DATASHEET

NETAPP FAS STORAGE ARRAYS

Optimize secondary storage workloads with hybrid flash storage

The challenge

Simplifying data management on premises and in the public cloud

Organizations of every size face increasing pressure to simplify and secure their storage operations. They're tasked with lowering overall storage spending while delivering efficient backup, tiering, and cyber vault capabilities for fast-growing SAN, NAS, and object datasets — and with quickly recovering backup data for a growing number of use cases. Businesses can achieve these objectives with a purpose-built secondary storage solution like NetApp FAS. Part of NetApp's unified data storage portfolio, FAS is cost-optimized secondary storage that integrates seamlessly within your NetApp ONTAP OS ecosystem across on premises and cloud.

An ideal balance of capacity and performance storage that also simplifies your operations. Industry-leading data management NetApp FAS arrays, powered by NetApp ONTAP data management software, help you build a storage infrastructure that is economical, simple, and secure.

The solution

With FAS, IT can realize dramatic savings in the lifecycle cost of data by automatically offloading the estimated 60% to 80% of typical enterprise primary storage data that is cold data. FAS provides seamless scale of capacity and performance, fast recovery for Dev/Test and AI, and deep integration to public cloud with ONTAP, making it ideal for diverse use cases, including as a target for an ONTAP powered cyber vault. Economical, simple, and secure, FAS enhances operational efficiency, delivers effective data protection, and scales easily as you grow.

NetApp FAS systems cost-effectively deliver the data protection, security, and scalability to safeguard your data and drive operational efficiency. Whether you're running a small business, a remote office, or a large enterprise, the FAS family's leading range of unified capabilities for SAN, NAS, and object workloads make it an ideal solution for your general-purpose business applications as well as for backup and retention.

Economical

Achieve lowest lifecycle cost of data When it comes to long-term investments in storage infrastructure, it's crucial to focus on simplifying your storage environment and reducing total cost of ownership. The FAS family offers significant advantages:

- Reduce costs and minimize your storage footprint: Automatically move your infrequently used data to more cost-efficient object storage—on premises or in the cloud—without having to refactor your applications.
- Eliminate silos by supporting NAS, SAN, and object workloads on one unified system.
- Go from initial power-on to serving data in less than 10 minutes with simple application provisioning.
- Simplify ongoing management by upgrading software or servicing storage with zero downtime during regular business hours.
- Accelerate business operations by leveraging NetApp Snapshot™ copies to instantly create writable clones for use in DevTest, report generation, and analytics.
- Increase the efficiency of your staff by using the deep integration of ONTAP with key business applications.

KEY BENEFITS

Economical

- Optimize the overall cost of storage over the data lifecycle with automated tiering and economical backup.
- Slash costs by automatically moving infrequently used data to cost-efficient hybrid flash storage.
- Preserve primary storage efficiency and use NetApp® FAS data reduction for additional savings.

Simple

- Flexibly adapt to evolving business needs with industry-leading hybrid flash storage.
- Simplify at scale by using FAS for backup and/or tiering and/or cyber vault on the same NetApp ONTAP® OS as the rest of your hybrid cloud environment.
- Consolidate your 3-2-1 backup strategy entirely on a single cloud-connected storage OS and enjoy seamless integration with backup software vendors.
- Leverage policy-based data tiering that frees primary storage capacity.

Secure

- Rely on the safest storage on the planet to securely store your critical backup datasets.
- Safeguard your data with autonomous ransomware protection and guaranteed ransomware recovery.
- Deploy FAS as a resilient, logically air-gapped cybervault target.
- Use immutable NetApp Snapshot™ copies, lockable data, and role-based access control to prevent unauthorized access to data

Simple

Streamline your storage operations

The FAS family has the flexibility to keep up with your growing business as your capacity and performance requirements change. Scale up by adding capacity or by upgrading controllers. Scale out by growing from 2 nodes up to a 24-node cluster with 176PB of capacity.

Plus, you can cluster different combinations of FAS and AFF models to build out your environment by adding new generations of storage with the latest technologies.

The FAS family also supports massive NAS containers, which are easy to manage. With the NetApp FlexGroup feature of ONTAP 9, a single namespace can grow to 20PB and 400 billion files while maintaining consistent high performance and resilience.

With nondisruptive addition and replacement of storage systems and components, scaling occurs without maintenance windows or the challenge of coordinating downtime across teams. And you can perform your updates during regular work hours.

Integrate with the cloud
FAS systems running ONTAP are optimized for private and hybrid cloud by providing secure multitenancy, quality of service, nondisruptive operations, and easily defined tiers of service. Plus, NetApp offers a number of options for extending your FAS system to the hybrid cloud with Amazon Web Services, Microsoft Azure, Google Cloud, and other leading cloud providers. Easily move your data between your on-premises FAS system and cloud environments by using NetApp SnapMirror® data replication software.

Optimize your storage with smart management You don't need to be a storage expert to use the broad range of capabilities in the NetApp storage management portfolio.

- Simplify and speed up day-to-day management activities with ONTAP System Manager. The new GUI provides quick insights into capacity, system health, networking, and performance history.
- Streamline your management of multiple storage clusters with NetApp Active IQ® Unified Manager. Boost the efficiency of your staff by monitoring petabytes of data from a single dashboard, and receive notifications to quickly resolve issues before they affect data services. The latest version of Active IQ Unified Manager provides insights and advice on security risks and compliance.

Use the insights and recommendations derived from predictive analytics and community wisdom to optimize and protect your storage investments with Active IQ. Expose risk factors and prevent problems before they affect your business. Benefit from insights and best-practice recommendations derived from the collective wisdom of NetApp's large user base. Implement this actionable intelligence to prevent problems, save time, and make smarter decisions when managing your infrastructure with ONTAP System Manager and Active IQ Unified Manager.

NetApp BlueXP data management simplification NetApp BlueXP simplifies storage and data services management as the unified control plane across your entire data estate, including FAS systems designed for secondary workloads. By leveraging BlueXP, businesses can seamlessly manage on-premises and cloud environments, utilizing familiar ONTAP OS tools and workflows. BlueXP breaks down management silos though unified control of your intelligent data infrastructure, that is powered by AIOps, automates workflows,. It delivers real-time health monitoring, and offers actionable insights with guided remediation, to

optimize performance and prevent downtime. This unified management approach enhances operational simplicity, ensures robust data protection, and maximizes ROI through intelligent automation and resource optimization. Storage efficiencies such as compression, deduplication, and compaction are preserved when moving data to FAS, reducing required object storage capacity and transport costs.

Secure

Secure company and customer data across your hybrid cloud

- ONTAP offers both software- and hardware-based encryption technologies to protect data at rest. ONTAP also offers encryption for data in-flight to prevent and protect data that is transmitted between systems.
- Snaplock allows you to create special-purpose volumes in which files can be stored and committed to a tamper-proof, non-erasable, non-writable state either for a designated retention period or indefinitely.
- Easily and efficiently safeguard your data with autonomous ransomware protection.
- Protect against weak administrative passwords, the leading cause of system compromises, by using multifactor authentication.
- Designate and validate authorized users with role-based access control.
- Multi-admin verification (MAV) ensures that certain operations, such as deleting volumes or Snapshot copies, can be executed only after approvals from multiple designated administrators.
- Use storage-level file security to prevent unauthorized administrators from accessing or deleting crucial intellectual property.
- Meet privacy standards, including GDPR, by cryptographically shredding and sanitizing individual files.

Protect against data loss and accelerate recovery FAS systems running ONTAP provide comprehensive, integrated data protection to safeguard your data. Meet your requirements for local backup with near-instant recovery by using space-efficient NetApp Snapshot copies. Achieve remote backup/recovery and disaster recovery with NetApp SnapMirror asynchronous replication. Plus, deep integration with leading backup applications makes management easier. Rely on the safest storage on the planet to securely store your critical backup datasets with NetApp ONTAP NetApp ONTAP provides robust security features for FAS systems, making it ideal for secondary storage.

It includes autonomous ransomware protection with AI/ML models for over 99% precision in threat detection, multi-factor authentication (MFA), role-based access control (RBAC), and comprehensive logging and auditing. Data encryption is supported both in-transit and at-rest, along with tamperproof Snapshots and SnapLock for regulatory compliance and data immutability. ONTAP's secure purge capabilities help meet GDPR compliance, and its integration with SnapMirror ensures efficient remote backup and disaster recovery. These features, combined with automatic tiering and space-efficient Snapshots, optimize storage efficiency while providing peace of mind for data protection.

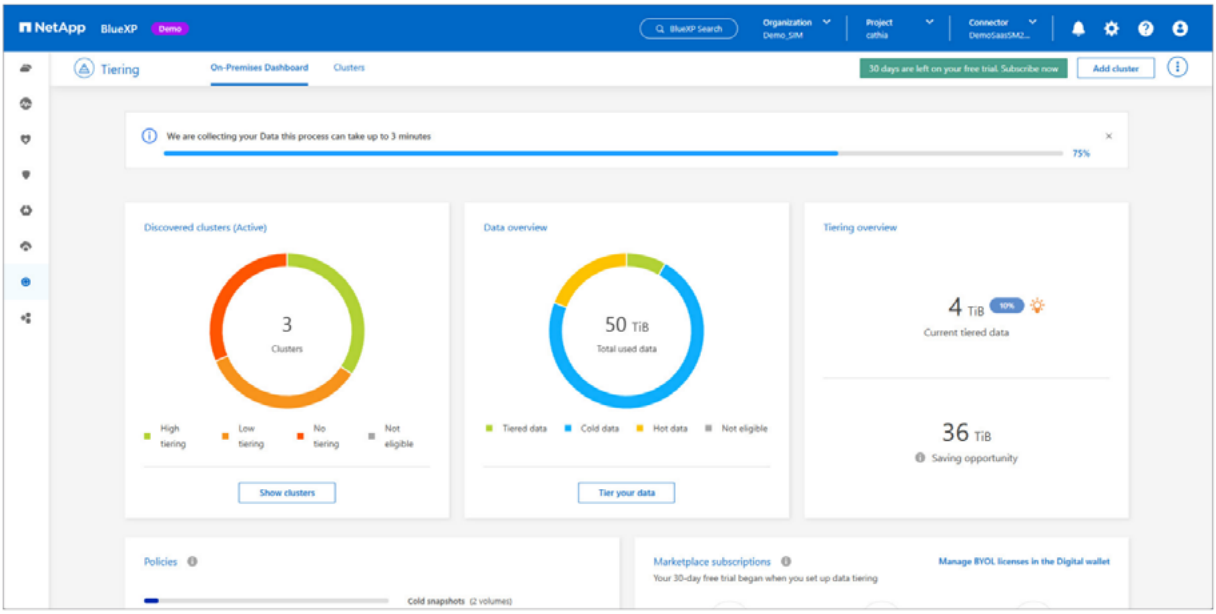
Achieve unparalleled availability and nondisruptive operations NetApp MetroCluster™, SnapMirror Business Continuity, and SnapMirror Synchronous technologies expand data protection to eliminate risk of data loss by synchronously mirroring data between locations for continuous availability of information. Storage arrays can exist in a single data center or in two different data centers that are located across a campus, across a metropolitan area, or in different cities. No matter what happens, your data can be protected from loss, and with MetroCluster and SnapMirror Business Continuity, it is continuously available to meet business-critical needs.

FAS systems are engineered to meet demanding availability requirements. All models are designed to deliver at least 99.9999% availability through a comprehensive approach that combines highly reliable hardware, innovative software, and sophisticated service analytics.
Introducing our new FAS70 and FAS90 systems!
The NetApp FAS70 and FAS90 systems are tailored for organizations looking to efficiently manage their secondary workloads with data tiering and backup. Both systems are designed to facilitate the smooth transition of infrequently accessed data to secondary storage. This tiering process is not only seamless, it's also costeffective, so that data remains accessible and secure without incurring unnecessary storage expenses.

These systems are optimized to capitalize on their storage density to manage and protect backup data efficiently. FAS systems provide optimal security with the capability to deploy as a logically air-gapped cyber vault target and immutable Snapshot copies. Disaster recovery is also a streamlined process with these systems, thanks to the incorporation of NetApp SnapMirror® technology for reliable data replication.

NetApp FAS Storage Arrays:

- FAS90. New high-range system with 1.35x the performance of FAS9500 and 4U form factor.
- FAS70. New mid-range, consolidated 4U system 1.85x the performance of FAS8300 for secondary workloads.
- FAS50. New mid-range 2U system with 1.5X the performance of the FAS8300 for secondary workloads
- FAS2820. Optimized for small and midsize businesses that require simple deployment and operations. Ideal for high-capacity use cases.
- FAS2750. Optimized for small and midsize businesses that require simple deployment and operations. Supports up to 24 internal drives plus external storage shelves.



Realize the most from your investment by engaging NetApp Professional Services experts or our Services Certified partners. When moving data into your new environment, smooth the transition and mitigate risks by using proven NetApp methodologies, tools, and best practices. With the NetApp Storage Lifecycle Program, you can purchase a NetApp AFF, ASA or FAS system and we'll upgrade it indefinitely with nondisruptive refreshes of storage controllers every 3 years at no additional cost. You choose the timing of your upgrade, and we'll help you seamlessly and securely scale as you grow.

For more information, go to netapp.com/services.

Harness the Power of ONTAP to Simplify and Accelerate Your Storage Environment:	
Storage efficiency	Reduce costs with leading data reduction technologies and built-in configuration efficiencies.
Business continuity	Make sure that your critical applications stay online with continuous data availability.
Nondisruptive operations	Eliminate business disruptions during maintenance and upgrades.
Performance and scalability	Improve performance for consolidated workloads, and scale up or scale out capacity and performance.
Cloud Integration	Easily move your data between your on-premises FAS system and cloud environments.
Security	Safeguard your critical data with anti-ransomware protection for both preemption and post-attack recovery.
Compliance	Meet strict governance and data retention policies.

Table 1. NetApp FAS technical specifications

	FAS90	FAS70	FAS50	FAS2820	FAS2750
Maximum scale-out	up to 24 nodes (12 HA pairs)	up to 24 nodes (12 HA pairs)	up to 24 nodes NAS (12 for SAN)	up to 24 nodes (12 HA pairs)	up to 24 nodes (12 HA pairs)
Maximum Drives per HA pair (2 nodes)	1440	1440	480	144	144
Maximum Raw Capacity per HA pair	14.7PB	14.7PB	10.6PB	2.3PB	1.2PB
Controller Chassis Form factor	4U 2×2U	4U 2×2U	2U	2U	2U

Note: All HA pair specifications are for dual controller, active-active configurations.

[1] Maximum raw capacity depends on the drive offerings. For current information, see netapp.com.

Contact Us

About NetApp

NetApp is the intelligent data infrastructure company, combining unified data storage, integrated data services, and CloudOps solutions to turn a world of disruption into opportunity for every customer. NetApp creates silo-free infrastructure, harnessing observability and AI to enable the industry's best data management. As the only enterprise-grade storage service natively embedded in the world's biggest clouds, our data storage delivers seamless flexibility. In addition, our data services create a data advantage through superior cyber resilience, governance, and application agility. Our CloudOps solutions provide continuous optimization of performance and efficiency through observability and AI. No matter the data type, workload, or environment, with NetApp you can transform your data infrastructure to realize your business possibilities. www.netapp.com