



# Zjednodušenie on-premise infraštruktúry

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Marec, 2026

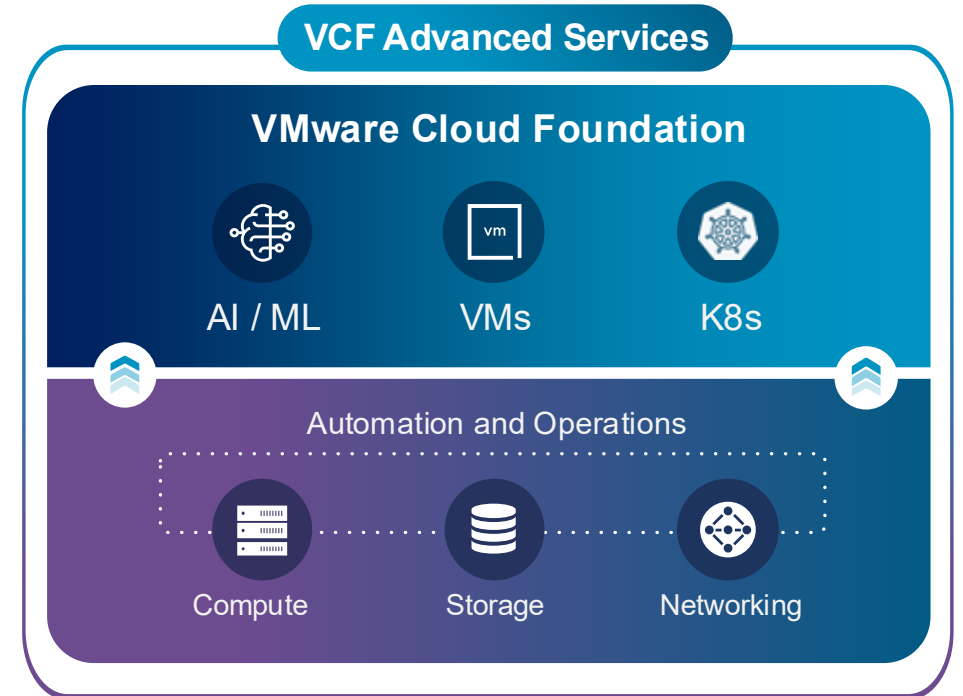
# The Evolution: From Best-of-Breed to Best-for-Value

IT Landscape
Service Management
Service Broker
Orchestration
Public Cloud
Security
Analytics
Database
Virtualisation
Compute
Network
Storage
Container
Automation / Cloud Mgmt

**VCF Does not replace  
"VMware"  
(what customers call  
vSphere)**

**It Replaces the full Set of  
Products on the left!!!**

**Either VCF or Multiple  
Solutions!**




# Modernization with VCF

## Advanced Services



Private AI LLMs on-prem



Data Services Manager DBaaS



Advance Cyber Compliance



vSAN Add-on



vDefend ATP



Avi Load Balancer




Platform aaS

## VMware Cloud Foundation



**vSphere**  
(VKS, vCenter)



**vSAN**  
(FS, Dedup, S3)



**VCF Operations**



**VCF Automation**  
(Includes VKS cluster management)



**NSX**



**HCX**

Broadcom Support



CLOUD ADMIN

GEN X,Y



CONSUMER

GEN Z

# The Fundamental Shift in VMware Cloud Foundation 9.0



# VCF Division Primary Offers



## Operational Efficiency

(down 60%)

## Storage Economics

(Capacity, Global Dedup, Immutable snap)

## Application Unification

(VM, K8s, AI)

## Strongest Security

## Consumption + Cloud Portability

## Canonical Ubuntu Support + Istio + TMC



### VMware Cloud Foundation

### VMware Cloud Foundation EDGE



#### vSphere

(VKS, vCenter)



#### vSAN

(1 TiB / core)



#### VCF

Operations



#### VCF

Automation

(TMC, Istio)



#### NSX

(Net Visibility)



#### HCX

# The Enterprise hardware is in a structural supply crisis



“AI memory is sold out, causing an unprecedented surge in prices” (Jan 10, 2026)



“Server prices set to jump 15% on memory cost spike” (Dec 4, 2025)



“Server memory prices could double by 2026 as AI demand strains supply” (Nov 20, 2025)



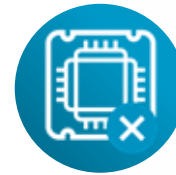
“Perhaps one of the under reported elements of the current environment is that general purpose server CPUs are in short supply.” (Nov 21, 2025)



**Skyrocketing memory prices:** standard DRAM prices are set to double this year.<sup>1</sup>



**Sticker shock for hardware:** Standard server components follow this trend due to component price inflation.<sup>1</sup>

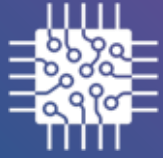


**Sold out inventory:** Major suppliers report their capacity is effectively sold out through 2026.<sup>2</sup>



**Structural shortage:** Supply shortages expected to grow through 2027.<sup>2</sup>

# VFC 9 Innovate infrastructure aspects of private cloud stack



## Compute

**NVMe Memory Tiering**

**VCF 9 Runs on Existing Servers**

Live Patching for ESX



## Storage

Native multi-tenant S3 bucket on VSAN

Cluster-wide deduplication  
Snapshot – performance, immutable, remote

**Adopt vSAN 9 on Existing Servers**



## Networking

Integration of VPCs in vCenter

Fully multitenant VPC

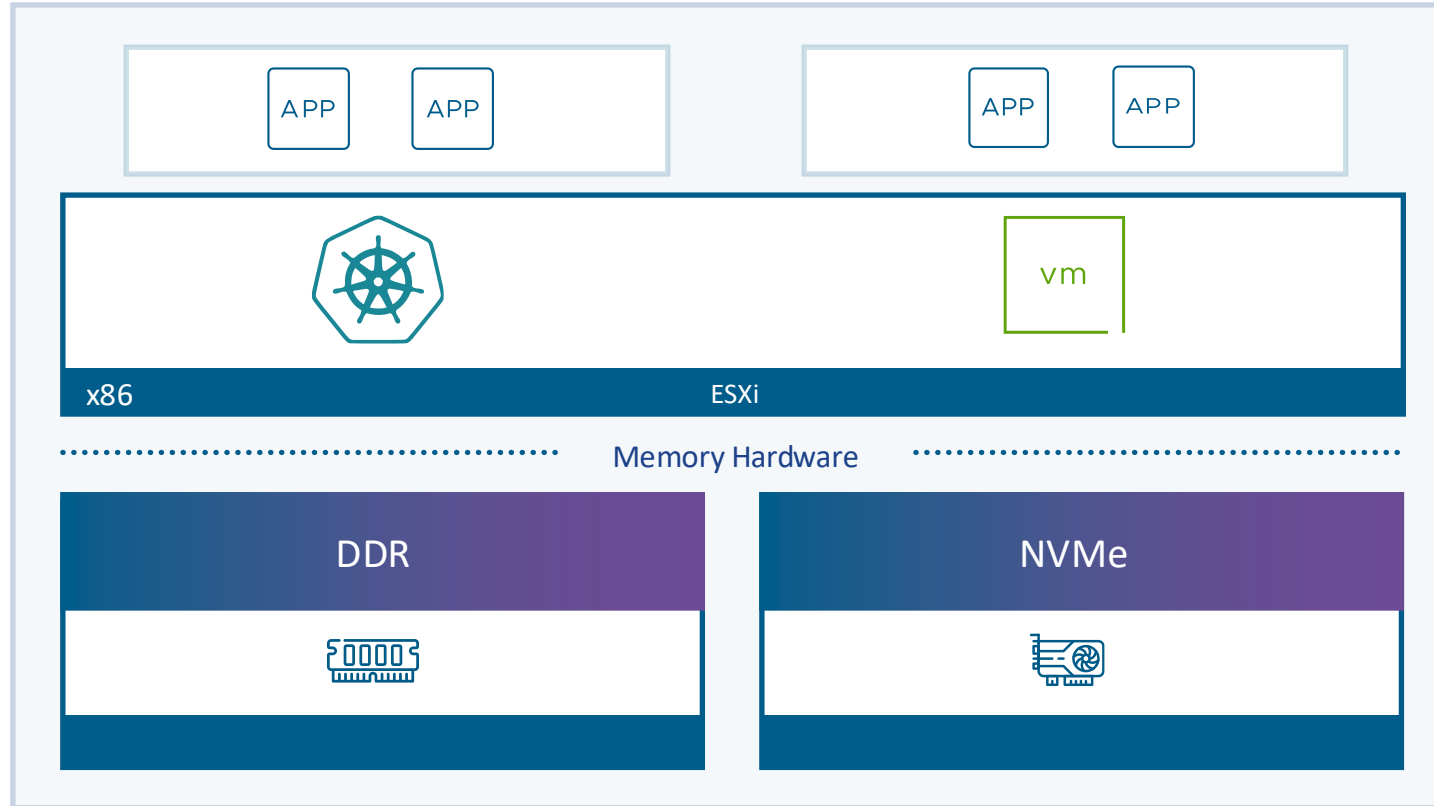
Intelligent Assist  
FW and Network  
Visibility

# Compute



# Scale Memory Capacity with NVMe device

## NVMe Memory Tiering



Leverages  
NVMe devices  
as memory tier

Addresses core-  
to-memory  
imbalance

Endurance  
Class D

Performance  
Class F or

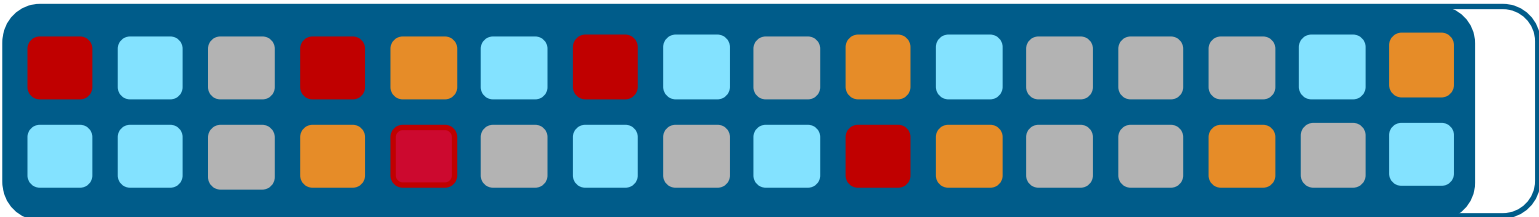
Redundancy  
HW RAID or HA


# Page Classification Unique Approach

CPU





Memory



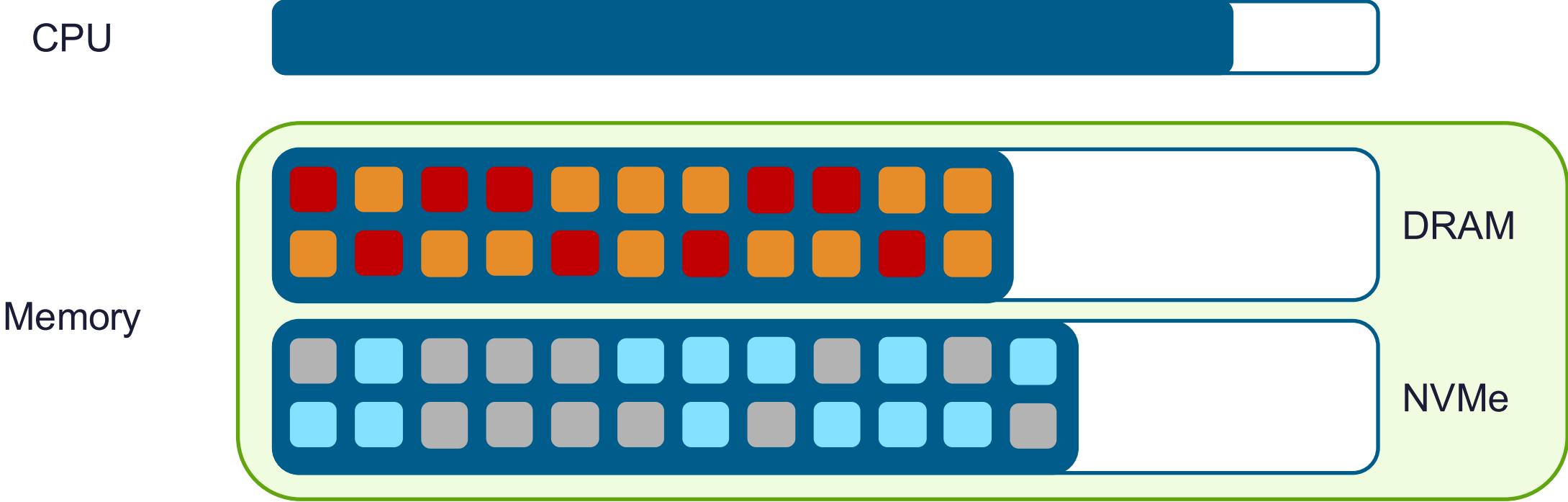
 Hot Pages  
+50% of the time

 Warm Pages  
< 50% of the time

 Cold Pages  
20% of the time

 Very Cold Pages  
caused by over-provisioning

# NVMe Memory Tiering for Better Resource Utilization



Hot Pages

Warm Pages

Cold Pages

Very Cold Pages

# Hardware savings and application performance results

## 2TB DRAM (Socket attached)

Host configuration	(DRAM only)	List Price <sup>1</sup>
CPU (and base components)	2 x 5420 (28C @ 2.6GHz)	\$4,993*
DRAM	2048GB (32 x 64GB)	\$47,104
Lower-cost Memory	-	-
Emulex LPE36002 Dual port HBA	64Gb FC	\$2,395
Storage capacity	2 X 960GB	\$1,386
<b>Total</b>		<b>\$55,878</b>

## 1TB DRAM + 1TB on NVMe Tier

Host configuration	(DRAM + NVMe)	List Price <sup>1</sup>
CPU (and base components)	2 x 5420 (28C @ 2.6GHz)	\$4,993*
DRAM	1024GB (32 x 32GB)	\$23,552
NVMe (Tier)	1.6TB	\$1,466
Emulex LPE36002 Dual port HBA	64Gb FC	\$2,395
Storage capacity	2 X 960GB	\$1,386
<b>Total</b>		<b>\$33,792</b>

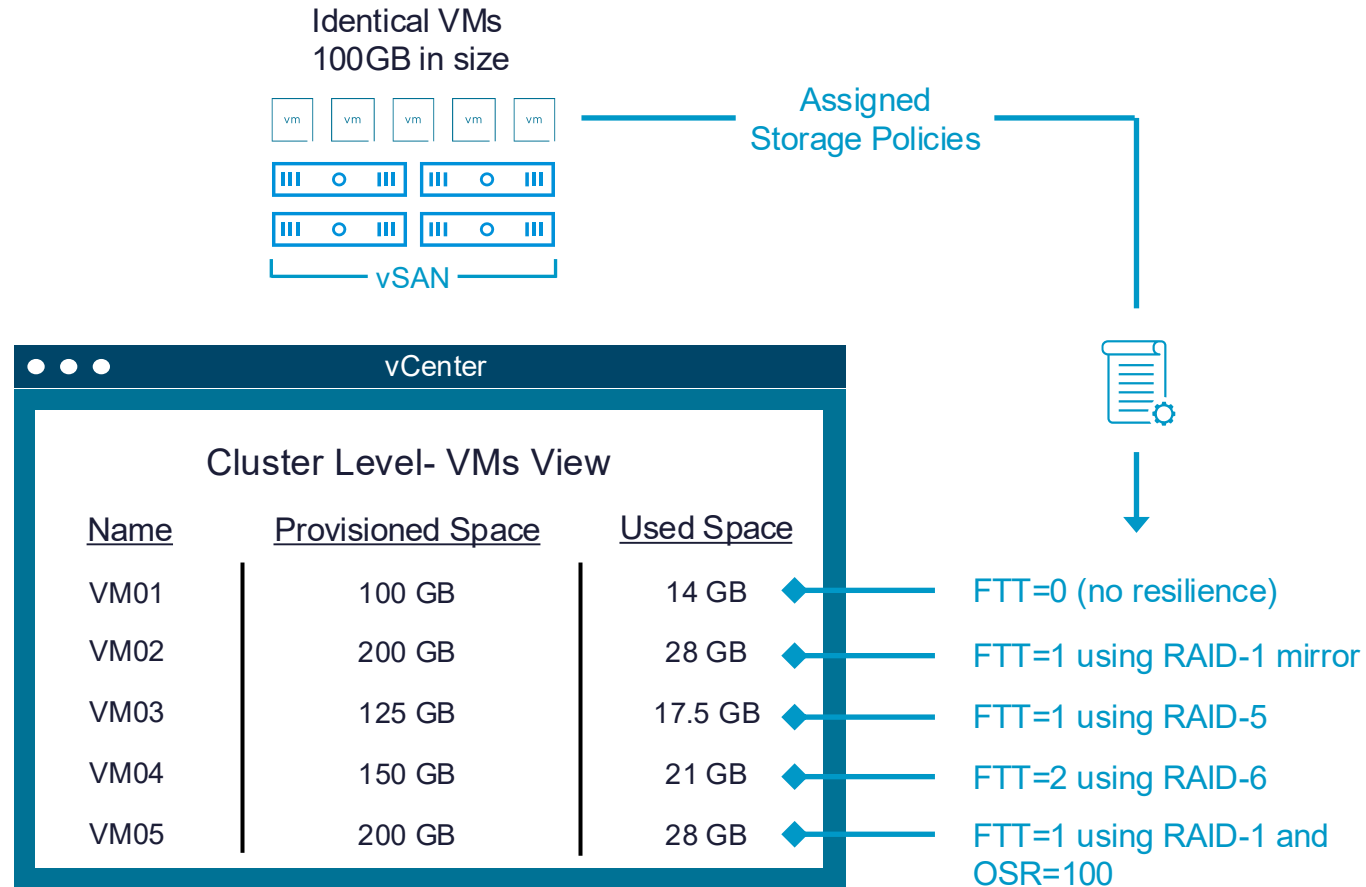
Benchmark	Workload	Results
<a href="#">Login Enterprise</a>	VDI app	2x VM density increase, 0-8% performance loss
<a href="#">VMmark</a>	Enterprise apps	2x VM density increase, 5% performance loss
<a href="#">DVD Store</a>	Oracle Database	2x VM density increase, less than 5% performance loss
<a href="#">HammerDB</a>	SQL Server MySQL	2x VM density increase, 5-10% performance loss (SQL, MySQL)

# Storage



# Understanding Provisioned and Used Space in vSAN

## Capacity reporting in vSAN



“Provisioned Space” and “Used Space” columns **will change values** based on storage policy settings

- Includes resilience data
- Different than traditional storage

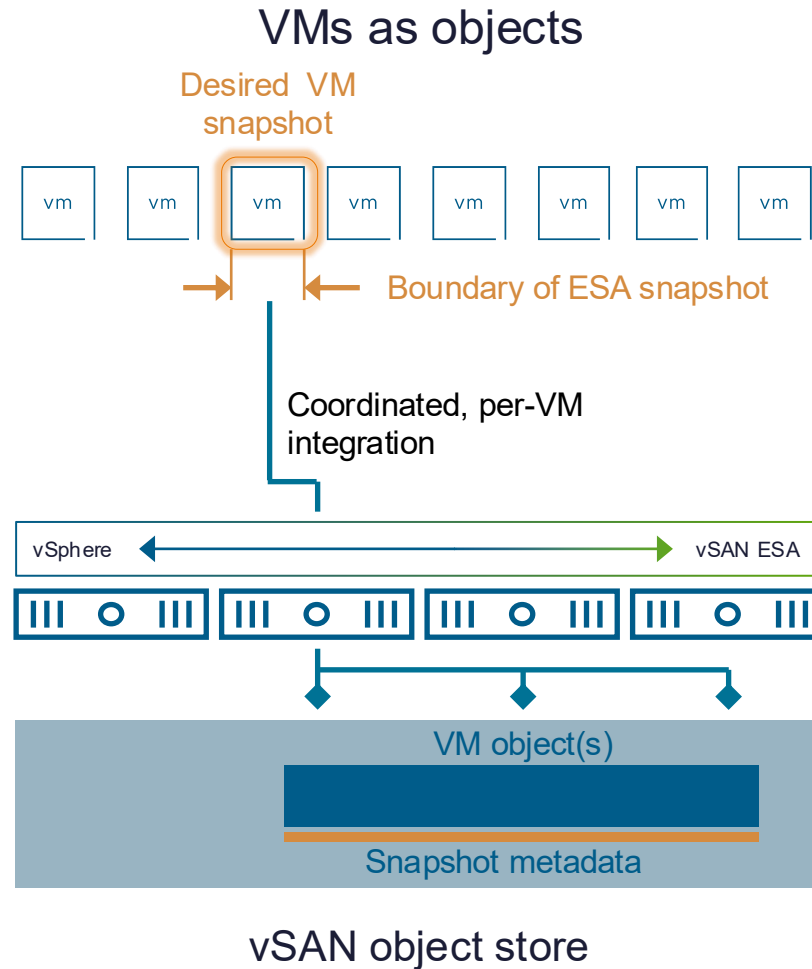
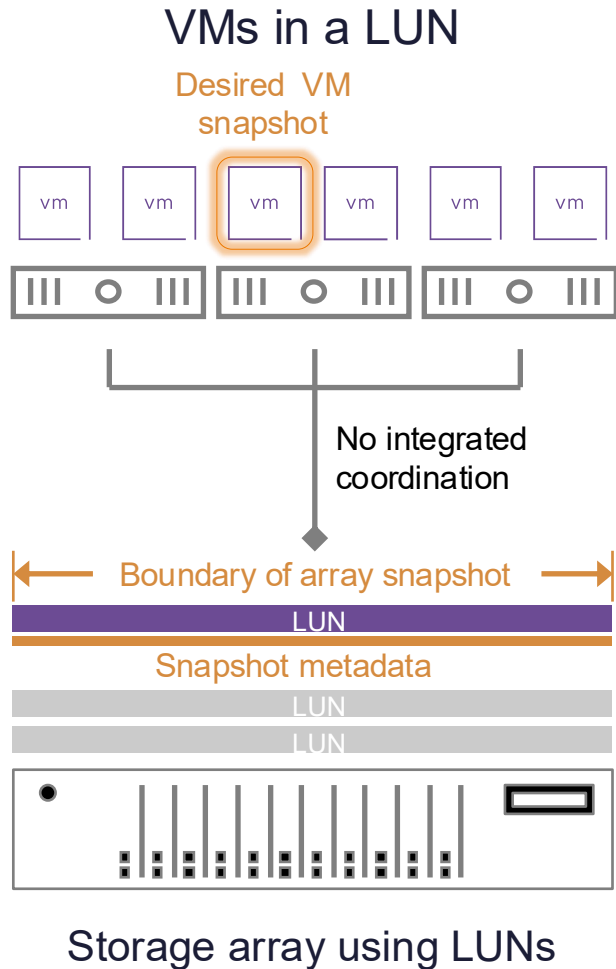
“Provisioned Space” **does NOT reflect thin provisioning**

“Used Space” may reflect unused spaced **not reclaimed**

- Use TRIM/UNMAP to mitigate

# Granular Snapshotting Integrated into Hypervisor

Integrated object store ideal for highly scalable, flexible snapshots



## Array-based Snapshots

Snapshots entire LUN

Tracks all changed data within datastore

May stun VM to achieve consistency

## vSAN ESA Snapshots

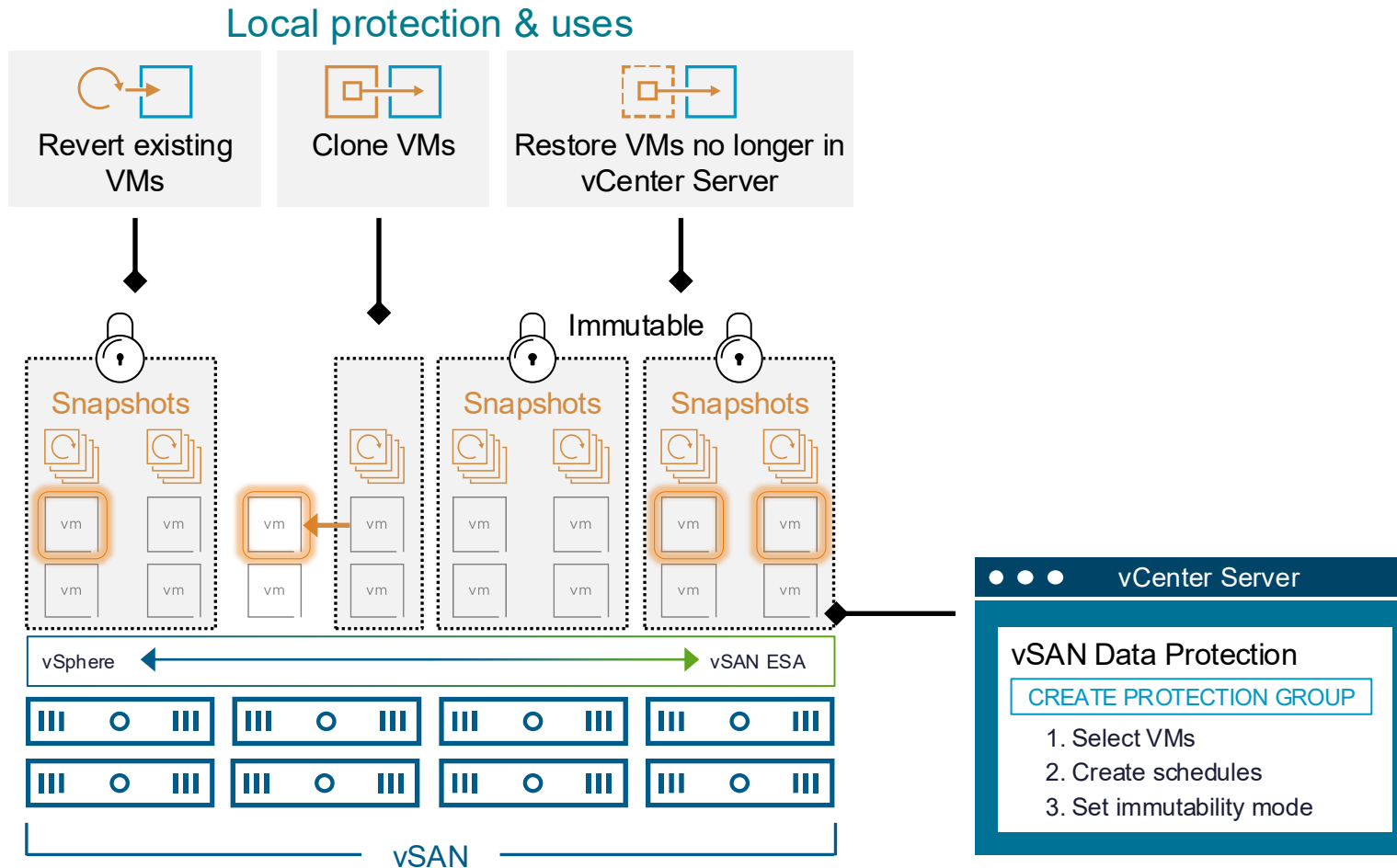
Snapshots objects associated with discrete VM

Tracks only changed data for selected VM

Does not stun VM. End-to-end awareness and control of VM I/O during snapshot

# Protect and Recover VMs against Accidental and Malicious Activities

## vSAN Data Protection in the Express Storage Architecture



Use vSAN ESA snapshots to provide **immutable protection**

Policy-based **protection groups**

- Group applications & VMs
- Define protection and retention

**New UI and scheduler**

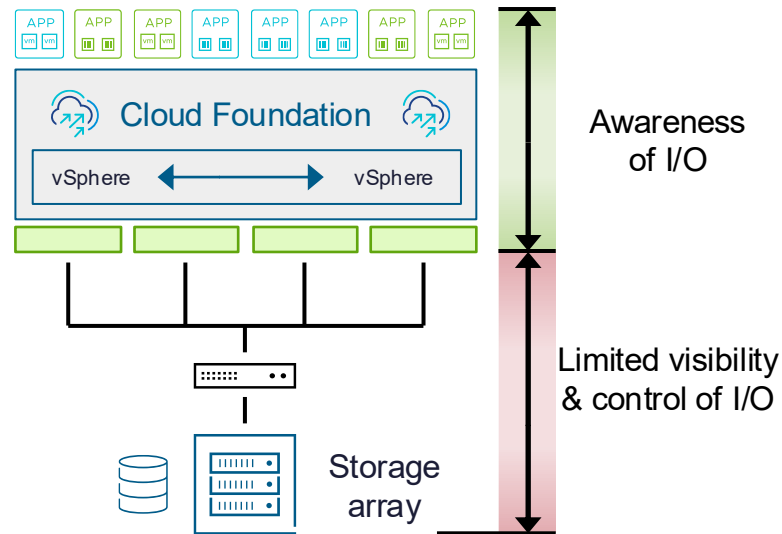
Supports **multiple use cases**

- Recover VMs from accidental deletion
- Clone VMs for operational agility

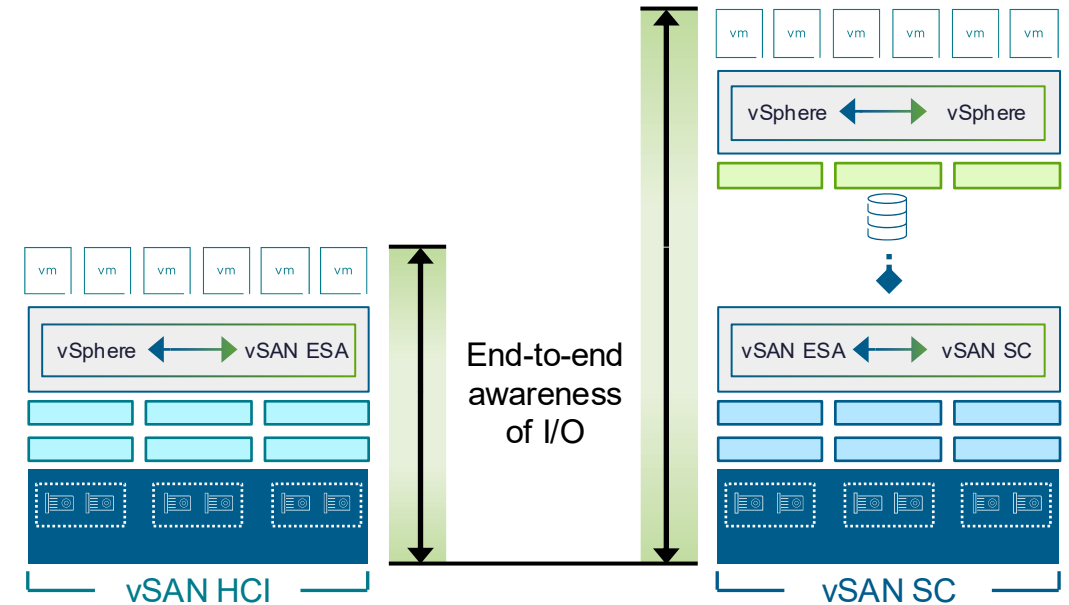
# Why VCF with vSAN is Better: Awareness, Intelligence, and Control

End-to-end monitoring and control when using vSAN to power VCF vs the competition

## Traditional Storage



## VCF powered by vSAN ESA



## Pain Points

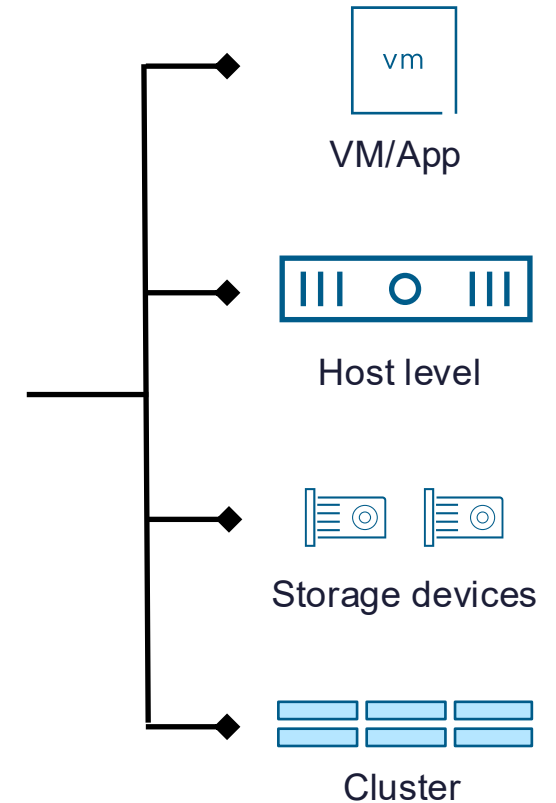
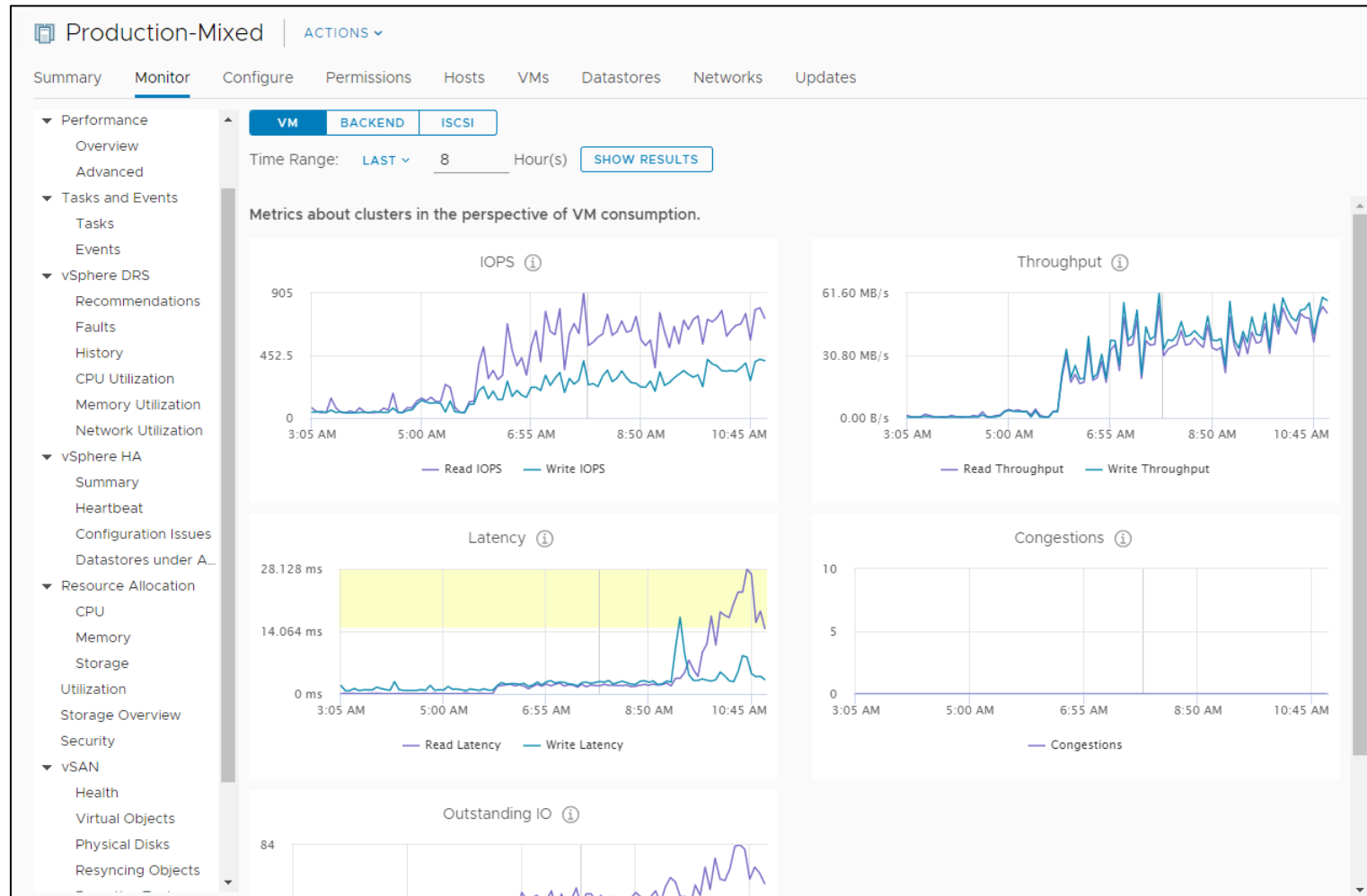
- I/O managed **arbitrarily** by array after leaving hosts
- Array measures metrics in **different ways** from a different location
- **Limited visibility** of I/O when troubleshooting

## Benefits

- I/O managed and controlled from **end to end**
- All metrics **measured in the same way**, from the same location
- **Full visibility** of I/O simplifies troubleshooting

# Storage Performance Metrics Integrated into vCenter

Collects and renders performance data at multiple levels

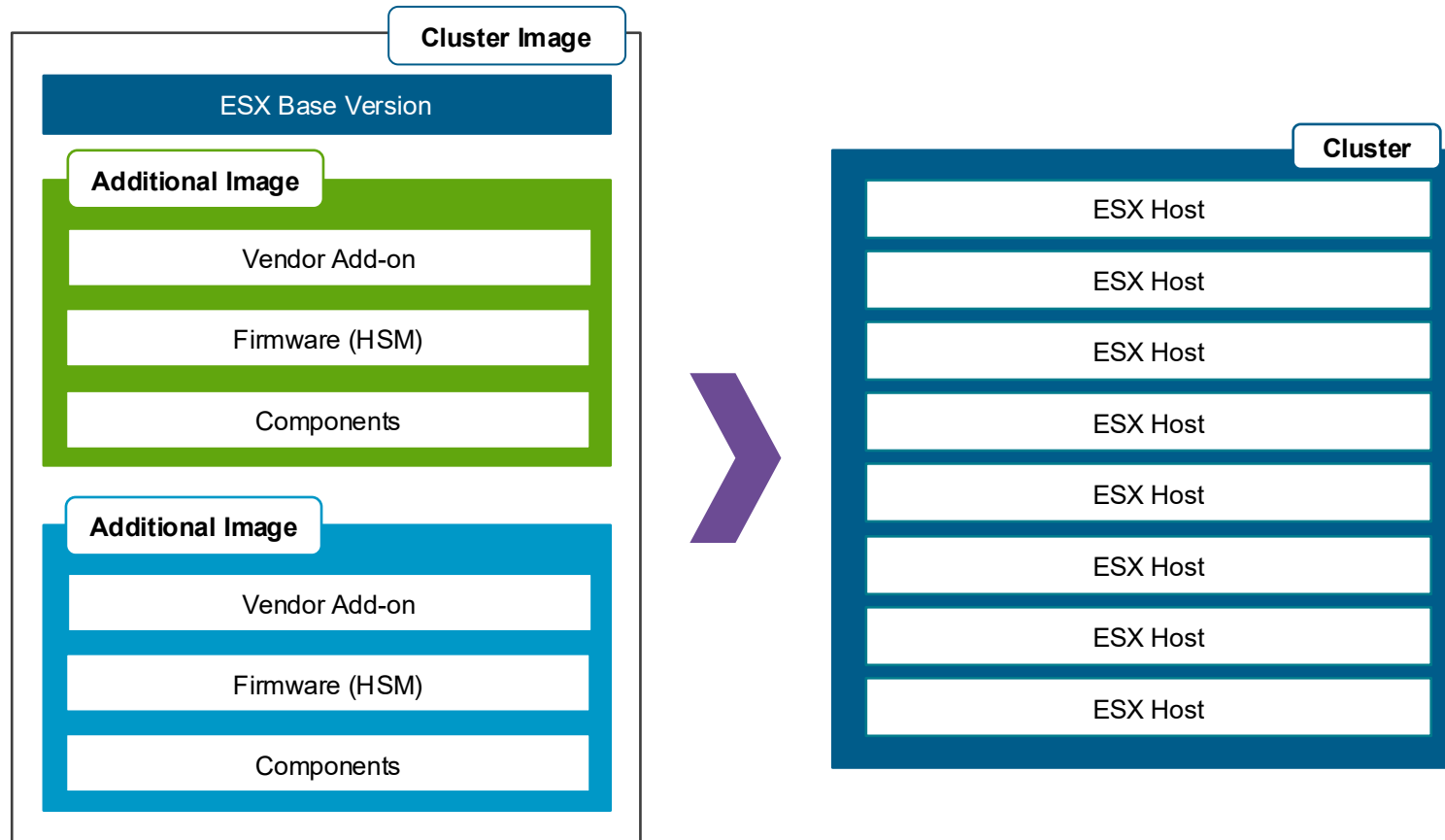


# Operations



# Operations – Build clusters your way, driver and firmware update

## Mixed vendor clusters



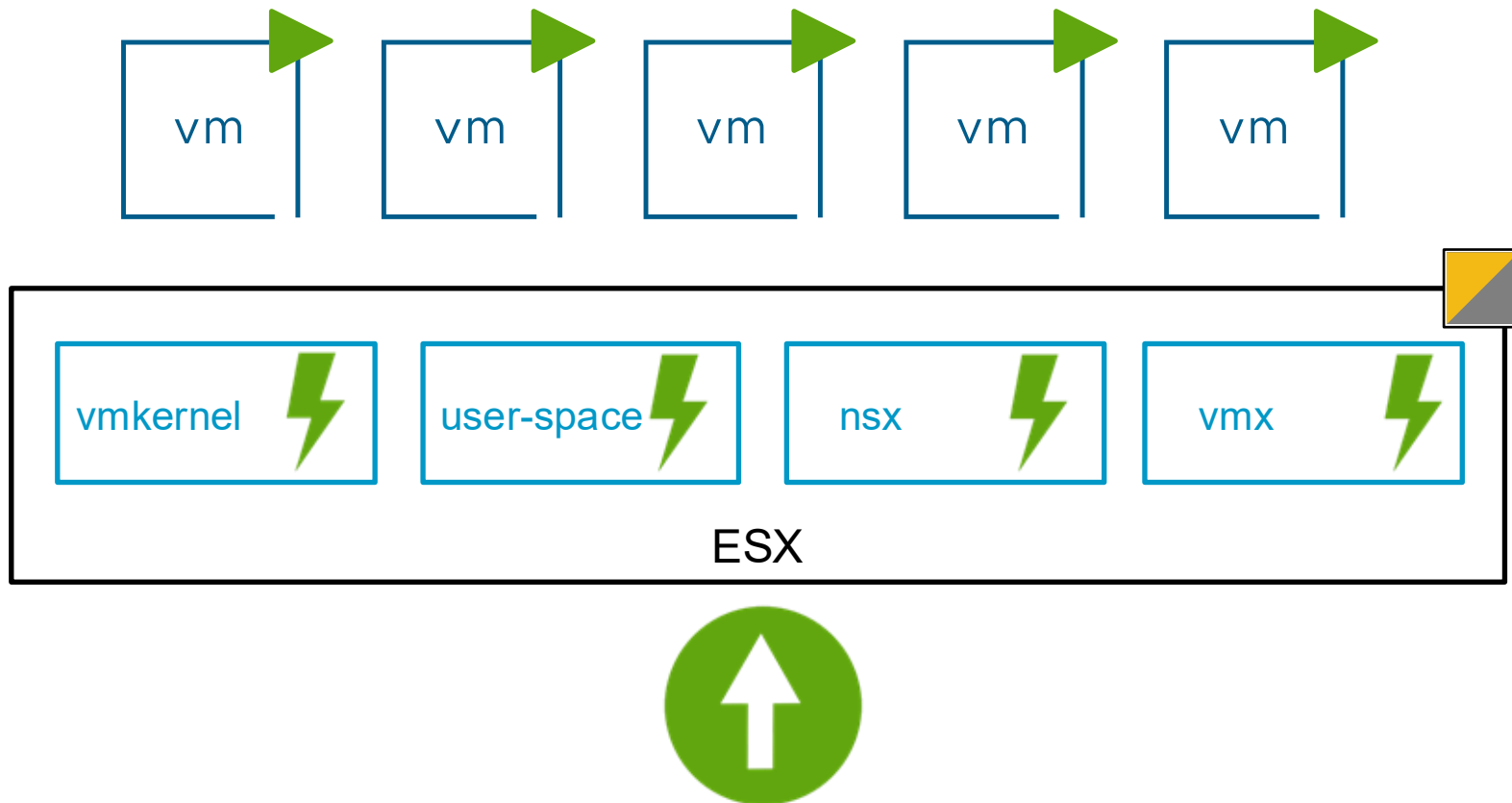
Assign additional images manually or automatically

Multiple Hardware Support Managers (HSM) per cluster image

Up to 4 additional images can be created per cluster image

Support multiple server models in a single cluster image

# Operations – ESX Live Patch



Live Patch vmkernel, user-space and NSX components

ESX service restarts required (non-disruptive)

Fast-Suspend-Resume remediates VMs

**No Evacuation, VMs stay running**

# Home

Overview Launchpad



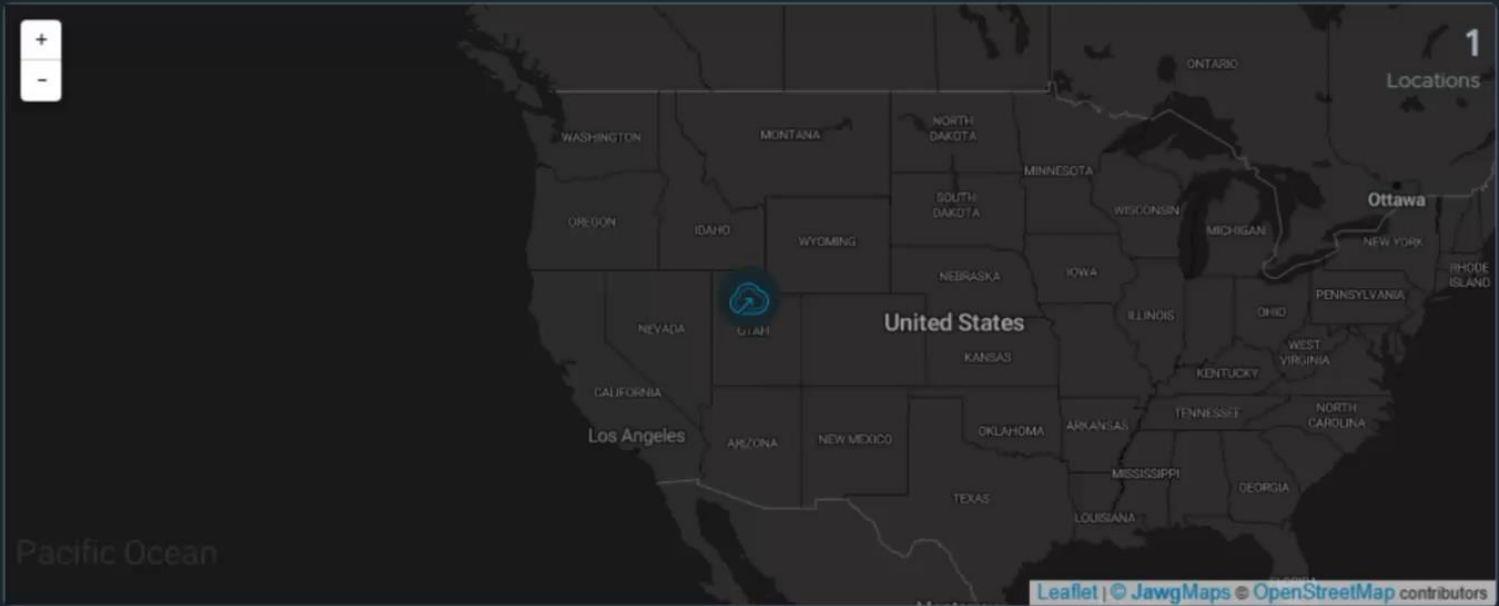
**All VMware Clouds**  
Accounts: 1




**VMware Cloud Foundation**  
Accounts: 1 | Domains: 1




**vCenter**  
No accounts



### Monitoring Accounts




1  
VMware Cloud Foundation




1  
VCF Domain


### Inventory




1  
Datacenter



1  
Cluster Compute Resource



20  
Virtual Machine



1  
Datastore

[VIEW INVENTORY](#)

## Appliances Health & Management

Ensure high availability, scalability, and performance of the VCF stack through, monitoring, diagnosing, and security, and incident response.

### Findings

1

Total Findings

0  
 Critical

### Configuration Drifts

0

Require Attention



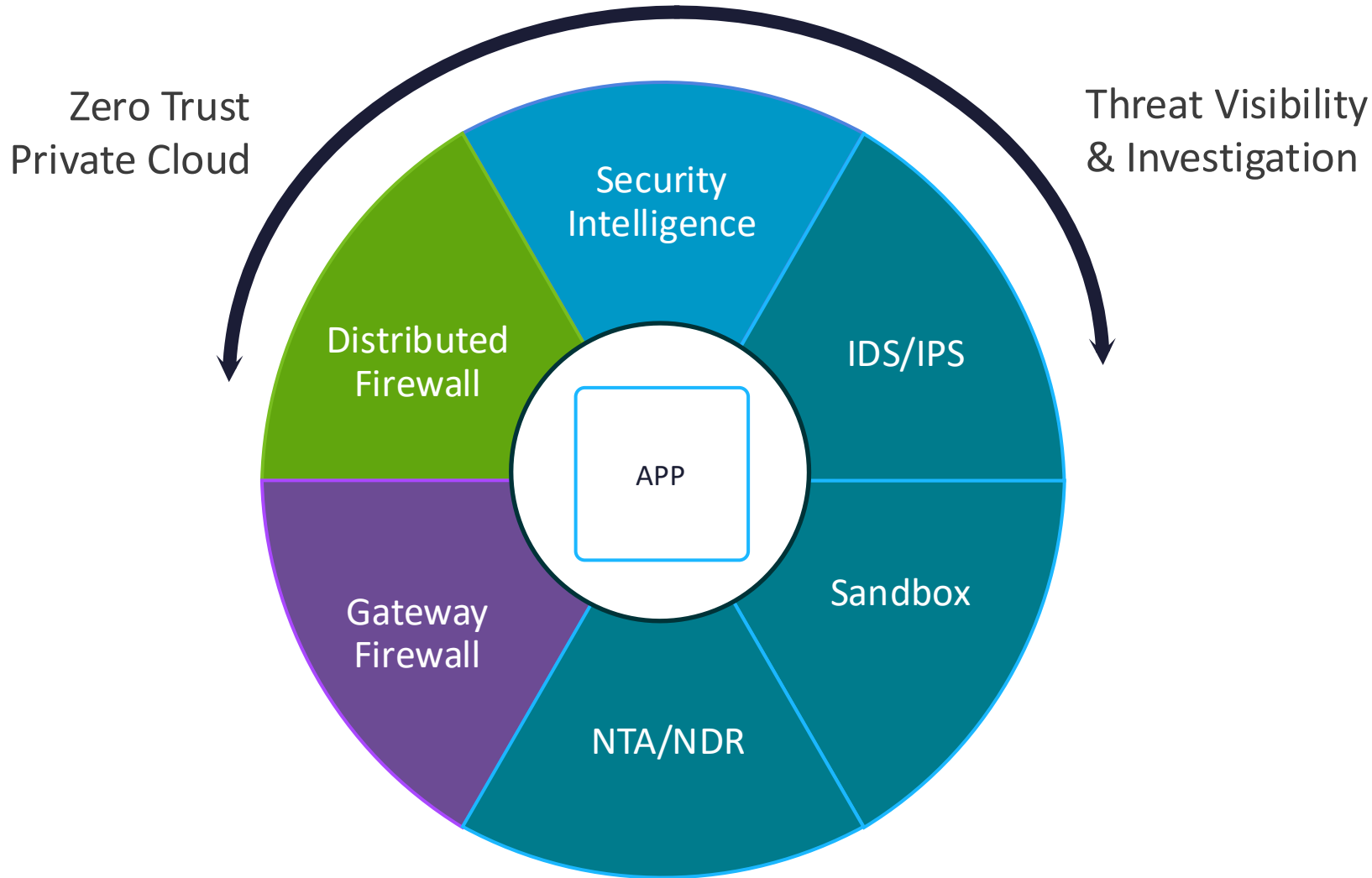
### Certificates



# Security Add-on



# Security – VMware vDefend



Hypervisor integrated for VMs (agentless)

Single operations console for all vDefend features

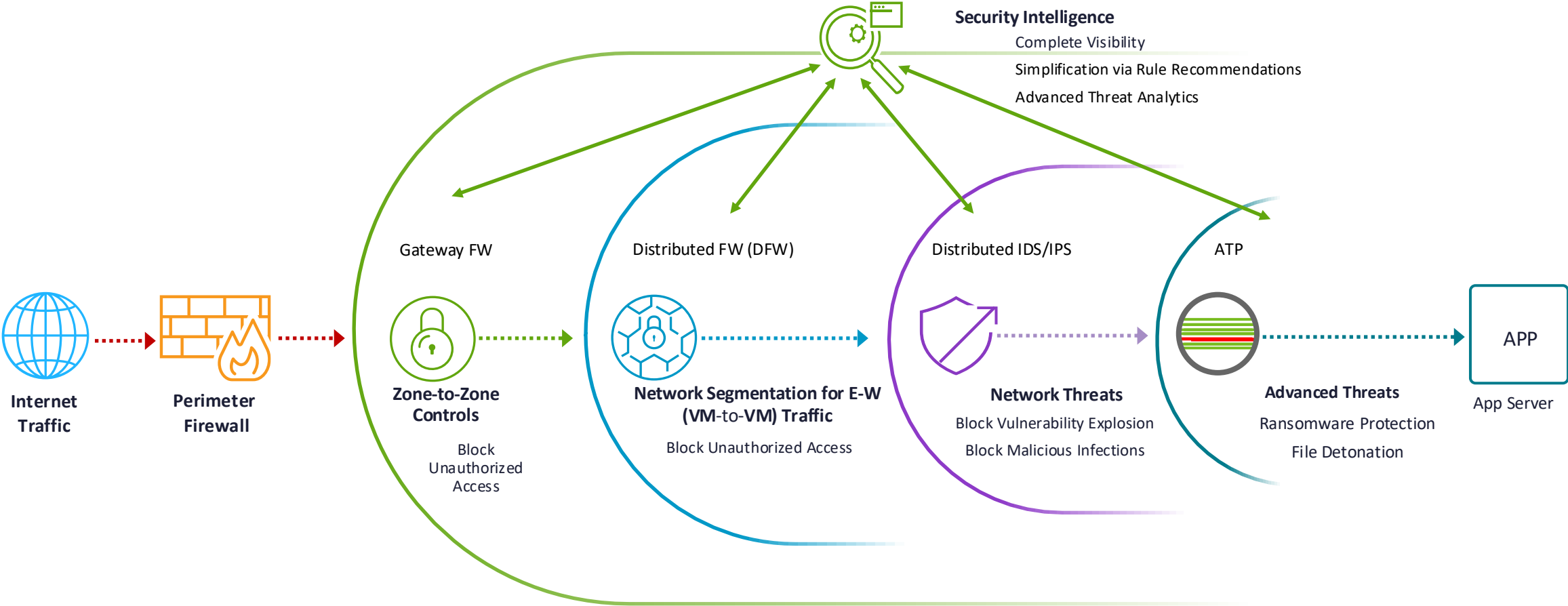
Scale-out with applications

No traffic hair-pinning

Plug and play for VCF

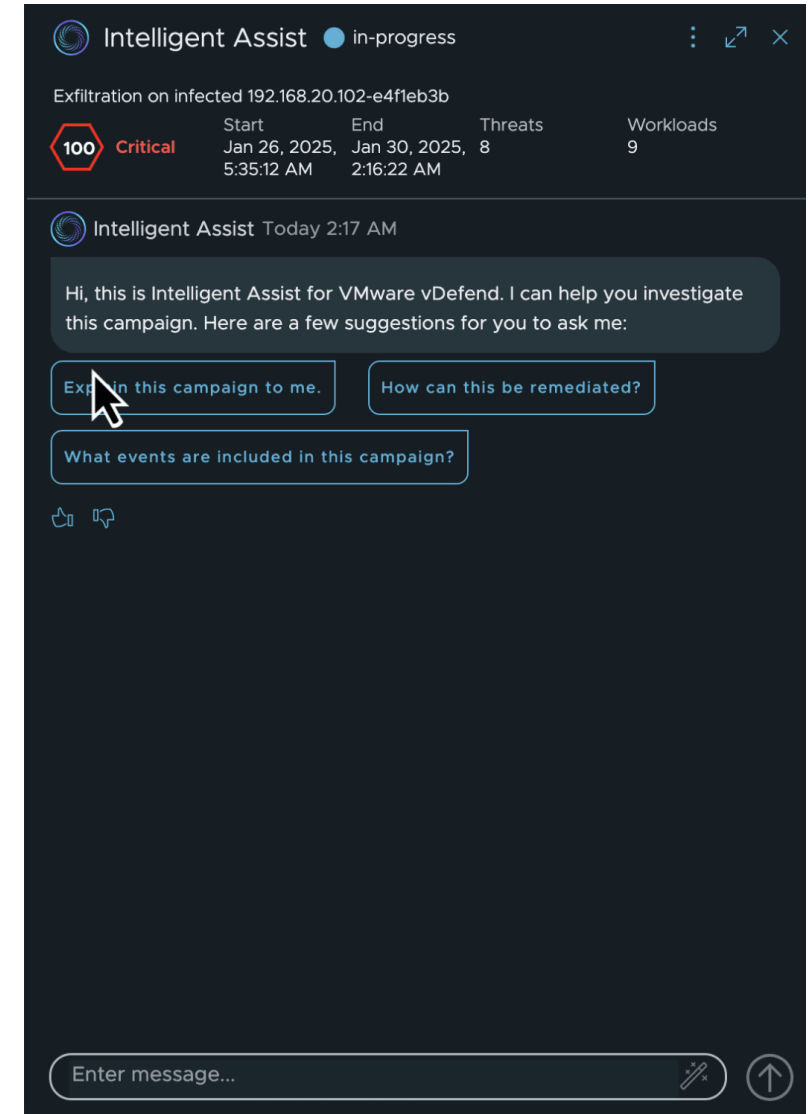
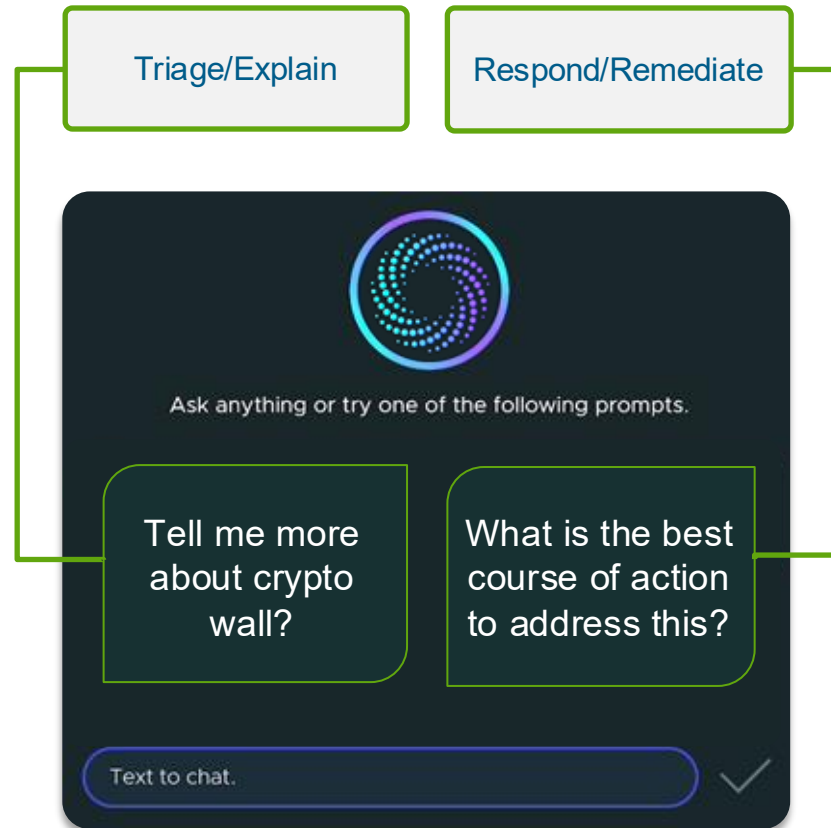
# Security – Protection which enables Zero Trust

With VMware vDefend



# Security – Intelligent Assist for Threat Defense

Threat Guidance and Actionable Remediation, powered by GenAI and LLM



# Consumption



# Modernization and consumption

## NEW GAME-CHANGERS



Virtual Private Clouds (VPCs)

vSphere Namespaces



Enhanced VKS



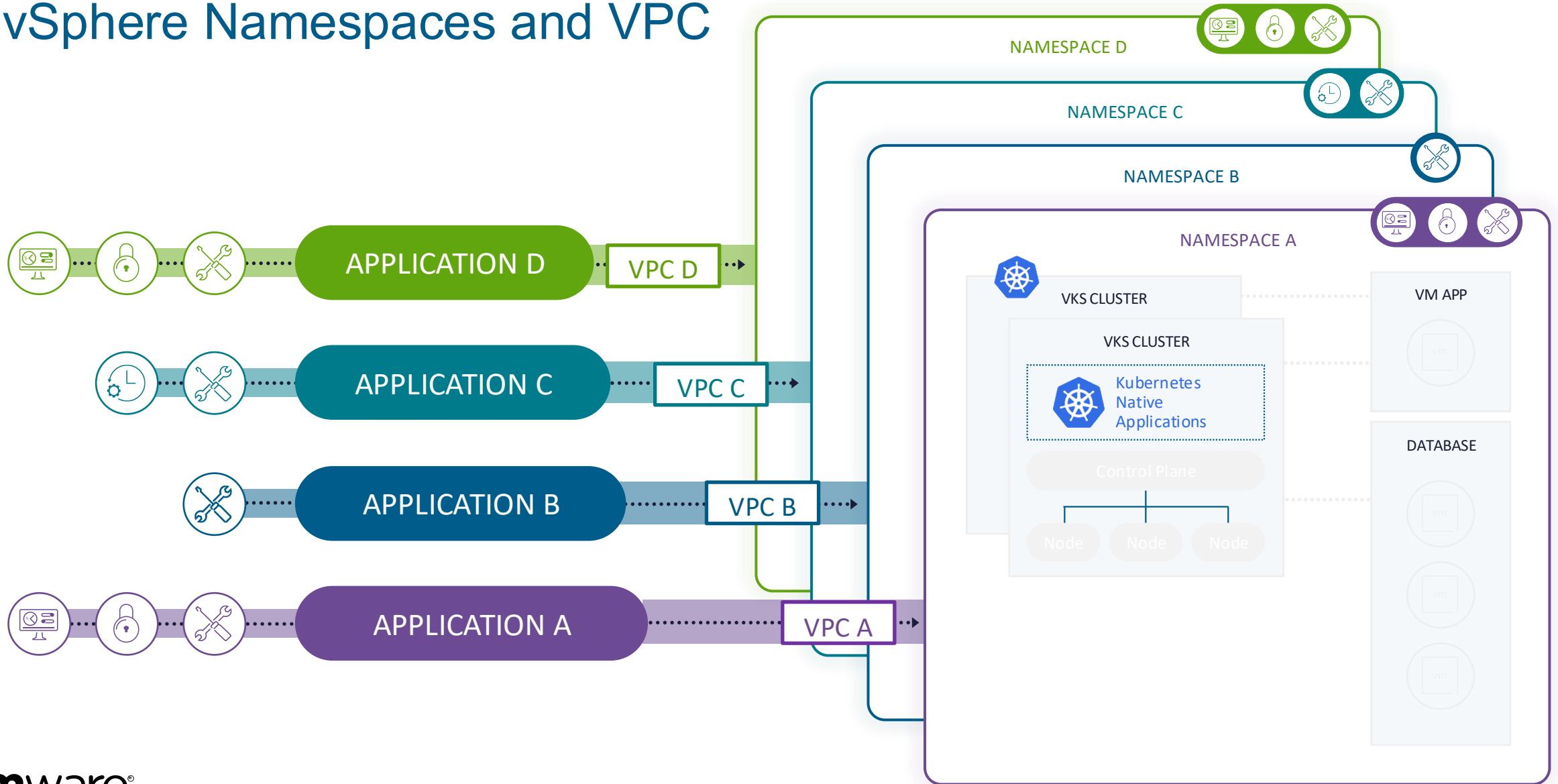
Virtual Private Clouds is self-service, pre-segmented networks

vSphere Namespaces is policy-aware resource slices

VM Service enable launch native ESXi VMs from Kubernetes API

Enhanced VKS is one API multiple services for Windows & GPU (AI) workload support

# Provide workload isolation with vSphere Namespaces and VPC



# Consumption Interface

VMware Cloud Foundation Automation

Overview Build & Deploy Manage & Govern Administer Inbox

Welcome!

Overview

Projects 2 Namespaces 2 Policies 0 Users 7

Services acme-ns-1-zlnbr

- Services Overview
- Virtual Machine
- Network
- Virtual Machine Image
- Kubernetes
- Volume

Connect Identity Provider CONNECT

Connect your identity provider to add users to VCF automation. Manage their access using the access control features.

Private AI Foundation Quickstart START

- Enable one-click deployment of AI and RAG capable clusters and VMs, databases and sample AI applications via Catalog.
- Configure and deploy Private AI Services to build RAG applications.

Total Utilization

- Total CPU: 371.4 MHz
- Total Memory: 1.08 GB
- Total Storage: 0 GB

Top 3 Consumers

Consumer	CPU	Memory	Storage
acme	120.5 MHz used	1.09 GB used	6.47 GB used
default-project	0 Hz used	0 GB used	0 GB used

All You Need To Know

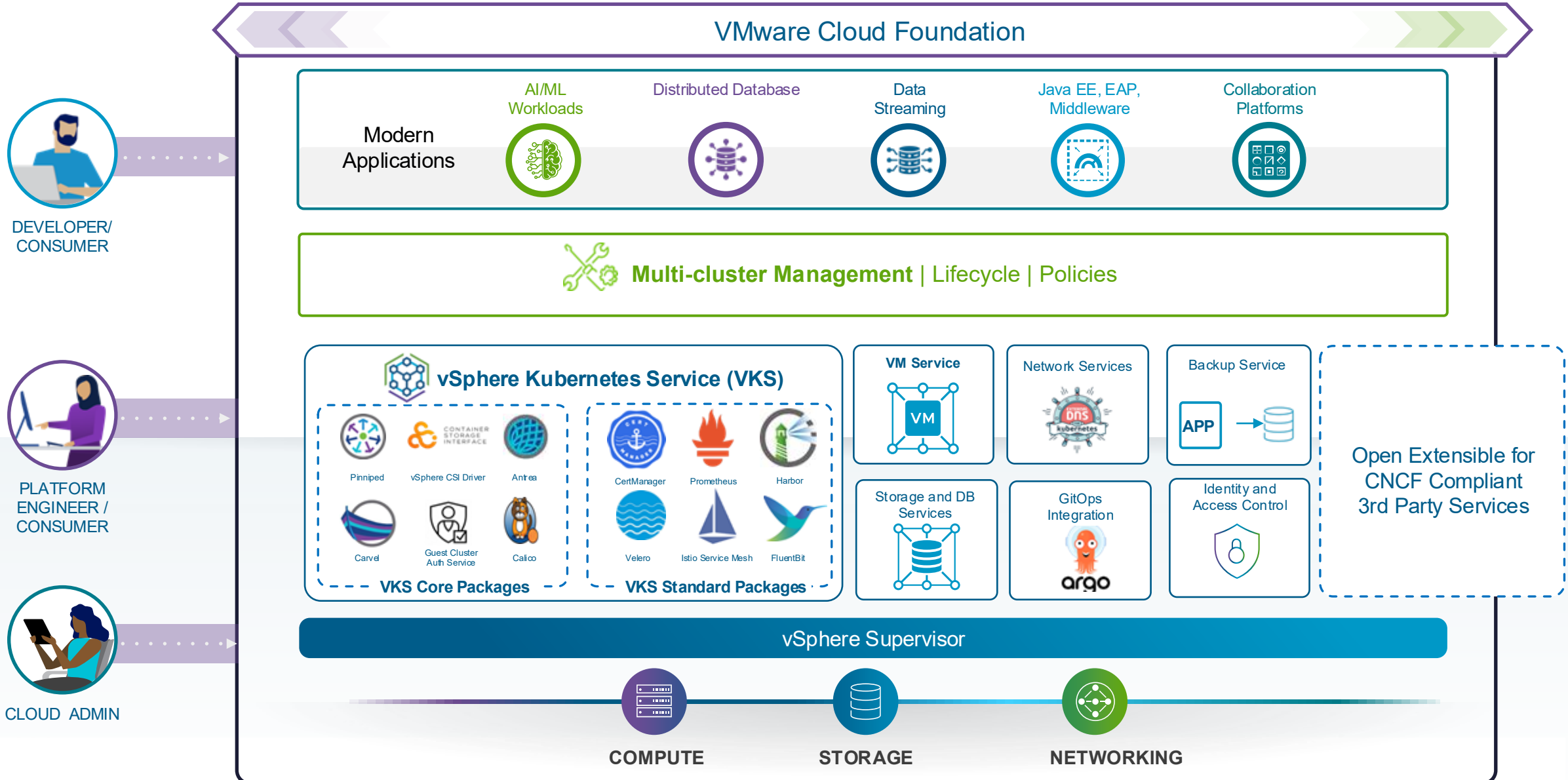
- [Product Documentation](#): Search through a range of product documentation, KB articles, technical papers, release notes, to learn more about VCF Automation.
- [Community](#): Vibrant and extensive network where users, enthusiasts, and professionals come together to share knowledge, collaborate, and support each other.
- [CLI Experience](#): Try out the new CLI Experience to speed up your workflow.

Plug-n-play adoption to save time and reduce errors

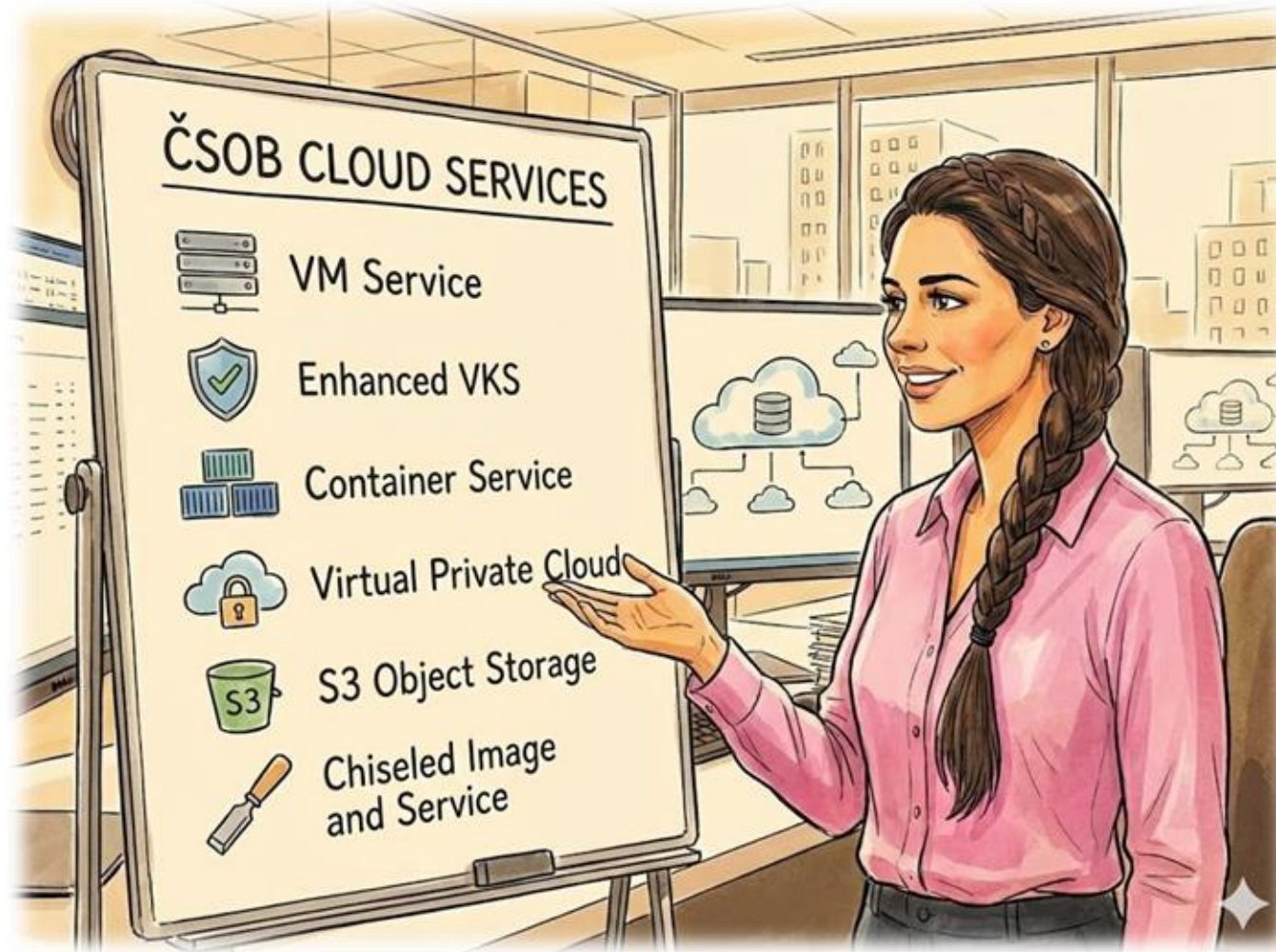
Automate secure, isolated workload creation, multitenant

Improve user experience with utilization and cost view

# Built-in Kubernetes Runtime and Multi-Cluster Management



# Modern consumption and services



# Unlocking Maximum ROI with Best for value technology

**Up to 42%**

**Lower Memory Costs**

When NVMe memory tiering is enabled

**Up to 39%**

**Lower Storage TCO**

Compared to external storage arrays

**Efficient Infrastructure &  
Operations at Scale**

**Up to 70%**

**Faster VKS Cluster Deployments**

Compared to previous version

**5x Better Density**

**For Containers Workloads**

Compared to competitor's platform

**High Velocity  
Application Delivery**

**Up to 70%**

**Lower CPU Usage**

For encrypted vMotion for AI/non-AI apps

**Up to 80%**

**More Live Patching**

When applying security patches

**Cyber Resilience &  
Data Security**

# VCF Real-world use cases

## Manufacturing with 2 factory sites replication over 120km

- 2 DC sites, async-replication
- 7 employees; lean IT team
- Adopted VCF 64 + 64 core
- Add-on VLR - SRM for DR plans and vSphere replication RTO=1m
- Add-on vDefend - Better security and visibility into the “full picture” from a security standpoint
- Reduces cost – would need more people with 3 Tier architecture
- Migrated from Hyper-V and MS-SS

## Finance customer created modern DevOps in primary DC

- Primary and DR site
- VCF 1600 core (800+800) stretched
- Self-service portal for easier consumption via VKS
- Multi-tenancy for internal projects and external suppliers
- FinOps chargeback for Project1,2,3
- Capacity planning and scalability on-demand

## Public services to host modern apps from three DCs

- Three DC sites in capital city with metro distance RTT < 5ms
- Public agenda for rapid app development
- Infrastructure sharing for app developers
- Critical SLA with 7\*9s
- Add-on PaaS with Tanzu Platform
- Control of application stack security build predominantly on Open Source components



Ďakujem