

Cisco Live US 2024

Novinky z oblasti DC, Enterprise Networks a Observability

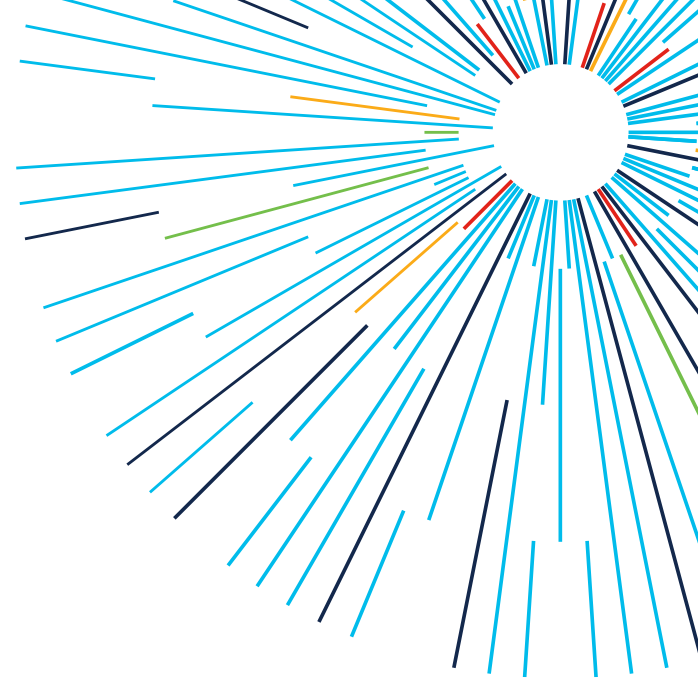
Červen 2024

Jaromír Pilař, Dominik Soukup, Martin Diviš



Agenda

- Cisco Networking Cloud
 - Novinky v možnostech správy
 - Cisco Workflows
- Common Policy
- Cisco Nexus HyperFabric
- Cisco Observability Solutions



Cisco Networking Cloud



Cisco Networking Cloud

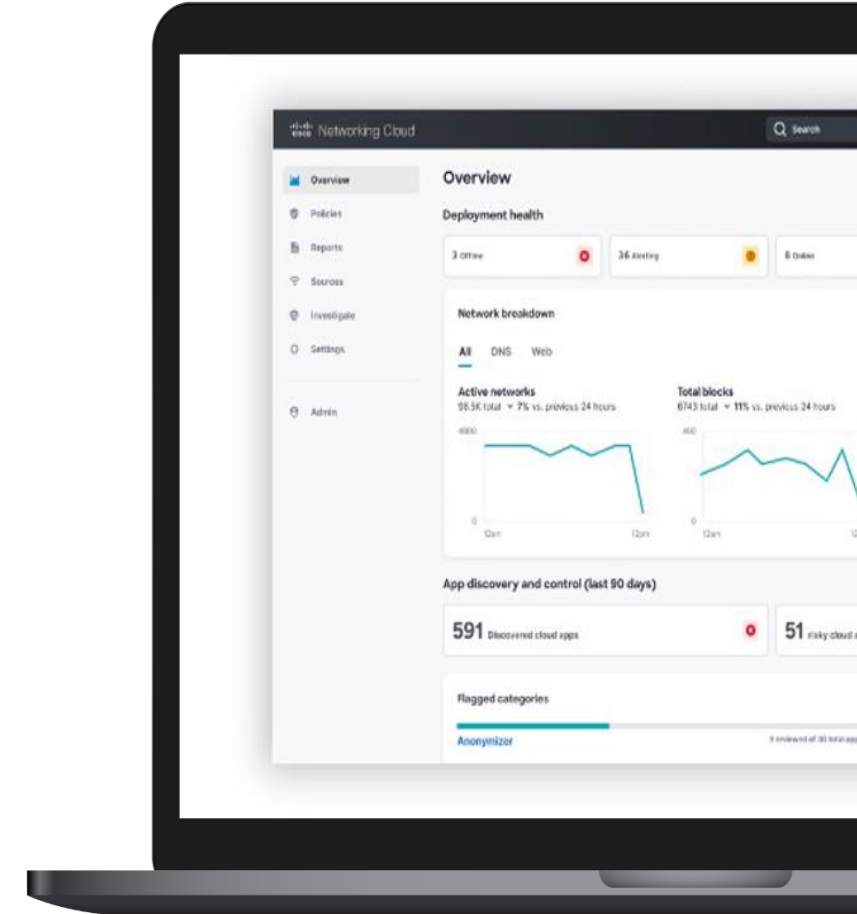
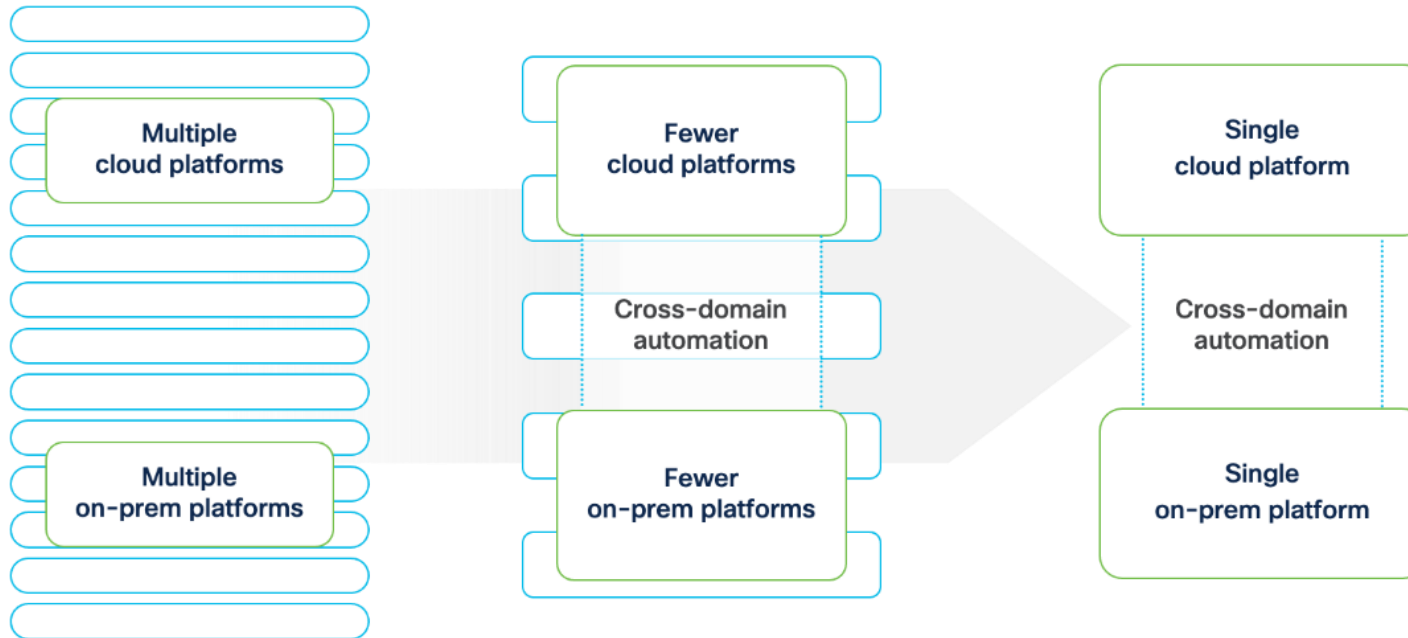
Integrating on-prem and cloud operating models

Unified Experiences

RELY ON

Your Platform Architecture

Consumption Model Considerations



Greater simplicity, everywhere, at every scale



Catalyst Center 2.3.7.x

Key New Features & Enhancements



AI Ops

Improve Performance

- Event Analytics
- Client 360- Latency per Client data
- Site Analytics Enhancement
- PoE Visibility – AP Power Savings
- OTA Sniffer
- Enhanced AI-RRM configuration workflow



NetOps

Enhance Efficiency

- 3rd Party Device/Generic MIB2 “Visibility”
- Device refresh for IOS-XE
- Visibility and Control
- SWIM Upgrade readiness check enhancement
- C9800 Day-0 onboarding template support
- IOS Config preview for C9800
- Individual AP Maintenance mode



SecOps

Manage Security and Policy

- Security Service Insertion
- LAN Automation Enhancements
- SD-Access UI 2.0
- SD-Access API updates
- BGP-EVPN (EFT)



Platform

Expand Deployment Options

- Cisco-First APIs
- External API support for import/export floor map, export AP-related info
- LAN Automation with IPAM
- Service Now integration with Catalyst Center
- Support for Assurance and system notification events



PLATFORM/ SYSTEM

• VA ESXi

• VA AWS Launchpad Updates

• Flexible Reports

• Virtual Airgap

Cloud Monitoring for Catalyst Switches

Unified View of Cisco Network Infrastructure

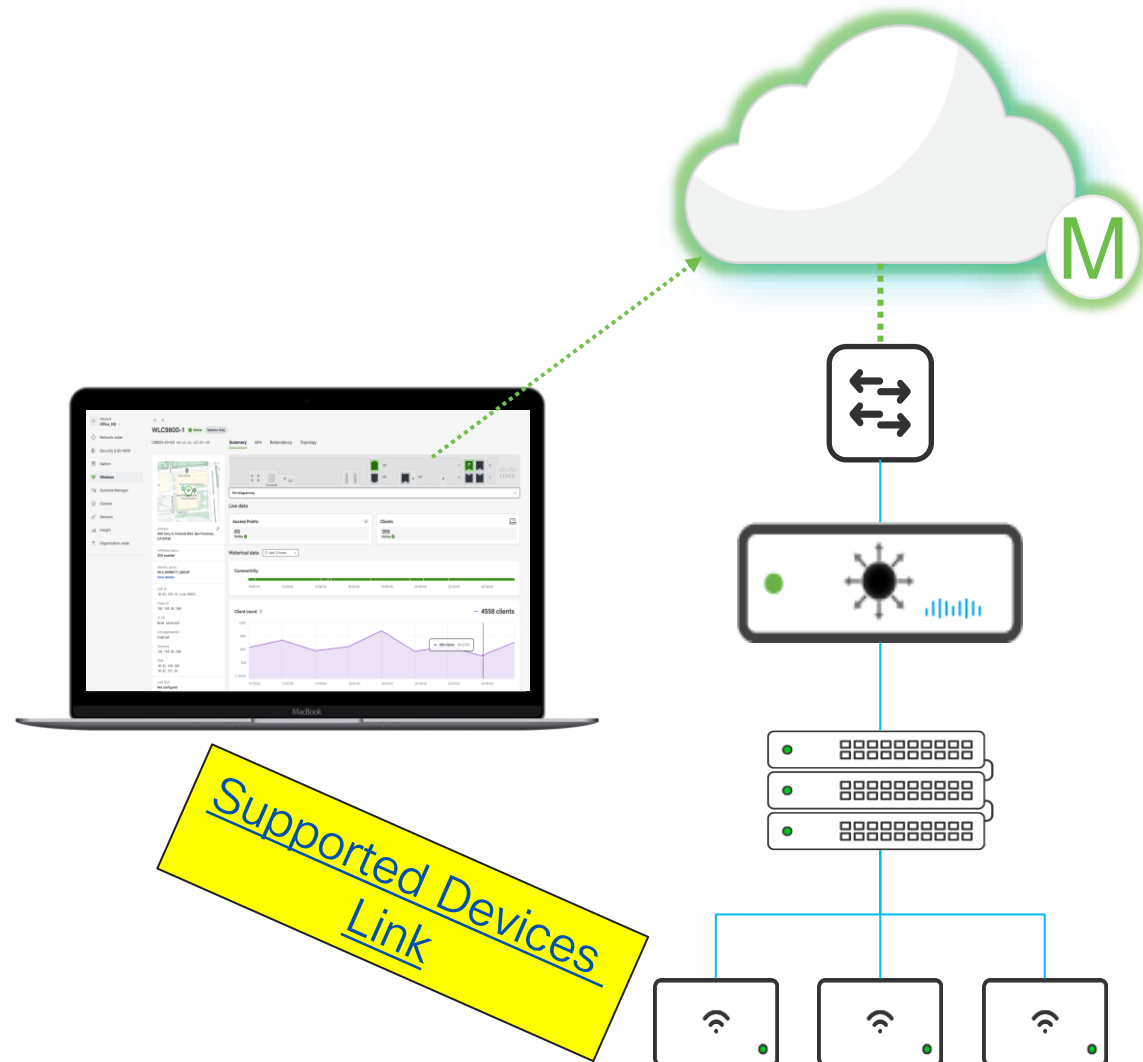
- Centralized monitoring of IOS-XE and Meraki devices
- Unified topology view
- Consolidated device inventory
- IOS-XE firmware management

Device health and troubleshooting

- Port-level packet and error counters
- Remote troubleshooting
- Email and webhook alerts for proactive response
- CLI access in Dashboard for show commands

Network client and traffic information

- See connected devices across your network
- Application visibility into network traffic



Unifying AI Technology for Cisco Wireless



Cloud Monitoring for Catalyst Wireless

On-premise functionality in the cloud | Deployed & monitored by you

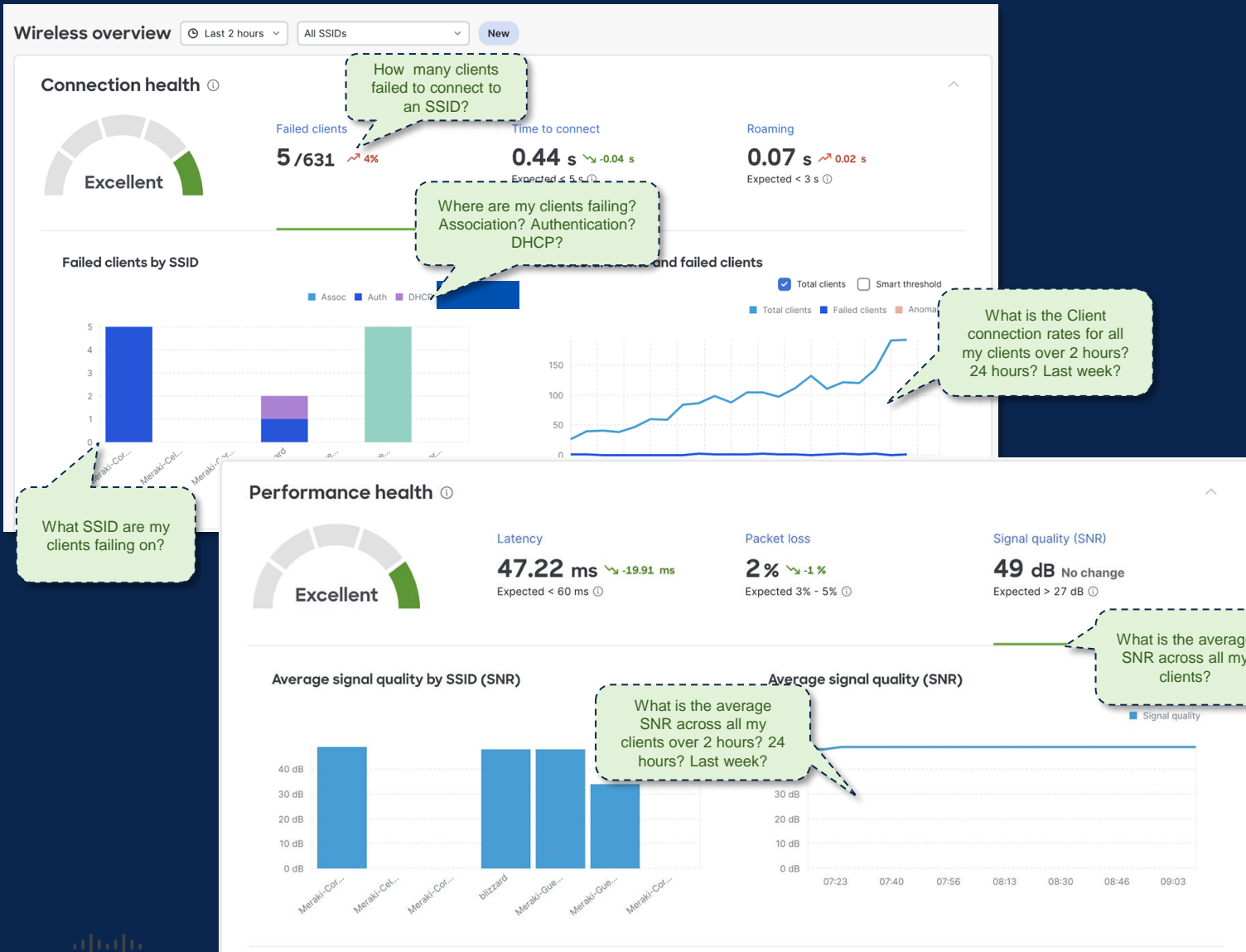
Unified view of Cisco
Wireless Infrastructure

Device Health and
Troubleshooting

Network Client and
Traffic Information



Health and Assurance for Catalyst Wireless



Client Connection Health

See the health of wireless connections across the entire network

Client Performance Health

View Latency, Packet loss and SNR of the client devices

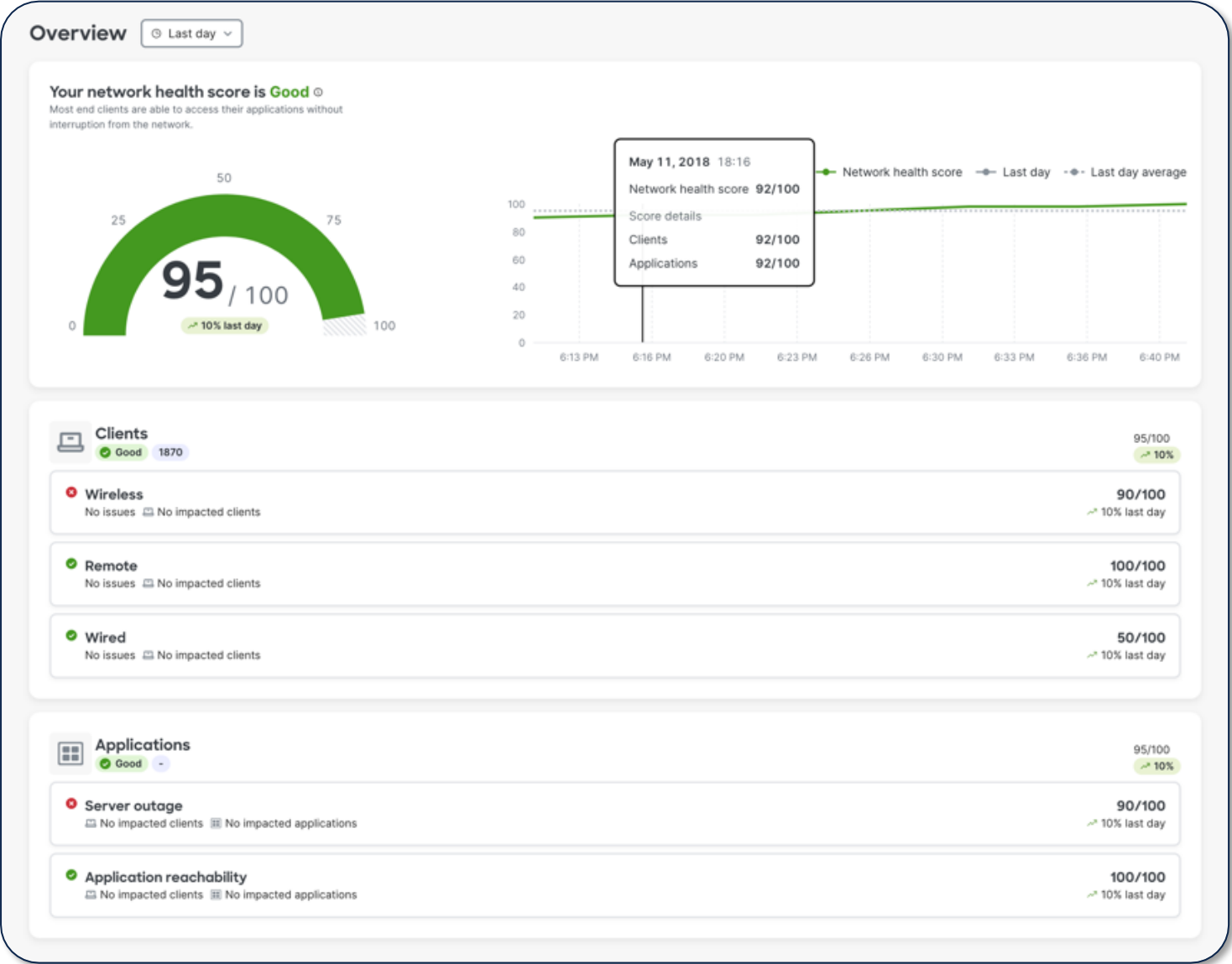
Catalyst Monitoring Resources

[Cloud Monitoring for Catalyst Link](#)

Private Beta

Assurance Overview Dashboard

- Full Stack Network Health
- Top-Down Scoring
- Client Impact Focus
- Before and After View



Sign up for the
Assurance Overview
Private Beta!

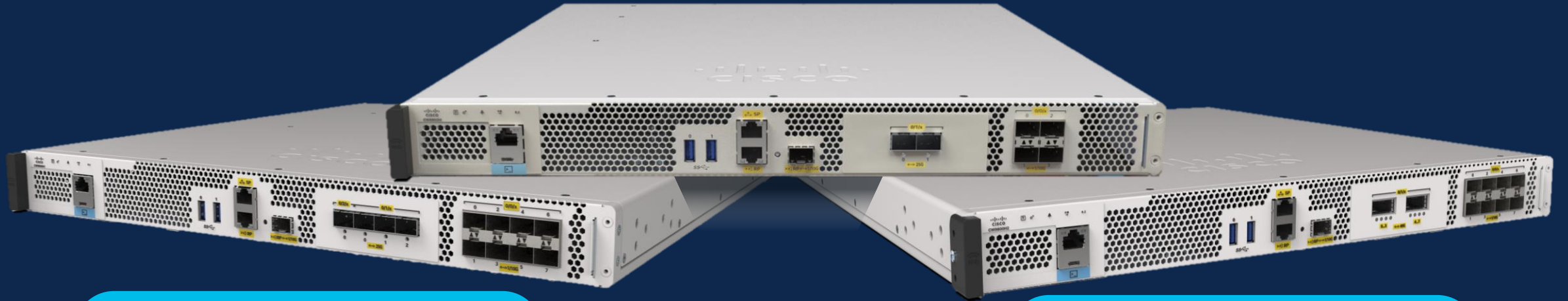
Scan QR Code



or [Click Here!](#)

CW9800 Wireless Controller Family

CW9800M



CW9800H1

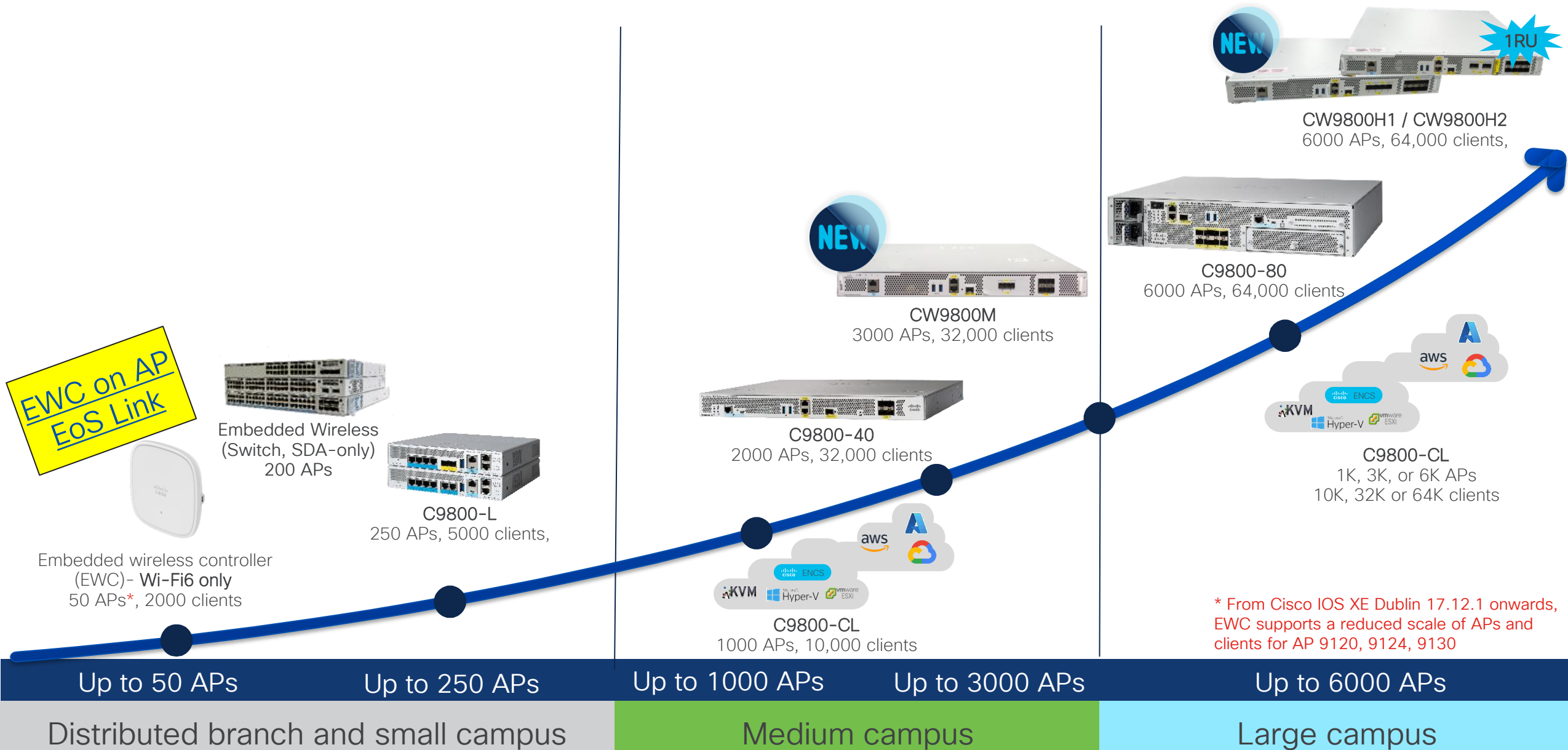
CW9800H2

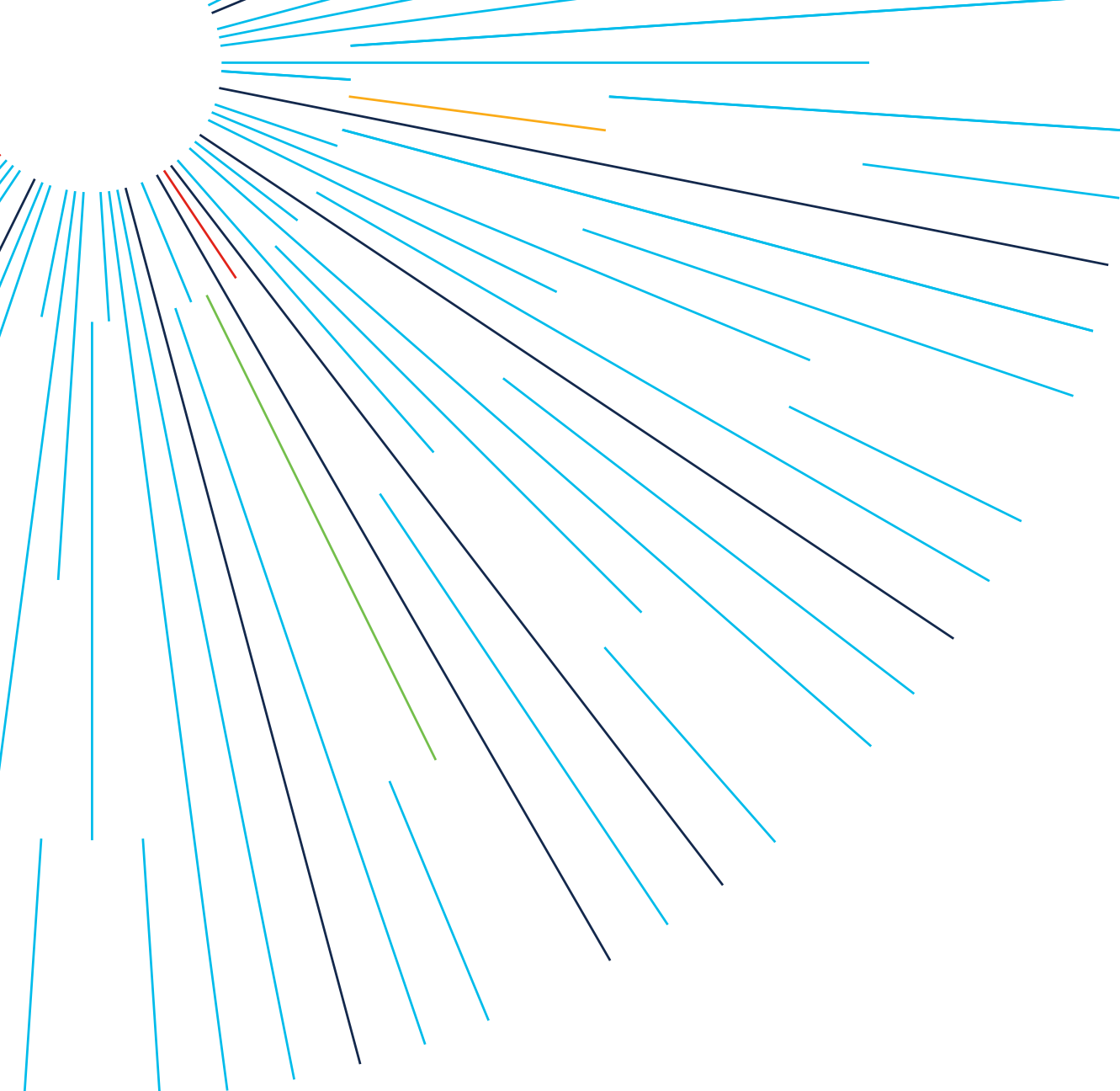
Orderable April 23, 2024

Shipping Mid-May

Minimal SW release IOS-XE 17.14.1

Cisco 9800 Wireless Infrastructure





Introducing

SD-WAN & SASE Announcements

SD-WAN & SASE announcements

- **New Cisco Catalyst and Meraki SD-WAN fabric interconnect** - allows IT teams to select the best WAN platform for every type of site they operate, without sacrificing security, simplicity, or scale.
- **Cisco Meraki Secure Connect is now integrated with Cisco Secure Access**, powerful cloud-based security service edge (SSE) solution, to help connect and protect dynamic remote workforces in a zero-trust model. Along with powerful next-generation firewall (NGFW) capabilities powered by Cisco Talos, this native integration gives customers a seamless path to a unified, scalable SASE solution.
- The **new Meraki MX650 extends the Meraki MX secure SD-WAN portfolio**, more than doubling throughput for high-performance branch routing and security.



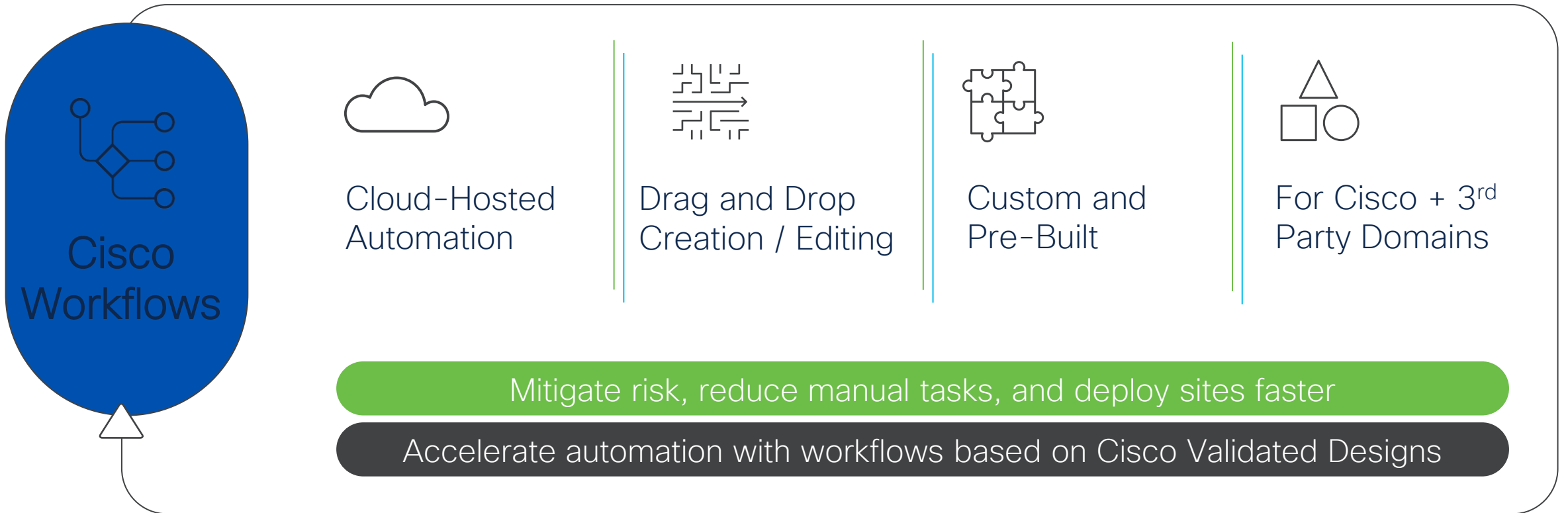
Introducing

Cisco Networking Cloud Workflows

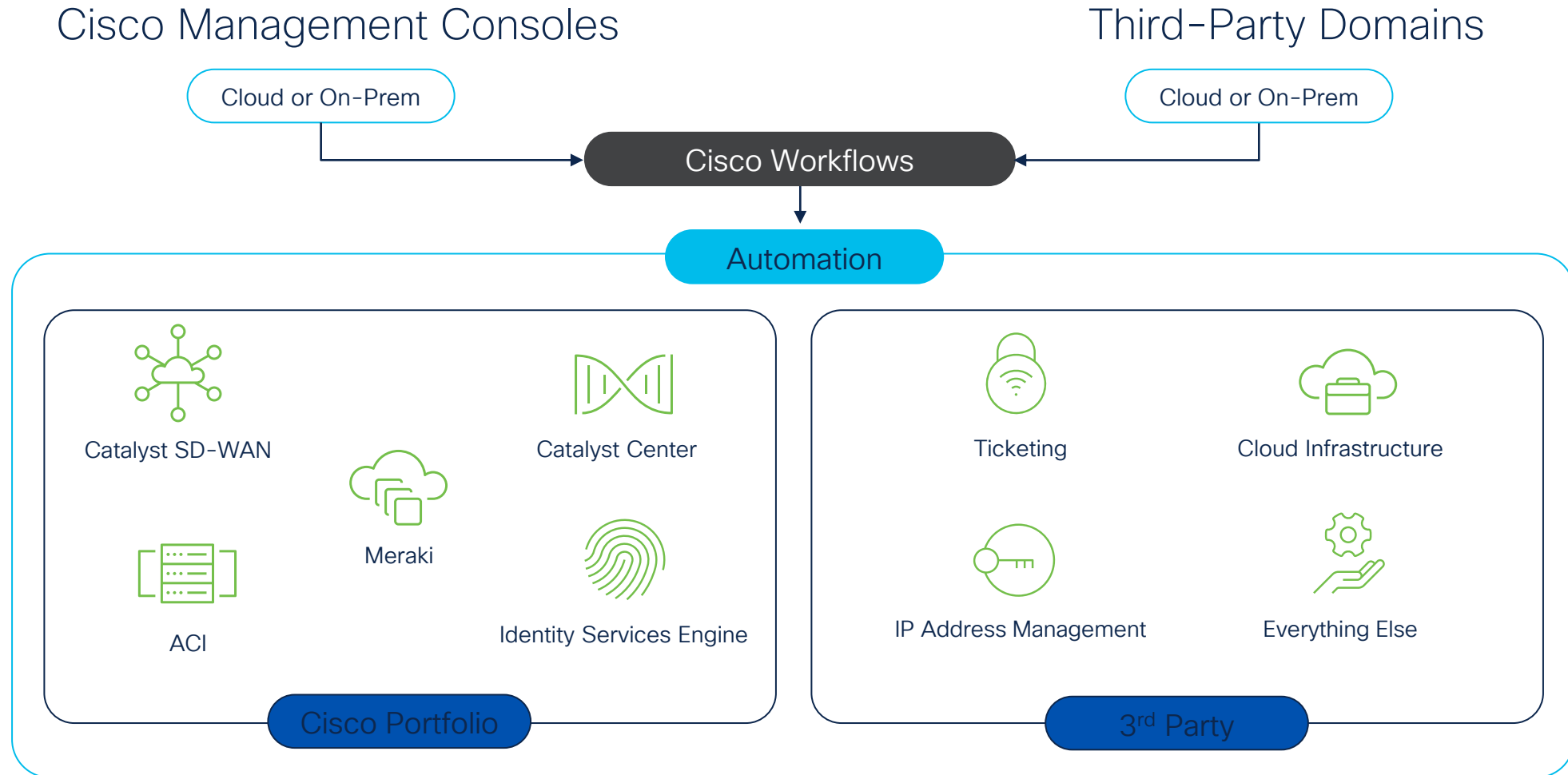


Cisco Networking Cloud Workflows

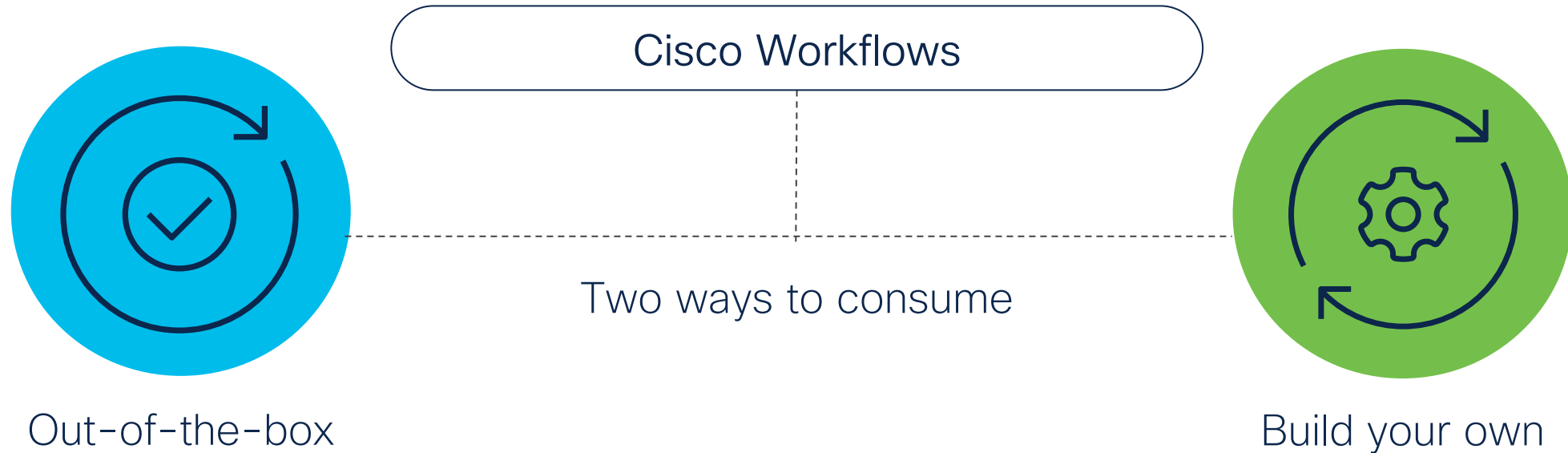
The key to simplifying business operations



Central automation for your entire infrastructure



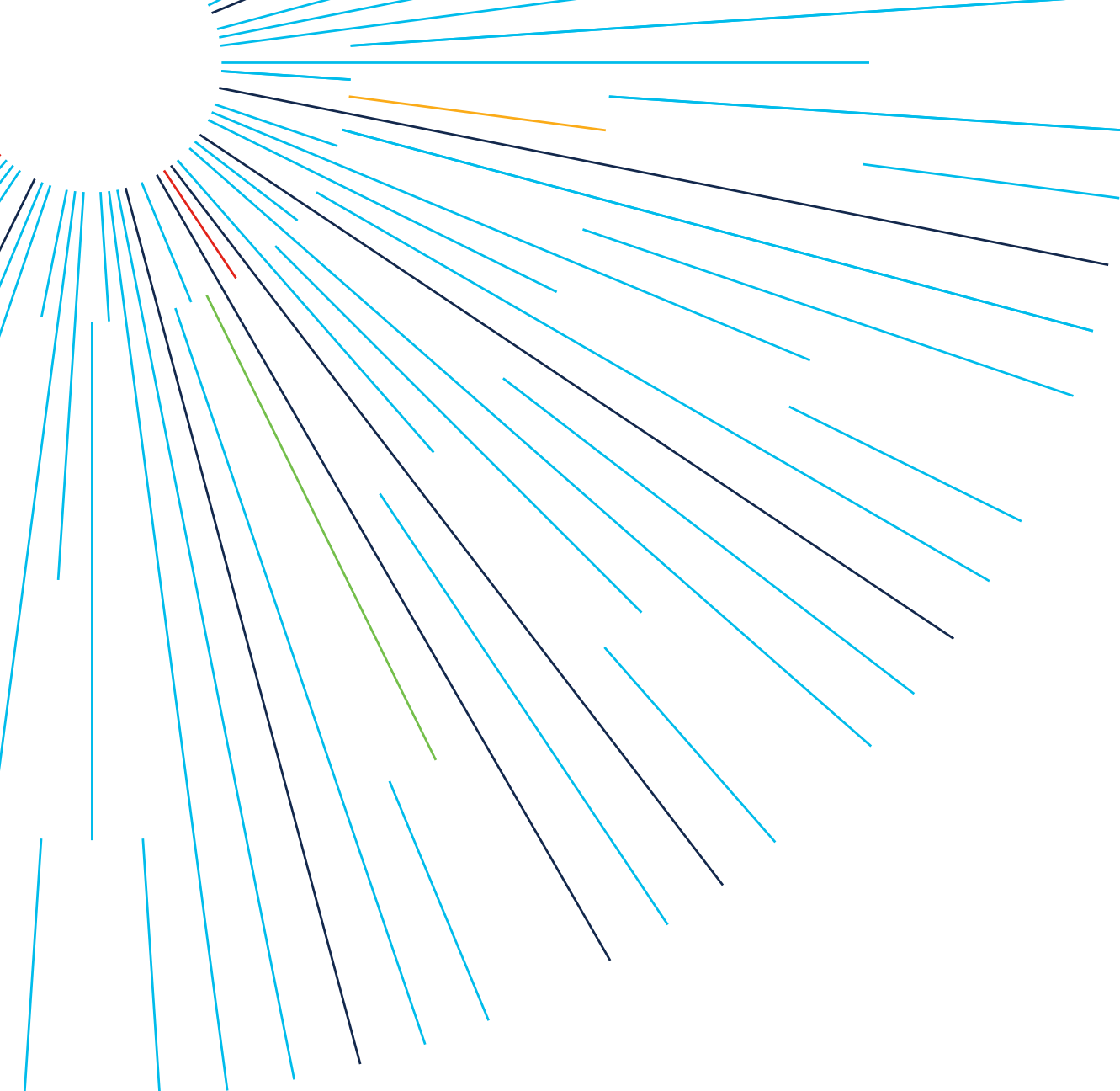
Flexible consumption for whatever works for you



Premade templates based on Cisco Validated Design for common automation scenarios

Drag-and-drop workflow creation and editing

Custom automation leveraging the provided adapters for Cisco and 3rd Party systems integrations



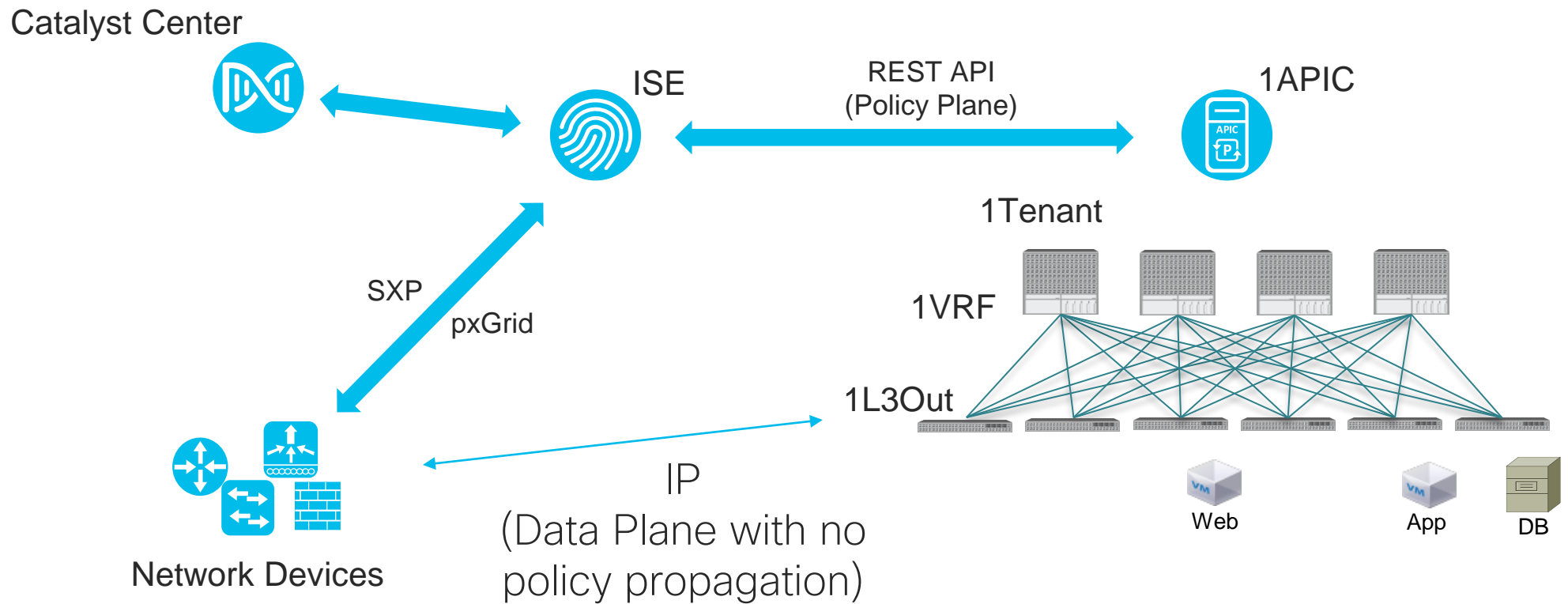
Introducing
Common policy



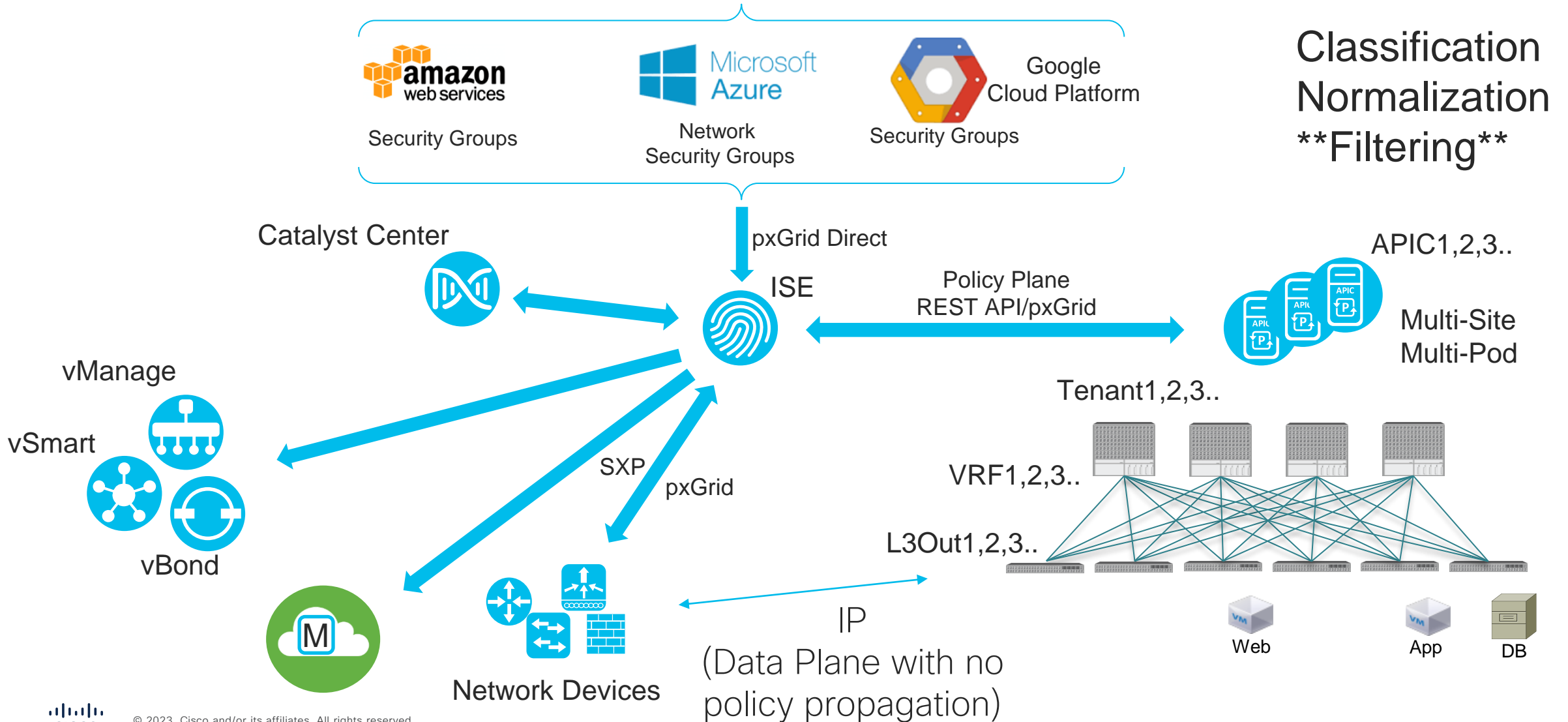
ISE - ACI Integration Today

Since ISE 2.1 (2016):

Normalization

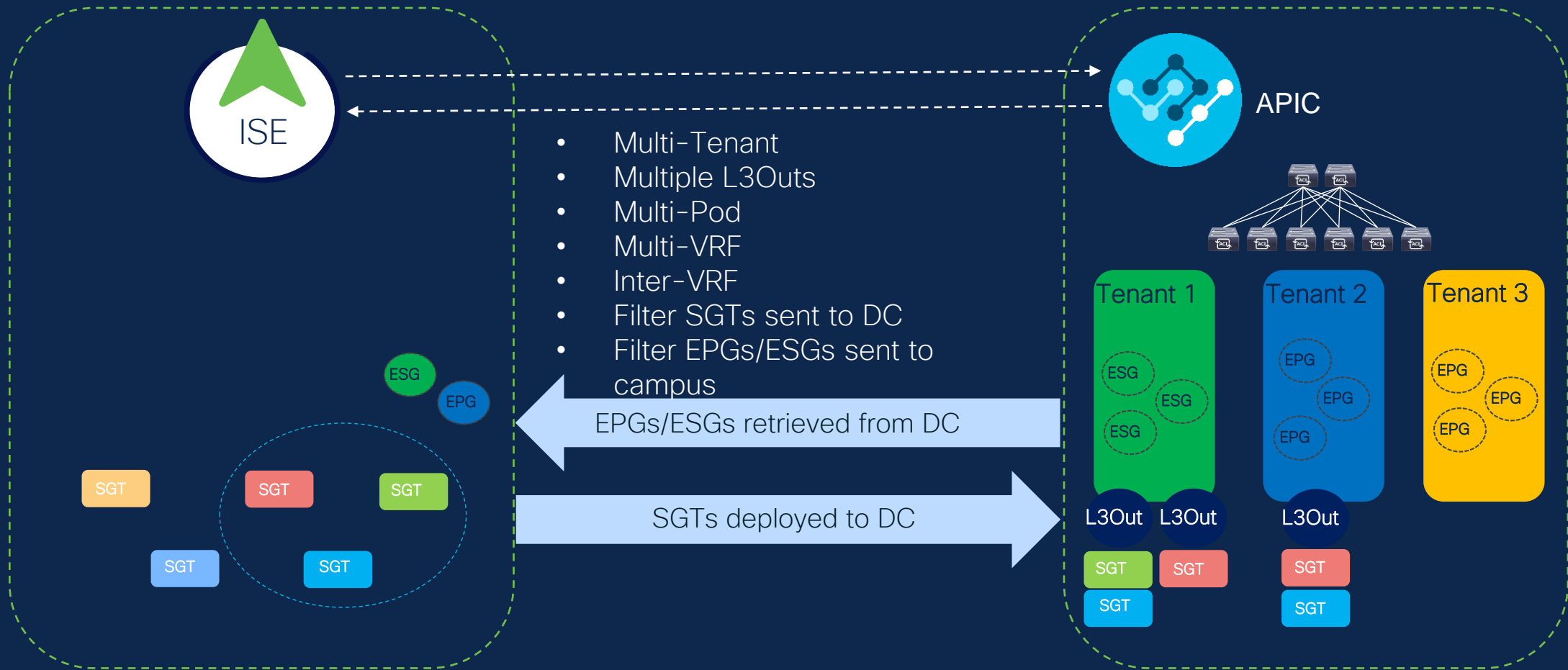


Common Policy



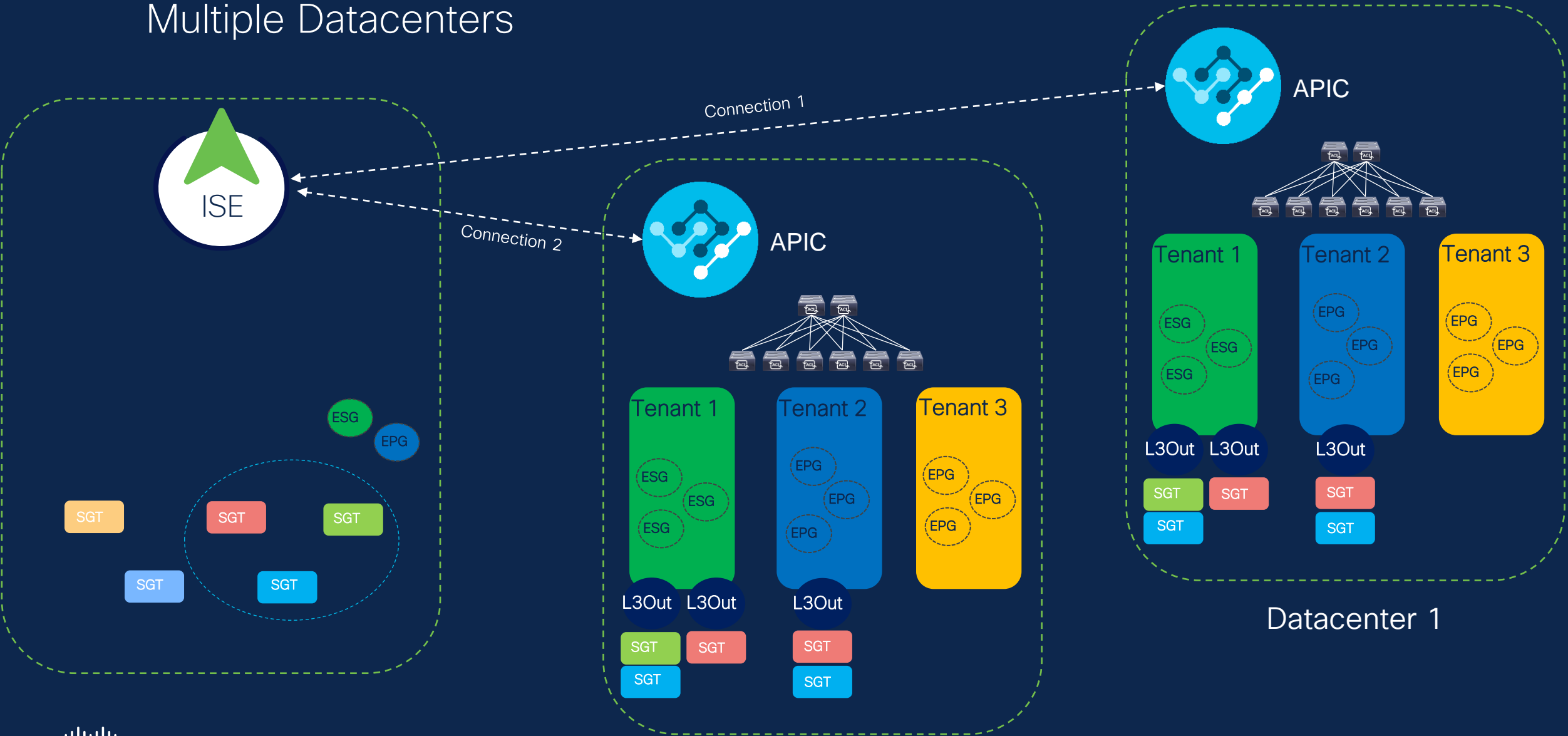
ACI: Data Center & Campus Policy Integration

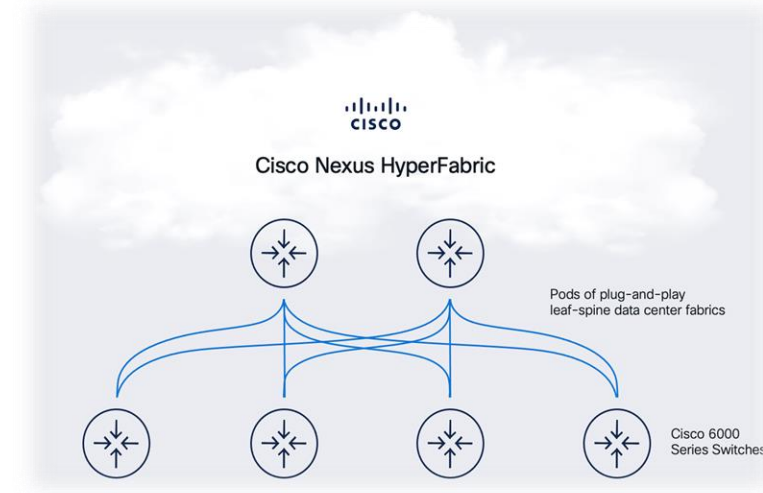
Multi-Tenant / Multi-VRF Support



ACI: Data Center & Campus Policy Integration

Multiple Datacenters





Cisco Nexus HyperFabric & Cisco Nexus HyperFabric for AI Clusters



Validating what we know
from our customers

Complexity is the status quo



Greater application complexity

750M new applications

By 2025



Mandate to do more with less

Cloud costs up 20%

Versus last year



Accelerating pace of operations

Infrastructure and apps are deployed

56% faster



Rising demands for sustainability

In a typical office, data centers consume

<50x power



Surging data from AI workloads

117M TB of data

from AI-lifecycle workload



Expanding attack surface

125% rise

in cyber threats, costing \$10T in 2025

Customers are rapidly adopting **Cloud Managed Networking**

35%

projected YoY growth in global NaaS market 2023-2030

4M+

Customer networks managed by Cisco Meraki



<https://www.fortunebusinessinsights.com/network-as-a-service-market-106700>



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Cisco Nexus HyperFabric

Data center network fabric-as-a-service

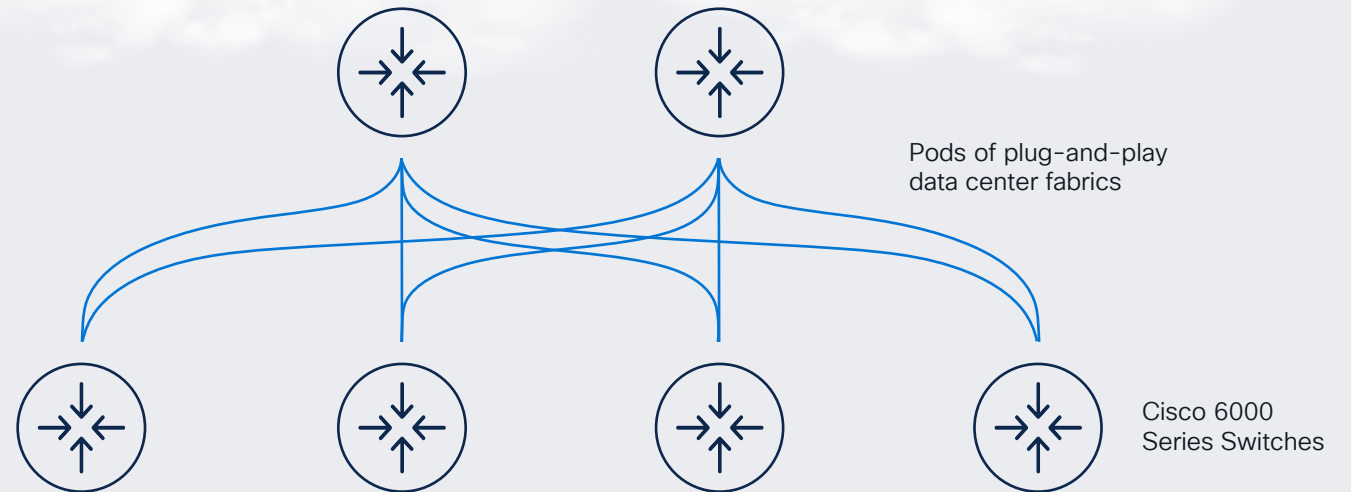
Design, deploy and operate on-premises fabrics located anywhere

Easy enough for IT generalists, application and DevOps teams

Outcome driven by a purpose-built vertical stack



Cisco Nexus HyperFabric



Design



Order



Deploy



Validate



Monitor



Upgrade



Collaborate

Cisco Data Center Networking Portfolio

Cisco Nexus HyperFabric



Commercial/
Public Sector



Distributed
DC Edge

Cisco Cloud-Managed as-a-Service, Fully Integrated

Easily design, order, deploy, monitor and upgrade fabrics

Purpose built vertical stack

Greenfield deployments only

Cisco 6000 series switches (Silicon One™)

*V1.0 FCS Target CY25 & scales up to 2K host ports

Cisco Nexus ACI and NX-OS



Enterprise/
Public Sector/
Commercial



Service
Providers



Tier 2/3 Web

Private Cloud Managed, Flexible Solution

General purpose data center solution

Greenfield & brownfield deployments

Any size spine-leaf data center

APIC and Nexus Dashboard for simplified Ops

CloudScale & Silicon One™ Switches

* Shipping

Cisco Nexus HyperFabric Components

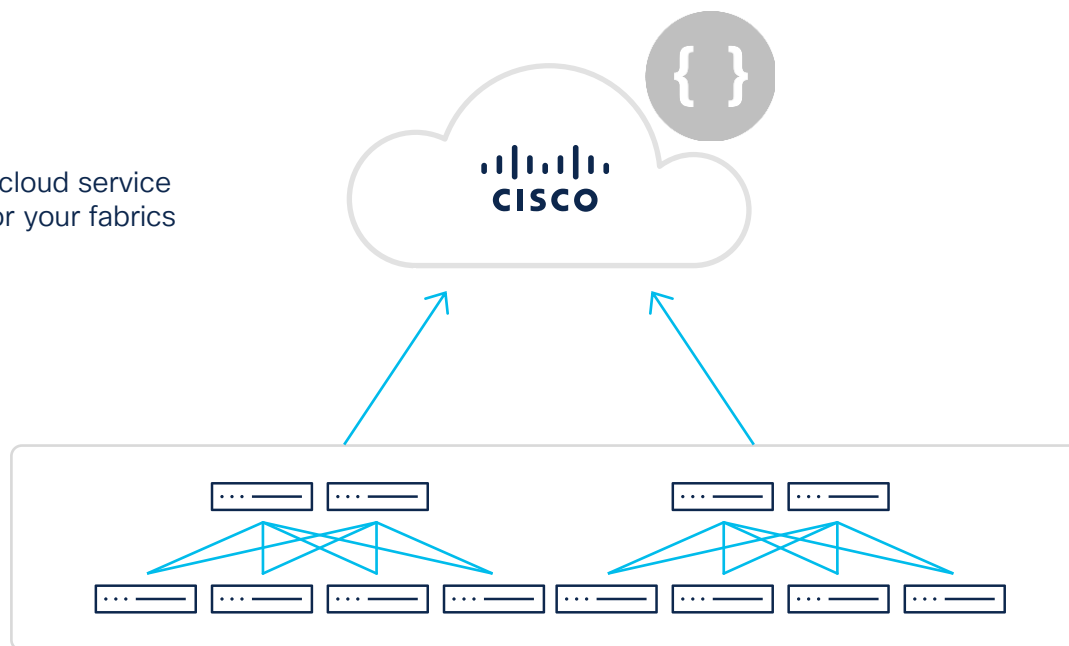
Cloud Controller

- Scalable, globally distributed multi-tenant cloud service
- Design, plan, control, upgrade, and monitor your fabrics
- Browser, API, and mobile access



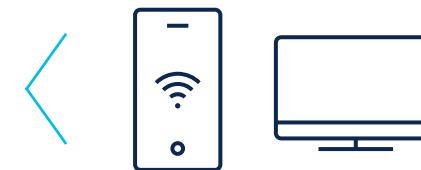
Cloud-managed 6000 switch

- Boot-strapped from cloud
- Full visibility and control from the cloud



High-performance fabrics

- Initially thousands of 10/25/100/400 GbE host ports
- EVPN/VXLAN, layer 2 VLANs, IPv4/IPv6 routing
- Mesh and spine leaf fabrics

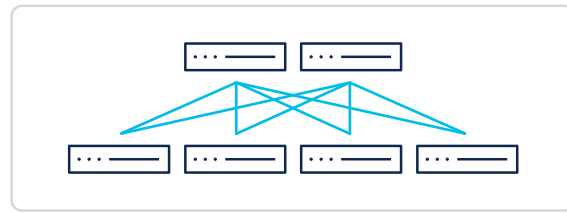


Helping hands app

- Step-by-step deployment tasks
- Registration and cabling
- Real-time validation

Who is the Cisco Nexus HyperFabric for?

Customer use cases

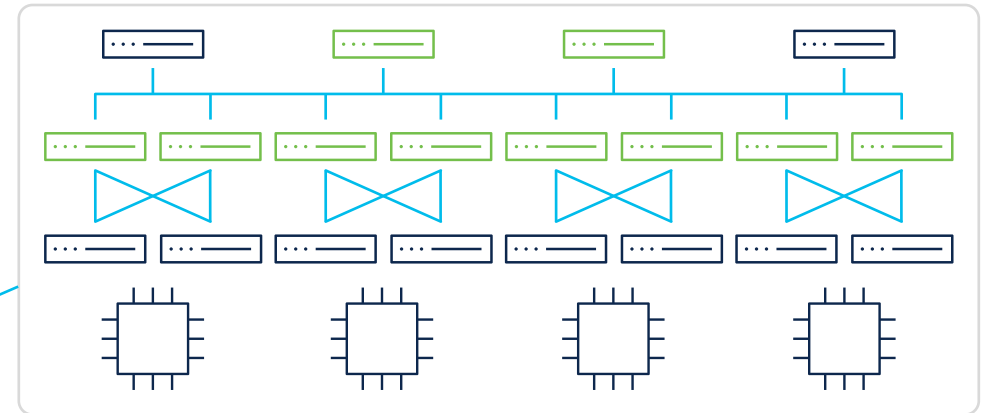


Build new data centers

- Ease-of-use for IT generalists
- Start small and grow fabrics (1+)
- Self-service for fabric tenants

Cloud SaaS Controller

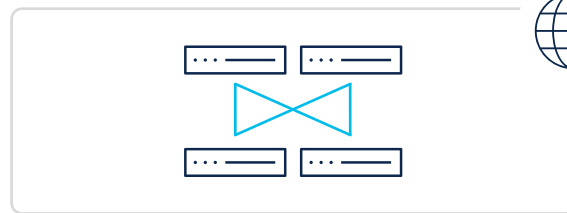
- Single global UI for all owned fabrics
- Single global API endpoint
- Underlay and lifecycle automation



AI/ML/HPC fabrics

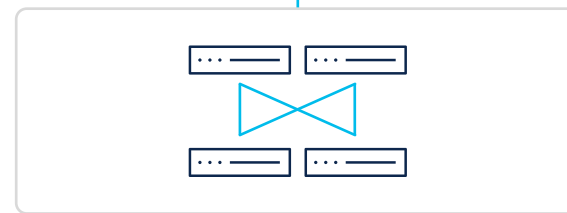
- Simple to deploy and manage
- Scalable AI-ready Ethernet fabric

Cisco Nexus HyperFabric AI cluster
Post 1.0 Release



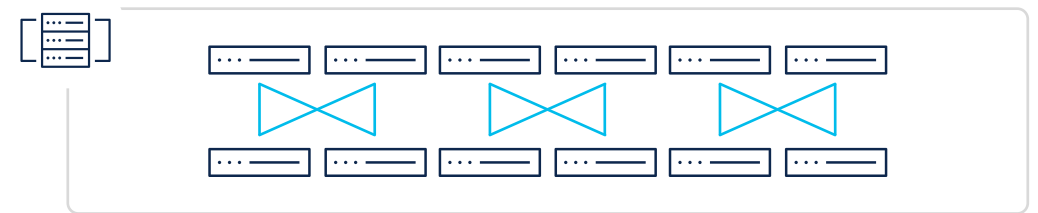
Extend data centers

- Plug-and-play deployment
- Easily expand to data center edge/colo
- Small fabrics of 1-2 switches



Downsize data center tooling footprint

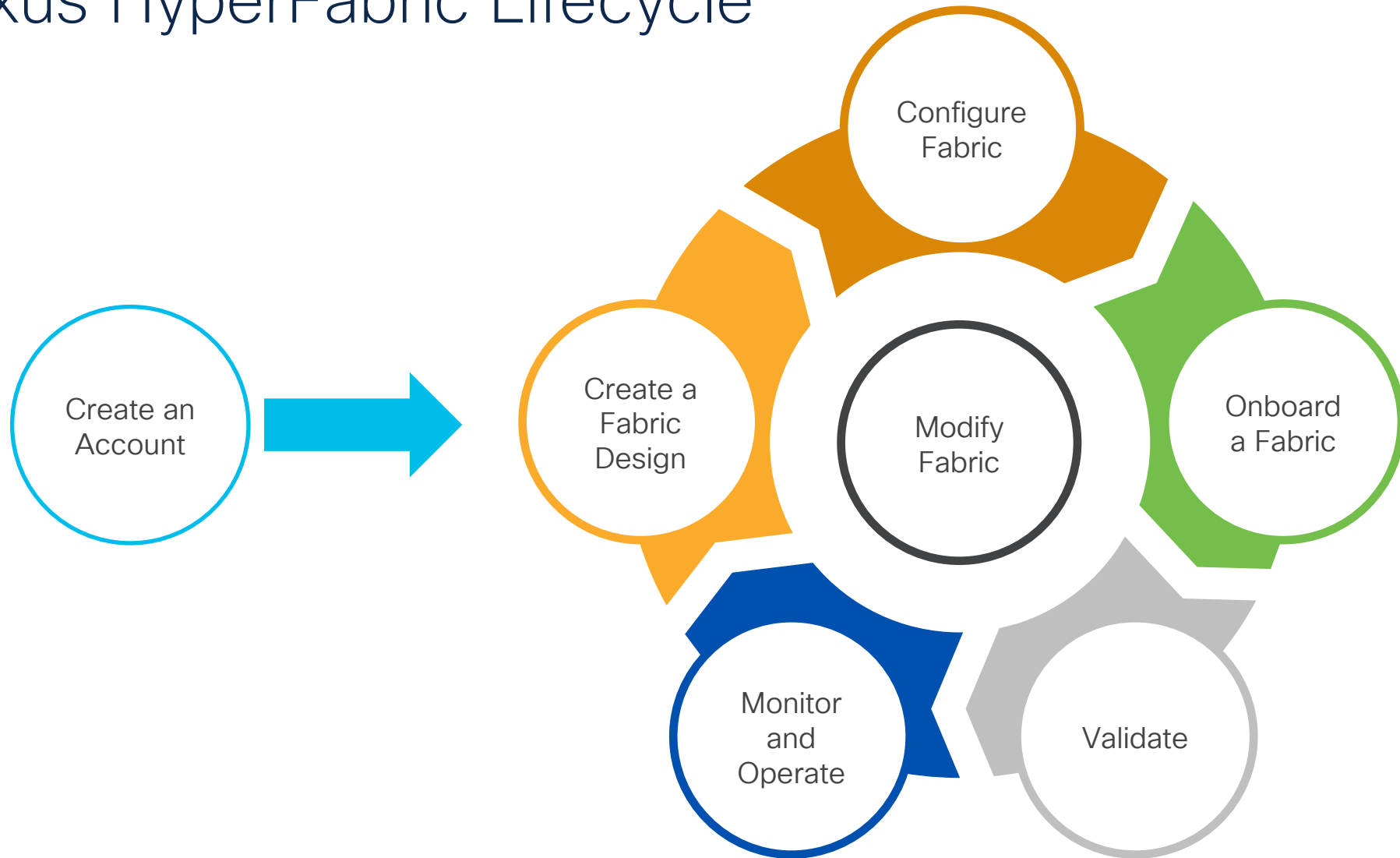
- Data center anywhere with cloud controller
- Planning/design tools to help build rollout



Manage multiple customer data centers

- Managed from cloud
- Remote hands assistance

The Nexus HyperFabric Lifecycle





Cloud-Managed Full-Stack AI Solution with NVIDIA

Introducing

Cisco Nexus HyperFabric AI Cluster



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“By 2027, **40% of enterprises** will deploy GenAI network fabrics to enable **cost and performance optimized** support for AI workloads in their own data centers.”

IDC Perspective, March 2024*

Cisco Nexus HyperFabric AI Cluster

in partnership with NVIDIA

Democratize AI Infrastructure

Visibility into full stack AI

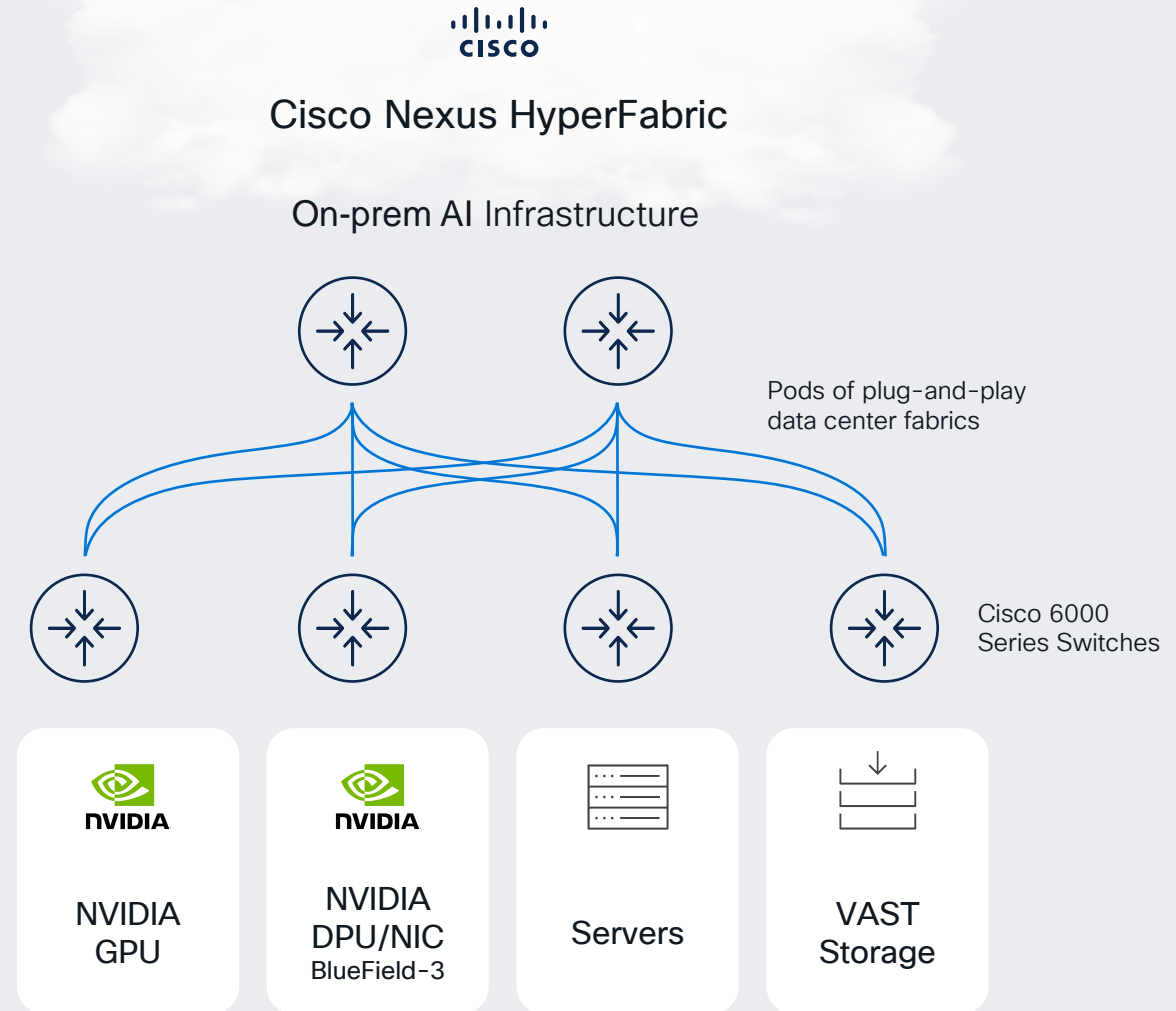
Unified stack including NVAIE

AI-native operational model

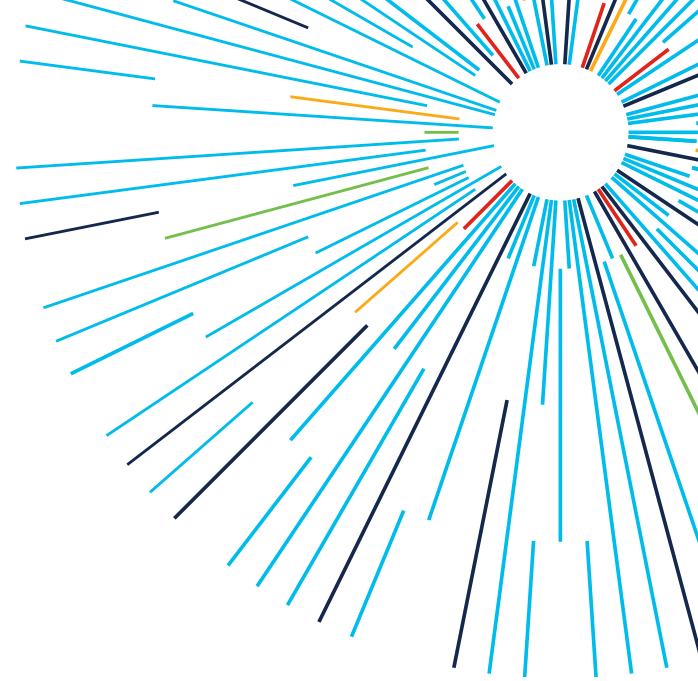
High-performance Ethernet

Cloud managed operations

A solution that will enable you to spend time on AI innovation—not on IT.



Built on Cisco Silicon One and Optics innovations



Observability Solutions

Integrace Splunk a AppDynamics



~1/2 of Cisco's recent acquisitions were observability related



Leader of Business and Application Monitoring; \$3.7Bn

Jan 2017



ThousandEyes

Network and global path visibility

May 2020

KENNA Security

Security risk scoring and business prioritization

Dec 2020



Cloud native cost analytics.

Oct 2021



PERSPICA

ML & AI for data analysis, APM enhancements



dashbase

Event and metric analytics



epsagon

Modern microservices observability



opsani

Performance and cost tuning for cloud native

Jan 2022

smartlook

Session playback and user trends

Mar 2023



SamKnows

last mile network and mobile monitoring

Jun 2023

Jun 2023



splunk>

Aug 2023

Mar 2024

Lightspin

Cloud native – end to end security and visibility

ACCEDIAN

5g and Service Provider monitoring, observe by microsecond at scale

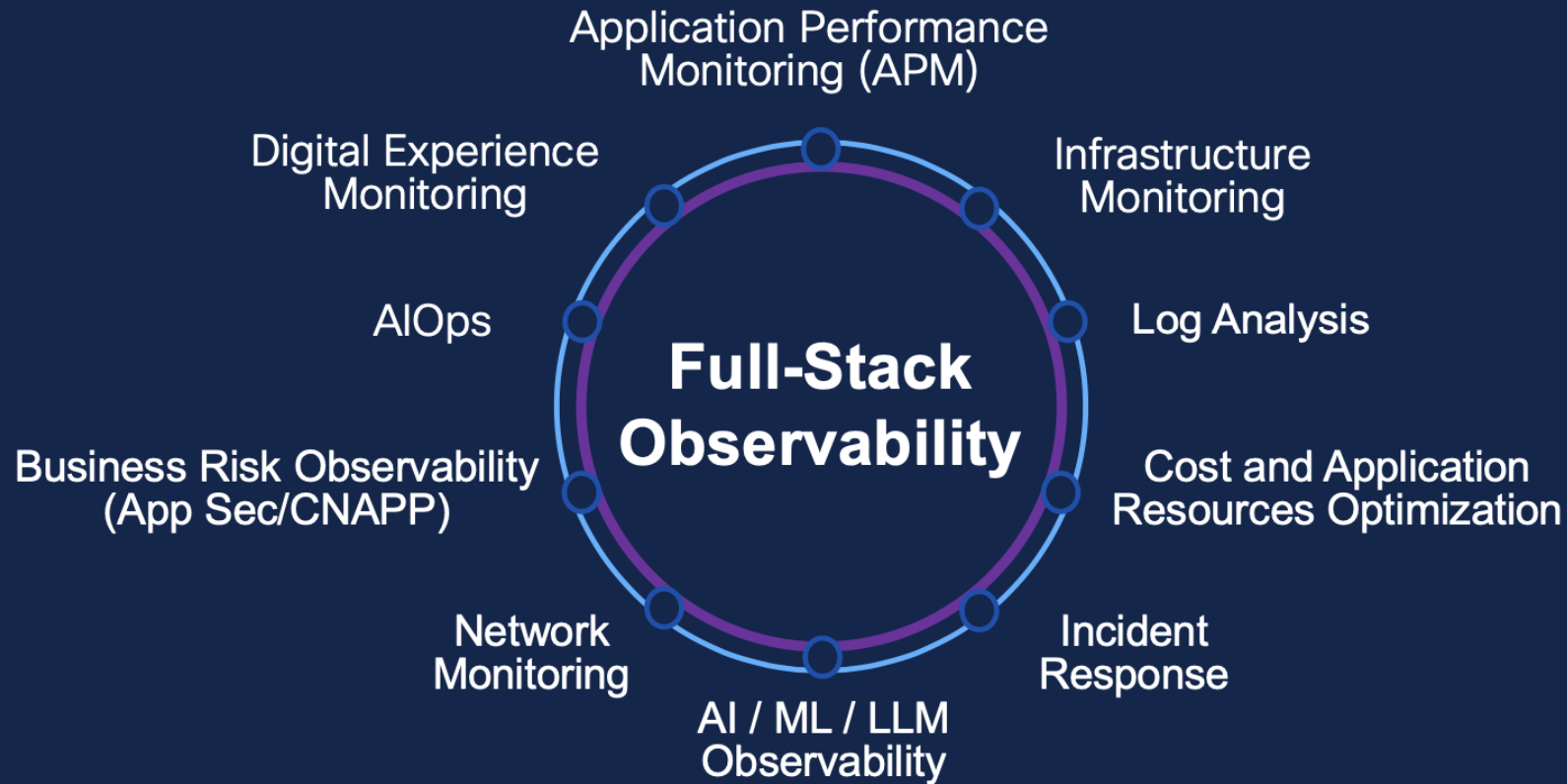


Code BGP

global BGP monitoring, internet health



Cisco + Splunk Full-Stack Observability



Real-Time Insights

AI Powered

Enterprise Grade

Open Telemetry Native

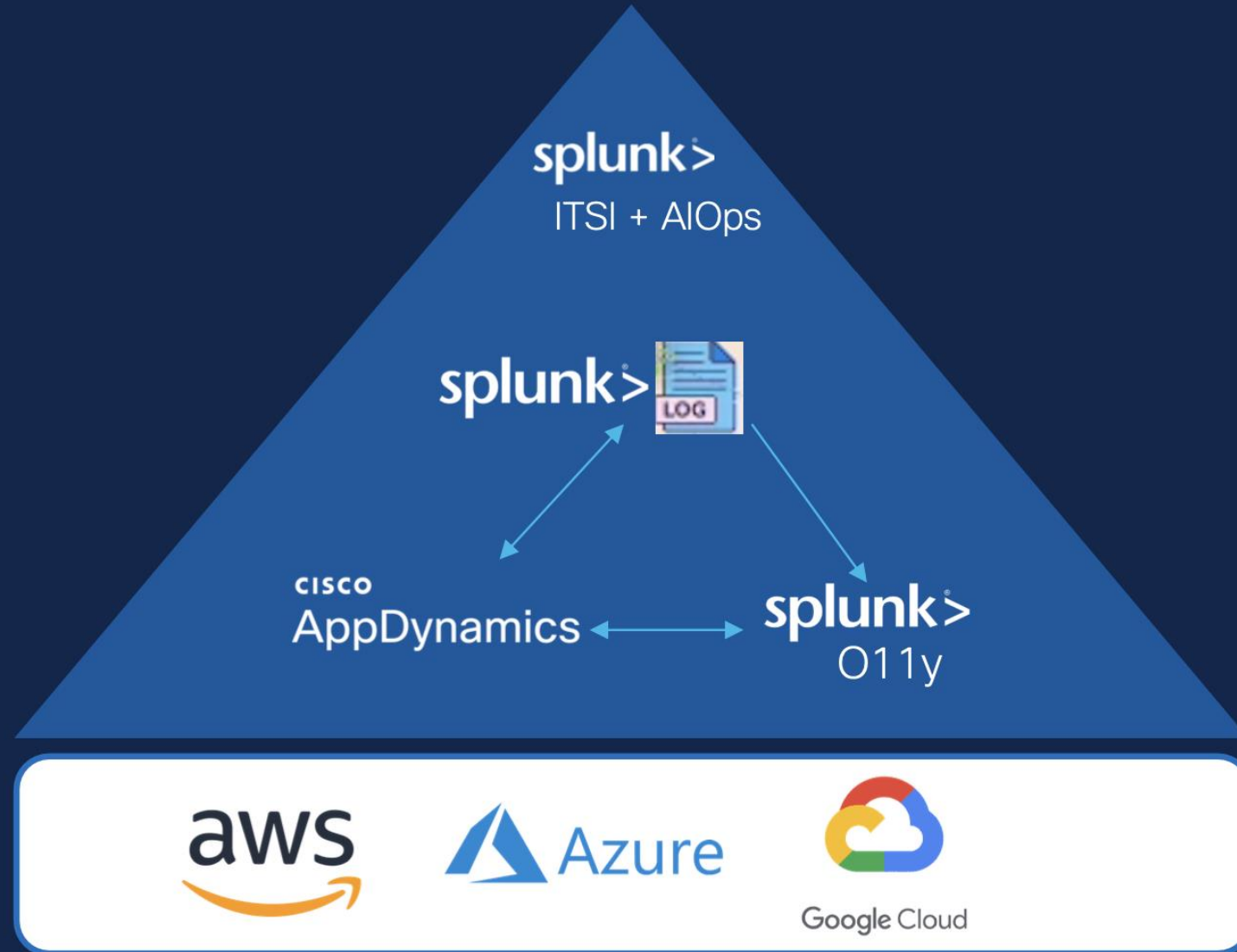
Extensibility

Cross MELT

Business context

On-Prem | Hybrid Cloud | Multi-Cloud | Cloud-Native

Cisco + Splunk Near Term North Star



Novinky ohlášené na CLUS 2024

- Single sign-on pro AppDynamics a Splunk - Q3CY24
- Splunk Log Observer Connect for Cisco AppDynamics - Q3CY24
- Cisco AppDynamics integration with Splunk Enterprise / Splunk Cloud and Splunk ITSI - June 14, CY24
- Cisco AppDynamics on Microsoft Azure - Q3CY24
- Cisco AI Assistant for Cisco AppDynamics - Q3CY24
- Advanced AI in Splunk IT Service Intelligence (ITSI) - available

Splunk Log Observer Connect for Cisco AppDynamics

The screenshot displays the Splunk Log Observer Connect for Cisco AppDynamics interface. The main navigation bar includes 'CiscoLive2024DemoApp' and a 'View Logs in Splunk' button. A red arrow points from this button to the search input field in the 'New Search' section. The search query is 'appd_app_name=CiscoLiveECommerceApp index=splunkufdemo'. Below the search bar, it indicates '9,442 events' for the time range '5/13/24 12:14:05.000 PM to 5/14/24 10:14:05.000 PM'. A bar chart shows event counts over time. The 'Events (9,442)' tab is selected, displaying a list of events with columns for 'Time' and 'Event'. The first event is an INFO level log from 5/13/24 5:37:40.785 PM. The second event is an ERROR level log from 5/13/24 5:37:32.658 PM, with a detailed stack trace for a 'java.lang.RuntimeException: Error in processing payment'. The third event is an INFO level log from 5/13/24 5:37:30.649 PM. The left sidebar contains various navigation options like 'Main Menu Applications', 'Application Dashboard', and 'Alert & Respond'.

View Logs in Splunk

appd_app_name=CiscoLiveECommerceApp index=splunkufdemo

9,442 events (5/13/24 12:14:05.000 PM to 5/14/24 10:14:05.000 PM) No Event Sampling

i	Time	Event
>	5/13/24 5:37:40.785 PM	2024-05-13_23:07:40.785 [qtp1639830993-75] level=INFO [AD_REQUEST_GUID=9248683e-3bae-43c9-9cft host = BHUVNESK-M-9WK1 source = /Users/bhuvnesk/appdy/Opentelemetry/AlphaApp/payment/paym
>	5/13/24 5:37:32.658 PM	2024-05-13_23:07:32.658 [qtp1639830993-75] level=ERROR [AD_REQUEST_GUID=e983c656-9902-453b-b0f e 500 java.lang.RuntimeException: Error in processing payment at com.sample.PaymentServlet.doGet(PaymentServlet.java:29) at javax.servlet.http.HttpServlet.service(HttpServlet.java:735) at javax.servlet.http.HttpServlet.service(HttpServlet.java:848) Show all 26 lines host = BHUVNESK-M-9WK1 source = /Users/bhuvnesk/appdy/Opentelemetry/AlphaApp/payment/paym
>	5/13/24 5:37:30.649 PM	2024-05-13_23:07:30.649 [qtp1639830993-75] level=INFO [AD_REQUEST_GUID=e983c656-9902-453b-b06f host = BHUVNESK-M-9WK1 source = /Users/bhuvnesk/appdy/Opentelemetry/AlphaApp/payment/paym

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IT Service Intelligence and AppDynamics

splunk enterprise Apps Administrator Messages Settings Activity Help Find

Service Analyzer Entity Overview Alerts and Episodes Glass Tables Deep Dives Dashboards Configuration Search IT Service Intelligence

(Demo) - Buttercup Retail Auto Refresh: No refresh (Global default) Last 4 hours Save as... Save

Filter services Select services to monitor Filter by tags Select tags to monitor Minimum Severity None Filter by Service Depth Maximum Depth: All KPI Value: Aggregate

Go to service

APM_App_Response_Time 70

APM_App_Response_Time_AppDynamics 244.3 ms

4 KPIs Open all in Deep Dive

Severity	KPI Name	Value
Low	APM_App_Response_Time_New_Relic	749.29 ms
Normal	APM_App_Response_Time	292.73 ms
Normal	APM_App_Response_Time_AppDynamics	244.3 ms
Normal	APM_App_Response_Time_DynaTrace	242.96 ms

0 Critical and High Episodes View All

No episodes found.

155 Entities

Severity	Entity Name	Value
Low	Checkout Service:223:mon...	735.5
Normal	Email Service:226:monty41...	55
Normal	Online Service:230:monty4...	315
Normal	Currency Service:234:mont...	374
Normal	Redis-cart Service:234:mo...	85
Normal	Payment Service:228:mont...	348
Normal	Cart Service:226:monty413...	199
Normal	B2B Service:227:monty413...	81
Normal	Customer Service:225:mon...	73
Normal	Product Catalog Service:2...	218.5
Normal	Product Catalog Service:2...	93
Normal	Customer Service:231:mont...	371
Normal	Cart Service:231:monty413...	273
Normal	Comments Service:226:mo...	288
Normal	Authentication Service:234...	175
Normal	Authentication Service:228...	300
Normal	Recommendation Service:...	302
Normal	Cart Service:232:monty413...	72
Normal	Redis-cart Service:228:mo...	294
Normal	Customer Service:233:mon...	227

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Advanced AI in Splunk IT Service Intelligence

The screenshot displays the Splunk APM interface with a service dependency map. The map shows a central node 'frontends' connected to 'checkoutservice' and 'recommendationservice'. 'checkoutservice' is further connected to 'adservice'. The interface includes a sidebar with navigation icons, a top navigation bar with 'APM Explore', and a bottom status bar with 'Infrastructure (0)' and 'Logs (0)'. An AI chat overlay is positioned in the foreground, showing a conversation between a user and an AI assistant.

AI Assistant: I see 3 critical alerts triggered for paymentservice, can you explain more?

User: I can certainly help with that!

The upstream service from paymentservice is called checkoutservice, which had critical alerts triggered 30 minutes before alerts were triggered for paymentservice. Two deployments were made to checkoutservice today. This could be related. You can explore these services visually from the service dependency map in APM, or I can assist you with some metric names to further explore. Which of these next steps would you prefer?

Buttons: View service dependency map in apm, Suggesting some metric names

AI Assistant: Ask me anything about your environment

356 days left in trial

Observability Assistant



The bridge to possible