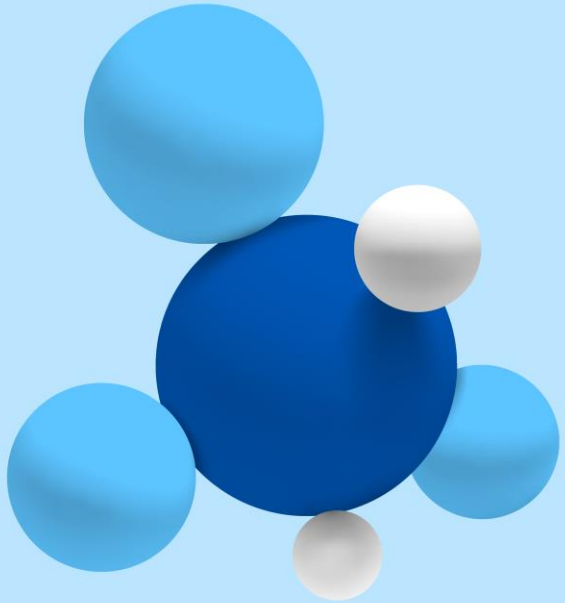
NetApp® BlueXP™ sustainability dashboard

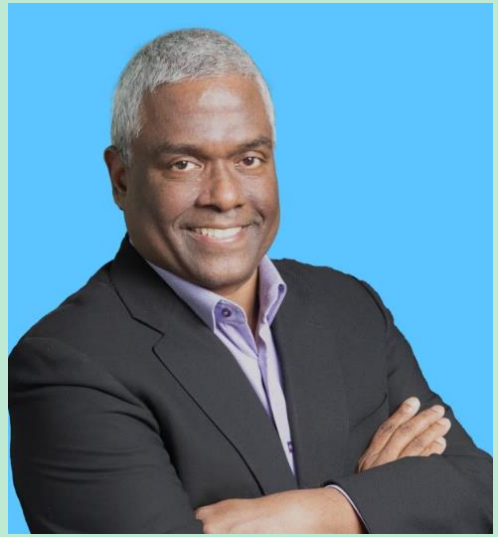
Chris Pearce
Field Solutions Architect
February 29, 2024



Return to top

“At NetApp, we believe that having an ESG vision is far more than just a part of our value proposition or even a competitive advantage: it is a key part of our organization's impact on the world we live in.”

George Kurian, NetApp CEO



The NetApp portfolio uniquely helps companies achieve sustainable operations

Let's address a few important points right up front

Hybrid cloud is the most impactful way for companies to have a viable sustainability plan	• Public clouds are inherently more energy efficient than any corporate data center
NetApp is the undisputed leader in helping companies identify, migrate and manage data in the public clouds	• No other vendor has as comprehensive a portfolio of products and services to help companies build their hybrid cloud and achieve their sustainability goals
NetApp takes a “no greenwashing” approach to sustainability	• We know companies must keep some data on-prem, so we are relentlessly focused on reducing the carbon footprint of our storage systems • We provide validated energy use data

BlueXP sustainability dashboard

Understand and improve sustainability posture of ONTAP systems
Reach your sustainability goals

Comprehensive sustainability visibility, insight and guidance

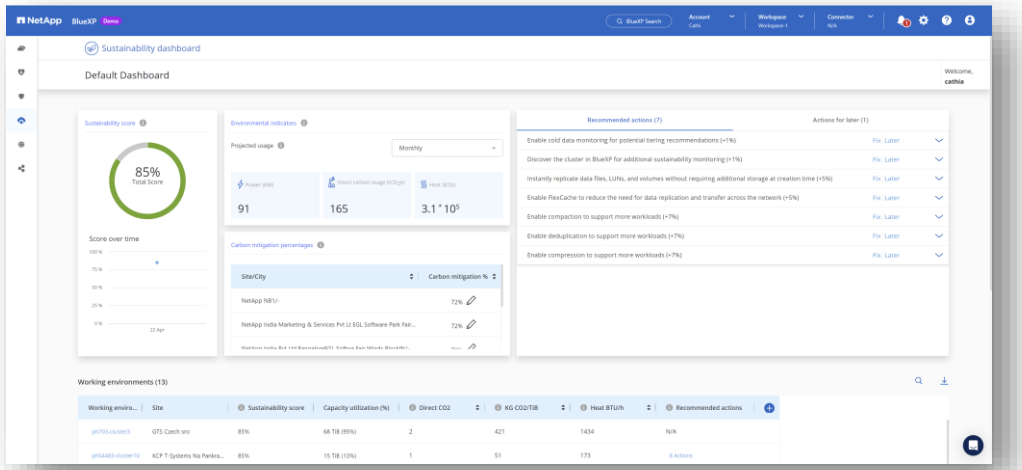
- AIOps-driven intelligent insights and recommended actions
- Gain visibility into power, thermal, and carbon information
- Reporting on NetApp AFF and FAS ONTAP systems

Sustainability assessment scoring

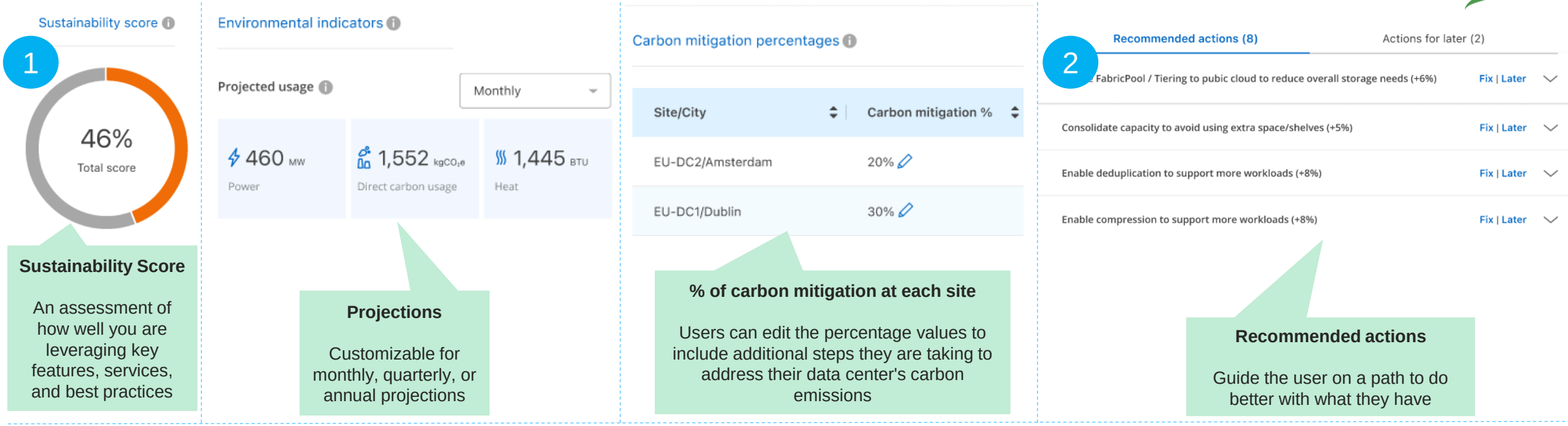
- Sustainability score helps determine your overall posture
- Based on carbon footprint and recommended guidance
- Follow graphical progress tracking to monitor changes and improvements

Actionable insights to reach goals

- Identified actions at cluster level with guided remediation improve status
- Improve energy consumption while reducing carbon footprint
- Geared to improving sustainability posture and reaching goals



BlueXP sustainability dashboard breakdown



Sustainability Score

An assessment of how well you are leveraging key features, services, and best practices

Projections

Customizable for monthly, quarterly, or annual projections

% of carbon mitigation at each site

Users can edit the percentage values to include additional steps they are taking to address their data center's carbon emissions

Recommended actions

Guide the user on a path to do better with what they have

Working environments (60)

Working environment	Location	Sustainability score	Capacity utilization (%)	Direct CO_2 usage	Actual kWh usage	Heat BTU/h	Recommended actions
3 prdclu01	San Jose	70%	21,824.5 TiB (91%)	9,960	10,895	9,000	1 action
cvoawsue1ncorpprdclu01n01a	AWS/ North East	100%	1.20 (42%)	N/A	N/A	N/A	None
amsprdclu02	Tel Aviv	36%	15,824.5 TiB (75%)	8,300	10,895	4,500	5 actions
amsprdclu03	Dublin	54%	21,824.5 TiB (91%)	9,960	5,700	9,000	8 actions
amsprdclu04	Dublin	54%	21,824.5 TiB (91%)	9,960	10,895	1,200	5 actions
amsprdclu01	Singapore	Requires AutoSupport	Requires AutoSupport	Requires AutoSupport	5,700	Requires AutoSupport	12 actions

REST API and CSV

Integration ready into 3rd party tools and stand alone ready for print out reporting

All customer working environments

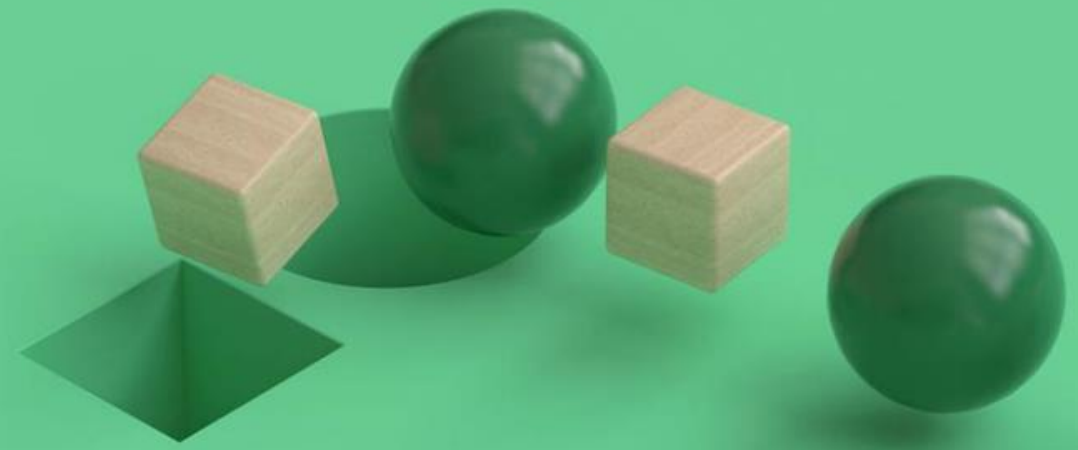
All AFF & FAS working environments included

Key Metrics for planning & assessment

kWh, Capacity, KwH/TiB, heat (BTU), carbon usage

Demo

BlueXP sustainability dashboard demo

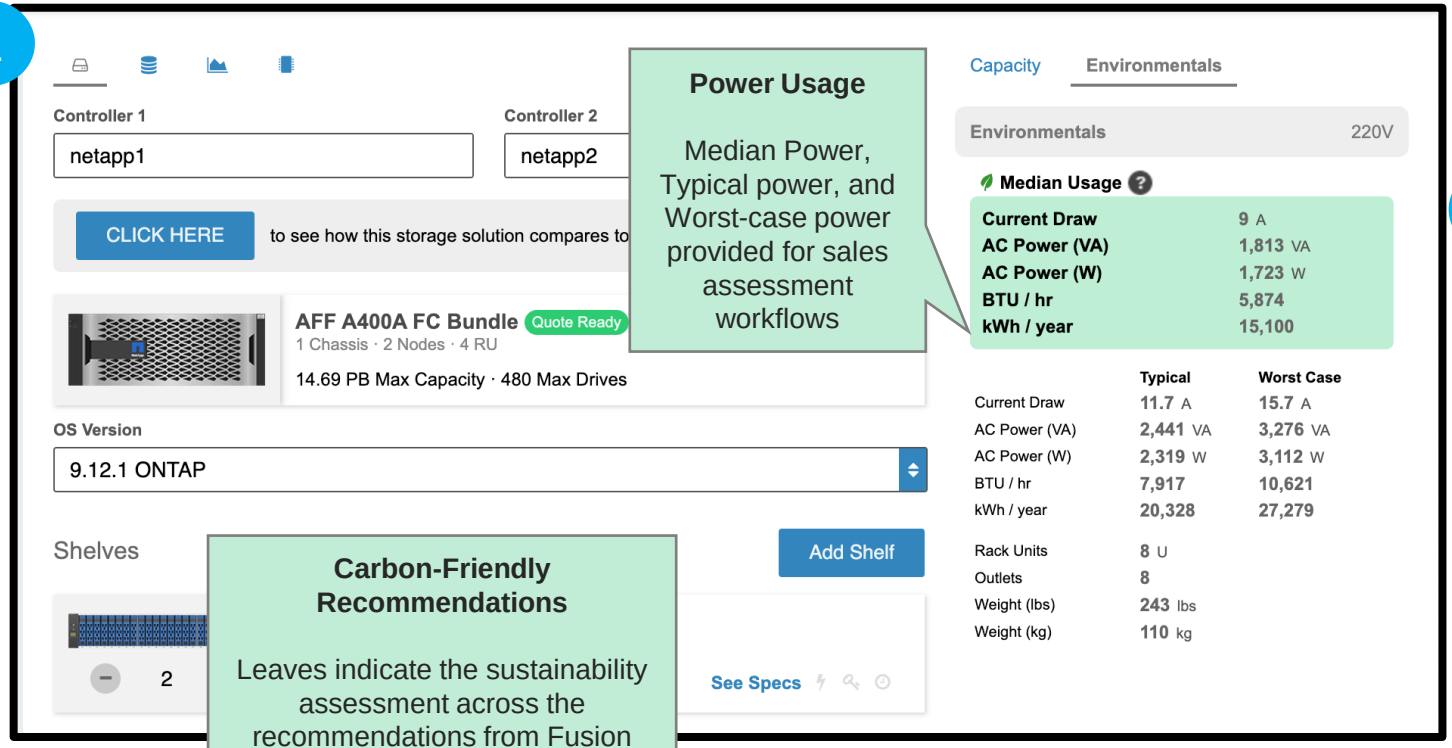


5 steps to tell your customers how reduce energy usage in your data center

1. Understand how assets across your data estate are being used
   - **BlueXP digital advisor** provides a view of on-prem and in the cloud with assessments guiding utilization, power, carbon, and heat data along with how to do better with what you have
2. Perform comprehensive analysis of your data
   - **BlueXP classification** service maps and classifies all cloud and on-premises data to reduce storage costs, improve sustainability and more by identifying unused data for move to more sustainable cold storage
3. Utilize the public cloud to take advantage of sustainability at scale
   - **BlueXP sync** for data migration to cloud
   - **BlueXP tiering** to move infrequently-used data automatically and seamlessly to the cloud
   - **BlueXP backup and recovery** for fast, simple backup to cloud
4. Use energy efficient storage for data that remains in the data center
   - NetApp’s **Storage Efficiency Guarantee** (4:1 for SAN, 1.5:1 for NAS) uses deduplication, compression, & compaction to create a smaller energy footprint
5. Plan for tomorrow, today
   - NetApp's **Fusion Size and Recommendation tool**, used by partners and your sales teams, enables AI enabled sustainability forecasting and actual power consumption data to plan for the future when helping clients choose the best NetApp solution to meet their needs

Sustainability Planning in Fusion (for Partners)

1



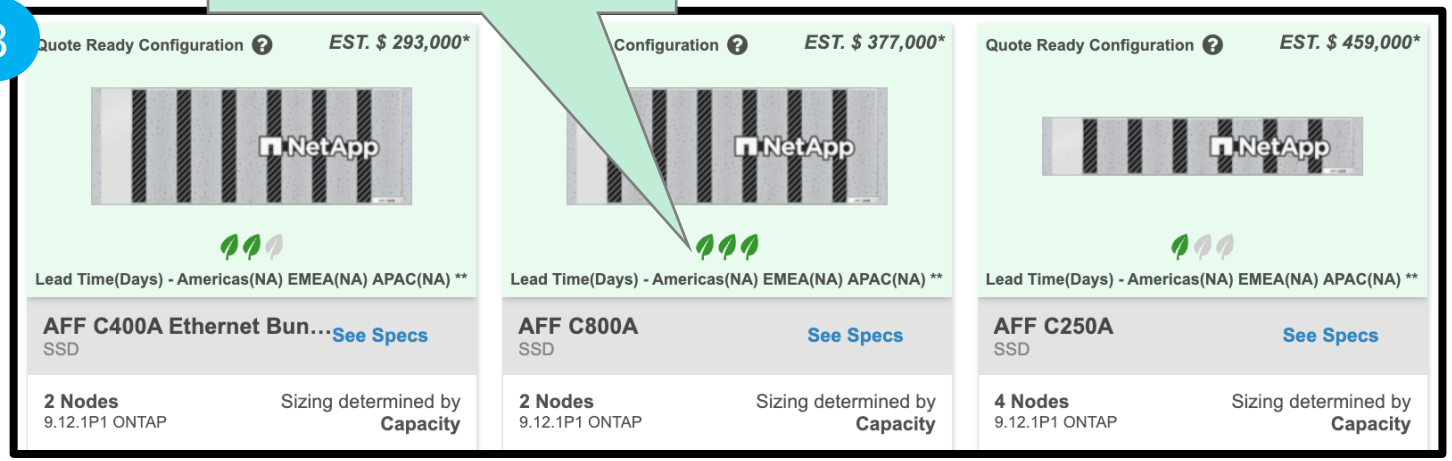
Power Usage

Median Power, Typical power, and Worst-case power provided for sales assessment workflows

Carbon-Friendly Recommendations

Leaves indicate the sustainability assessment across the recommendations from Fusion

3



2

Environmental Certifications

- Product Carbon Footprint
  - AFF A800 Report
  - NS224 Report
- Statements & Certifications
  - Environmental Policy and Certifications
  - ISO 14001:2015 Certificate
  - PSU 80+ Titanium Certificate TDPS-2000KB A
  - PSU 80+ Titanium Certificate TDPS-1600GB A
  - PSU 80+ Platinum Certificate DPS-1600AB-18 B
  - PSU 80+ Platinum Certificate PS-2162-8F
  - US TSCA PBT Substances Declaration
  - E-waste Program
  - European Union WEEE and Battery Statement
  - European Union RoHS Compliance Statement
  - China RoHS Compliance Statement
  - China and Taiwan Toxic and Hazardous Substances or Elements Table
  - European Union REACH Compliance Statement
  - European Union REACH Article Notifications - Cords and Cables

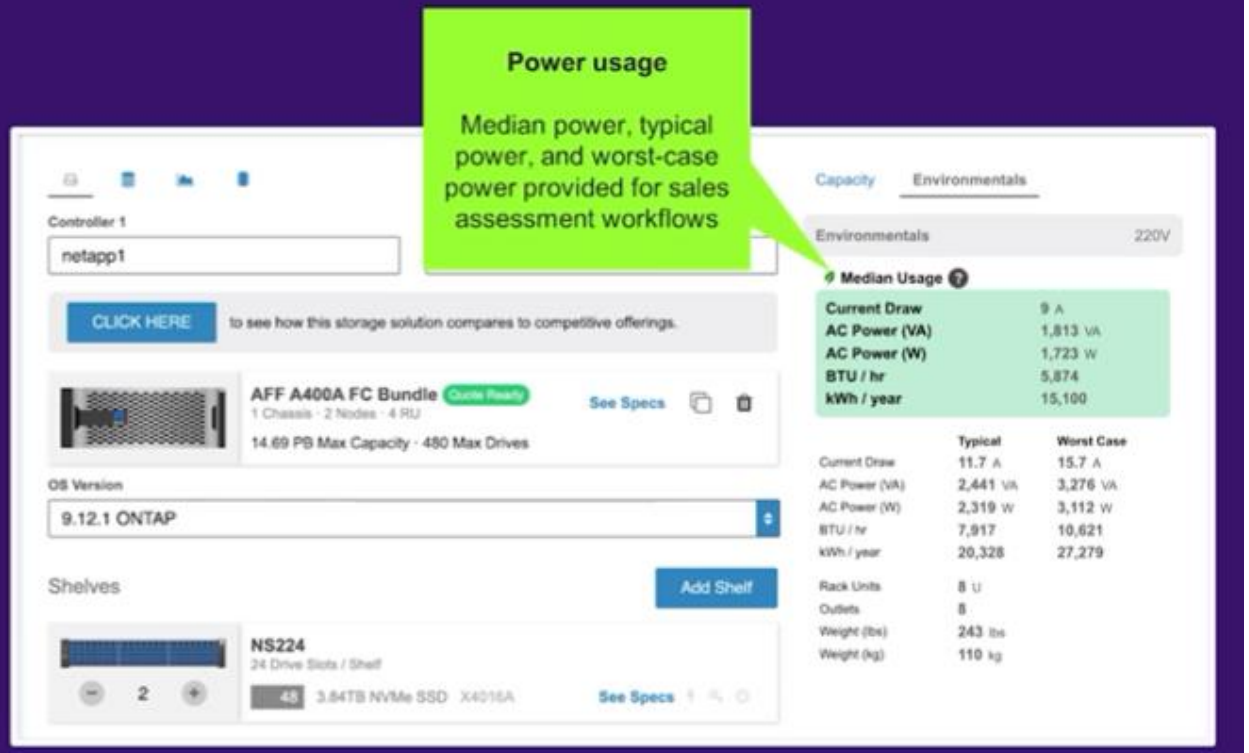
Environmental Certifications

Quick links to carbon footprint lifecycle assessments, environmental certifications, and compliance statements & declarations

Median power

See what customers really experience

- Augmentation of environmental data for NetApp AFF and FAS systems
- Median power systems in both the UI and technical report outputs
- Median power is based on actual power numbers reported by installed base systems of similar configuration.



Median power is based on actual power numbers reported by installed base systems of similar configuration. Median power represents the midpoint, where half of the similar configurations consume less power and the other half consume more power. Typical and worst-case power numbers are calculated based on product specifications and are spot-checked for accuracy. Typical power values are used when median power values are unavailable.

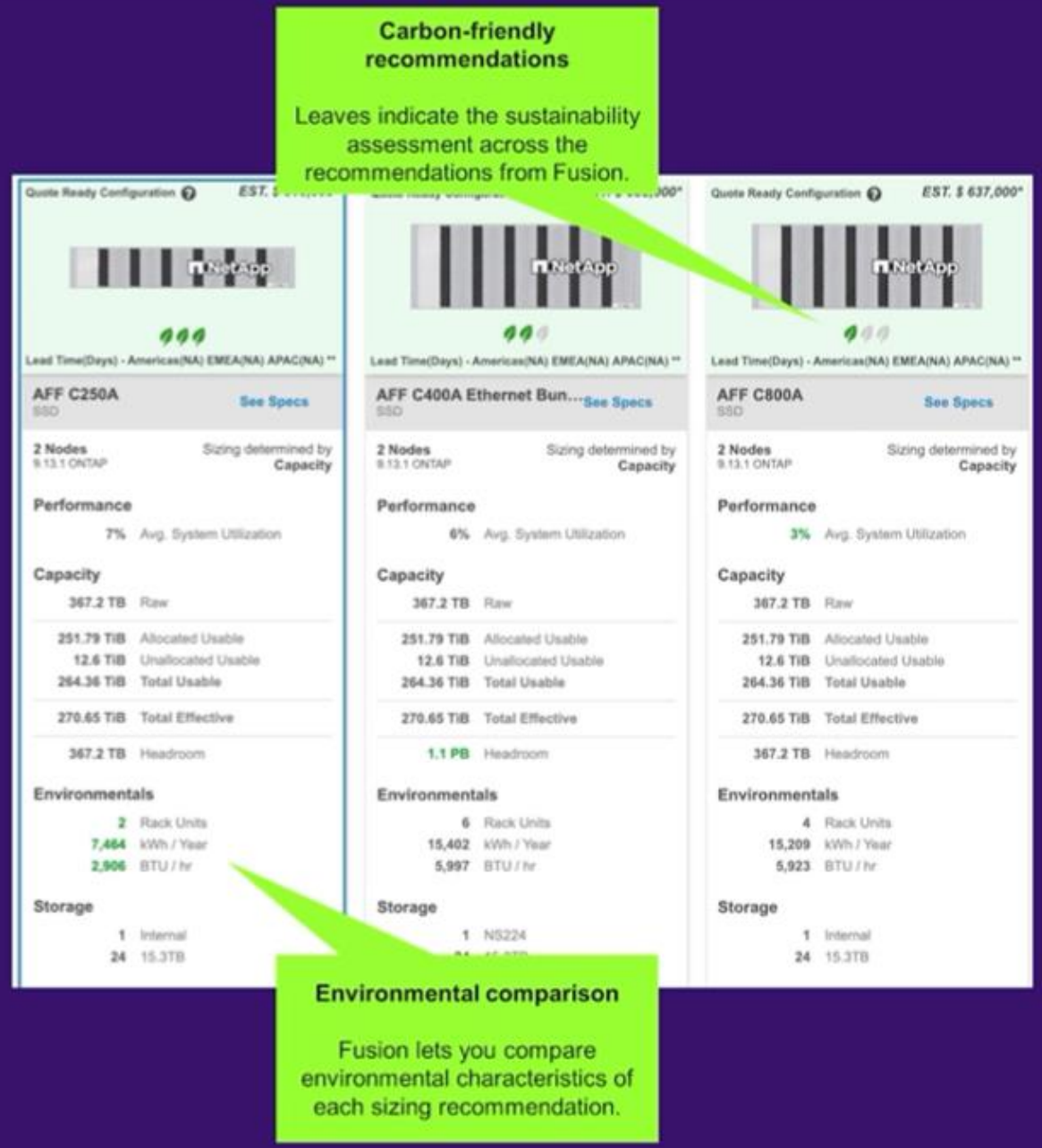
Carbon footprint leaf count

Simple and easy carbon comparison

Leaf counts are a simple and easy way to compare the environmental impact of sizing recommendations.

Leaf counts indicate which option has the smallest carbon footprint (relative to other recommendations).

A future version of the sizer will enable users to set the weight and preference for solutions that have the least environmental impact.



Price estimator and TCO calculator

Quickly estimate NetApp and competitor pricing

Compare support extension vs. new system purchase price, with TCO if desired

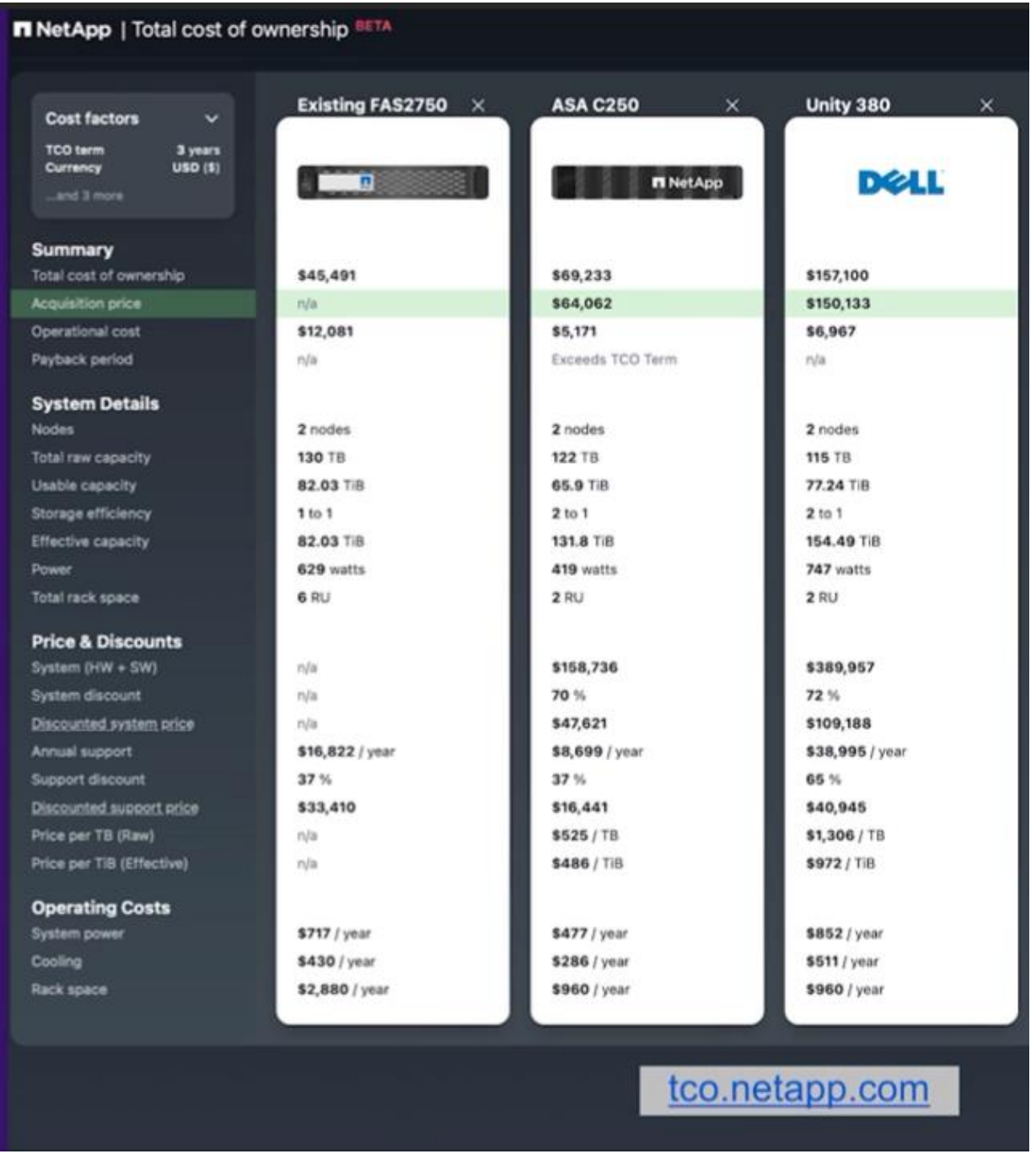
Compare several NetApp configurations for lowest cost or best discount and margin

Estimate a competitor's pricing and discounting

Match a competitive bid to a NetApp platform and price

Outline customer operational costs:

- Rack space
- System power
- Cooling

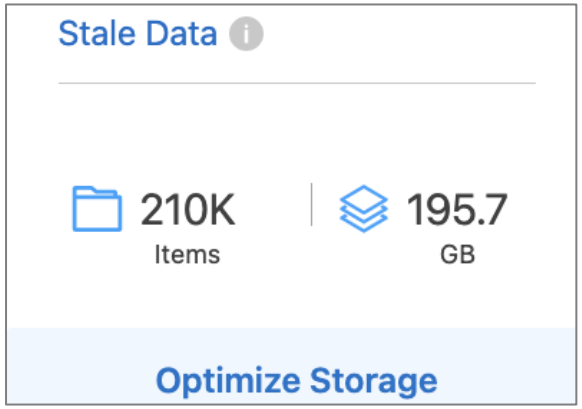


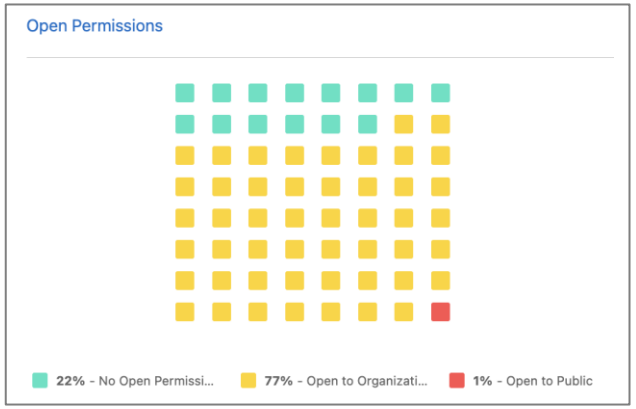
Helping you achieve storage optimization and protection

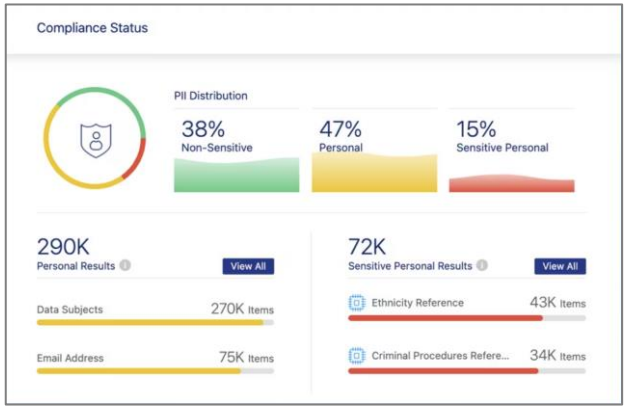
Data analytics and stewardship

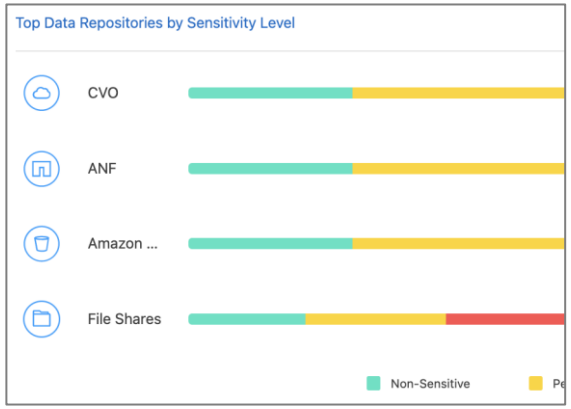
BlueXP classification

Store only the data you need and reduce your storage footprint









Optimize storage

Reduce storage footprint across your hybrid multicloud by automatically identifying and removing data storage waste.

Identify security risks

Protect your data using AI/ML to identify and alert on data potentially at risk of being accessed for criminal purposes.

Automate compliance

Automatically identify, control, and report on Personal Identifiable Information (PII) and a wide scope of sensitive personal information as required by GDPR, CCPA, PCI, and HIPAA privacy regulations.

Accelerate cloud migration

Identify stale, unused, and duplicated data that's not needed or allowed before migrating to the cloud.

NOTE: BlueXP chargeable service

BlueXP tiering

Move appropriate workloads and data to public cloud

Optimizes economics

- Save ~40% on storage TCO
- Comprehensive analysis and reporting of savings, with option to increase, through unified management interface
- ‘Float’/’convert’ licenses for flexibility and investment protection*

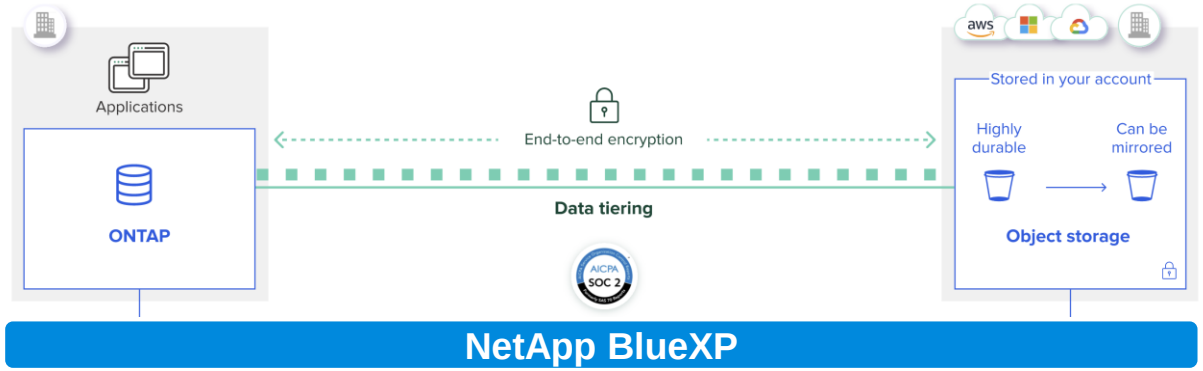
Simplifies IT operations

- Predefined tiering policies provides easily defined and customizable new policies
- Automation enhances IT Ops efficiencies – “Set it and forget it”
- Transparent access to tiered data
- No application/workload reengineering needed for cold (tiered) data

Streamlines infrastructure management

- Extended storage capacity becomes available by reducing active/critical storage footprint
- You can focus on management of hot/warm data
- You can support more workloads within existing capacity
- Enables an easy and safe first step towards a hybrid cloud strategy

By discovering, tiering, and managing cold data, you save storage TCOP, simplify IT ops, and streamline infrastructure management



NOTE: BlueXP chargeable service

*NOTE: Function of BlueXP digital wallet, specific to ‘floating’/’converting’ FabricPool licenses to BlueXP tiering entitlements

BlueXP backup and recovery

Move appropriate workloads and data to public cloud

Efficient, secure, and cost-effective data protection for NetApp ONTAP data, databases, applications, Kubernetes persistent volumes, and virtual machines, both on premises and in the cloud.

Performance

Back up on a block level, incrementally forever. Preserve NetApp® ONTAP® storage efficiencies, including deduplication, compression, and compaction.

Automation

Gain more control over how backups are created without additional overhead and complexity. Restore entire volumes, directories, or single files with indexed catalog.

Reliability

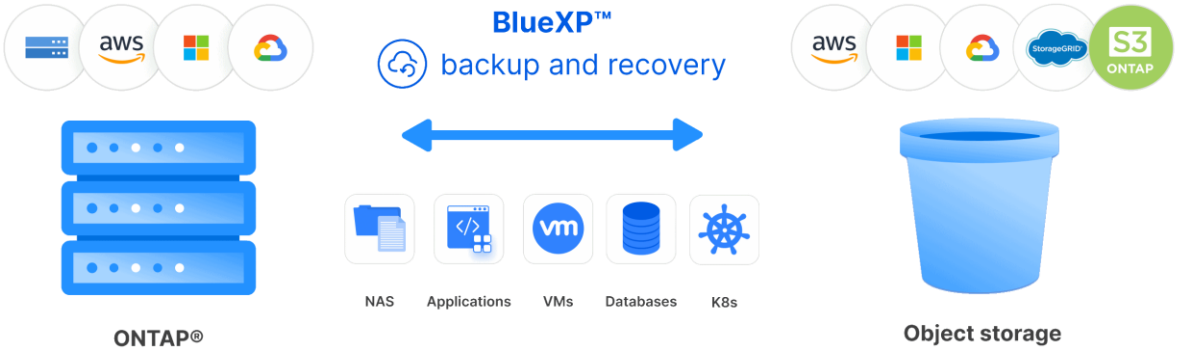
Data copies are independent and immutable, and they cannot be modified. The object storage is designed for 99.999999999% (11 nines)
of data durability.

Security

End-to-end encryption with CMK support—AES-256 bit encryption at rest and TLS/HTTPS encryption in flight. Private network connectivity between source and destination.

Cost efficiency

Pay only for what is protected and use the lowest-cost storage tiers available.



NOTE: BlueXP chargeable service

BlueXP copy and sync

Fast and secure data synchronization and migration from any source to any destination
Save money, time and resources

Simple and flexible

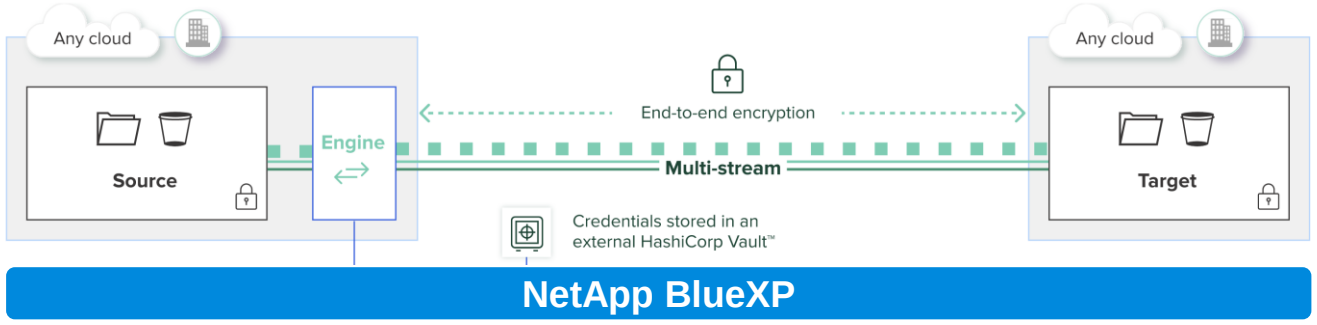
- Migrate large datasets fast with multi-stream transfer
- From any source to any destination
- Simple drag and drop initiation with intuitive wizard configuration
- Supports NFS, SMB/CIFS, file, object, on-premises, and cloud
- Mix and match source and target storage format types

Full control and visibility

- 10x data transfer rate
- Control the synchronization schedule and data transfer
- Select any available target, including on-premises, cloud object storage tiers, and low-cost archival tiers
- Preserve NAS ACSs and permissions, object metadata, and tags

Highly Secure

- Adheres to enterprise security standards
- Data-in-flight encryption and secure internal communication
- Store and access credentials
- Deploy data transfer engine in datacenter or within cloud account



NOTE: BlueXP chargeable service

Data Reduction

Efficiently store the data you need

The most effective guarantee in the industry. Period.

What is the Efficiency Guarantee?

A risk-free approach to more storage, more value, and more efficiency
A way to get high performance while minimizing energy usage and greenhouse gas emissions

Simple

- 4:1 for SAN protocols (Fibre Channel, NVMe, iSCSI)
- 1.5:1 for NAS protocols (NFS, SMB, CIFS)
- 3:1 for VMware, Hyper V, and KVM workloads on NAS
- For ONTAP all-flash systems including AFF A-Series, AFF C-Series, All SAN Array, FAS500f, and SolidFire

Smart

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

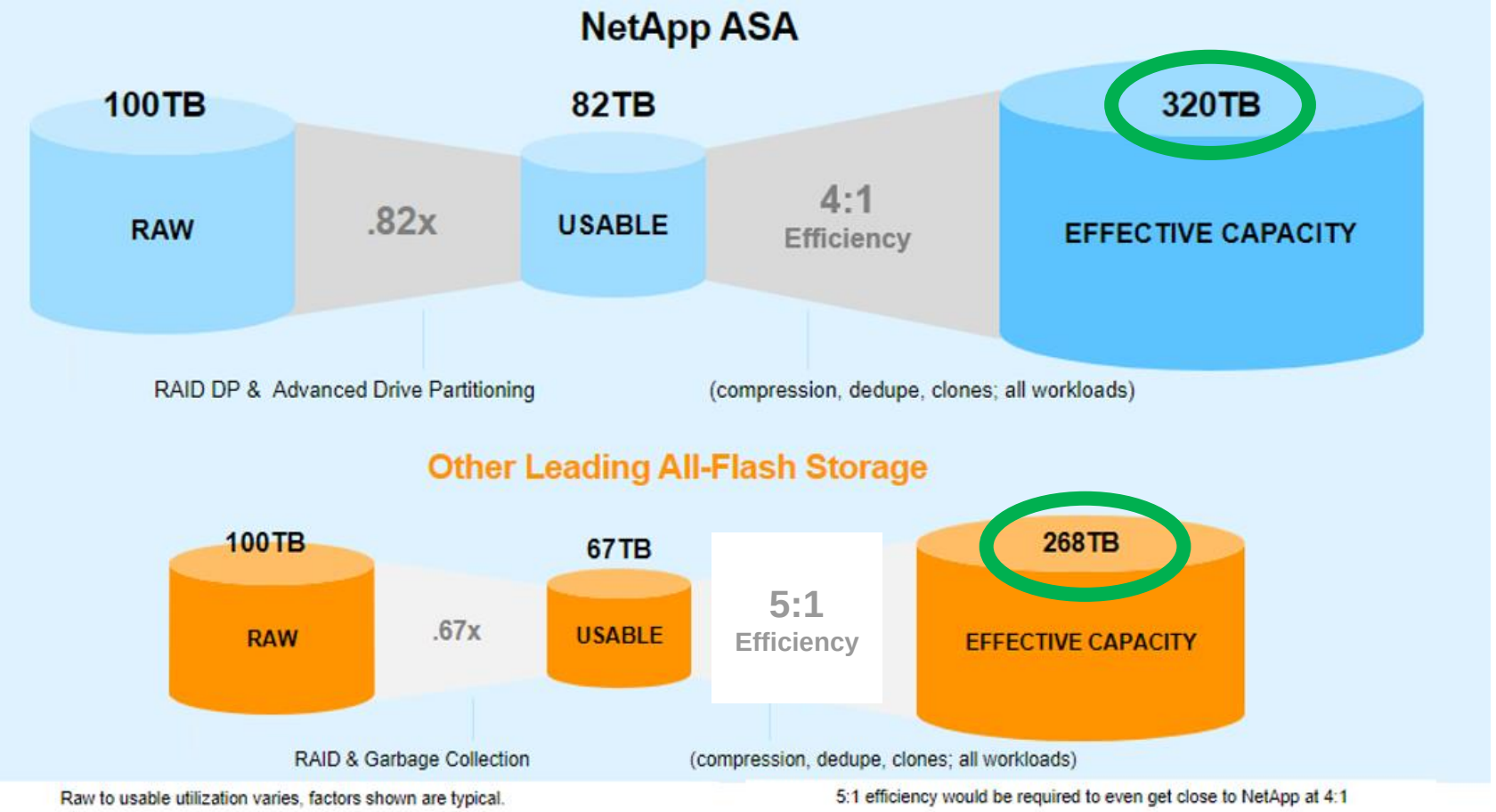
"With NetApp, we're able to fit a whole lot more in a smaller amount of space and still provide more performance than we had before."

– CI engineer, financial services firm

Our promise: if we don't meet your workload efficiency goals, we'll make it right

Data Reduction

Efficiently store the data you need – without the waste



NetApp ASA delivers approximately **320 TB** of *effective capacity*, when applying our 4:1 ratio with a *usable capacity* of 82%.

ASA C-Series Fit in the ASA Family

Launched new category in all flash block storage

ASA A-Series

High performance

Exceptional performance for mission-critical workloads to address application service level objectives

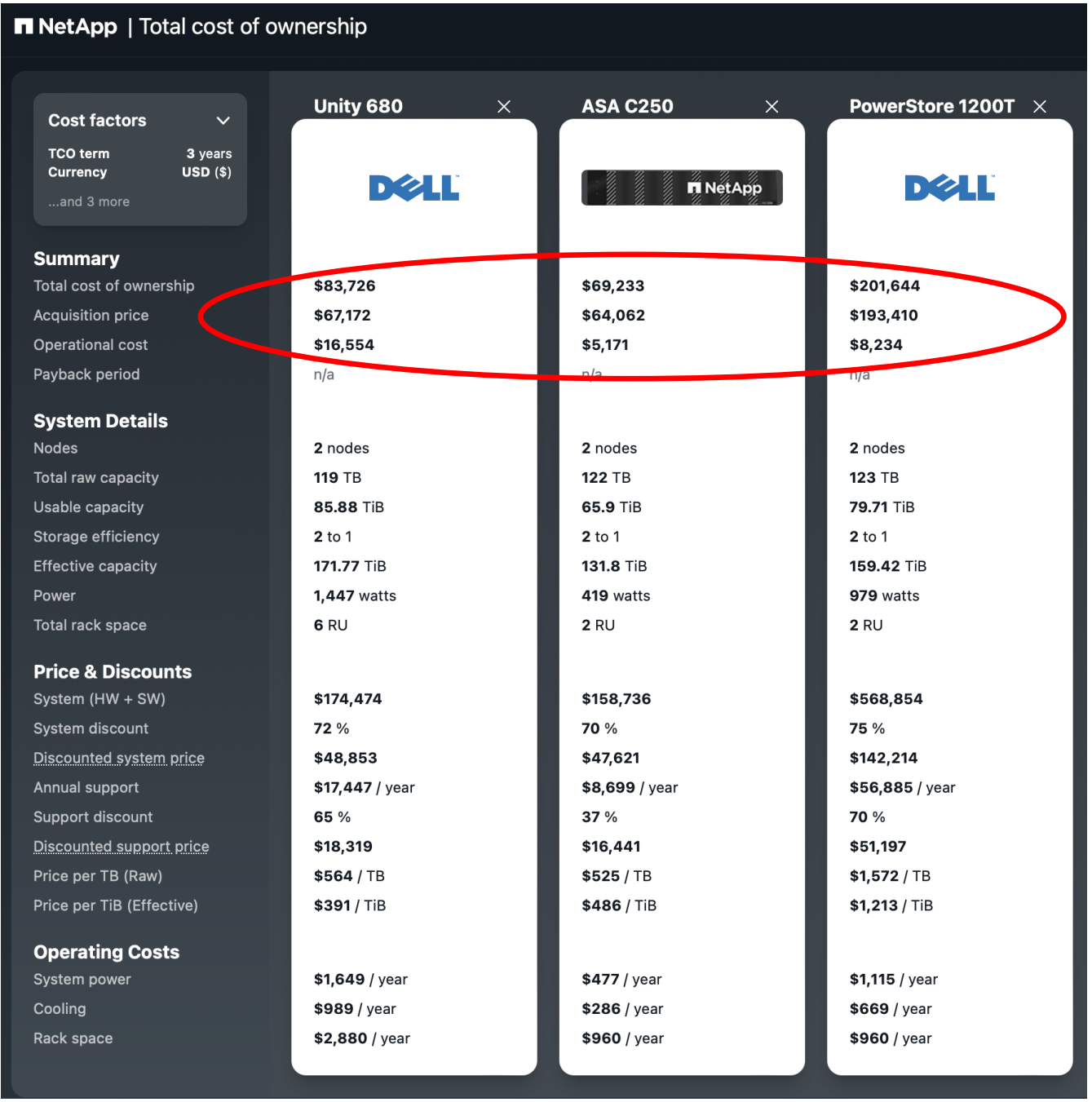
ASA C-Series

Lowest TCO

Efficient, sustainable storage for business-critical workloads and secondary storage, e.g. backup and recovery

Built on ONTAP Advantages

RESILIENT	MODERN	SIMPLE	SECURE	EFFICIENT
6 9's Data Availability Guarantee	**App integrated backup** for Oracle, SQL, SAP, and VMware **Cloud** connected	Comprehensive **ONTAP One** licensing included	**Recover rapidly** from **ransomware** attacks Guarantee	Up to **70% lower emissions** than the competition



ASA C-Series delivers more vs competition

- ASA C250 has a lower acquisition price and **1/3rd the operational cost of a Unity** 680 with SAS HDDs.
  - **C-Series all flash at the price of disk**
  - Lower TCO
- ASA C250 is **1/3rd the price** and less operating cost vs. PowerStore 1200T
  - More mature storage OS that can take you to the **cloud when ready**

Estimate prices, calculate TCOs at tco.netapp.com

ASA C-Series Fit: delivers unique competitive advantage

Dell and HPE will be trying to refresh their legacy hybrid flash systems with performance all-flash storage

Category	ASA C-Series	Dell PowerStore	HPE Alletra 6000
TCO: Price	Capacity flash systems offer SAN-optimized storage at the price of hybrid flash	Performance flash storage only at performance flash prices	Performance flash storage only at performance flash prices
TCO: Tiering	Automated tiering to hybrid flash on-prem or cloud storage for lower TCO	No tiering	No published information in tiering and no support for tiering to cloud
TCO: Efficiency	4:1 storage efficiency guaranteed*	On par with NetApp	Store More guarantee is vague
HA	High availability with fast failover, backed by a 6 9's Data Availability Guarantee*	Slower failover and no availability guarantee	On par with NetApp
Security	Best in class, NSA validated security capabilities, and Ransomware Recovery Guarantee*	No security validation, no ransomware recovery guarantee	No SnapLock feature or ransomware guarantee
Simplicity	Hybrid multicloud management with BlueXP that provides single control pane management of entire data estate – on-premises and public cloud	Separate management tools for each storage silo	No, Data Services Cloud Console does not manage public cloud storage
Cloud Readiness	Integration with all 3 major public clouds for easy backup, tiering, DR, migration, bursting	Not available	Not available
Future-Proof: Flexibility	Storage Lifecycle Program provides controller refresh to eliminate new storage purchase in the future (or cloud credits for future flexibility)	Anytime Upgrades program provides controller refresh only, no cloud credits	Not available – Timeless Storage seems to have been cancelled
Future-Proof: Protocol	Supports NVMe/FC, NVMe/TCP, iSCSI, FC	On par with NetApp	No NVMe/FC or NVMe/TCP support

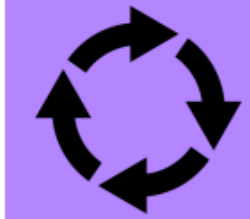
*Terms and conditions apply for all guarantees: Storage Efficiency Guarantee, Ransomware Recovery Guarantee, Six Nines Data Availability Guarantee

New NetApp sustainable packaging

Five advantages

More sustainable materials and design: our packaging is now made from 98% recycled/renewable materials

Reduced greenhouse gas emissions (CO2): our new packaging produces up to 50% lower greenhouse gas emissions compared to previous foam packaging



Curbside recyclable: boxes, inserts, and support materials are now all curbside-recyclable. This makes recycling easier and less costly

Easier unboxing: The new two-piece shipping box provides easier removal and handling of the product

Enhanced protection: Even with a smaller size and eco-friendly materials, this new packaging is more rugged and provides up to 51% less impact shock when compared to previous packaging

Replaced expanded polyethylene foam cushions with thermoformed cushions made from 100% postconsumer recycled and 100% curbside recyclable materials.

Replaced edge guards with corrugated vertical supports to allow for more comprehensive stacking strength and easier recyclability.

Decreased the corrugated cardboard box size to increase stack height, improving shipping efficiency by 50%.

NetApp

We're Reaching New Heights for Sustainability

TD SYNNEX has increased our CDP score this year. Learn about our rating and where we're going from here.

Adam Rutstein
Published 5 days ago

This year, we achieved a remarkable improvement in our CDP rating, moving from a C to a B-. CDP is the gold standard for environmental reporting focused on climate-related risks and strategy. This year was more competitive than ever before with a record-breaking number of over 23,000 companies disclosing with CDP. This marks a 24% increase from disclosure in 2022 and a 140% increase from disclosure in 2020.

What Our Rating Means:

A B- rating puts us in the management category, which means that we are taking coordinated action on climate issues. This places us amongst 43% of companies that reached management level in our Activity Group: Trading, Wholesale, Distribution, Rental & Leasing.

Areas that Contributed to Our Success:

- **Disclosure around our net zero targets**
- **Identification of key climate related opportunities**
- **Enhancements around our risk management process**

4 steps to reduce energy usage in your data center

1. Store only the data you need
2. Understand your infrastructure energy use and carbon emissions
3. Use the most sustainable on-prem storage
4. Move appropriate workloads and data to public cloud

Resources

NetApp 2023 ESG Report

Sustainable Technology: Serious Sustainability. Better Technology.

Four Steps to a sustainable approach to data

Sustainability Dashboard: Active IQ Digital Advisor and BlueXP

NetApp AFF C-Series

Price estimator & TCO calculator

Thank You