

Intelligent data infrastructure for the modern data center

Harvinder Bhela

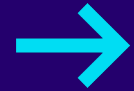
Executive Vice President and
Chief Product Officer

Haiyan Song

Executive Vice President and General
Manager of Cloud Operations



Agenda



Unique product and platform delivers unmatched customer value

Targeting large and growing markets

Blistering pace of innovation extends market leadership

We are in the “Age of Data”

But companies need to overcome some really big hurdles



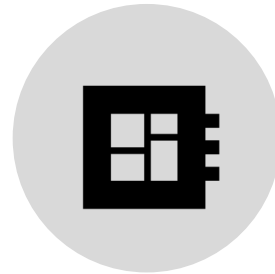
Data is increasing in **complexity** and **highly fragmented** across on-prem and hybrid multi-cloud environments



Data is **costly** to store and manage, with increasing pressures to cut costs, CAPEX, and demonstrate ROI



Data is the crown jewel and **constantly under threat**



Data fuels **AI workloads**, but **data management and operational bottlenecks** make it hard to scale



Data and applications infrastructure needs to **responsively scale** to demand



Data-related operations need to be **more sustainable** to meet rising expectations

NetApp meets every modern data challenge, turning data into your competitive advantage

SIMPLICITY



Deliver simplicity by managing complex workloads and eliminating infrastructure silos across apps, data, and clouds

SAVINGS



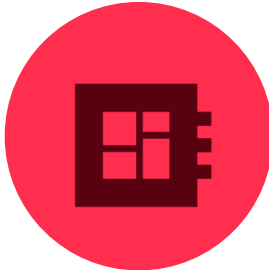
Make on-premises and cloud infrastructure spend go further

SECURITY



Keep business running with built-in security, rapid recovery, and infrastructure observability

SMARTS



Embed intelligence into data infrastructure to enable AI workloads—for new levels of productivity and innovation

SCALABILITY



Maximize infrastructure and applications scalability and team responsiveness

SUSTAINABILITY



Power more sustainable operations with energy-efficient technologies, tiering, and analytics

The NetApp Platform enables Intelligent Data Infrastructure

INTELLIGENT DATA INFRASTRUCTURE

UNIFIED CONTROL

ANY DATA,
WORKLOAD, & PLACE



ADAPTIVE
DATA MANAGEMENT & OPERATIONS



EXPANSIVE
ECOSYSTEM



ALWAYS-ON INTELLIGENCE



Enables

THE NETAPP PLATFORM

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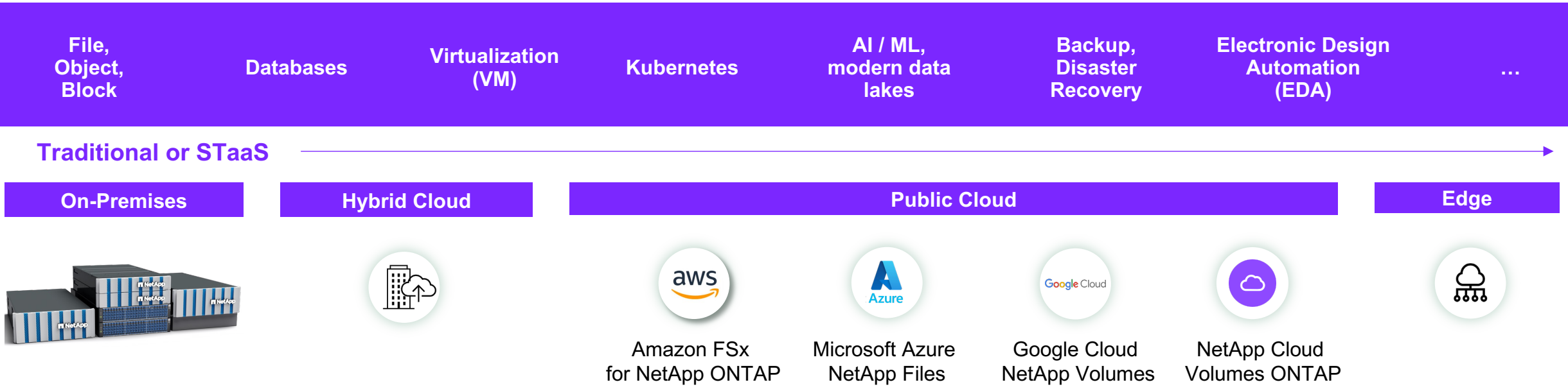
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Any data, any workload, any place

Data delivered how you need it, where you need it



The NetApp Platform is the only storage and data management platform that is everywhere data is – on-premises and as a native managed cloud service provided directly by the three biggest public clouds

- ✓ Consistent management and automation
- ✓ Consistent data protection and security
- ✓ Consistent performance
- ✓ Ultimate flexibility in consuming traditionally or as-a-Service
- ✓ Unified control across hybrid multi-cloud

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Data management services build on NetApp's strengths in storage to expand our value – and upselling opportunities – with customers

Keep data safe with AI-powered anomaly detection that automatically finds ransomware threats and protects the data before they do harm

Move data as needed by syncing, copying, tiering and caching – substantially improving productivity for AI workloads



Ensure better business continuity in the event of data loss with integrated data replication, backup, and restore

Classify, monitor, and govern data with AI-driven data classification, automated policy implementation, and enhanced privacy tools



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Example: AI-powered Autonomous Ransomware Protection



World's first AI-driven, real-time, on-box ransomware detection for storage – ensures precise detection from day one



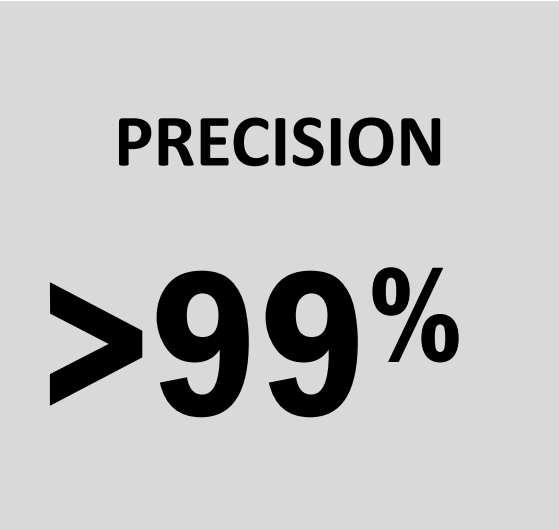
ML-based detection models are updated automatically and continuously for up-to-date protection



Automated recovery workflows at workload level to bounce back quickly in minutes



Industry's most comprehensive ransomware recovery guarantee



Validated by SE Labs in independent testing.

Although it's possible that an attack might go undetected, our and third party's research indicates NetApp technology has resulted in a high degree of detection based on certain currently known technologies and attacks.

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Operations services expand NetApp's value proposition to empower customers to maximize performance and ROI for their data infrastructure



Data Infrastructure Observability and AIOps



Monitor full stack (compute, network, storage), across NetApp and other vendors

Identify problems before they become incidents with predictive analytics & anomaly detection

Track configuration changes for real-time incident and root cause analysis



Infrastructure Optimization

Continuously maximize performance and efficiency across private, public, or hybrid cloud infrastructure



Workload Automation

Automatically scale workloads to adapt to shifting needs and free operation teams of manual tasks



Application Services

Boost data productivity and developer agility to develop, deploy, and scale open source powered applications



FinOps

Minimize costs and maximize the return of multi-cloud investments



SLA Management

Manage and ensure SLAs for storage and compute across data infrastructure with the power of AI



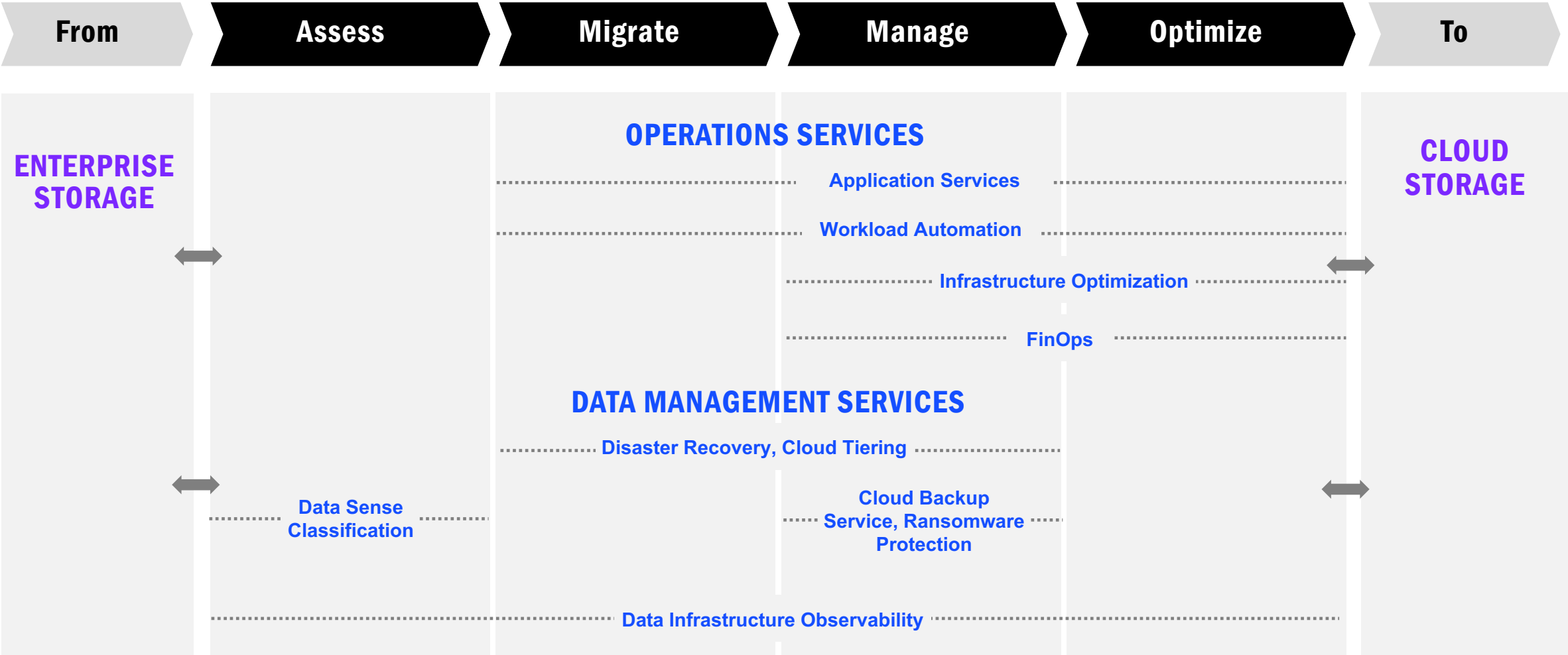
Fleet Management

Prescribe how to address misconfigurations, outdated firmware, and other vulnerabilities before they do harm to data infrastructure

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Data infrastructure insights empower customers in their migration to the cloud

Cloud Migration Steps



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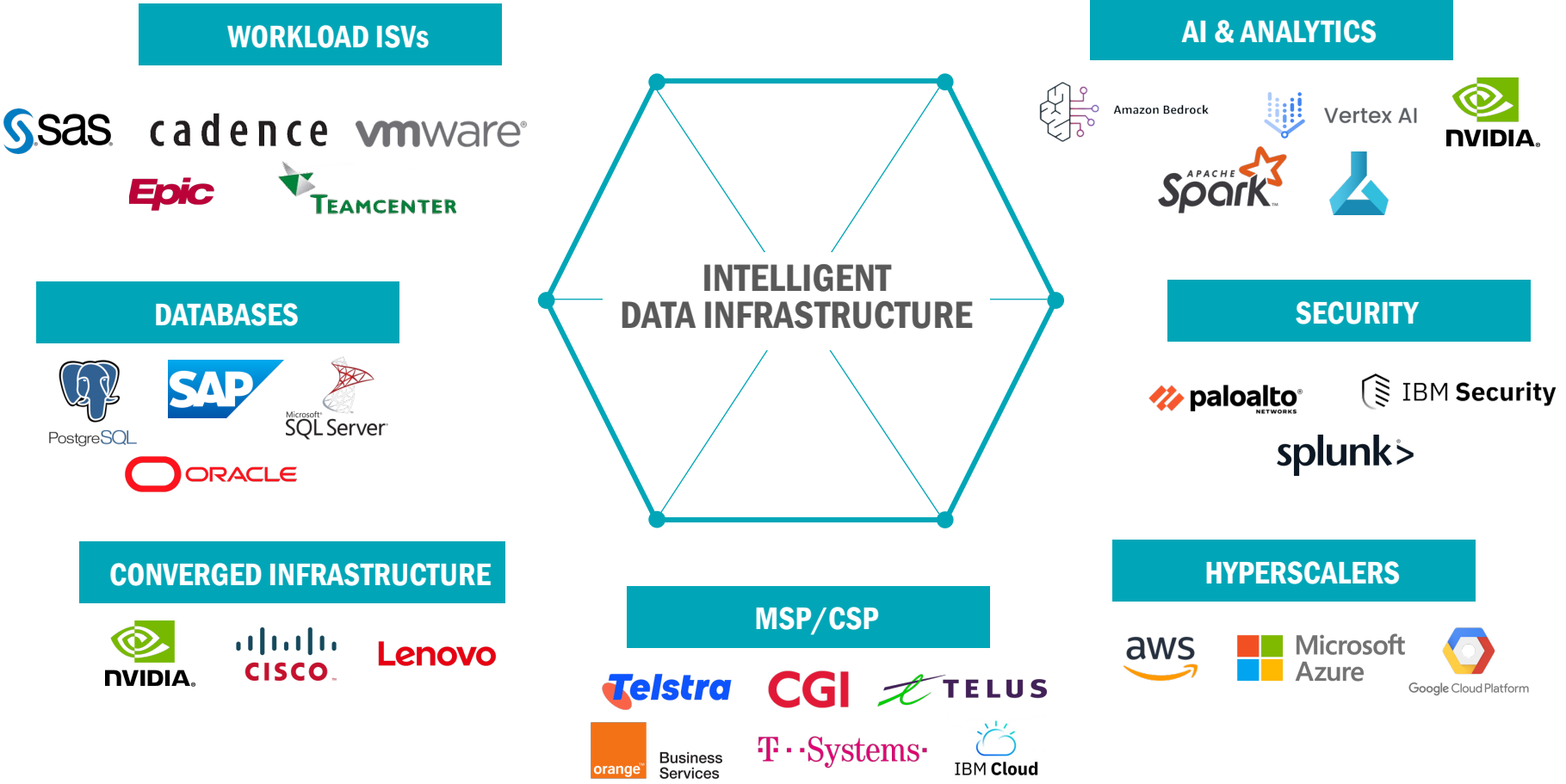
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NetApp's partner ecosystem with deepened support for workloads at the intersection of cloud, data, and AI will enable next wave

Intelligent Data Infrastructure brings a multi-dimensional ecosystem together to solve data challenges in the era of intelligence



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Simplicity at scale through unified control

UNIFIED CONTROL

Configurable to fit the usage and administration needs of every persona



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WORKLOAD, & PLACE



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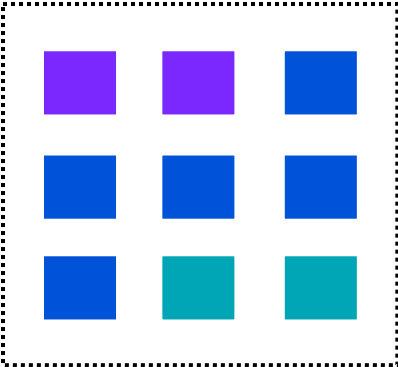
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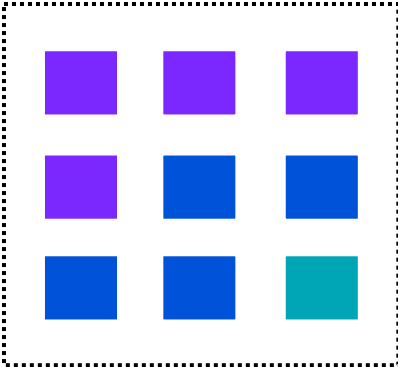
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The compossible building blocks of Intelligent Data Infrastructure enable customers and partners to adapt solutions to their specific needs

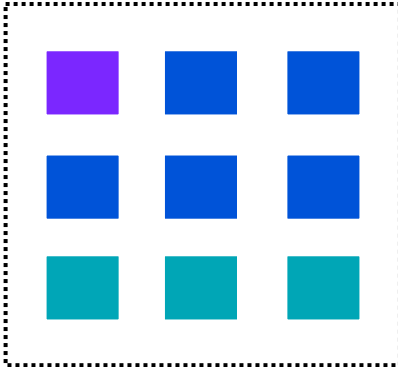
Flash



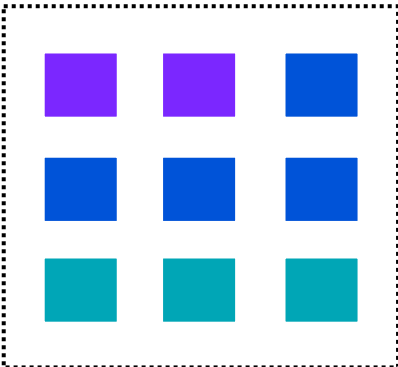
Block



Cloud



AI



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 Storage format

 Data & operations services

 Ecosystem elements

Agenda



**Unique product and platform
delivers unmatched
customer value**

**Targeting large and growing
markets**

**Blistering pace of innovation
extends market leadership**

Competitively positioned to drive growth in key markets

Flash



AFF Series

Optimized performance and design across all price points



Block



ASA Series

The right product and strategy to disrupt the mature block market



Cloud



aws A GCP

Only natively integrated player, addressing a broad set of workloads



AI











NetApp + NVIDIA

Large portion of the world's unstructured enterprise data resides on NetApp today



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Why we are winning in Flash

	For lowest cost, secondary use cases	For best price / performance	For best performance on Tier 1 workloads
	 HYBRID FLASH	 CAPACITY FLASH	 PERFORMANCE FLASH
Unified / file	FAS 	AFF C-Series 	AFF A-Series 
Block		ASA C-Series 	ASA A-Series 

Delivering automation, efficiency, data protection, and security capabilities for file, block, and object

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- Most comprehensive flash portfolio in the industry – but without the silos
- Lowest cost of data over the data lifecycle
- Cloud strategy resonates strongly with customers
- Industry-leading, real-time ransomware detection along with ransomware recovery guarantee
- High performance coupled with data management services for Enterprise AI and Gen AI
- Simplified operations and unmatched flexibility with unified data storage

Customer case studies

Flash

Block

Cloud

AI

Internet Services Provider – previously used us for NAS only – now consolidates both NAS and SAN with NetApp

Key winning factors

- Flexibility in managing NAS and SAN workloads with ASA
- Simplified manageability and reduced costs



Why we are winning in Block

Disrupting the market by providing all the features at the lowest price in the industry

Modern, resilient and simple

- Power and resiliency of a legacy frame array in a modern system
- Resilient with a 6 9's Data Availability Guarantee program

Strong foundation

- Trusted and proven by 20,000 customers for their SAN workloads
- Leader in VMware deployments

Common platform

- Single platform across file and block
- Integrated approach provides simplified experience and lower costs

Primary use cases



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Customer case studies

Flash

Block

Cloud

AI

Leading healthcare customer – who never used NetApp before – migrates to NetApp

Key winning factors

- ASA / C-series value for high-capacity SAN workloads
- ASA / A-series for business-critical SAN workloads
- Rich features, reliability, ease of use, performance, and “same for less” value of ASA series



Why we are winning in Cloud storage

Everywhere

- 89% of orgs have a multi-cloud strategy¹ – and NetApp is the only native solution that is everywhere
- Integrated data protection, cross-region disaster recovery, and multi-zone high availability

Every workload

- Best price-performance file storage in the cloud
- Successful with both high-end and low-end workload coverage across all industries

Integrated, unified, scaled

- Simplified user experience via full integration with hyperscaler management consoles and APIs
- Wide customer reach via hyperscaler sales and GTM routes - sold against customers' cloud commitments

Primary use cases

Backup,
Disaster
Recovery

Electronic
Design
Automation
(EDA)

AI / ML
Modern Data
Lakes

SAP

Databases

EPIC

File, Object,
Block

Virtualization
(VM)

Kubernetes



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Customer case studies

Flash

Block

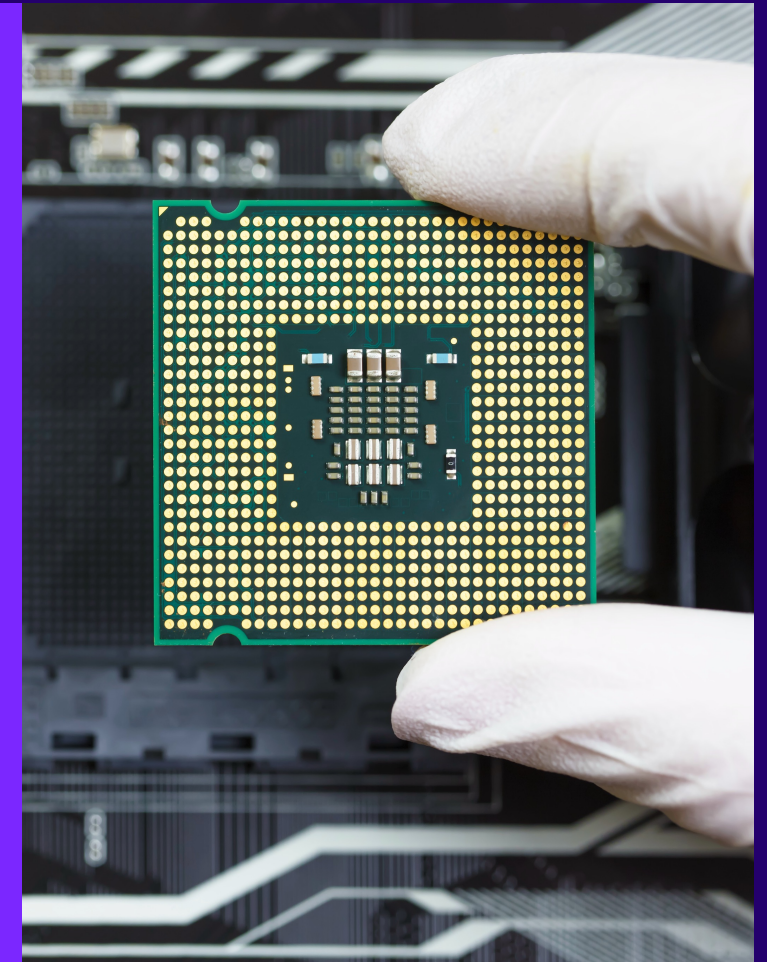
Cloud

AI

Semiconductor company enhances EDA workload with NetApp

Key winning factors






- Extended on-premises Electronic Design Automation (EDA) workload to AWS cloud. And now in the process of extending it to Azure and GCP as well
- Better cost/performance in comparison to hyperscalers' other offerings. Achieved agility with burst to cloud, high availability, and performance



NetApp AI opportunity

Broad portfolio of solutions

Enterprise AI represents our greatest opportunity

	High Performance Model Training	Data Prep/Data Lake Modernization	Model Training & Fine Tuning	RAG & Inferencing
Use Case	Build and train large foundational models	Modernizing Data Lakes	Build and train models at various scale	Leverage proprietary data
Solutions	EF-Series with BeeGFS for NVIDIA DGX SuperPOD 	  AFF FAS	AFF A-Series or C-Series for NVIDIA DGX BasePOD, SuperPOD, and OEM Servers with GPUs 	FSX_N Ecosystem Integrations  Lenovo FlexPod
Selling Points	<ul style="list-style-type: none"> Enterprise level support Competitive price/performance High availability 	<ul style="list-style-type: none"> One Platform Cloud Connected NVIDIA Certified 	<ul style="list-style-type: none"> Ecosystem Integrated Secure & Efficient 	

Why we are winning in AI

NetApp's leadership in files, objects and cloud storage is an essential data foundation for AI

- Gen AI operates on **unstructured data** – and a large portion of the world's unstructured data is already stored in NetApp.
- AI is inherently **hybrid**. Training is in the cloud. Data is on-premises. NetApp has a seamless, hybrid multi-cloud workflow.
- Multiple versions of models will be in production. Ability to version using snapshot / clone datasets is key for **responsible AI**.
- **Data mobility, metadata management and data management** features are key for AI workflows – and NetApp excels at these!
- NetApp's **MLOps and RAG / inferencing pipeline integrations** put ONTAP's power inside the tools of data scientists – critical for their productivity.
- Our built-in **data protection / anti-ransomware** detection becomes critical when even more workloads are AI driven.

Primary use cases

Data Lake
Modernization

Model Training

Fine Tuning

Inferencing

Data Prep

RAG



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Customer case studies

Flash

Block

Cloud

AI

Aerospace leader innovates with NetApp for AI Excellence

Key winning factors

- Established an AI Center of Excellence that offers a variety of AI workload services for the whole company
- Built and trained models using advanced techniques like RAG and fine-tuning on a NetApp STaaS/Keystone model
- Increased data scientist productivity, security, and silo-less architecture



Agenda

Unique product and platform
delivers unmatched
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Targeting large and growing
markets



**Blistering pace of innovation
extends market leadership**

Innovations delivered in just the last year...

Flash

- AFF C-series with capacity flash
- AFF A-series refresh
- ONTAP One comprehensive software suite
- Keystone enhanced with additional data services and guarantees

Block

- ASA A-series for block
- ASA C-series for block with capacity flash

Cloud

- GCNV: First party storage service in Google cloud
- Unified file and object on Amazon FSxN
- Higher performance tier in Amazon FSxN
- Lower price points and capacities in Google

AI

- NVIDIA BasePOD and SuperPOD certifications
- "AIpod" solution with Lenovo and NVIDIA
- Have AI talk to your enterprise data on-premises (NVIDIA NeMo Retriever microservices)

AI-based Autonomous Ransomware Protection
Ransomware recovery guarantee
BlueXP as a single control plane across on-premises and cloud

And we have a lot more planned...

- ✓ Ongoing updates to hardware designs for flash, optimized for performance, efficiency, appliance-like simplicity, density, and power savings
- ✓ More price/performance tiers for AWS, Azure, GCP to cover a broader range of price points and workloads -- all you need in cloud storage is NetApp!
- ✓ Even more robust ransomware protection and fully automated recovery – for the ultimate peace of mind for customers
- ✓ Premium add-ons for protection, compliance, governance – helps customers with their biggest data challenges
- ✓ More integrated data services making in-place RAG and inferencing even easier for enterprise AI

**This blistering
pace of innovation
is enabled by the
most robust and
powerful storage and
data management
platform in the
industry!**

Key takeaways

NetApp
delivers

**unmatched
customer
value**

For any data, any
workload, any
place

Customers
appreciate

**simple
management,
world-class
protection
and
consumption
flexibility**

We are

**competitively
positioned**

to win in

**Flash, Block,
Cloud and AI**

Our unique
platform
enables us to

out-innovate

everyone else
in the industry

NETAPP INVESTOR DAY

June 11, 2024

