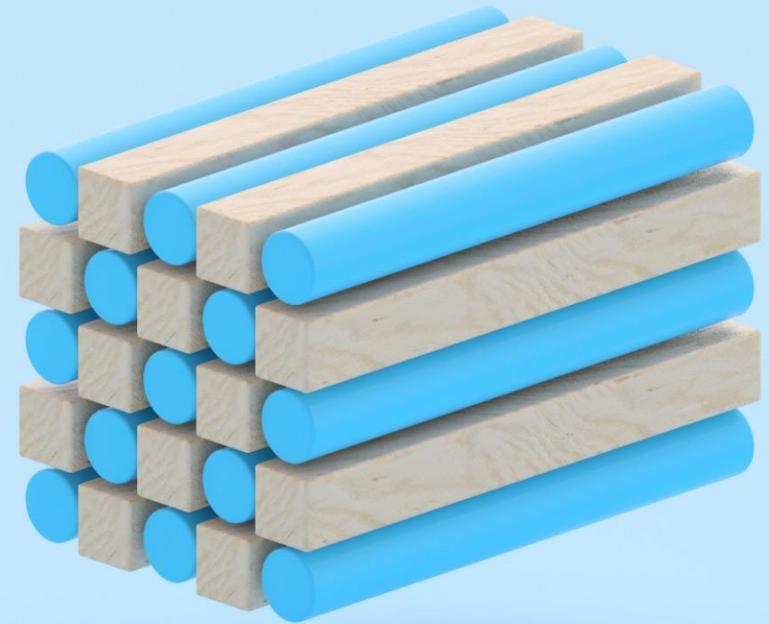# NetApp ASA all-flash systems

Simple and powerful dedicated SAN storage

NetApp

May 2023

You have enough to worry about

Global macro trends are wreaking havoc on IT budgets and plans

Untenable IT complexity and skills shortages

Deepening of unsettled macroeconomic climate

Urgent focus on energy cost and sustainability

Exponential increase in cyberthreats

NetApp's innovation priorities are aligned to address macro trends

Driving data storage that's ready for the modern world, with proven technologies and innovations

Simplicity
Unified, consistent operations; same experience everywhere; run apps anywhere
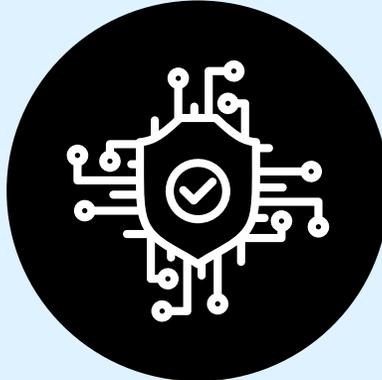
Savings
Continuous optimization: Cost visibility and savings; storage as a service anywhere

Sustainability
Services to monitor, manage, and optimize carbon footprint across hybrid multicloud

Security
Complete integrated cyber resilience; unified and integrated data protection, security, governance, and compliance

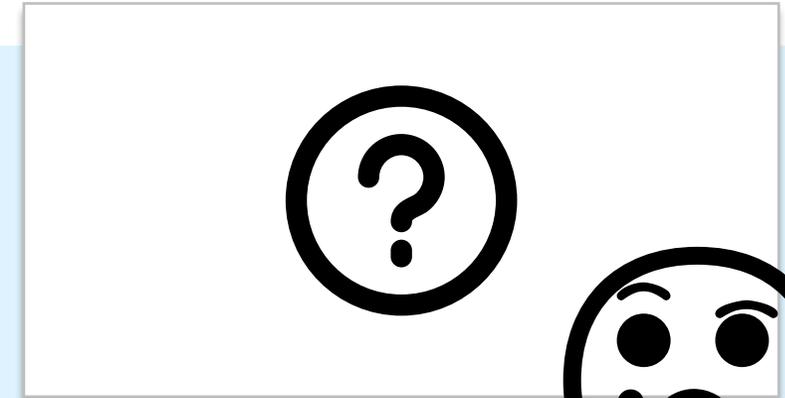# NetApp is the leader in NAS and Unified Storage

Leader in NAS

- Analysts recognize NetApp for NAS leadership.

- NetApp is trusted by customers for NAS.

- NetApp® ONTAP® offers the most comprehensive data services.

Leader in Unified

- Analysts recognize NetApp for unified leadership.

- Only unified solution with file, block, and object.

Storage area networks (SANs)

- What about SAN?

Customers trust NetApp with their SAN workloads

Over **20,000** customers across **50,000** storage arrays trust NetApp with their SAN workloads.

Over **5,000** customers use NetApp® controllers for **SAN-only workloads.**

Introducing NetApp ASA

- The all-flash block storage for mission-critical applications

- Simple, dedicated SAN storage that delivers high **availability, performance,** and **efficiency.**

- Enhancements to NetApp® ONTAP® and new additions to NetApp Advance, our portfolio of simplified buyer programs and guarantees.

Availability   Performance   Efficiency

Why NetApp ASA

Modern all-flash SAN storage family ideal for VMware and database applications

- **Modern.** Active-Active. All-NVMe. Comprehensive data services. Cloud connected. Future-proof ownership experience.

- **High-availability – guaranteed.** Comes with a 99.9999% data availability guarantee.

- **Efficiency – guaranteed.** Comes standard with a 4:1 storage efficiency guarantee. Leading raw-to-effective capacity.

- **Secure and Protected.** Recover rapidly from Ransomware attacks. Protect against disasters with business continuity across sites.

- **Sustainable**. Up to 50% lower emissions relative to competing all flash arrays.

NetApp is trusted and proven by over 20,000 customers for their SAN workloads

Bezel mock-up; Not final; initial shipments may use older bezel

ASA systems are ideal for VMware and database workloads

- App & VM integrated snapshot backups
- 99.9999% availability for critical infrastructure
- Instantly create thin clones of VMs and DBs
- Native integration with VMware vSphere and Cloud Foundation

Bezel mock-up; Not final; initial shipments may use older bezel

A deeper look at NetApp ASA A-Series

A wide range of performance and capacity offerings

	ASA A150	**ASA A250**	**ASA A400**	**ASA A800**	**ASA A900**
HA system	• 15.2TB – 547TB raw • Up to 2.1PB effective • 2U base w/ 24 drives	• 15.2TBs – 1.1PB raw • Up to 4.4PB effective • 2U base w/ 24 drives	• 15.2TB – 14.6PB raw • Up to 58.6PB effective • 4U base + 2U24 drive shelf	• 22.8TB – 6.6PB raw • Up to 26.3PB effective • 4U base w/ 48 drives	• 22.8TB – 14.6PB raw • Up to 58.6PB effective • 8U Base + 2U24 shelf
Cluster	• 91.2TB – 3.3PB Raw • Up to 13.1 PB effective	• 91.2TB – 6.6PB raw • Up to 26.4PB effective	• 91.2TB – 87.6PBs raw • Up to 351.6PB effective	• 136.8TB – 39.6PB raw • Up to 157.8PB effective	• 138TB – 87.6PB raw • Up to 351.2PB effective
Protocols	**NVMe/FC, NVMe/TCP,** FCP, iSCSI				

       Bezel mock-up; Not final; initial shipments may use older bezel.

Highly available and highly resilient

Ensuring that your mission-critical apps are always online

- Symmetric active-active pathing to applications for highly resilient data access

- NetApp® ASA storage is designed to deliver the availability you need to run your business
  - **6 nines** (99.9999% uptime)

- We are so confident in our ability to deliver this availability to you that we guarantee it
  - If you experience an unplanned data availability downtime event in excess of 31.56 seconds per year (99.9999% uptime), NetApp will issue you a credit.
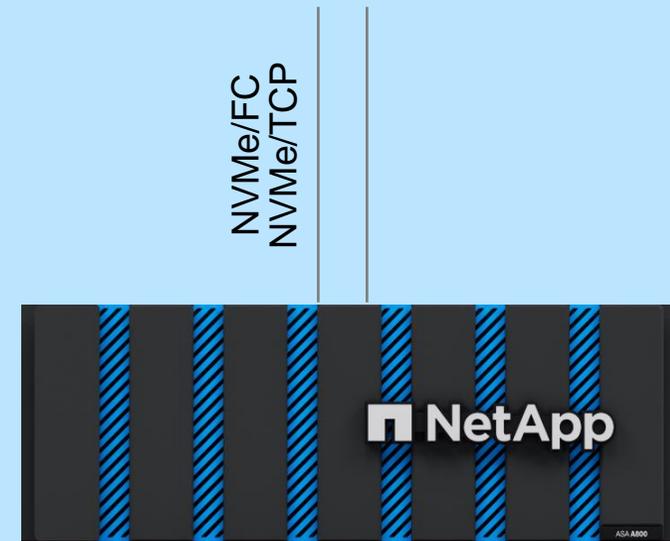
6 Nines Data Availability Guarantee

ASA systems are powerful

For your most demanding workloads

- Accelerate enterprise apps with end-to-end NVMe storage
  - Extremely low latency (as low as 100µs)
  - Millions of IOPS in a cluster

- Future-proof with NVMe-oF technology, high-bandwidth network connectivity
  - NVMe/FC
  - NVMe/TCP

- Reduce data center costs by consolidating workloads on high-performance and high-density storage
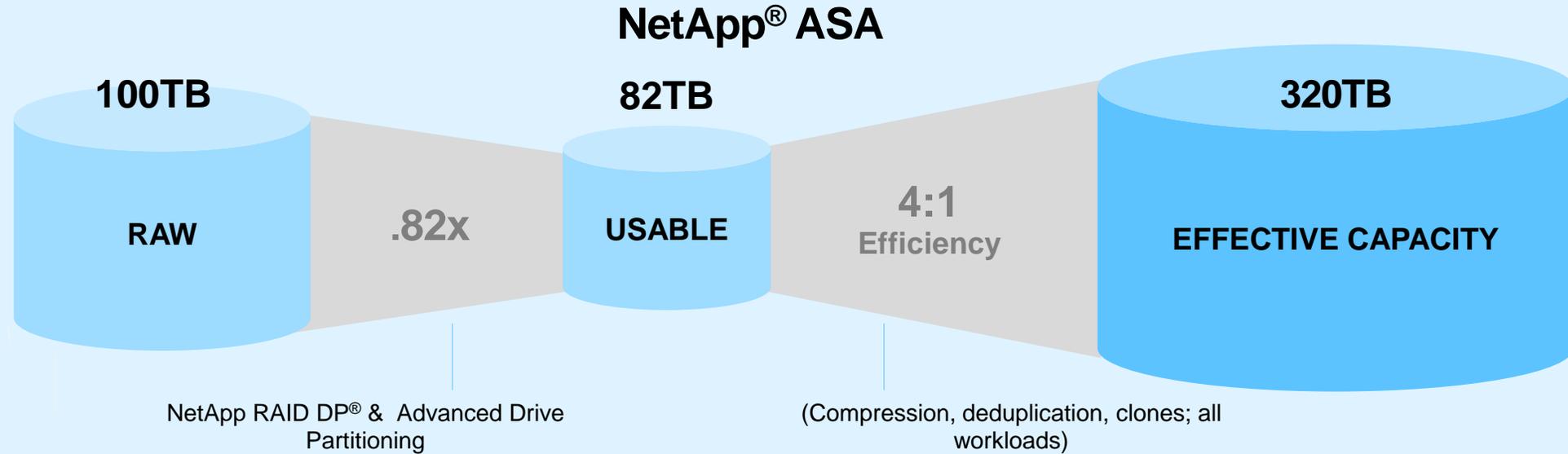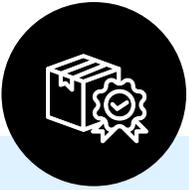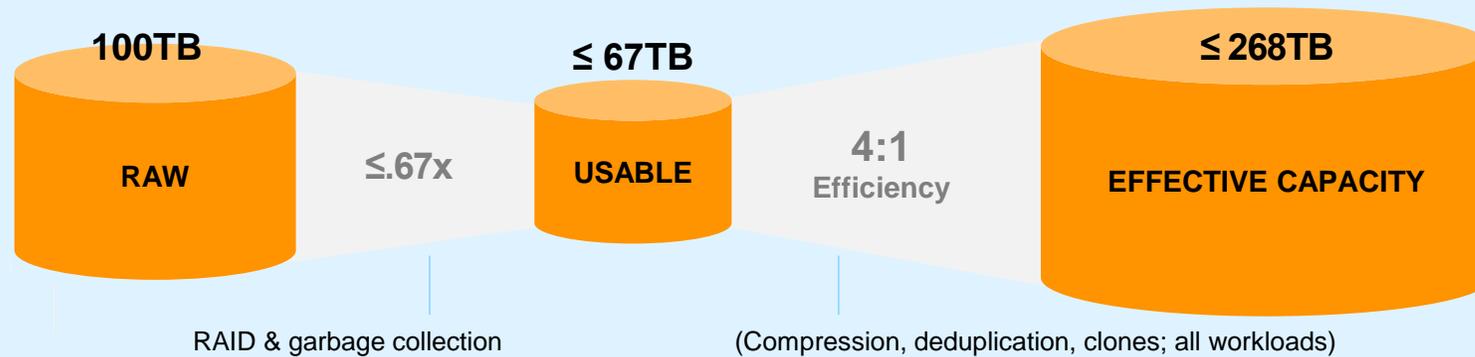
To host servers

NVMe/FC
NVMe/TCP

NVMe SSD + NVMe-oF

ASA systems are efficient

Industry-leading efficiency over the competition

NetApp® ASA

100TB   **82TB**   **320TB**

RAW   .82x   **USABLE**   **4:1** Efficiency   **EFFECTIVE CAPACITY**

NetApp RAID DP® & Advanced Drive Partitioning

(Compression, deduplication, clones; all workloads)

Other leading all-flash storage

100TB   **≤ 67TB**   **≤ 268TB**

RAW   ≤.67x   **USABLE**   **4:1** Efficiency   **EFFECTIVE CAPACITY**

RAID & garbage collection

(Compression, deduplication, clones; all workloads)

Even 5:1 storage efficiency would barely break even in some cases.

Storage Efficiency Guarantee

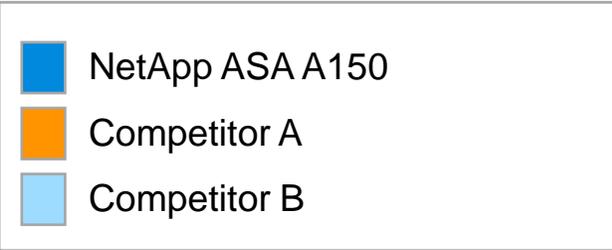The simplest effective guarantee in the industry.
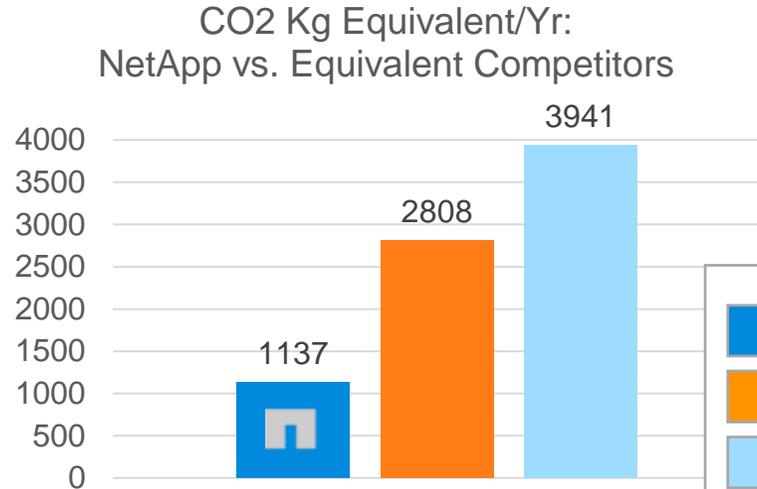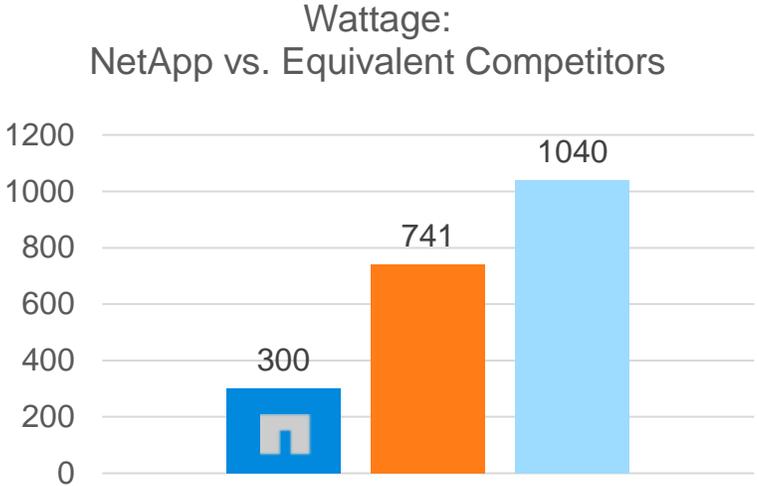
- **Standard 4:1 Storage Efficiency Guarantee** available for customers using SAN protocols

- A risk-free approach to more storage, more value, and more efficiency

- Our guarantee: If we don't meet your workload efficiency goals, we'll make it right at no cost to you

- Available for AFF and now for the new ASA systems

4:1

Storage Efficiency Guarantee
on all ASA systems

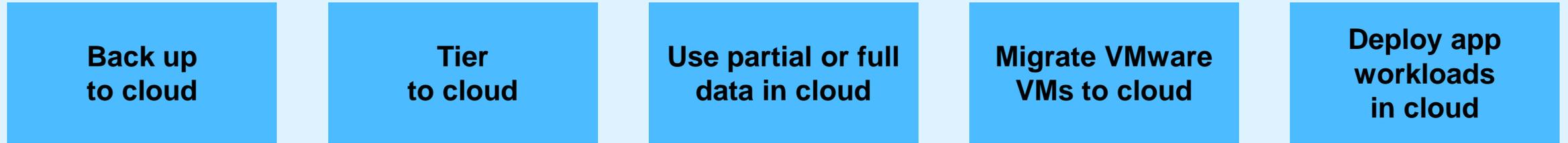# NetApp All-Flash is more sustainable than major competitors

Lower power consumption by design

Wattage:
NetApp vs. Equivalent Competitors

Value	
300	NetApp ASA A150
741	Competitor A
1040	Competitor B

CO2 Kg Equivalent/Yr:
NetApp vs. Equivalent Competitors

Value	
1137	NetApp ASA A150
2808	Competitor A
3941	Competitor B

Legend:
- ■ NetApp ASA A150
- ■ Competitor A
- ■ Competitor B

- **NetApp all-flash arrays deliver significantly lower power usage** and equivalent emissions vs. major competitors.

- Many vendors make outrageous sustainability claims. **Always check the datasheets.**

- Competitor data is based on their publicly published *nominal power value* which is assumed to be typical wattage.
- NetApp AFF/ASA wattages based on the median wattage of *actual customer power consumption* across entire population of systems reporting to NetApp ActiveIQ.
- Carbon emissions equivalents were calculated via the U.S. EPA calculator here: https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator

 Bezel mock-up; Not final; initial shipments may use older bezel

ASA systems are cloud connected

Back up to cloud	Tier to cloud	Use partial or full data in cloud	Migrate VMware VMs to cloud	Deploy app workloads in cloud

ASA on premises

Public cloud

- ✓ **Consistent performance**
- ✓ **Consistent management and automation**
- ✓ **Consistent data protection**
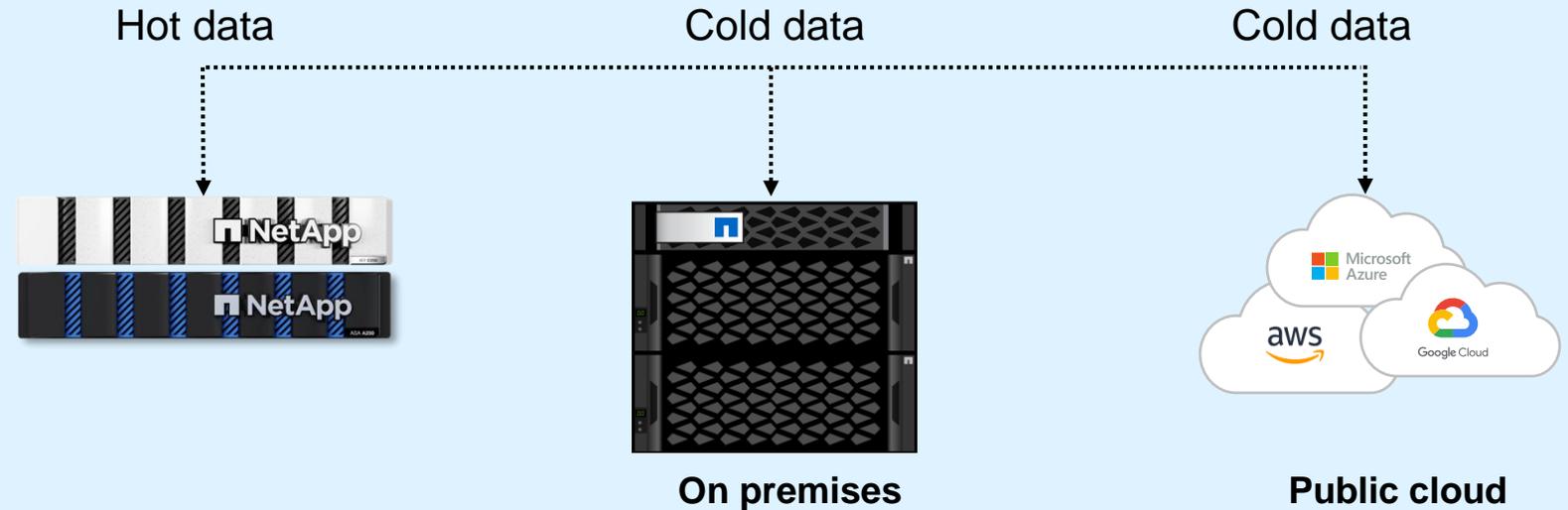
Bezel mock-up; Not final; initial shipments may use older bezel

Better outcomes and economics with simplicity at scale

Customer outcomes and ROI limited by silos

Customer outcomes and ROI accelerated with automated data tiering

Hot data

Cold data

Cold data

On premises

Public cloud

- ✓ Consistent management and automation
- ✓ Consistent data services
- ✓ Better performance

Bezel mock-up; Not final; initial shipments may use older bezel

Ransomware Recovery Guarantee

NetApp can help. And now we guarantee it.

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.

The NetApp Ransomware Recovery Guarantee

FOR ENTERPRISE
PRIMARY STORAGE

Deployed NetApp ASA or AFF C-Series storage according to NetApp ransomware protection best practices, with support from NetApp PS.

Warranty includes both technology deployment and PS engagement. Terms and conditions apply.

■ NetApp

ONTAP One for SAN

Comprehensive software for ASA systems

NetApp® ONTAP® One for SAN, available exclusively with the NetApp ASA family, is included software that provides comprehensive capabilities relevant for SAN workloads

Including

- Block protocols

  - NVMe/FC, NVMe/TCP, FCP, iSCSI

- Data protection

- Security and compliance

- Hybrid cloud

Simplified ordering

- One line item; one price; no add-ons

ONTAP One for SAN

Descriptions on this slide are an overview only. Encryption software not available in all countries. Certain metered services are at a separate cost per TB through NetApp BlueXP™.

ASA systems are future-proofed with Storage Lifecycle Program

NetApp® ASA systems

+

NetApp
Storage Lifecycle Program

- Free controller every 3 years
- Cloud Advantage
- Capacity refresh
- Support-managed software updates
- Premier-level support services

Future proof your storage investment for tomorrow.

Bezel mock-up; Not final; initial shipments may use older bezel

NetApp Advance

Portfolio of programs and guarantees to continually evolve your storage environment with confidence

NEW

NEW

Storage Lifecycle Program with Cloud Advantage

- Eliminate painful and costly refresh.
- Scale out to the cloud to meet changing business needs.

Ransomware Recovery Guarantee

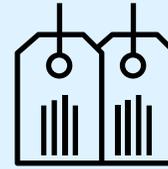Data loss from ransomware avoided or minimized—we guarantee it.

1st INDUSTRY FIRST

6 Nines Data Availability Guarantee

The storage that runs your business will always keep running—we guarantee it.

Predictable support pricing

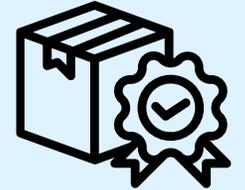No budget surprises with flat-rate, predictable support pricing across the lifecycle of your ASA, AFF, or FAS systems.

Media replacement assurance

Never worry about flash media wear. ONTAP® is designed so that it isn't a factor. And as long as your storage is under support, we've got you covered.

Storage Efficiency Guarantee

- 4:1 efficiency for SAN workloads on AFF and ASA, guaranteed or we'll make it right.
- Other guarantees based on workload.

| **OPTIONAL program** | **OPTIONAL program[1]** | **INCLUDED w/ ASA[2]** | **INCLUDED w/ support** | **INCLUDED w/ support** | **INCLUDED w/ ASA/AFF** |

Best-in-class ownership experience to accompany NetApp AFF/FAS/ASA solution purchase

Descriptions on this slide are an overview only. Each offer requires agreement with certain Terms & Conditions. Please refer to the Terms & Conditions for each offer for full details.
Note 1: Requires purchase of specific PS program. Applies to AFF C-Series and ASA systems Note 2: Requires usage of Cloud Insights to validate compliance.

Delivering freedom to IT to manage and innovate with data

Leader in NAS

NetApp® AFF and FAS are trusted by tens of thousands of customers for NAS.

Leader in Unified

Only Unified solution with file, block, and object.

Leader in SAN

ASA A-Series

NetApp is already trusted by 20,000 customers for their SAN workloads.

Across any app, any data, any cloud

aws   Microsoft Azure   Google Cloud   IBM Cloud   SaaS

Bezel mock-up; Not final; initial shipments may use older bezel.

The modern world with NetApp
Freedom to innovate across any app, any data, and any cloud

Free IT from different silos across structured and unstructured data

Deploy dedicated NAS, dedicated SAN, or unified systems all with the same technology stack.

Modernize data storage affordably

Integrated autonomous tiering makes sure that data is always on the right storage media and at the right cost, with guaranteed storage efficiencies.

Save the planet and shrink your power bill

Dense efficient storage uses less power and creates fewer carbon emission than other comparable storage.

Turn cyberworry into peace of mind

Autonomous antiransomware technologies and tamper-proof data protection help level the playing field against constant cyberthreats.

Thank you

■ NetApp