

# SECURING THE DOD MISSION IN A HYPERCONNECTED ERA:

LEVERAGING INTELLIGENT DATA INFRASTRUCTURE FOR RAPID, EFFICIENT, AND CYBER RESILIENT AI AND MISSION DATA



Jim Cosby
CTO, NetApp Public Sector and Partners
10/2/25

# **Brief NetApp Overview**

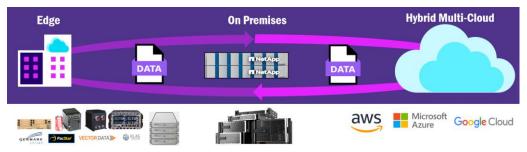


### **Established and committed to your mission since early 2000s**

- Well-known for our storage solutions
- Reliable and easy to work with
- Leader in industry
- 40,000 customers worldwide
- 11,000+ employees worldwide
- \$6.57B FY25 Revenue



Providing **Intelligent Data Infrastructure**/Storage at Edge, On-Prem and Hybrid Multi-Cloud capabilities in both unclassified and classified networks.



Partner Ecosystem: AWS, Azure, Google, NVIDIA, Splunk, Microsoft, RedHat, VMware, Elastic, Cisco and many more

















3000 PB+

Tens of thousand of systems deployed across Civilian, DoD, Intel, and SLED



























**100+ highly cleared employees** 



2 SCIFS



Only storage certified to store Top Secret Data. CSfC, FIPS 140-2/3, DISA STIG, DoD APL, Common Criteria, Ransomware security and protection built in.





FIPS 140-2











FIPS 140-3

**DISA STIG** 

Department of Defense Approved Product List (DoDIN APL)

















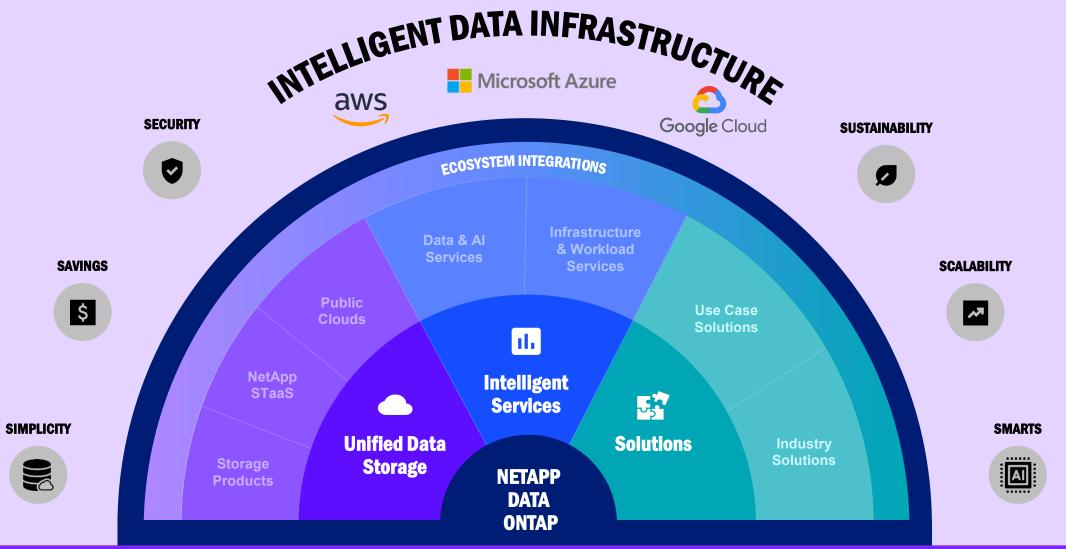








### Modern data estate operations and optimization for any file, block, or object data anywhere



Your Data: Efficient (Dedup, Compress, Compact, Tier - 25-90% savings), Flexible, and Secure

### **Intelligent Data Infrastructure** delivered how you need it, where you need it for any agency















### Modern data fabric backbone for any agency data, any time, any where









**On-Premises (Flash/Hybrid) Hybrid Multi-Cloud** 



**Amazon FSx for NetApp ONTAP** FedRAMP High, IL2, IL4, IL5, IL6



**Azure NetApp Files** FedRAMP High, IL2, IL5



**Google Cloud NetApp Volumes** 

Google Distributed Cloud



**NetApp Cloud Volumes ONTAP No FedRAMP Required** 











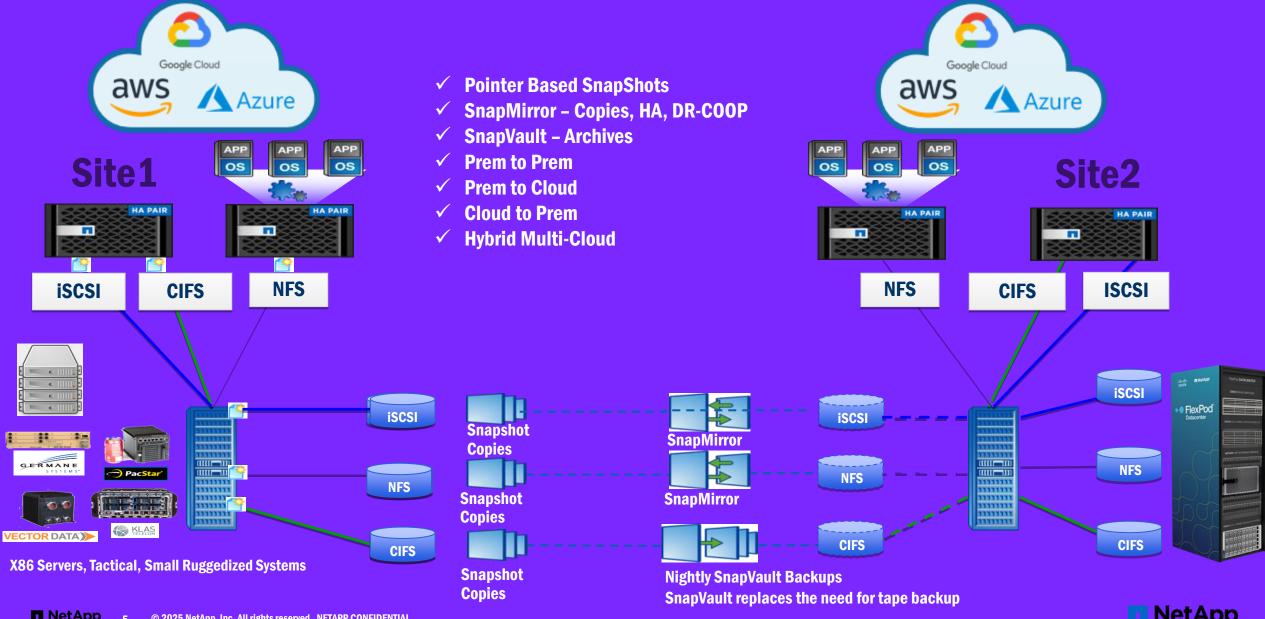




The only common storage software provided as on-premises enterprise storage and 1<sup>st</sup> party and 3<sup>rd</sup> party cloud native services by the three biggest clouds

**Your Data: Efficient (Dedup, Compress, Compact, Tier - 25-90% savings), Flexible, and Secure** 

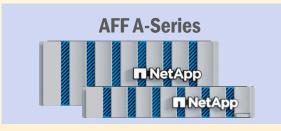
# Data Backbone, Fabric, Replication and Protection - Intelligent Hybrid Multi-Cloud



# **Unified Data Storage Systems, Powered by ONTAP**

Best performance for missioncritical workloads

#### **PERFORMANCE FLASH**



Block Optimized

Unified



Capacity-optimized for best price/ performance

#### **CAPACITY FLASH**

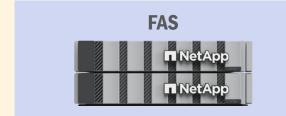


**ASA C-Series** 



Lowest cost of data across its life cycle, secondary storage

#### **HYBRID FLASH**



**ONTAP** 

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



Keystone STaaS







Google Cloud

# SOLVING THE AIDATA CHALLENGE

### **TOP BLOCKERS**

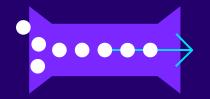
# **Moving AI from POC to production**



of the work associated with AI is in data sourcing, movement, and preparation



DATA IS EVERYWHERE



DATA CAN BE
HELD BACK BY SILOS



DATA IS CONSTANTLY UNDER THREAT

# The data challenge for AI demands an intelligent data infrastructure





DATA CAN BE
HELD BACK BY SILOS



**SCALABLE PERFORMANCE** 



DATA IS CONSTANTLY UNDER THREAT



**TRUSTED & SECURE** 

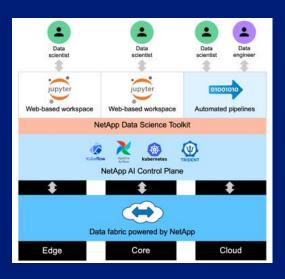
# **Digital Battlespace Technologies for AI Solutions**

Intelligently manage AI workloads and data from edge to core to cloud

- NetApp Data Science Toolkit
  - Simple interfaces for Data Scientists
- NetApp Al Control Plane
  - Delivers full-stack, automated end-to-end Al workload management



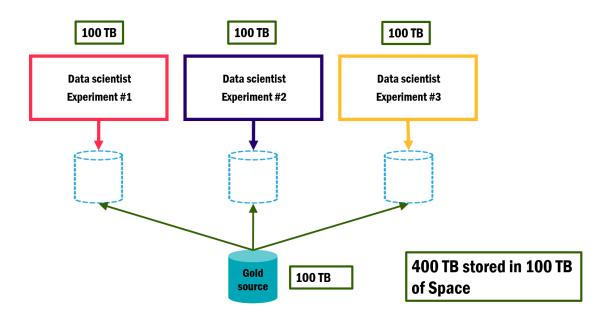
- **NetApp AI Bundled Solutions** 
  - Tight reference architectures of NetApp, NVIDIA and **Mellanox systems**





### **Accelerating the AI training workflow, efficiently**

- Copying a dataset takes seconds instead of hours/days
  - Ex. 10 TB dataset 2 seconds vs. up to 17 hours
  - Ex. 3 x 10TB dataset 6 seconds vs. up to 51 hours
- **Copies are stored efficiently** 
  - Ex. 3 copies of each dataset up to 90% reduction in storage space



# 6 seconds

vs. 51 hours

# **Turnkey AI infrastructure solutions**

Power NVIDIA GPUs by delivering the right performance across the data lifecycle

### **ENTERPRISE AI**

HPC | Model Training | Fine-Tuning | Inferencing



**NVIDIA DGX SuperPOD** with NetApp



NetApp<sup>®</sup> AlPod™ **built on NVIDIA DGX BasePOD** 



NetApp AIPod With **Standard OEM x86 Servers** 



FlexPod® Al with NVIDIA GPUs



# What is AIPod Mini with Intel?

AlPod Mini is designed to be an affordable, easyto-deploy Al platform for scale out deployment of inferencing

### Compute:

Choice of OEM server based on <u>Intel 6<sup>th</sup> Generation</u>
 Xeon® CPUs, with Intel AMX®

### Storage:

<u>NetApp AFF</u> A20, currently ONTAP version

### Software:

 Open Platform for Enterprise Al (OPEA): Intel Al for Enterprise RAG

# **Networking:**

Choice of TOR ethernet switch

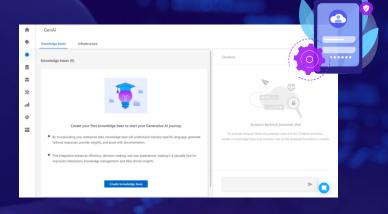
### **NETAPP CLOUD STORAGE**

# AI READY



Google Cloud Vertex AI + **Google Cloud NetApp Volumes** w/ BigQuery and Agent Builder

Google Cloud



**BlueXP Workload Factory AWS Bedrock Knowledge Bases** on AWS FSx for NetApp ONTAP





**Azure NetApp Files Now Supported with Azure OneLake** 









# **INTELLIGENT DATA SERVICES FOR AI**



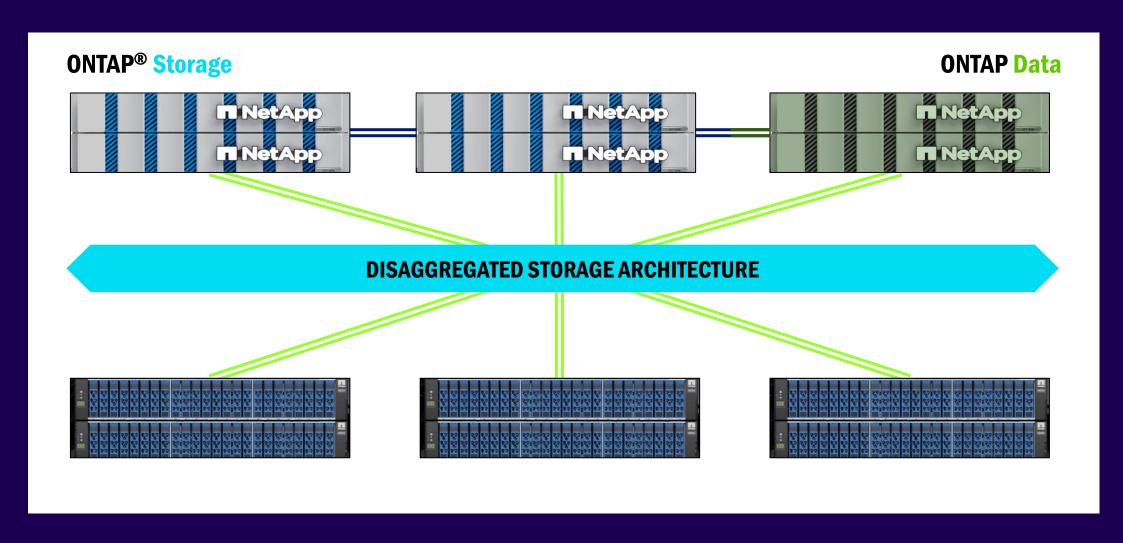
**ROBUST DATA ENGINE FOR AI** 



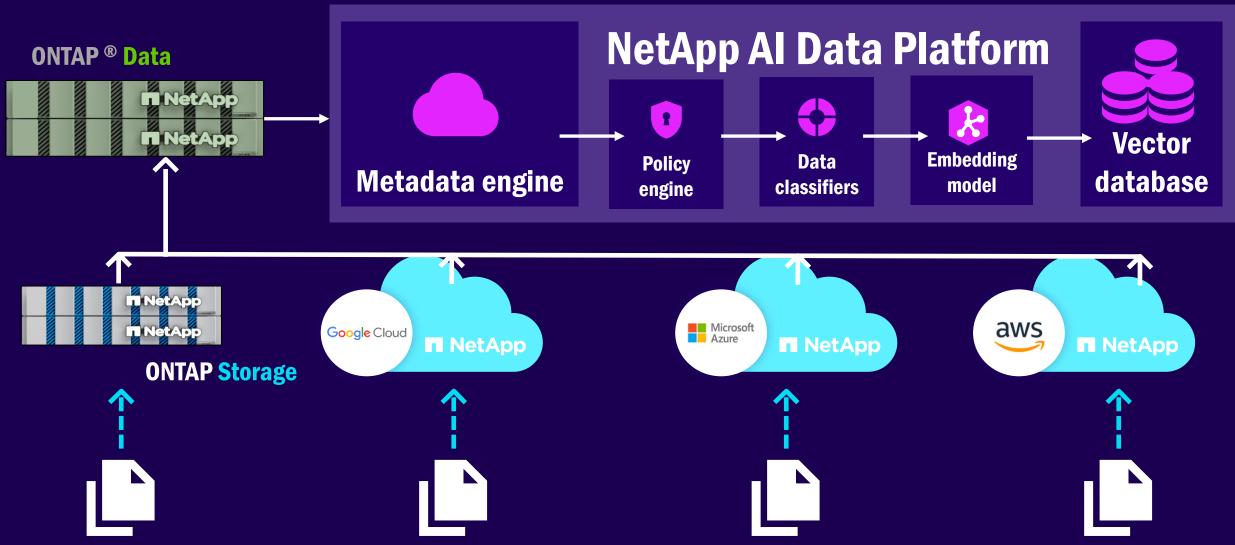
**BEST INFRASTRUCTURE FOR AI** 



# **BEST INFRASTRUCTURE FOR AI**



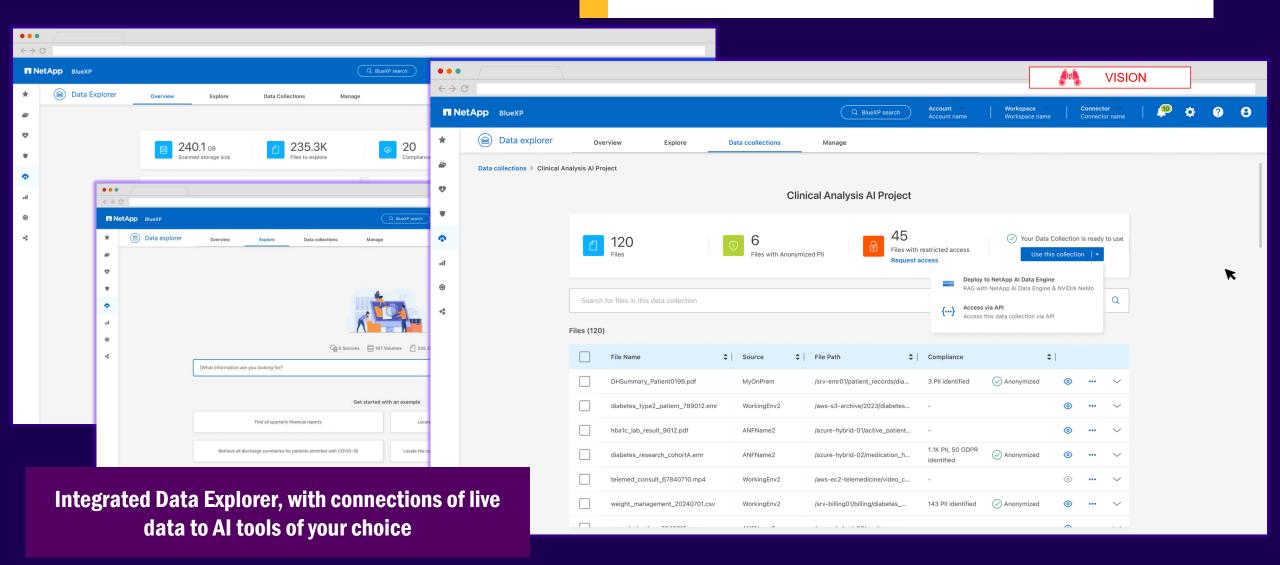
# **ROBUST DATA ENGINE FOR AI**





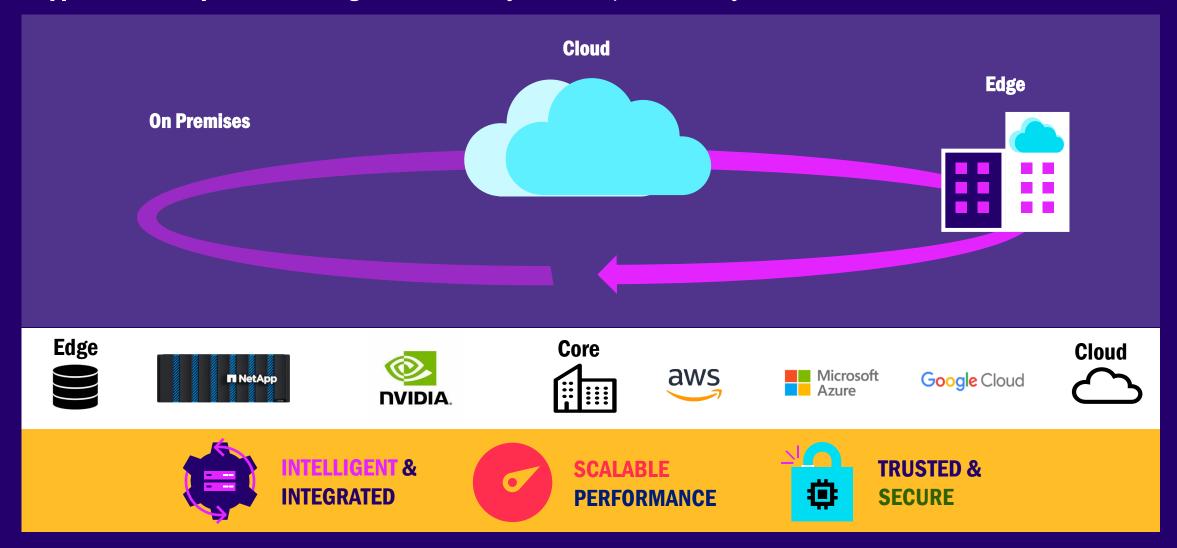


# **INTELLIGENT DATA SERVICES FOR AI**



# **Power Your AI Mission Anywhere**

NetApp delivers enterprise data management wherever your data is, or wherever you want it



# DATA CENTRIC SECURITY

**AND** 

**ZERO TRUST** 

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

# П NetApp



**Commercial Solutions** for Classified (CSfC) **Component List** 



**FIPS 140-2** 



**FIPS 140-3** 



**DISA STIG** 

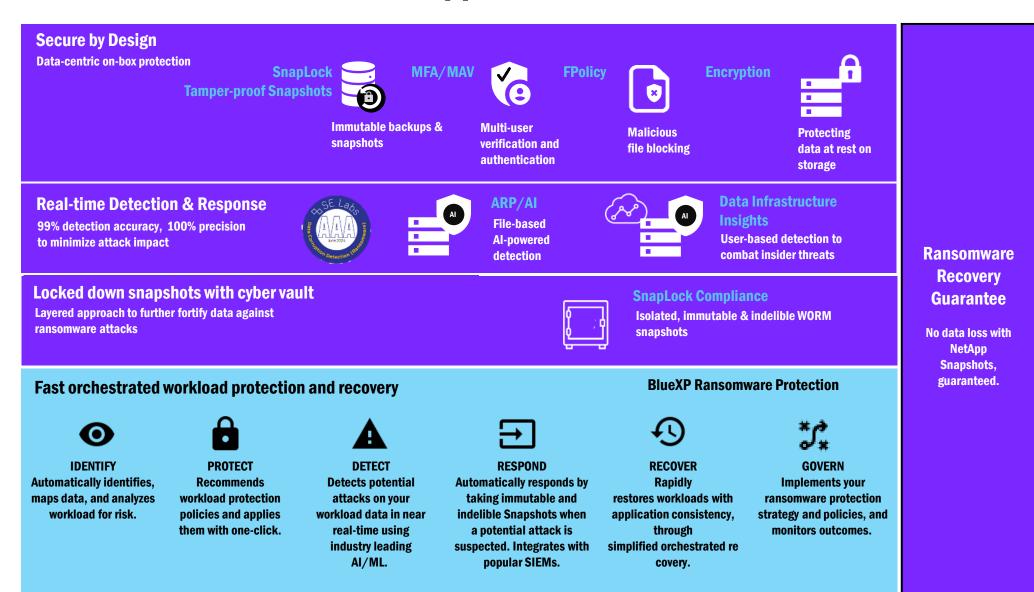


**Department of Defense Approved Product List** (DoDIN APL)



**Common Criteria** 

# **Enhance Zero Trust with Built-in NetApp Ransomware Protection**

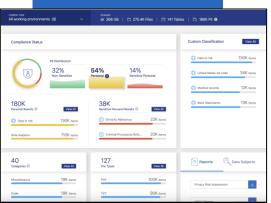


# **BlueXP Classification**









#### Insights: Data privacy, compliance risks



**Insights: Savings opportunities** 

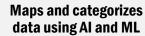
### Map, Identify, and Report on Structured and Unstructured Data

- Automated Data Reporting
  - Assess your organization's privacy risk status with privacy risk assessment reports
  - Identify files that contain
  - Get details on every occurrence of a subject's full name or known identifiers

### Categorize and Classify Data

- Al analysis categorizes content and metadata of each file
- Flags results that may need further investigation
- Categories inventory the quantity of each file type, to help you assess and optimize resources







Identifies PII, HIPAA, GDPR, CCPA, SEC, data waste (ROT) and can search custom patterns



Visibility and insights via quick, easy dashboards, reports plus detailed filtering



Automates routine tasks and reporting



Alerts on high-risk



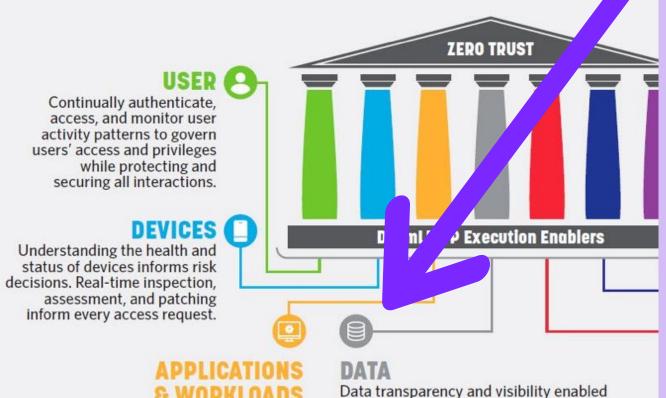
Supports entire NetApp data estate

### **Data-centric Zero Trust**

### **How NetApp Enables the DoD Zero Trust Pillars**

# **Data Pillar Alignment**





- Data Microsegmentation
- Data-centric Access Policies
- Fine-grained Encryption
- Dynamic Access Control
- Data Monitoring and Analytics
- Data Life Cycle Management
- Automation and Orchestration

Key: Al/ML = Artificial Intelligence/Machine Learning; DOTmLPF-P = Doctrine, Organization, Training, materiel, Leadership and Education, Personnel, Facilities-Policy.

Source: DoD Zero Trust Strategy

and secured by enterprise infrastructure,

encryption, and data tagging.

applications, standards, robust end-to-end

Secure everything from applications to

containers and virtual machines.

hypervisors, to include the protection of

### **NetApp DoD ZT Pillar Alignment**

### **Security capabilities mapped to the seven ZT Pillars**

- <u>Data Microsegmentation</u>
  - Data, Network and Environment
- Data-centric Access Policies
  - Applications and Workloads, Data, Automation and Orchestration
- Fine-grained Encryption
  - User, Devices, Applications and Workloads, Data, Network and Environment,
     Automation and Orchestration, Visibility and Analytics
- Dynamic Access Control
  - User, Devices, Applications and Workloads, Data
- Data Monitoring and Analytics
  - User, Devices, Applications and Workloads, Data, Network and Environment,
     Visibility and Analytics
- Automation and Orchestration
  - User, Devices, Applications and Workloads, Data, Network and Environment,
     Visibility and Analytics
- Data Life Cycle Management
  - User, Devices, Applications and Workloads, Data



### ■ NetApp

White Paper

#### **Data-centric Zero Trust**

An evolution in cyberdefense

Justin Spears and Matt Trudewind, NetApp May 2024 | WP-7366

#### Abstract

This white paper defines data-centric Zero Trust and describes its core concepts. It also explains how NetApp® ONTAP® built-in features and capabilities, along with adjacent portfolio technologies, can help organizations secure their data by using a data-centric Zero Trust approach that aligns with the seven DoD Zero Trust pillars: User, Devices, Applications and Workloads, Data, Network and Enablement, Automation and Orchestration, and Visibility and Analytics

• NetApp Data-centric Zero Trust Whitepaper

# **DOD USE CASES**

# **US Federal Deployed Systems Success**



### **Reduction in Data Footprint**

 Federal Agency achieved 85% reduction in storage requirements for virtual machines, application servers and application DB through the use of NetApp Deduplication and Thin Provisioning while seeing the same or better performance in FlexVols ranging from 300G to 20TB.



210%

### **Reduction in Set Up & Deployment Time**

 Federal Agency reduced their set up time from 3 weeks to 1 day through use of NetApp Virtual Storage Console, Rapid Cloning Tool, FlexClone and SnapMirror



### **Reduction of P1Cases and Part Replacement Requests**

- NetApp Hardware is resilient with less than a 2% failure rate over the lifetime of tactical deployments
- NetApp is easy to manage through the deployment of training programs the average soldier can operate a NetApp system, causing significant decrease in support cases submitted.



### **Reduction in Backup & Recovery time**

 Federal Agency reduced their backup and recovery window from hours down to minutes through use of NetApp VSC and Snapshots. NetApp protection tools provided an alternative method to backup their data versus copying 300GB - 20TB VMware datastores to external HDDs.

# **Enhancing Digital Battlespace Capabilities for DOD and Multi-Domain Operations Hybrid Multi-Cloud**

For all agencies and applications on-premise and across multiple clouds





















**vm**ware



**CITRIX**°



mongoDB





BlueXP - Modern data and compute estate operations made simple

Data ONTAP Select
Edge x86 for ESX and KVM













StorageGrid







Microsoft
Azure



Solving storage and data management challenges across clouds

Cloud Volumes Data services

















Deduplication Compression Compaction Tiering



















Reduce Ingress and Egress Charges







**Core – Hybrid Cloud** 



**Multi-Cloud** 

# Thank You Q&A



### Unified management plane

Abstraction enables unified operations, processes, and observability everywhere.

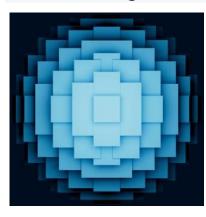


# Common APIs, services, and open architectures

Consistency allows you to move and manage workloads, data, and resources whenever and wherever you want.

# **■** NetApp

# The intelligent data infrastructure company



### NetApp BlueXP

Unify hybrid multicloud operations with a single control plane and set of APIs. SaaSdelivered storage and data services offer integrated monitoring and protection, powerful automation, and flexible consumption options.



#### Powerful Al-driven automation

Intelligent automation handles monitoring, operations, and optimization to boost efficiency and cost savings while reducing your environmental footprint.