

Zukunftsweisende IT-Lösungen

PDV
ITcampus 2024

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28. August 2024

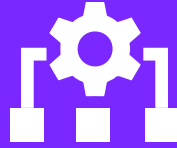




**ANY DATA,
ANY PLACE**



**ACTIVE DATA
MANAGEMENT**



**ADAPTIVE
OPERATIONS**

INTELLIGENT DATA INFRASTRUCTURE

**Intelligent data
infrastructure
enables businesses to
master data, cloud, and
AI challenges and build
future-proof IT for what
comes next**

Unified data storage

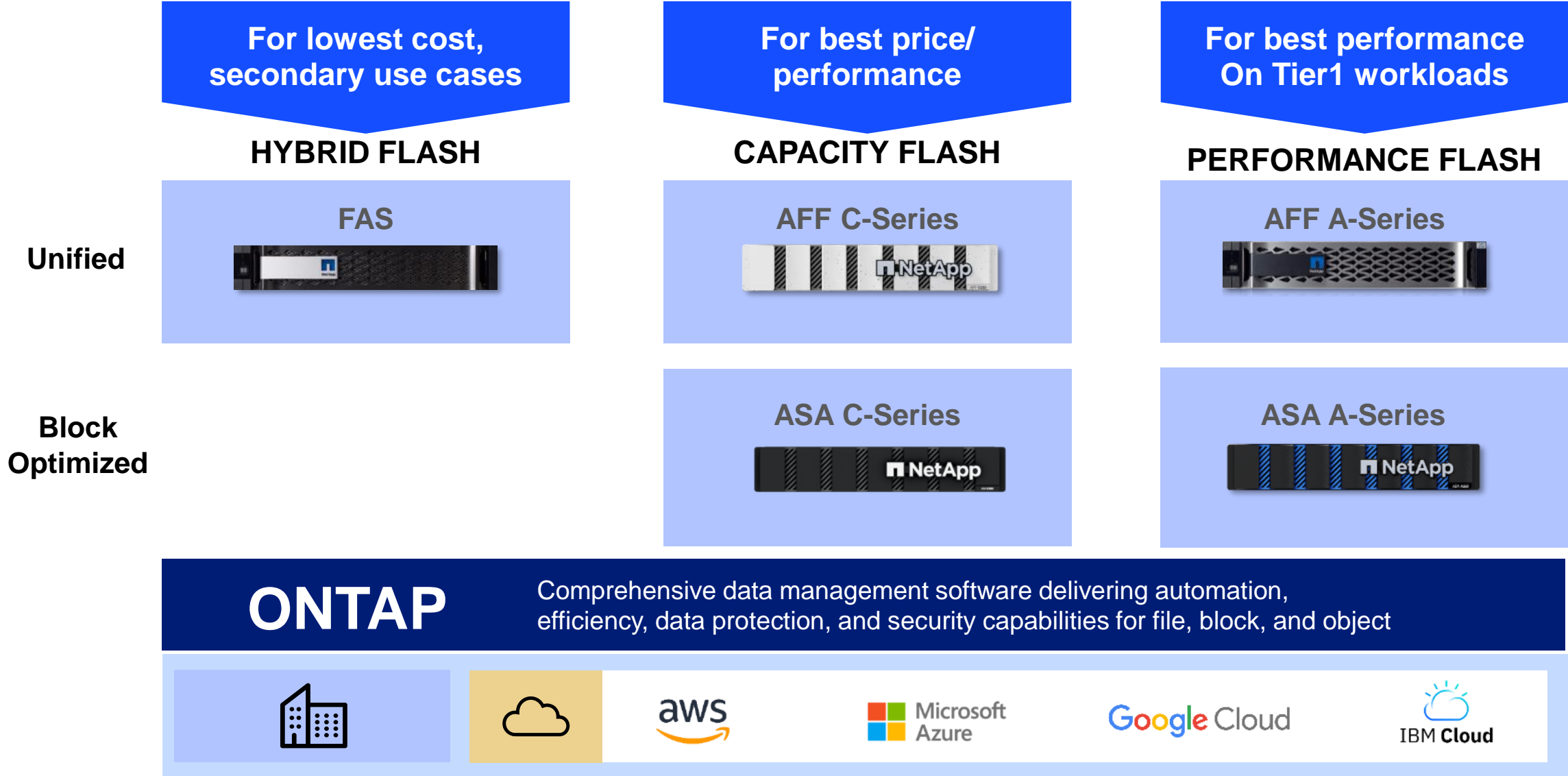
Any data type

Any workload

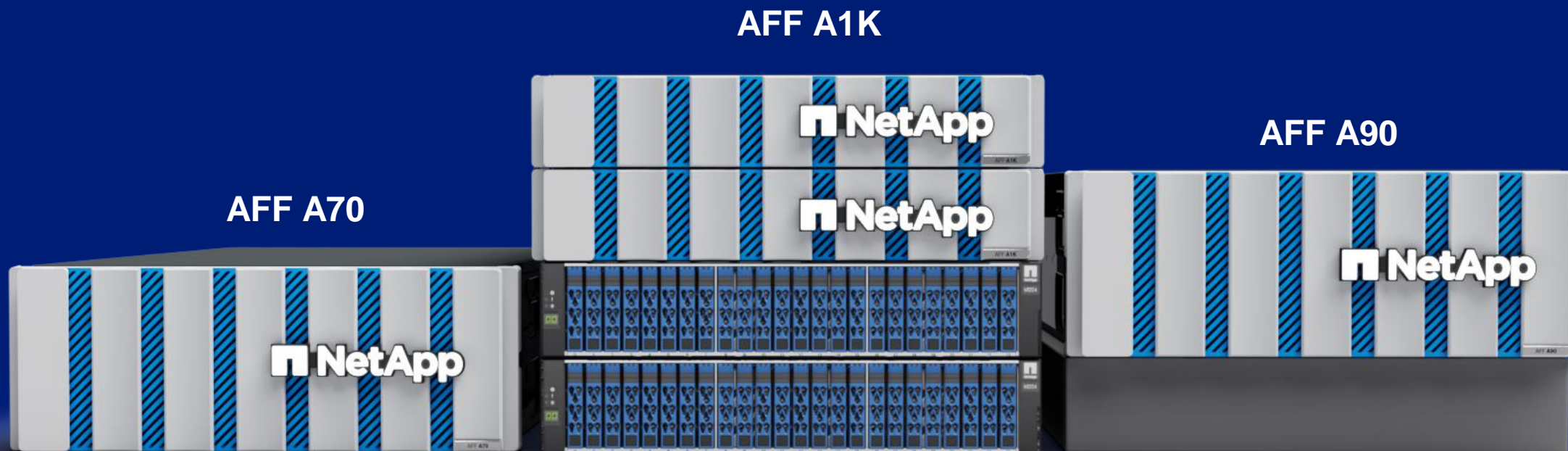
Any storage protocol

Anywhere

Data storage to meet every need – all powered by ONTAP



Introducing unified data storage built for the AI era



NetApp AFF A-Series

Powerful.

Intelligent.

Secure.

New AFF A-Series:

Turbocharge every workload –
VMware, database, AI –
without trade-offs

Powerful
Intelligent
Secure



Unparalleled performance to power your mission-critical workloads

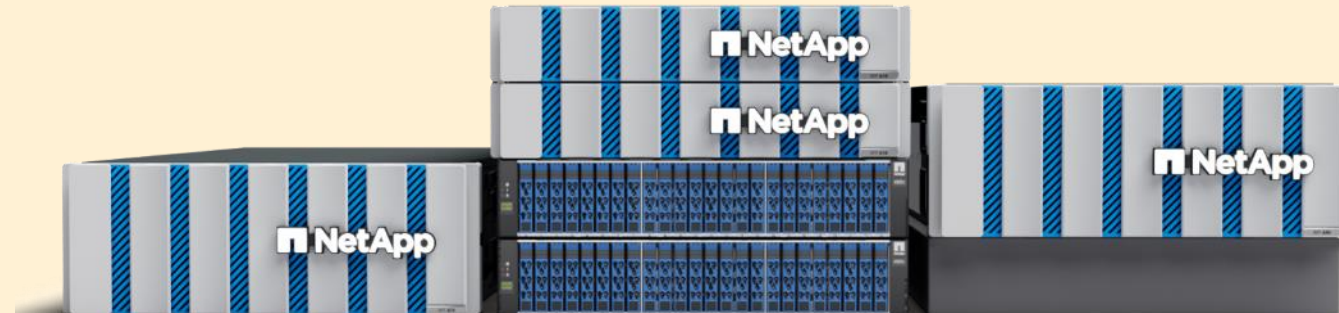
Boost your VMware, databases, and AI initiatives

Up to
2X PERFORMANCE

Up to
40M IOPS

Up to
1TB/S THROUGHPUT

**Maximum performance with
always-on storage efficiency**



Introducing new AFF A-Series

High-Performance AFF systems (re)designed for next-generation All Flash workloads

"No trade-offs between improved storage efficiency and performance"

Architect forward:

- Always on storage efficiency with full performance
- End-to-end NVMe
- Enabled for future security hardware offload
- Designed for Sustainability
- Far better Price/Performance
- Trusted Platform Module (TPM) is used to secure the on-box encryption key manager
- Common Criteria planned for 9.15.1

The best way to harness the power of ONTAP!

Key Customer Benefits of new AFF A-Series



AFF A70

Mid-range platform optimized for the right balance of price performance

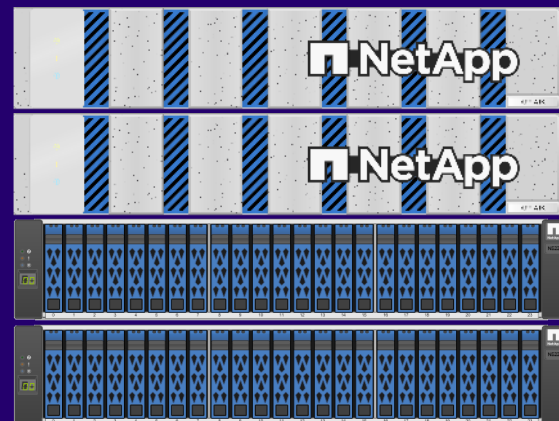
100% Faster than A400



AFF A90

High-end platform for mission critical workloads

60% Faster than A800



AFF A1K

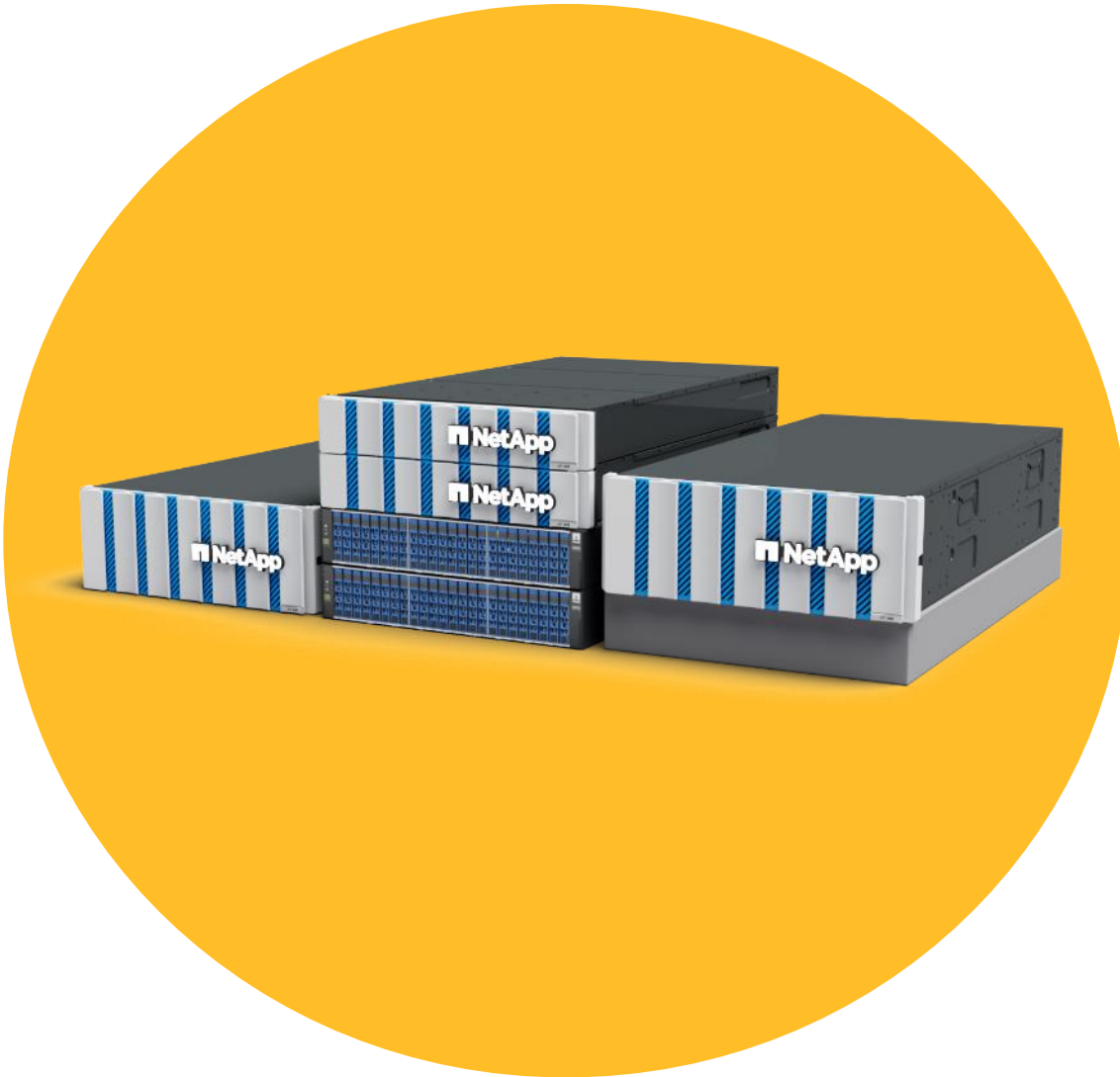
For the most demanding mission critical workloads

40% Faster than A900

Performance will vary by workload

Major Innovations

- Integrated compression offload engine with Intel® QAT®
 - Next generation CPU architecture provides increased performance for resource-intensive tasks and processing
 - Always-on enhanced storage efficiency without impacting performance
 - Up to 160GB/s data compression
- PCIe Gen 5
 - Offering 4X the throughput¹
- DDR 5 Memory
 - 2X the clock speed for faster memory access
 - 50% more throughput for large data transfers
 - Improved reliability
- Ready for IPsec/TLS offload²
- Titanium power supplies
 - 95% efficiency rating
 - Maximizing energy efficiency



AFF A-Series systems deliver even more value for the price

More IOPs, more effective capacity, more throughput, more density

Up to

50%

lower \$/IOPS

Up to

35%

lower \$/effective TB⁽¹⁾

Up to

55%

lower \$/throughput

Up to

45%

lower \$/density



New AFF A-Series:

Transform via data-driven intelligence
and future-proof infrastructure

Powerful

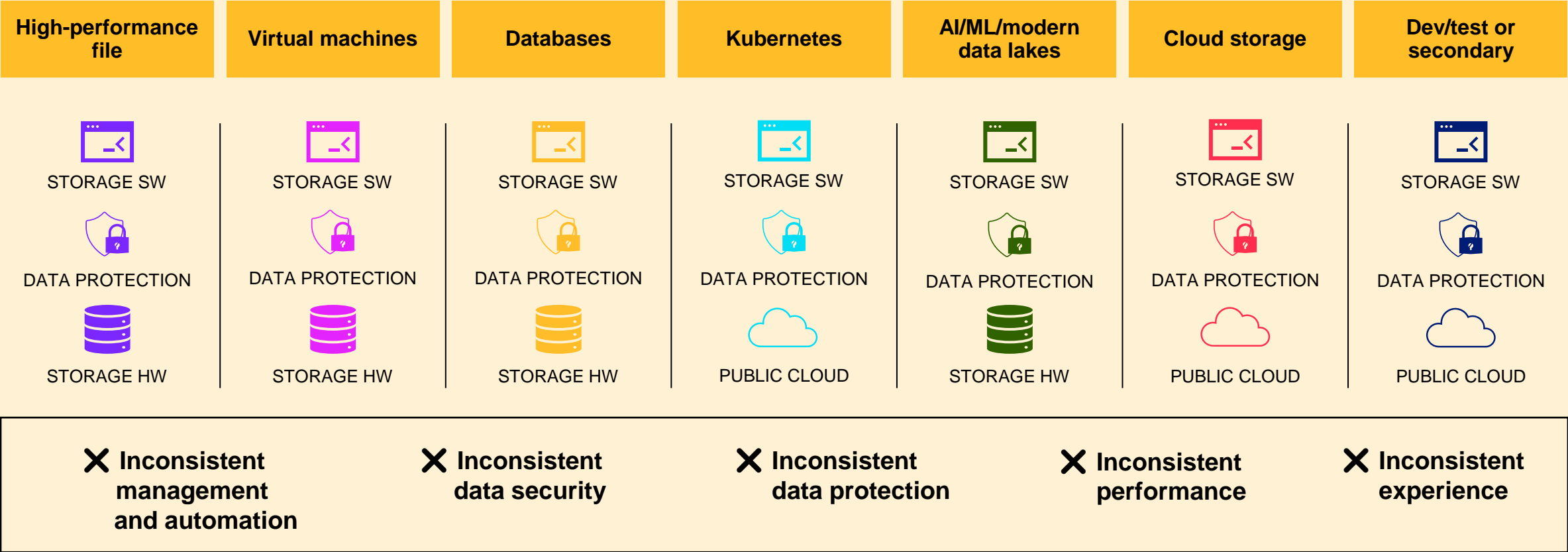
Intelligent

Secure



Complexity is the silent killer of IT productivity

Bespoke infrastructure silos across app, data, cloud are inefficient, costly, and introduce risk



Increase productivity and minimize risk with unified simplicity at scale

High-performance file

Virtual machines

Databases

Kubernetes

AI/ML/modern data lakes





Cloud storage





Dev/test or secondary

ONTAP

ONLY NETAPP

Comprehensive data management software delivering automation, efficiency, data protection, and security capabilities for file, block, and object





✓ Consistent management and automation

✓ Consistent data security

✓ Consistent data protection

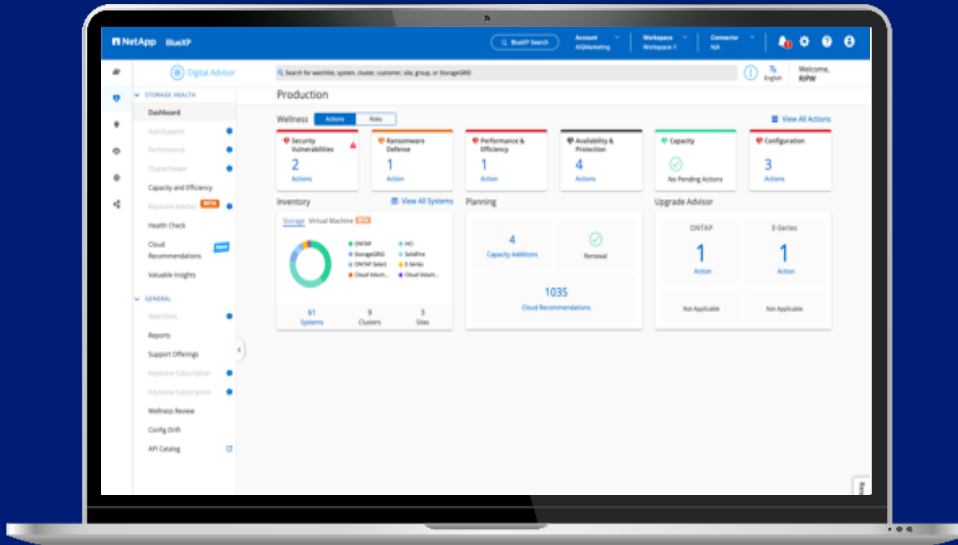
✓ Consistent performance

✓ Consistent experience

Achieve the lowest cost across the entire lifecycle of your data

ONTAP provides comprehensive data management software

Automated services to always keep your data in the best place across your **hybrid multicloud environment**



All data is managed and controlled by BlueXP with Active IQ AIOps.



Migrate data without disruption



Tier to lower-cost on-prem or cloud



Burst to/from on-prem and cloud



Backup and DR to disk or cloud



Migrate to and from the cloud

Accelerate NetApp AI Pod with new AFF A-Series

Get started quickly, reducing cost and complexity



Consolidate a data center's worth of analytics, training, and inference compute into a single AI infrastructure

- New AFF A-Series systems ideal for fine tuning and enterprise model training.
- Simplify, accelerate, and integrate your data pipeline for ML and DL with flexible, NVIDIA- validated solutions.
- Deliver the right performance and nondisruptive scalability
- Eliminate infrastructure silos and unify AI workloads.
- Leverages the NVIDIA BasePOD design.



NetApp AI Pod Architectures with DGX H100

New AFF A-Series:

Protect your data via real-time ransomware detection designed for industry-first 99%+ accuracy

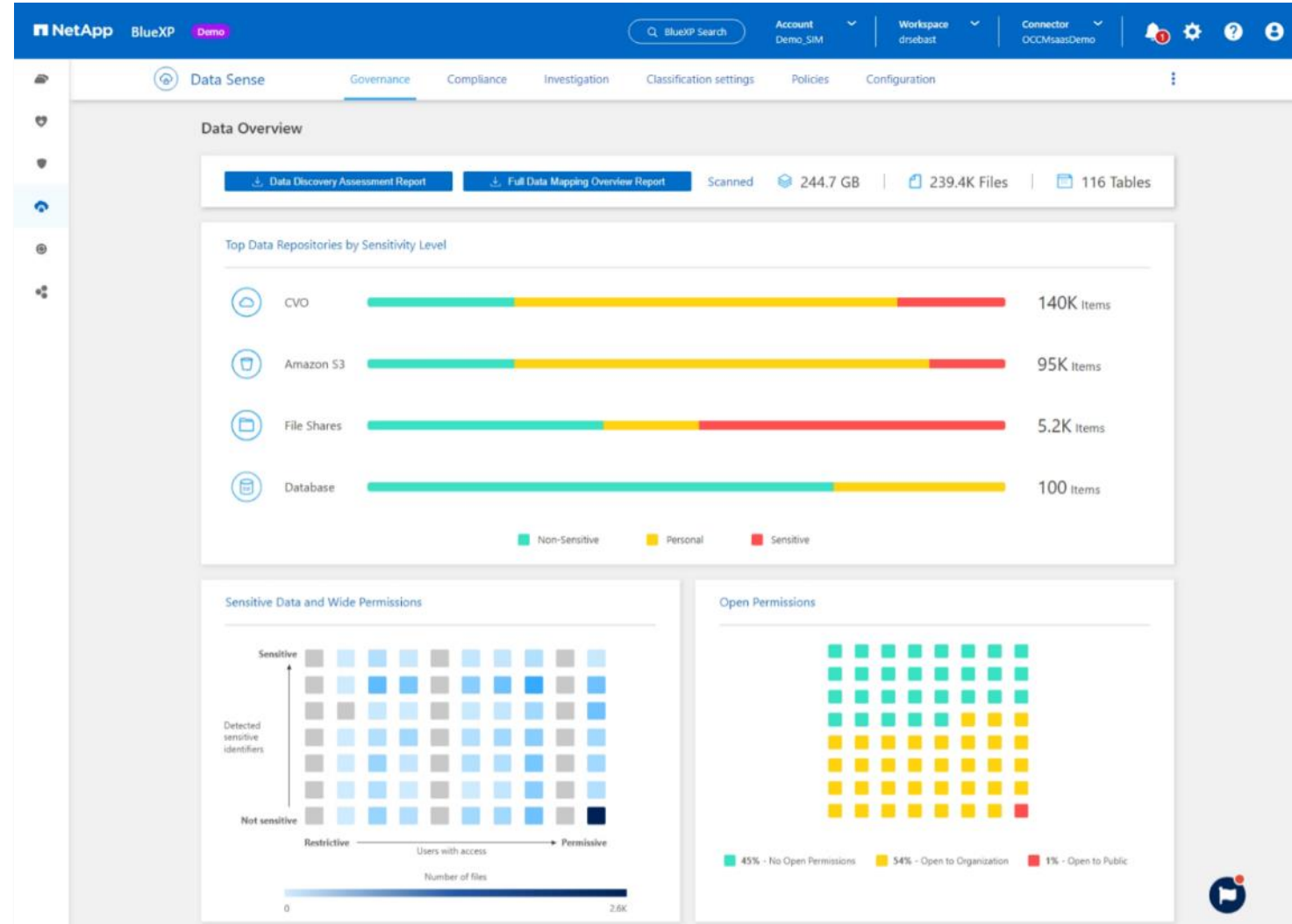
Powerful
Intelligent
Secure



Daten-Strategie first! Know your data

1. Welche Arten von Daten habe ich?
Klassifiziert
2. Wer hat Zugriff darauf?
3. Wie lange sollte ich es aufbewahren?
Redundant?
4. Wo werden sie gespeichert?
5. Wann wurde zuletzt darauf zugegriffen?

DORA + NIS-2





**The most secure
storage on the planet**

**The only enterprise
storage vendor validated
to store top-secret data
everywhere**



Commercial Solutions
for Classified (CSfC)
Component List



FIPS 140-2




Department of Defense
Approved Product List
(DoDIN APL)



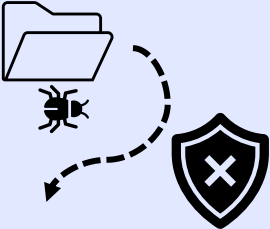
Common Criteria

Full-spectrum data protection built into ONTAP

Advanced data protection and security across your hybrid cloud

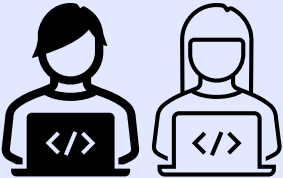
PROTECT

Policy Engine




Automatically block known malicious file types

Multi-Admin Verify



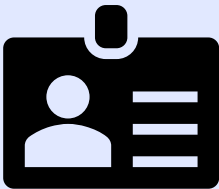
Block rogue admins and malicious users

Immutable WORM Primary Data & Tamper-Proof Snapshots




Prevent data destruction with immutable and indelible snapshots


End-to-End Encryption




Secure data access, end-to-end

DETECT

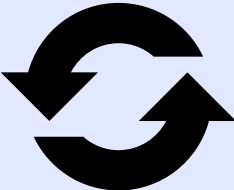
Autonomous Ransomware Protection



Automatically detect and respond to file system anomalies in real-time that may signal a ransomware attack – **built into ONTAP**

RECOVER

SnapRestore



Restore data in minutes from secure snapshots

Ransomware Recovery Guarantee

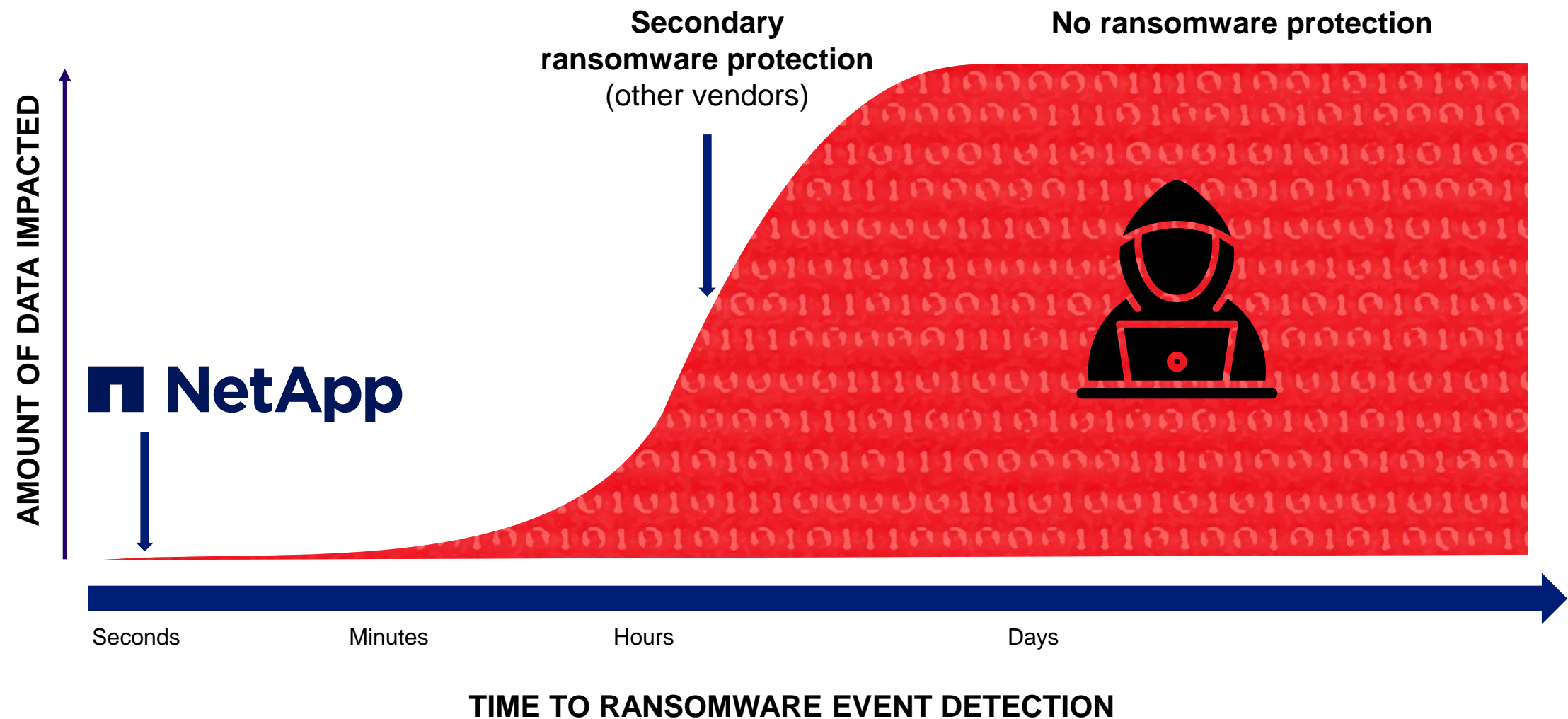
NetApp

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Some words from our lawyers... No ransomware detection or prevention system can completely guarantee safety from a ransomware attack. While it's possible an attack might go undetected, NetApp technology acts as an important additional layer of defense.

Real-time detection with 99%+ accuracy is essential to effective recovery

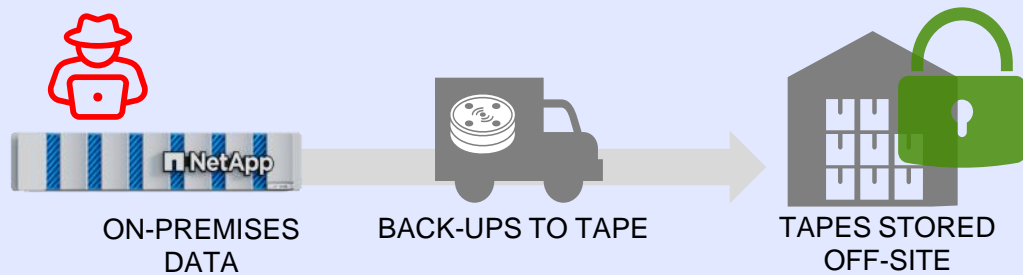
Potential damage caused by ransomware attack increases in time to detection



The evolution of data protection

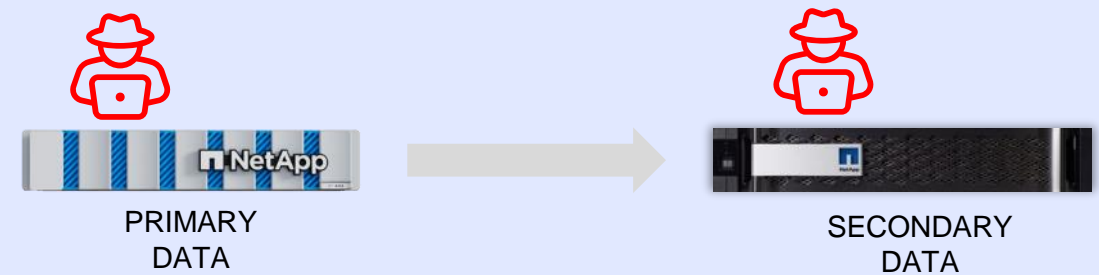
Customers desire to protect their data against ransomware

PAST



Challenges: Infrequent backup, massively slow restore, and impossible to validate

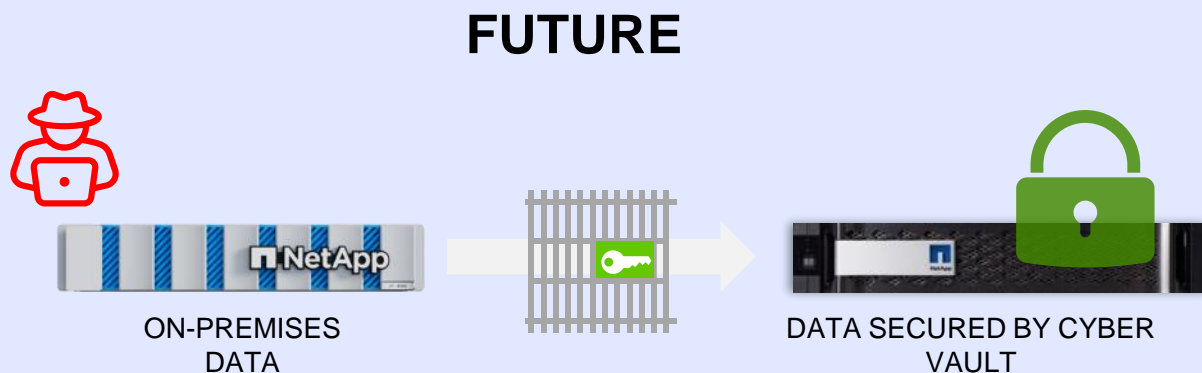
TODAY



Challenges: Attacks on primary storage could be easily extended to secondary storage

The evolution of data protection

Customers desire to protect their data against ransomware



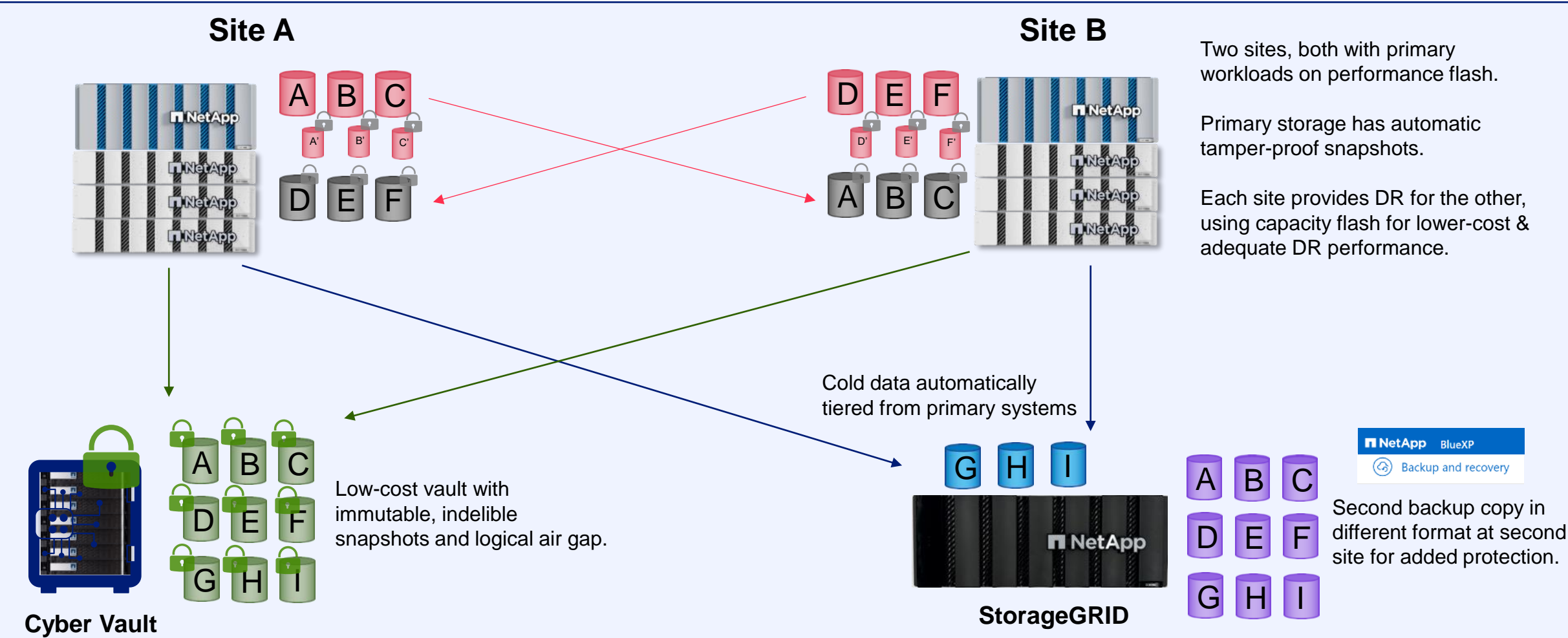
Cyber vault solutions can offer a logical air-gap, protecting secondary data from attack

Challenges:

- Most cyber vault solutions create all-new **architecture silos**
- Without an integrated solution, orchestration of complete protect, detect, recovery methodology **is manual**.
- Cyber vaults **still require long restores**, so tamper-proof primary snapshots are still preferred.

Comprehensive cyber-storage architecture

The unified data storage solution for ransomware protection and business continuity



The Artificial Intelligence opportunity

AI is not only transforming industries but also shaping the future of work, the economy, and society at large

50%



Enterprise AI initiatives will boost productivity and creative problem-solving by 50%.*

Automation and Efficiency Improvements

60%



60% of workers will use their own AI to perform their tasks.*

Data Analysis and Insights

3YRS



Due to AI, the global average customer experience will improve for the first time in three years.*



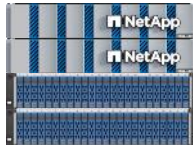





Innovation and New Product Development

*Forrester 2024 predictions



NetApp AI Opportunity

Broad portfolio of solutions

Enterprise AI (Building Center of Excellences)				
	High Performance Model Training	Data Prep/Data Lake Modernization	Model Training	Fine-Tuning RAG & Inferencing
Use Case	<ul style="list-style-type: none">▪ Build and Train Large Foundational models▪ Parallel file system and/or InfiniBand requirements	<ul style="list-style-type: none">▪ Modernizing Data Lakes▪ Build Data Staging platform for AI workflow	<ul style="list-style-type: none">▪ Build Models and Train them on enterprise data in an iterative process▪ Produce models ready for inferencing▪ Fine Tune pre-trained models with proprietary data	<ul style="list-style-type: none">▪ Augment open-source models with proprietary data▪ Storing Gen AI output data
Solutions	EF-Series with BeeGFS for NVIDIA DGX SuperPOD 		AFF A-Series or C-Series for NVIDIA DGX BasePOD and OEM Servers with GPUs 	    
Selling Points	<ul style="list-style-type: none">▪ Enterprise level support▪ Competitive price/performance▪ High availability	One Platform Cloud Connected NVIDIA Certified Ecosystem integrated Secure & Efficient		

THANK YOU