cisco Live!
ALL IN

The bridge to possible

Cisco HyperFlex Lifecycle

Install and Operate Clusters at Scale

Ganesh Kumar, Engineering Product Manager
@gkumark44300

BRKDCN-2089

Cisco Webex App

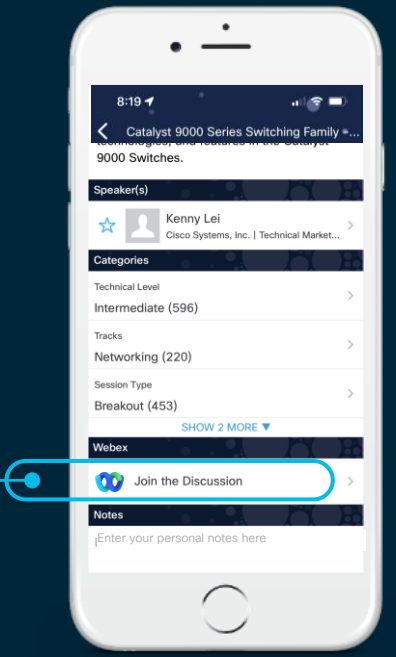
Questions?

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-2089

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Agenda

- HyperFlex Architectural Overview
  - HyperFlex Deployment Options
- Cisco Intersight Overview
- Prepare for HyperFlex Cluster Deployment
  - HX Pre-install tool
- HyperFlex Lifecycle at Scale
  - Install, Upgrade and Expand
- HyperFlex on Intersight – Manageability

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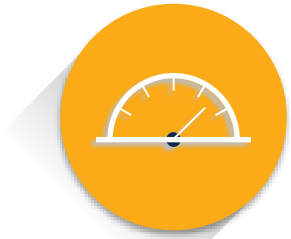
HyperFlex Architectural Overview

IT Operations at Scale

REDUCE COST AND MINIMIZE COMPLEXITY

ALWAYS ON APPLICATIONS



DELIVER APPLICATION PERFORMANCE

MAXIMIZE STORAGE UTILIZATION

MINIMIZE DEPLOYMENTS TIME

SIMPLIFIED AND CENTRAL MANAGEMENT

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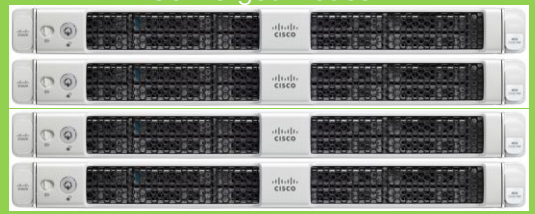
Cisco HyperFlex DC-with-FI

Deploy & Operate

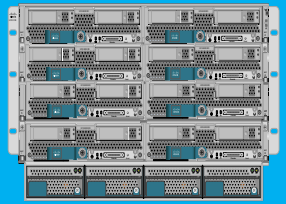
OR Cisco HyperFlex Connect

UCS Fabric Interconnects

Converged Nodes



Compute Only Nodes



- Shipped From Factory With Integrated Networking
- High Performance, Flat and Predictably Latent Fabric
- Plug and Play Networking with UCS Unified Fabric
- Reduced Complexity, Simplified Decision Making and Deployment
- Scale up to 96 nodes
- Mix Converged and Compute nodes

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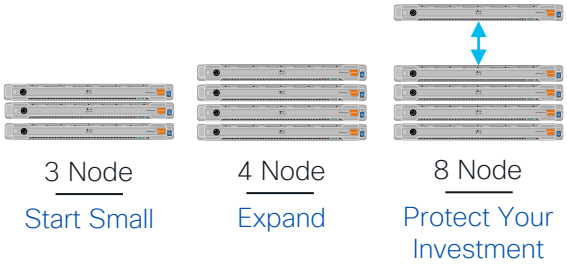
Cisco HyperFlex DC-no-FI

HyperFlex Datacenter no Fabric Interconnect

For DC Environment



Form-Factor Options

1RU HX220

2RU HX240

Hyperflex M5 & M6

Intersight Lifecycle Management

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Cisco HyperFlex Edge

Engineered for the modern edge

Simplicity and distributed scale

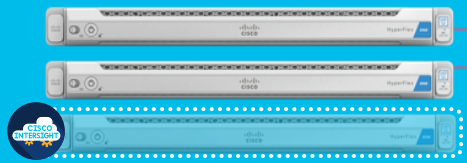
- Optimized for availability and reliability
- 2-4 Node flexible configurability, scalability and investment protection
- Lights-out deployment and cloud managed
- GPU support for AI inferencing
- Single source HCI with connected TAC Support

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

Deploy & Operate

OR

Cisco HyperFlex Connect

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Cisco Intersight Overview

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

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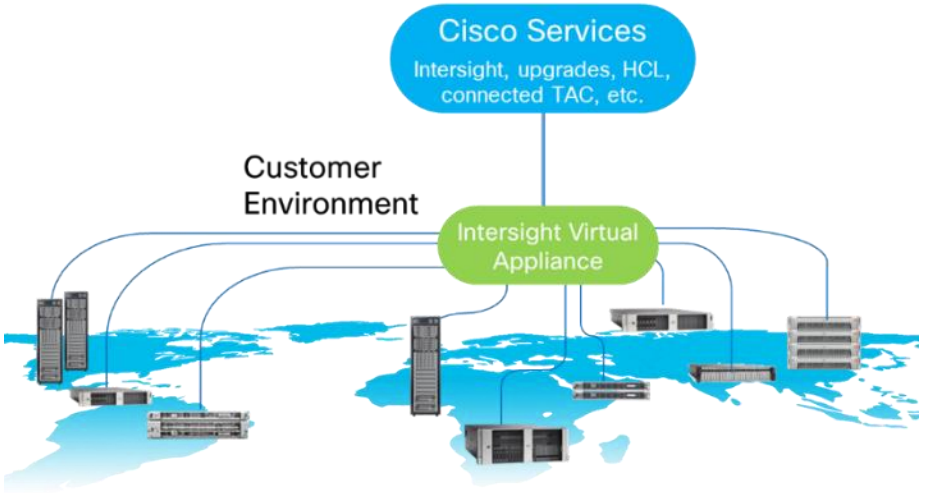
Virtual Appliance

- Includes the services of SaaS version wrapped up in a virtual machine
- Addresses the concerns of customers with data locality or security requirements not met by SaaS
- Provides the customers an option to take advantage of connection to Cisco (Connected Virtual Appliance) or operate in a completely air-gapped mode (Private Virtual Appliance)



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Next Generation Management

Centralized Cloud-Based Management of the Future

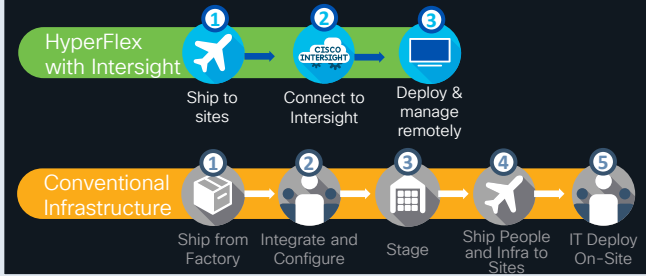
- Telemetry and Analytics
- Policy Based Orchestration
- Secure and Compliant
- API Driven, DevOps Enabled
- Connected TAC

Cisco Intersight

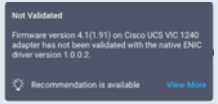
SaaS Simplicity

Actionable Intelligence

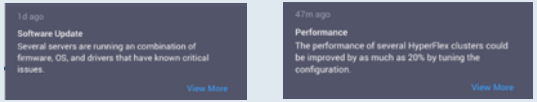
Remotely Deploy & Manage



Compatibility(HCL) Check



Recommendations Engine



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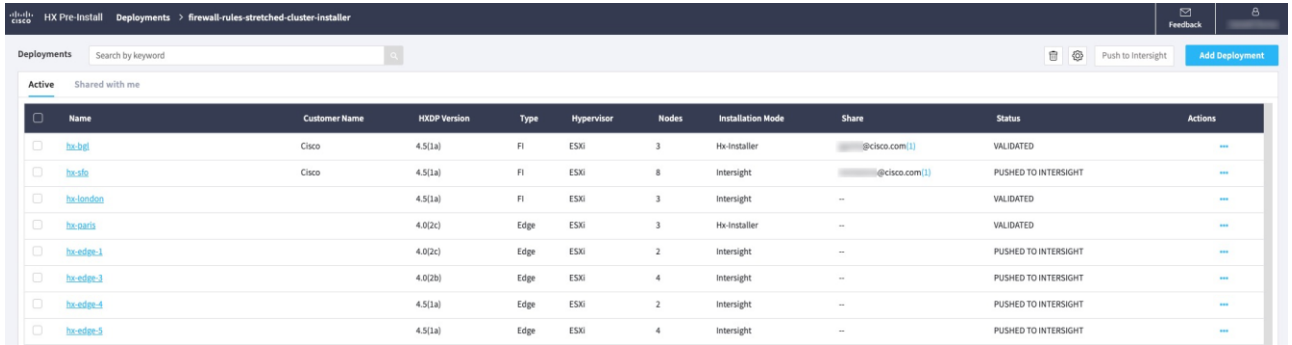
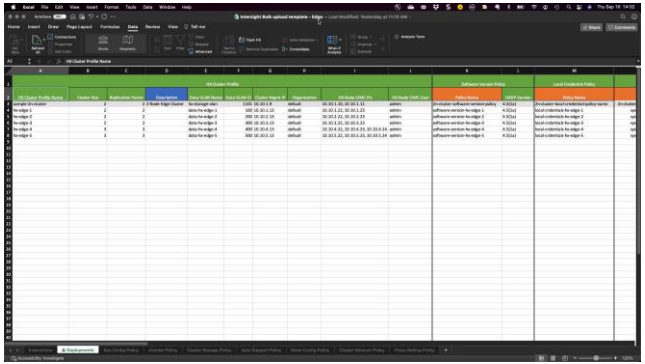
Prepare for HyperFlex Cluster Deployment

HyperFlex Pre-Install Tool

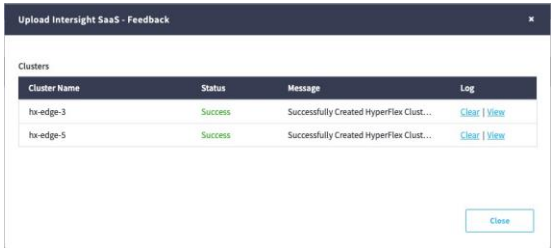
Prepare for Cluster Deploy



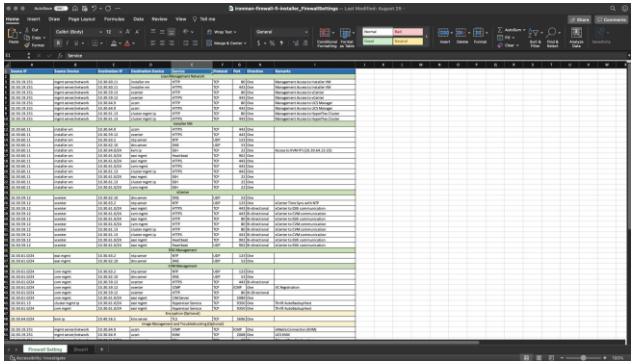
Bulk Upload Template



Push to Intersight



Firewall Rules



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HyperFlex
Lifecycle at Scale

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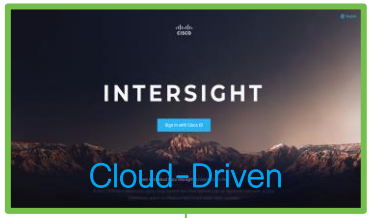
HyperFlex on Intersight

With Full-Life Cycle Management

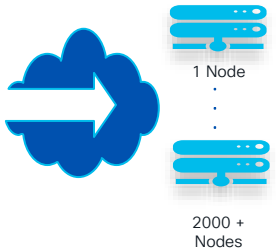
Deploy

Manage



Upgrade

Multi-Cluster Install



Invisible Cloud Witness Service

On-Going Management Including Full Stack Upgrades and expansion

Connected TAC Experience

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Industry Leading Cloud Deployment Model

Challenge:
Quickly deploy HX clusters to multiple sites around the globe

Don't Worry! You have Cisco Intersight!

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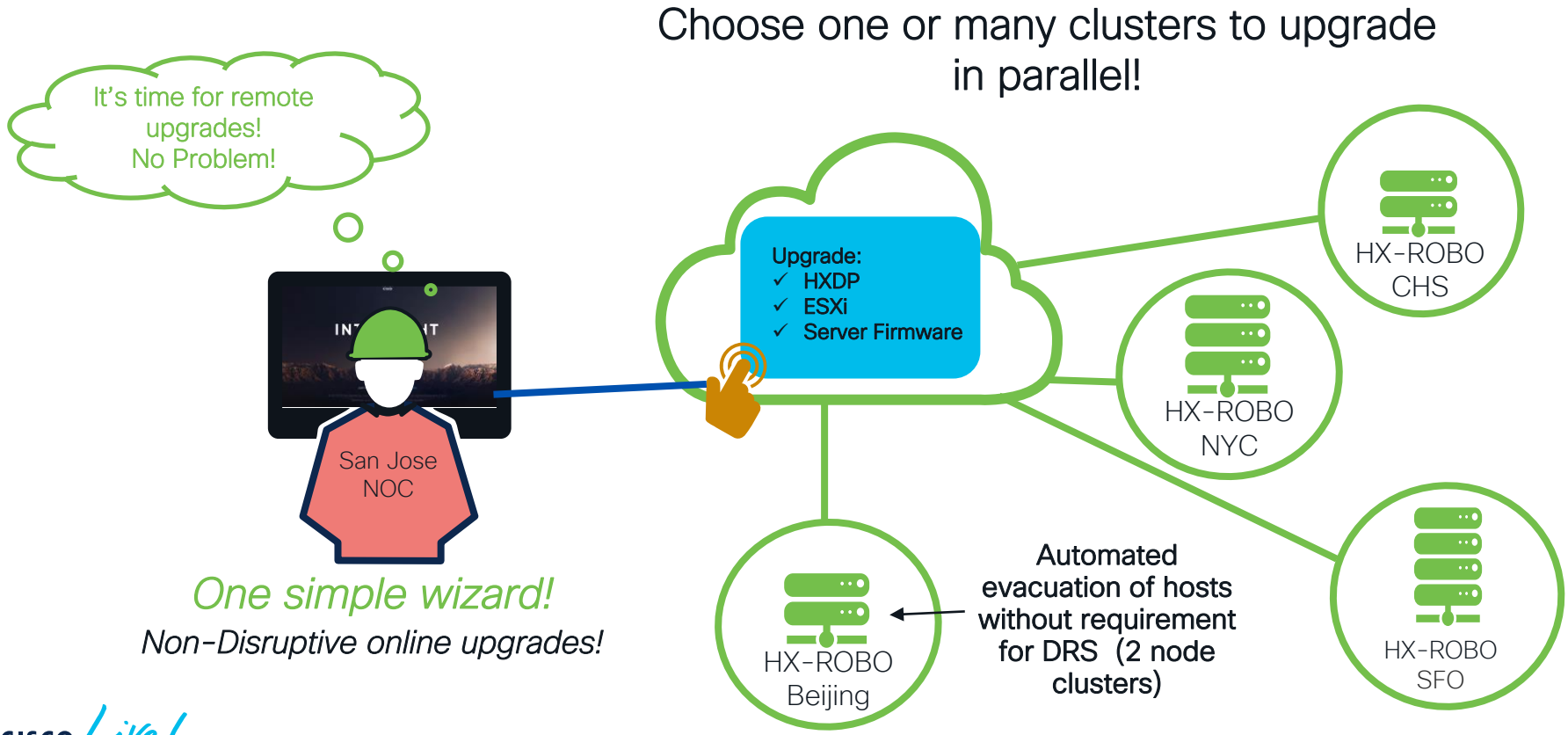
Simple Worldwide HyperFlex Upgrades

From Cisco Intersight



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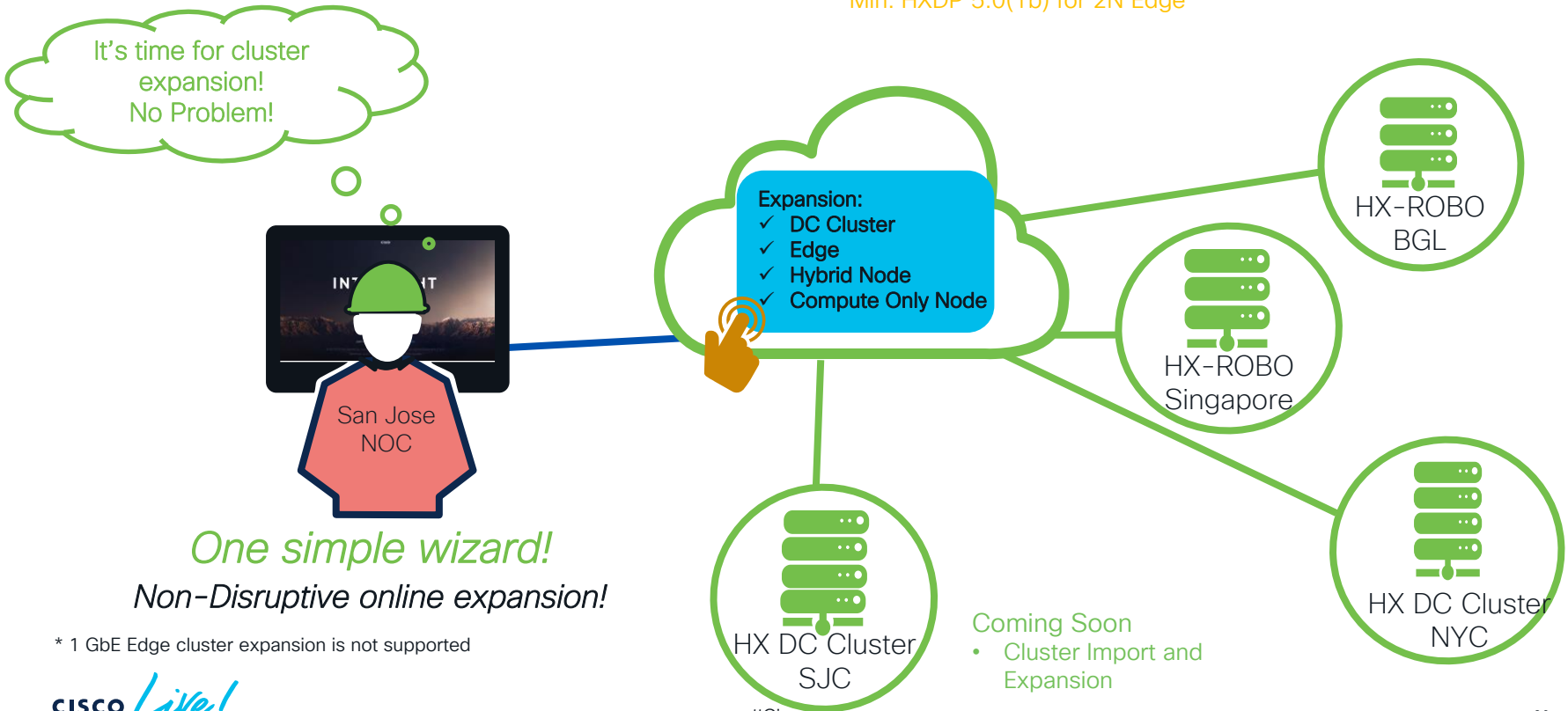
Simple Worldwide HyperFlex Expansion

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



One simple wizard!

Non-Disruptive online expansion!

* 1 GbE Edge cluster expansion is not supported

Coming Soon
- Cluster Import and Expansion

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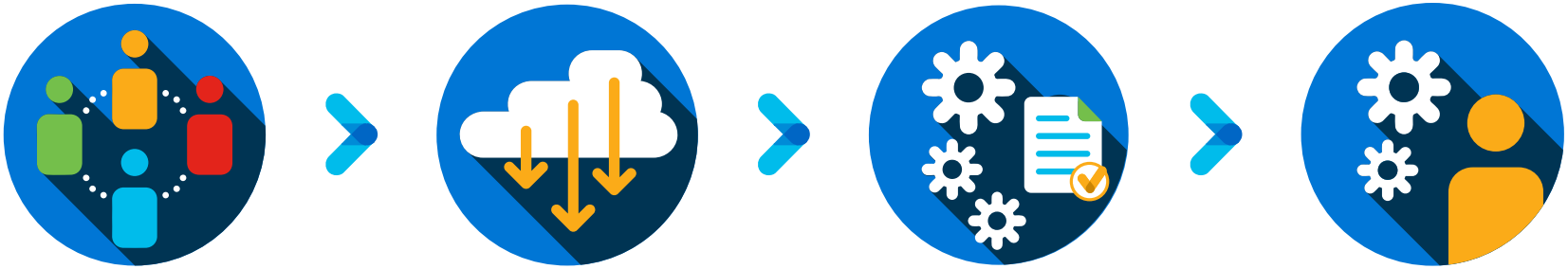
Cisco HyperFlex

Intelligent Manageability at scale from Intersight

Cisco Intersight + Connected TAC real-world example



Case opened:
XXXXXX244

Diagnostic data
automatically collected

Diagnostic results
automatically gathered

Firmware upgrade
identified to resolve
known issue

01:25PM → +12 Minutes → +16 Minutes

Total: 28 minutes
to diagnose issue

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Cisco Intersight Proactive Support

Issue detected on device that can be resolved by RMA

Service Request and RMA automatically generated

E-mail from cisco-proactive-rma@cisco.com with instructions for user

https://intersight.com/help/features#proactive_support_enabled_through_intersight

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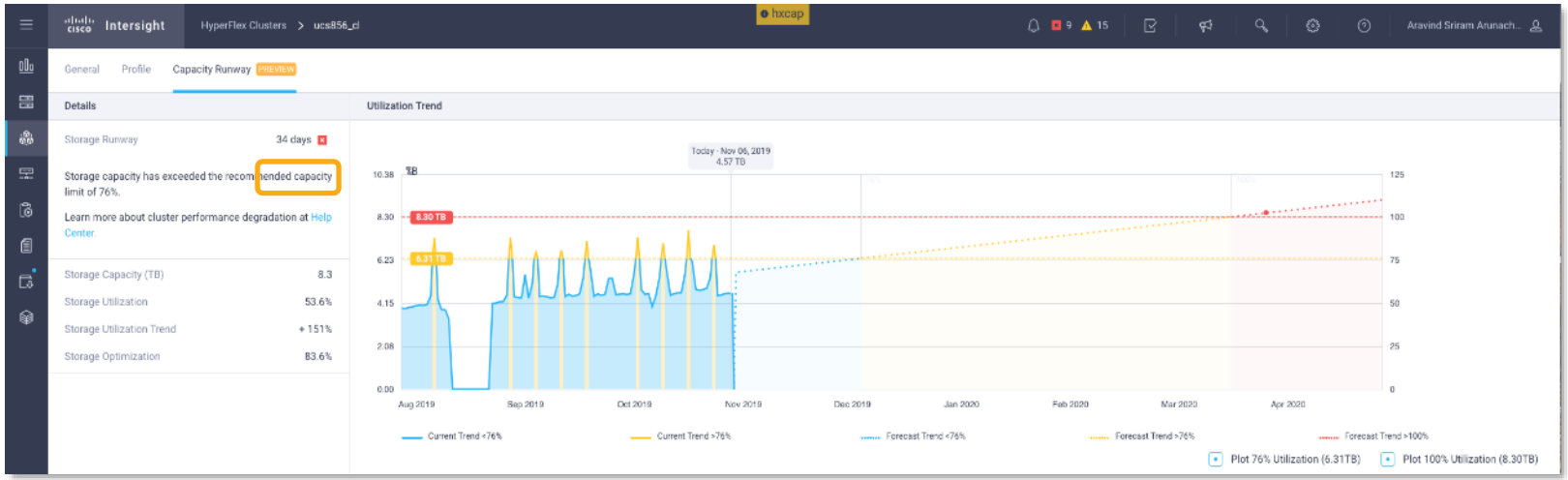
Storage Capacity Forecast and Trending

- Predict the storage capacity runway up to a year in advance
- Periodic reminders as you get closer to maximum capacity
- Insights on the last 6 months historical trends
- Forecast available 2 weeks after cluster installation
- Functionality available under Intersight Essentials license



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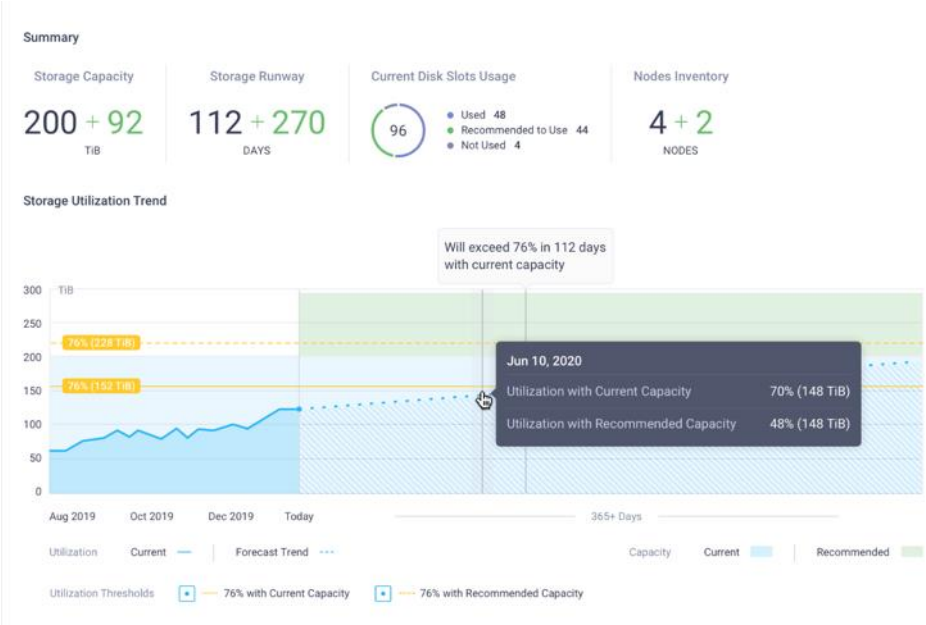
Intersight Storage Capacity Recommendations

- Get recommendations to meet the predicted increase in storage capacity
  - Number of nodes to add
  - Number of disks to add
- Increased capacity prediction to last for the next 12 or 18 months



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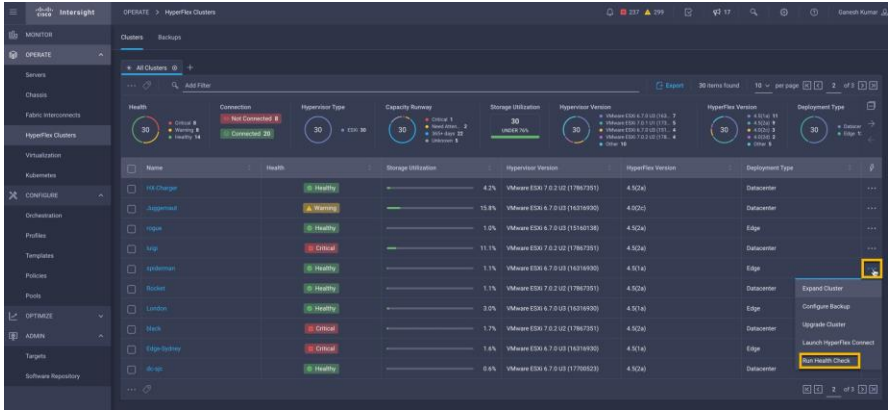
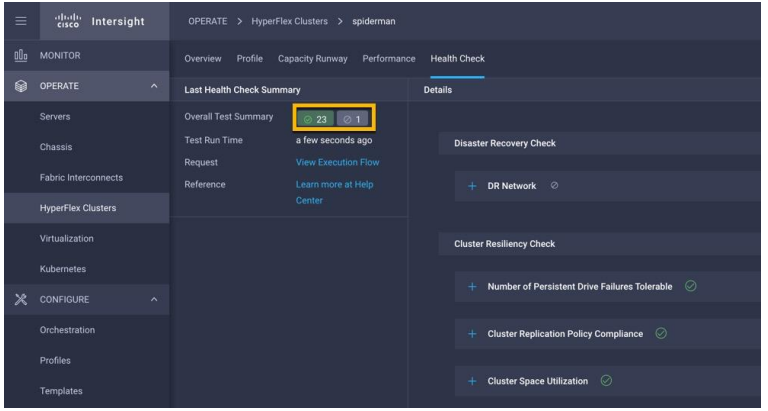
HyperFlex Health Check

- Run comprehensive health checks across the entire HX infrastructure.
- Automatic updates for newer checks
- Pick and choose specific tests or categories to run
- Run it across multiple cluster





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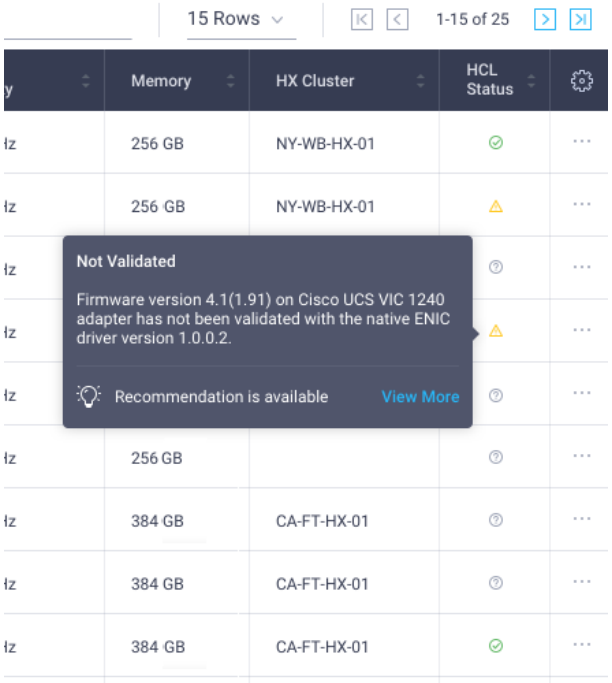
Telemetry & Analytics : HCL Check



HyperFlex + Cisco Intersight

- Automatically validate against the HCL
- Check adapter & BMC firmware and drivers against the current OS
- View status in server list view

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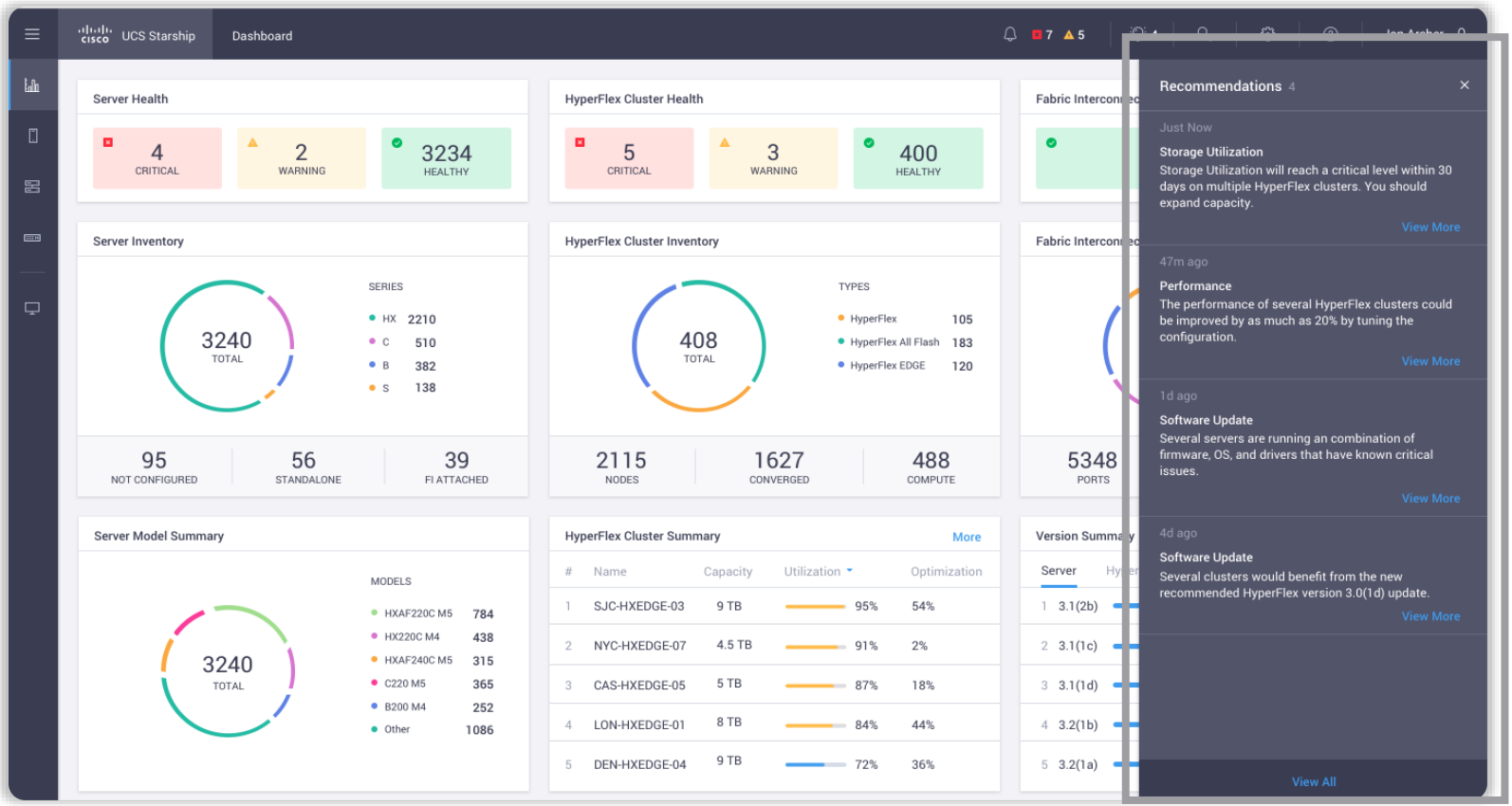
Telemetry & Analytics : Recommendation Engine



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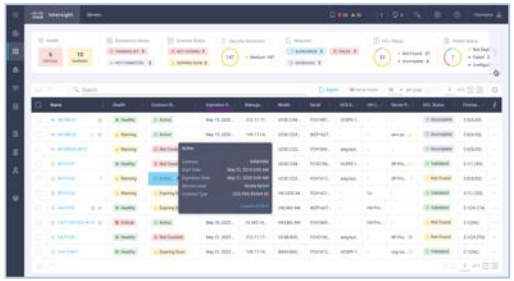
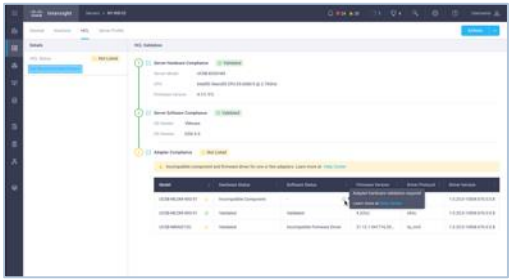
Delivering Customer Value Today

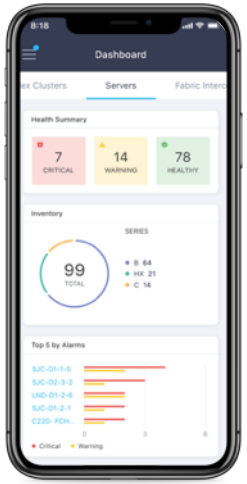
Contract status



Connected TAC



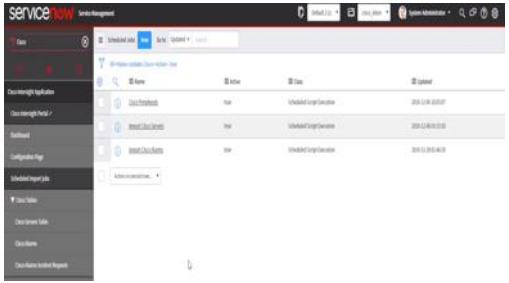
Intersight mobile app



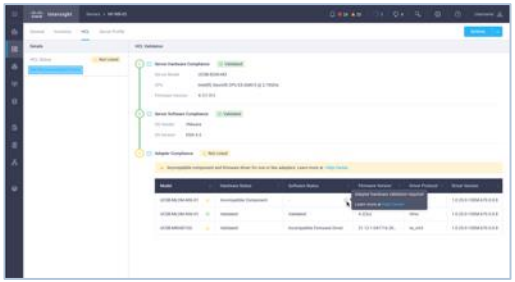
Visibility on the go

Faster time to resolution

ServiceNow integration



Security Advisories



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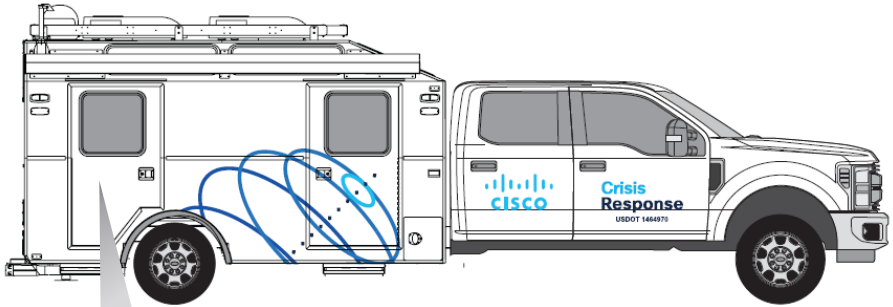
Tour the Network Emergency Response Vehicle (NERV)!

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.

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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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Learn

Cisco U.
IT learning hub that guides teams and learners toward their goals

Cisco Digital Learning
Subscription-based product, technology, and certification training

Cisco Modeling Labs
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Cisco Learning Network
Resource community portal for certifications and learning

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Cisco Training Bootcamps
Intensive team & individual automation and technology training programs

Cisco Learning Partner Program
Authorized training partners supporting Cisco technology and career certifications

Cisco Instructor-led and Virtual Instructor-led training
Accelerated curriculum of product, technology, and certification courses

Certify

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

Cisco Guided Study Groups
180-day certification prep program with learning and support

Cisco Continuing Education Program
Recertification training options for Cisco certified individuals

Here at the event? Visit us at **The Learning and Certifications lounge at the World of Solutions**

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- Book your one-on-one Meet the Engineer meeting
- Attend the interactive education with DevNet, Capture the Flag, and Walk-in Labs
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The bridge to possible

Thank you

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