ATRATO
ACCESS. THE REVOLUTION.™

Atrato® *Velocity1000*

In today's business environment IT professionals face a number of challenging issues. Elite among those challenges is effective management of storage resources. The storage industry has made great advances in storage hardware, but software has not kept pace. The current issue plaguing IT professionals is effective management of storage tiers. With the recent introduction of solid state disk (SSD) technology, the ability to effectively utilize Tier 0 is imminent. IT professionals are anxious to embrace this new technology; however, they lack the tools needed to optimize its use.

Autonomic intelligence challenges traditional thinking

Management of tiered storage has long been a challenge. With the introduction of SSD, Tier 0 offers IT departments the ability to optimize storage performance and scale like never before. But with this added layer, comes added complexity. Atrato Virtualization Software (AVS) leap frogs traditional application-aware storage and introduces intelligent software that learns data access patterns to optimize the use of Tier 0 and Tier 1 storage. IT administrators no longer have to decide which files need to reside in a particular tier. With AVS, administrators can choose to allocate VLUNs or have the system to do it for them, dynamically managing storage based on actual access patterns.

Advanced data acceleration opens doors to new opportunities

Atrato is revolutionizing the data management and storage markets by offering new levels of storage performance. The Atrato® Velocity1000 (V1000) solves the capacity/accessibility tradeoff and conquers I/O bottlenecks between storage and servers. This high-density storage system combines 160 identical hard disk drives (HDDs), terabytes of SSDs and new advanced data acceleration features to ensure applications perform as never before. This perfect marriage of agility and efficiency shatters the barriers to instantaneous information access and continuous content streaming without sacrificing capacity or scale.

Design offers performance, availability and cost advantages

Commerce never rests, and Atrato believes that your storage solution should not either. The V1000 offers RAID 0, 10 and 50, and integrates virtualization software to eliminate any single point of failure. Atrato takes this a step further by solidifying the system with FDIR (fault detection, isolation, recovery) technology. The system offers predictive fail-in-place, auto-rebuild disk management, and redundant component design including data paths and power systems with three-years of zero drive maintenance. The V1000 achieves unmatched performance 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.

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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 all of their data, effortlessly. Contact us today to learn more.

HIGHLIGHTS

Intelligent Management
- Autonomic Design
- Self-Optimizing
- Self-Healing
- Virtualization Software

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

Extreme Capacity
- 25.6, 51.2, 80TB Tier 1, 2
- 1.2TB SSD via Controller
- Supports 1.6TB JBOFs

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

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System Highlights

Software Features

Atrato Virtualization Software (AVS) brings autonomic intelligence to storage. With a machine learning architecture, management of Tier 0 and Tier 1 storage is simple and highly optimized. 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 0, RAID 10, RAID 50
LUN mapping with WWN
Real-time data verification
Host management software
Supports Windows, Linux, Solaris
VDS, VSS Support

Communication

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

Host Interface

4 full-duplex 4Gbps FC ports

Self-maintaining Array of Identical Disks (SAID)

Total Capacity (raw)

25.6TB; 51.2TB; 80TB

Formatable Capacity

(RAID 10)
11.2TB; 22.4TB; 35TB
(RAID 50)
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, Solid State Disks

Typical Performance

8-Pack Expansion Unit:
80,000 IOPS, 4k block size
800 MB/sec, read and write over range of IO request sizes (4k to 128k)

JBOF (Just a Bunch of Flash) with 10 SSDs:
100,000 IOPS, 4k block size
1 GB/sec, read and write over range of IO request sizes (4k to 128k)
*Performance based on Single Level Cell (SLC) NAND flash; also supports Multi Level Cell (MLC) NAND flash

Dimensions

Physical Dimensions - height x width x depth

SAID: 5.2" (13.2 cm); 17" (43.2 cm); 27" (68.6 cm)
Controller Option I: 3.36" (8.54 cm); 17.5" (44.36 cm); 27.5" (69.8 cm)
Controller Option II: 6.94" (17.6 cm); 19.0" (48.3 cm); 26.5" (67.3 cm)
JBOF: 1.75" (4.44cm)l; 19" (48.26 cm); 27.6" (70.1 cm)

Physical Weight

SAID: 85 lbs (38.56 kg)
Controller Option I: 46.5 to 65 lbs (21.1 - 29.49 kg)
Controller Option II: 71 to 100 lbs (32.2 - 45.4 kg)
JBOF: 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 Option I:	250W	875 Btu/hour
Controller Option II:	425W	1,500 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

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