

The background is a vibrant, abstract graphic. It features a central bright white light source from which numerous colorful rays emanate, creating a sunburst or starburst effect. The rays transition through a spectrum of colors including yellow, orange, red, and various shades of blue and green. Overlaid on this are large, flowing, wavy shapes in similar colors, giving the impression of liquid or smoke. The overall composition is dynamic and energetic.

cisco *Live!*

Let's go

#CiscoLive



The bridge to possible

Hybrid cloud management simplified with Cisco Intersight and Hyperflex

Rupesh Chakkingal
HyperFlex Product Management
BRKCLD-1007



#CiscoLive

Cisco Webex App

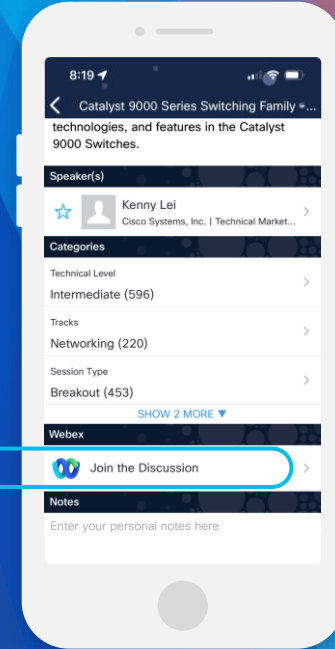
Questions?

Use Cisco Webex App to chat with the speaker after the session

How

- 1 Find this session in the Cisco Live Mobile App
- 2 Click “Join the Discussion”
- 3 Install the Webex App or go directly to the Webex space
- 4 Enter messages/questions in the Webex space

Webex spaces will be moderated by the speaker until June 9, 2023.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKCLD-1007>

Agenda

- Introduction
- Cisco Intersight Cloud platform
- Cisco HyperFlex solution
- Integration with Cohesity
- Integration with Veeam
- Conclusion

Complexity in IT operations



Have adopted hybrid cloud*



Have deployed or intend to deploy edge computing*



Running workloads in public cloud**



Moving workloads between on- and off-premises environments weekly*



Identify correlation of metrics from multiple tools as burdensome***

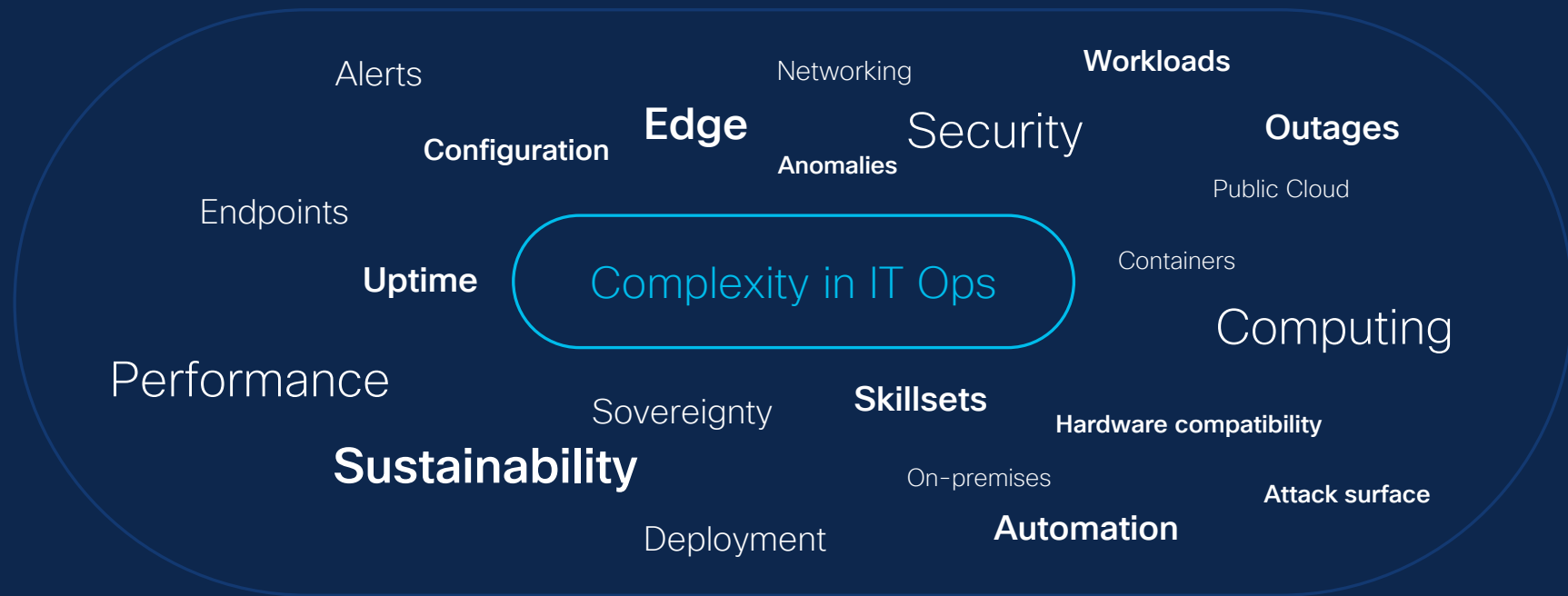


State managing data at edge locations is burden to IT operations***



See security concerns as a significant challenge to deploying to multiple clouds*

Hybrid cloud environments are driving complexity in IT operations



Why simplify IT operations with Cisco Intersight?



Agility

Quickly deploy, configure, and maintain infrastructure—anytime, anywhere



Security

Operate securely; identify and close security and compliance gaps to fortify your global environment



Growth

Enable predictable outcomes to drive sustainable business growth

Operate at the speed of business

Cisco Intersight



Cisco Intersight



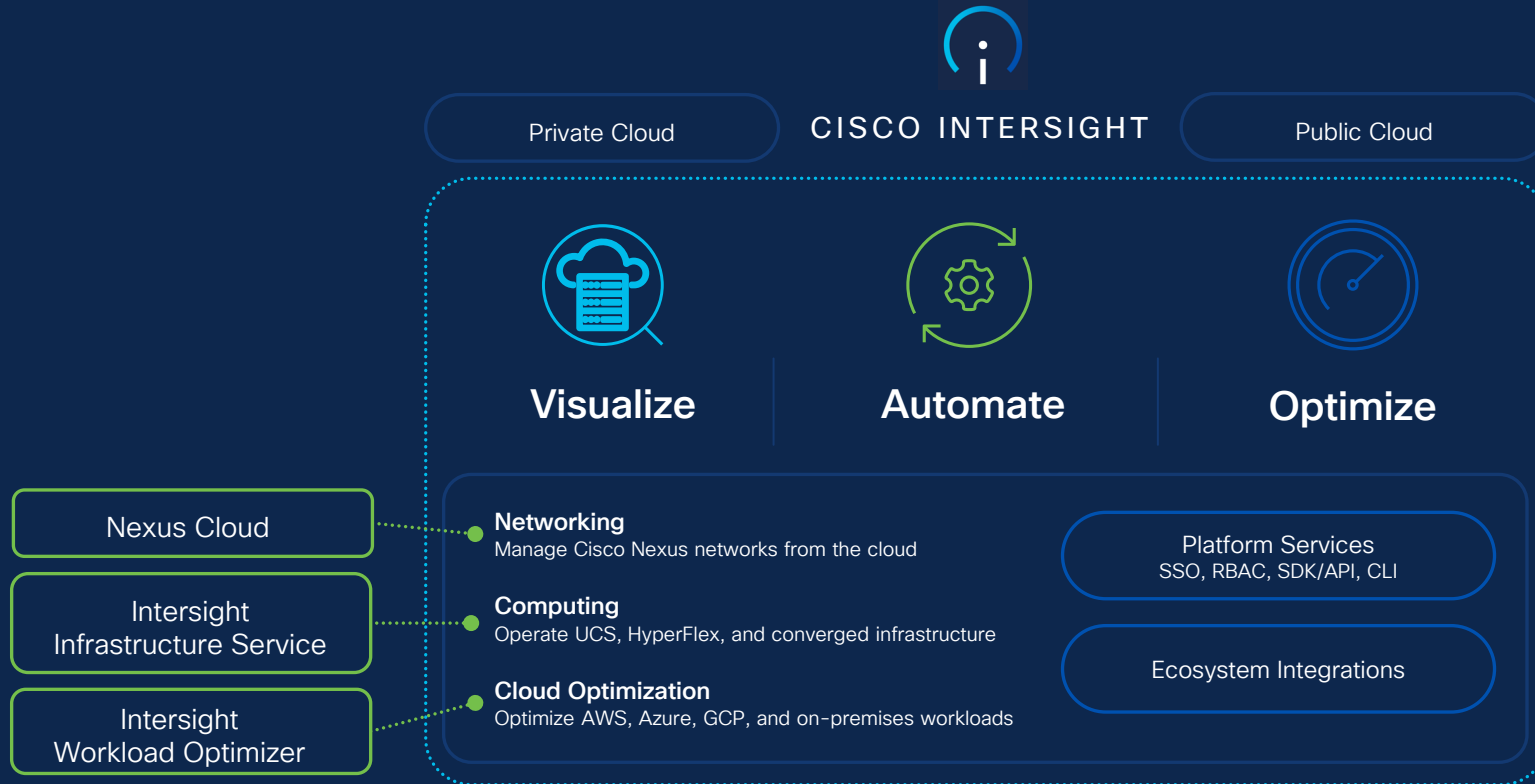
A platform for intelligent automation, observability and optimization for traditional and cloud-native applications with flexible deployment options including SaaS-delivered and On-premise

Faster Delivery

Simplified Operations

Continuous Optimization

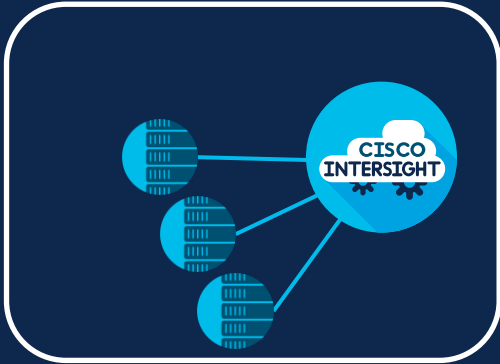
Simplify IT Operations



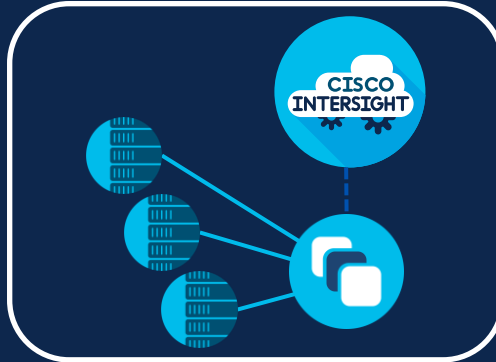
Intersight Consumption Models



SaaS



Connected
Appliance



Private Appliance



Intersight Cloud Operations Platform

Cisco Intersight



Cisco Intersight Cloud Operations Platform

Visualize anywhere

Provider/Platform



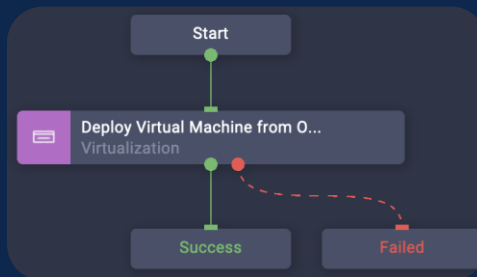
- VMware vSphere 976
- Amazon Web Services 17
- Cisco IWE 2

Top 5 Used Instance Types



- c5.xlarge 4
- t2.medium 4
- t2.micro 3
- m5.large 3
- m5.2xlarge 2

Automate anywhere



Operate anywhere

tgn-receiver	VMware vSphere	Running
tgn-receiver	VMware vSphere	Running
teastore-eks-frontend-ng-26a8292	Amazon Web Services	Running
teastore-eks-frontend-ng-26a8292	Amazon Web Services	Running

CPU Utilization

1
WARNING

977
OK

Memory Utilization

15
CRITICAL

963
OK

Status

Running 656

Stopped 318

Pending 21

Cisco HyperFlex

Supporting drivers for HCI

IT/OT
Edge

Core
DC

Cloud
Native

Hybrid
Cloud

01

Simplicity

cloud-like simplicity
across infra mgmt.,
networking, cluster
lifecycle, operations,
health, security

02

Data Platform

for VM and container
workloads with
performance,
efficiency, security,
resilience, integrated
data protection

03

Versatility

in scaling, networking,
form factor, CPU, GPU,
storage



Security, infra mgmt. across locations, networking, workload orchestration, and cloud native: top-5 most important functions for HCI users (ESG, 2022)

Cisco HyperFlex

HX data platform

Purpose built for HCI
Fast and flexible
Enterprise grade storage

Cloud innovations

Cisco Intersight
Single pane of glass
Policy based management
And more...

UCS foundation

Software defined compute
Fabric centric
Intent-based

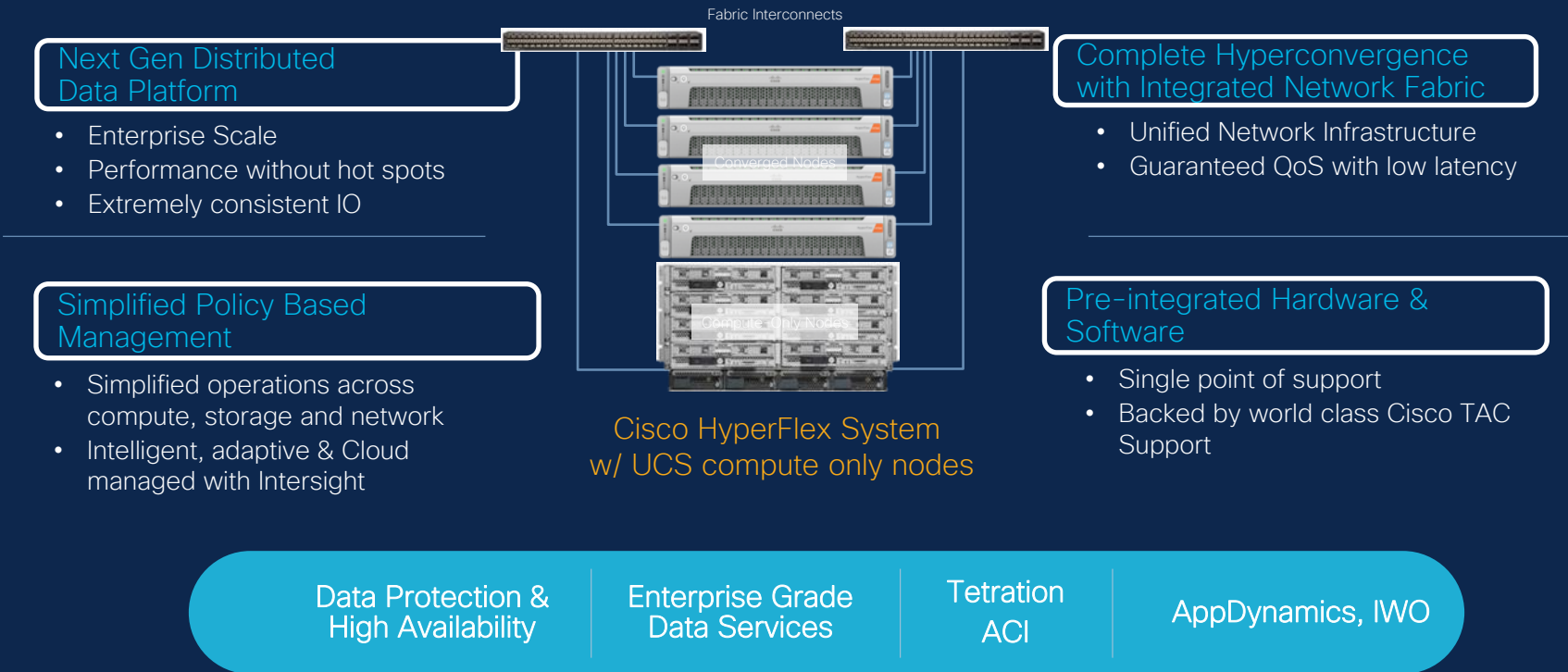


Compute, networking and storage
woven together into a building block

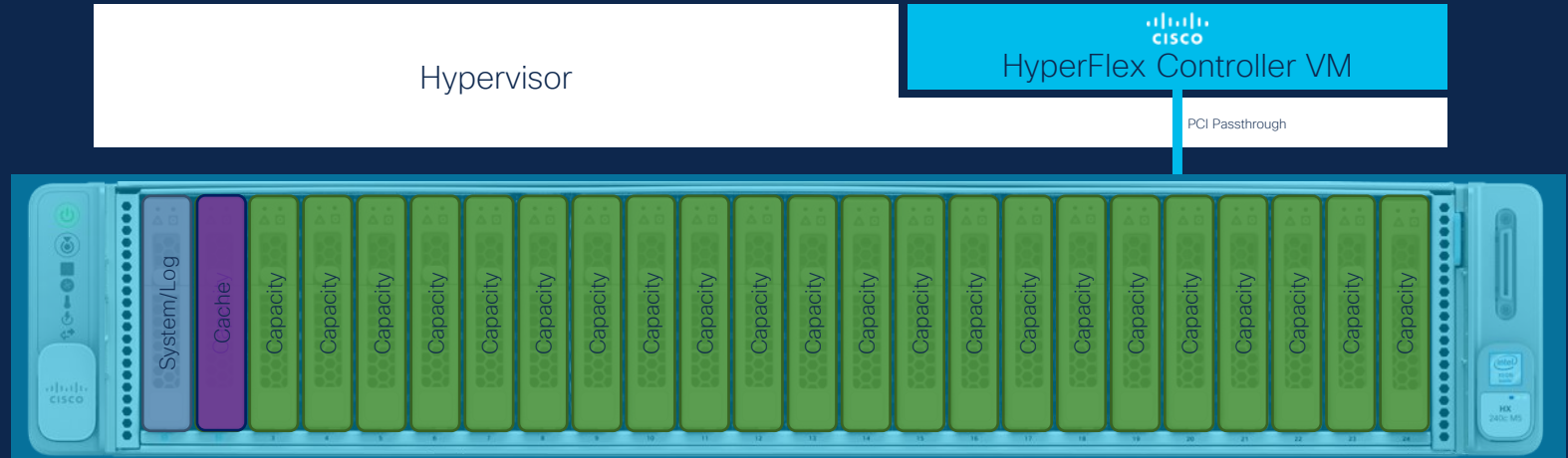
Optimized for ease of use,
performance and dynamic scale

Cisco HyperFlex Architectural Differentiators

Hardware and Software Engineered Together



HyperFlex Data Platform – Storage Controller VM



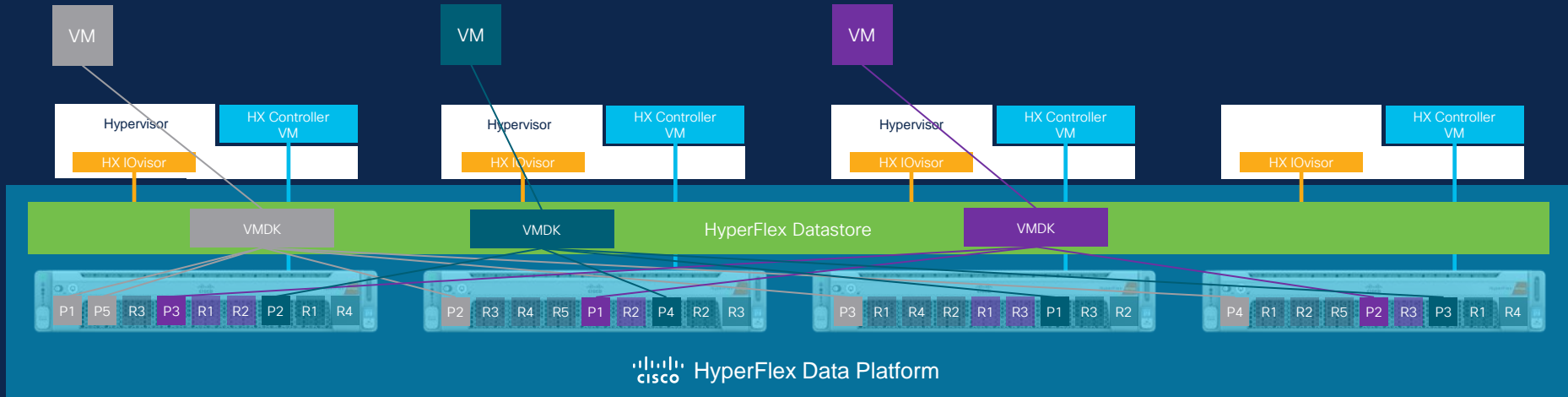
NOTE: Cache drive located in rear of HX240 M5

An instance of the HyperFlex Controller VM runs on each hypervisor node

The HyperFlex Controller VM assumes direct control of all drives in the local node via PCI passthrough

Each drive plays a specific role, either cache, system/log or capacity. Most drives are capacity drives used for user data

HyperFlex Data Platform – Distributed Data Model



Data and IOPs are distributed across all nodes as evenly as possible, no data locality and no storage hotspots

All data is simultaneously replicated locally within the cluster based on the configured Replication Factor. The system ensures that each replica is stored on a different node to ensure higher data integrity

Drive simplicity with Intersight operations of HyperFlex



Usability

Empowering users to do more themselves

- Self-service maintenance
- Capacity planning
- Intuitive interfaces, actionable feedback
- Proactive support
- Connected TAC



Fleet Management

Helping users manage infrastructure across locations

- Monitor cluster health
- Security posture mgmt.
- Monitor compatibility/HCL
- Advisories and notifications

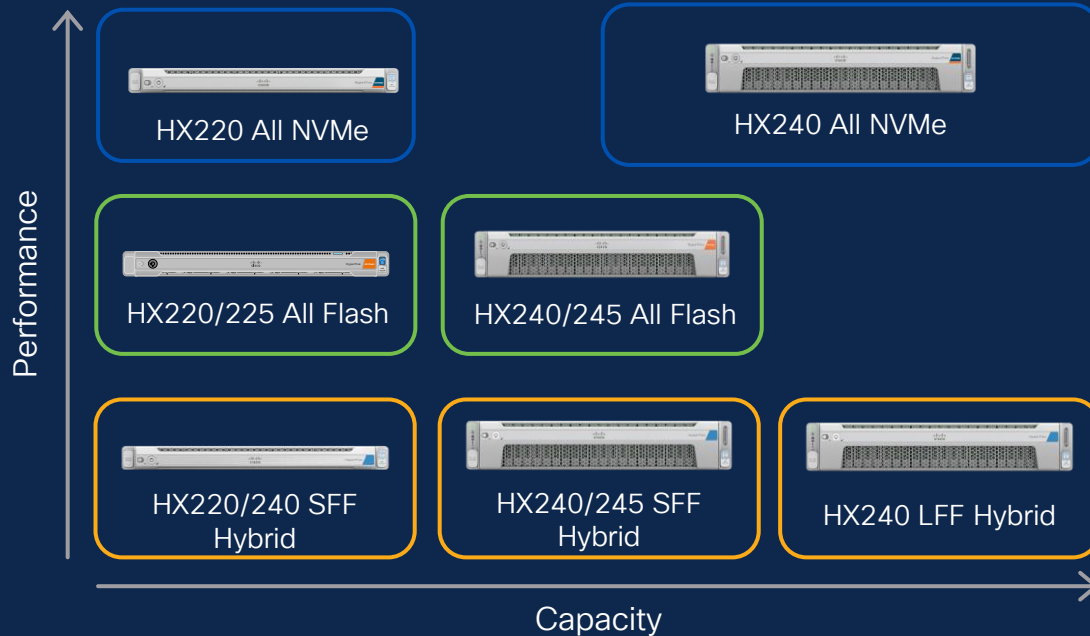


Efficiency

Driving excellence and simplicity to user operations

- Workflow reliability
- Cluster lifecycle management
- Cluster operations
- Workload orchestration

HyperFlex performance/capacity



- ✓ Flexible choices
- ✓ Intel or AMD platforms
- ✓ Subscription software model

HyperFlex has a minimum of 6 drives
HyperFlex Edge has a minimum of 3 drives



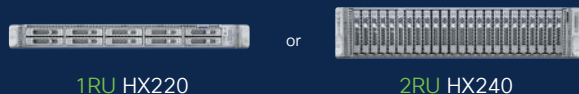
Hyperconverged at the Edge

HyperFlex edge Size for your environment



*Expansion not supported for 1GbE clusters
**Option to expand beyond 4 nodes requires DC license

Edge form-factor options

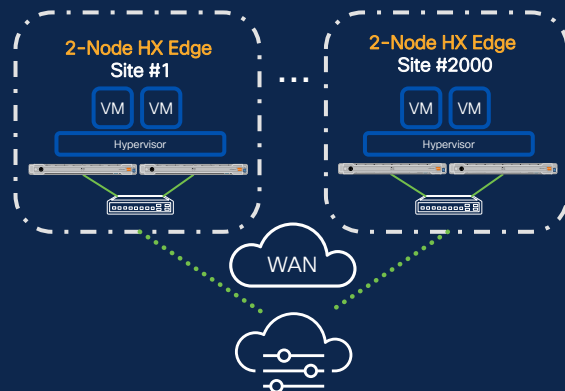


HyperFlex M6 now available

SaaS-Driven Lifecycle Mgmt. Any location, at any scale



Invisible cloud witness via Cisco Intersight



- Cisco Intersight serves as the witness for 2 node HyperFlex Edge clusters
- No additional license cost
- No requirement for 3rd site or infrastructure to run witness
- Built on efficient protocol stack, no periodic heartbeats over WAN
- No lifecycle management of witness required, all handled automatically by Intersight

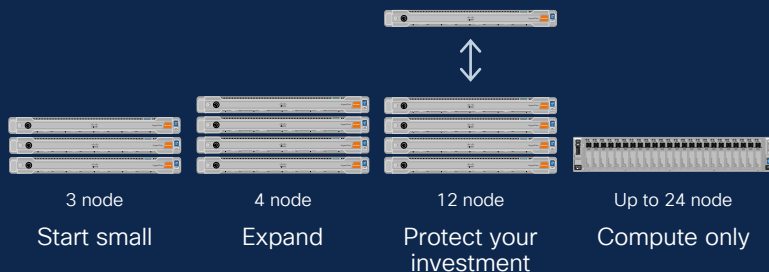
Flexible network options



Single switch
or
Dual switch

New deployment option with HyperFlex for Data Center environments

HyperFlex datacenter no fabric interconnect for DC environment



Form-factor options

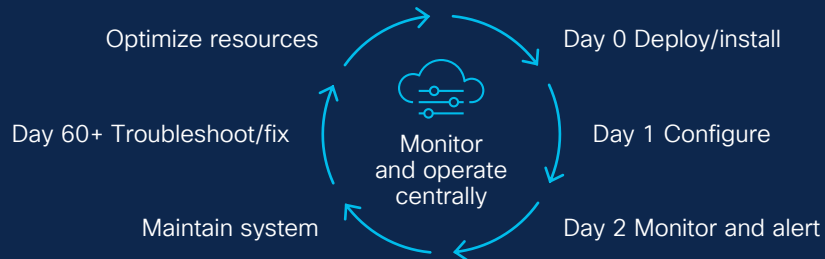
1RU HX220/HX225






2RU HX240/HX245

Hyperflex M5 and M6

SaaS-driven lifecycle management

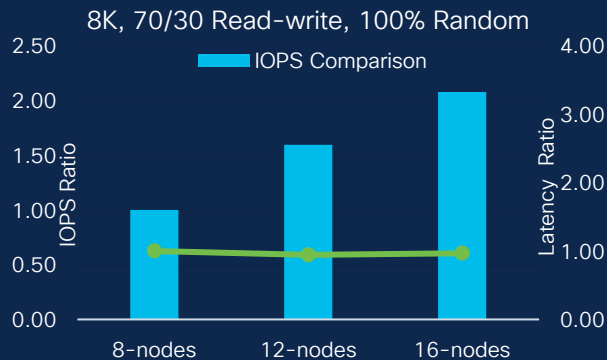
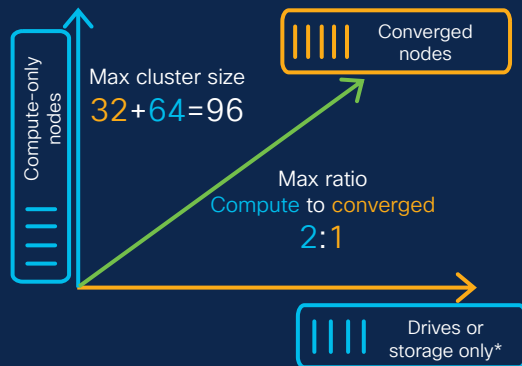


Differentiation

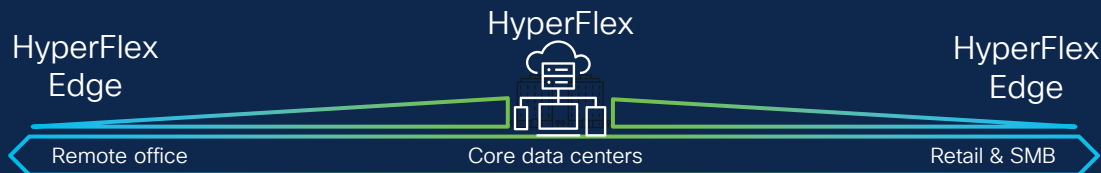
 Performance	 Ease of use	 Flexibility
<ul style="list-style-type: none">• Best in class performance with enterprise features and storage efficiency• HX unique fully distributed and log structured layout	<ul style="list-style-type: none">• Integrated, full stack cloud management with Intersight• Single operating model across edge, datacenter and public cloud	<ul style="list-style-type: none">• Start as Edge and seamlessly grow into a DC config• Scale using compute only

HyperFlex seamless scale and Flexibility

Independent scaling



Scale up and scale down



Co-exist, no forklift upgrades

Centralized cloud-based management of the future



Telemetry
and analytics



Policy based
orchestration



Secure and
compliant



API driven,
DevOps enabled



Connected
TAC



Next generation management

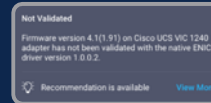
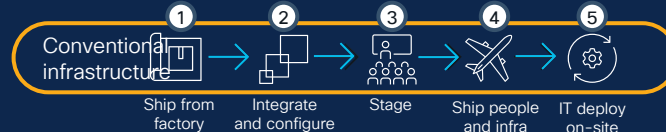
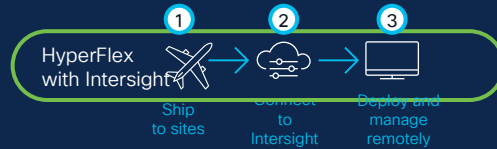
Cisco Intersight

SaaS
simplicity

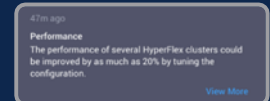
Actionable
intelligence

Remotely deploy & manage

Compatibility(HCL) check



Recommendations engine



Hybrid Cloud Use Cases

Backup and Archival

Data replication and archiving to the Cloud to recover on a needed basis



Backup and Archival to Cloud with HyperFlex and Cohesity



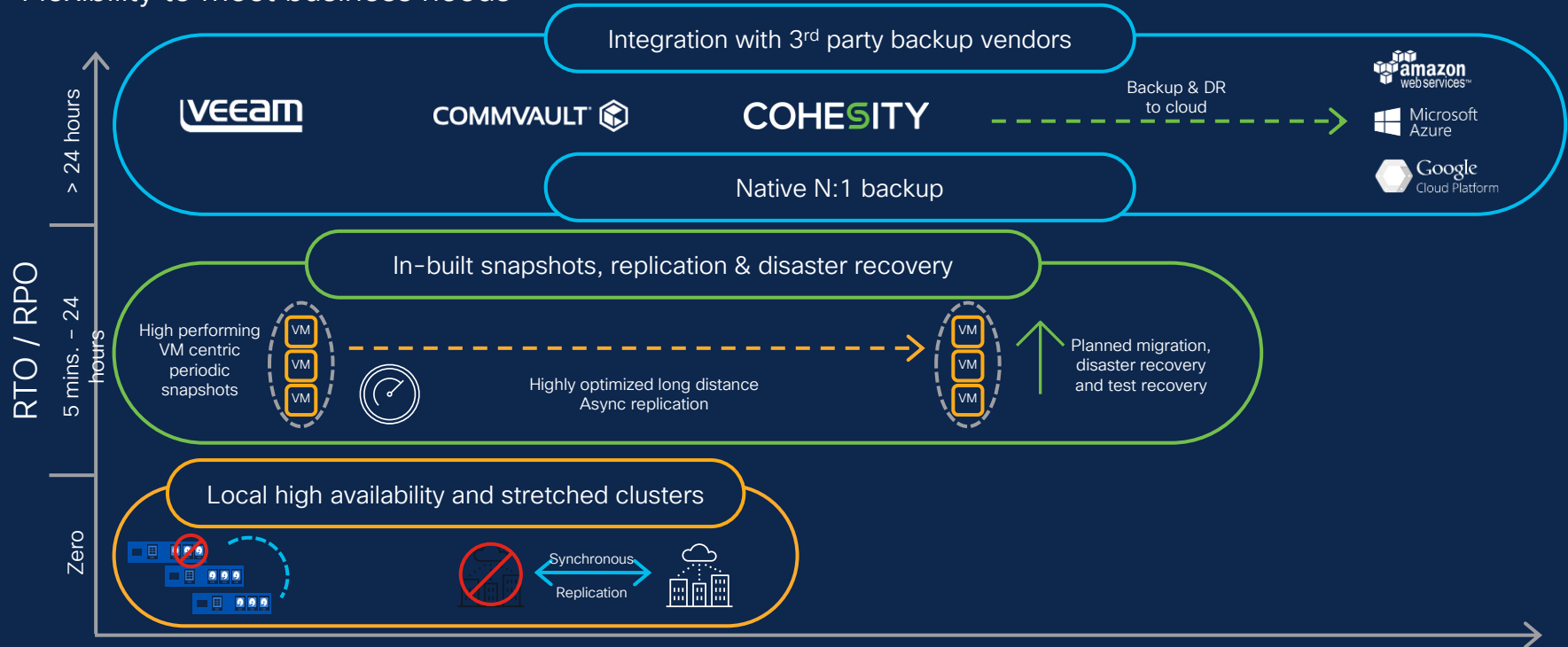
Cloud Mobility from Core to Cloud and Back to Core with Veeam

Integration with Cohesity



HyperFlex Availability & Data Protection

Flexibility to meet business needs



RTO = Recovery Time Objective

RPO = Recovery Point Objective



Local



Metro



WAN

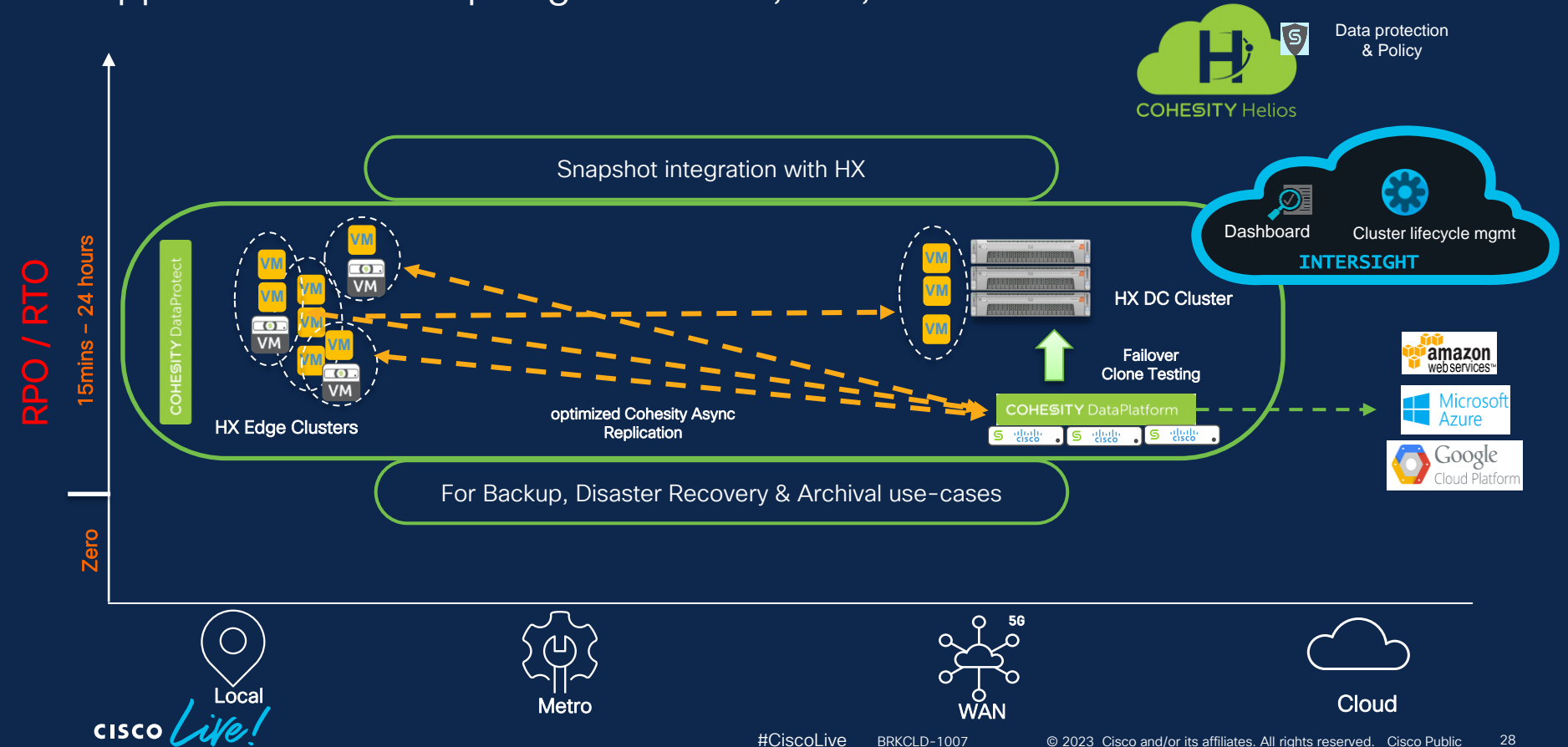


Cloud

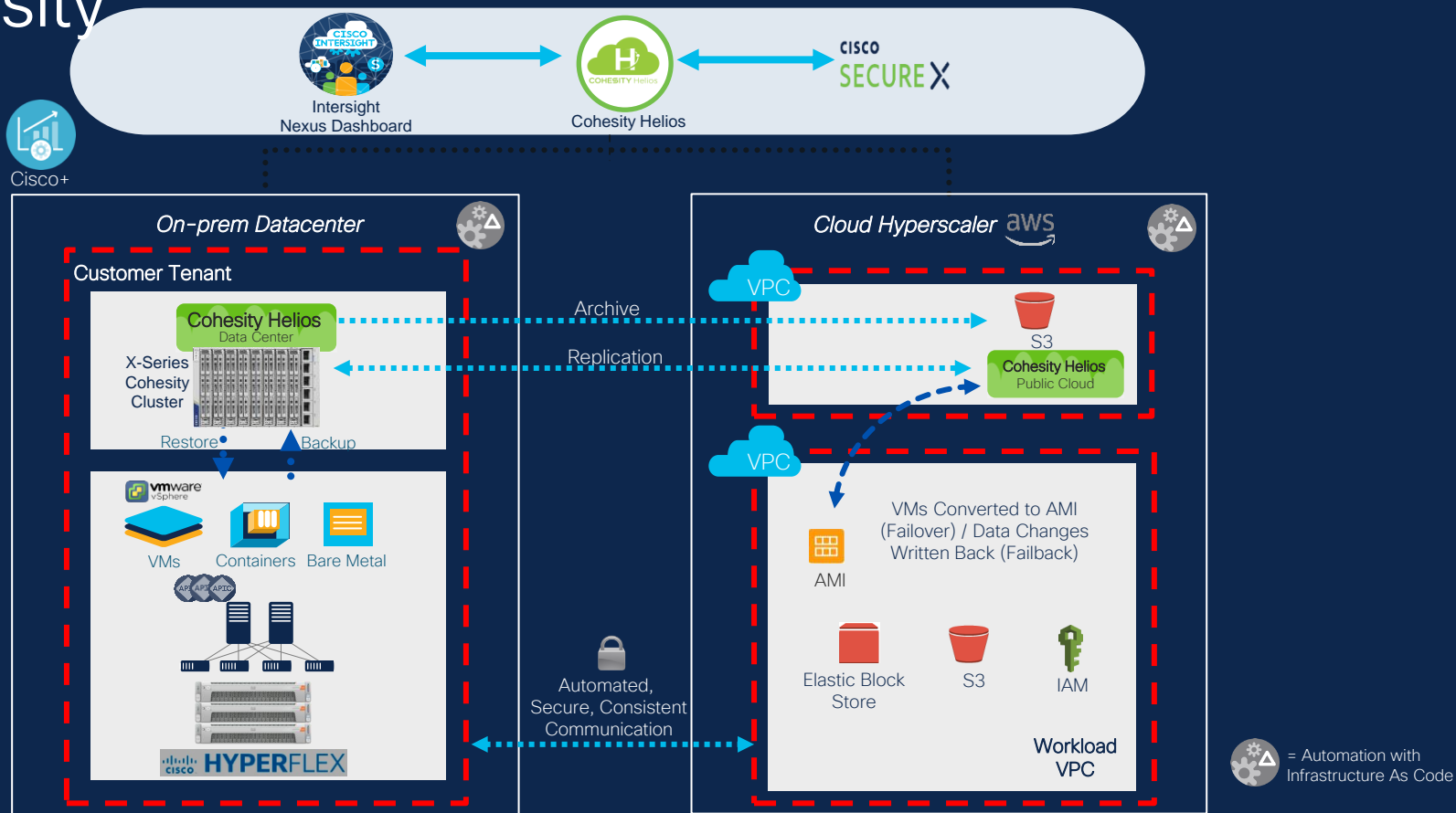
CISCO *Live!*

Hyperflex Data Protection with Cohesity

Support for various topologies like N:1, N:2, N:1:1

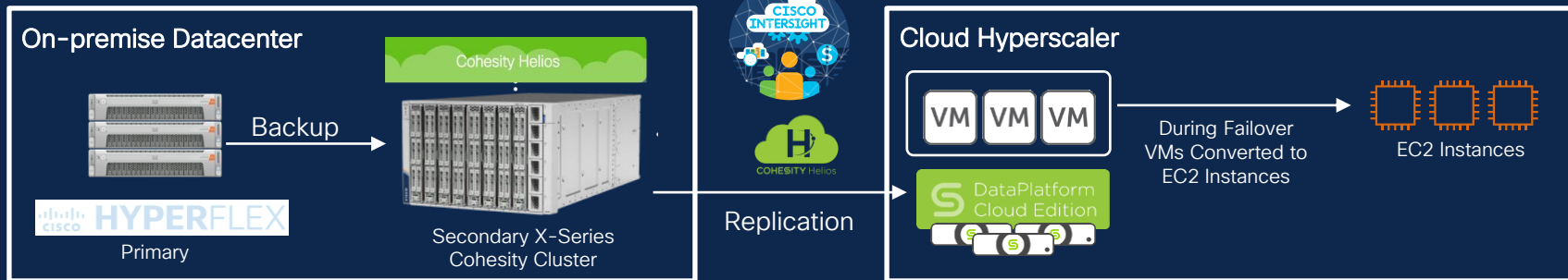


Backup and Archival to Cloud with HyperFlex and Cohesity

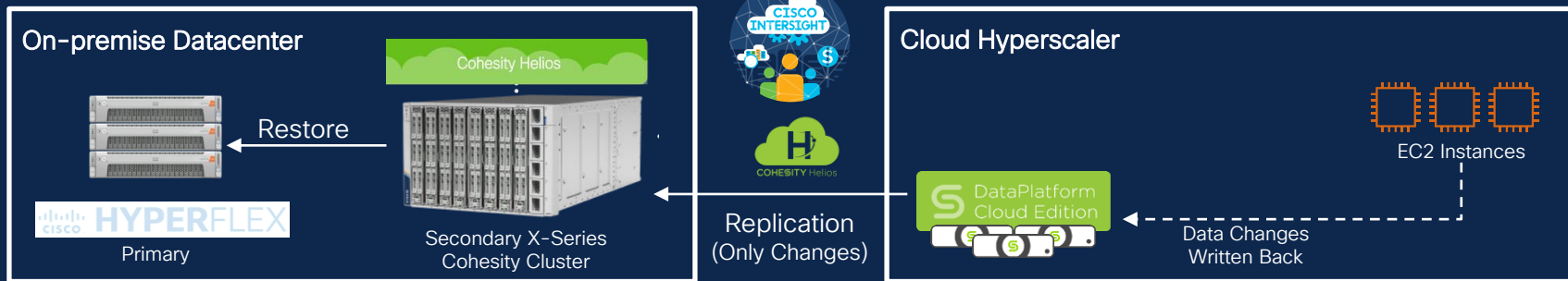


Backup and Archival with HyperFlex and Cohesity

Failover



Failback



Why Cohesity with Cisco Hyperflex

Solution Differentiators

- **Choice & flexibility to right-size your environment** with different platforms
- **Enhanced security and protection against ransomware** via Cisco SecureX integration, immutable file, supply chain security etc.
- Ansible & Terraform supported **automation**
- **Quick setup and deployment** with Cisco Intersight across multi-site environments
- **Lower Operational Cost**

Hyperflex Differentiators

- Choice of Hybrid/All Flash/ NVMe for primary workload with best-in-class performance
- 2 Node Edge with Invisible witness and lesser network cables with UCS
- **Primary workloads and Cohesity virtual edition on same server at edge**, reducing network latencies
- **Ease of Scaling** of Cohesity nodes on DC, with significant performance improvements with scaling

Intersight Differentiators

- **Ease of configuration, management & monitoring** for hardware across multiple sites
- **Advisories & field notices**
- **Cloud managed operating model** (supports connected/private appliance)

Sky Lakes Medical Center

Cuts Data Restore Time and Lowers PACS TCO with Cisco and Cohesity



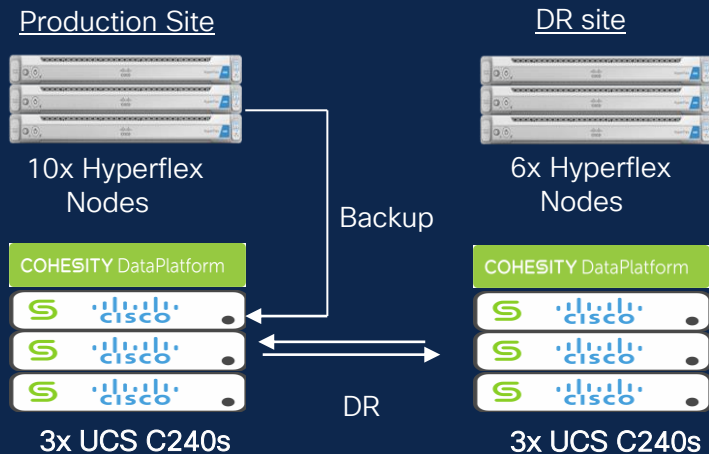
- **Business Objectives**

- Deliver quality healthcare with limited budget & resources
- Proactive and productive IT | Free up time IT for innovation

“We are getting more work done than ever, which I attribute to both our talented team and the very strategic investments we’ve made in Cisco and Cohesity. There is 100% consensus among our engineers that Cohesity works reliably, is easy to use, and we can all be productive with it. That’s powerful.”

–John Gaede, Director of IS, Sky Lakes Medical Center

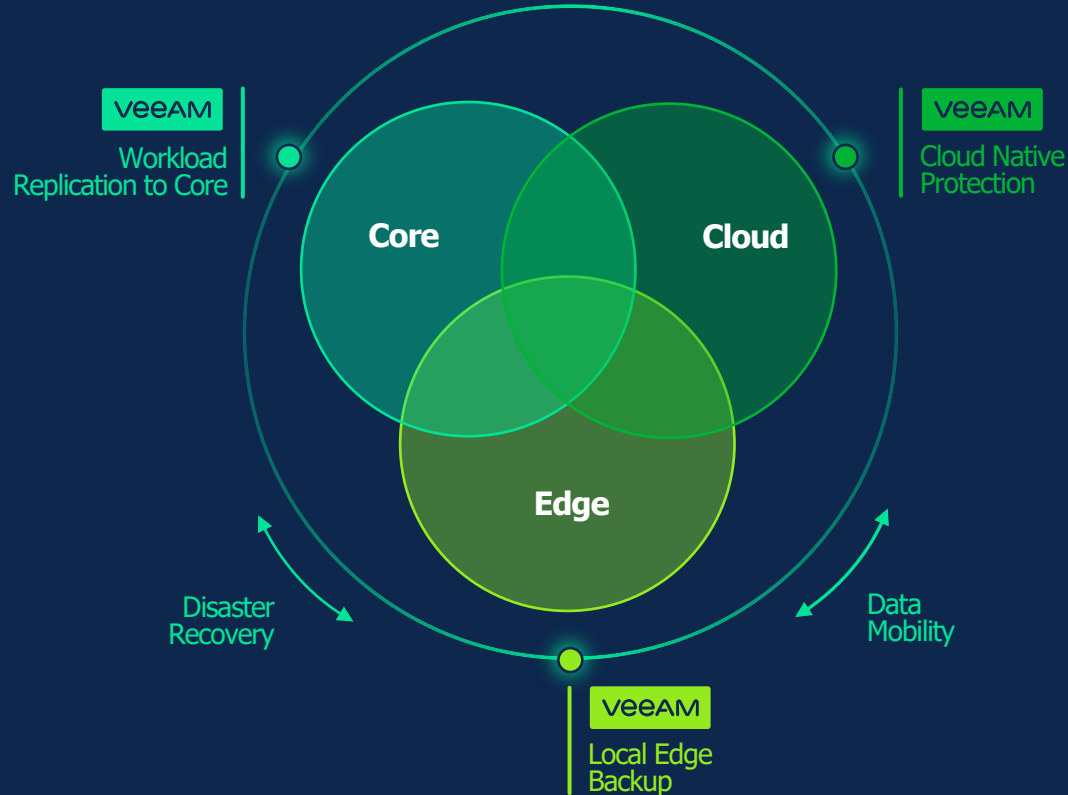
Use Cases: Backup, DR, Scale-out NAS



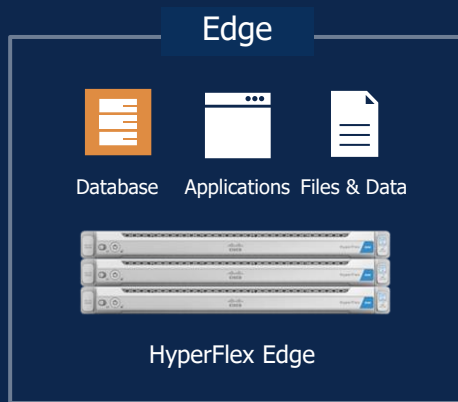
Integration with Veeam



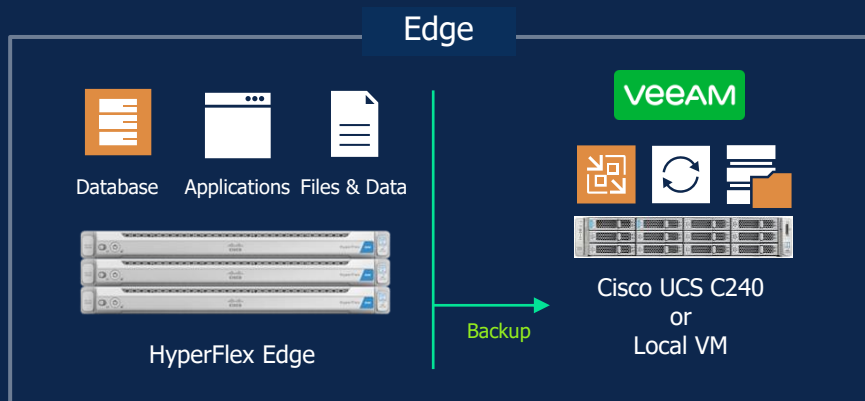
Enabling Cisco Hybrid Cloud - Edge to Core to Cloud with Veeam



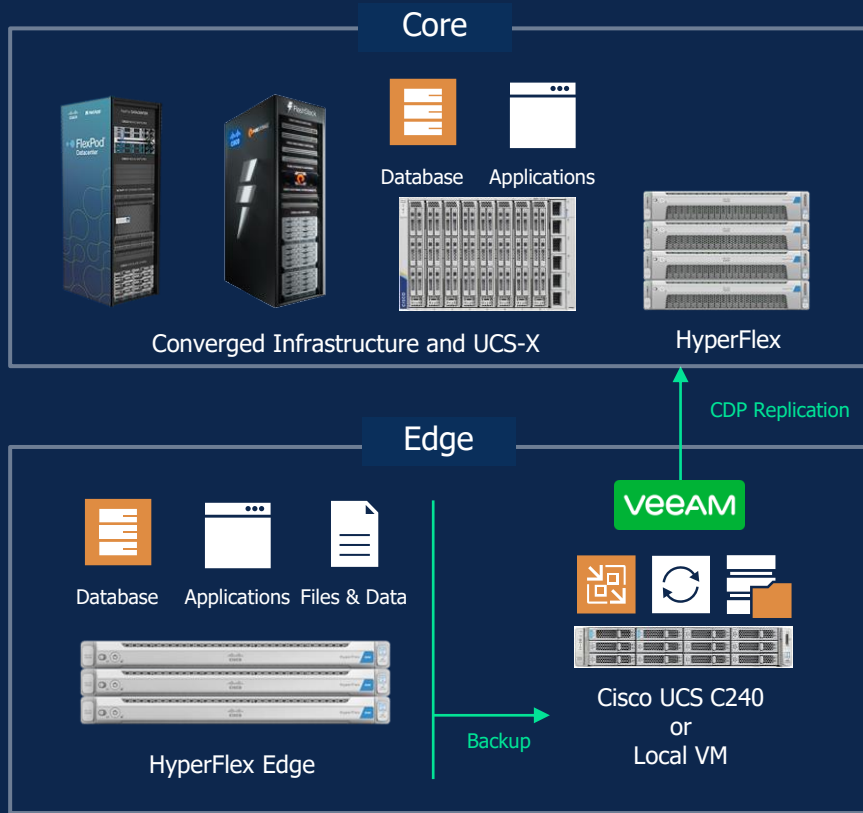
Local Edge Workload Backup



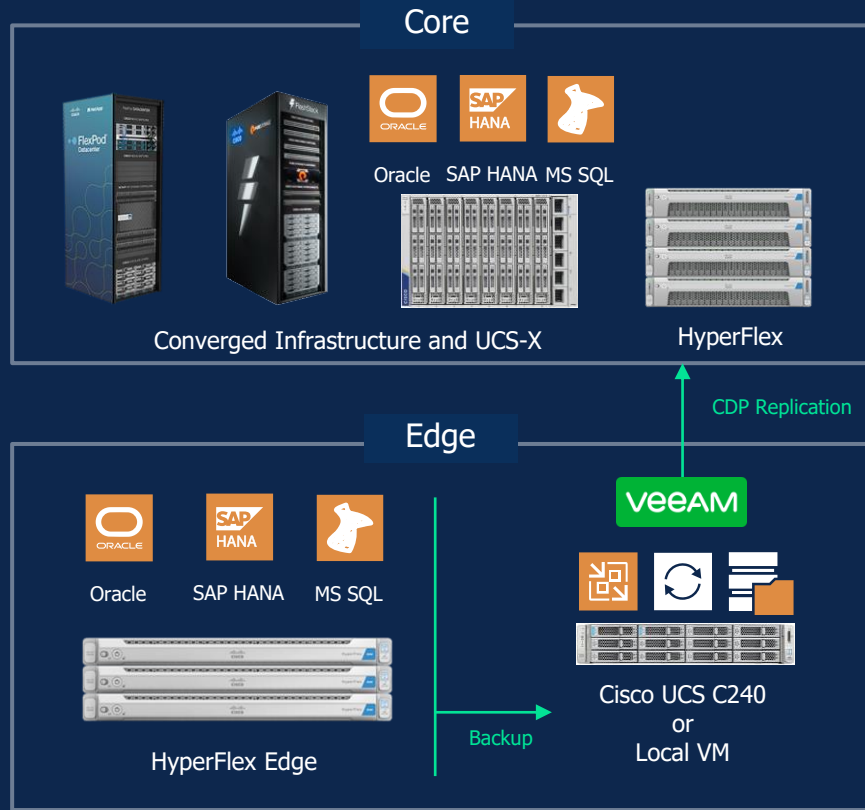
Local Edge Workload Backup



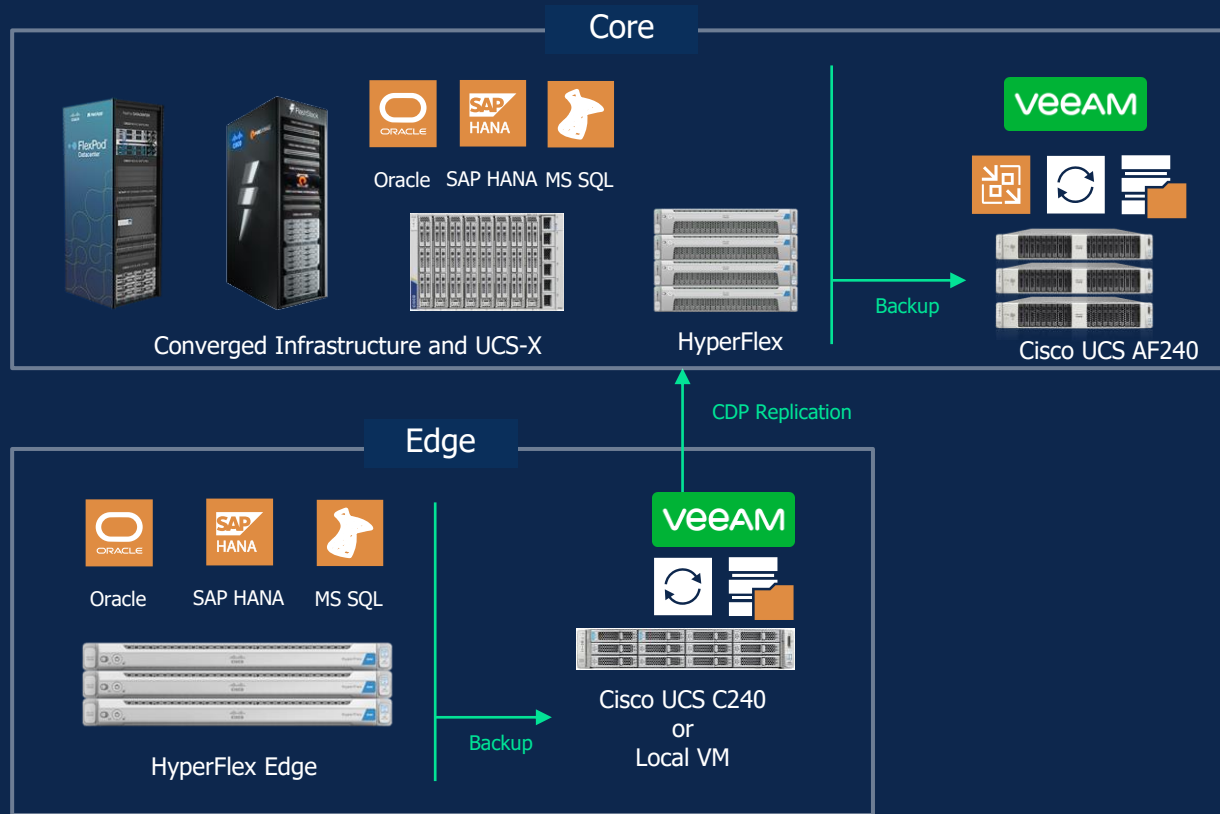
Replication to Core for DR failover/failback



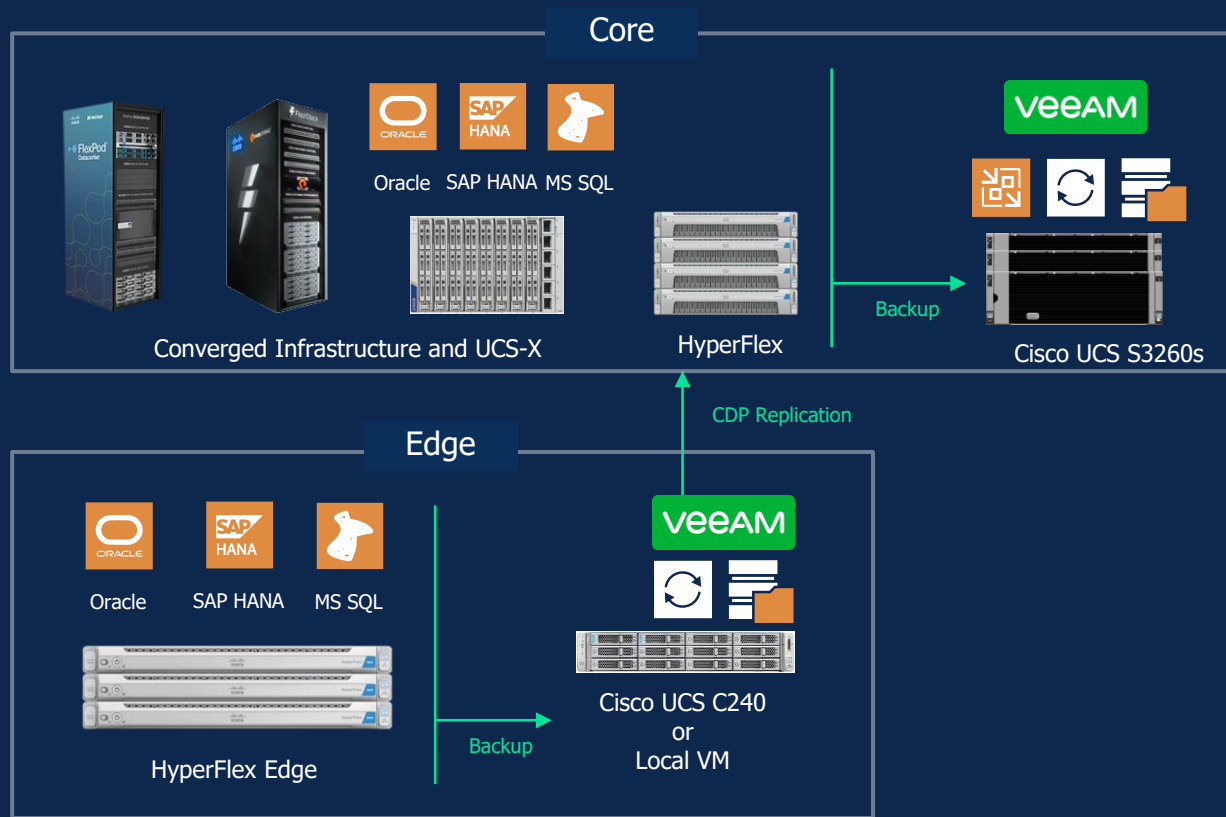
Including Enterprise Applications



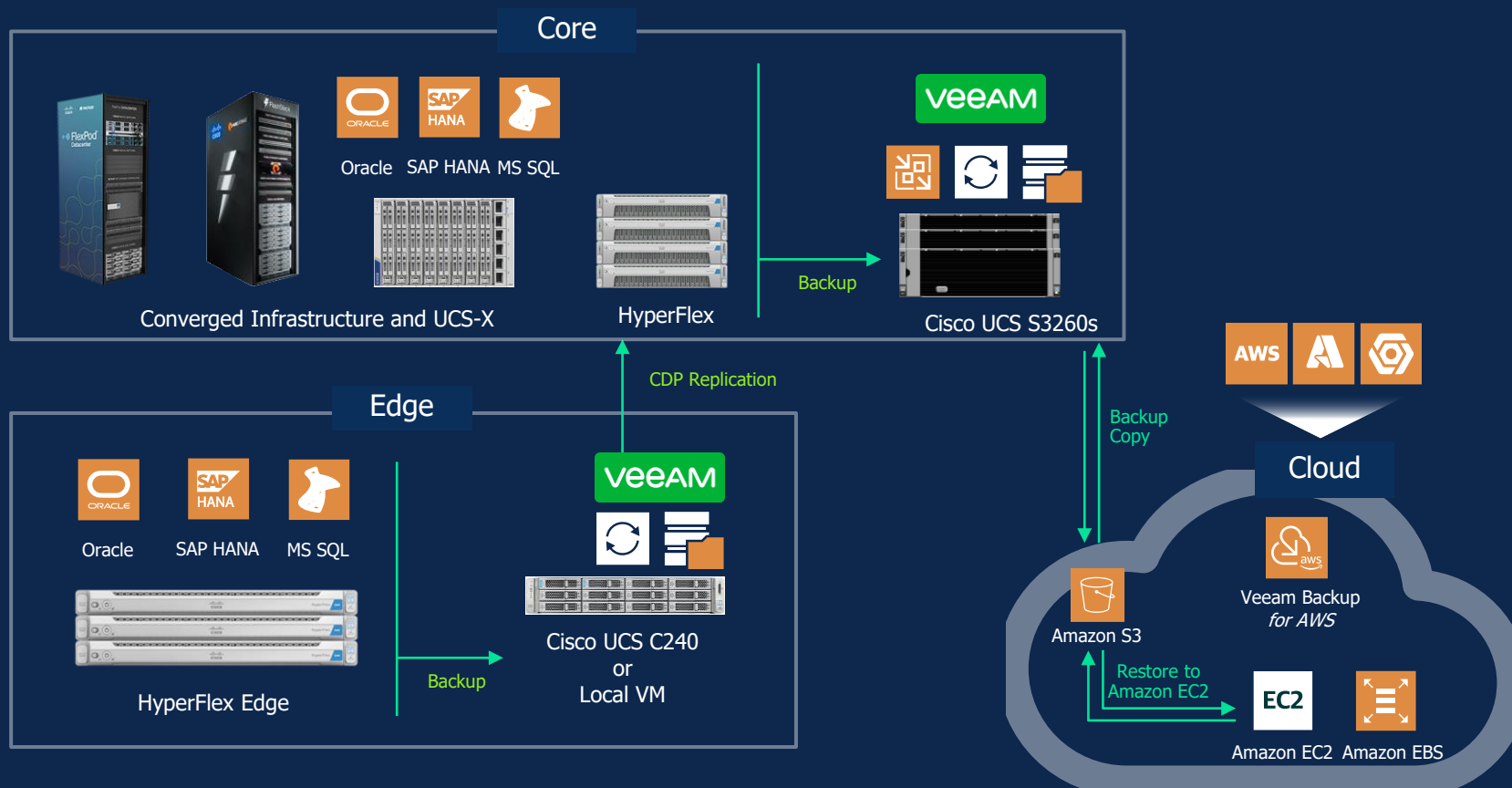
Data Protection of Core



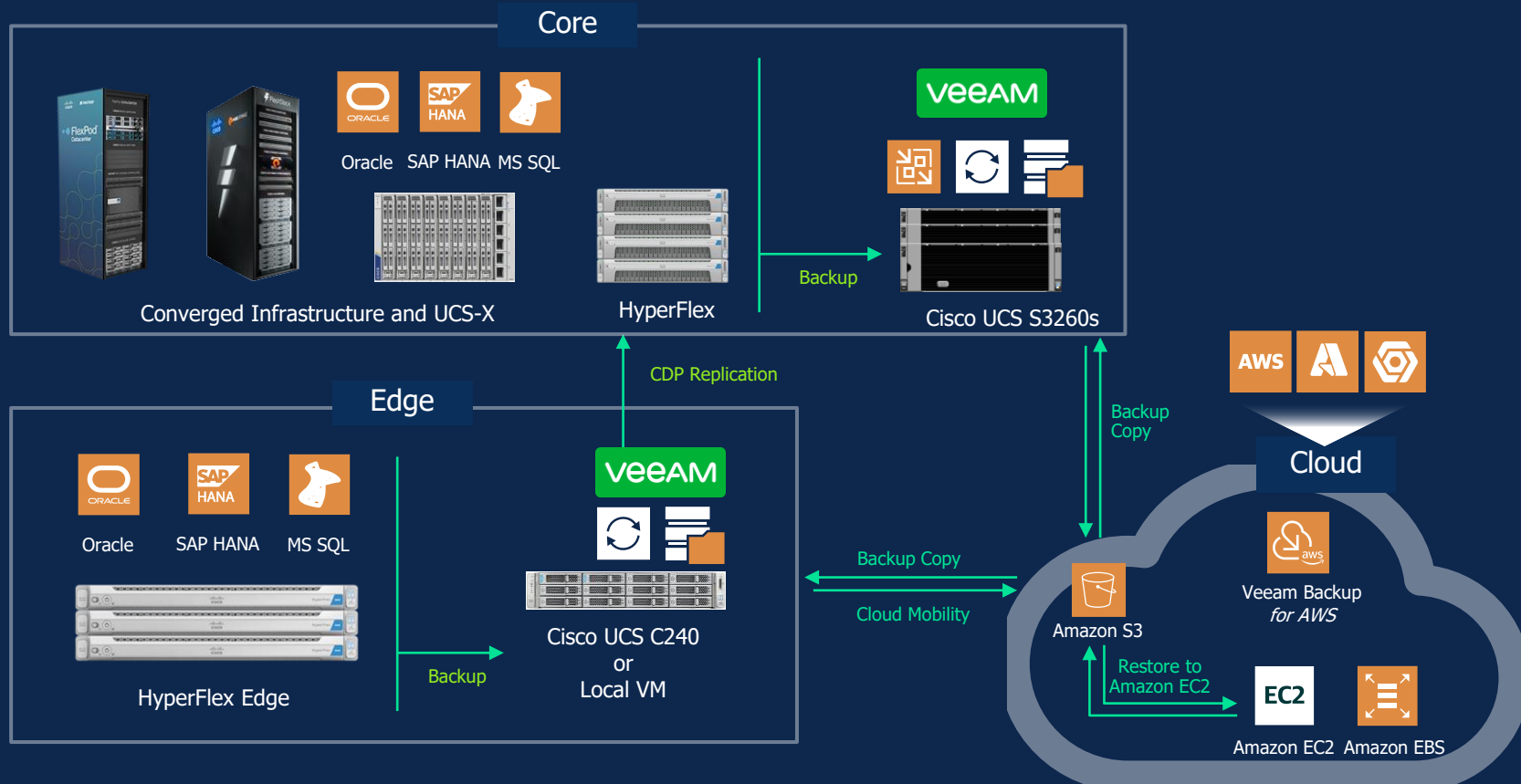
Data Protection of Core



Cloud Mobility from Core to Cloud and Back to Core



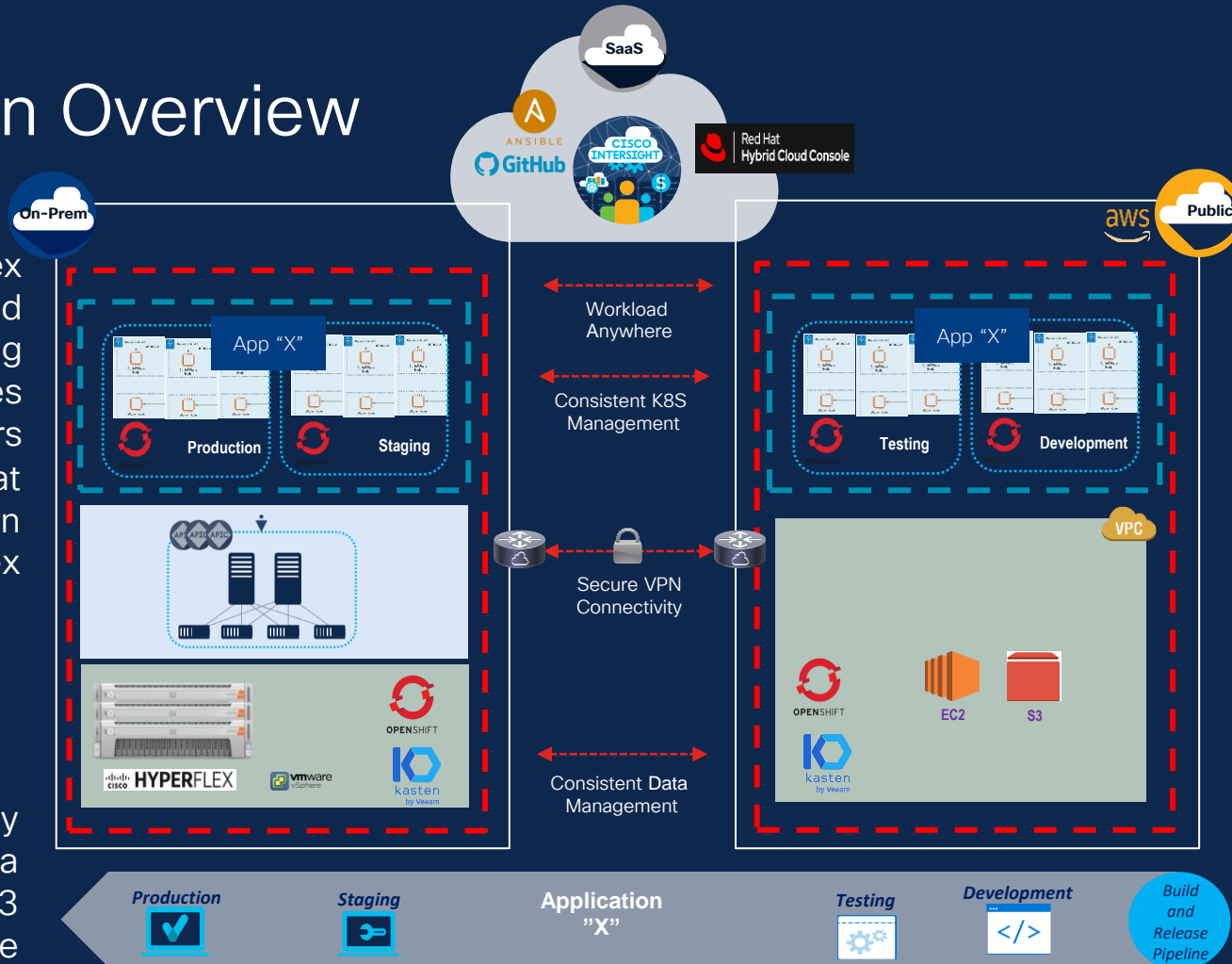
Cloud Mobility from Edge to Cloud and Back to Edge



Solution Overview

Cisco HyperFlex
for compute and
storage using
HX-series
servers
Red Hat
OpenShift on
Cisco HyperFlex

Kasten K10 by
Veeam for data
mgmt. using S3
storage
CISCO Live!



Red Hat
OpenShift on
AWS EC2

Kasten K10 by
Veeam for data
mgmt. using S3
storage

Sock Shop e-
commerce
microservices
application

Get Started Today

1 | Research

HyperFlex business value calculator



<https://hxroi.cisco.com/go/cisco/hyperflex>

HyperFlex systems and configurations



https://www.cisco.com/c/en/us/td/docs/hyperconverged_systems/HyperFlex_HX_DataPlatformSoftware/b_Cisco_HyperFlex_Systems_Ordering_and_Licensing_Guide/b_Cisco_HyperFlex_Systems_Ordering_Guide_chapter_00.html

2 | Consult

Your Cisco Partner and Account team. They will size the perfect HyperFlex solution



3 | Test drive

What to expect:

- Increased application performance
- Spend less time managing your Infrastructure
- Lower TCO



Fill out your session surveys!



Attendees who fill out a minimum of four session surveys and the overall event survey will get **Cisco Live-branded socks** (while supplies last)!



Attendees will also earn 100 points in the **Cisco Live Challenge** for every survey completed.



These points help you get on the leaderboard and increase your chances of winning daily and grand prizes

Continue your education



- Visit the Cisco Showcase for related demos
- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
- Visit the On-Demand Library for more sessions at www.CiscoLive.com/on-demand



The bridge to possible

Thank you

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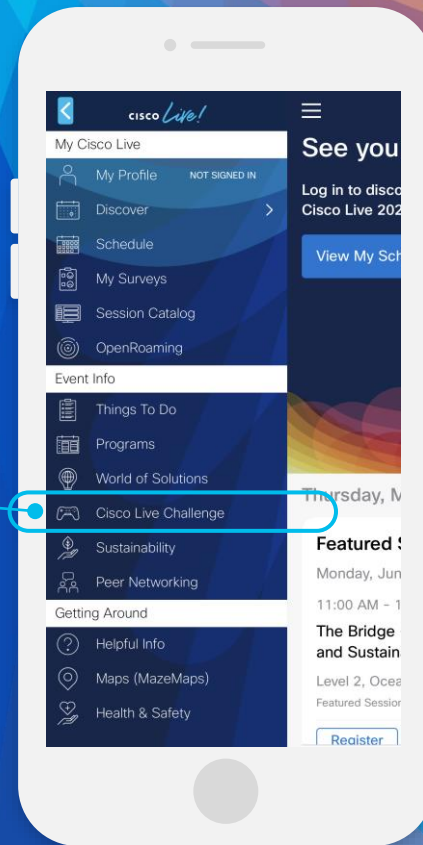
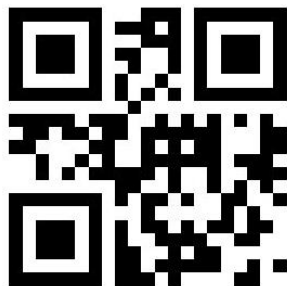
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Cisco Live Challenge

Gamify your Cisco Live experience!
Get points for attending this session!

How:

- 1 Open the Cisco Events App.
- 2 Click on 'Cisco Live Challenge' in the side menu.
- 3 Click on View Your Badges at the top.
- 4 Click the + at the bottom of the screen and scan the QR code:



The background is a vibrant, abstract graphic. It features a central bright white light source from which numerous colorful rays emanate, creating a sunburst or starburst effect. The rays transition through a spectrum of colors including yellow, orange, red, and various shades of blue and green. Overlaid on this are several large, semi-transparent, wavy shapes in similar color tones, giving the overall image a sense of motion and energy.

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Let's go

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