, SMB, S3 TensorFlow
Parallel I/O	Striping, direct communication from client to many storage servers	
Data Protection	Erasure coding or replication, configurable at the file level	
High Availability	Built-in, with transparent failover	
Checksums	End-to-end CRC32 at the block level	
Intelligent Data Placement	Dynamic and policy-defined down to the file level; enables performance isolation, system partitioning, tiering, and intelligent placement by locality	
Quotas	Based on capacity/files/file systems; per user, group, file system or tenant	
Block Size	512 bytes to 2MB, configurable for each file	
Scalability	Servers: Capacity: File Systems: Files:	4-10,000s Unlimited, max. 32PB per file Unlimited Up to 100,000,000 per file system



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