Datasheet

The New NetApp FAS3200 Series Enables Flash, Clustering to Improve IT Agility and Performance

KEY BENEFITS

Designed for an Agile Data Infrastructure
- Intelligent management reduces complexity to deliver business impact faster
- Immortal operations that are non-disruptive to eliminate planned downtime
- Infinite scaling allows your business and storage infrastructure to grow without limits

Improved Speed and Scalability
- New models deliver up to 80% more processing power and 100% more capacity.

Flash Ready to Boost Performance
- Up to 2TB of on-board Flash Cache or Flash Pool provides instant response to workload spikes.

Nondisruptive Operations
- Update and expand storage infrastructure with zero disruption to users.

Cluster-Ready Architecture
- Seamlessly scale to meet new business demands without undue complexity.

The Challenge

The pace and complexity of data-driven businesses are creating new challenges for IT. Every year, applications require higher I/O performance and larger storage footprints to quickly and efficiently store and retrieve data—and to satisfy the needs of advanced analytics and data intelligence projects. These challenges necessitate storage that can respond with quickness and agility to changing business needs while benefiting from advanced storage efficient technologies.

Traditional midrange storage arrays simply are not adequate. Your storage has to achieve maximum performance and scale without wasting resources or affecting availability—even as you introduce new and updated technologies.

The Solution

Combining reliable, high-performance hardware with the world's most popular storage architecture—the NetApp® Data ONTAP® operating system—NetApp FAS storage lets you seamlessly scale your storage infrastructure to support demanding business applications and requirements, no matter how quickly your business changes.

The FAS3200 series is a midrange platform tailored to deliver the performance, expandability, and capacity scaling critical to the needs of your growing business. Fully Flash-ready systems support internal Flash, solid-state disks (SSDs), and advanced server cache, so you can achieve optimum performance while minimizing your total investment in Flash. This significantly reduces the total storage capacity you need.

The ability to scale FAS3200 performance and capacity without disrupting operations brings a new level of agility to midrange storage. As capacity requirements grow, NetApp clustering technology allows seamless scaling of devices, storage volumes, and even entire storage systems residing within a cluster.

Faster Platform With Proven Flash Performance

Designed to deliver more performance than ever before, our new FAS3200 models provide up to 80% more I/O per second, enabling you to drive your business faster. As business needs change you can boost performance further using the broad range of Flash

Figure 1) NetApp FAS3200 controller.
The new FAS3200 series is the perfect foundation for an agile data infrastructure.

products in the NetApp Virtual Storage Tier. This innovative approach combines the inherent latency and throughput benefits of Flash with intelligent caching capabilities, delivering the performance benefits of Flash while keeping total costs low.

All FAS3200 systems are fully Flash ready and can be configured with up to 2TB of high-speed Flash Cache PCIe cards or Flash Pool SSDs. Flash Pool allows you to combine SSDs and HDDs; workloads get the performance benefits of SSDs with the capacity of HDDs. Flash Accel™ technology allows you to cache NetApp data directly on your servers, targeting Flash acceleration to particular applications. You can also configure the FAS3200 with all-SSD disk shelves for workloads that require the utmost performance.

Highly Efficient Systems and Intelligent Management Lower Costs

The FAS3200 delivers the industry-leading NetApp storage efficiency portfolio, including:

• Space-efficient disk-failure protection with RAID-DP® technology
• Space-efficient Snapshot™ technology
• FlexClone® virtual cloning
• Data deduplication and compression
• Thin provisioning and replication

At NetApp, storage efficiency is part of our DNA. We seek out every way possible to reduce your cost per effective gigabyte of storage. What's more, the NetApp OnCommand® management

suite automates the process. Efficiency technologies can be invoked with the click of a button or—in the case of NetApp Workflow Automation—can be encapsulated in your data management policies. This further reduces administrator time and helps you achieve optimum storage efficiency throughout your data infrastructure.

Maximum Platform Flexibility

For midrange storage, the key to success is platform flexibility. Only a flexible, expandable platform can bridge the substantial gap between entry-level storage systems and enterprise-class storage.

FAS3200 models scale from a few terabytes to over 2PB of storage capacity to adapt readily to your growing storage demands. For maximum performance density and to decrease consumption of space, power, and cooling, the FAS3200 series is available with the DS2246 disk shelf. This disk shelf utilizes the latest high-performance hard-disk technology, with small-form-factor 2.5" disk drives that double the capacity per rack unit, conserving valuable data center resources.

With midrange storage, available expansion slots can be a limiting factor. The expanded I/O configurations of the FAS3220 and FAS3250 models significantly add to the number of PCIe expansion slots available for network cards, Flash cards, and storage connectivity.

Should you reach the limits of a FAS3200 system, all models support clustering, providing you with the flexibility to build clustered systems from 2 nodes to 8 nodes—all managed from a single console.

Reliability and Availability Designed In

The FAS3200 series is built on enterprise-class technology for proven reliability. The FAS3200 leverages features from NetApp enterprise systems including Alternate Control Path (ACP) and service processor. These features enhance our already reliable architecture by enabling additional diagnostics and nondisruptive data recovery.

HA and cluster configurations support nondisruptive maintenance, upgrade, and other operations to eliminate planned downtime and provide even greater availability to meet your business needs. You can further boost data availability and meet stringent service-level objectives by combining the FAS3200 series with the NetApp Integrated Data Protection portfolio. High-speed, space-efficient Snapshot copies let you capture a copy of a data volume in seconds, while advanced synchronous and asynchronous replication for business continuity can protect you against both planned and unplanned outages. Deduplication and compression are leveraged across both primary and secondary storage, reducing capacity consumption and network usage.

FAS3200 TECHNICAL SPECIFICATIONS
All data in this table applies to high availability configurations.

	FAS3250 with Expanded I/O	FAS3220 with Expanded I/O	FAS3220
Maximum Raw Capacity	2160TB	1440TB	1440TB
Maximum Disk Drives	720	480	480
Controller Form Factor	Dual enclosure HA; two controllers in two 3U chassis, total of 6U	Dual enclosure HA; two controllers in two 3U chassis, total of 6U	Single enclosure HA; two controllers in single 3U chassis
Memory	40GB	24GB	24GB
Maximum Total Flash	2TB	1TB	1TB
PCIe Expansion Slots	12	12	4
On-Board I/O: 4Gb FC	4	4	4
On-Board I/O: 6Gb SAS	4	4	4
On-Board I/O: GbE	4	4	4
Standard I/O: 10GbE or 8Gb FC	4	Optional	Optional
Storage Networking Supported	FC; FCoE; IP SAN (iSCSI); NFS; CIFS; HTTP; FTP		
OS Version	Data ONTAP 8.1.2 and later		
Operating Systems Supported	Windows® 2000, Windows Server® 2003, Windows Server 2008, Windows XP, Linux®, Sun Solaris, AIX, HP-UX, Mac® OS, VMware®, ESX		

DATA ONTAP ESSENTIALS
The following software is included with every FAS/V3200 system, delivering unmatched value through greater flexibility, availability, and automation.

Capability	Product/Feature	Description
OnCommand Management Software	System Manager	Windows OS–based management tool for single system deployment
	OnCommand Unified Manager	Deploy, automate, provision, protect, monitor, and manage all your NetApp storage from a single console
	Workflow Automation	Efficiently automate storage processes so that best practices for storage management are always applied
High Availability	Multipath I/O	Load balancing and multipath capabilities for failover
	SyncMirror®	Maintains two local online copies of data; protects against all types of hardware outages
	MetroCluster™	Combines array-based clustering with synchronous mirroring; provides continuous availability at a low cost
Storage Efficiency	Deduplication	Transparently removes duplicate data at the block level for all storage tiers
	Thin Provisioning	Enables on-demand storage provisioning to achieve maximum utilization across multiple applications
	FlexVol®	Enables virtual volumes that you can manage and move independently from physical storage
Data Protection	RAID-DP	Safeguards your data from double disk failure, with no performance penalty
	Snapshot	Enables quick point-in-time copies of file systems or LUNs; NetApp Snapshot uniquely carries no performance penalty
	Open Systems SnapVault®	Snapshot replication for Backup of DAS connected to Windows or UNIX® servers; maintains online archive of backup copies
Secure Multi-Tenancy	MultiStore®	Secure partitioning of network and storage resources enables consolidation of multiple domains on a single system
Performance	FlexCache®	Enables NetApp systems to be used as caches
	FlexShare®	Automatically allocates storage resources to higher-priority workloads
Storage Protocols	Included SAN or NAS protocol	One SAN or NAS protocol of your choice (iSCSI, FC, NFS, CIFS) is included with your system

EXTENDED-VALUE SOFTWARE

Affordable, easy-to-buy add-on software modules are available to enhance base system functionality.
These can be purchased individually or all of them can be purchased together via the NetApp Complete Bundle.

Capability	Product/Feature	Description
Application Integration	SnapManager® Suite	Enables application-aware and virtual machine–aware backup, recovery, and cloning (for Oracle®, Exchange, SharePoint®, SQL®, SAP®, Virtual Infrastructure, and Hyper-V™)
System Recovery	SnapRestore®	Restore LUNs and file systems from previously backed-up Snapshot copies in seconds, irrespective of size or number of files
Disaster Recovery	SnapMirror®	Synchronous, and asynchronous data replication software that delivers simple, efficient, and flexible disaster recovery for business-critical applications
Virtual Cloning	FlexClone	Instantly create transparent virtual copies of production databases or virtual machines, without the need for additional storage capacity or compromising performance
Disk-to-Disk Backup	SnapVault	Disk-to-disk snapshot based replication software for complete backups and online archives to primary or secondary storage in minutes instead of hours or days
Storage Protocols	Optional SAN and NAS protocols	Native support for all key SAN/NAS protocols (iSCSI, FC, NFS, CIFS) makes NetApp systems ideal for consolidating your mixed IT environment; one protocol of your choice is included standard with your system—others can be added as desired
All Extended-Value Software	Complete Bundle	All of the extended-value software above, together in a single bundle for all-inclusive convenience

FAS3200 SERIES QUICK CHECKLIST FOR ORDERING

Models	FAS3250 FAS3220
Flash Cache	1TB, 512GB, and 256GB modules
I/O Options	Optional NICs and HBAs
Disk Shelves	DS2246 (24 drives—2.5" SAS SFF) DS4243 (24 drives—3.5" SATA/SAS/SSD) DS4246 (24 drives—3.5" SATA/SSD, mixed Flash Pool configurations) DS4486 (48 drives—3.5" SATA)
Storage Protocols	FC, IP SAN (iSCSI), NFS, CIFS
Optional Software	Refer to FAS3200 series software tables
Professional Services	Storage System Installation Service, RDS+ Implementation Services, Storage Controller Upgrade Service, Assessment Services, Consulting Services, Deployment/Implementation Services, Managed Services, Solution Suites
Support	SupportEdge Services

Professional Services

Modular offerings customized for you

NetApp Professional Services can assist you in any and every phase of the storage lifecycle. Whether you need help planning your next-generation storage system, need an extra set of hands for a major storage deployment, or want to upgrade your existing infrastructure, NetApp Professional Services personnel have the skills and expertise. NetApp offers a complete portfolio of services. In summary, NetApp Professional Services offerings include:

- **Solution Suites:** These customized solutions are designed to address your business-level challenges holistically.
- **Assessment Services:** Enlist NetApp to identify and document business, storage, and infrastructure requirements and receive recommendations for improvements.
- **Consulting Services:** Reduce the complexity of your networked storage implementation when you enlist our experts to design, document, and implement a range of applications and solutions.

- **Deployment/Implementation Services:** Reduce risk as we prepare your site, install and connect systems, set up your software, and perform complete verification.
- **Managed Services:** Have NetApp experts on site to perform storage management services so you can focus on core business initiatives.

Global Support

SupportEdge Services

NetApp Global Support delivers the highest availability for your enterprise data environment and helps you optimize your storage investments. Let NetApp mitigate support issues and drive operational best practices. NetApp's innovative, proactive support means you'll have fewer and less-severe support cases. But if a problem arises, our award-winning technical centers and field support staff—delivering in over 100 countries—won't rest until it's solved.

As an industry leader in innovation, NetApp Global Support provides tools and technology to enable business continuity. Our AutoSupport™ suite of automation tools is delivered as a service to help you proactively manage your systems and quickly resolve issues. AutoSupport functions as a "virtual staff" to protect critical data, save time, and reduce impact on your IT resources.

For More Information

- FAS3200 system: www.netapp.com/us/products/storage-systems/fas3200/
- Additional products and software: www.netapp.com/us/products/
- Professional Services: www.netapp.com/us/services/professional/
- Support: www.netapp.com/us/support/

About NetApp

NetApp creates innovative storage and data management solutions that deliver outstanding cost efficiency and accelerate business breakthroughs. Discover our passion for helping companies around the world go further, faster at *www.netapp.com*.

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