

# NETAPP ASA



## Simple, resilient, secure block-optimized storage.

### The challenge

Organizations have long had to choose between operational simplicity, preventative data security, 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, resilient, secure all-flash storage with advanced data management and protection features for any budget. NetApp ASA enables storage modernization for every organization.

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

### All-flash block storage powered by ONTAP

NetApp ASA systems modernize your SAN infrastructure, accelerating your most critical applications and virtualized apps, making data always available, and simplifying storage management. The ASA family includes A-Series models designed for your most performance-demanding applications, and C-Series models optimized for cost-effective deployment of large-capacity applications, as well as serving as an ideal backup and DR target for ASA A-Series systems. 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 block storage that delivers a price advantage 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, prevent app and 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.

### Resilient

- Trust NetApp to run your virtualized and database apps with resilient architecture, consistent performance, and intelligent data management.
- Give your apps uninterrupted data access with an active-active architecture backed by a 99.9999% data availability guarantee.

### Secure

- Protect your business with the most secure storage on the planet.
- Detect and defend against ransomware via industry-leading real-time ransomware detection and guaranteed recovery.

### 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:

- Detect and defend against ransomware in real-time with guaranteed recovery.
- Prevent app disruptions, even during site failures, with integrated business continuity
- Utilize immutable snapshots, lockable data, multitenant key management, and RBAC (role-based access control) to prevent unauthorized access to data.

## Trust NetApp to run your apps with resilient architecture

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 ASA solution that:

- Support both NVMe/FC and NVMe/TCP, providing low latency 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.
- Support your dynamic business environment with always-on storage efficiency and adaptive QoS.

## 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 block 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.

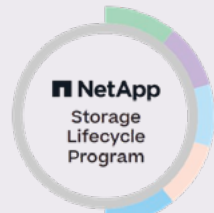
Figure 1) Provision new storage in seconds.<sup>3</sup>

Figure 2) Protect storage unit with one click.<sup>3</sup>

## 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**<sup>1</sup>: 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<sup>1</sup>: If you have unplanned downtime in excess of 31.56 seconds per year, we provide remediation.
- Recover data with the **Ransomware Recovery Guarantee**<sup>1</sup>: 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<sup>2</sup>, SnapLock®, and multitenant key management.

Footnote:

<sup>1</sup> Terms and conditions will apply.

<sup>2</sup> Encryption availability subject to Global Trade Compliance.

<sup>3</sup> Currently available for new ASA A-Series.



**Table 1. ASA technical specifications**

	ASA A1K	ASA A90	ASA A70	ASA A50	ASA A30	ASA A20	ASA C30
System							
Base enclosure form factor	2×2U modular	4U	4U	2U	2U	2U	2U
Base eclosure drive count	Requires NS224	48	48	24	24	24	24
Power consumption (median)	2718W (with NS224)	1950W	1232W	512W	495W	432W	495W
Scale up/per HA-pair							
Max. drive count (NVMe)	240	240	240	120	72	48	48
Max. raw capacity	2.67 PB	2.67 PB	2.67 PB	1.8 PB	1.1 PB	734 TB	1.47PB
Max. effective capacity <sup>1</sup>	11.6 PB	11.6 PB	11.6 PB	8 PB	4.8 PB	3.2 PB	6PB
Supported NVMe drives	1.92TB, 3.84TB, 7.68TB, 15.3TB						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)	12 Nodes (6 HA Pair)	8 Nodes (4 HA Pair)	6 Nodes (3 HA Pair)	8 Nodes (4 HA Pair)
Max. raw capacity	16 PB	16 PB	16 PB	11 PB	4.4 PB	2.2 PB	5.8 PB
Max. effective capacity <sup>1</sup>	69 PB	69 PB	69 PB	48 PB	19 PB	9.3 PB	24 PB
IO connectivity							
PCIe expansion slots	18	18	18	8	8	8	8
Max. FC ports	56	56	56	24	24	24	24
FC port speeds	Up to 64 Gbps						
Max. Ethernet ports	56	56	56	32	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	Up to 100 Gbps
Shelves	NS224 (2U, 24 drives, 100Gbps NVMe)						
Storage networking supported	NVMe/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	ONTAP 9.16.1 P3 or later
Host/client OS supported	Windows Server, Linux, Oracle Solaris, AIX, HP-UX, VMware, macOS, ESX						

**Technical specifications for previous ASA models.**

<sup>1</sup> 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 software

Data access protocols	<ul style="list-style-type: none"><li>• FC, iSCSI, NVMe/FC, NVMe/TCP</li></ul>
High availability	<ul style="list-style-type: none"><li>• Active-active controller architecture</li><li>• Symmetric active-active FCP, iSCSI, and NVMe multipathing</li><li>• Nondisruptive maintenance, upgrade, and scale-out clustering</li><li>• Multisite resilience for continuous data access</li></ul>
Storage efficiency	<ul style="list-style-type: none"><li>• Inline data compression, deduplication, and compaction</li><li>• Space-efficient cloning</li><li>• NVMe deallocate for block space reclamation with Virtual Machines (VMs)</li></ul>
Data management	<ul style="list-style-type: none"><li>• Intuitive on-board GUI, REST APIs, and automation integration</li><li>• AI-informed predictive analytics and corrective action</li><li>• Quality of service (QoS) workload control</li><li>• Easy provisioning and data management from market-leading host operating systems, hypervisors, and application software</li></ul>
Data protection	<ul style="list-style-type: none"><li>• Application-consistent NetApp® Snapshot™ copies for backup and restore</li><li>• Integrated remote backup and disaster recovery</li><li>• Synchronous zero-data-loss replication</li><li>• Tamperproof Snapshot copies</li><li>• Symmetric active-active multisite replication for business continuity</li></ul>
Security and compliance	<ul style="list-style-type: none"><li>• Multifactor admin access</li><li>• In-flight and data-at-rest encryption</li><li>• Regulatory-compliant data retention</li><li>• Multi-admin verification before executing sensitive commands</li></ul>

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](http://www.netapp.com)