

CISCO *Live!*



#CiscoLive



The bridge to possible

Cisco HyperFlex Lifecycle

Install and Operate Clusters at Scale

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BRKDCN-2089



#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 17, 2022.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKDCN-2089>



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

HyperFlex Architectural Overview

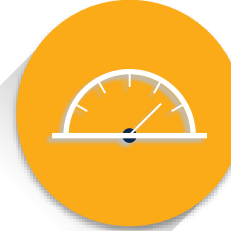
IT Operations at Scale



REDUCE COST AND
MINIMIZE COMPLEXITY



ALWAYS ON
APPLICATIONS



DELIVER APPLICATION
PERFORMANCE



MAXIMIZE STORAGE
UTILIZATION



MINIMIZE
DEPLOYMENTS TIME



SIMPLIFIED AND CENTRAL
MANAGEMENT

Cisco HyperFlex DC-with-FI

Deploy & Operate



OR



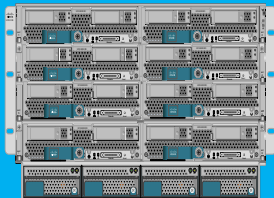
UCS Fabric Interconnects



Converged Nodes



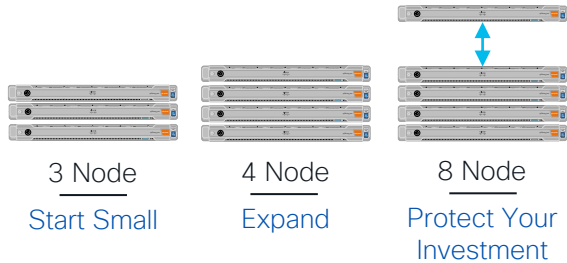
Compute Only Nodes



- ❖ 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

Cisco HyperFlex DC-no-FI

HyperFlex Datacenter no Fabric Interconnect For DC Environment



Form-Factor Options



Intersight Lifecycle 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



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



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

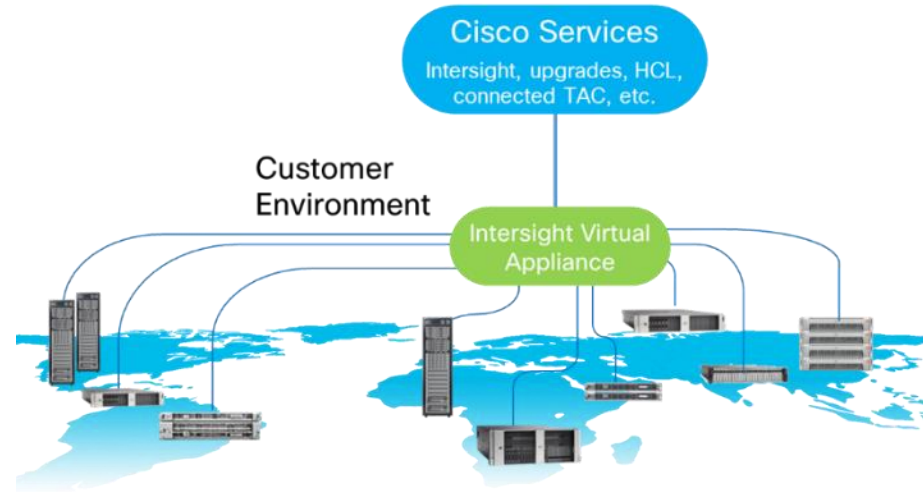
Faster Delivery

Simplified Operations

Continuous Optimization

Virtual Appliance

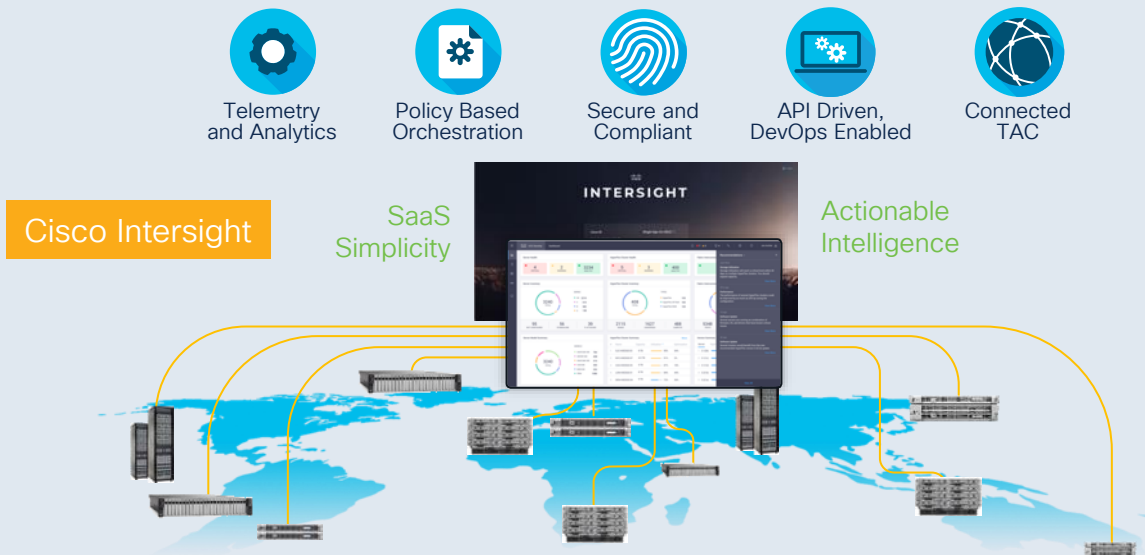
- Includes the services of SaaS version wrapped up in a virtual machine
- Addresses the concerns of customers with data locality or security requirements not met by SaaS
- Provides the customers an option to take advantage of connection to Cisco (Connected Virtual Appliance) or operate in a completely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



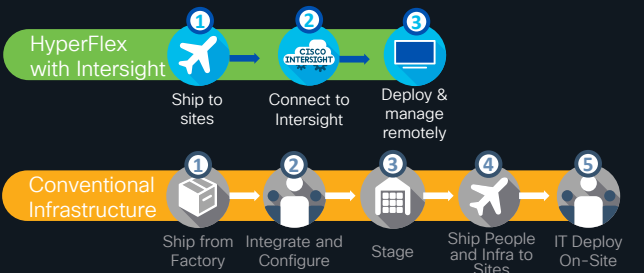


Next Generation Management

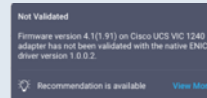
Centralized Cloud-Based Management of the Future



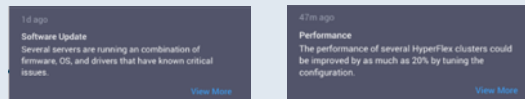
Remotely Deploy & Manage



Compatibility(HCL) Check



Recommendations Engine

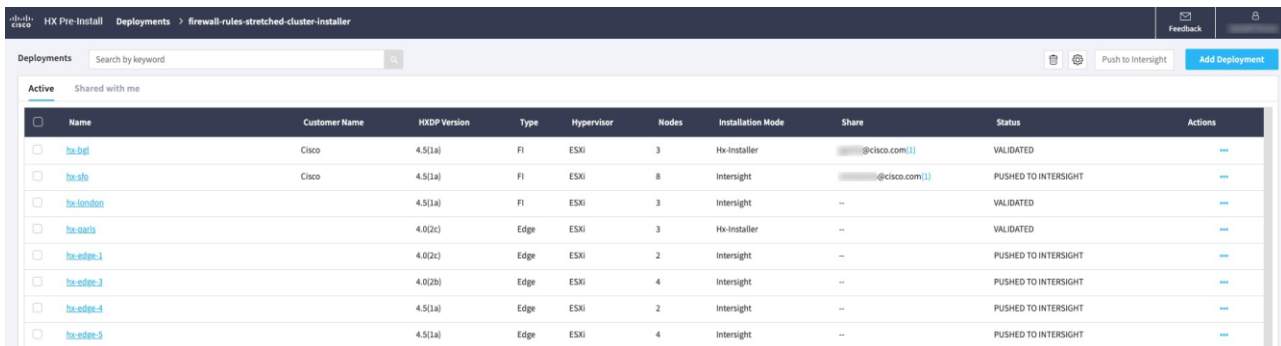


Prepare for HyperFlex Cluster Deployment



HyperFlex Pre-Install Tool

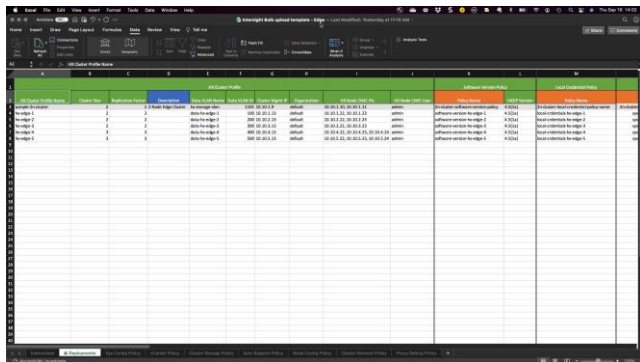
Prepare for Cluster Deploy



The screenshot shows the 'HX Pre-Install' interface with a 'Deployments' tab selected. It displays a table of active deployments with columns for Name, Customer Name, HXDP Version, Type, Hypervisor, Nodes, Installation Mode, Share, Status, and Actions. The table lists several deployments, including 'hx-bgl', 'hx-sfo', 'hx-london', 'hx-paris', 'hx-edge-1', 'hx-edge-3', 'hx-edge-4', and 'hx-edge-5'. The status for most is 'VALIDATED' or 'PUSHED TO INTERSIGHT'.

Name	Customer Name	HXDP Version	Type	Hypervisor	Nodes	Installation Mode	Share	Status	Actions
hx-bgl	Cisco	4.5(1a)	FI	ESXi	3	Hx-installer	@cisco.com(1)	VALIDATED	...
hx-sfo	Cisco	4.5(1a)	FI	ESXi	8	Intersight	@cisco.com(1)	PUSHED TO INTERSIGHT	...
hx-london		4.5(1a)	FI	ESXi	3	Intersight	...	VALIDATED	...
hx-paris		4.0(2c)	Edge	ESXi	3	Hx-installer	...	VALIDATED	...
hx-edge-1		4.0(2c)	Edge	ESXi	2	Intersight	...	PUSHED TO INTERSIGHT	...
hx-edge-3		4.0(2b)	Edge	ESXi	4	Intersight	...	PUSHED TO INTERSIGHT	...
hx-edge-4		4.5(1a)	Edge	ESXi	2	Intersight	...	PUSHED TO INTERSIGHT	...
hx-edge-5		4.5(1a)	Edge	ESXi	4	Intersight	...	PUSHED TO INTERSIGHT	...

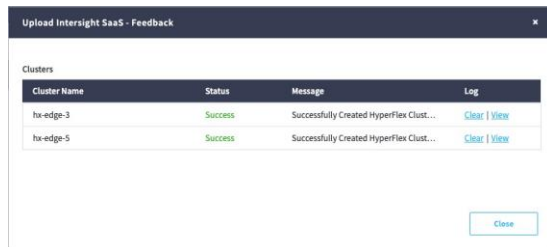
Bulk Upload Template



The screenshot shows a spreadsheet template for bulk uploading deployment information. It has columns for Cluster Name, Customer Name, HXDP Version, Type, Hypervisor, Nodes, Installation Mode, Share, Status, and Actions. The template is designed to be filled out with specific deployment details.

Cluster Name	Customer Name	HXDP Version	Type	Hypervisor	Nodes	Installation Mode	Share	Status	Actions
Cluster 1	Customer 1	4.5(1a)	FI	ESXi	3	Hx-installer	@cisco.com(1)	VALIDATED	...
Cluster 2	Customer 2	4.5(1a)	FI	ESXi	8	Intersight	@cisco.com(1)	PUSHED TO INTERSIGHT	...
Cluster 3	Customer 3	4.5(1a)	FI	ESXi	3	Intersight	...	VALIDATED	...
Cluster 4	Customer 4	4.0(2c)	Edge	ESXi	3	Hx-installer	...	VALIDATED	...
Cluster 5	Customer 5	4.0(2c)	Edge	ESXi	2	Intersight	...	PUSHED TO INTERSIGHT	...
Cluster 6	Customer 6	4.0(2b)	Edge	ESXi	4	Intersight	...	PUSHED TO INTERSIGHT	...
Cluster 7	Customer 7	4.5(1a)	Edge	ESXi	2	Intersight	...	PUSHED TO INTERSIGHT	...
Cluster 8	Customer 8	4.5(1a)	Edge	ESXi	4	Intersight	...	PUSHED TO INTERSIGHT	...

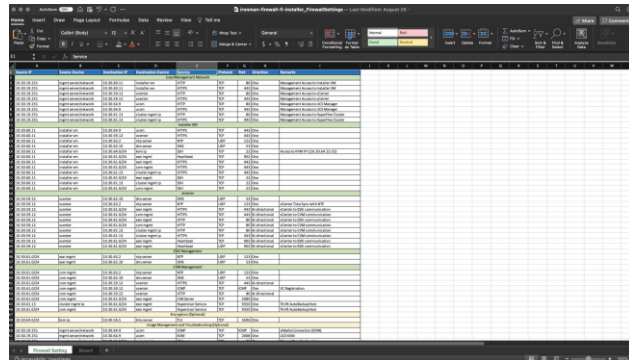
Push to Intersight



The screenshot shows a dialog box titled 'Upload Intersight SaaS - Feedback'. It displays a table with columns for Cluster Name, Status, Message, and Log. The table shows two successful uploads for clusters 'hx-edge-3' and 'hx-edge-5'.

Cluster Name	Status	Message	Log
hx-edge-3	Success	Successfully Created HyperFlex Clust...	Clear View
hx-edge-5	Success	Successfully Created HyperFlex Clust...	Clear View

Firewall Rules



The screenshot shows the 'Firewall Rules' configuration interface. It displays a table with columns for Rule Name, Action, Source, Destination, and Status. The table lists several rules, including 'Rule 1', 'Rule 2', 'Rule 3', 'Rule 4', 'Rule 5', 'Rule 6', 'Rule 7', 'Rule 8', 'Rule 9', 'Rule 10', 'Rule 11', 'Rule 12', 'Rule 13', 'Rule 14', 'Rule 15', 'Rule 16', 'Rule 17', 'Rule 18', 'Rule 19', 'Rule 20', 'Rule 21', 'Rule 22', 'Rule 23', 'Rule 24', 'Rule 25', 'Rule 26', 'Rule 27', 'Rule 28', 'Rule 29', 'Rule 30', 'Rule 31', 'Rule 32', 'Rule 33', 'Rule 34', 'Rule 35', 'Rule 36', 'Rule 37', 'Rule 38', 'Rule 39', 'Rule 40', 'Rule 41', 'Rule 42', 'Rule 43', 'Rule 44', 'Rule 45', 'Rule 46', 'Rule 47', 'Rule 48', 'Rule 49', 'Rule 50', 'Rule 51', 'Rule 52', 'Rule 53', 'Rule 54', 'Rule 55', 'Rule 56', 'Rule 57', 'Rule 58', 'Rule 59', 'Rule 60', 'Rule 61', 'Rule 62', 'Rule 63', 'Rule 64', 'Rule 65', 'Rule 66', 'Rule 67', 'Rule 68', 'Rule 69', 'Rule 70', 'Rule 71', 'Rule 72', 'Rule 73', 'Rule 74', 'Rule 75', 'Rule 76', 'Rule 77', 'Rule 78', 'Rule 79', 'Rule 80', 'Rule 81', 'Rule 82', 'Rule 83', 'Rule 84', 'Rule 85', 'Rule 86', 'Rule 87', 'Rule 88', 'Rule 89', 'Rule 90', 'Rule 91', 'Rule 92', 'Rule 93', 'Rule 94', 'Rule 95', 'Rule 96', 'Rule 97', 'Rule 98', 'Rule 99', 'Rule 100'.

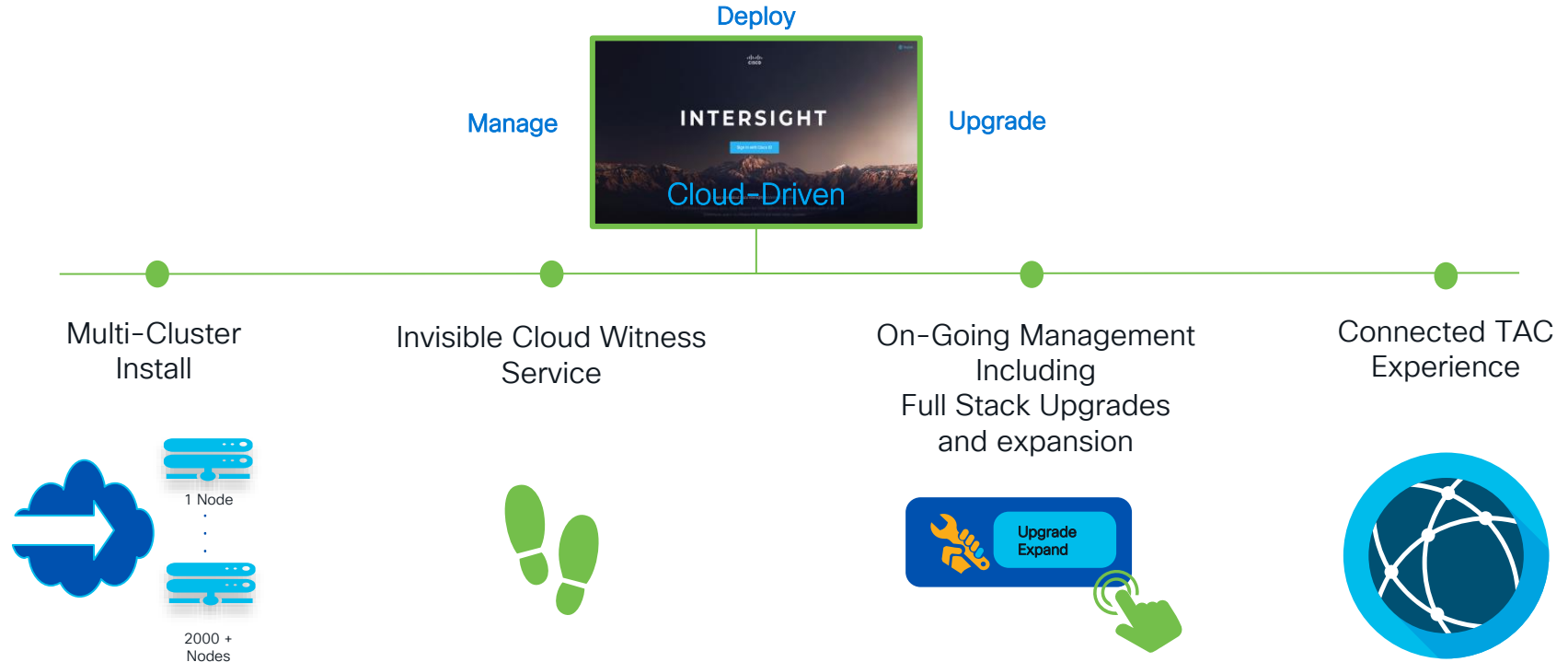
Rule Name	Action	Source	Destination	Status
Rule 1	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 2	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 3	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 4	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 5	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 6	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 7	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 8	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 9	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 10	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 11	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 12	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 13	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 14	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 15	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 16	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 17	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 18	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 19	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 20	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 21	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 22	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 23	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 24	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 25	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 26	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 27	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 28	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 29	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 30	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 31	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 32	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 33	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 34	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 35	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 36	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 37	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 38	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 39	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 40	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 41	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 42	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 43	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 44	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 45	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 46	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 47	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 48	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 49	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 50	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 51	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 52	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 53	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 54	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 55	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 56	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 57	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 58	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 59	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 60	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 61	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 62	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 63	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 64	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 65	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 66	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 67	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 68	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 69	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 70	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 71	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 72	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 73	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 74	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 75	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 76	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 77	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 78	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 79	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 80	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 81	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 82	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 83	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 84	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 85	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 86	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 87	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 88	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 89	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 90	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 91	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 92	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 93	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 94	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 95	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 96	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 97	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 98	Deny	10.10.10.10	10.10.10.10	Enabled
Rule 99	Allow	10.10.10.10	10.10.10.10	Enabled
Rule 100	Deny	10.10.10.10	10.10.10.10	Enabled

HyperFlex Lifecycle at Scale



HyperFlex on Intersight

With Full-Life Cycle Management



Industry Leading Cloud Deployment Model

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



HX Admin
San Jose, CA

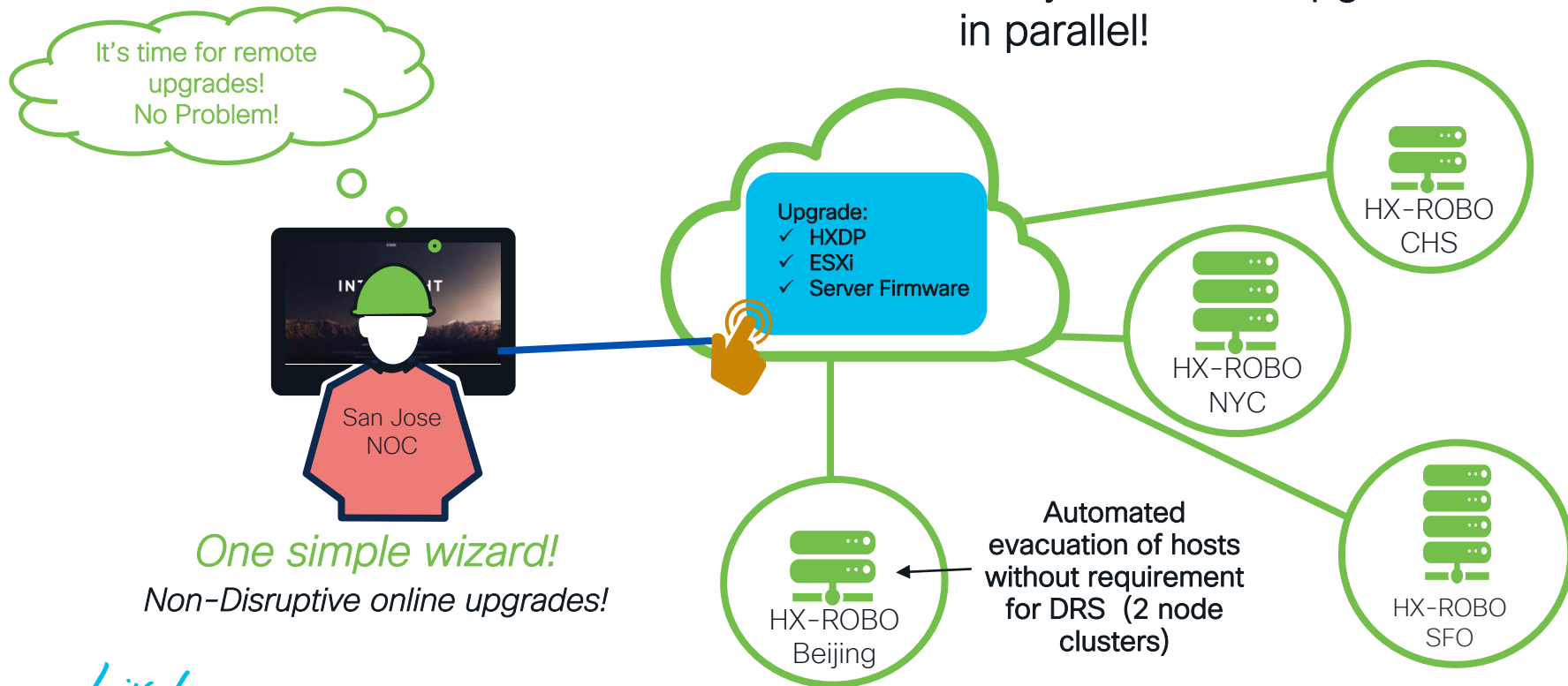


Don't Worry! You have Cisco Intersight!

Simple Worldwide HyperFlex Upgrades

From Cisco Intersight

Choose one or many clusters to upgrade in parallel!



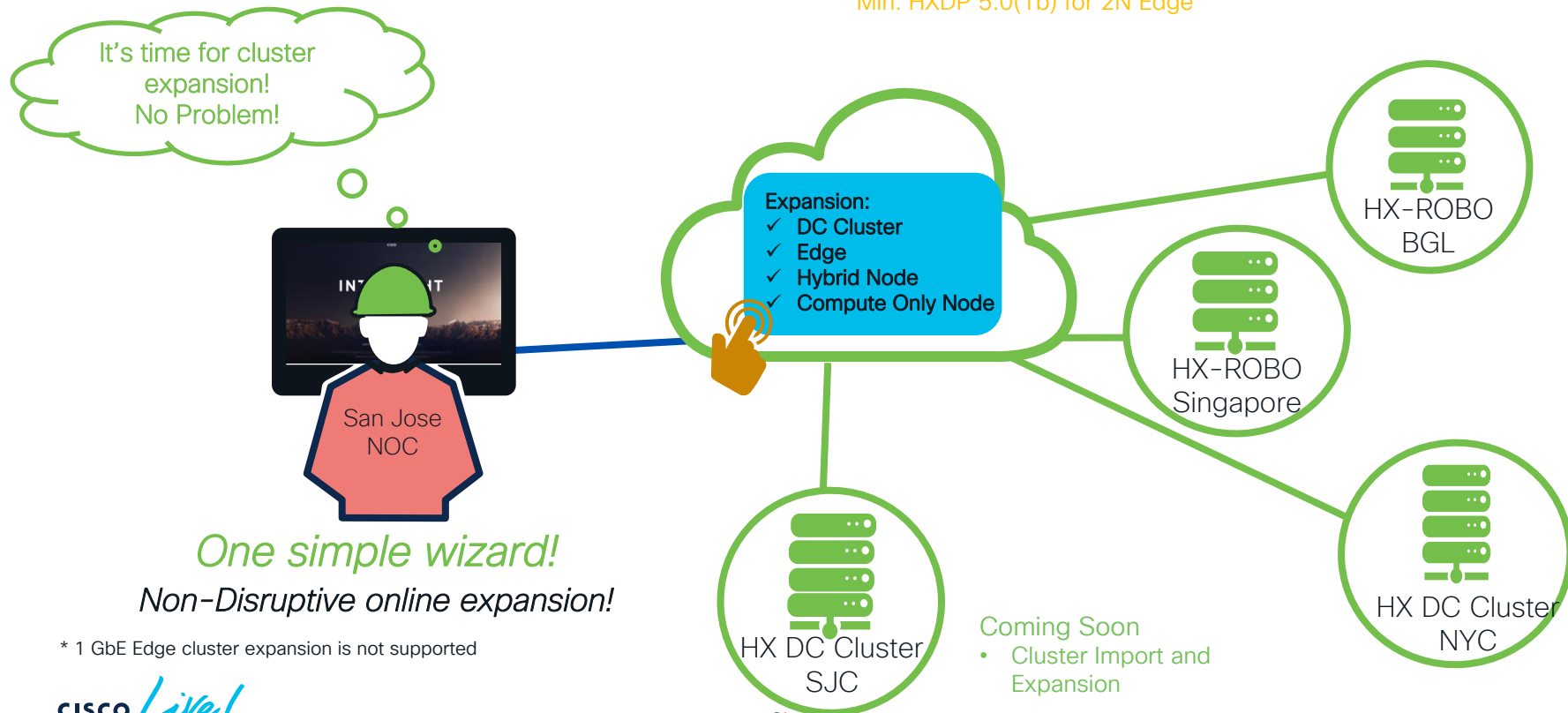
Simple Worldwide HyperFlex Expansion

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

CISCO *Live!*

Cisco HyperFlex

Intelligent Manageability at scale
from Intersight



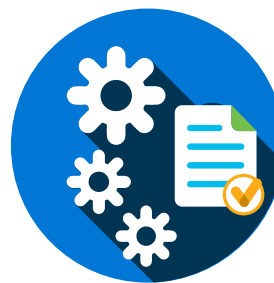
Cisco Intersight + Connected TAC real-world example



Case opened:
XXXXXX244



Diagnostic data
automatically collected



Diagnostic results
automatically gathered



Firmware upgrade
identified to resolve
known issue

01:25PM



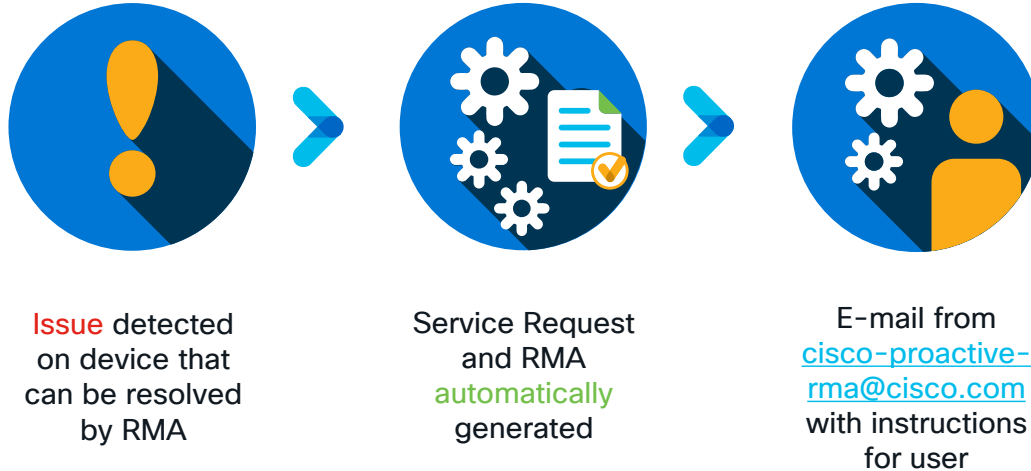
+12 Minutes



+16 Minutes

Total: 28 minutes
to diagnose issue

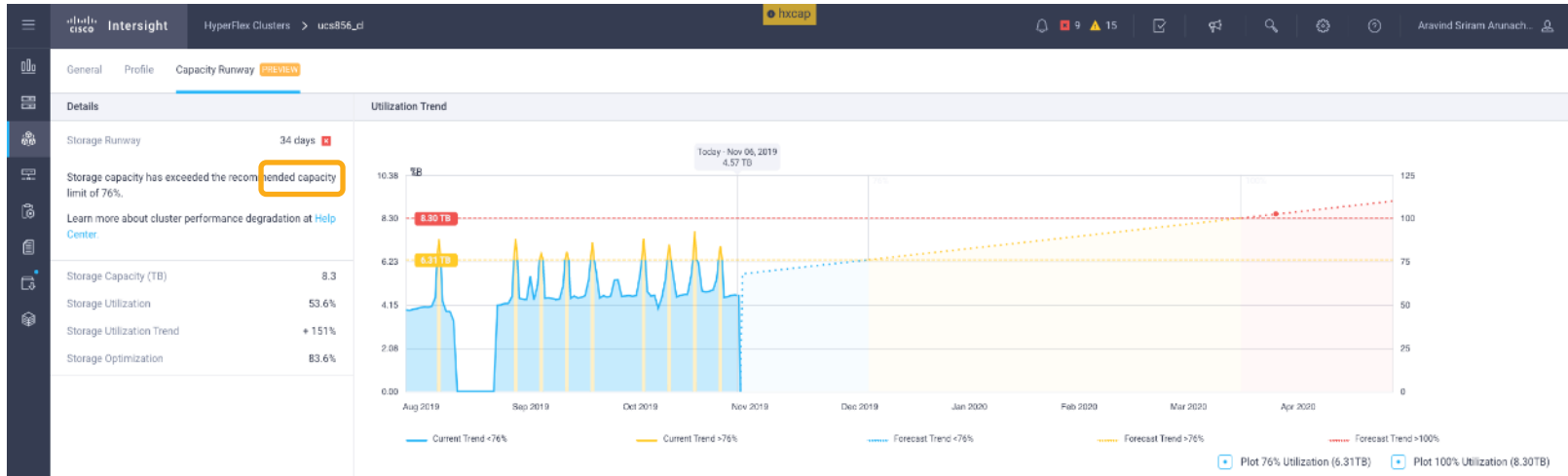
Cisco Intersight Proactive Support



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

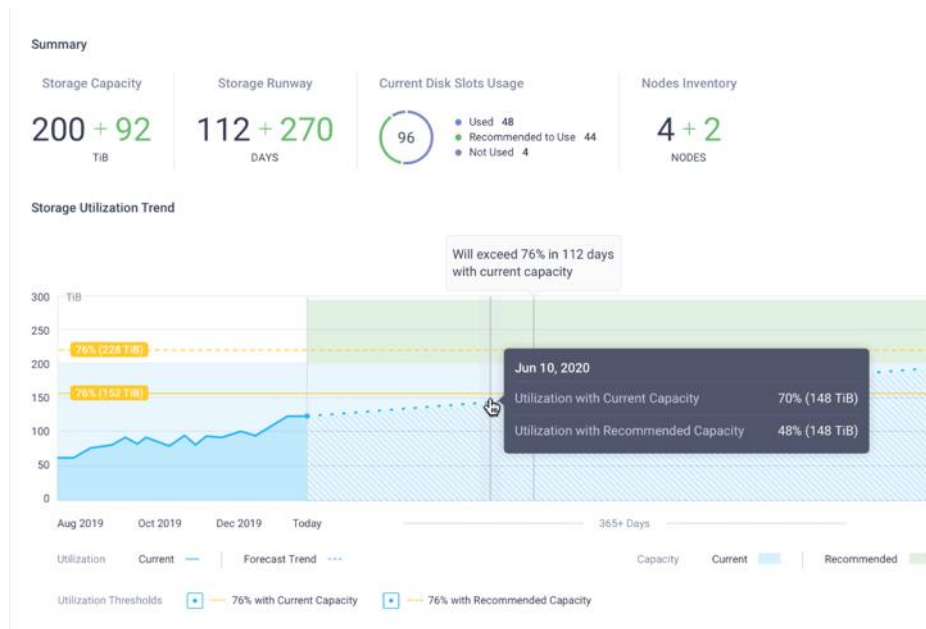
Storage Capacity Forecast and Trending

- 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



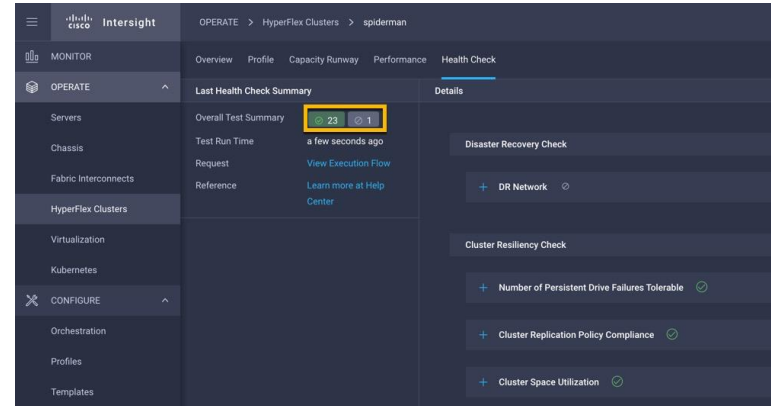
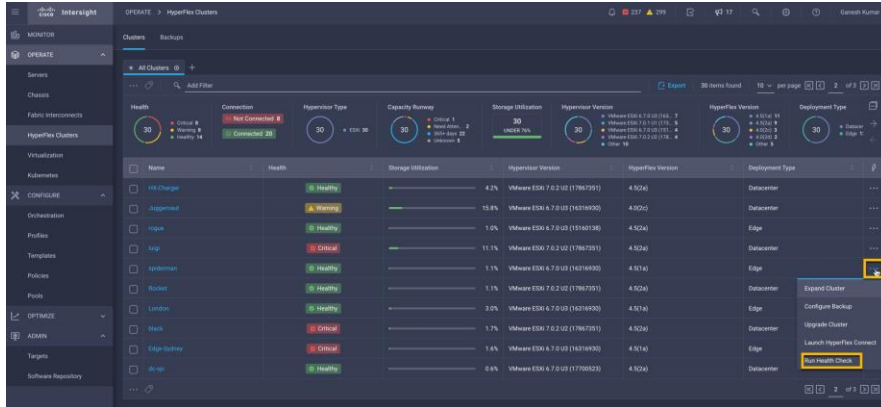
Intersight Storage Capacity Recommendations

- 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



HyperFlex Health Check

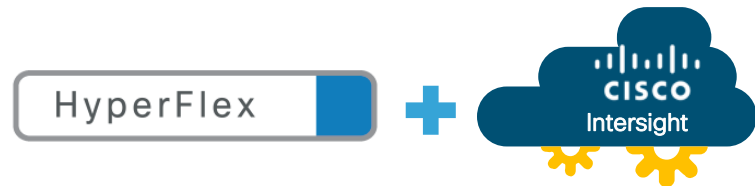
- Run comprehensive health checks across the entire HX infrastructure.
- Automatic updates for newer checks
- Pick and choose specific tests or categories to run
- Run it across multiple cluster



Telemetry & Analytics : HCL Check

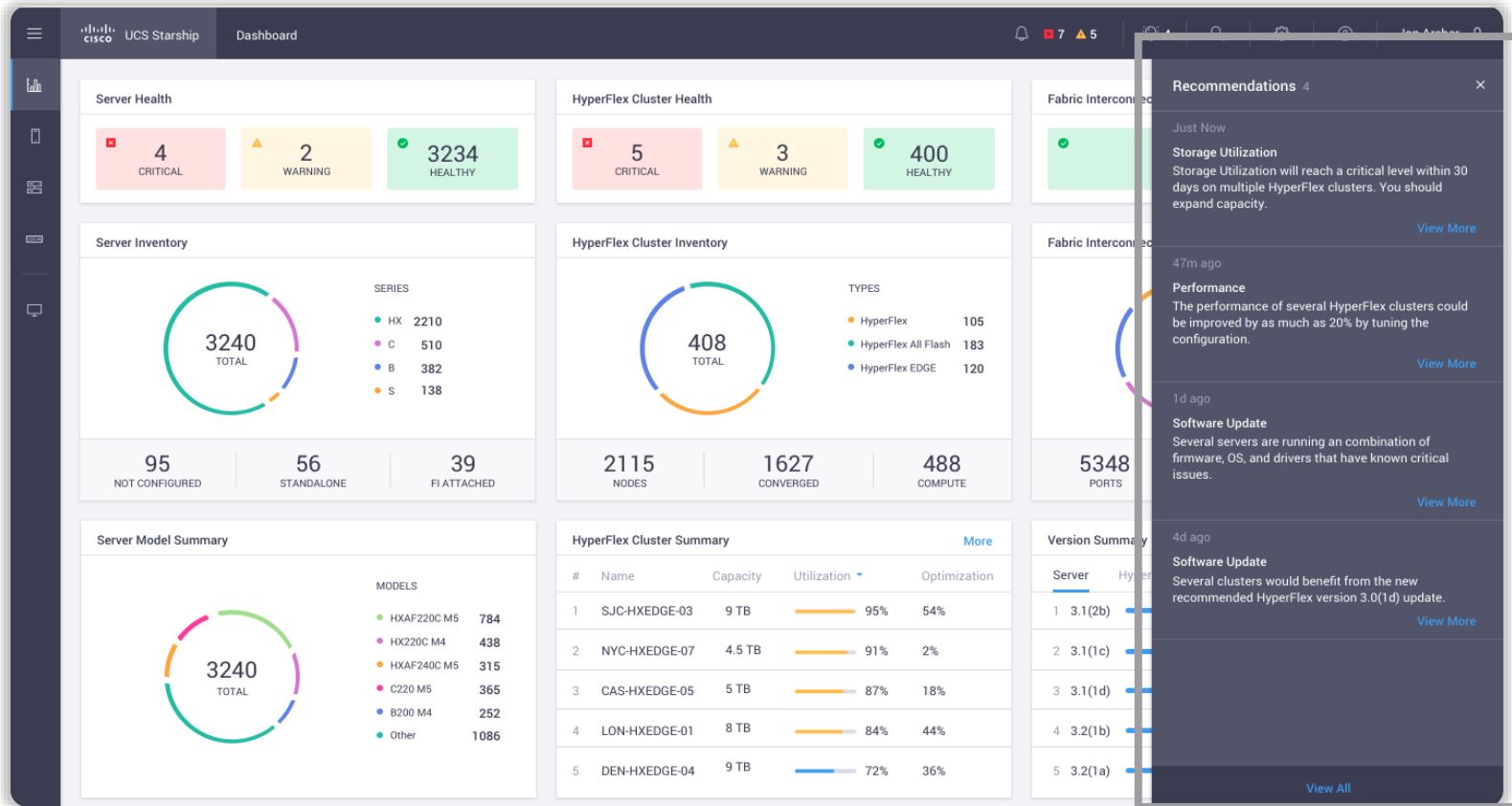
15 Rows ▾ ⏪ ⏩ 1-15 of 25 ⏪ ⏩

	Memory	HX Cluster	HCL Status	
iz	256 GB	NY-WB-HX-01	✔	...
iz	256 GB	NY-WB-HX-01	⚠	...
iz	<div>Not Validated</div> <div>Firmware version 4.1(1.91) on Cisco UCS VIC 1240 adapter has not been validated with the native ENIC driver version 1.0.0.2.</div> <div>💡 Recommendation is available View More</div>		⊙	...
iz			⚠	...
iz	256 GB		⊙	...
iz	384 GB	CA-FT-HX-01	⊙	...
iz	384 GB	CA-FT-HX-01	⊙	...
iz	384 GB	CA-FT-HX-01	✔	...



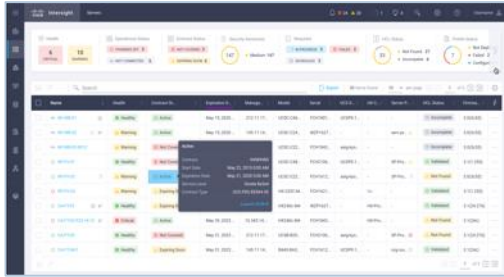
- Automatically validate against the HCL
- Check adapter & BMC firmware and drivers against the current OS
- View status in server list view

Telemetry & Analytics : Recommendation Engine

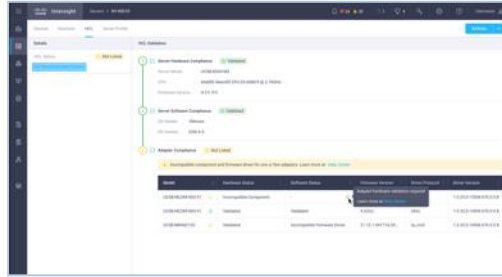


Delivering Customer Value Today

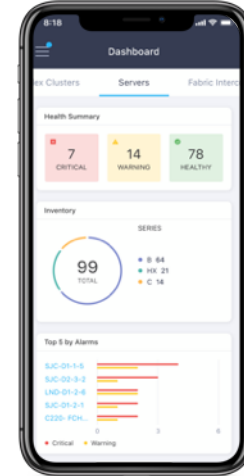
Contract status



Connected TAC



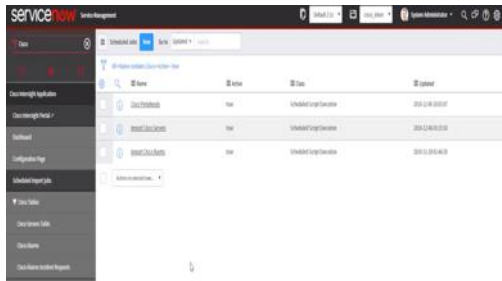
Intersight mobile app



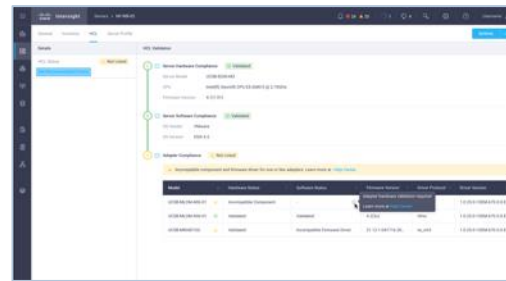
Visibility on the go

Faster time to resolution

ServiceNow integration



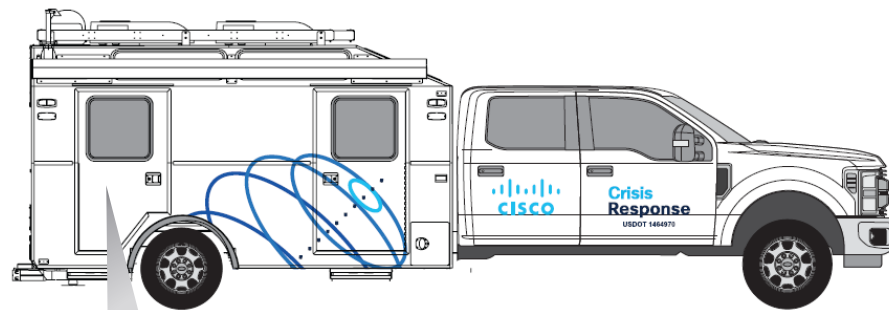
Security Advisories



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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The bridge to possible

Thank you

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