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Enterprise

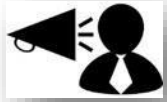
HPE GreenLake Private Cloud Business Edition

Sri Parameswaran

Global TME Technical Enablement

May 20, 2024

Before we begin...



- Listen by computer audio or dial-in



- All lines are muted during the webinar



- Ask *questions* by selecting “Q&A” and to report any webinar difficulties



- Webinar is being recorded & will be emailed to all attendees



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Partner Technical Webinar Series

New HPE Aruba Next-Gen Data Center Solutions

Session 1: Data Center: HPE GreenLake

Monday, March 18th at 9 AM PT / 12 PM ET

Session 2: Data Center: FY24 DCN Overview and Road Ahead

Monday, April 15th at 9 AM PT / 12 PM ET

Session 3: Data Center: Private Cloud Business Addition

Monday, June 5th at 9 AM PT / 12 PM ET

([Click here](#)) to view session recordings for the webinar series

Agenda

Introduction

Architecture of Traditional Three tier or HCI Framework

Evolution from Traditional HCI Framework

dHCI Components and Architecture

Integration with HPE's Ecosystem

Private Cloud Business Edition (PCBE)

Demo

HPE DC Network Deployment

Conclusion

Introduction





Today's workloads demand a new data platform that offers:

Intuitive cloud experience on prem

that is AI driven for simpler storage and data management

Highly resilient, efficient infrastructure

That's built for critical enterprise applications and scales efficiently per business needs

Hybrid cloud management and protection

seamlessly integrated, without needing point solutions

Three Tire or HCI Framework

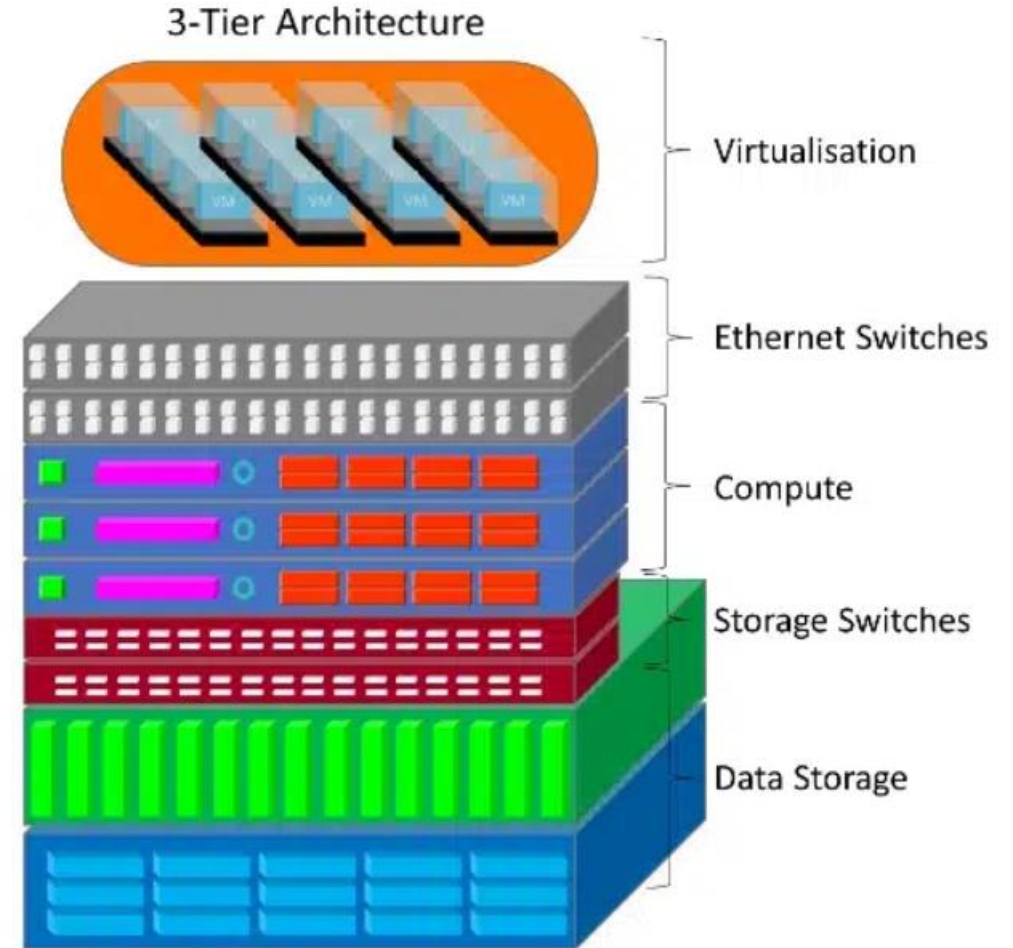


Legacy Systems

- Traditional Three Tier Architectures
- Converged Infrastructure Solutions

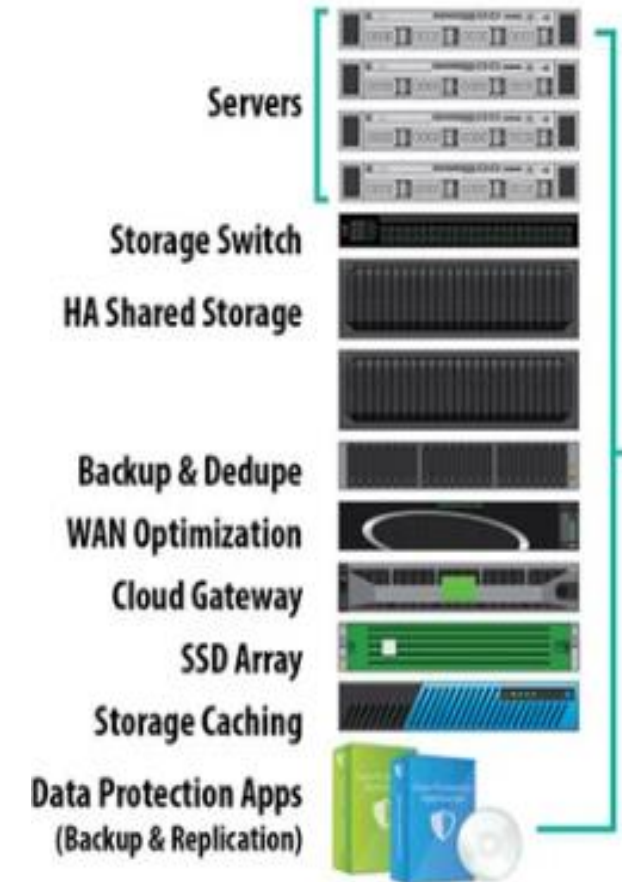
Traditional Three Tier Architectures

- **Separate tiers for storage, networking, and compute**
- **Required complex management and often led to underutilization**



Converged Infrastructure Solutions (CI)

- Integrating compute, storage, and networking components
- Unified Management: With CI



Challenges with the Legacy Systems

- Complexity
- Scalability
- Performance Bottleneck
- Resources under utilized
- Scale up limitation
- Cost inefficiency
- Vendor Lock-in

Evolution from Traditional Three Tier to dHCI



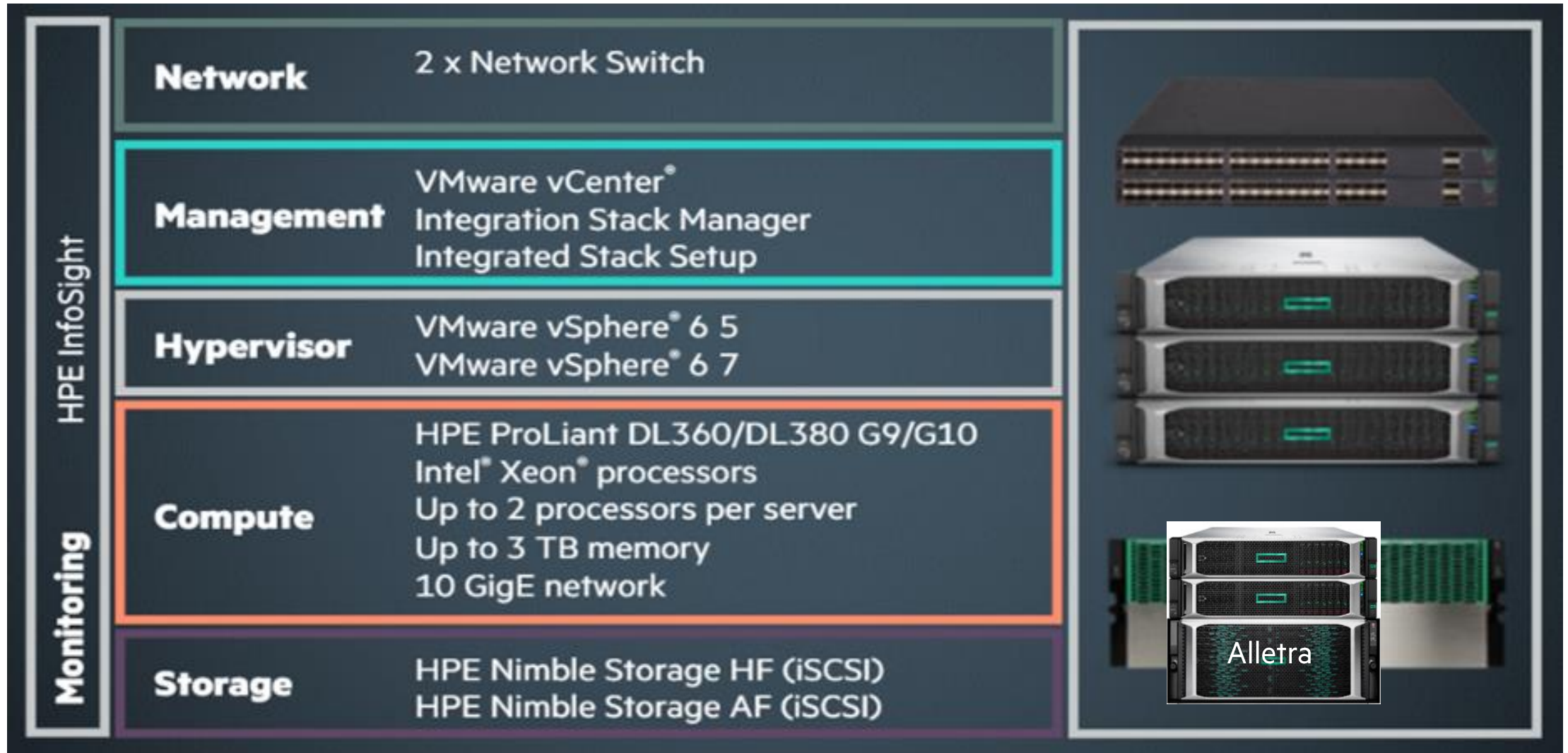
Why dHCI Framework

- **Flexibility and Scalability**
- **Resource Optimization**
- **Cost Efficiency & Performance Optimization**
- **Hybrid Cloud Integration**
- **Workload Diversity**
- **Non-Vendor lock-in**

dHCI Components and Architecture



dHCI FrameWork

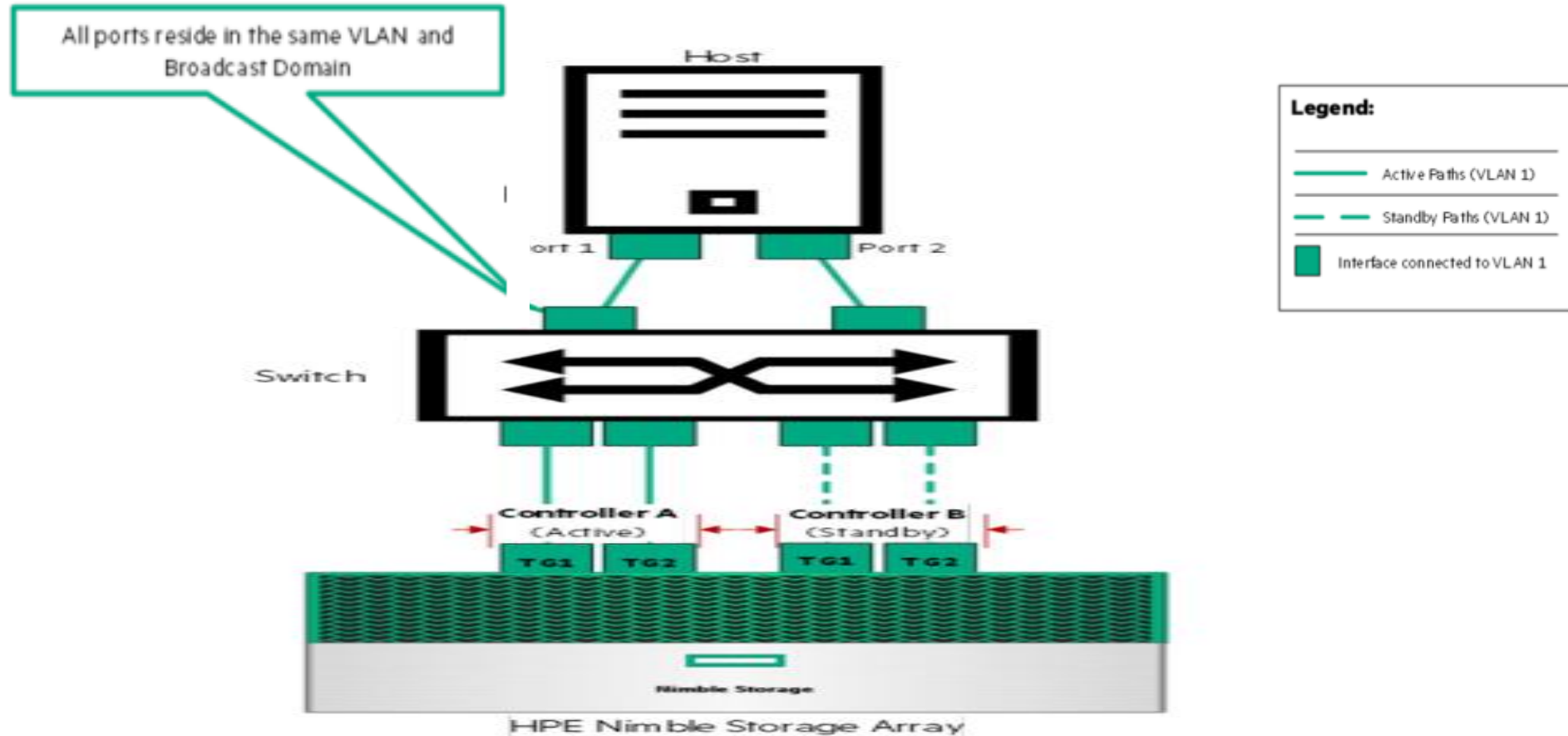


Recommendations for supported Switch topologies

- **Single subnet, single switch**
- **Single subnet, multiple switches**
- **Multiple subnets, multiple switches**

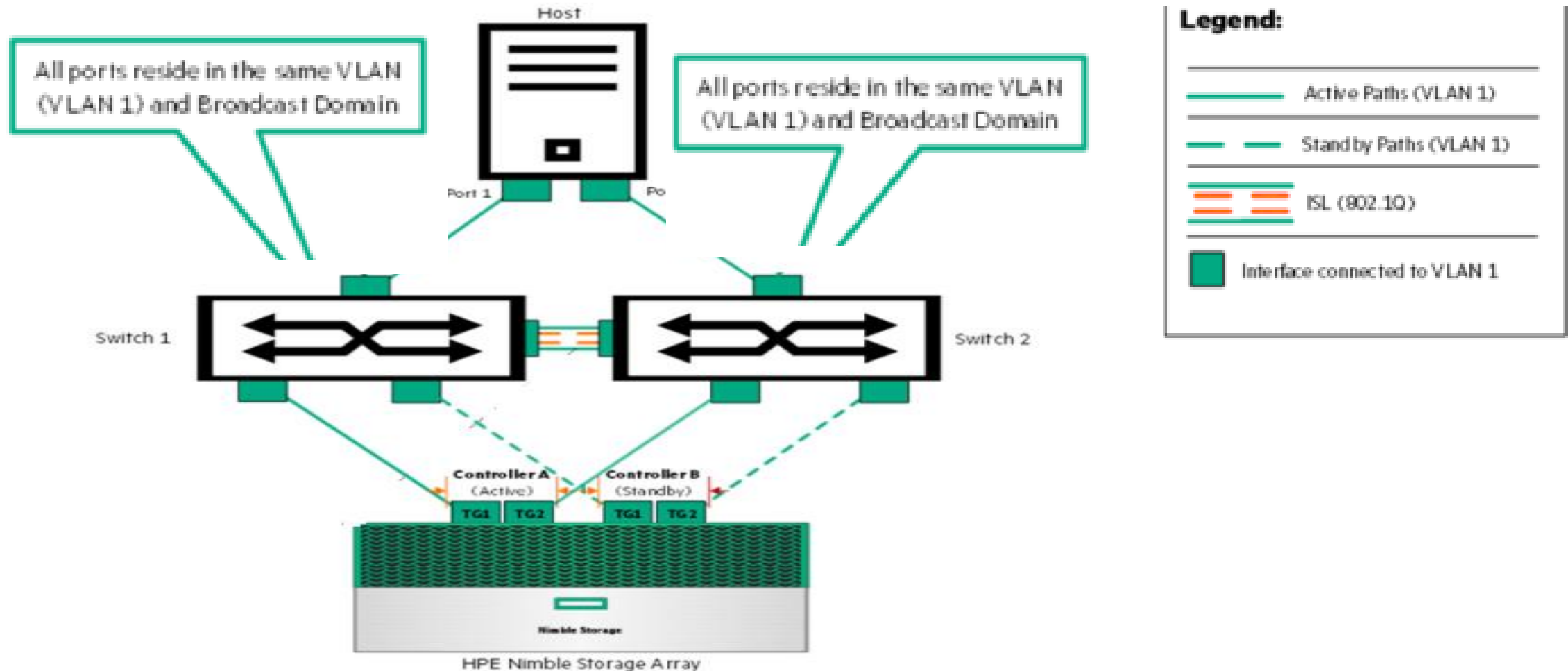
supported Switch topologies Continues

Single subnet, single switch



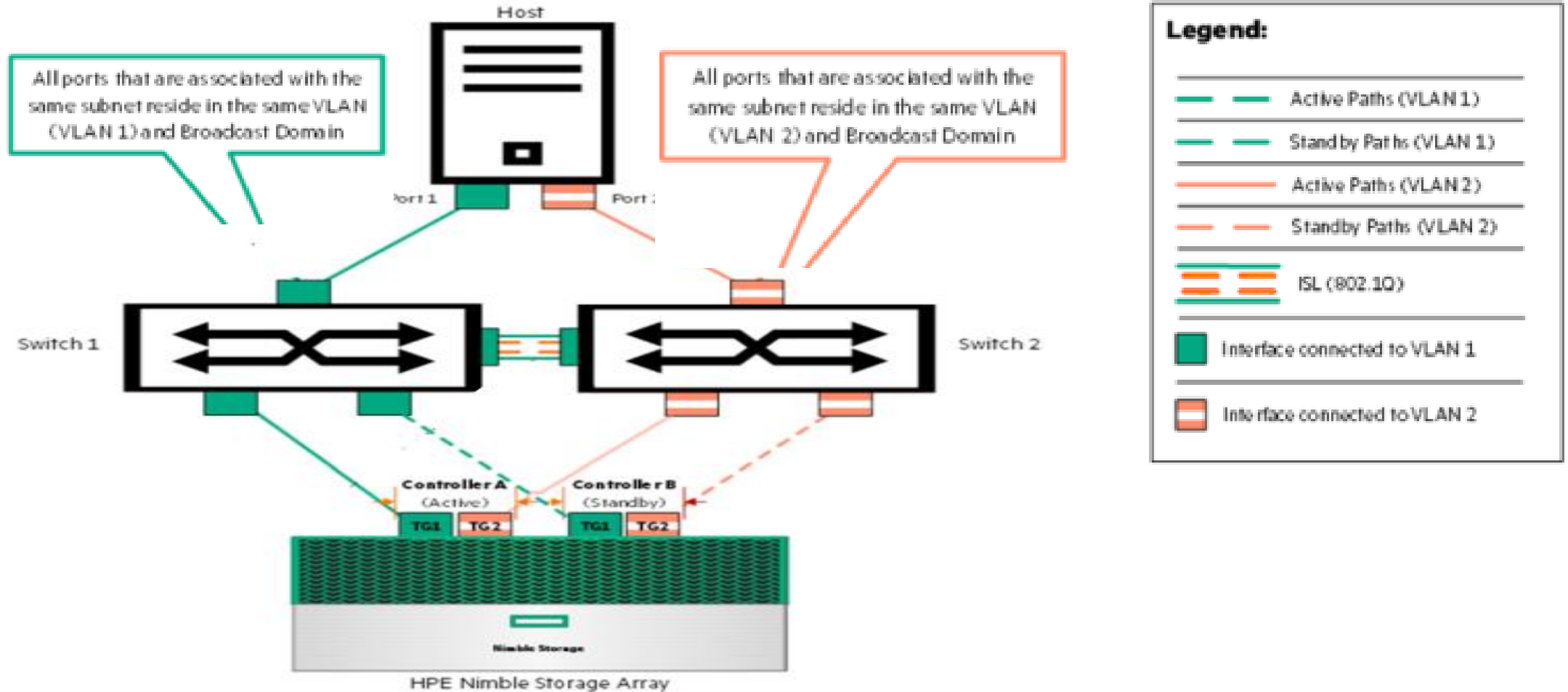
Supported Switch topologies Continues

Single subnet, multiple switches



Supported Switch topologies Continues

Multi subnet, multiple switches



Integration with HPE's Ecosystem



The world is hybrid

but the true cloud experience is not everywhere

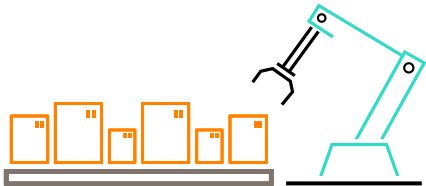
70%

Multi-gen IT | Data sovereignty | Security & Compliance |
Data costs and control | Latency, real-time decision making

30%

Speed | Agility | Self-serve | Pay-per use

Edge locations



Private data center



Colocation facilities



Public clouds



aws

Microsoft Azure

Google Cloud

Alibaba Cloud

- **Private Cloud Enterprise (PCE)**

- **Private Cloud Business Edition (PCBE)**

Private Cloud Business Edition (PCBE)



Today's reality for every VM admin



Infrastructure complexity
requiring multi-domain experience



Constant fire fighting
with uncontrolled VM sprawl



Pressure to lower cost
requiring efficient utilization at scale



Managing diverse environments
spread across hybrid cloud

HPE GreenLake for Private Cloud Business Edition:

The evolution of HPE hyperconverged solutions

HPE GreenLake Platform
Single consistent management experience across private and public cloud
Easy integration of data management and protection services

HPE SimpliVity

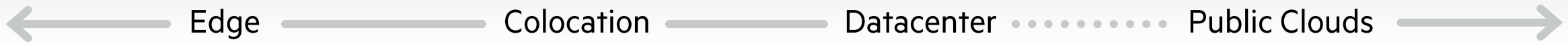
HPE Alletra dHCI

Public Cloud



All-in-one dHCI
for edge to core workloads

Disaggregated HCI
for mixed workloads at scale



HPE GreenLake

for Private Cloud Business Edition Different solution types

HPE GreenLake - Paid up front



Managed by the customer through the HPE GreenLake platform



Choice of technologies with HPE Alletra dHCI or HPE SimpliVity

Managed through the HPE GreenLake platform

The customer or partner manages their vm environment and public cloud through the platform (Data services cloud console)

Technology

Customer can choose from HPE Alletra dHCI or HPE SimpliVity, according to the size or performance of the environment.

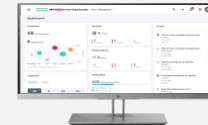
Solution comes with 24x7 remote support

HPE GreenLake – Pay as you go



Proactive support and reporting

Service and account planning, capacity planning reviews and reports. Deliverables vary according to SLA (HPE GL Lite or entry experience levels)



Managed by the customer through the HPE GreenLake platform

Managed through the HPE GreenLake platform

The customer or partner manages their vm environment and public cloud through the platform (Data services cloud console)

Overage capacity

Customer is able to scale up into additional capacity when required



Choice of technologies with HPE Alletra dHCI 5000 or 6000 (HPE SimpliVity to be added)

Pay for what you use

Customer can choose from HPE Alletra dHCI 5000/6000, according to the size or performance of the environment. Customers are then charged for what they use (usable GBs storage capacity and memory for servers)

Solution comes with 24x7 remote support (4hr response)

Private Cloud Business Edition (PCBE) - Components

Cloud-Native Management

Private Cloud Business Edition management console



Private Cloud Business Edition console

HPE Alletra dHCI

- GreenLake
- CAPEX
- OPEX (new)
 - Attribute based selling
 - Metering - 3 UoMs (CPU, Memory and Capacity)
 - Fixed monthly subscription + On-demand (OPEX)
 - End to End Service offering

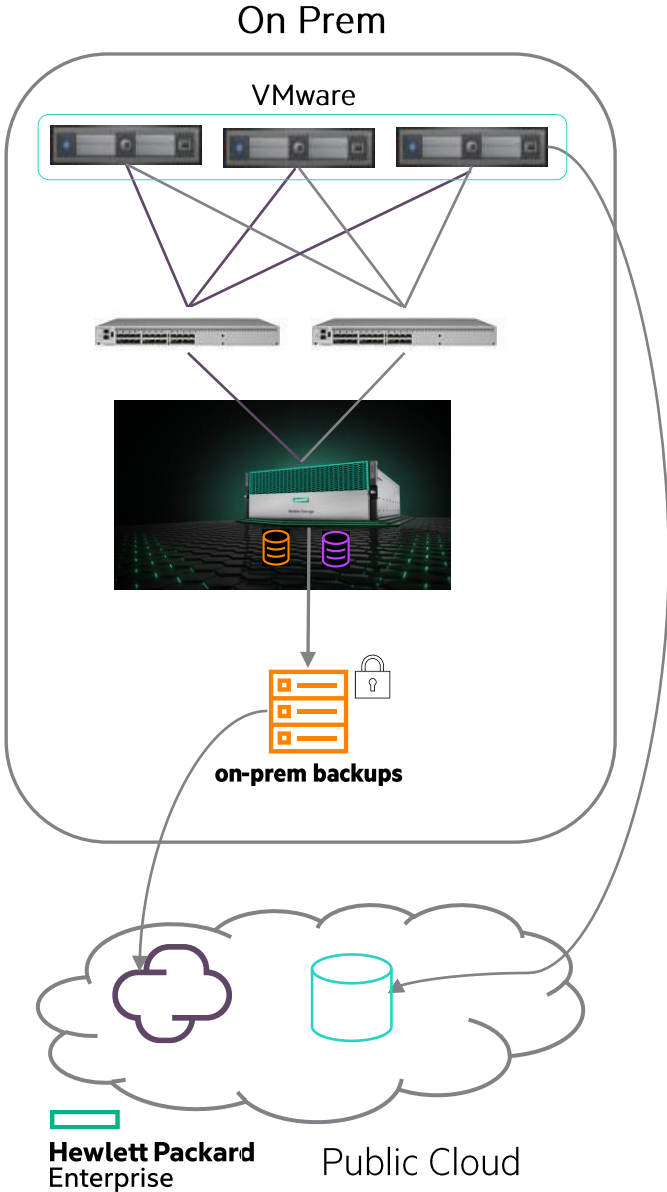


HPE Alletra dHCI



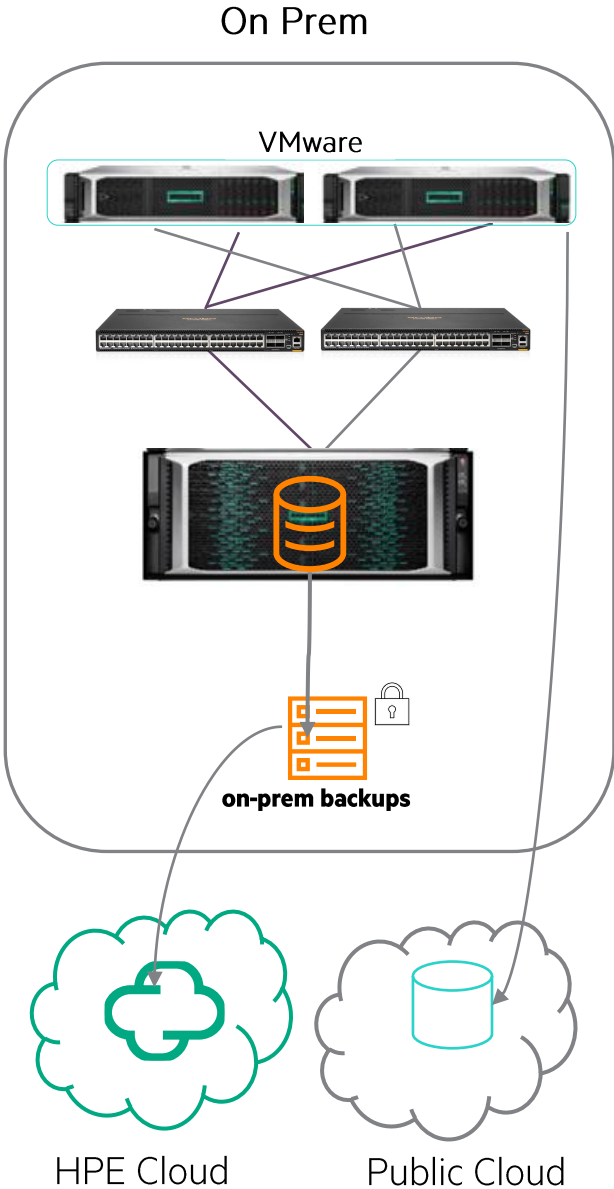
- Available to any HPE Alletra dHCI customer
- DSCC Tile - Cloud based Global Management Console
- Platform Automation – Setup & Lifecycle
- Hybrid Cloud VM provisioning & Management

In Practice....



- Management Tools
- OneView/iLO
- vCenter
- Web Gui
- On-prem Storage UI
- Backup software
- Replication software

Private Cloud Business Edition



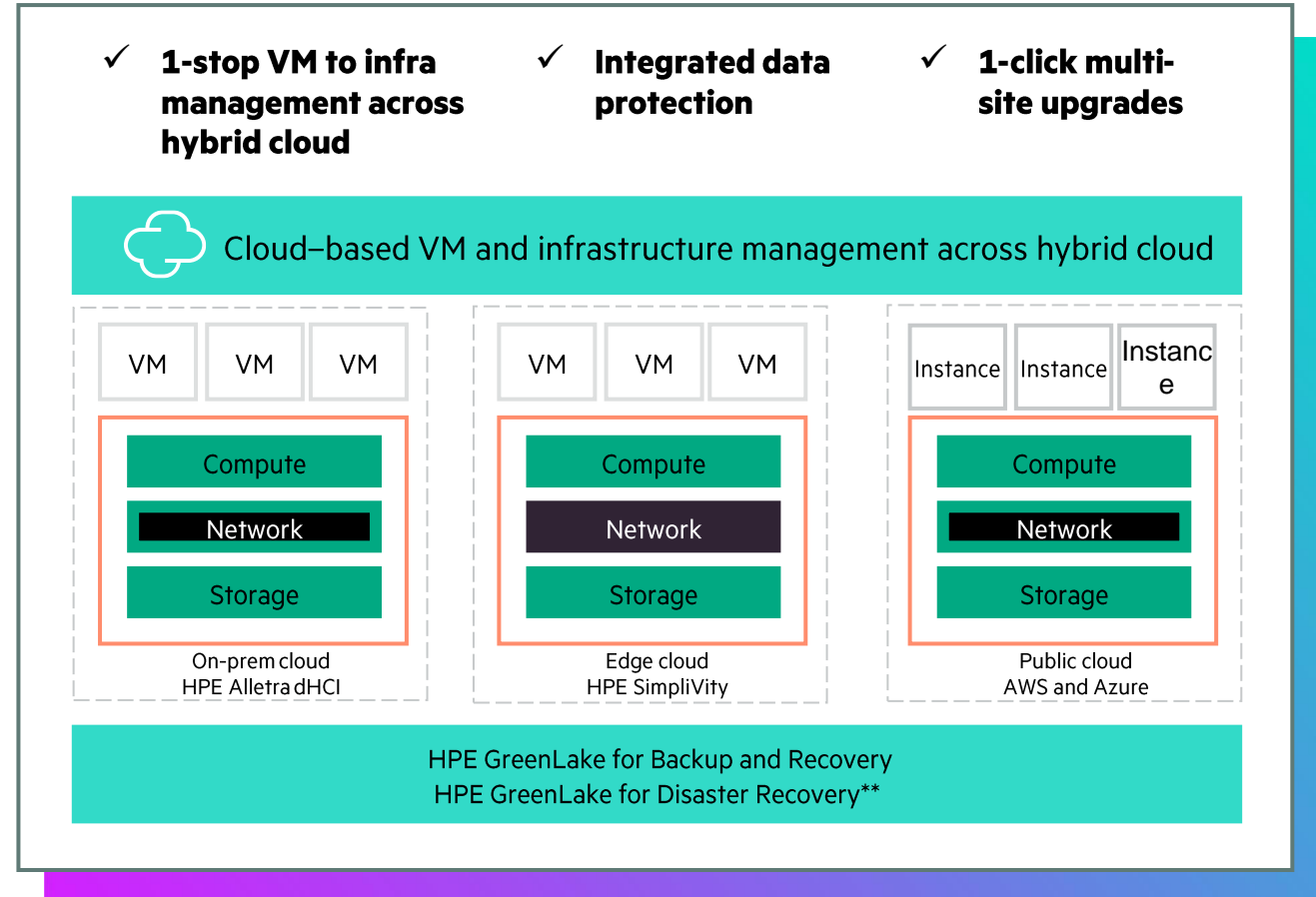
HPE GreenLake Platform

- Private Cloud Business Edition Management Console
- Backup & Recovery
- Disaster ^{Zerto} Recovery

Introducing HPE GreenLake for Private Cloud Business Edition

- Easy Management of on-prem and cloud VMs and infrastructure with a unified cloud experience
- Harness hybrid cloud data protection and mobility
- Consume with choice of pay per use* or payment upfront

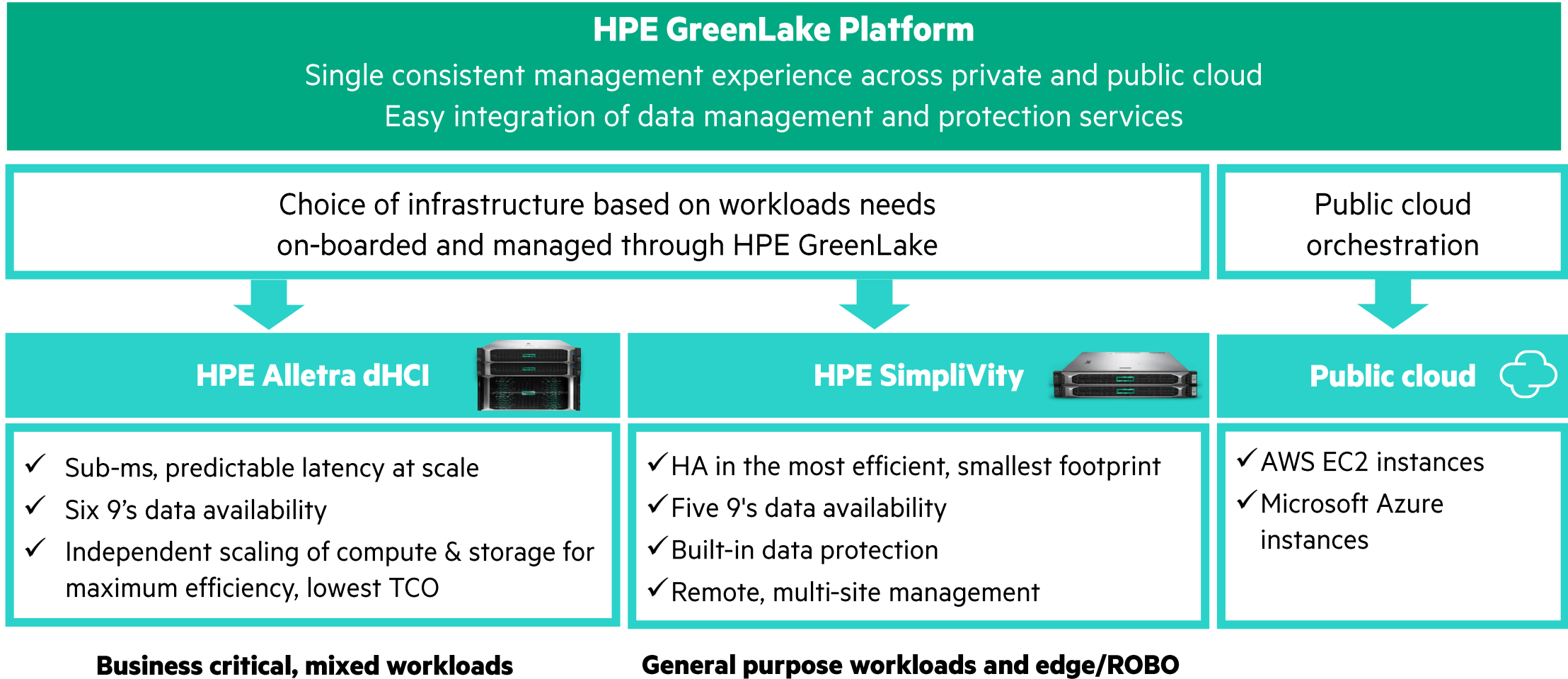
Build your self-service cloud where you need it




The industry's only self-service private cloud with a six-nines data availability guarantee built-in***

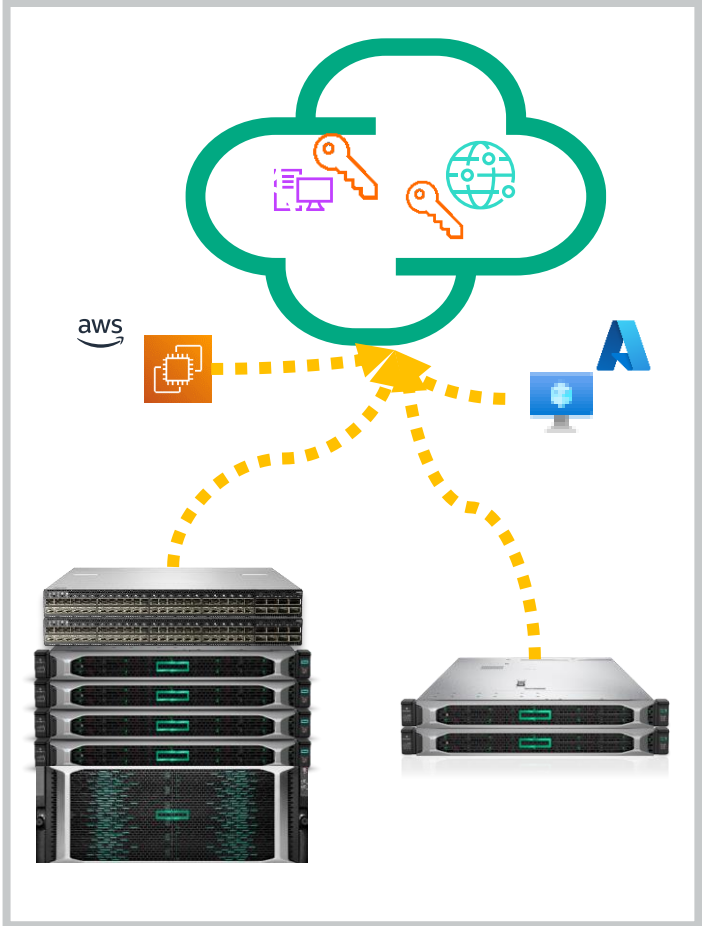
HPE GreenLake for Private Cloud Business Edition:

The evolution of HPE hyperconverged solutions



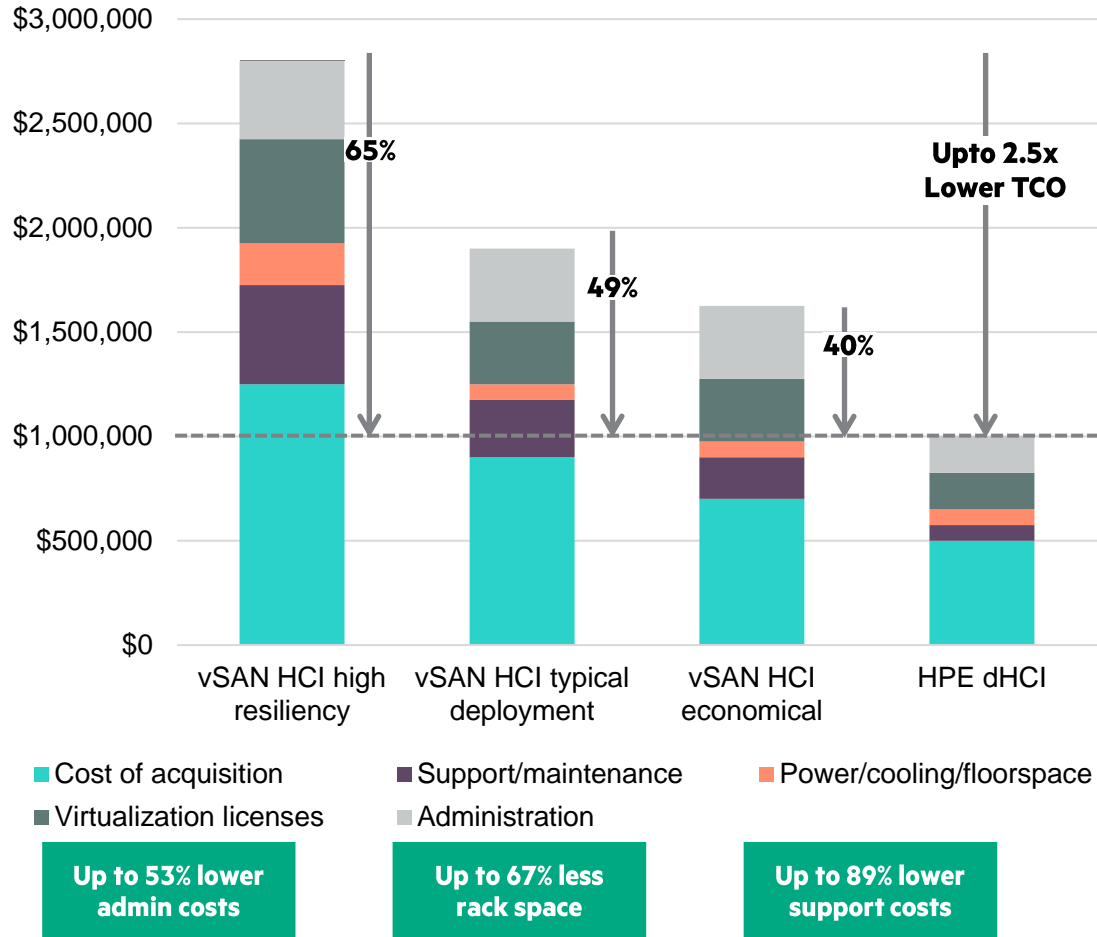
Private Cloud Business Edition platform building blocks

Full-stack AI-Ops 	<p>HPE GreenLake Platform</p>	<p>User account Create new company account or invite user to existing company account</p>
	<p>Data Services Cloud Console</p>	<p>Valid subscription to Private Cloud Business Edition User account configured with appropriate access</p>
	<p>HPE Alletra dHCI HPE SimpliVity</p>	<p>Existing or new deployment Greenfield or brownfield</p>
	<p>Public cloud account (optional)</p>	<p>AWS and / or Azure account Enables EC2 and Azure virtual machine instance provisioning</p>



ESG economic validation of HPE Alletra dHCI

Based on example customer with 121 mixed workload VMs



Source: ESG Economic Validation report for HPE dHCI, February 2022

**HPE Alletra dHCI
delivers
2.5X
cost savings**

PCBE – CAPEX required SKUs with HPE Alletra dHCI

- **Product SKUs:**

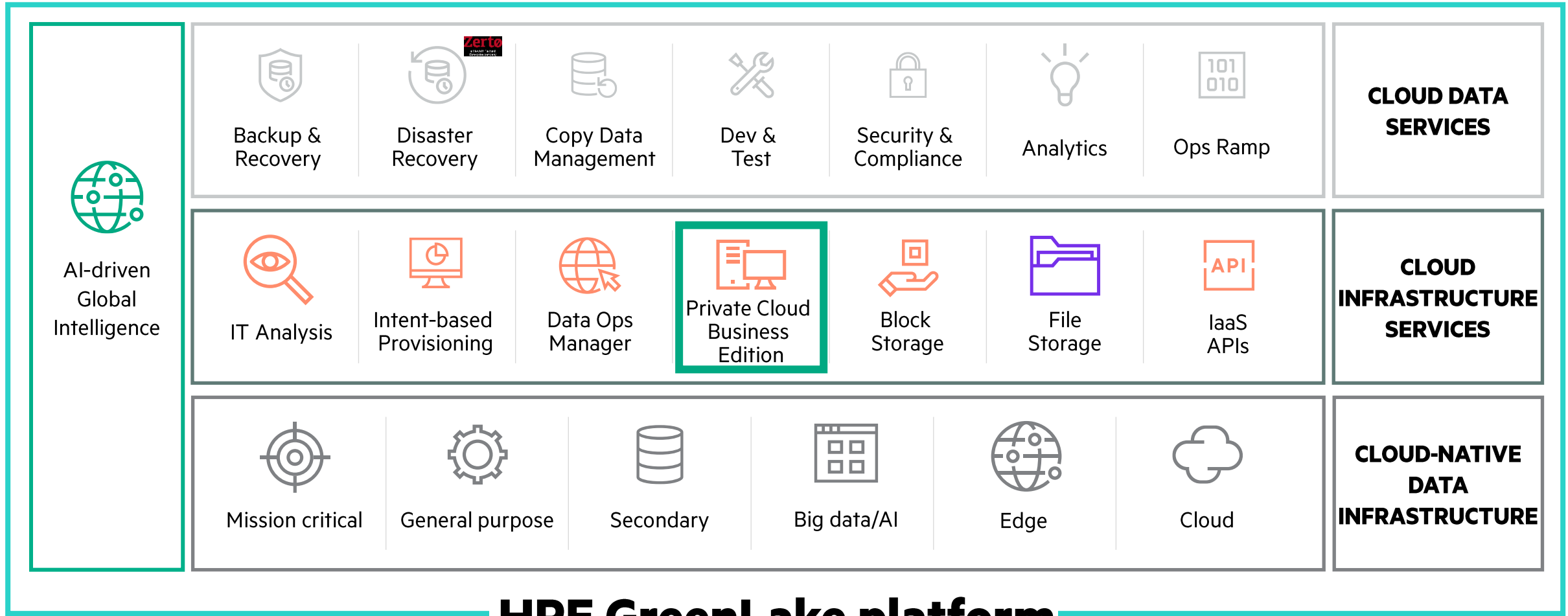
- S1U93AAE – HPE GreenLake for Private Cloud Business Edition 3-year
 - S1U94AAE – HPE GreenLake for Private Cloud Business Edition 4-year
 - S1U95AAE – HPE GreenLake for Private Cloud Business Edition 5-year
- Duration must match the Tech Care Support duration.
 - No mixing allowed
 - “In-flight” quotes created prior to Oct 2nd without the new E-RTU SKUs will be honored for 90 days.
 - Please contact nimblestoragefanoverride@hpe.com for any questions or FAN approvals.



Demo

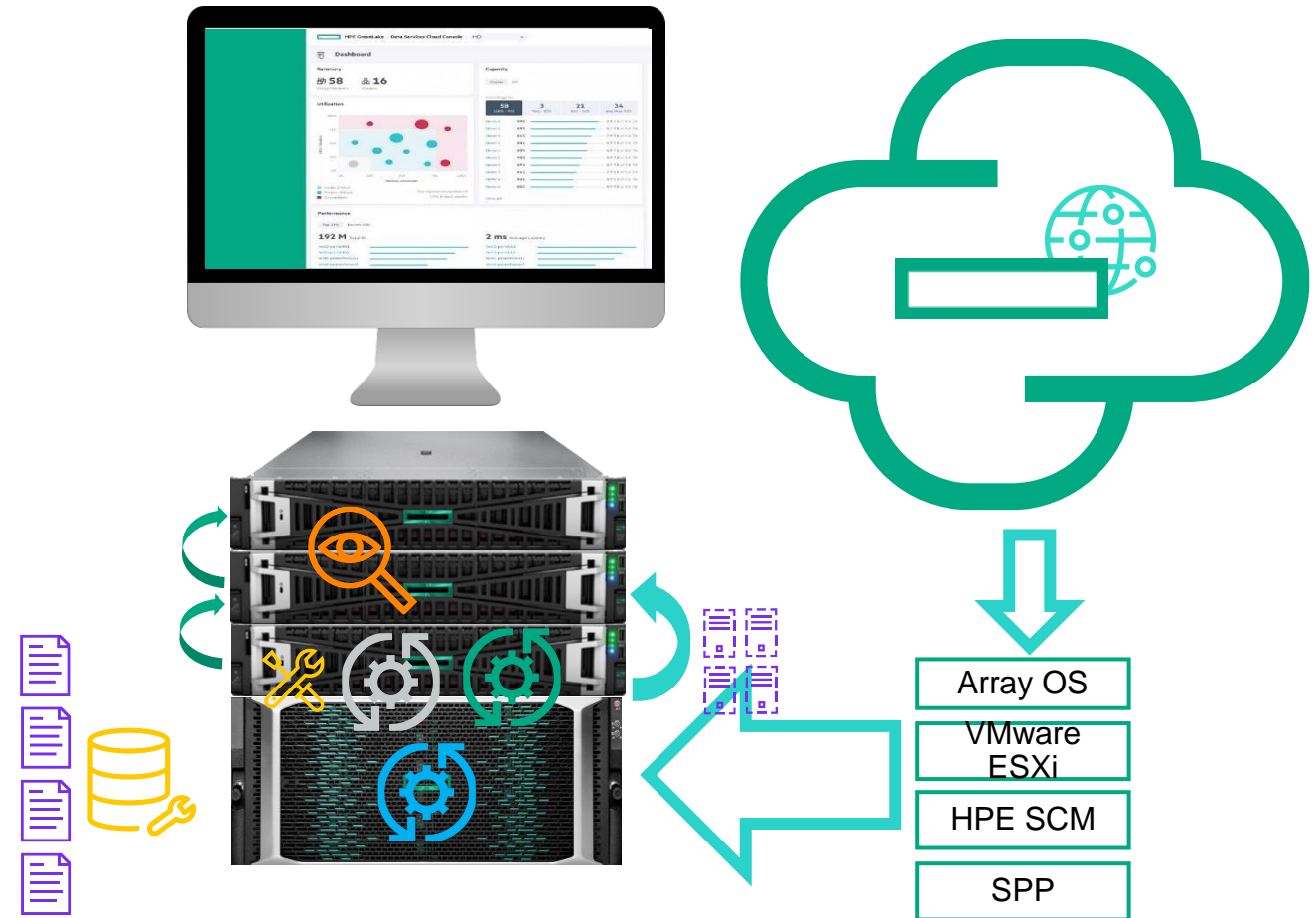


A three-layer cake—The way to consolidating the management stack



System management—System update process

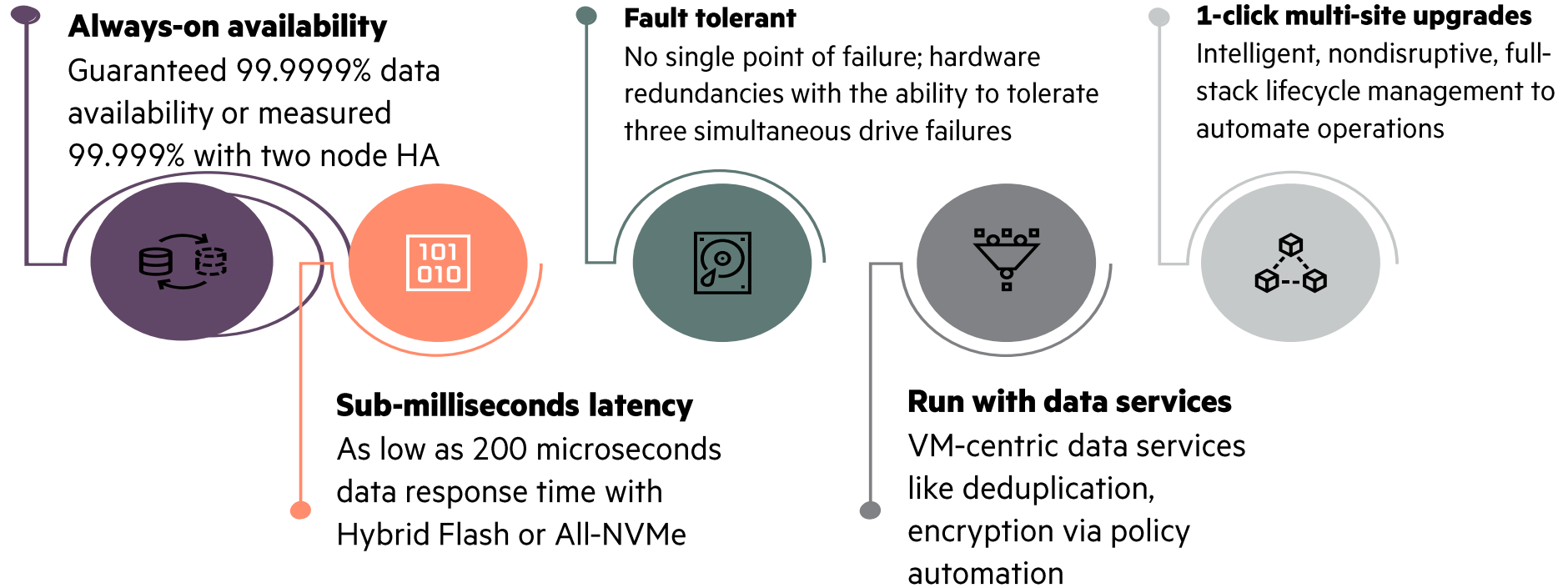
1. Admin issues update request from Private Cloud Business Edition
2. Downloads HPE array OS, VMware ESXi, HPE ProLiant SPP and HPE SCM from HPE to array
3. Comprehensive pre-checks for applicable components
4. HPE array OS update
5. VMware DRS migrates VMs to other nodes*. Compute node enters maintenance mode
6. VMware ESXi and HPE SCM updated on compute node and node rebooted
7. HPE ProLiant SPP updates applied and node rebooted
8. On completion, compute node exits maintenance mode
9. Steps 5 through 8 repeat for each host
10. Post-update checks and cluster update complete!



*If VMware DRS is not present or enabled the user will be prompted to manual migrate the VMs off the host to be updated.

Built for resilience and speed

Simple.
Resilient.
Efficient.




Built-in backup and disaster recovery reduces costs and risk


Simple.
Resilient.
Efficient.

Alternate private cloud without built-in backup/recovery

+ backup appliances and tape infrastructure




+ third-party backup for operational recovery




3-2-1 protection

+ replication and disaster recovery automation



+ off-site protection



Cloud Backup

OR

Private Cloud Business Edition
Global Lifecycle Management of infrastructure and virtualization resources.
[Launch](#)

Backup and Recovery
Automated protection with rapid recovery and cost efficient long term retention.
[Launch](#)

HPE GreenLake for Private Cloud Business Edition

One

Simple, unified console
with self-managed
operations, automation

Six-nines

Data availability for
business-critical apps

Up to 8X

More efficient backups

HPE DC Network Deployment



Aruba CX 8325

SPOCK

For Storage

- High Performance Campus & Data Center Connectivity
- **Hardware**
 - 25G SFP28 ports with QSFP28 uplinks
 - 100G QSFP28
 - Front-to-back or back-to-front airflow
 - Up to 6.4 Tbps
 - Built for Core/agg and Data Center
- **Models**
 - 32 x 100G QSFP28 ports
 - 48 x 25G SFP+ ports w/8 x 100G QSFP28 uplinks
- **Features**
 - 1/10/25G to 40/100G uplinks for scale and investment protection
 - HA with VSX, MC-LAG
 - Advanced L2 Features (VXLAN, RPVST+, etc)
 - Advanced L3 Features (EVPN, OSPF, BGP, IPv6, etc)
 - AC and DC power options



SKU	Description
R9F66A	Aruba 8325-32C FB 6 F 2 A/C PS Bundle
R9F67A	Aruba 8325-32C BF 6 F 2 A/C PS Bundle
R9F64A	Aruba 8325-48Y8C FB 6 F 2 A/C PS Bundle
R9F65A	Aruba 8325-48Y8C BF 6 F 2 A/C PS Bundle
S1D11A	Aruba 8325-32C FB 6 F 2 D/C PS Bundle
S1D12A	Aruba 8325-32C BF 6 F 2 D/C PS Bundle
S1D09A	Aruba 8325-48Y8C FB 6 F 2 D/C PS Bundle
S1D10A	Aruba 8325-48Y8C BF 6 F 2 D/C PS Bundle

VN SKU's!

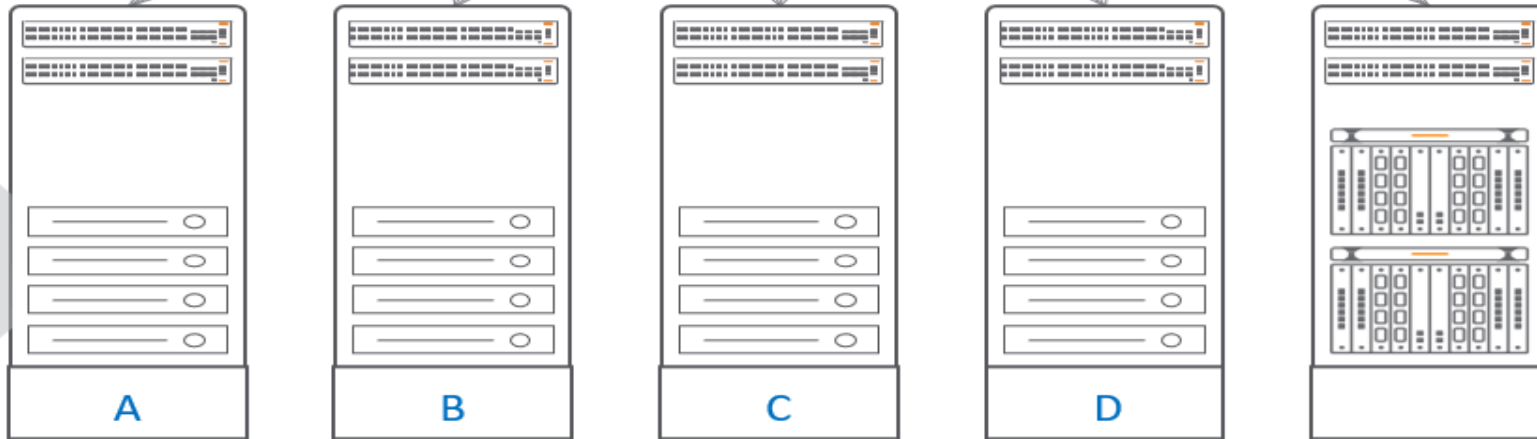
Confidential | Authorized HPE Partner use only

Spine to Leaf Design

9300-32D Switches

Spine

8325



Three Connector Options

400G QSFP-DD MPO 2eDR4 SMF Transceiver—4 x 100G FR1

SR8 to 2x100SR4

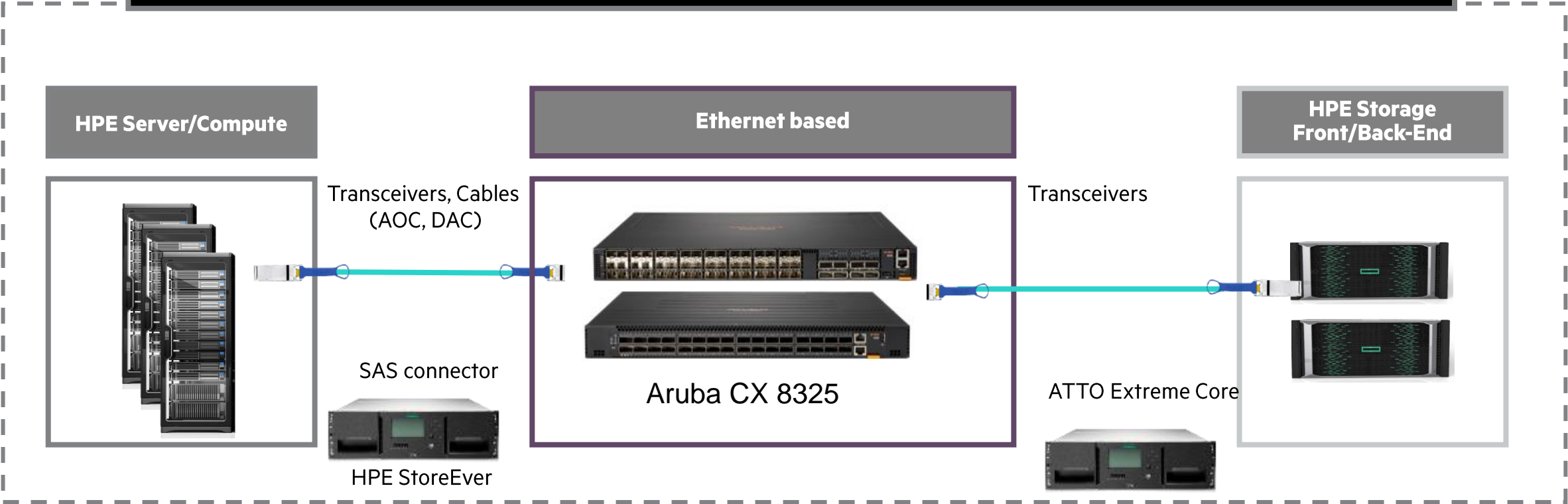
Leaf

QSFP28 to 4x25G SFP28 AOC

Storage Networking is the Connectivity between Servers and Storage.



Leverage HPE Leadership in servers and storage with network attach to create value for customers



Conclusion



Questions

- **What is your cloud strategy?**
- **What is your data strategy?**
- **What is your container strategy?**
- **What is your AI strategy?**

GreenLake Offerings

HPE GreenLake cloud service catalog

AI, ML, and Data Analytics <ul style="list-style-type: none"> • ML Ops • Unified Analytics • DataFabric • Big Data 	Business Applications <ul style="list-style-type: none"> • Payments (Lusis) • Electronic Health Records (Epic) • 5G Core Stack • FIS Ethos Engagement Suite 	Connectivity <ul style="list-style-type: none"> • Indoor Wireless • Outdoor Wireless • Remote Wireless • Wired Access • Wired Aggregation • Wired Core 	Containers <ul style="list-style-type: none"> • Red Hat® OpenShift® Container Platform • Google Anthos 	Core Compute <ul style="list-style-type: none"> • Compute Ops Management • Composable Compute • General Purpose Compute • High Availability Compute • Storage Optimized Compute 	
Data Protection <ul style="list-style-type: none"> • Backup & Recovery • Zerto • Disaster Recovery • Backup Infrastructure • Veeam • Commvault • Cohesity 	Data Storage <ul style="list-style-type: none"> • Block Storage • Mission Critical Storage • Business Critical Storage • General Purpose Storage • Qumulo • Scalify RING 	Database <ul style="list-style-type: none"> • EDB Postgres • Microsoft SQL Server 	Edge Compute <ul style="list-style-type: none"> • Ruggedized Infrastructure 	High Performance Computing <ul style="list-style-type: none"> • HPC 	Hyperconverged <ul style="list-style-type: none"> • HCI • Disaggregated HCI • General Purpose and Edge HCI • Nutanix • Microsoft Azure Stack HCI
Private Cloud <ul style="list-style-type: none"> • Private Cloud Enterprise (bare metal, VMs, containers, storage) 	SAP <ul style="list-style-type: none"> • SAP HANA • SAP S/4HANA Cloud, Private Edition 	Virtual Desktop <ul style="list-style-type: none"> • Virtual Desktop Infrastructure 	Virtualization <ul style="list-style-type: none"> • VMware 		

Next steps and learn more

- See a [demo](#)
- Take a [test drive](#)
- Run an assessment

Learn more at hpe.com/HPE-GreenLake-private-cloud-business-edition

Questions



Reach out to your local Channel SE!


Or

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HPE Aruba Networking
douglas.dinunzio@hpe.com

Office (803) 548-2126
Mobile (508) 826-7149
Teams (404) 648-2558

ARUBA CHANNEL ENABLEMENT WORKSHOPS

CX-10000 (10K) / Aruba Fabric Composer



OVERVIEW

The **Aruba CX 10000 (10K)** is an exciting and unique addition to the Aruba switching portfolio developed in partnership with AMD/Pensando. In this workshop, students will leverage **Aruba Fabric Composer (AFC)** to configure a simple Layer 3 datacenter fabric with **Ethernet VPN (EVPN) – Virtual Extensible LAN (VXLAN)** and **Symmetric Integrated Routing and Bridging (IRB)**. Students will also learn about the integration between VMware® vSphere and AMD's® Pensando® **Policy Service Manager (PSM)**. Finally, students will get to create, deploy, and monitor switch traffic flow policies, showcasing the power of the 10K to function as a L4-L7 stateful firewall while governing east-west traffic in a datacenter network.

MAIN TOPICS

Aruba Fabric Composer

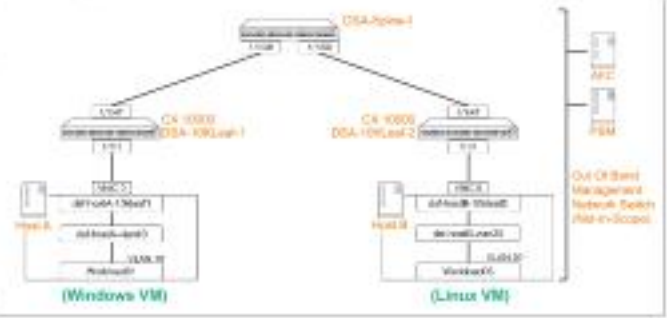
- Switch Discovery
- Fabric Creation / Switch Assignment
- Layer 3 Leaf-Spine Fabric
- Configure Underlay (OSPF)
- Configure Overlay (IBGP)
- Configure Datacenter EVPN

Distributed Services Integration

- vSphere Integration (pre-staged)
- AMD/Pensando Policy Service Manager (PSM)

Policy Management & Testing

- Traffic Flow Redirection



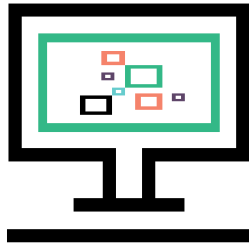
Partner Resources

Partner Portals



Airheads Community

[\(Click Here\)](#)



Arubapedia for Partners

[\(Click Here\)](#)



Partner Ready for Networking portal

[\(Click Here\)](#)

Live Support



Channel SEs (CSEs)

Regional channel support

Thank You

