DATASHEET

NETAPP ASA

Simple, powerful, affordable block-optimized storage.

The challenge
Organizations have long had to choose between operational simplicity and high-end capabilities like scale-out and advanced data management in block storage. IT decision makers have been forced to compromise, and that has impeded infrastructure modernization efforts.

The solution
With the block-optimized NetApp® ASA systems, NetApp eliminates that trade-off — via simple, powerful, scale-out all-flash storage with advanced data management and protection features at an extremely affordable price. NetApp ASA enables storage modernization for every organization.

The ASA systems deliver a simplified and consistent experience for VMware apps, mission-critical databases, and other SAN workloads. Built on a scale-out, end-to-end NVMe architecture, NetApp ASA systems offer industry-leading availability and performance, along with simplified data management across your hybrid cloud.

All-flash block storage powered by ONTAP

NetApp ASA systems modernize your SAN infrastructure, accelerating business-critical applications, making data always available, and simplifying storage management. The ASA family includes A-Series models designed for your most performance-demanding and mission-critical applications, and C-Series models optimized for cost-effective deployment of large-capacity and general-purpose applications. Together, the ASA systems:

- Deliver exceptional performance that improves customers' experience and reduces time to results.
- Slash operational risk and enhance business continuity by keeping business-critical data available, protected, and secure.
- Transform your SAN environment with modern, affordable block storage that costs up to 50% less than other storage vendors, with far better TCO.

Keep critical data available, protected, and secure

As organizations become more data driven, the business impact of data loss can be increasingly dramatic—and costly. IT must protect data from both internal and external threats, ensure data availability, eliminate maintenance disruptions, and quickly recover from failures.

Access your data with continuous availability
ASA systems provide continuous access to data during unplanned outages by using symmetric, active-active multipathing. With both active controllers capable of communicating to a LUN, multipathing gives you uninterrupted access to your data with rapid failover recovery.

NetApp business continuity solutions help you maintain constant data availability with zero data loss and zero downtime in the event of a human-made or natural disaster. NetApp SnapMirror® active sync provides application-level protection with automatic failover, enabling mission-critical business services to keep operating, even during a complete site failure. SnapMirror active sync also offers symmetric active/active support for block workloads on ASA systems across 2-node configuration at each site. It enables higher scalability and better performance, allowing you to distribute workloads across cluster without compromising the ability to protect your mission-critical workloads against disasters.

Integrated data protection
ASA systems come with a full suite of acclaimed NetApp integrated and application-consistent data protection software. Key capabilities include:

- Native space efficiency with cloning and NetApp Snapshot™ copies that reduce storage costs and minimize performance impact.
- NetApp SnapCenter® software that provides application-consistent data protection and clone management to simplify application management.
- NetApp SnapMirror technology that simplifies operations with built-in data protection across the hybrid cloud.

NetApp will warrant Snapshot data recovery in the event of a ransomware attack. If you can't recover your data copies with help from NetApp or partner assistance, NetApp will offer compensation.

Find details here

KEY BENEFITS

Simple

- Leverage a storage solution so simple that anyone can deploy it, manage it, and upgrade it.
- Get up and running in minutes, provision in seconds, and protect in one click; manage directly from vCenter.

Powerful

- Accelerate VMware and database apps with market-leading performance, proven reliability, and intelligent data management.
- Run worry-free with built-in business continuity, a 99.9999% data availability guarantee, and a ransomware recovery guarantee.

Affordable

- Drive unmatched value with an up to 50% upfront price advantage versus other storage vendors, up to 25% lower VMware costs, and better overall ROI.
- Gain leading raw-to-effective capacity and an always-on 4:1 storage efficiency guarantee.

Security everywhere
Encryption and key management help guard your sensitive data on your premises, in the cloud, and in transit. Market-leading anti-ransomware protection for post-attack recovery safeguards your critical data from ransomware attacks and can prevent catastrophic financial consequences. With NetApp's proven and efficient security solutions, you can:

- Protect against threats with multifactor authentication, role-based access control, and multi-admin verification.
- Achieve FIPS 140-2 compliance (Level 1 and Level 2) with self-encrypting drives and use any type of drives with software-based encryption.
- Meet governance, risk, and compliance requirements with security features such as disk sanitization, logging and auditing monitors, and secure multitenancy.

Power your applications with abundant performance

NetApp ASA arrays are primed to take on any SAN workloads. Multitasking is not a problem. These systems maintain consistent high performance even while encrypting, compressing, deduplicating, and protecting your data.

Build a trusted SAN environment with powerful ASA systems that:

- Support both NVMe/FC and NVMe/TCP, providing latency as low as 100 microseconds and millions of IOPS in a cluster.
- Accelerate your VMware infrastructure and your Oracle, SAP, and Microsoft SQL Server applications.
- Meet performance objectives for all your applications even while efficiently encrypting, replicating, and storing data.

Simplify operations and reduce TCO

Managing your infrastructure shouldn't be complex. As seasoned veterans in this industry, we know a thing or two about what works and what doesn't. The new NetApp ASA offers an intuitive user experience. And feature-rich, SAN-specific NetApp ONTAP® data management capabilities are built in, enabling your staff to:

- Quickly provision storage and simplify ongoing management of dedicated SAN workloads—VMware, Oracle, SAP, Microsoft SQL Server.
- Streamline data management for your SAN workloads with simple, purpose-built block storage powered by ONTAP.
- Significantly reduce your storage footprint, power consumption, and carbon footprint with high-density, highly efficient all-flash storage.

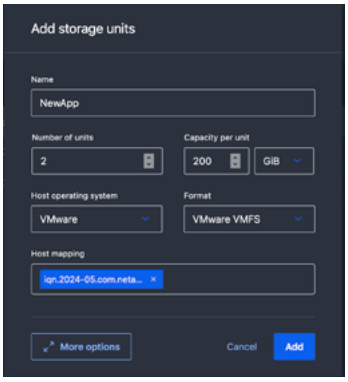

Figure 1) Provision new storage in seconds.[3]

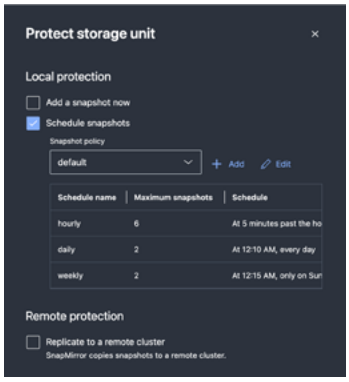

Figure 2) Protect storage unit with one click.[3]

Future-proof your infrastructure

When you purchase NetApp ASA storage, you can future-proof your investment with our industry-leading storage ownership program. Make the smart choice today and stay current with technological innovations.

- Eliminate the headache of tech refreshes with the Storage Lifecycle Program: Get a new controller every 3 years with support-managed updates included, or move to the cloud, whichever best meets your needs.
- Achieve high performance while minimizing storage cost with the Storage Efficiency Guarantee[1]: If we don't meet your workload goals, we'll make it right at no cost to you (4:1 for SAN workloads).
- Enjoy a Six Nines (99.9999%) Data Availability Guarantee[1]: If you have unplanned downtime in excess of 31.56 seconds per year, we provide remediation.
- Recover data with the Ransomware Recovery Guarantee[1]: If you can't recover your data copies with help from NetApp or partner assistance, NetApp will offer compensation.

Eliminate the headache of tech refreshes with the Storage Lifecycle Program: Get a new controller every 3 years with support-managed updates included, or move to the cloud, whichever best meets your needs.

Learn more

Flexibly consume storage resources

Like the rest of the NetApp portfolio, ASA systems are available via traditional capex or as a service with NetApp Keystone.® Gain financial flexibility as you modernize, and better align IT expenditure to business needs.

Leverage ONTAP One for SAN

Take advantage of ONTAP One for SAN, a comprehensive software suite that includes SAN protocols as well as ONTAP technologies applicable to SAN workloads, such as SnapRestore®, SnapMirror, SnapCenter, FlexClone®, FlexCache®, FPolicy, encryption[2], SnapLock®, and multitenant key management.

Footnote:

[1] Terms and conditions will apply.

[2] Encryption availability subject to Global Trade Compliance.

[3] Currently available for new ASA A-Series.

Table 1. ASA A-Series technical specifications

	ASA A1K	ASA A90	ASA A70	ASA A50	ASA A30	ASA A20
System						
Base enclosure form factor	2×2U modular	4U	4U	2U	2U	2U
Base eclosure drive count	Requires NS224	48	48	24	24	24
Power consumption (median)	2718W (with NS224)	1950W	1232W	512W	495W	432W
Scale up/per HA-pair						
Max. drive count (NVMe)	240	240	240	120	72	48
Max. raw capacity	2.67 PB	2.67 PB	2.67 PB	1.8 PB	1.1 PB	734 TB
Max. effective capacity[1]	11.6 PB	11.6 PB	11.6 PB	8 PB	4.8 PB	3.2 PB
Supported NVMe drives	1.92TB, 3.84TB, 7.68TB, 15.3TB	1.92TB, 3.84TB, 7.68TB, 15.3TB	1.92TB, 3.84TB, 7.68TB, 15.3TB	1.92TB, 3.84TB, 7.68TB, 15.3TB	1.92TB, 3.84TB, 7.68TB, 15.3TB	1.92TB, 3.84TB, 7.68TB, 15.3TB
Scale out / per cluster						
Cluster nodes	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)
Max. raw capacity	16 PB	16 PB	16 PB	11 PB	6.6 PB	4.4 PB
Max. effective capacity[1]	69 PB	69 PB	69 PB	48 PB	29 PB	19 PB
IO connectivity						
PCIe expansion slots	18	18	18	8	8	8
Max. FC ports	56	56	56	24	24	24
FC port speeds	Up to 64 Gbps	Up to 64 Gbps	Up to 64 Gbps	Up to 64 Gbps	Up to 64 Gbps	Up to 64 Gbps
Max. Ethernet ports	56	56	56	32	32	32
Max. Ethernet speed	Up to 200 Gbps	Up to 200 Gbps	Up to 200 Gbps	Up to 100 Gbps	Up to 100 Gbps	Up to 100 Gbps
Shelves	NS224 (2U, 24 drives, 100Gbps NVMe)	NS224 (2U, 24 drives, 100Gbps NVMe)	NS224 (2U, 24 drives, 100Gbps NVMe)	NS224 (2U, 24 drives, 100Gbps NVMe)	NS224 (2U, 24 drives, 100Gbps NVMe)	NS224 (2U, 24 drives, 100Gbps NVMe)
Storage networking supported	NVMe/TCP, NVMe/FC, FC, iSCSI	VMe/TCP, NVMe/FC, FC, iSCSI	VMe/TCP, NVMe/FC, FC, iSCSI	VMe/TCP, NVMe/FC, FC, iSCSI	VMe/TCP, NVMe/FC, FC, iSCSI	VMe/TCP, NVMe/FC, FC, iSCSI
OS version	ONTAP 9.16.0 GA or later	ONTAP 9.16.0 GA or later	ONTAP 9.16.0 GA or later	ONTAP 9.16.1 or later	ONTAP 9.16.1 or later	ONTAP 9.16.1 or later
Host/client OS supported	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX

Technical specifications for previous ASA A-Series models.

[1] Effective capacity based on 5:1 storage efficiency ratios with the maximum number of SSDs installed; space savings will vary depending on workload and use cases.

Table 2. ASA C-Series technical specifications

	ASA C800	ASA C400	ASA C250
System			
Controller form factor	4U	4U+2U external shelf	2U
Base eclosure drive count	48	Requires external shelf NS224	24
Power consumption (median)	1463W	1240W (with NS224)	491W
Scale up/per HA-pair			
Max. drive count (NVMe)	240	96	48
Max. raw capacity	7.4PB	2.9PB	1.5PB
Max. effective capacity[1]	29.5PB	11.8PB	5.9PB
Supported NVMe drives	15.3TB, 30.7TB	No internal drives Storage shelf: 15.3TB, 30.7TB	15.3TB, 30.7TB
Scale out / per cluster			
Cluster nodes	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)	12 Nodes (6 HA Pair)
Max. raw capacity	44.2PB	17.7PB	8.8PB
Max. effective capacity[1]	176.8PB	70.7PB	35.4PB
IO connectivity			
PCIe expansion slots	10	10	4
Max. FC ports	32	40	16
FC port speeds	32 Gbps	32 Gbps	32 Gbps
Max. Ethernet ports	32	32	20
Max. Ethernet speed	Up to 100 Gbps	Up to 100 Gbps	Up to 100 Gbps
Shelves	NS224 (2U, 24 drives, NVMe QLC SSDs)	NS224 (2U, 24 drives, NVMe QLC SSDs)	NS224 (2U, 24 drives, NVMe QLC SSDs)
Storage networking supported	NVMe/TCP, NVMe/FC, FC, iSCSI	NVMe/TCP, NVMe/FC, FC, iSCSI	NVMe/TCP, NVMe/FC, FC, iSCSI
OS version	ONTAP 9.13.1 P1 or later	ONTAP 9.13.1 P1 or later	ONTAP 9.13.1 P1 or later
Host/client OS supported	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX

[1] Effective capacity based on 5:1 storage efficiency ratios with the maximum number of SSDs installed; space savings will vary depending on workload and use cases.

Table 3. ASA software

Data access protocols	• FC, iSCSI, NVMe/FC, NVMe/TCP
High availability	• Active-active controller architecture • Symmetric active-active FCP, iSCSI, and NVMe multipathing • Nondisruptive maintenance, upgrade, and scale-out clustering • Multisite resilience for continuous data access
Storage efficiency	• Inline data compression, deduplication, and compaction • Space-efficient cloning • NVMe deallocate for block space reclamation with Virtual Machines (VMs)
Data management	• Intuitive on-board GUI, REST APIs, and automation integration • AI-informed predictive analytics and corrective action • Quality of service (QoS) workload control • Easy provisioning and data management from market-leading host operating systems, hypervisors, and application software
Data protection	• Application-consistent NetApp® Snapshot™ copies for backup and restore • Integrated remote backup and disaster recovery • Synchronous zero-data-loss replication • Tamperproof Snapshot copies • Symmetric active-active multisite replication for business continuity
Security and compliance	• Multifactor admin access • In-flight and data-at-rest encryption • Regulatory-compliant data retention • Multi-admin verification before executing sensitive commands

Get more business value with services
Whether you're planning your next-generation data center, need specialized know-how for a major storage deployment, or want to optimize the operational efficiency of your existing infrastructure, NetApp Professional Services and NetApp certified partners can help.

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

NetApp