



Data Center Innovation Day

Journey to the Multicloud





HyperFlex Platform for the Multicloud

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Data Center Solution Lead, Cisco Vietnam
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Evolving Infrastructure Challenges



Complexity

Hampers speed,
security, service
delivery, scale



Evolving App Architectures

Microservices and
distributed applications
on/off premises



Multicloud Reality

Developers demand
choice, business
demands economics

Hyperconverged Infrastructure

Cloud like resource model

Speed and Simplicity

Common platform across data center

Predictable, reliable performance



Pay as you grow

Pay-as-you-grow
Economics with
Resource Scaling On-Demand



Streamlined Operations

Cloud like simplified management and orchestration

Cisco HyperFlex : HCI Engineered on UCS

3 Part of a Complete Data Center Strategy

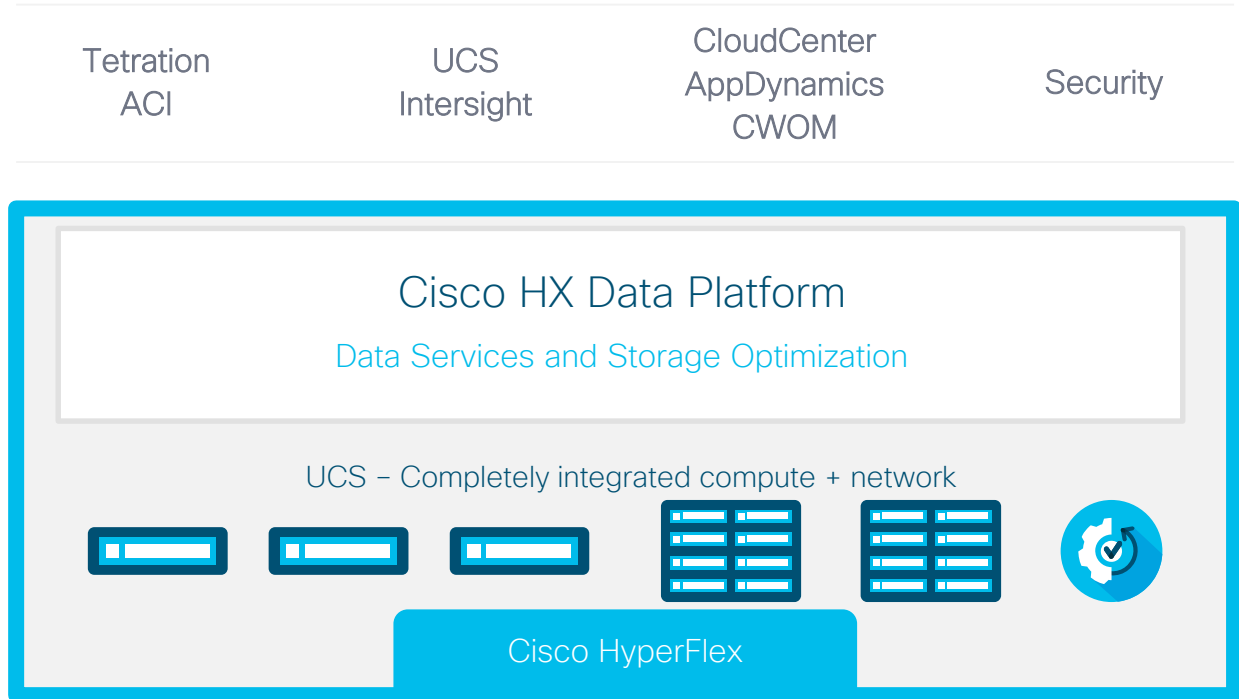
Elastic and Secure at Enterprise Scale

2 Next Gen Data Platform

Designed for Distributed Storage

1 Complete Hyperconvergence

Unified Compute and Network Infrastructure



Cisco HyperFlex Architectural Differentiators

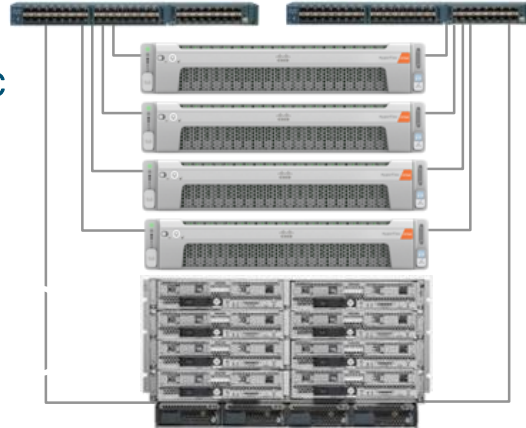
Hardware and Software Engineered Together

Complete Hyperconvergence with Integrated Network Fabric

- Unified Network Infrastructure
- Guaranteed QoS with low latency

Unified Architecture

- Connect to existing storage
- Ideal for tiered storage architecture , migration , backup etc



Cisco HyperFlex System

Independent Scaling

- Use diskless UCS rack/blade servers
- No additional HyperFlex licenses

Enterprise Storage Features

- Snapshots , Dedupe , Compression
- No performance impact , no licenses



Business Benefits of HyperFlex



- Reduced DC footprint
- Lower power consumption
- Improved application performance
- Capacity to drive more business
- Ease of management



We Didn't Do
Anything Wrong
But Somehow We
Lost



Nokia CEO in 2016

HyperFlex - Continuous Innovation



All Flash



40G NW



SED



Enterprise Workloads



Profiler, Sizer



Edge



Connect UI



All NVMe with Intel



Hyper-V



Kubernetes Containers



Scale



IaaS & Cloud Mobility



Stretch Clusters



Greater Scale with Resiliency



Native DR Enhancements



Cloud Storage Analytics



M5 Skylake



SAP Modernization



EasyVDI For Citrix



Application Performance Monitoring



Native Replication/DR



AI/ML Workloads with NVIDIA

HyperFlex – Technology Leadership



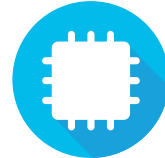
#1 Performance



1st Integrated Fabric Networking



1st CI and HCI Integration



1st Compute Only Nodes



1st Cloud Based Management



1st Multicloud Platform



1st Integrated Kubernetes



1st 40gbe Networking



1st Machine Learning Platform



1st All NVMe



Key Innovations & Partnerships

HyperFlex
All-NVMe



Machine
Learning
workloads



Citrix Cloud
Services



SAP
Modernization
& Data Hub



Data Protection
& Disaster
Recovery



COHESITY



Cisco Hyperflex™
Systems with
Intel® Xeon®
Platinum processor

Moving to an “Automatic” World



Definition: Automate, adapt and enhance driver activities for better driving and safety

Examples: blind spot monitor, collision warning, lane departure warning, automated parking, etc.

Automated



Automatic

Simplified Cloud Based Management

Cisco Intersight for HyperFlex



Intuitive
Experience



Enhanced
Connected
Support



Proactive
Guidance



Secure and
Extensible



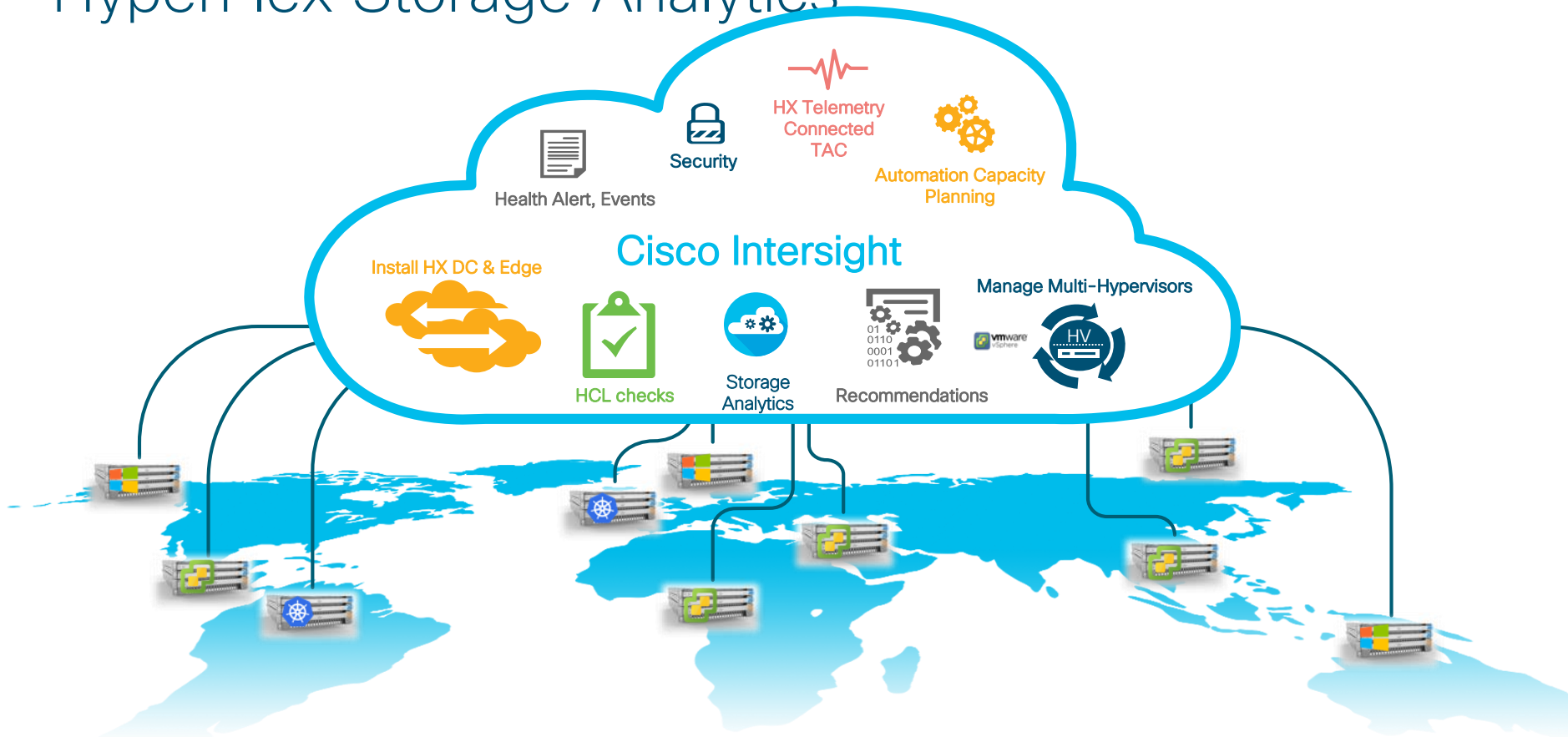
SaaS
Delivered

SaaS
Simplicity

Actionable
Intelligence



HyperFlex Storage Analytics



Introducing All NVMe HyperFlex



All NVMe with 40 GbE Integrated Fabric Networking



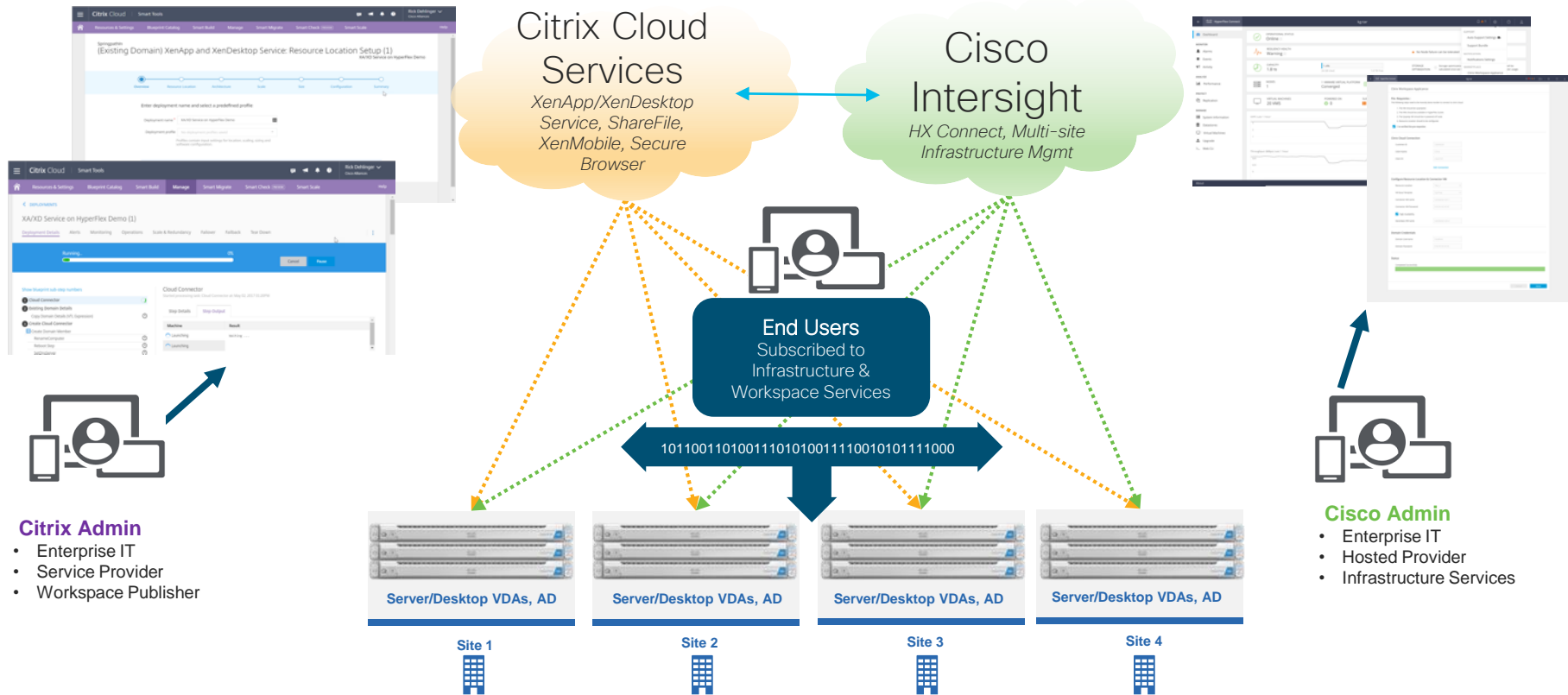
RAS with Intel VMD for Hot-Plug, Surprise Removal etc.



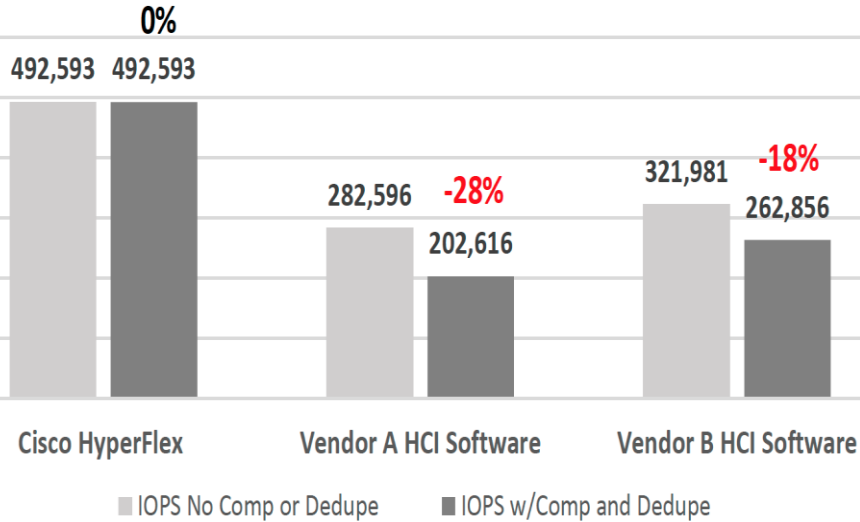
NVMe Optane Cache, NVMe Capacity (up to 32TB/Node)



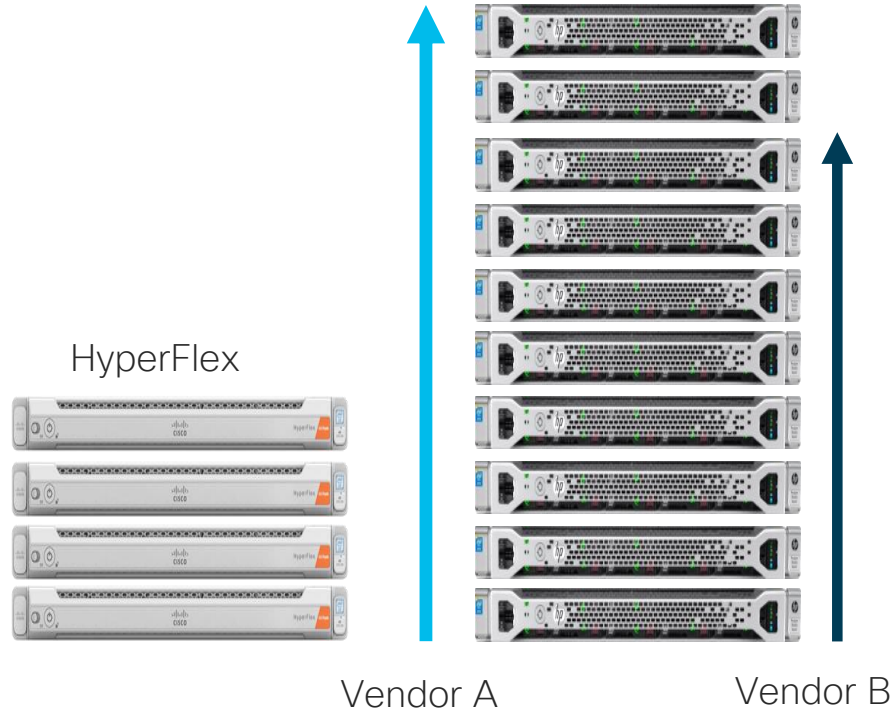
HyperFlex Citrix Cloud Services Integration



Unmatched Performance



SQL as a workload



Target Workloads & Use Cases



Virtual Desktop
Infrastructure

Low
upfront
costs

Consistent
performance

Predictable
scaling



Server
Virtualization

Reduce
operational
complexity

Adaptive
scaling

Always-on
resiliency

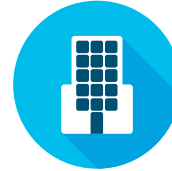


Test and
Development

Agile
provisioning

Frequent
iterations

Instant
cloning and
snapshots



ROBO &
Edge

Simple
deployment

Centralized
management

No
“fly-and-fix”
missions



Databases
& ERP

Consistent,
low-latency

High IOPS

All-flash
nodes



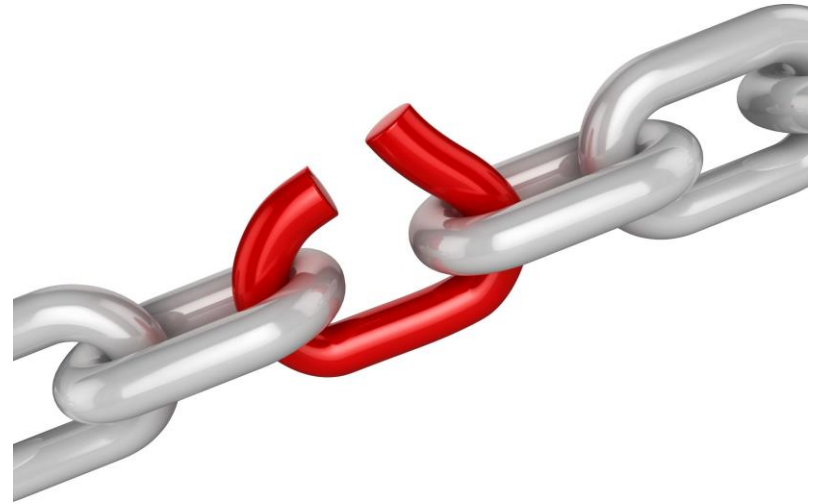
Containers

Simple & seamless
customer
experience

Enterprise grade
container storage

Cloud native
development on
prem

A Chain Is Only As
Strong As Its
Weakest Link



HyperFlex Native Data Security

Data-at-Rest Protection

Data-At-Rest Encryption thru Self-Encrypting Drives

Enterprise Key Management Support

Vormetric

SafeNet



Secure Platform

Vulnerability Assessments and Hardening

Role-Based Access Control and Auditing



Regulatory Compliance

Certifications Starting with FIPS, Common Criteria*

Compliance for Data Privacy (HIPAA, PCI-DSS etc.)



HyperFlex End-to-End Platform Security



Policy

Micro-segmentation
and Policy
ACI and Tetration



Data and Storage

HyperFlex Data at
Rest Drive
Encryption



Application

Advance Malware
Protection (AMP)



Network

Threat Detection
(Stealthwatch)
Next-gen Firewalls
(NGFWs)
Intrusion
Protection (NGIPs)



Cloud and Edge

Adaptive Security
Virtual Appliance
(ASAv)
Next-Gen Virtual
Firewalls
(NGFWv)

Cisco HyperFlex



Complete hyperconvergence
with integrated networks

Unmatched performance for
highest workload density &
improved TCO

End to end security & broad
solution ecosystem

