

Atrato® Velocity1000

In today's business environment rapid expansion of digital data and longer retention periods have prompted new requirements in storage performance and scale. Simply adding rack units for increased power has failed to deliver the necessary performance gains and added costly energy and space overhead to the data center. Today's challenge: to unite cost-effective storage with immediate access to stored information, and minimize the management complexity.

Advanced data acceleration opens doors to new opportunities

The Atrato® Velocity1000 (V1000) solves the capacity/performance tradeoff and conquers I/O bottlenecks between storage and servers. This high-density storage system combines 160 identical hard disk drives (HDDs) and advanced data acceleration features to deliver higher performance and availability. Solid state disk (SSD) technology is available to maximize performance, providing instantaneous access to your data. This perfect marriage of agility and efficiency is ideal for the most demanding storage applications.

Design offers performance, availability and cost advantages

Commerce never rests, and Atrato believes that your storage solution should not either. The V1000 offers RAID 10 and 50, and integrates virtualization software to ensure the highest levels of availability. AVS' (Atrato Virtualization Software) self-healing feature set extends the health of the drives and system. Its patented FDIR (fault detection, isolation, recovery) technology makes sure that data is readily accessible, and full capacity is available for three years or more without service interruptions. The V1000 achieves unmatched performance and availability while remaining the greenest solution in its class. The system saves up to 80% in power and cooling costs and 50% on the total cost of operation; it provides unprecedented savings in dollars per watt and dollars per IOPS.

Autonomic intelligence challenges traditional thinking

With the introduction of SSDs, IT departments have the ability to optimize storage performance and scale like never before. ApplicationSmart tiered management software leapfrogs traditional application-aware storage and introduces added intelligence that identifies data access patterns to optimize the use of storage tiers. You no longer have to decide which files need to reside in a particular tier. ApplicationSmart does the work automatically, dynamically managing storage based on your unique access patterns.

Flexible building blocks deliver investment protection

Investment protection is a priority in today's economic times. Customers can no longer justify forklift upgrades to implement the next generation storage architecture. The V1000 offers customers flexibility to invest in today's technology and upgrade cost effectively down the road.

Access. The Revolution.™

Companies today are looking for innovative solutions that allow them to be flexible and nimble. Atrato offers the perfect addition for all businesses that need a storage solution that adapts to their business needs. Digital media, Web 2.0 and high performance computing are a few markets where Atrato's storage solutions can provide significant advantage. Performance, manageability and efficiency all contribute to storage excellence, and the Velocity Series is best in its class. Industry-leading performance originates in the SAID (Self-maintaining Array of Identical Disks), extending to new levels of performance with solid state disk. When compared to other solutions, this scalable system is raising the bar by offering unparalleled performance, lower operational costs, and an intelligent, self-managing architecture. Now businesses can manage and optimize access of their data, effortlessly. Contact us today to learn more.

HIGHLIGHTS

Extreme Performance

- 1.4GB/sec Throughput
- Data Acceleration
- Tier 0 (Solid State Disk)
- RAID 10, 50

Extreme Capacity

- 25.6, 51.2, 80TB of HDD
- Supports 2.56TB of SSD

Most Green

- Up to 75% Less Rack Space
- 50%-80% Less Power & Cooling
- Lowest TCO

Investment Protection

- Data Access Controller
- SAID Disk Enclosure
- Solid State Disk Enclosure

Intelligent Management

- Autonomic Design
- Access Profiler
- Self-Optimizing
- Self-Healing
- Virtualization Software



System Highlights

Atrato Virtualization Software (AVS)

Atrato Virtualization Software (AVS) brings autonomic intelligence to storage. Fail-in-place design including preventative drive maintenance, error handling, hot spare management (fans, controller, power supplies), virtual sparing, background drive scrubbing, duty cycle management.

FDIR (fault detection, isolation and recovery) design with SMART, SES, SCSI sense data, SAS link management, drive state management, RAID recovery and data migration support.

- RAID 10, RAID 50
- LUN mapping with WWN
- Real-time data verification
- Host management software
- Supports Windows, Linux, Solaris
- VDS, VSS Support

ApplicationSmart Software (AVS)

ApplicationSmart extends the capabilities of the Velocity 1000 beyond the traditional storage array. With a machine learning architecture, management of tiered storage is simple and highly optimized. SSD LUN Manager (SLM) supports the creation of LUN's strictly in SSD storage. Tier Management Engine (TME) supports the creation of Hybrid VLUNs (Spinning Disk and SSD resources) and the dynamic management of data between tiers of storage. Ingest Accelerator(IA) takes inbound data streams and reformats the blocks to improve handling and retrieval when read. Egress Accelerator(EA) recognizes read access (sequential) patterns, and accelerates access of sequential data. Access Profiler (AP) provides real-time analysis of data traffic patterns. Resulting data is analyzed and recommendations are made to optimize performance.

Communication

- Java-based GUI, remote administration
- SMTP
- Windows IHV Provider Modules

Host Interface

- 4 full-duplex 4Gbps FC ports
- 4 10Gbps iSCSI ports

Self-maintaining Array of Identical Disks (SAID)

Total Capacity (raw)

25.6TB; 51.2TB; 80TB

Formatable Capacity

(RAID 10)	(RAID 50)
11.2TB; 22.4TB; 35TB	17.9TB; 35.8TB; 56TB

Security

- Physical: Sealed array, no access to individual drives
- Logical Data: RAID-10 (n-way)
- Content Protection: 128bit AES Encryption (Optional)

Cooling

8 fans, variable speed control up to 400 CFM

Warranty

- 3-years hardware
- 90-day software with extended support plan options available

Agency Certifications

UL, CE, FCC Class A

Velocity1000

Typical Performance

- 16,000 IOPS, random read at 4k block size
- 1.4 GB/sec, random read at 512k block size
- 3,700 content streams at 3.75 Mb/sec

Tier 0, VxSSD

Typical Configuration

- 1U drive enclosure
- 10 SSDs per enclosure
- Scalable to 4 enclosures per controller
- Supports multiple systems

Dimensions

Physical Dimensions - height x width x depth

- SAID: 5.2" (13.2 cm); 17" (43.2 cm); 27" (68.6 cm)
- Controller: 3.36" (8.54 cm); 17.5" (44.36 cm); 27.5" (69.8 cm)
- VxSSD: 1.75" (4.44cm); 19" (48.26 cm); 27.6" (70.1 cm)

Physical Weight

- SAID: 85 lbs (38.56 kg)
- Controller: 46.5 to 65 lbs (21.1 - 29.49 kg)
- VxSSD: 33 lbs (15 kg)

Power, Heat & Environment

Electrical, Power, Thermal

- AC Voltage: Single Phase 100 - 120 / 200 - 240
- Typical Current for SAID and Power Shelf: 4.7A at 208V
- SAID and Power Shelf: 1,000W 3,500 Btu/hour
- Controller: 250W 875 Btu/hour

Environmental

- Operating Temperature: 50°F - 95°F (10°C - 35°C)
- Non-Operating: 50°F - 109°F (10°C - 43°C)
- Shipment: -40°F - 140°F (-40°C - 60°C)
- Humidity: 8% - 80% non-condensing