

Understanding Hyperfabric

CISCO Live !

A Groundbreaking Cloud-Controlled Data Center Network Solution

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PTME

Cisco Webex App

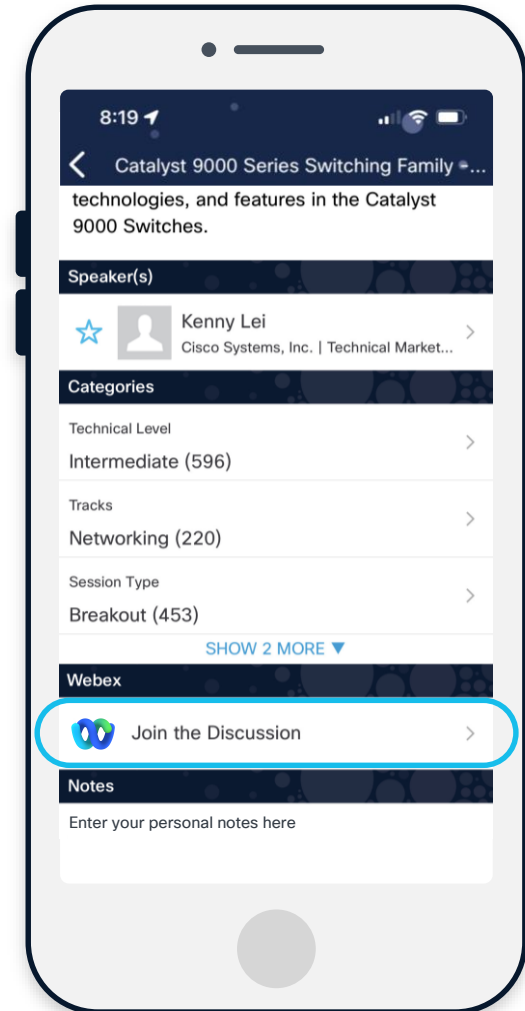
Questions?

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 13, 2025.



<https://ciscolive.ciscoevents.com/ciscolivebot/#BRKDCN-2944>

Agenda

- 01 Introducing Hyperfabric
- 02 Live Demo
- 03 How it works
- 04 Day 2 Operations
- 05 Conclusion

Cisco Nexus Hyperfabric

Data center network fabric-as-a-service

- ✓ Design, deploy and operate on-premises fabrics located anywhere
- ✓ Easy enough for IT generalists, application and DevOps teams
- ✓ Outcome driven by a purpose-built vertical stack



Design



Order



Deploy



Validate



Monitor



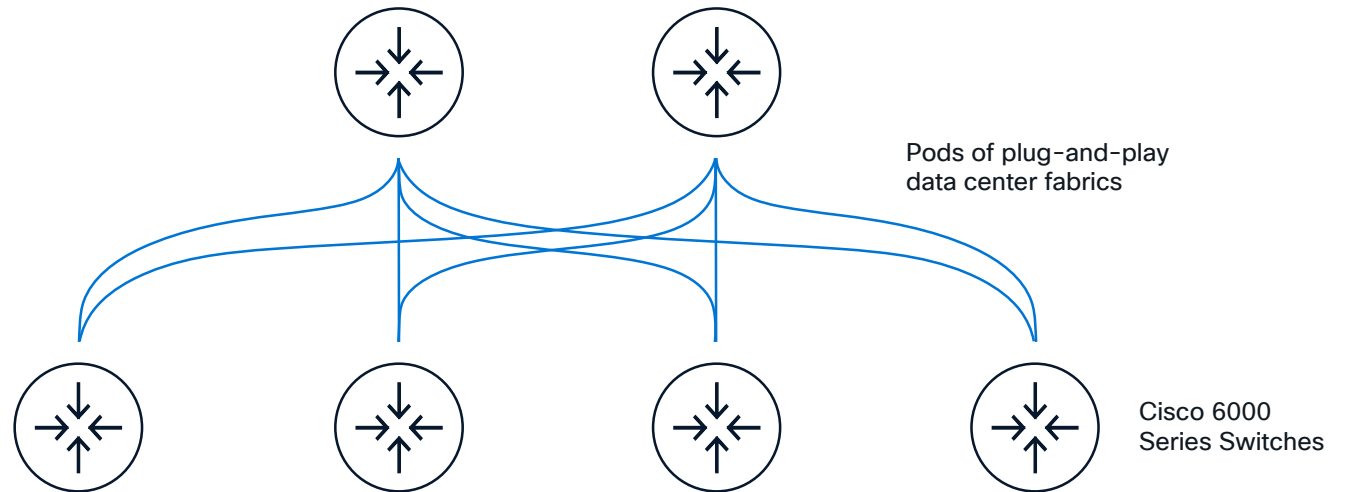
Scale



Collaborate



Cisco Hyperfabric



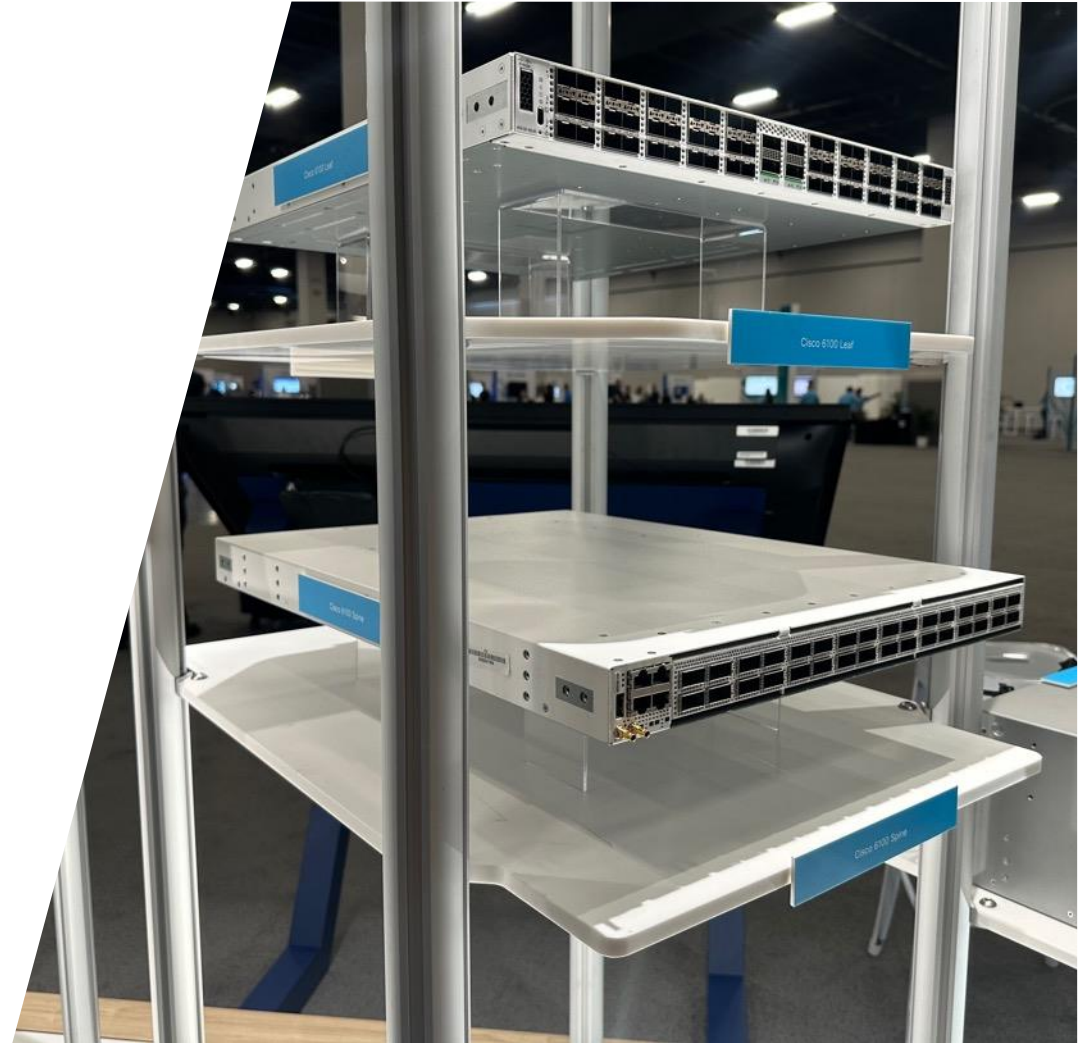
Cisco 6000 series switches

Leaf: HF6100-60L4D

- 4x 100/400GbE QSFP56-DD (16x 100G breakout)
- 60x 10/25/50GbE SFP56

Spine/Leaf: HF6100-32D

- 32x 100/400GbE QSFP56-DD
- 128x 100GbE via 400:100 breakout



A fabric that scales up... and down

Cisco HF6100-60L4D (Q200)

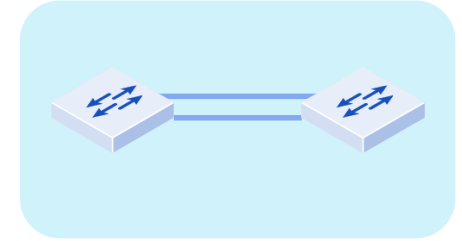


- 4x 100/400GbE QSFP56-DD (16x via 100GbE breakout)
- 60x 10/25/50GbE SFP56



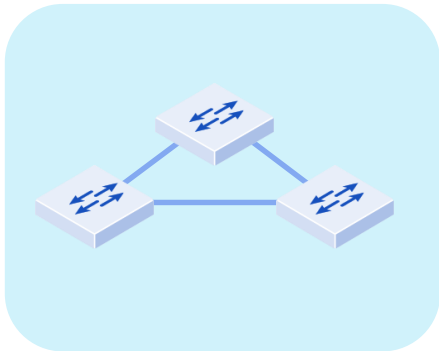
“A Fabric of One”

- No dedicated fabric links
- 4x 40/100/400GbE
- 60x 10/25/50GbE



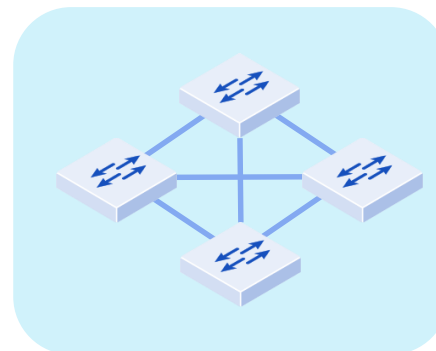
2-Switch Fabric (Remote Fabric)

- Fabric Links: 2 x 40/100/400GbE
- 4 x 40/100/400GbE
- 120 x 10/25/50GbE



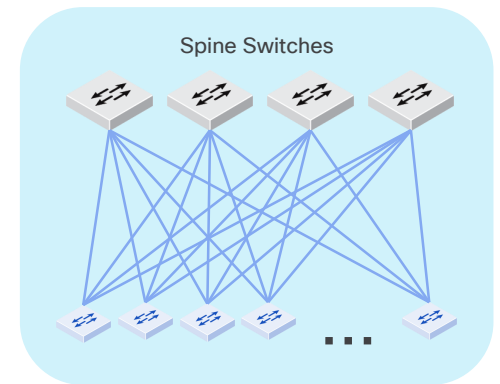
3-Switch Fabric

- Fabric Links: 3 x 40/100/400GbE
- 6 x 40/100/400GbE
- 180 x 10/25/50GbE



4-Switch Fabric

- Fabric Links: 6 x 40/100/400GbE
- 4 x 40/100/400GbE
- 240 x 10/25/50GbE



Leaf-Spine Fabric

Grow your fabrics in-service (without rearchitecting)

Spine: Cisco HF6100-32D (Q200)



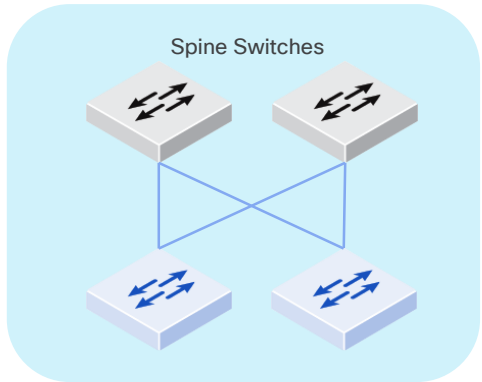
- 32x 100/400GbE QSFP56-DD
- 128x 100GbE via 400:100 breakout

Leaf: Cisco HF6100-60L4D (Q200)



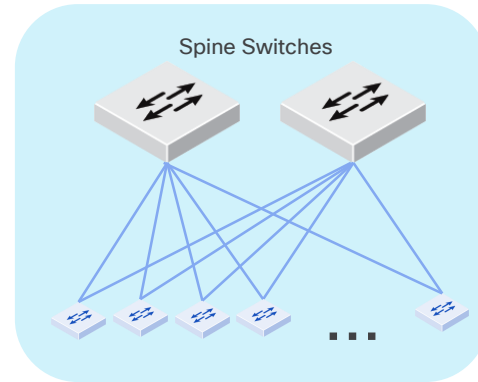
- 4x 100/400GbE QSFP56-DD (16x via 100GbE breakout)
- 60x 10/25/50GbE SFP56

Spine switches support host and gateway port modes



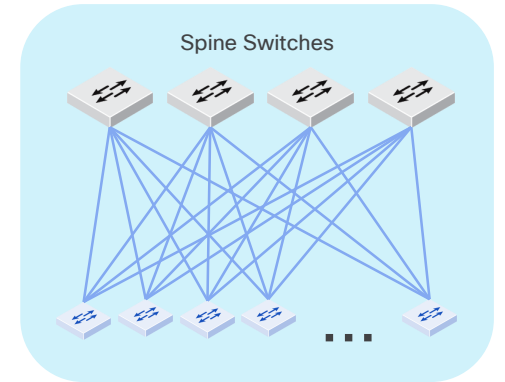
2x Spine - 2x Leaf (min)

- 40/100/400GbE Fabric Links
- 120 x 10/25/50GbE Ports
- 3.75:1 to 1.87:1 Max Oversubscription



2x Spine - 2-32x Leaf (typical)

- 40/100/400GbE Fabric Links
- 120-1920 x 10/25/50GbE Ports
- 3.75:1 to 1.87:1 Max Oversubscription

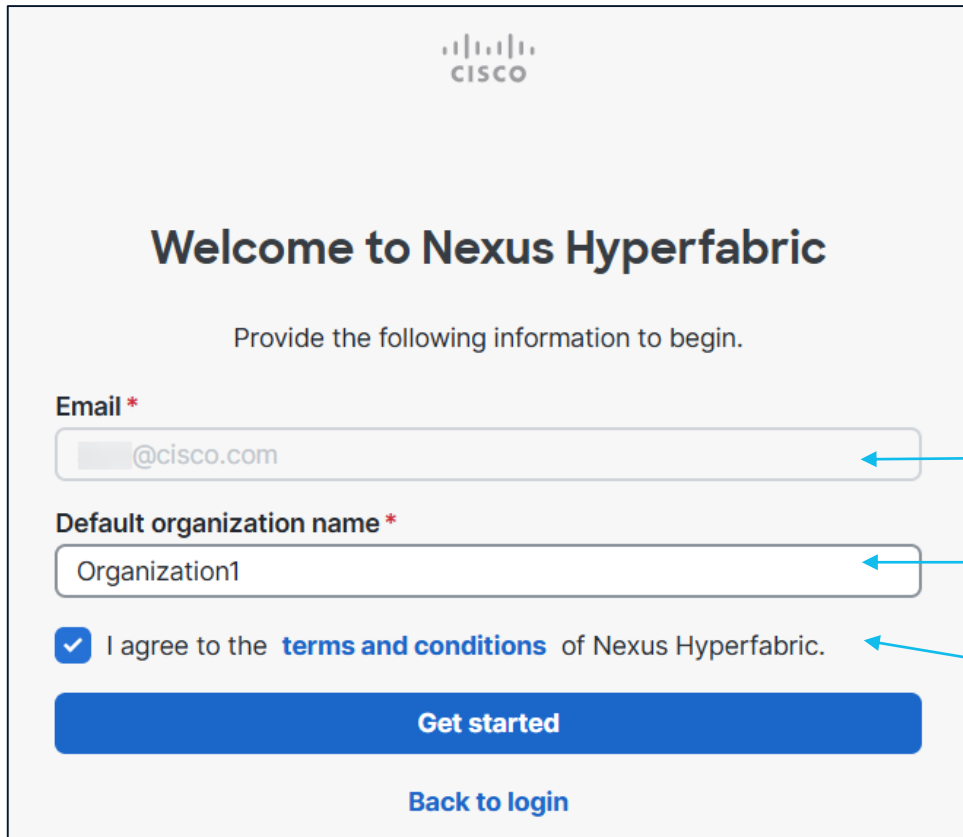



4x Spine - 8-32x Leaf (max)

- 40/100/400GbE Fabric Links
- 480-1920 x 10/25/50GbE Ports
- 1.87:1 Max Oversubscription

Login to Hyperfabric

- <https://hyperfabric.cisco.com/>




CISCO

Welcome to Nexus Hyperfabric

Provide the following information to begin.

Email *

Default organization name *

I agree to the [terms and conditions](#) of Nexus Hyperfabric.

Get started

[Back to login](#)

← Your CCO ID

← Your first organization name

← Check the agreement

Note: you cannot delete the organization once it's created!

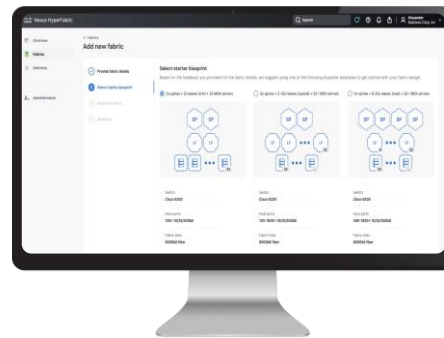
Hyperfabric Demo 1

Complete Lifecycle Experience



Cloud-managed controller

- Scalable, globally distributed multi-tenant cloud service
- GUI, mobile, and API access
- **On-site** for remote installation



Cloud-managed switch

- Cisco 6000 series
- Boots from cloud
- Full visibility & control from the cloud



Bill of Materials (BOM)

BOM (total number of switches and optics)

BOM calculations Estimate ID requests Assembly list

Last updated Apr 21, 2025 11:10:44 am Request estimate ID Export CSV Print

Product ID (PID)	Description	Qty deployed	Qty required	Total
HF6100-32D-D	Hyperfabric Switch, 32x400Gbps QSFP-DD Configurable	0	2	2
PSU1.4KW-ACPE <small>Port side Exhaust</small>	1400W AC Power Module with Port-side Exhaust	0	4	4
FAN-1RU-PE-V2 <small>Port side Exhaust</small>	Cisco 8000 Series 1RU Fan with Port-side Air Exhaust Ver 2	0	12	12
QDD-400G-SR4.2-BD	400GBASE-SR4.2 QSFP-DD BIDI module	0	4	4

Product ID (PID)	Description	Qty deployed	Qty required	Total
HF6100-32D-SVC-D	Cisco Nexus Hyperfabric Switch HF6100-32D SaaS Subscription	0	0	1
HF6100-32D-SVC-E	HF6100-32D Essentials Service	0	0	2

The screenshot shows the Cisco Cloud Commerce Estimates interface. The main content area displays an estimate for 'Hyperfabric Switch, 32x400Gbps QSFP-DD Configurable' with a quantity of 21. A blue arrow points from this item in the screenshot to the 'BOM calculations' table in the adjacent image.

Connect to CCW to generate Estimate ID

Assembly list BOM calculations

Search device name Status 4 results

Per switch inventory information

TME-fab1-HF6100-60L4D-leaf1 Needed

Product ID (PID): HF6100-60L4D

4 x 100/400GbE QSFP56-DD16x via 100GbE breakout, 60+ 10/25/50GbE SFP56

Status: Needed

Serial number: -

Required parts

Power Supply (2)

Item	Product ID (PID)	Status	Serial number	Quantity
1500W AC Power Supply	CSK-PWR-1500WAC	Needed	-	2

Fan tray (6)

Item	Product ID (PID)	Status	Serial number	Quantity
Catalyst 9500X front to back (port-side intake) cooling fan	C9500X-FAN-1U-R	Needed	-	6

Optics for assigned ports (2)

Item	Product ID (PID)	Status	Serial number	Quantity
Ethernet1_31	QDD-400G-SR4.2-BD	Needed	-	1
Ethernet1_32	QDD-400G-SR4.2-BD	Needed	-	1

TME-fab1-HF6100-60L4D-leaf2 Needed

TME-fab1-HF6100-32D-spine1 Needed

TME-fab1-HF6100-32D-spine2 Needed

Self-Documenting Fabric

Edit port connection for tsim-fabric-leaf0

LF1

tsim-fabric-leaf0

Port interface
Ethernet1_1

Port role
Fabric

Select optics

Pluggable
QDD-400-AOC15M

Plug type
N/A

Cable type
AOC

To switch

tsim-fabric-spine0

Port interface
Ethernet1_1

Port role
Fabric

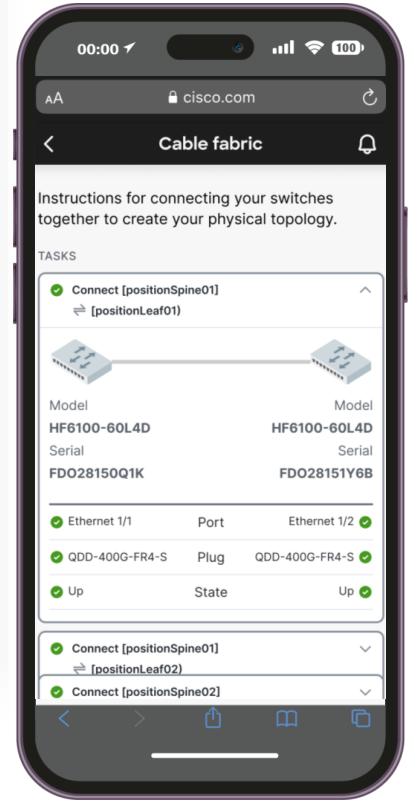
400G N/A 400G DAC 9 results [Reset all](#)

PID	Plug type	Max speed	Cable type	Length	Description
<input type="radio"/> QDD-2Q200-CU3M	N/A	400G	DAC	3M	Preterminated breakout cable
<input type="radio"/> QDD-400-CU1M	N/A	400G	DAC	1M	Preterminated cable
<input type="radio"/> QDD-400-CU2.5M	N/A	400G	DAC	2.5M	Preterminated cable
<input type="radio"/> QDD-400-CU2M	N/A	400G	DAC	2M	Preterminated cable
<input type="radio"/> QDD-400-CU3M	N/A	400G	DAC	3M	Preterminated cable
<input type="radio"/> QDD-4ZQ100-CU1M	N/A	400G	DAC	1M	Preterminated breakout cable
<input type="radio"/> QDD-4ZQ100-CU2.5M	N/A	400G	DAC	1.5M	Preterminated breakout cable
<input type="radio"/> QDD-4ZQ100-CU2M	N/A	400G	DAC	2M	Preterminated breakout cable
<input type="radio"/> QDD-4ZQ100-CU3M	N/A	400G	DAC	3M	Preterminated breakout cable

[Cancel](#) [Save](#)

Fabric connections [Export CSV](#)

<input type="checkbox"/> Source Switch (Port)	Source Connector	Source Plug Type	Role	Source Pluggable (PID)	Max distance	Cable Type	Destination Pluggable (PID)	Destination Plug Type	Destination Connector	Destination Switch (Port)
<input type="checkbox"/> CiscoLive-Demo-HF6100-60L4D-leaf1 (Ethernet1_31)	QSFP-DD	N/A	Fabric	QDD-400-AOC1M	1	AOC	QDD-400-AOC1M	N/A	QSFP-DD	CiscoLive-Demo-HF6100-32D-spine1 (Ethernet1_1)
<input type="checkbox"/> CiscoLive-Demo-HF6100-60L4D-leaf1 (Ethernet1_32)	QSFP-DD	N/A	Fabric	QDD-400-AOC1M	1	AOC	QDD-400-AOC1M	N/A	QSFP-DD	CiscoLive-Demo-HF6100-32D-spine2 (Ethernet1_1)
<input type="checkbox"/> CiscoLive-Demo-HF6100-60L4D-leaf2 (Ethernet1_31)	QSFP-DD	N/A	Fabric	QDD-400-AOC1M	1	AOC	QDD-400-AOC1M	N/A	QSFP-DD	CiscoLive-Demo-HF6100-32D-spine1 (Ethernet1_2)
<input type="checkbox"/> CiscoLive-Demo-HF6100-60L4D-leaf2 (Ethernet1_32)	QSFP-DD	N/A	Fabric	QDD-400-AOC1M	1	AOC	QDD-400-AOC1M	N/A	QSFP-DD	CiscoLive-Demo-HF6100-32D-spine2 (Ethernet1_2)



CiscoLive-Demo

Summary Issues Deployment Event viewer **On-site**

Shareable link

Shareable link

Easy to share quick response code containing the url to navigate to the Nexus Hyperfabric on-site mobile friendly site.

QR CODE

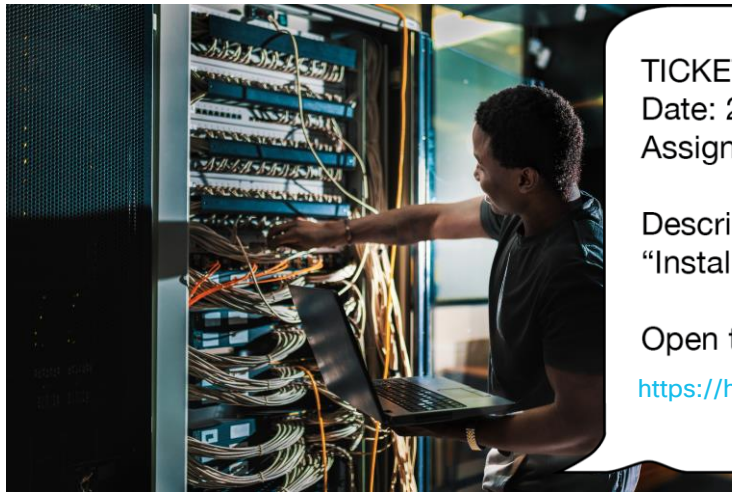
URL

<https://hyperfabric.cisco.com/on-site/org/36560975-45b3-38b4-6d1b-b340a9887489/fabric/db76d913-15ca-445c-a64b-6527012e6191/task/> [Copy](#)

Breaks & Fixes **1**

Interface for remote hands

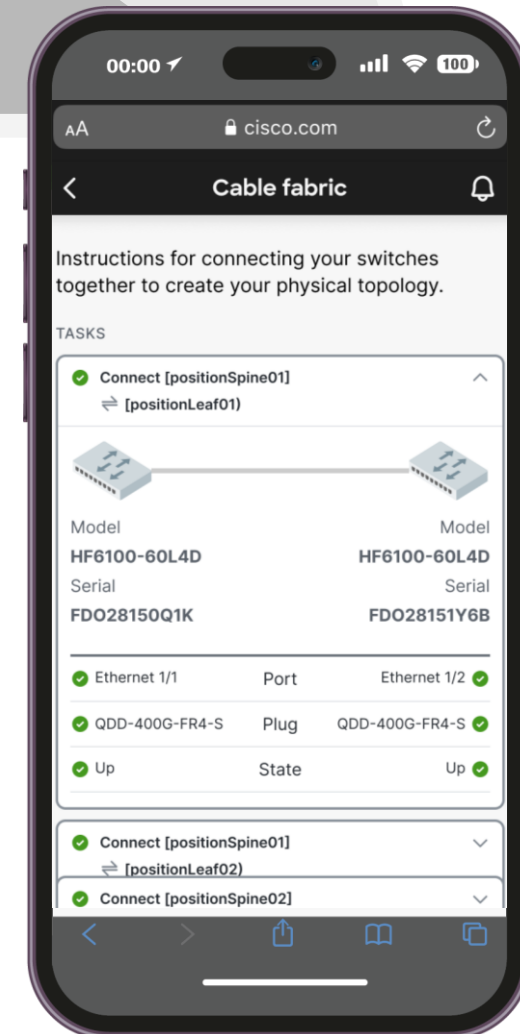
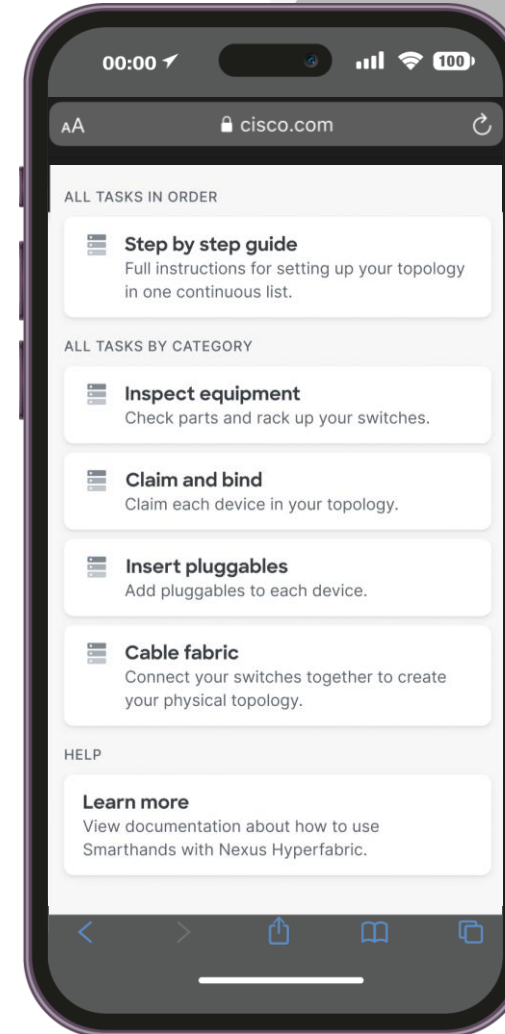
- *Share workflow and status updates with remote hands*
- *Reduce deployment time from weeks to hours*
- *Coordinate multiple installers*



TICKET OPEN: 093872632
Date: 2023-05-01 / 16:43Z
Assigned to: jwalsh@colosp.net

Description:
“Install leaf switch in pod00-SJC01”

Open this link to complete MOP:
<https://hyperfabric.cisco.com/rhui/?job=ad62dae672>



Software Lifecycle Management

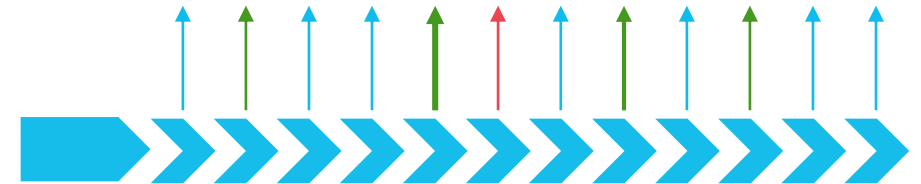
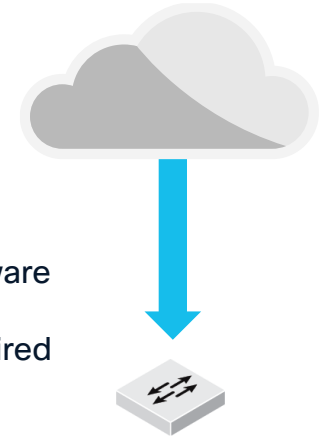
Pre-release Image · Subject to change

Device	Upgrade progress	Running version	Switch status
aqua3-L1		20250114	●
aqua3-L2		20250114	●
aqua3-S1		20250114	●
aqua3-S2		20250114	●

Cloud SaaS Delivery Model:

Continuous Delivery Model: Always up-to-date

- Continuous delivery of new features and software updates to the production cloud service.
- No user testing or software maintenance required



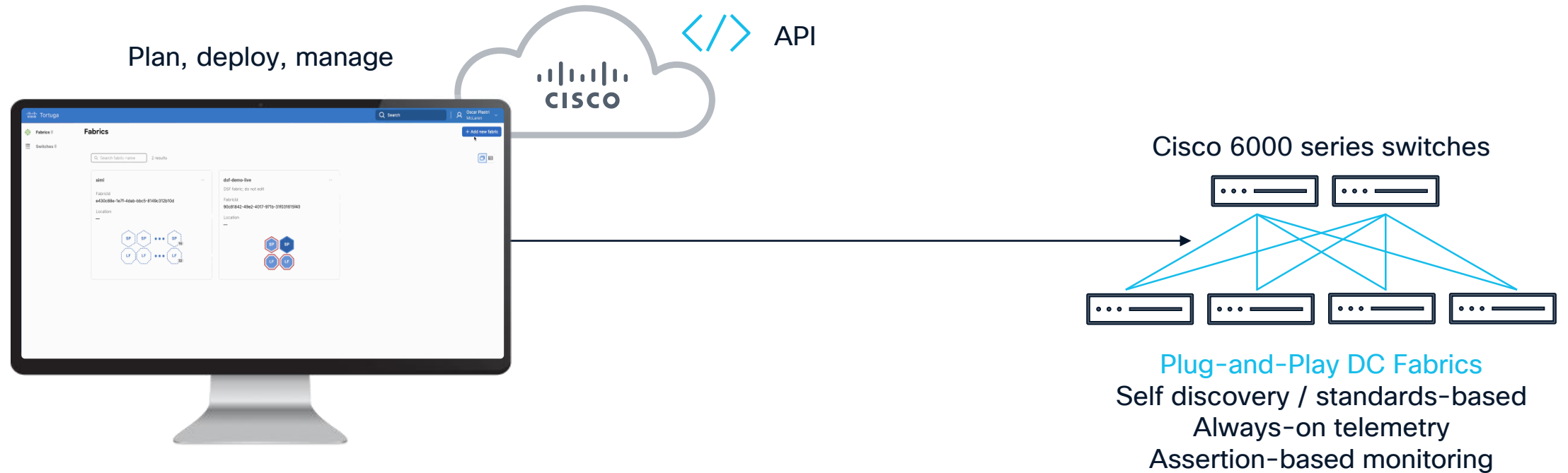
Change target ^

- 20250320 Latest
- 20250114 aqua3
- 20250305 aqua3

Device	Upgrade progress	Running version	Switch status
aqua3-L1	● Upgrade complete	20250320	●
aqua3-L2	● Upgrade complete	20250320	●
aqua3-S1	Post check <div style="width: 50%;"></div>	20250320	●
aqua3-S2	Post check <div style="width: 50%;"></div>	20250320	●

Hyperfabric Demo 2

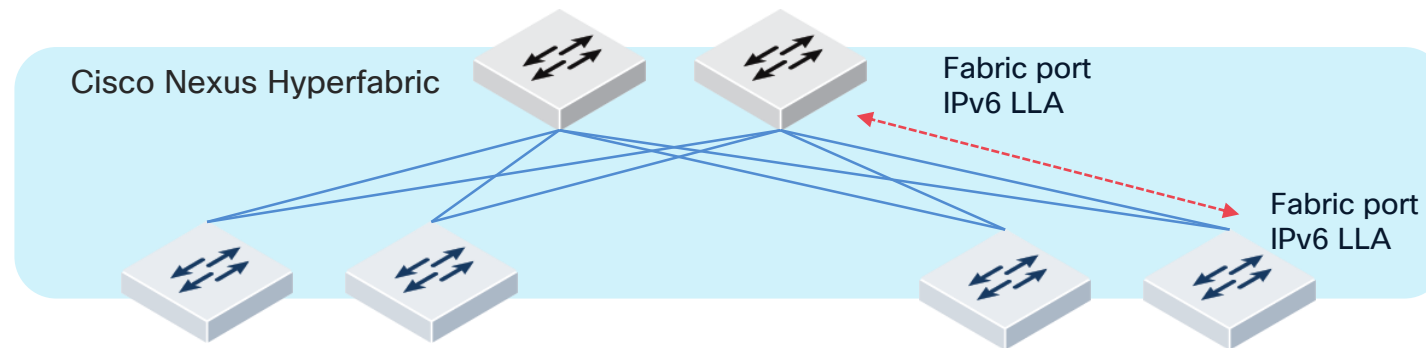
How It Works



Purpose-built to make DC fabrics **flexible, not fragile**

Automating the Underlay

- When another Hyperfabric switch is found via LLDP, Hyperfabric switches authenticate each other. The communication between switches use Fabric port IPv6 Link Local Addresses (LLA).
- Once it's hardware authenticated, underlay and overlay configuration is automatically done.

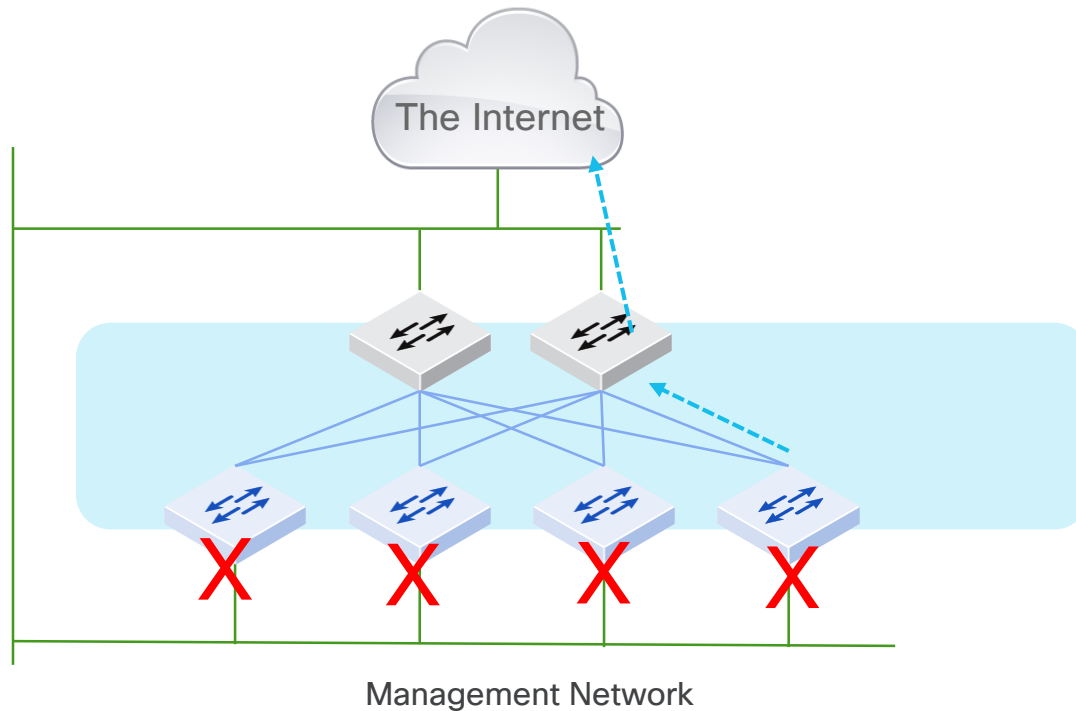


- Neighbor discovery via LLDP
- Authenticate each other
- Automatically configure BGP and VXLAN



What if we're disconnected from cloud?

- If at least one switch in the fabric is reachable to the cloud, other switches can reach the cloud via other nodes.



Thanks to Automatic Fabric underlay deployment!

Even if it's fully disconnected, fabric keeps on running and can even converge

Claim

Cisco Hyperfabric Switch (cloud-managed)

Main Menu - Please Choose an Option:

- 1 **Change Configuration**
- 2 Diagnostics
- 3 Reboot Switch
- 4 Power Off Switch
- 5 Factory-reset and Reboot Switch
- 1 Logout

<K> <Cancel>

Current Switch Status

Switch time: Sat 08 Mar 2025 02:44:59 AM UTC
Up time: 2 days, 1 hour, 6 minutes
Switch name: FD0283909CE
Switch model: HF6100-60L4D
Serial number: FD0283909CE
Mgmt interface: eth0

IPv4 STATIC
IPv4 address: 198.19.223.161/21
IPv4 gateway: 198.19.216.1
IPv4 gateway reachable: Yes

IPv6 DHCP
IPv6 address:
IPv6 gateway:
IPv6 gateway reachable: No

DNS: *198.19.254.82
DNS status: 1 Responding to DNS query; 1 Reachable

Proxy:
Proxy status:

Cloud URL: https://hyperfabric.cisco.com
Connection status: Responding to HTTPs
Connected to Hyperfabric Cloud

Claim status: Not claimed
Claim code: cecilia-rent-diana-cool-tempo-sweet

The token is automatically refreshed every few mins

Nexus Hyperfabric

Organization: Marketing

Fabrics

Inventory

1 claimed device not bound | 10 devices bound to fabric | 43 fabric nodes with no devices bound

Search: Search Fabric 54 results

Claim devices

Claim devices

Use claim code

Generate claim codes on your device console and enter the generated code below to claim.

Enter claim codes

e.g. abcd-efg-hij, klmn-opq-rst

Separate claim codes with commas or new line

Cancel Claim

Inventory

Nexus Hyperfabric

 | mihiguch@cisco.com
Marketing

Inventory

Device inventory

1 claimed device not bound

10 devices bound to fabric

43 fabric nodes with no devices bound

Q Search

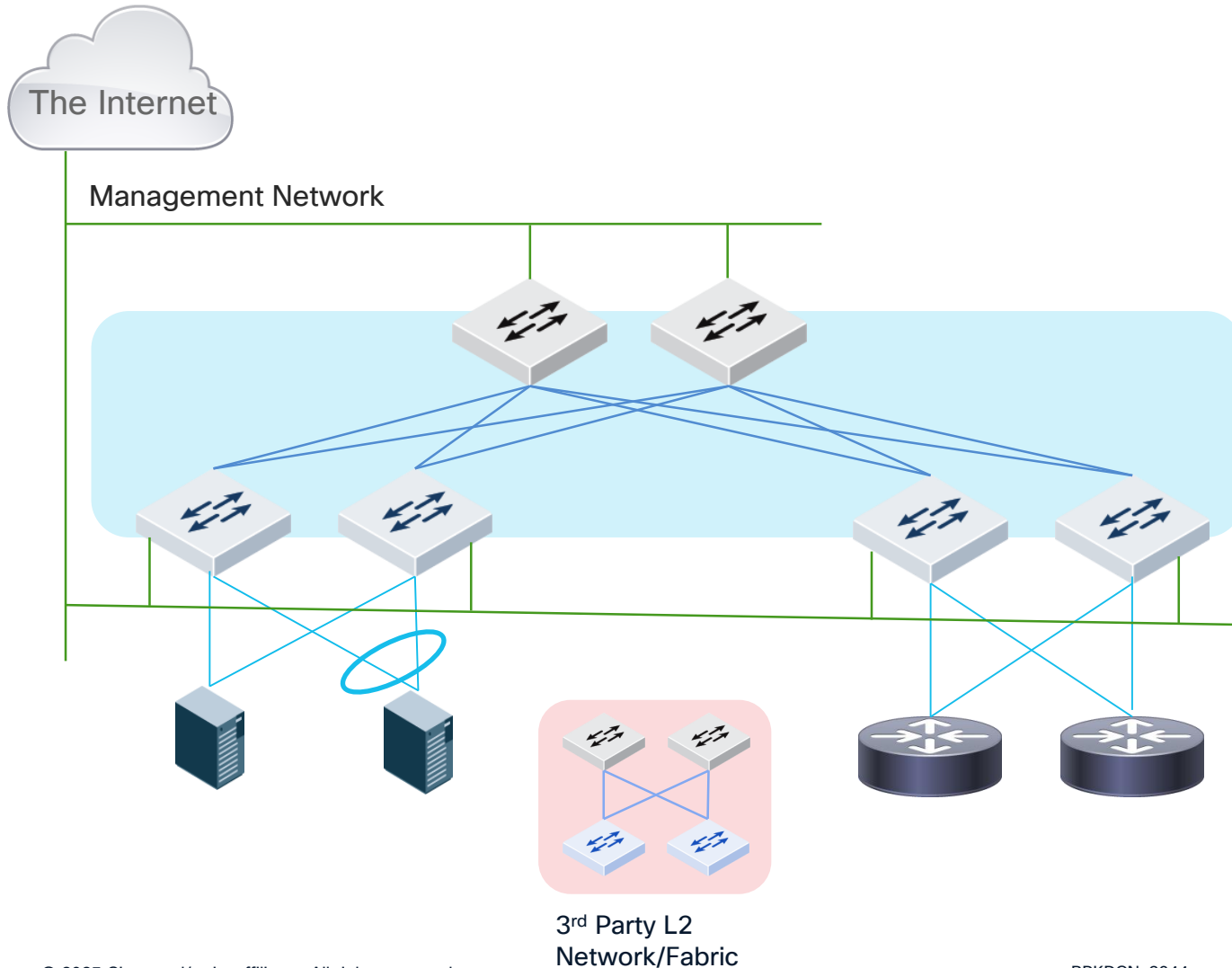
Fabric ▼

54 results

Claim devices

Hostname ↕	Fabric	Role	Cloud Connectivity	Labels	Claimed on	Serial number	PID	Switch ID	
CiscoLive-Demo-HF6100-32D-spine1	CiscoLive-Demo	Spine	✔ Yes	—	—	FLM281601WX	HF6100-32D	b4-4c-90-da-97-90	Unclaim
CiscoLive-Demo-HF6100-32D-spine2	CiscoLive-Demo	Spine	✔ Yes	—	—	FLM272807U9	HF6100-32D	48-80-02-99-c7-c0	Unclaim
CiscoLive-Demo-HF6100-60L4D-leaf1	CiscoLive-Demo	Leaf	✔ Yes	—	—	FDO28150Q1F	HF6100-60L4D	ec-19-2e-c0-68-00	Unclaim
CiscoLive-Demo-HF6100-60L4D-leaf2	CiscoLive-Demo	Leaf	✔ Yes	—	—	FDO28150Q1A	HF6100-60L4D	ec-19-2e-c0-4c-00	Unclaim
CiscoLive-Demo1-HF6100-32D-spine1	CiscoLive-Demo1	Spine	⊘ Not applicable	—	—	—	HF6100-32D	—	
CiscoLive-Demo1-HF6100-32D-spine2	CiscoLive-Demo1	Spine	⊘ Not applicable	—	—	—	HF6100-32D	—	
CiscoLive-Demo1-HF6100-60L4D-leaf1	CiscoLive-Demo1	Leaf	⊘ Not applicable	—	—	—	HF6100-60L4D	—	
CiscoLive-Demo1-HF6100-60L4D-leaf2	CiscoLive-Demo1	Leaf	⊘ Not applicable	—	—	—	HF6100-60L4D	—	
dcloud-test-HF6100-32D-leaf1	dcloud-test	Leaf	⊘ Not applicable	—	—	—	HF6100-32D	—	
dcloud-test-HF6100-32D-leaf2	dcloud-test	Leaf	⊘ Not applicable	—	—	—	HF6100-32D	—	
demo-fab-HF6100-32D-spine1	demo-fab	Spine	⊘ Not applicable	—	—	—	HF6100-32D	—	
demo-fab-HF6100-32D-spine2	demo-fab	Spine	⊘ Not applicable	—	—	—	HF6100-32D	—	
demo-fab-HF6100-60L4D-leaf1	demo-fab	Leaf	⊘ Not applicable	—	—	—	HF6100-60L4D	—	
demo-fab-HF6100-60L4D-leaf2	demo-fab	Leaf	⊘ Not applicable	—	—	—	HF6100-60L4D	—	
demo-fab-HF6100-60L4D-leaf3	demo-fab	Leaf	⊘ Not applicable	—	—	—	HF6100-60L4D	—	
demo-fab-HF6100-60L4D-leaf4	demo-fab	Leaf	⊘ Not applicable	—	—	—	HF6100-60L4D	—	
FDO28150Q0Z	—	Unspecified	✘ No	—	Apr 02, 2025 10:01:51 am	FDO28150Q0Z	HF6100-60L4D	ec-19-2e-c0-80-00	Unclaim

How do you deploy Hyperfabric?



Physical Cabling

1. Switch-to-Switch
2. Management network
3. Server
4. Northbound routing
5. Existing fabric for migration

+

Logical Design and Configuration

- Underlay (Automatically done)
- Overlay VRFs, logical networks etc

Hyperfabric Demo 3

Agenda

- 01 Introducing Hyperfabric
- 02 Live Demo
- 03 How it works
- 04 **Day 2 Operations**
- 05 Conclusion

Cloud Connectivity Status

- Cloud Connectivity page shows how switches are connected to cloud (it out-of-band management interface, via another switch or front panel port)

The screenshot displays the 'Cloud connectivity' section of the Cisco Nexus HyperFabric interface. It features a topology diagram at the top and a table below. The table lists the connection paths and certificate statuses for various devices. Two blue arrows point from the text on the right to the 'Exit gateway' icons in the table.

Hostname	Connection path	Certificate status	Last seen
Spine 1	Management port +2	All valid 3	30s ago
Spine 2	Spine1 Spine 1	All valid 2	25s ago
Leaf 0	Management port +1	All valid 2	15s ago
Leaf 1	Spine 1	Valid 2, Invalid 1	30s ago

Indicate the number of exit gateway switches who have cloud connectivity via its own out-of-band management port.

Indicate the connection path.

- Management port
- Other switches (exit gateway switch)
- In-band interface (roadmap)

Optics / Pluggables Telemetry

Ports **Optics** Assertions 6

5 results Show All Lanes

eth1/1

PID	SFP-10G-SR	Laser temperature (°C)	✔ 68	Vendor rev	3D
Serial number	00001234	Temperature (°C)	✘ 100	Media interface code	400GBASE-DR4 (CI124)
Manufacturer	Cisco	Voltage (V)	! 3.5	Media interface technology	1310 nm EML
Type	QSPF-DD Double Density 8X	Vendor date	2022-07-18	Media lane assignment option	1
Ext identifier	Power Class 6 (12.0W Max)	Vendor OUI	44-7c-7f	Connector	MPO 1x12

Application advertisement `{1: {host_electrical_interface_id: '400GAUI-8 C2M (Annex 120E)', 'module_media_interface_id: '400GBASE-DR4 (CI 124)', 'media_lane_count': 4, 'host_lane_count': 8, 'host_lane_assignment_options': 1, 'media_lane_assignment_options': 1}, 2: {host_electrical_interface_id: '100GAUI-2 C2M (Annex 135G)', 'module_media_interface_id: '100GBASE-DR (CI 140)', 'media_lane_count': 1, 'host_lane_count': 2, 'host_lane_assignment_options': 85, 'media_lane_assignment_options': 15}}`

Lane 1

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 2

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 3

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 4

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 5

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 6

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 7

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

Lane 8

RX Power ! 1.5

TX Bias ✔ 77

TX Power ✘ 1.72

eth1/2

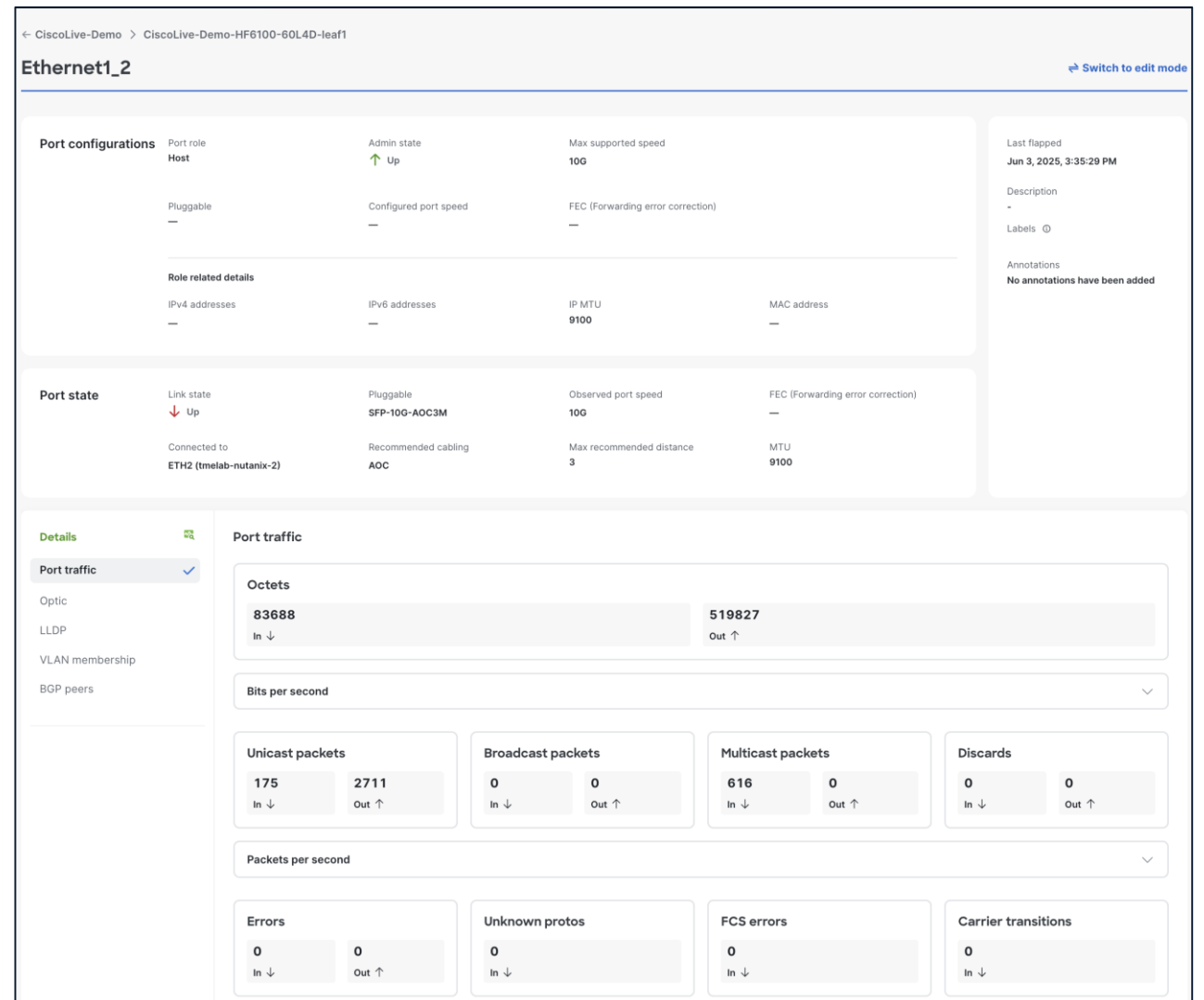
PID	SFP-10G-SR	Laser temperature (°C)	✔ 68	Vendor rev	3D
Serial number	00001234	Temperature (°C)	✘ 100	Media interface code	400GBASE-DR4 (CI124)
Manufacturer	Cisco	Voltage (V)	! 3.5	Media interface technology	1310 nm EML
Type	QSPF-DD Double Density 8X	Vendor date	2022-07-18	Media lane assignment option	1
Ext identifier	Power Class 6 (12.0W Max)	Vendor OUI	44-7c-7f	Connector	MPO 1x12

Application advertisement `{1: {host_electrical_interface_id: '400GAUI-8 C2M (Annex 120E)', 'module_media_interface_id: '400GBASE-DR4 (CI 124)', 'media_lane_count': 4, 'host_lane_count': 8, 'host_lane_assignment_options': 1, 'media_lane_assignment_options': 1}, 2: {host_electrical_interface_id: '100GAUI-2 C2M (Annex 135G)', 'module_media_interface_id: '100GBASE-DR (CI 140)', 'media_lane_count': 1, 'host_lane_count': 2, 'host_lane_assignment_options': 85, 'media_lane_assignment_options': 15}}`

Switch Telemetry

- Despite being a cloud managed fabric, HyperFabric aims to provide Switch Telemetry in near-real-time. This includes in the beginning:
 - Switch Telemetry – Port Status, Assertions, Traffic Stats
 - Interface Telemetry – Port Counters, Link Status, Network Configuration
 - Environmental Telemetry – Per Switch sensor readings for fans, psu, etc
 - Optics/Pluggables Telemetry – DOM Statistics

Port detail page



Assertions

- Assertions provide a framework that allows monitoring and troubleshooting of Hyperfabric.
- The goal of assertions are they would be raised based on a few different conditions:
- Is there a deviation from the configuration of the blueprint (i.e. interface is connected on port 3, but the blueprint says it should be port 2).
- Are end devices, or neighborships not operating as expected.
- Validation of routing, next hops, etc via IP SLA.
- Customized intent (i.e. "VLAN has traffic, BGP neighbor is learning X routes, etc") – Post FCS

The screenshot displays the 'Assertions' page in the Cisco Assurance Center. It is divided into 'Switch Assertions' and 'Port Assertions' tabs. The 'Port Assertions' tab is active, showing a summary of 'Latched' (603 results) and 'Unlatched' (7 results) assertions. Below the summary is a table with 610 results. The table columns are: Status, Hostname, Latch state, Latched, Port, Type, and Details. The first two rows show 'Critical' status with red icons, indicating failed assertions. The last two rows show 'OK' status with green icons, indicating successful assertions.

Status	Hostname	Latch state	Latched	Port	Type	Details
Critical	CiscoLive-Demo-HF6100-60L4D-leaf1	Latched	Jun 03, 2025 06:07:53 pm	Ethernet1_63	Port link is unexpectedly up	Disconnect from CiscoLive-Demo-HF6100-60L4D-leaf1/Ethernet1_63 to ec-19-2e-c0-80-00/Ethernet1_63
Critical	CiscoLive-Demo-HF6100-60L4D-leaf2	Latched	Jun 03, 2025 10:51:16 pm	—	Unexpected VLAN(s) tagged traffic is/are received on port	Sample of unexpected VLANs: 1012 View VLAN membership
OK	CiscoLive-Demo-HF6100-32D-spine2	Latched	Jun 03, 2025 06:09:23 pm	Ethernet1_1	Port pluggable ID matches with the expected fabric/host link	Expected Observed QDD-400-AOC1M QDD-400-AOC1M
OK	CiscoLive-Demo-HF6100-32D-spine2	Latched	Jun 03, 2025 06:09:23 pm	Ethernet1_2	Port pluggable ID matches with the expected fabric/host link	Expected Observed QDD-400-AOC1M QDD-400-AOC1M

Assertions

- Assertions are statements that must be true to be green
- Designed to minimize “Alert Fatigue” of traditional alarms
- All assertions are processed “Upstairs” in Cloud
- Assertions have a “Latch”
 - “Unlatched” assertions can never be false/alarm
 - Assertions may auto-latch after 90 seconds
 - User can “unlatch” a latched assertion

The screenshot displays the 'Assertions' page in the Cisco Assurance Center. It is divided into two tabs: 'Switch Assertions' and 'Port Assertions'. The 'Port Assertions' tab is active, showing two summary cards: 'Latched' (200 results) and 'Unlatched' (5 results). Each card displays counts for Critical, OK, and Unknown statuses. Below the summary cards is a table with 205 results. The table has columns for Status, Latch state, Latched, Port, Type, and Details. The first row shows a Critical status with a latched state, where the port link is unexpectedly up. The second and third rows show OK status with latched states, where the port pluggable ID matches the expected fabric/host link. A context menu is open over the third row, showing 'Unlatch' and 'Force Latch' options.

Status	Latch state	Latched	Port	Type	Details
Critical	Latched	Jun 03, 2025 06:07:53 pm	Ethernet1_63	Port link is unexpectedly up	Disconnect from CiscoLive-Demo-HF6100-60L4D-leaf1/Ethernet1_63 to ec-19-2e-c0-80-00/Ethernet1_63
OK	Latched	Jun 03, 2025 06:09:23 pm	Ethernet1_1	Port pluggable ID matches with the expected fabric/host link	Expected SFP-10G-AOC3M
OK	Latched	Jun 03, 2025 06:09:23 pm	Ethernet1_2	Port pluggable ID matches with the expected fabric/host link	Expected SFP-10G-AOC3M

Event viewer

CiscoLive-Demo ⇌ Switch to edit mode

Summary Issues Deployment **Event viewer** On site

Event Viewer

Last day Jun 2, 2025, 10:52:27 PM to Jun 3, 2025, 10:52:27 PM

Events

Assertions

Jun 03 4:00 AM 8:00 AM 12:00 PM 4:00 PM 8:00 PM

Viewer key
■ Failed assertions ↗ ■ Resolved assertions ↘ □ None ● Configuration event

3 Types

92 results

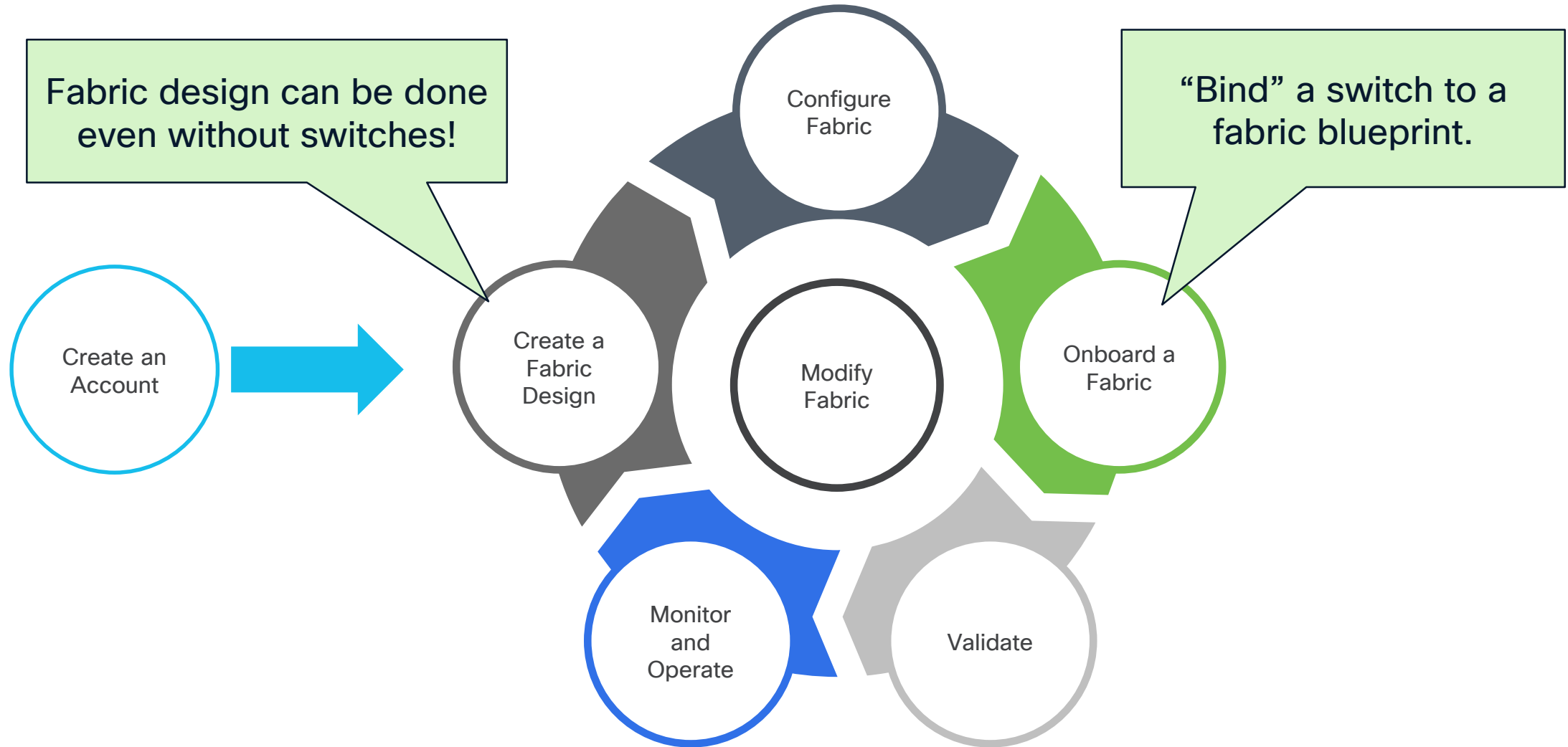
Jun 03, 2025 07:25:23 pm	Resolved assertion	Ethernet1_14 CiscoLive-Demo-HF6100-60L4D-leaf1 link is up	—
Jun 03, 2025 07:25:23 pm	Resolved assertion	Ethernet1_13 CiscoLive-Demo-HF6100-60L4D-leaf1 link is up	—
Jun 03, 2025 07:25:23 pm	Resolved assertion	Ethernet1_12 CiscoLive-Demo-HF6100-60L4D-leaf1 link is up	—
Jun 03, 2025 07:25:23 pm	Resolved assertion	Ethernet1_14 CiscoLive-Demo-HF6100-60L4D-leaf2 link is up	—
Jun 03, 2025 07:25:23 pm	Resolved assertion	Ethernet1_12 CiscoLive-Demo-HF6100-60L4D-leaf2 link is up	—
Jun 03, 2025 07:25:23 pm	Resolved assertion	Ethernet1_11 CiscoLive-Demo-HF6100-60L4D-leaf2 link is up	—
Jun 03, 2025 07:24:54 pm	Configuration event	Configuration pushed by cisco/shaphill@cisco.com	Created port-channels 101, 102, and 111
Jun 03, 2025 07:23:28 pm	Configuration event	Configuration pushed by cisco/shaphill@cisco.com	remove port channels
Jun 03, 2025 07:22:29 pm	Resolved assertion	CiscoLive-Demo-HF6100-60L4D-leaf1 is connected to cloud	—
Jun 03, 2025 07:21:39 pm	Failed assertion	CiscoLive-Demo-HF6100-60L4D-leaf1 is not connected to cloud	—

Assertion status change

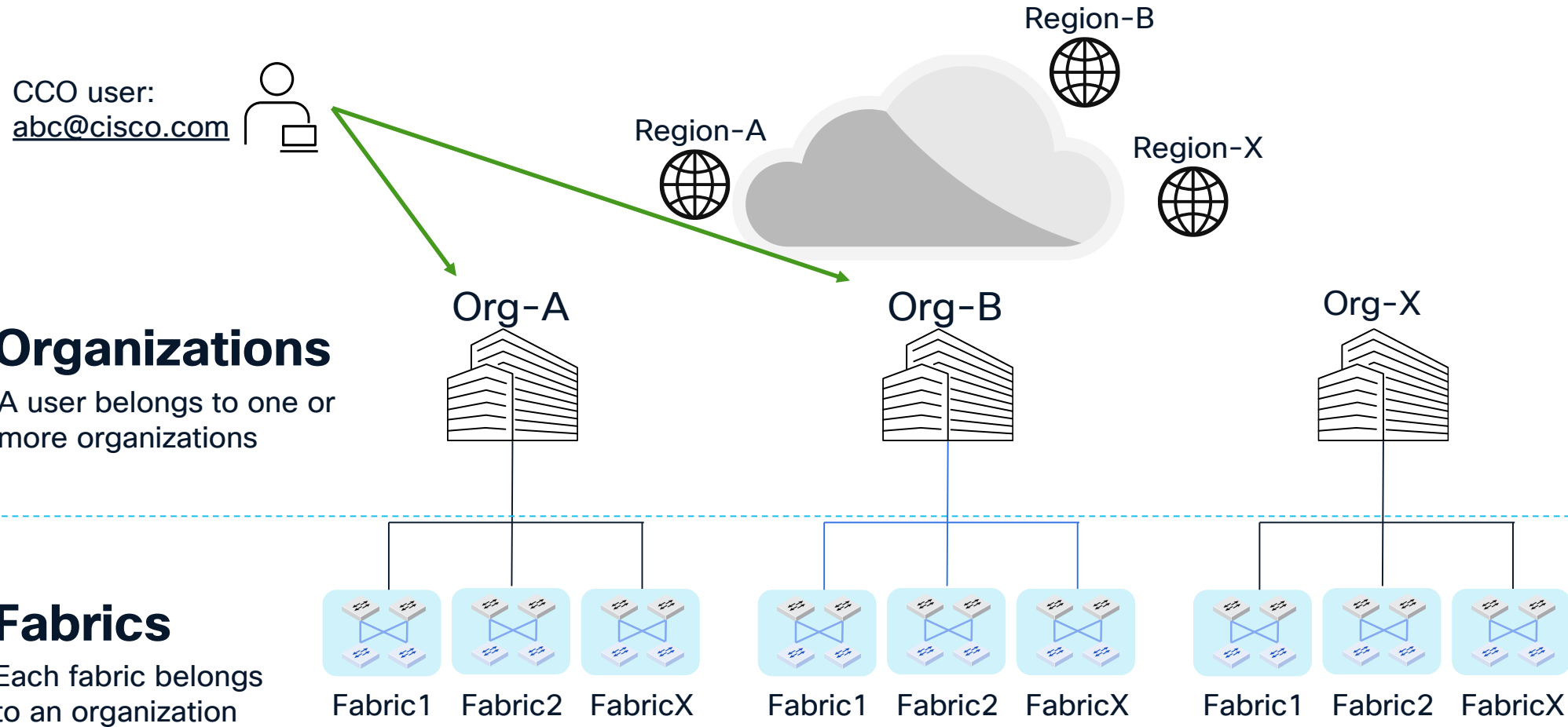
Configuration event

Hyperfabric Demo 4

Cisco Nexus Hyperfabric Lifecycle



How to manage fabrics?



Managing users in your organization

The screenshot shows the 'Select an organization' dialog in the Nexus Hyperfabric interface. It features a search bar with the placeholder text 'Search organization name' and a '+ Create new organization' button. Below the search bar, there is a list of organizations with their roles:

- Cisco-lab-Austin (Read Write)
- Cisco-lab-London (Administrator)
- Cisco-lab-Richardson (Administrator)
- Cisco-lab-Singapore (Administrator)
- CiscoLive (Administrator) - This option is selected, indicated by a checkmark.

The screenshot shows the 'User Management' page in the Nexus Hyperfabric interface. It displays a summary card for the current user and a table of other users.

User Summary:

Email	Role	Organization
mihiguch@cisco.com	Administrator	CiscoLive

31 results + Add User

Email	Role	User status	Last login	Added date
paregupt@cisco.com	Read Write	Enabled	—	—
rvenkatr@cisco.com	Read Write	Enabled	—	—
slym@cisco.com	Read Write	Enabled	—	—

The screenshot shows the 'Add Users' dialog in the Nexus Hyperfabric interface. It contains the following fields and options:

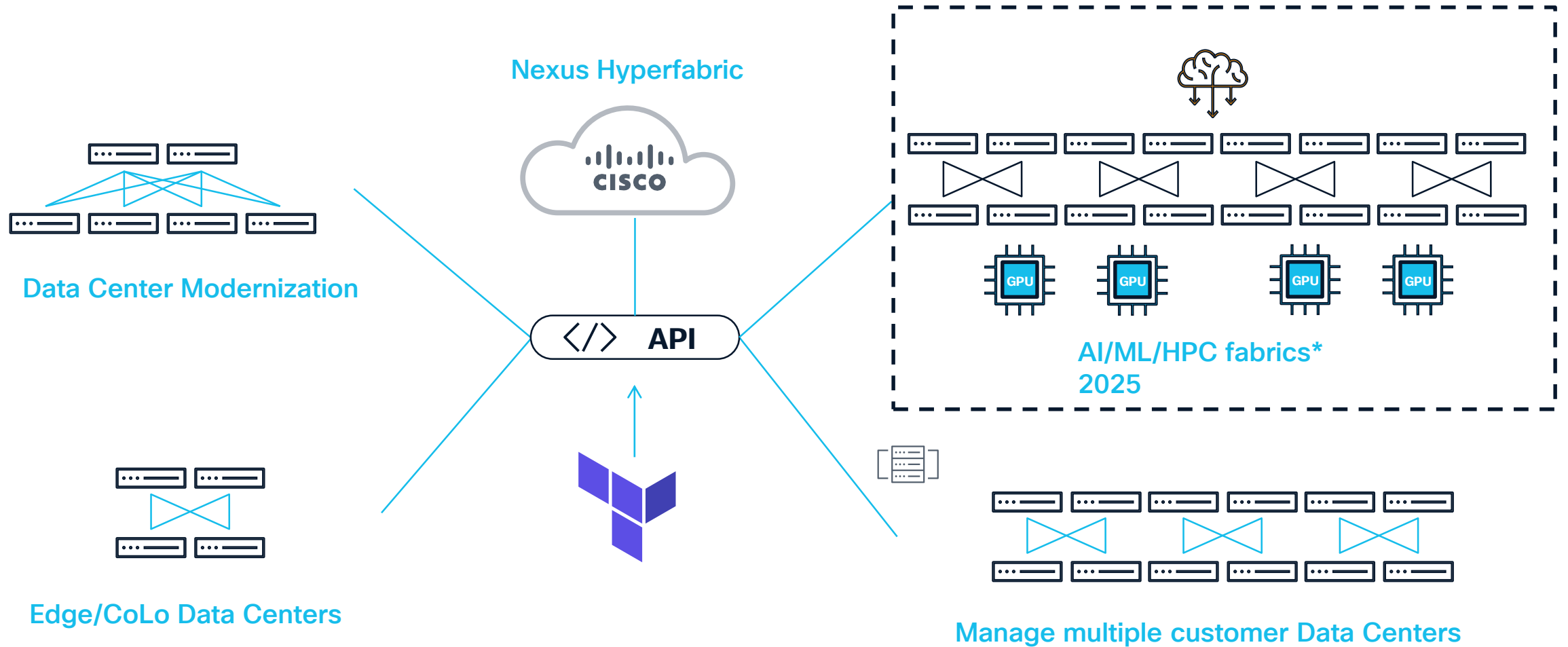
- Email:** A text input field containing 'user1@cisco.com'.
- Role:** Radio buttons for 'Administrator', 'Read Write' (selected), and 'Read Only'.
- Status:** A toggle switch for 'Enabled' (checked).
- Buttons:** 'Cancel' and 'Save' buttons at the bottom right.

Agenda

- 01 Introducing Hyperfabric
- 02 Live Demo
- 03 How it works
- 04 Day 2 Operations
- 05 Conclusion**

Where does Hyperfabric make sense?

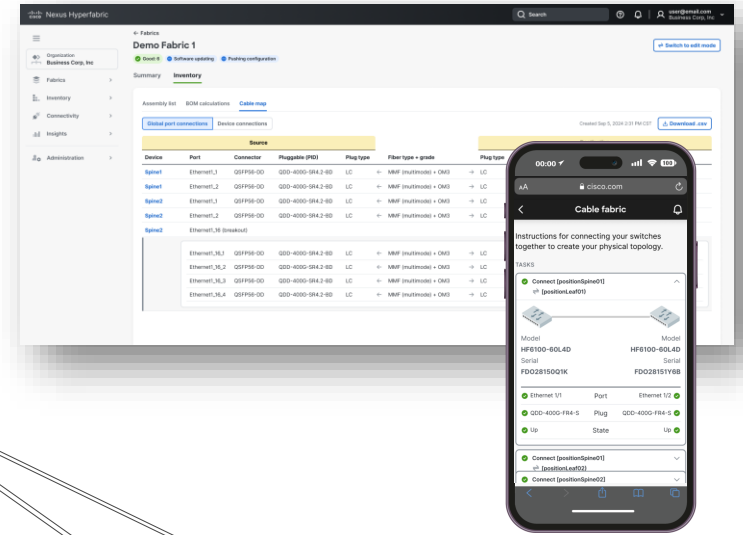
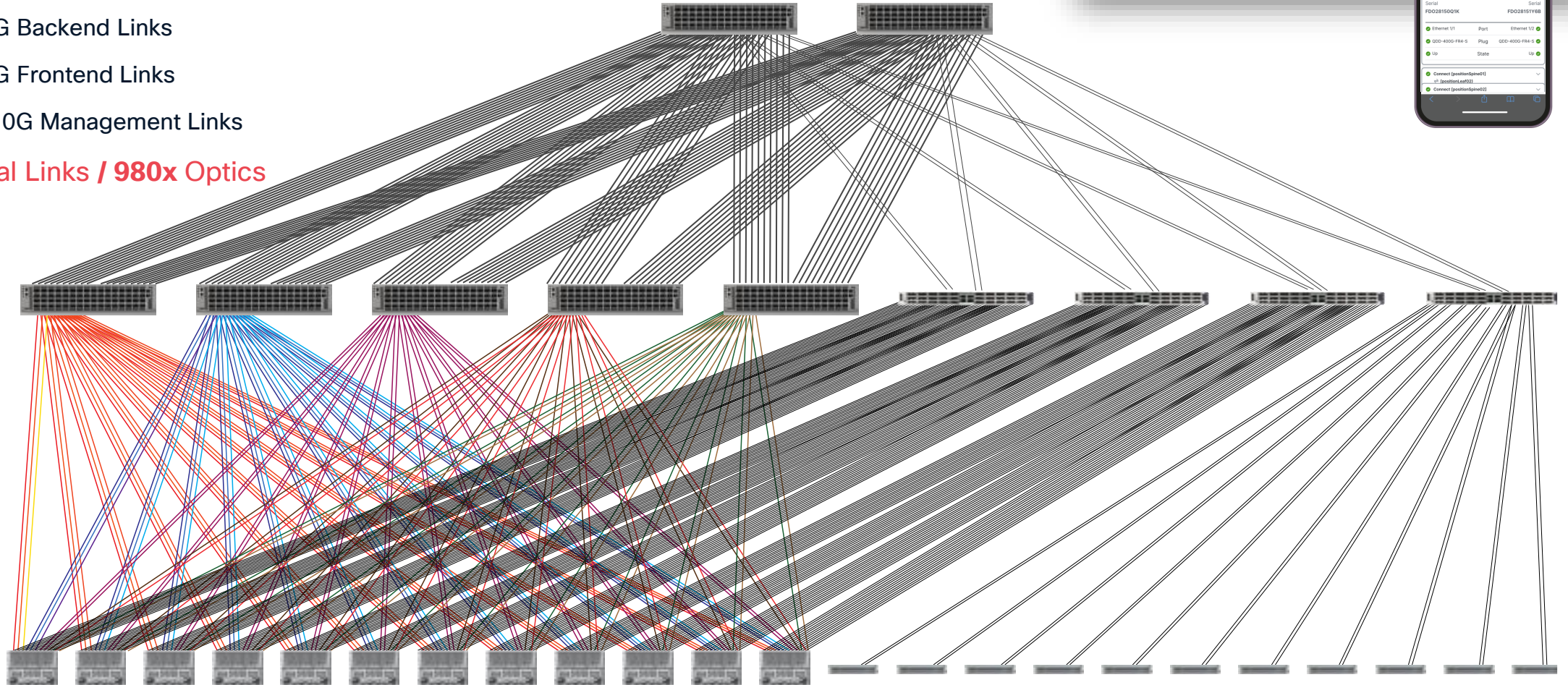
Single global GUI / API endpoint for all owned fabrics



*Nexus Hyperfabric AI

A “small” \$5M AI Training Cluster

- 12 UCS GPU Servers (96x GPUs) + Storage
 - 112x 800/400G Fabric Links
 - 96x 400G Backend Links
 - 48x 400G Frontend Links
 - 189x 1/10G Management Links
- = 445 Total Links / 980x Optics



Cisco Nexus Hyperfabric AI

COMING THIS YEAR (CY25)

High-performance Ethernet

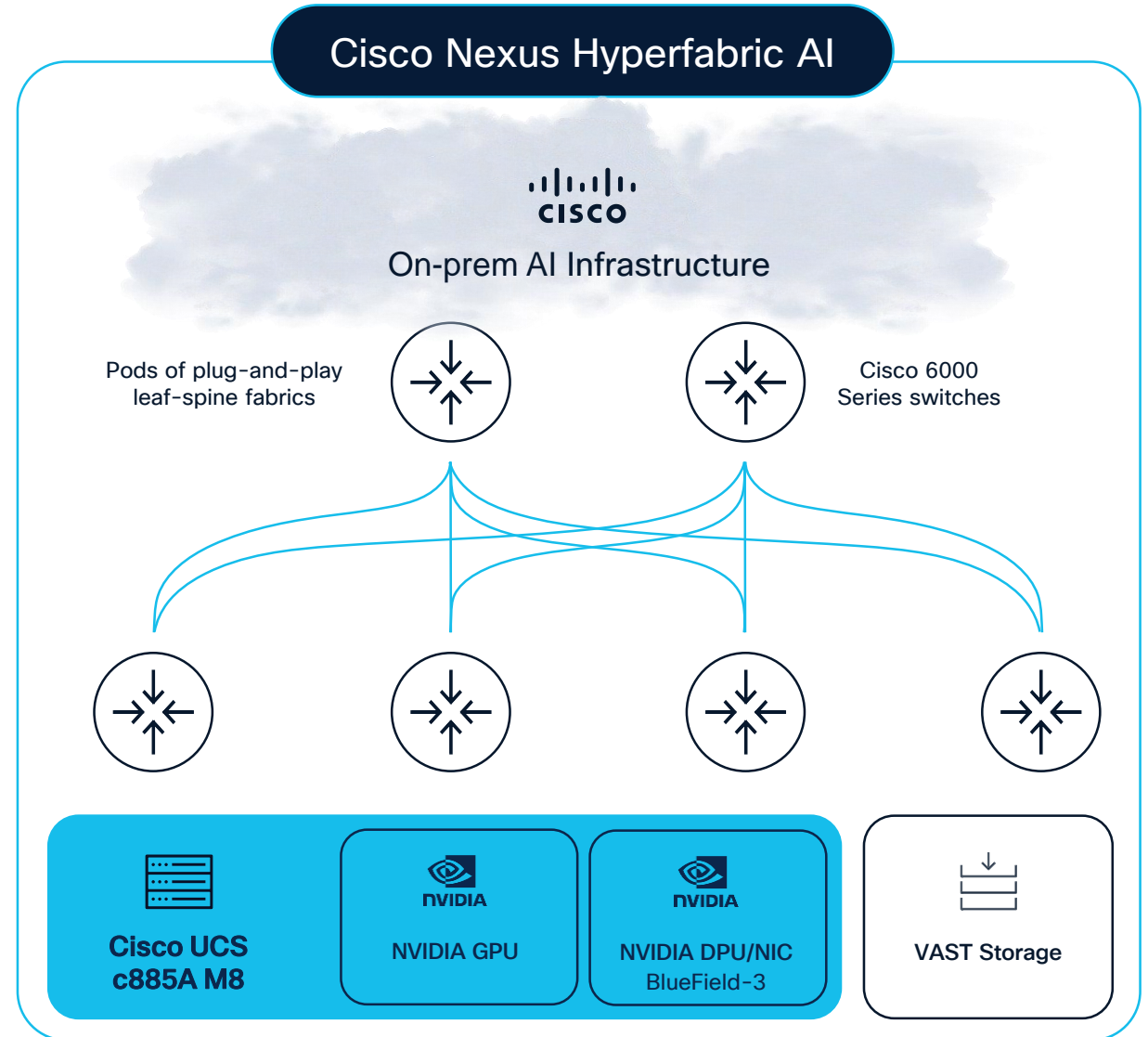
Cloud-managed operations

Unified stack including NVAIE

AI-native operational model

Democratize AI infrastructure

Visibility into full stack AI



Nexus Hyperfabric

Pre-configured, cloud-managed **networking** for Cisco 6000 switches

SHIPPING

Nexus Hyperfabric AI

Pre-configured, cloud-managed **networking, compute, and storage**, partnered with **NVIDIA**

COMING
This year 2025

Build your fabric today!

<https://hyperfabric.cisco.com/>

Explore more for Hyperfabric (1/2)

- AI Infra for the Rest of Us [BRKDCN-2677]
 - Monday, June 9th 1:00 PM - 2:00 PM PDT
- NorthWest Natural Gas Optimizes IT Operations with Nexus Hyperfabric [CSSDCN-1002]
 - Tuesday, June 10th 11:45 AM - 12:15 PM PDT
- How to Setup a Nexus Hyperfabric from Scratch [BRKDCN-2907]
 - Tuesday, June 10th 2:00 PM- 3:30 PM PDT
- Cloud-Managed Data Center Networking Made Easy: Introducing Cisco Hyperfabric AI [PSODCN-1008]
 - Wednesday, June 12th 12:30 PM - 1:00 PM PDT
- Cisco Nexus HyperFabric Lab [LABDCN-1524]
 - Walk-in Lab

Explore more for Hyperfabric (2/2)

- Getting Started with the Cisco Nexus HyperFabric API [DEWVKS-1381]
 - Monday, June 9th 1:00 PM – 1:45 PM PDT
- Set Sail on your Cisco Nexus Hyperfabric Automation Journey with Ansible [DEWVKS-1386]
 - Tuesday, June 10th 10:30 AM – 11:15 AM PDT
- Mastering Day 2 Operations of Cisco Nexus Hyperfabric [TACDCN-2014]
 - Wednesday, June 11th 11:45 AM – 12:15 PM PDT
- How to Terraform your Cisco Nexus HyperFabric [DEWVKS-1440]
 - Wednesday, June 11th 3:00 PM – 3:45 PM PDT
- The Engineer Experiences for Cisco Nexus HyperFabric [DEVNET-1454]
 - Thursday, June 12th 12:30 PM – 1:15 PM PDT

Documentation links

- Documentation portal:
<https://www.cisco.com/c/en/us/td/docs/dcn/hyperfabric/collections/hyperfabric-user-content.html>
- Getting Started: <https://www.cisco.com/c/en/us/td/docs/dcn/hyperfabric/software/cisco-nexus-hyperfabric-getting-started.html>
- Nexus Hyperfabric API: <https://developer.cisco.com/hyperfabric/>
- Extending Connectivity to Cisco Nexus Hyperfabric:
<https://www.cisco.com/c/en/us/td/docs/dcn/whitepapers/extending-connectivity-to-cisco-nexus-hyperfabric.html>

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