

# Le marché des hyperviseurs : *Constats et intégrations avec les plateformes de données Pure Storage.*

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BITF



#BITF25





# Pure Storage at a Glance



# THREE CORE PRINCIPLES

EFFORTLESS

SIMPLE

EFFICIENT

IT JUST WORKS

EVERGREEN

DON'T WASTE  
MONEY

DELIVERING THE ENTREPRISE DATA EXPERIENCE



# THREE CORE PRINCIPLES

## EFFORTLESS

STORAGE ADMINISTRATION  
SHOULD BE A TASK, NOT A FULL  
TIME JOB.

NO MANDATED TRAINING COURSE.

FULL-STACK AUTOMATION.  
MAKE HYBRID CLOUD A REALITY.

WE'RE WATCHING THE ARRAY FOR  
YOU, WE SEE THINGS BEFORE THEY  
HAPPEN. PREDICTIVE SUPPORT.

## EFFICIENT

BEST DATA REDUCTION IN THE  
BUSINESS. PROVEN. ALWAYS-ON.

DO WHAT YOU LIKE, WHEN YOU  
LIKE.

RUN MIXED WORKLOADS.  
PREDICTABLE & CONSISTENT  
PERFORMANCE.

NO OUT-OF-HOURS WORK  
REQUIRED FOR ANY TYPE OF  
MAINTENANCE OR CONFIGURATION.

## EVERGREEN

BUY AN ARRAY ONCE, NEVER BUY  
ANOTHER ONE TO REPLACE IT.  
EVER.

NEVER RE-BUY SOMETHING YOU  
ALREADY HAD.

NO HIDDEN COSTS, NO  
ENFORCED UPGRADES,  
TRANSPARENT PRICING.

DESIGNED FOR THE FUTURE.

ALSO AVAILABLE "AS-A-  
SERVICE", PAY-PER-GB USED

DELIVERING THE ENTREPRISE DATA EXPERIENCE

# Pure Leadership At A Glance

Pure Storage has one of the **highest NPS** in the industry!

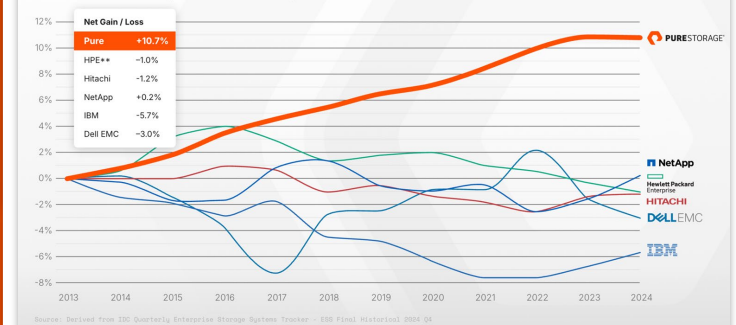
Pure's NPS is 81

Pure Storage is an MQ Leader for 11 Consecutive Years!



## 11 Year Enterprise Storage Market Share

IDC: Market Share Changes From 2013 Through 2024



Pure Storage is a Leader in the IDC Container Data Management MarketScape



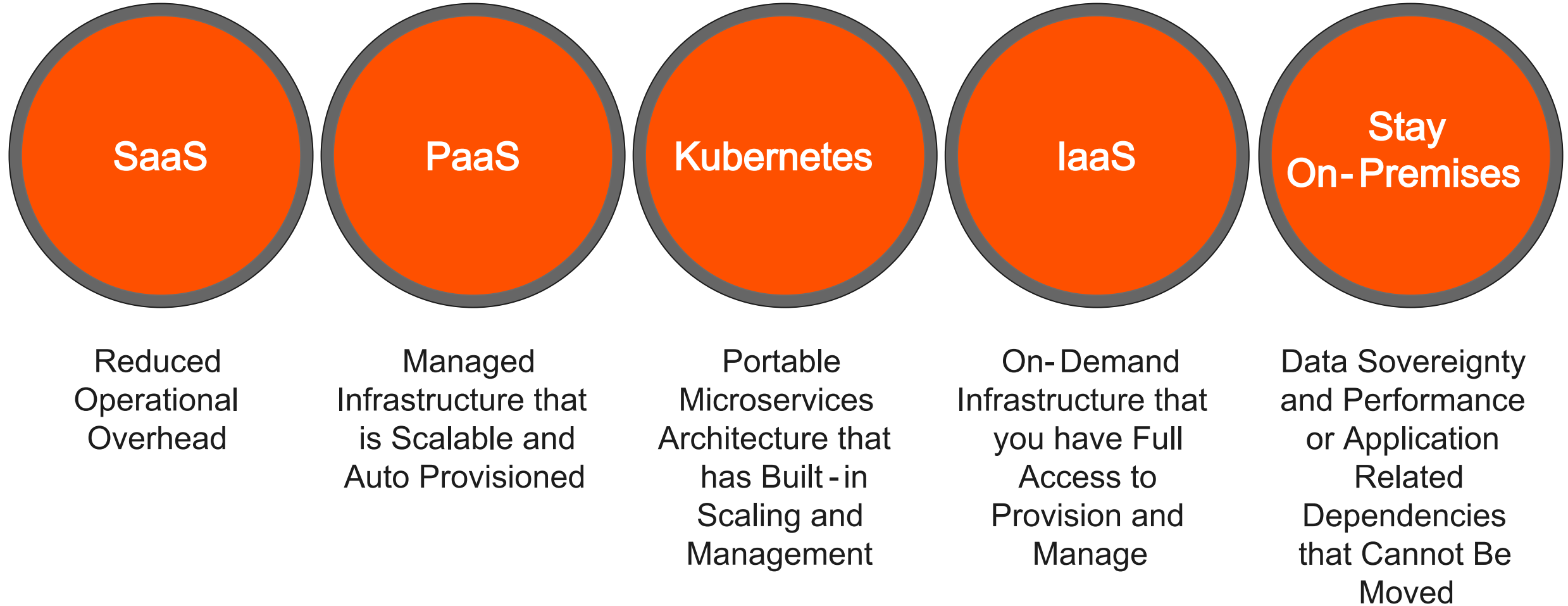
Pure Storage is a Leader in File & Object for the Fourth Consecutive Year!



Pure Storage is Recognized in Fortune's Best Workplaces List for Four Consecutive Years!

# State of the art

# Modernization Rationalization







# Redefining Virtualization

- 1 Stay with VMware
- 2 Switch Virtualization Providers
- 3 Move to the Cloud

# Virtualization ecosystem

## Hypervisor distributions

VMware (ESXi)

Nutanix AHV (KVM)

Proxmox VE (KVM)

oVirt by Red Hat (KVM)

XCP-ng (XenServer)

HPE VM Essentials (KVM)

## HCI platform (SDS)

VMware (stockage externe possible)

Nutanix (stockage externe possible)

OpenStack (stockage externe possible)

VergeOS

## Kubernetes management platform with integrated virtualization

Openshift for Virtualization by Red Hat

Harvester by Suse

Virtuozzo Hybrid Server

## Cloud management platform

CloudStack gestion multi-hyperviseur (KVM, XenServer, VMware)

OpenNebula gestion multi-hyperviseur (KVM, VMware + Azure et AWS)

Nutanix gestion multi-hyperviseur (AHV, VMware, Hyper-V + Azure, AWS, GCP)

VMware gestion ESXi + Azure, AWS, GCP)

# Evaluation criteria for platforms

Hybrid Cloud

Application Automation/Orchestration/Self Service

Storage Services (Files, Object, Blocks)

Micro Segmentation/App Firewalling

Network Overlay

Kubernetes

Data Replication and DR orchestration

SDS

Hypervisor

**Key differentiating factors to consider:**

- **Breadth of integrated services**
- **Integrations, centralized management, and API readiness**
- **Ease of deployment and maintain**
- **Costs, licensing, and subscription model**
- **Cloud readiness, hybrid capabilities, and public cloud options**
- **Training programs and partner ecosystem**
- **Available resources and skills in the market**
- **Number of alliances with the software vendor ecosystem**
- **Quality of support (NPS Score)**

# vmware<sup>®</sup>

by **Broadcom**

# VMware

## Strengths

Mature solution, widely used by large companies.

Large ecosystem and compatibility with numerous tools.

Excellent stability and performance.

Complete virtualization tools (+ 20 Years)

## Weaknesses

High licensing costs

Move to VCF could be complex

Heavy reliance on the VMware ecosystem.

## Opportunities

Further expansion into hybrid cloud.

Complete platform with K8s and AI integration

## Threats

Growing competition from open source and cloud native solutions.

Major strategic changes post-acquisition also for the future of the support.

Rise of containers on VMs.

# Stay with VMware

Optimize VMware with  
efficient Storage solutions

## Benefits:

- Familiar Solution
- Budget predictability
- Efficiency & cost optimization



FlashArray™

vmware®  
by Broadcom



10+  
(and counting)

Integrations built on  
multiple years of  
collaboration

# Take Control of Your VMware Environment

Certified and integrated solutions

Free up IT administrator time

Deliver self -service models to users

Continued Efforts on Integrated  
Engineering



Horizon®



Tanzu™



Cloud Director™



vSphere®  
Virtual Volumes™



vCenter®



Cloud Foundation™



Aria Suite™



Aria Operations™  
for Logs



Aria Operations™



Site Recovery  
Manager™





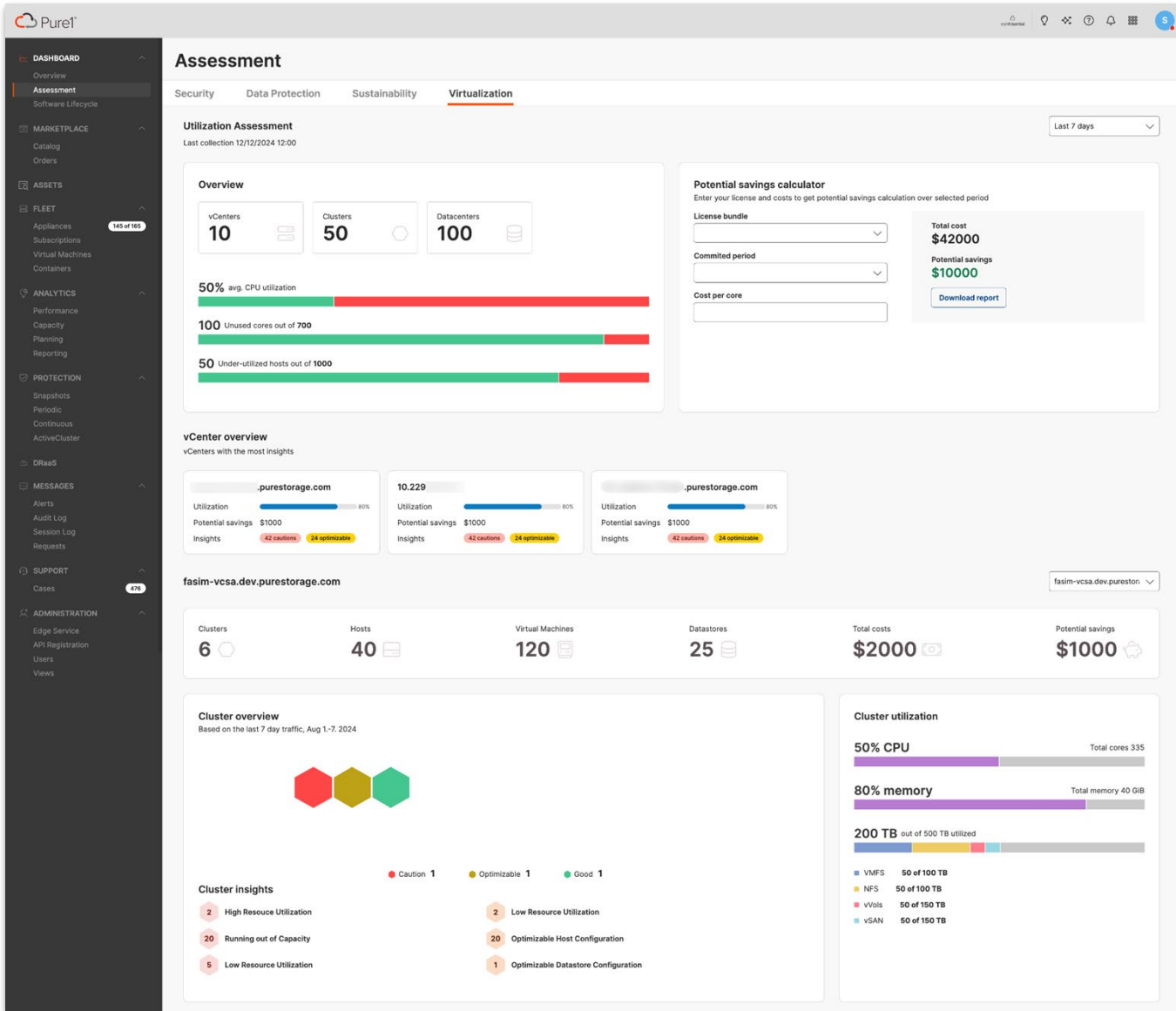
# Virtualization Assessment

Gain clarity into VM utilization and understand potential savings

Identify optimization opportunities to ensure VMs run at their best

Proactively manage and mitigate potential issues to reduce risk and ensure seamless operations

Generate custom reports to secure alignment with stakeholders



Cluster - level  
Analysis

Host - level  
Insights

VM - level  
Optimization

Cost Optimization  
Strategies



# Redefining Virtualization

- 1 Stay with VMware
- 2 Switch Virtualization Providers

# Switch Virtualization Providers

FlashArray™ +  openstack. /  Microsoft Hyper-V \  PROXMOX / NUTANIX \ Azure Local /  aws Outposts

# NUTANIX



# Nutanix

## Strengths

Integrated HCI stack (compute, storage, network) with Prism central console.

Complete virtualization tools (+ 10 Years)

Linear scalability and native multi-cloud support.

Very positive user support reputation.

## Weaknesses

Enterprise licensing still high cost.

Limited external storage compatibility (no Fibre Channel).

## Opportunities

VMware migrations for simplified HCI adoption.

Growing enterprise acceptance of hyperconverged infrastructures.

Expanding support for Kubernetes and AI on AHV.

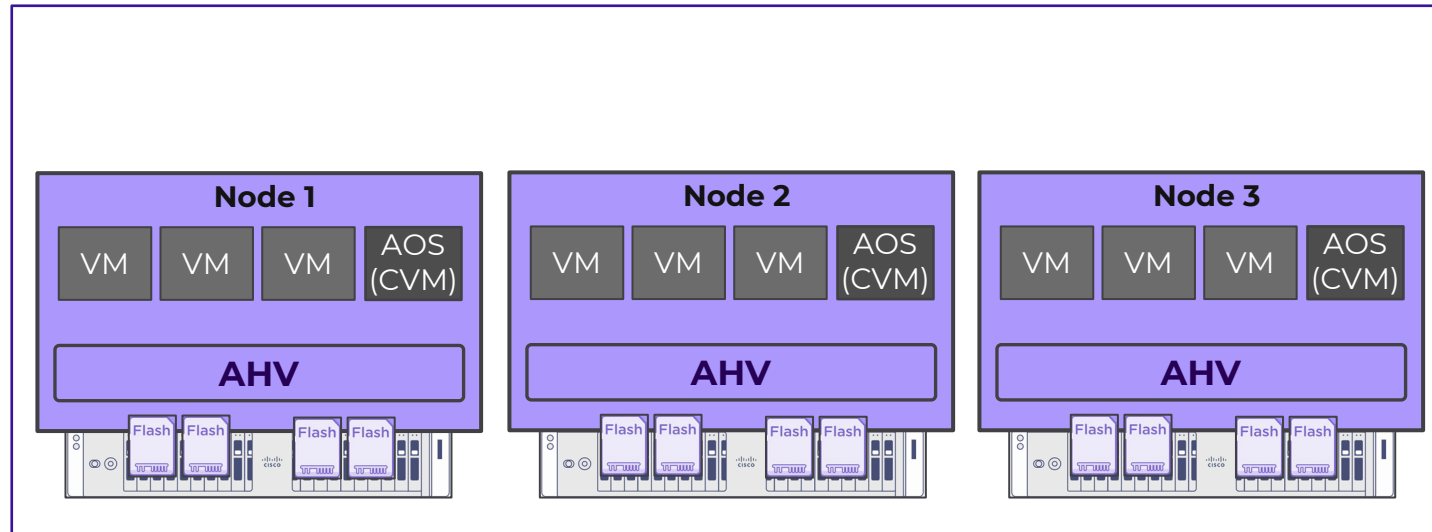
## Threats

Competition from VMware and open source solutions.

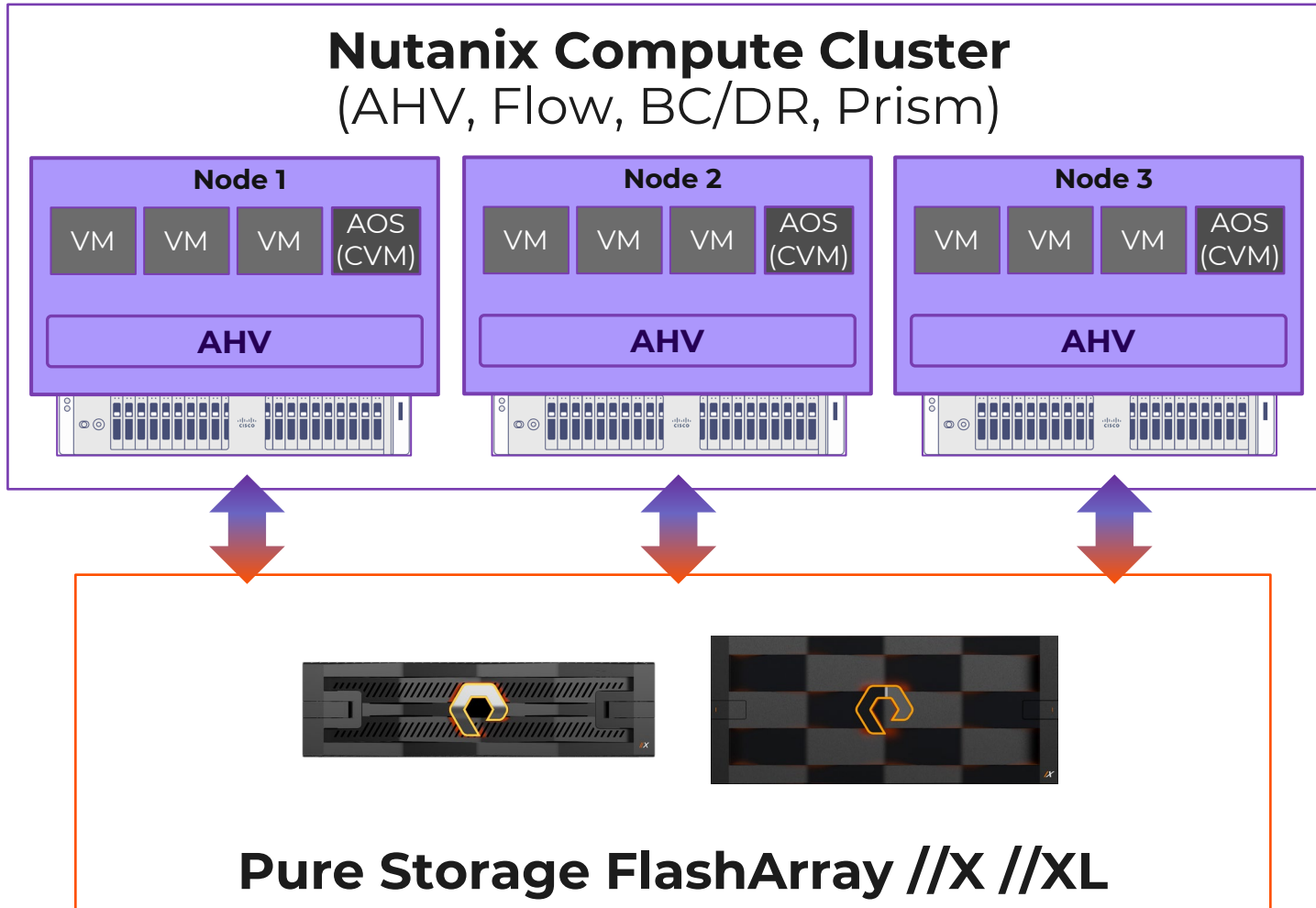
Market still consolidating.

Constant need to justify value against alternatives.

# Nutanix Cloud Platform with Pure Storage



# Nutanix Cloud Platform with Pure Storage



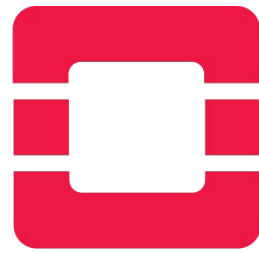
## Nutanix Compute Cluster

- AHV Enterprise Features
- Flow virtual networking & security
- Disaster Recovery
- Managed by Prism
- Runs on Industry Standard Servers

## IP-based Access (NVMeTCP)

## Pure Storage FlashArray

- Runs Storage Controller OS
- Storage Efficiency, Data Reliability
- Managed by Pure1



openstack®



# OpenStack

## Strengths

Open-source modular architecture, ideal for private/hybrid cloud.

No license costs, broad component ecosystem (Nova, Neutron, etc.).

High flexibility and scalability.

## Weaknesses

Complex setup and management, high technical barrier.

Support relies on community or third-party providers.

Heavy resource requirements and possible instability.

Low with virtualization tools and DR orchestration

## Opportunities

Partnerships with Red Hat, IBM, OVH bolster ecosystem and some distributions.

Open infrastructure trend increases adoption potential.

## Threats

Expertise in OpenStack remains scarce.

Risk of security vulnerabilities and upgrade friction.

Oriented TELCO customers

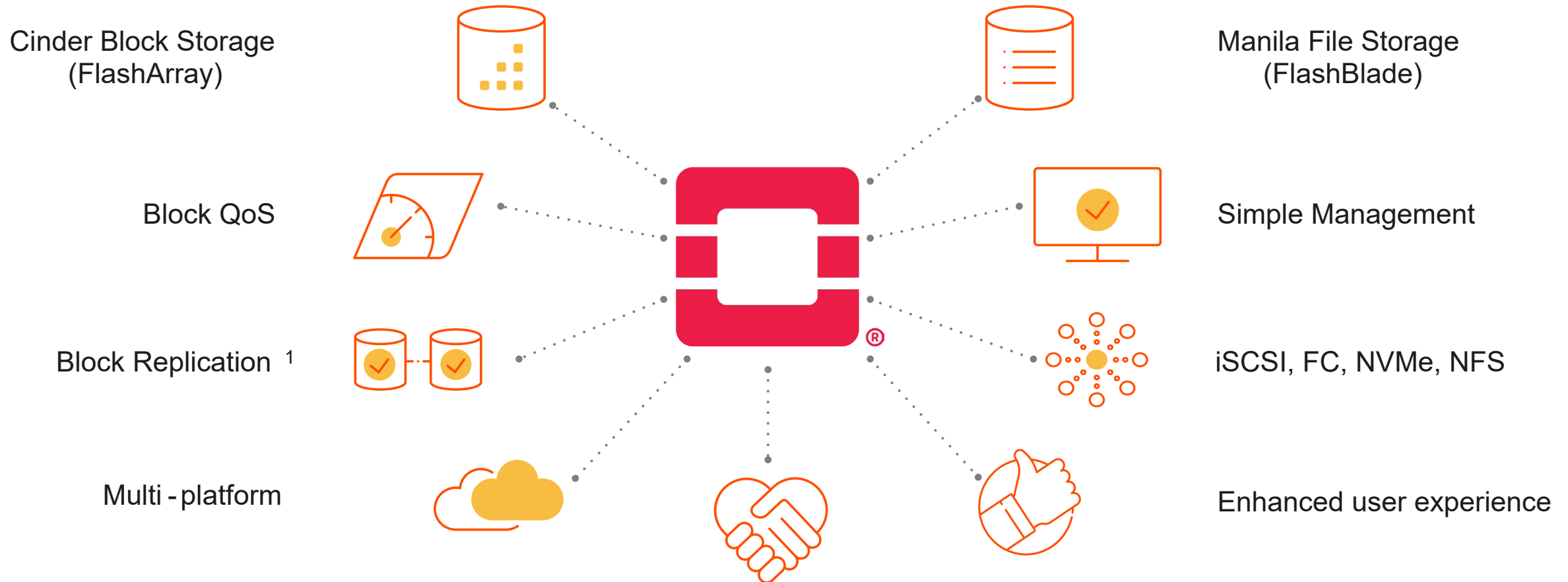
Low in innovation and support

# ONE OF THE MOST ACTIVE OPEN SOURCE PROJECTS WITH 40 MILLION CORES IN PRODUCTION

- OpenStack community completes the alphabet with Zed, and moves on to date - based releases
- 2024.1 (Caracal) just released
- OpenStack production deployments hit 40 Million Cores
- More than 450 organizations have contributed upstream to OpenStack, making it one of the most active open source projects in the world
- Over 9000 contributors across 180 countries
- OpenStack public cloud footprint exceeds 300 data centers worldwide
- Pure has contributed to 26 projects over 10 years
- FlashArray most popular external storage system

# OpenStack

An IaaS Platform – without all those pesky licensing costs...





# Red Hat Virtualization

# Red Hat OpenShift Virtualization

## Strengths

Delivers both VM and container orchestration via Kubernetes.

Single-pane management through OpenShift UI.

Backed by Red Hat enterprise support and certifications.

Natural fit for DevOps and CI/CD environments.

## Weaknesses

Less mature virtualization capabilities versus VMware.

Complex deployment requiring dual VM/Kubernetes skills.

Relatively expensive Red Hat subscription costs.

## Opportunities

Capitalizes on enterprise shift to containers/K8s.

Opportunity to consolidate VM and container workloads.

Strong alignment with DevOps and microservices strategies.

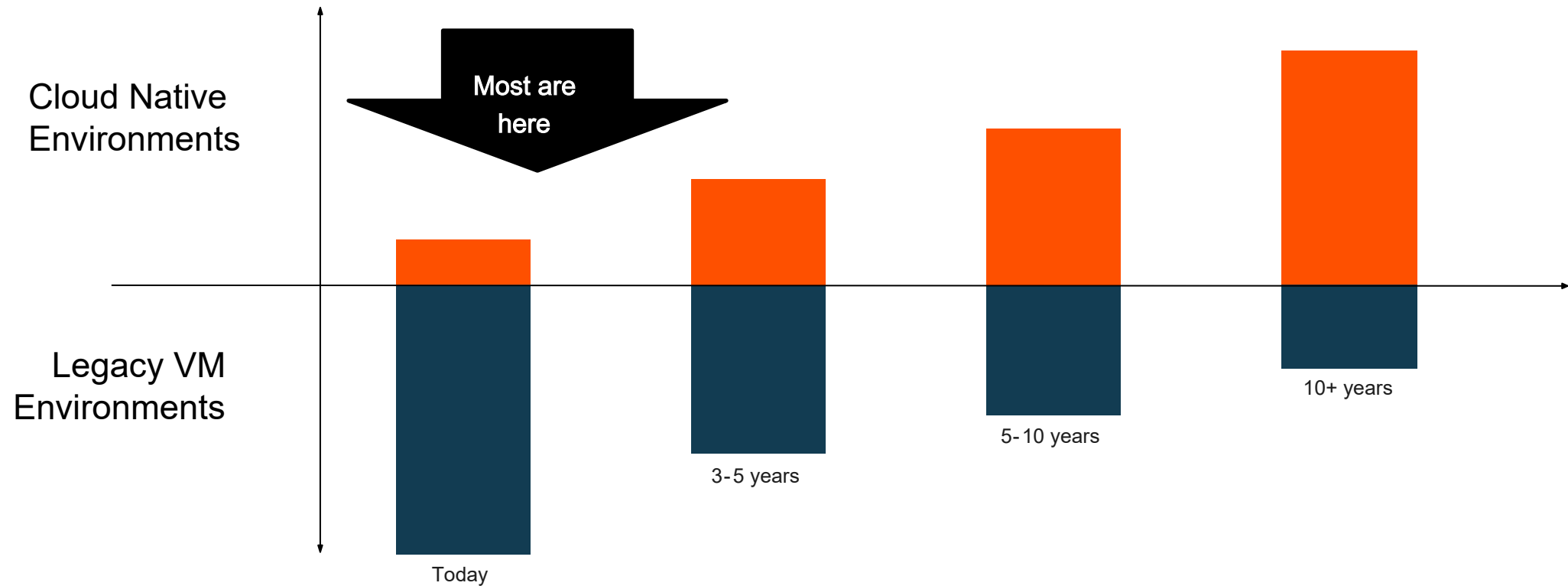
## Threats

Traditional hypervisors may outperform for pure VM use.

Kubernetes-only alternatives could compete strongly.

Talent skilled in both virtualization and K8s is rare.

# Cloud Native and VM environments will continue to exist side by side for the foreseeable future so supporting both is critical



By 2029, 35% of all enterprise applications will run in containers, an increase from less than 15% in 2023.

**Gartner**

# Portworx + Red Hat

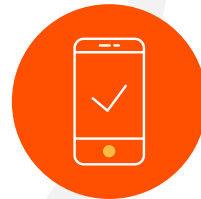
## Modern Application Development Platform



Optimize Operational  
Costs



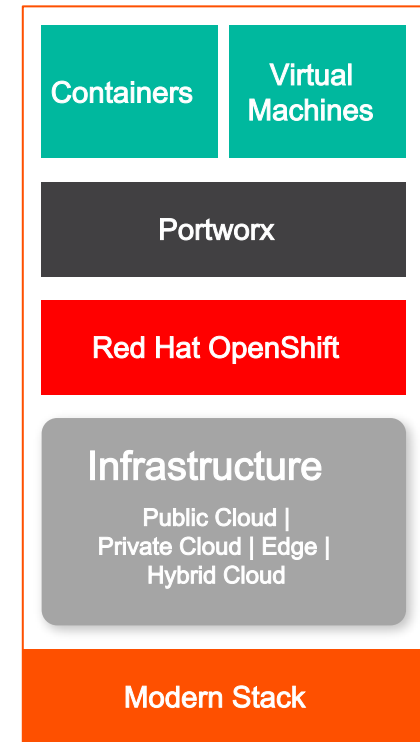
Mitigate  
enterprise risk



Accelerate Time  
to Revenue



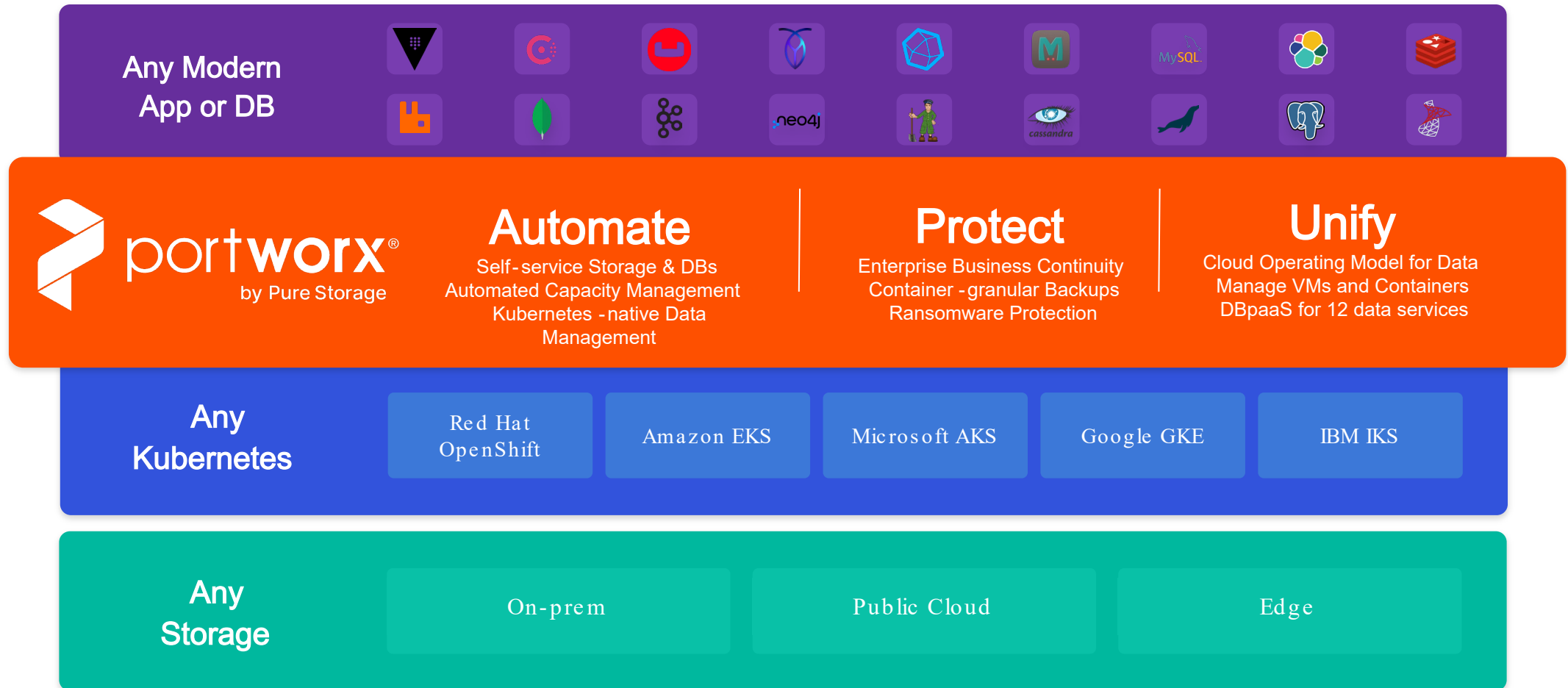
Achieve Data  
Agility



Blog: [Portworx, Red Hat OpenShift Virtualization, and KubeVirt](#)

# Automate, Protect and Unify Modern Applications and Data Anywhere

Portworx by Pure Storage is THE Leading Kubernetes Data Platform for Enterprise Scale







# Proxmox

## Strengths

Open-source, affordable with built-in HA and clustering.

Web-based central console, native backup, live migration.

Lightweight and easy to deploy—ideal for SMEs and labs.

## Weaknesses

Community-based support, not ideal for critical enterprise use.

Smaller ecosystem and fewer certifications.

Scalability limitations compared to large enterprise platforms.

## Opportunities

Growth in small to medium business deployments.

Ecosystem enhancements (backup server, improved clustering).

Compelling cost-benefit in comparison to commercial solutions

## Threats

Enterprise vendors (VMware, Nutanix) dominating critical use cases.

Missing enterprise-grade features like SRM or stretch clustering + Backup support

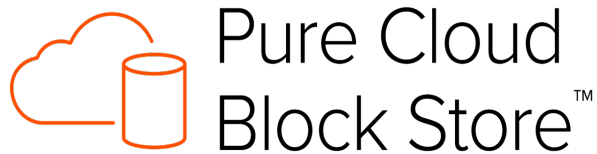
Expertise in Proxmox remains scarce.

# Redefining Virtualization

- 1 Stay with VMware
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- 3 Move to the Cloud

# Move To The Cloud

- Migrate VMware workloads to the cloud with cost effective storage that supports disaster recovery and data protection



# Pure Cloud Block Store



Optimize storage costs 30 -50%

- Better efficiency with 4:1 average data reduction and thin provisioning
- Seamless management experience from on -premises to cloud
- Cost effective migration & data mobility
- Improved security and data protection with enterprise -grade features

Bring the Best of Pure to the Cloud  
Enterprise-grade storage for the public cloud



Data Reduction



Thin Provisioning



Ransomware Remediation



Synchronous Replication



Asynchronous Replication



Continuous Replication



High Availability



Always -on Encryption



Instant Snapshots



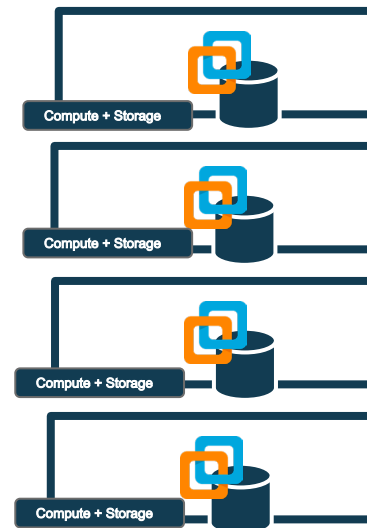
# Pure for Azure VMware Solution



- **First external block store** generally available for AVS
- **Migrate** storage-intensive VMware workloads
- **Enable cost-efficient hybrid** VMware deployments and data mobility
- Access to Pure's enterprise-grade storage
- Use familiar VMware tools
- 100% of storage available to customers

Better efficiency and cost optimization  
Scale storage volumes independent of compute nodes

AVS Only

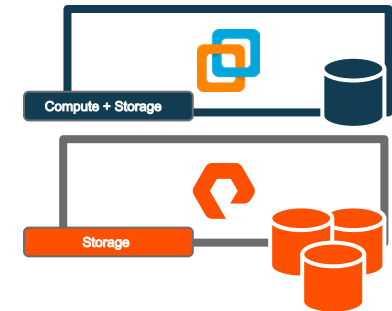


More Storage == More Nodes

Limited by # of Nodes per Cluster

50% vSAN Storage Efficiency

AVS + CBS



Scale Storage Independently

Reduce Storage FootPrint



# What Do I Have?

Do you know what is running in your  
datacenter? Inventory your  
applications!



# Atelier Alternatives virtualization.

Workshop d'une 1/2 journée pour comprendre les tenants et les aboutissants des alternatives à l'infrastructure dite «traditionnelle » ainsi que les points d'attentions sur un possible changement.

- **Contenu:**

- Comparaison des options de stockage traditionnel, HCI et Cloud Hybride et discussion sur les plans de virtualisation alternatifs
- Concepts : stack des usages
- Présentation : Solutions des éditeurs
- Environnement et compatibilités
- Avantages et inconvénients
- Gartner
- État des lieux et analyse de votre écosystème (compatibilité applicative)
- Next Steps
- Vos questions

- **Ce workshop inclut :**

- Préparation
- 1 heure de séance de kick-off pour le cadrage du périmètre et le choix des participants et inventaire applicatif
- 1/2 journée d'atelier sur site
- Rapport synthétique sur la faisabilité et conclusions de l'atelier



# Merci!

Des questions ? Contactez-nous :  
***it-forum.ch@bechtle.com***

