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The bridge to possible

Demystifying HyperFlex Edge

Powered by Cisco Intersight

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BRKDCN-2791



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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 17, 2022.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKDCN-2791>

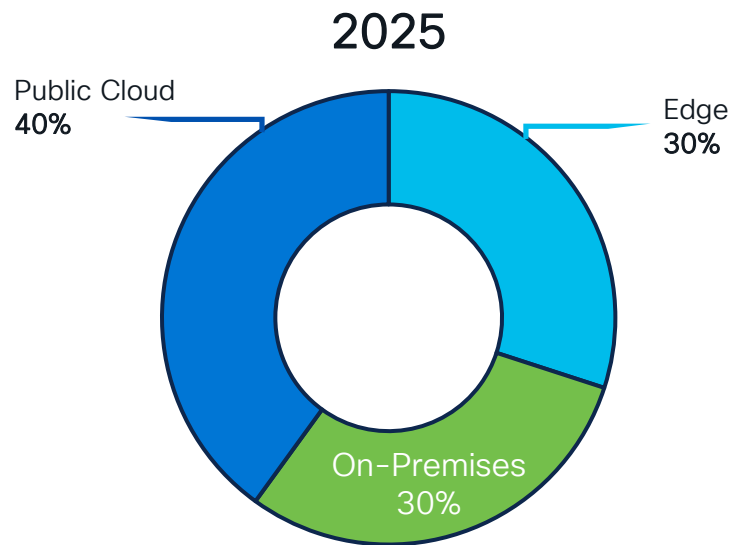
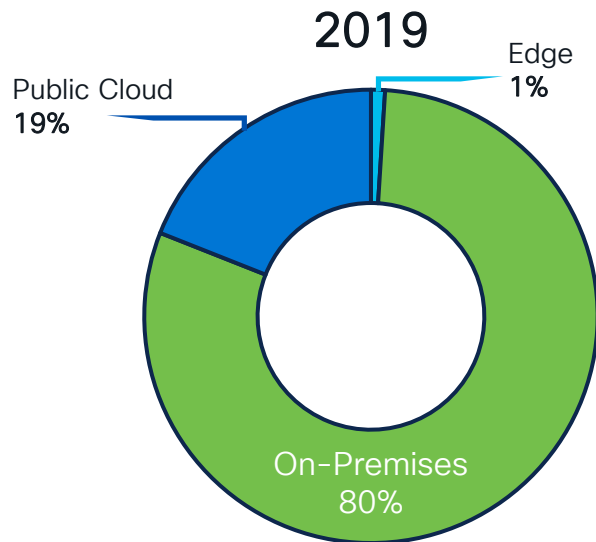


Agenda

- Recap of HyperFlex Edge
 - HX Data Platform
 - Edge Architecture
- Cisco Intersight Overview
 - Edge Lifecycle – Install, Upgrade and Expand
 - 2N Edge – Invisible Cloud Witness
- N:1 Replication for Edge
- Conclusion

Recap of HyperFlex Edge

Where will workload be in 2025?



*Gartner

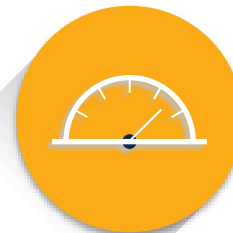
IT Operations at the Edge



REDUCE COST AND
MINIMIZE COMPLEXITY



ALWAYS ON
APPLICATIONS



DELIVER APPLICATION
PERFORMANCE



MAXIMIZE STORAGE
UTILIZATION



MINIMIZE
DEPLOYMENTS TIME



SIMPLIFIED AND CENTRAL
MANAGEMENT

4 Key Benefits of Next Generation Data Platform

Adaptive Infrastructure

Predictable, Pay-as-You-Grow Efficiency
Pre-integrated HW & SW
Single Point of Contact - TAC Support

Distributed Data Platform

Highly Available/Self-Healing
Performance without hot spots
Extremely consistent IO



Pointer-Based Snapshots
Inline dedupe and compression
N:1 Replication and Disaster Recovery

Enterprise Resiliency Features

Intelligent Cloud Management with Intersight
Reporting and Analytics
Single Button Non-Disruptive Rolling Upgrades

Integrated Management

Cisco HyperFlex Edge

Engineered for the modern edge

Simplicity and distributed scale



Optimized for availability and reliability



2-4 Node flexible configurability, scalability and investment protection



Lights-out deployment and cloud managed



GPU support for AI inferencing



Single source HCI with connected TAC Support

Deploy & Operate



OR



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Ability to leverage existing branch network



Three-node cluster quorum without physical 3rd node!

33% TCO advantage per site

Ultra-light 2-node



Invisible Cloud Witness

3-node



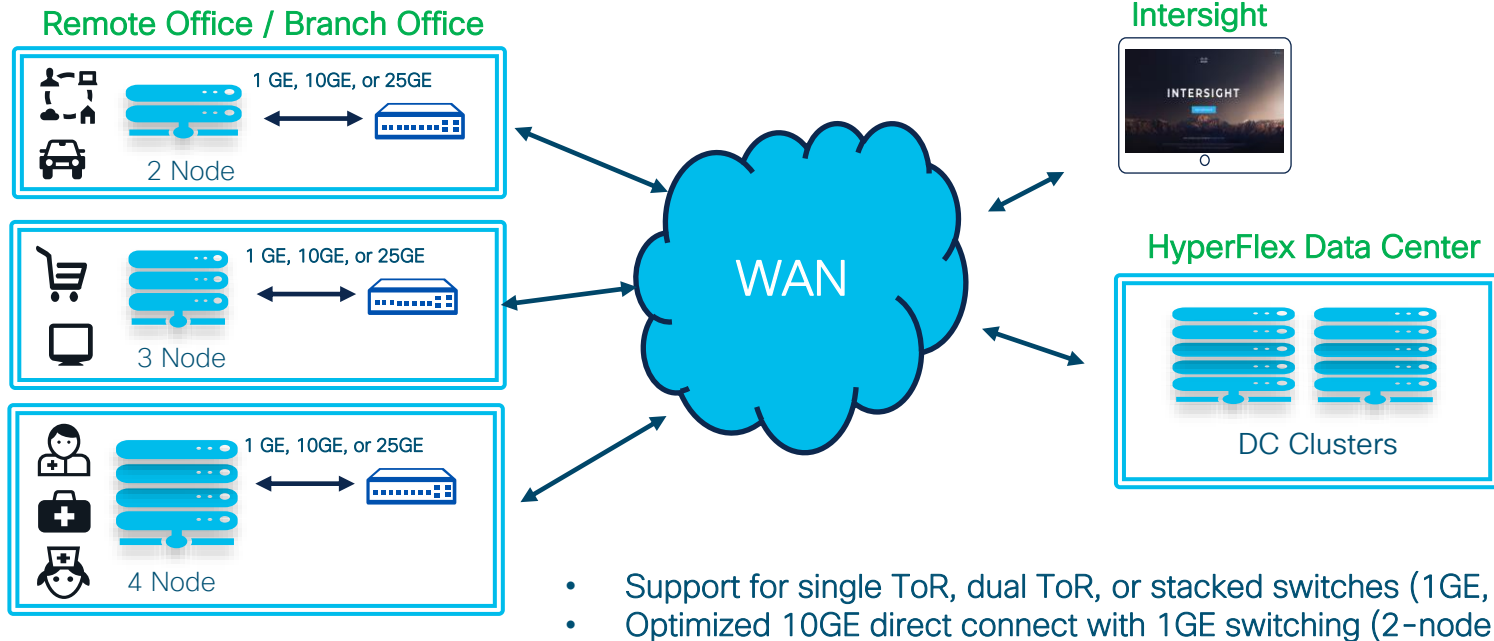
4-node



HyperFlex Edge Architecture

Size your Edge Deployment for your Environment

Scale | Network Flexibility | Full Life Cycle Management | Invisible Cloud Witness



HX Edge Bill of Materials (2,3,4 Node)



HX-E-220-M5SX



HXAF-E-220-M5SX



HX-E-240-M5SD



HXAF-E-240-M5SD



HX-E-240-M5SX



HXAF-E-240-M5SX



HX-E-220M6S



HXAF-E-220M6S



HX-E-240-M6SX



HXAF-E-240-M6SX

VIC 1457
10GbE & 25GbE*



OR

Intel i350
1GbE



Now supports Cisco copper 10G
transceiver modules (SFP-10G-T-X)

Cisco Intersight Overview



Next Generation Management

Centralized Cloud-Based Management of the Future



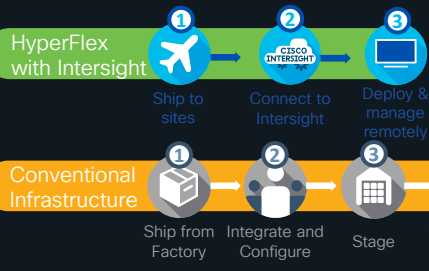
Cisco Intersight

SaaS Simplicity

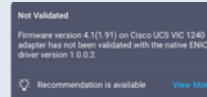
Actionable Intelligence



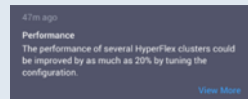
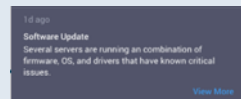
Remotely Deploy & Manage



Compatibility(HCL) Check

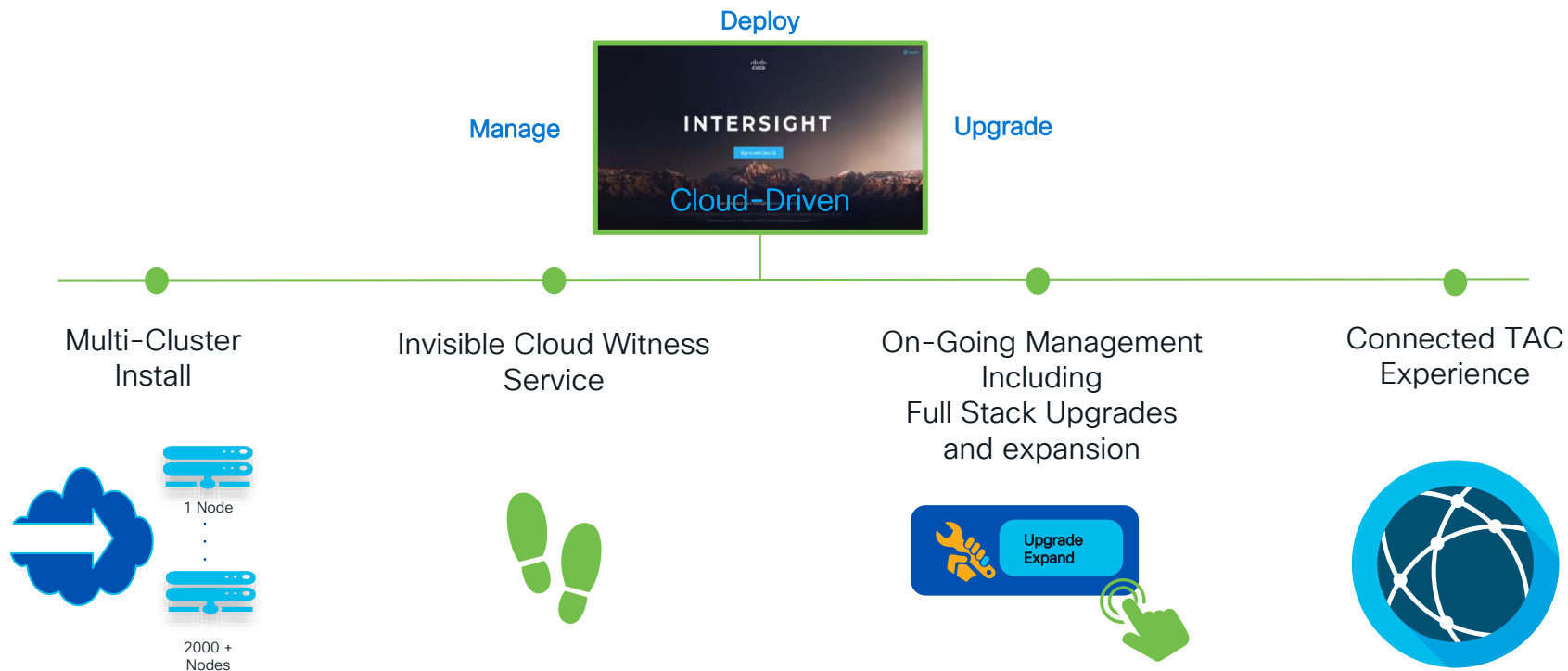


Recommendations Engine



HyperFlex Edge

With Full-Life Cycle Management



Industry Leading Cloud Deployment Model

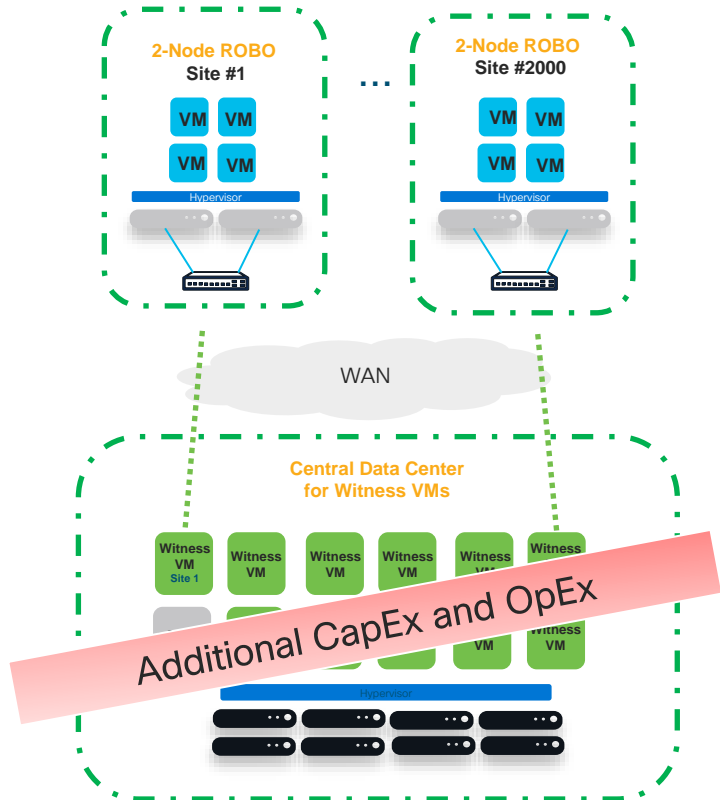
Challenge:
*Quickly deploy
HX Edge clusters
to ROBO sites around
the globe*



Don't Worry! You have Cisco Intersight!

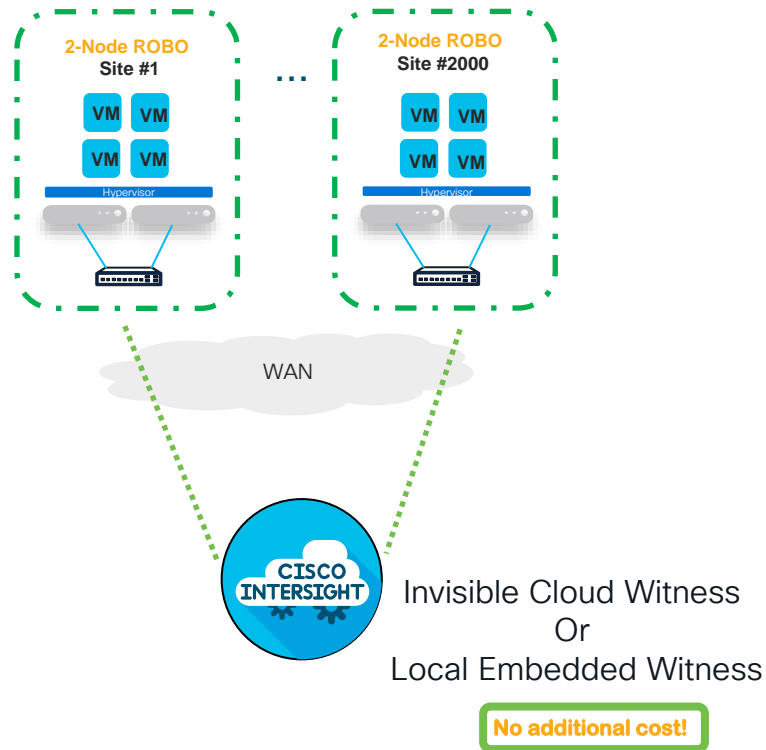
HyperFlex Edge 2 Node Invisible Cloud Witness

Other 2-Node ROBO



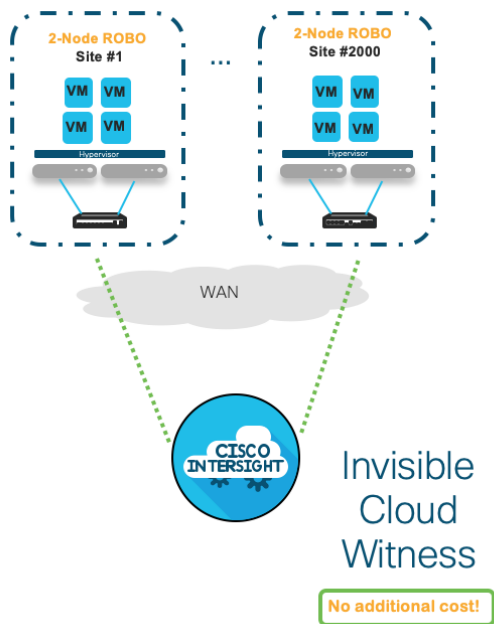
- or -

Cisco HyperFlex Edge 2-Node ROBO



Cisco Intersight Invisible Cloud Witness Benefits

2-Node Cluster



- No additional license cost, it is included in the Cisco HyperFlex Edge license subscription.
- No need for a third site or for existing computing, storage, and network infrastructure
- **Cloud-like operations; with the Invisible Cloud Witness, there is nothing to manage**
 - No user interface to monitor
 - No user-based software updates
 - No setup, configuration, or backup required
 - No scale limitations
 - Built-in high availability and fault tolerance
- **Security**
 - Real-time updates to the Invisible Cloud Witness service with the latest security patches
 - All communications encrypted using Transport Layer Security (TLS) 1.2
 - Use of standard HTTPS port 443; no firewall configuration required
- **Built on an efficient, silent protocol stack**
 - No periodic heartbeats sent across the WAN
 - No cluster metadata or user data transferred to the Cisco Intersight platform
 - Tolerant for high latency and lossy WAN connections

HyperFlex Containerized Local Witness

Lightweight, efficient, low-cost witness for edge-location clusters

Higher availability without dependency on WAN connection to Intersight Cloud or Intersight Virtual Appliance, in a remote datacenter

Reduce costs – removes the need for a 3rd node – saving HW, SW licensing and management overhead

Runs on any hardware platform that supports containers



Nexus 9000



Catalyst 9000



Linux x86



ASR 1000



2N Edge's 3rd witness runs on the platform of your choice!



Catalyst 9100 Wireless AP



ISR 4000



IR1101 Industrial Router



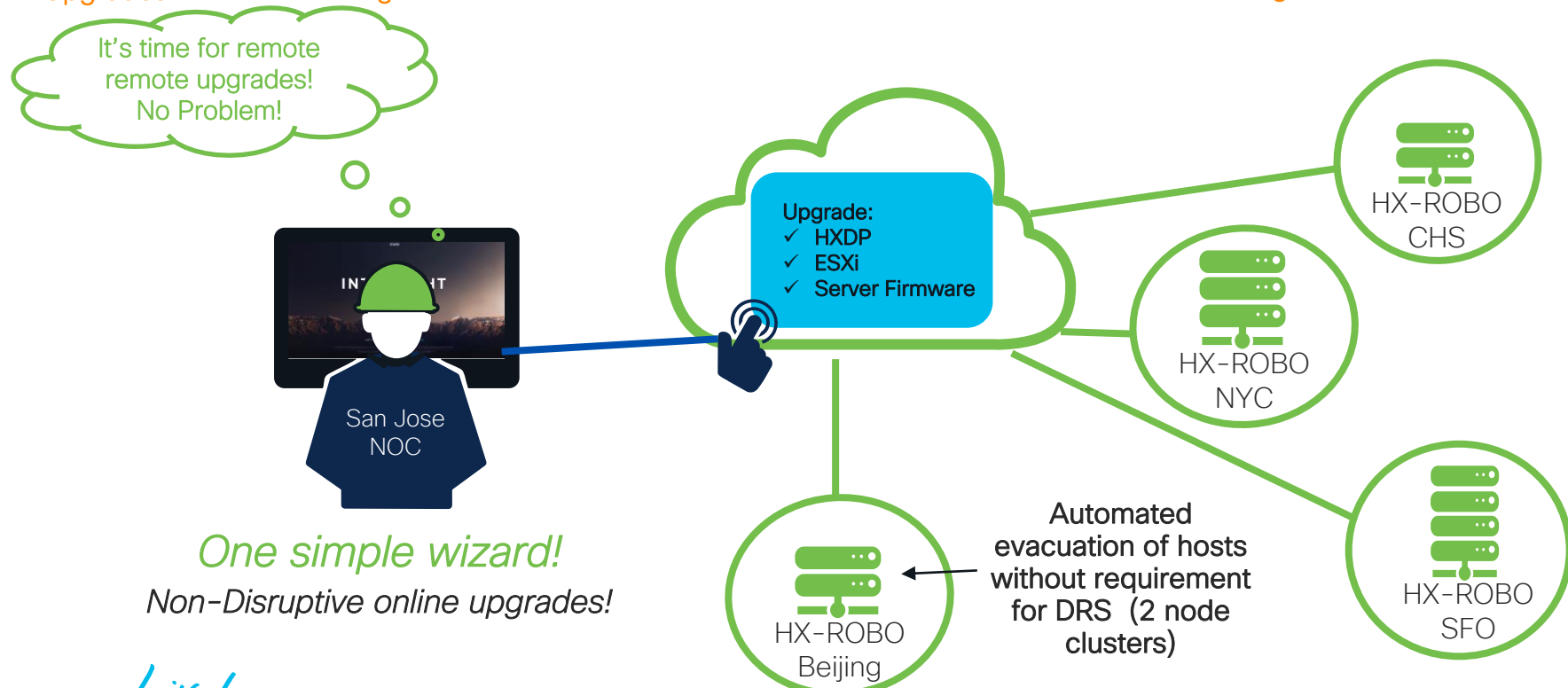
Raspberry Pi

Industry first, unmatched innovation for Edge HCI!

Simple Worldwide HyperFlex Edge Upgrades

From Cisco Intersight

- ❖ Parallel Upgrades
- ❖ Decoupled Upgrade Logic
- ❖ No File Download or Upload
- ❖ Automatic Version Filtering



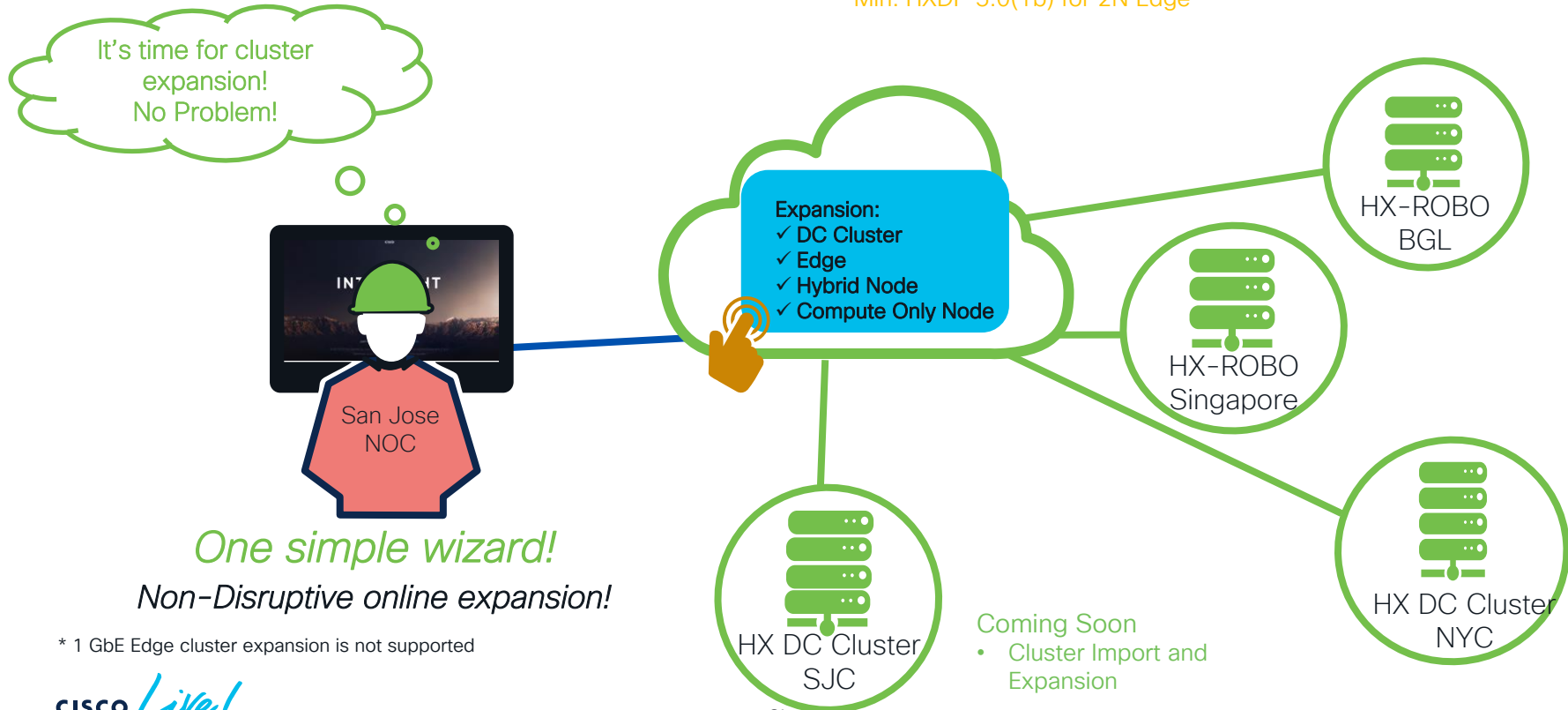
Simple Worldwide HyperFlex Expansion

From Cisco Intersight

Expand HX Edge or DC cluster

Min. HXDP 4.0(2e) for 3N Edge

Min. HXDP 5.0(1b) for 2N Edge



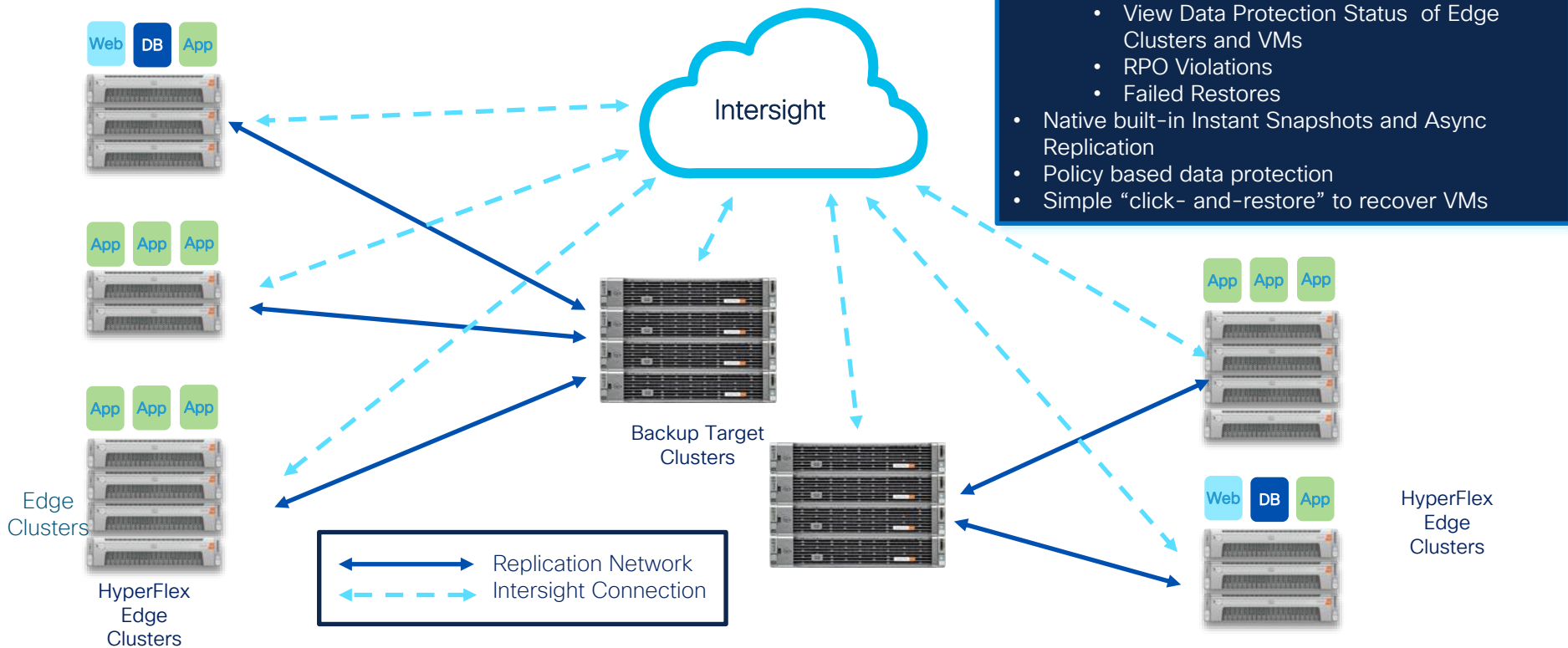
* 1 GbE Edge cluster expansion is not supported

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N:1 Replication for Edge



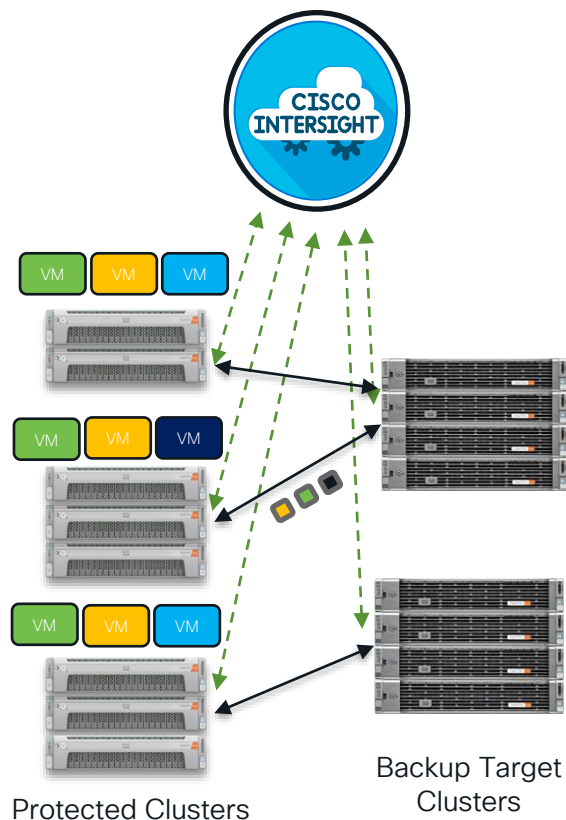
HyperFlex N:1 Replication For Edge Overview



- Centralized data protection status via Intersight Dashboard
 - View Data Protection Status of Edge Clusters and VMs
 - RPO Violations
 - Failed Restores
- Native built-in Instant Snapshots and Async Replication
- Policy based data protection
- Simple “click- and-restore” to recover VMs

Protect VMs from data loss due to Edge cluster failures or VM failures

HyperFlex N:1 Replication For Edge



Use Case

Protect VMs deployed on HyperFlex Edge from logical corruptions or accidental deletion

Protect VMs deployed on HyperFlex Edge from an Edge cluster outage or Edge site outage

Migrate VMs deployed on HyperFlex Edge to a different Edge cluster at a different Edge site

Feature

VMs restored from local copies to the same Edge cluster Very low RTO

VMs restored from remote copies on to a different Edge cluster
DR for Edge

VMs migrated to a different Edge cluster

Conclusion



Cisco HyperFlex Edge with Intersight



Simplified solutions
for today's digital Edge

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Meet IT budget per site



Power site critical
applications with resiliency



Start small and grow as
you need

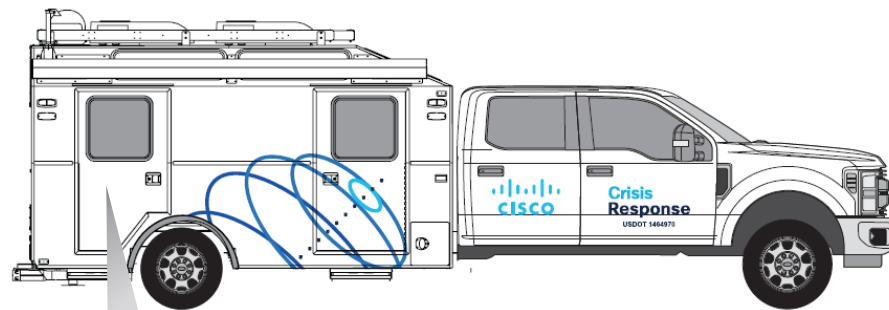


Enable AI driven apps at
the edge

Tour the Network Emergency Response Vehicle (NERV)!

Powered by Cisco HyperFlex

- Providing **free and secure emergency communications to first responders** after a disaster
- **Equipped with a HyperFlex edge cluster** for workloads that might include:
 - Drone Image processing
 - Video surveillance
 - Network, collaboration and cybersecurity applications
- **Take a tour.** Located at back of hall, near Broadcast Studio



"Reestablish and provide secure network and satellite communications for emergency responders in a disaster zone"



Cisco HyperFlex Edge Clusters



For info on Cisco Crisis Response scan the QR code.

Technical Session Surveys

- Attendees who fill out a minimum of four session surveys and the overall event survey will get Cisco Live branded socks!
- Attendees will also earn 100 points in the Cisco Live Game for every survey completed.
- These points help you get on the leaderboard and increase your chances of winning daily and grand prizes.



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Cisco Learning Network

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Award-winning certification program empowers students and IT Professionals to advance their technical careers

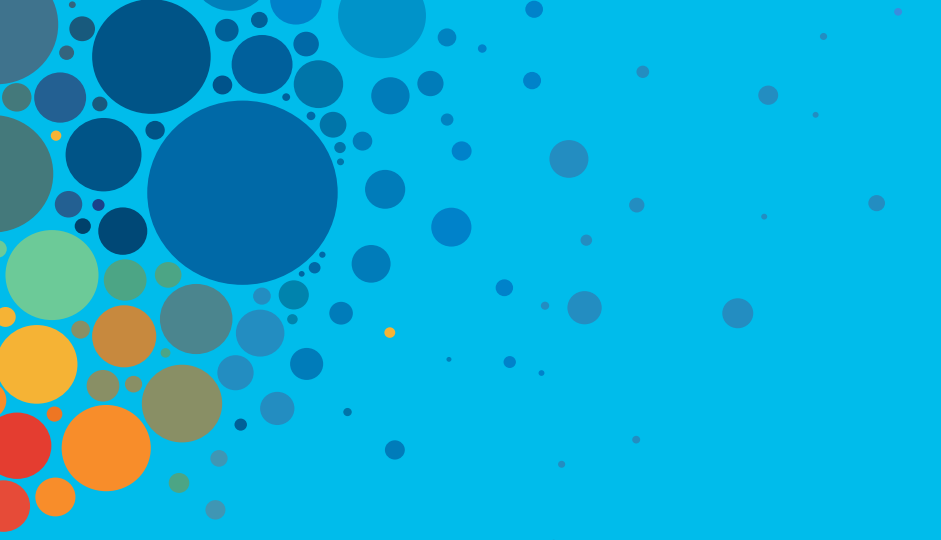
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- Book your one-on-one Meet the Engineer meeting
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The bridge to possible

Thank you

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