

The background is a vibrant, abstract composition of numerous colorful rays and shapes radiating from a central point. The colors include dark blue, light blue, green, yellow, orange, and red. Some shapes are elongated and pointed, while others are more rounded or circular. The overall effect is dynamic and energetic.

TURN IT UP

CISCO *Live!*

#CiscoLive



The bridge to possible

Nexus Dashboard

Transform Network Operations

Azeem Suleman, Director Product Management

@azeem_suleman

BRKDCN-2812

CISCO *Live!*

#CiscoLive



A decorative graphic on the left side of the slide, consisting of several overlapping, teardrop-shaped elements in various colors (blue, green, yellow, red, dark blue) radiating from a central point, resembling a stylized flower or a burst of energy.

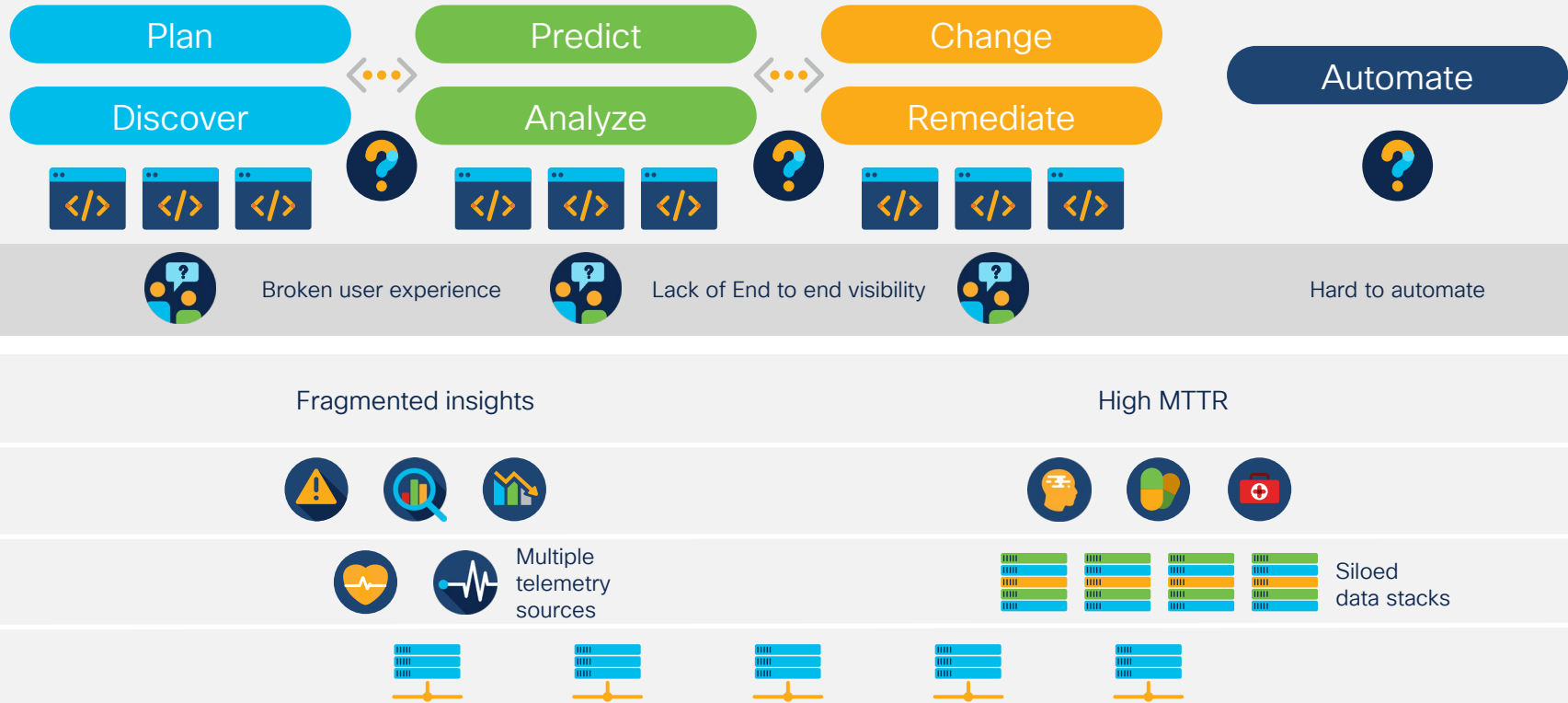
Agenda

- Introduction
- Nexus Dashboard
- Architecture and Services
- Demo
- Deployment and Use Cases
- Licensing
- References

Introduction



Operational Challenges in the Data Center



Inconsistent User Experience | No Correlation | Disjoint Ops Infra | High TCO

Nexus Dashboard

CISCO *Live!*



Nexus Dashboard

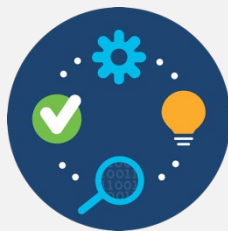
Transform networking operations



Orchestrator



Insights



Data Broker



3rd Party Tools



Connecting all services in one place



splunk>

servicenow



Cisco Nexus Dashboard Platform

Modern Scale-out application services stack to host data center operations applications



Nexus
Insights



Network
Assurance
Engine



3rd Party
apps



MultiSite
Orchestrator



2.2 GHz 10 core CPU x 2

256 GB memory

2.4 TB x 4 HDD

10G/25G/40G connect

Network
automation

Scale-out cluster

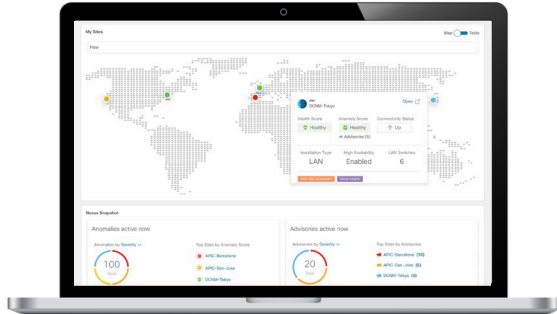
High Availability

Nexus Dashboard

The admin view



The operator view



* Roadmap



Onboard Cisco ACI and DCNM sites



Provide common services for all apps



Seamless integration and lifecycle management of operational services



Single dashboard for cross domain and third-party integrations*



Customizable role-based UI view for network operators use cases



Single Sign On (SSO) for seamless user experience across operation services



Easily monitor hybrid multi cloud environments



Unified Operations view



Easily leverage common northbound integrations

Nexus Dashboard

Simple to automate, simple to consume

Automation Platform



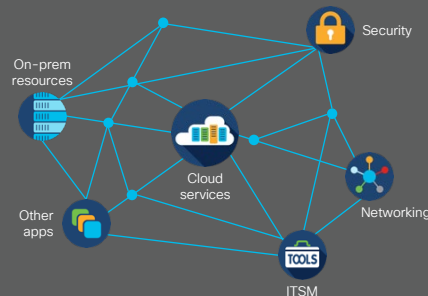
One platform, all services,
open APIs

IT Ops Transformation



Bridging the gap from
NetOps to DevOps

DC Network Services



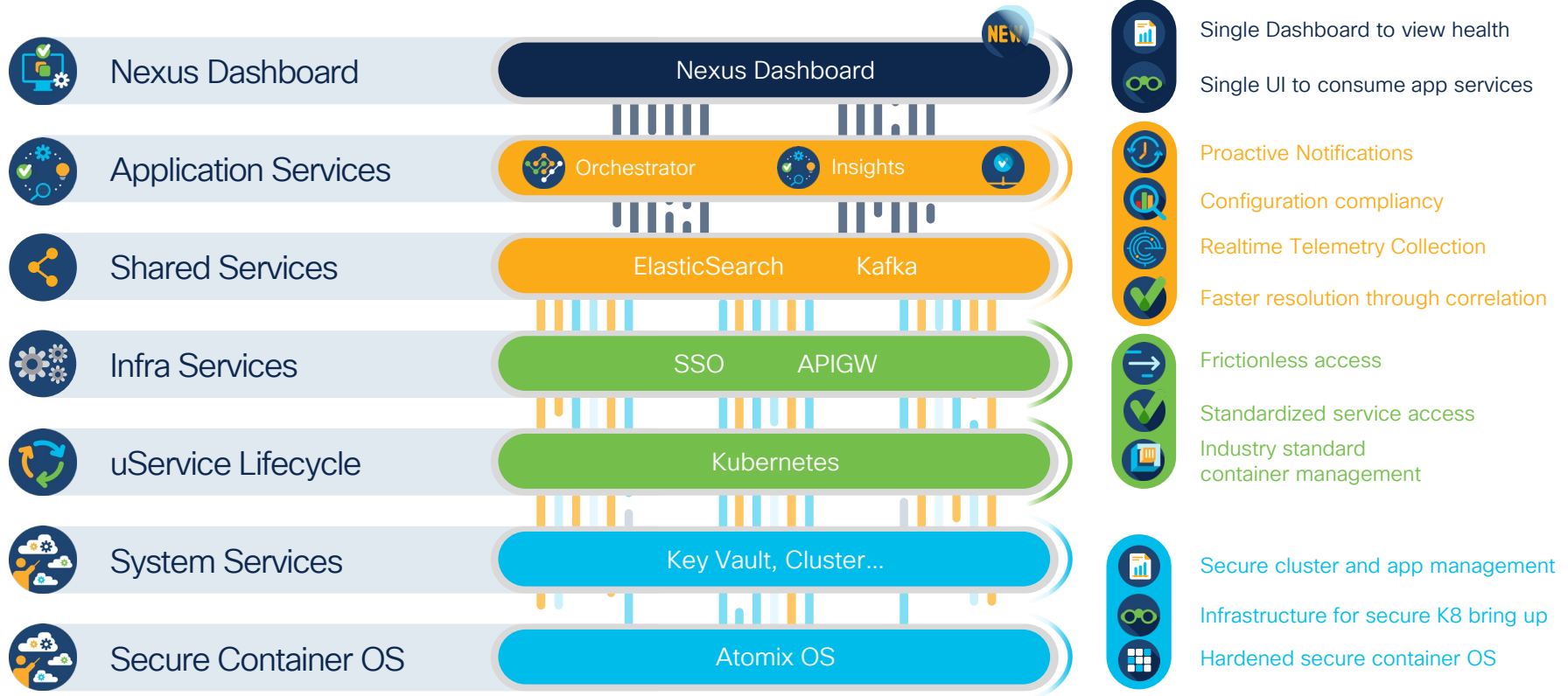
Lifecycle automation from
on-prem to cloud to edge

Architecture & Services

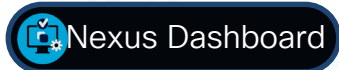
CISCO *Live!*



Nexus Dashboard Platform—Under the Hood

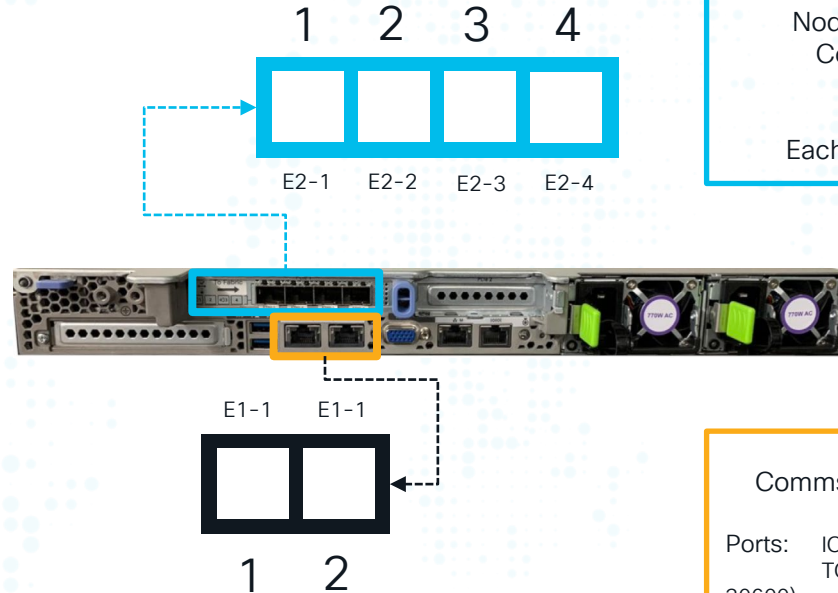


Nexus Dashboard Platform



Physical
Appliance
3+ physical nodes

150 ms RTT
between nodes¹



Data Ports (2)*

Node-to-Node & App Communication
Comms to APIC In-band and OOB
VXLAN Tunneled
MTU: 1500
Each node may be in a different subnet

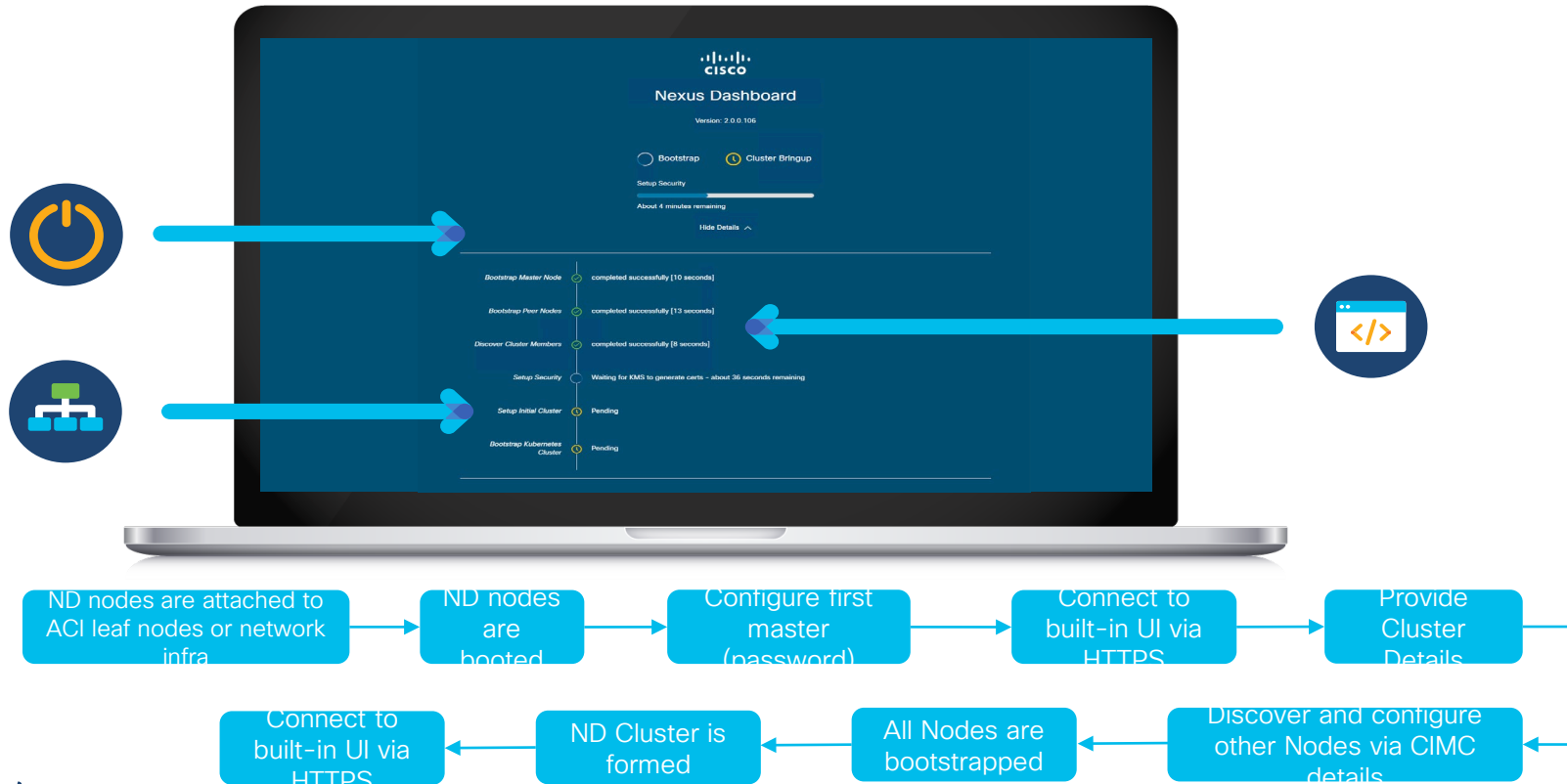
Out-of-band management (2)*

API & GUI access
Comms to NTP, Intersight, DNS, DC Proxy &
firmware/apps download

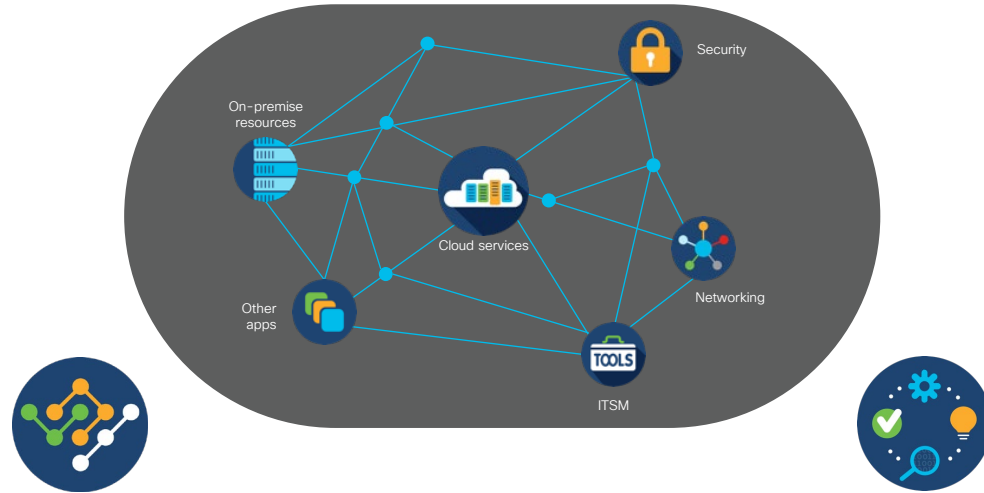
Ports: ICMP,
TCP (22,443,5555,9880,30012,30021,30500-
30600),
UDP (67,69,30500-30600)

Recommendation: Use **different** subnets for management and data

Nexus Dashboard – Easy Bootstrap



Nexus Dashboard Services



Orchestrator

Automate Cloud and DC(s)

Provision once, deploy anywhere
Integration with SD WAN and DNAC

Insights

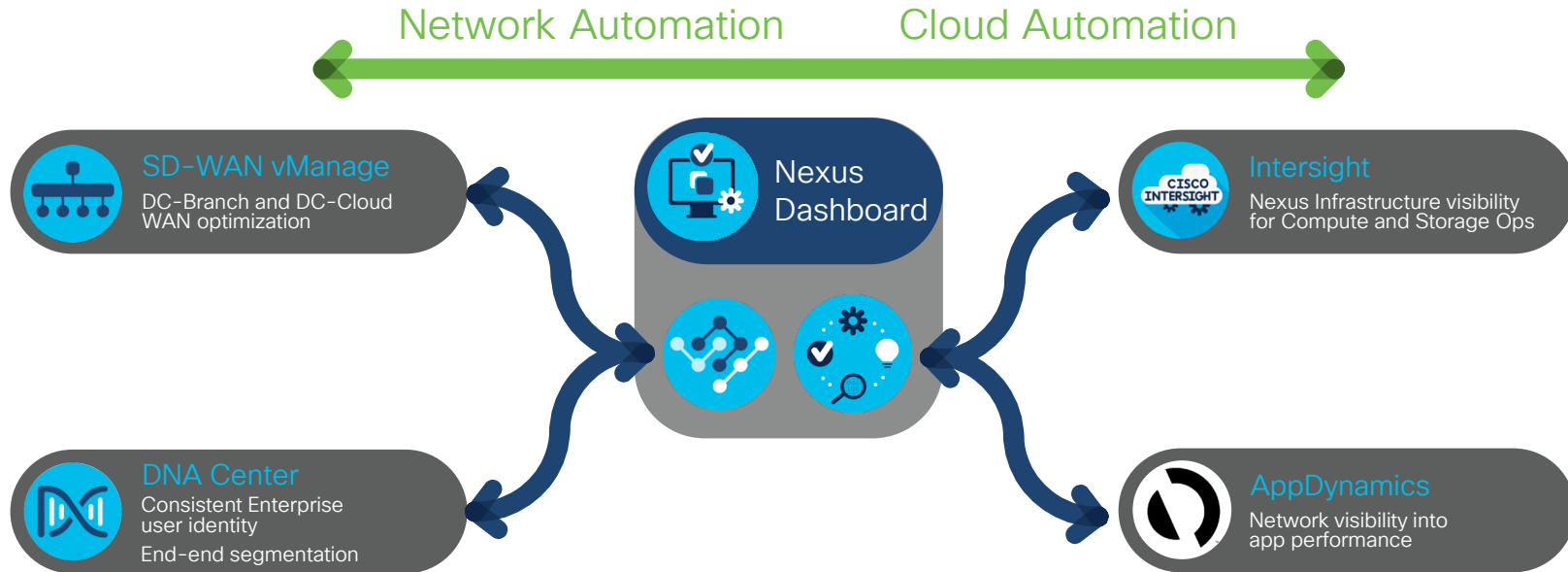


Transform network operations

Minimize risk and downtime
Integration with App Dynamics and Intersight


Nexus Dashboard

Service integrations



Nexus Dashboard

Insights 5.0

Bold == 

Visibility & Monitoring



Network graph



Capacity utilization



Multicast control plane



ACI Multi-Tier support



Multi-fabric support



Statistics

Analytics & Correlation



Flow Analytics - FTE*



AppDynamics integration



Endpoint Analytics



Microburst detection*



Overlay traffic



Anomaly analysis

Advisories & Tools



Kafka messaging bus



PSIRT notification



TAC Assist



Email notifications

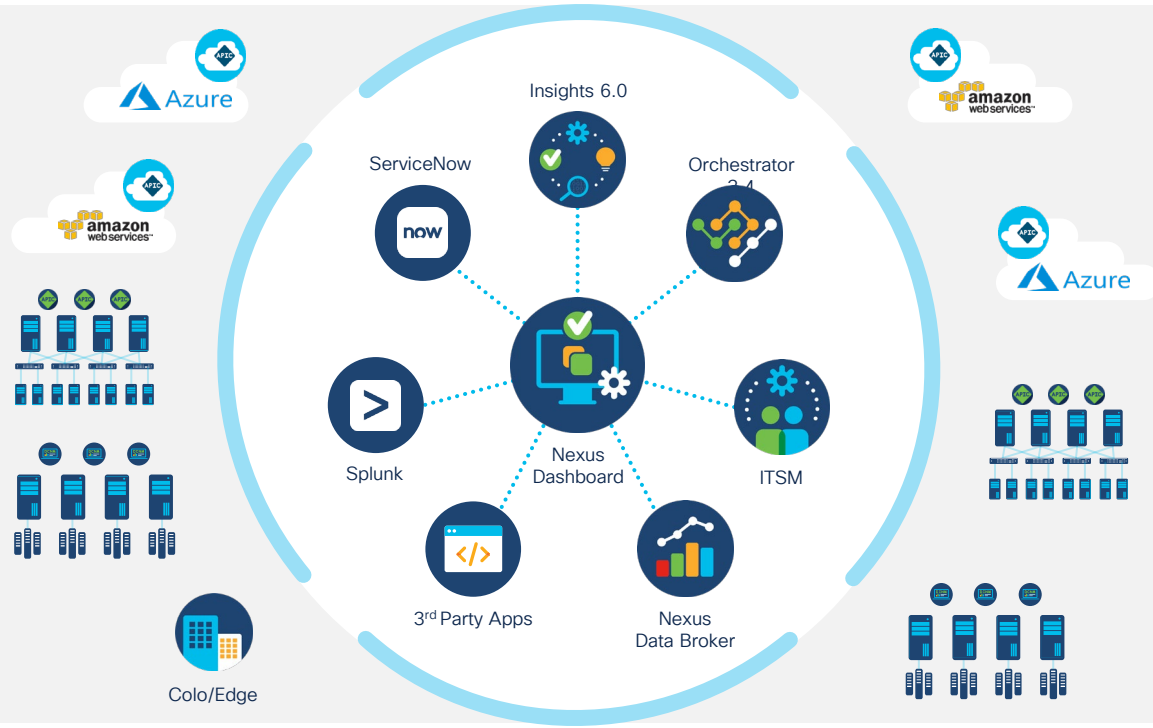


Field Notices

*Not supported on EX platform

Nexus Dashboard—2.1

Empowering full lifecycle automation

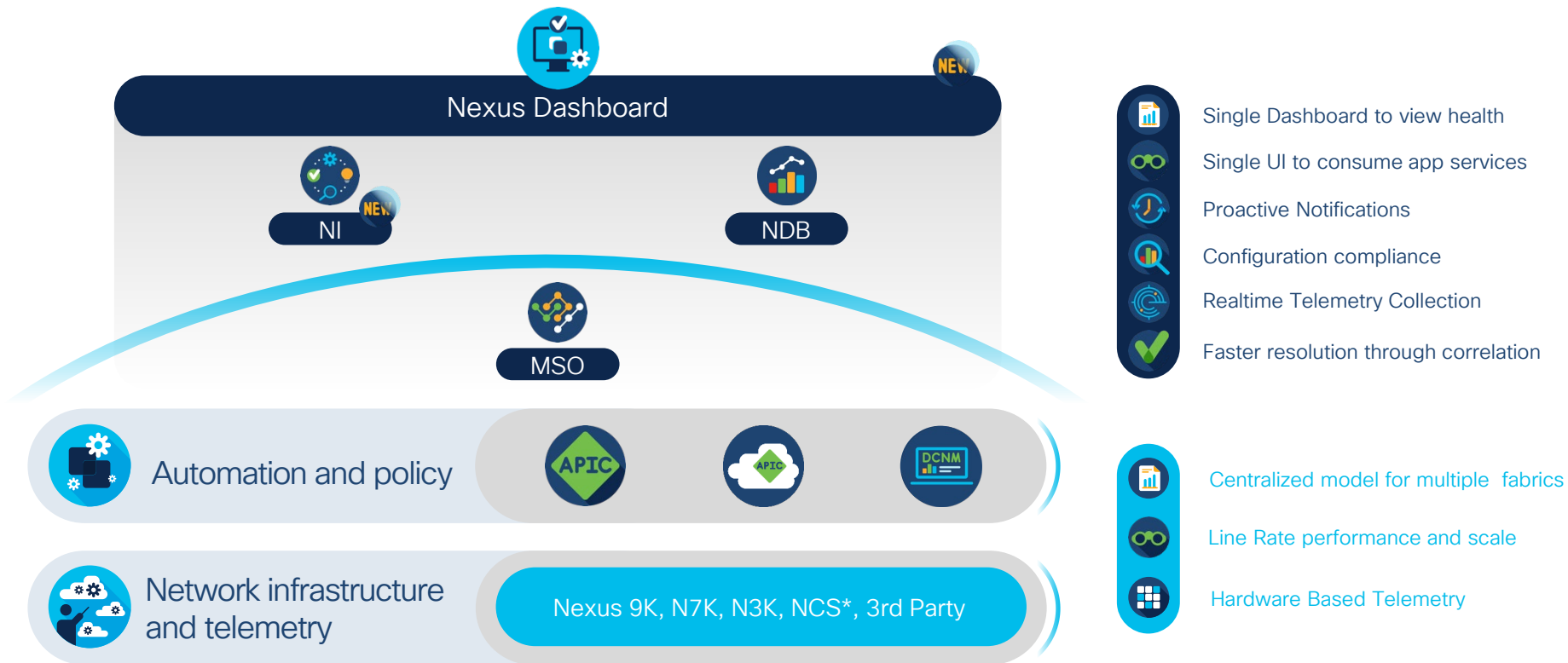


Single pane of
management

Any apps | All site types | All form factors

Cisco Data Center networking portfolio

Announcing the Cisco Nexus Dashboard



Demo

Deployment and Use Cases



Deployment Scenario's

Single Fabric and App(s)

- ND platform need IP (NI:Inband) connectivity with standby node
- Individual App has scale dimensions (NI:500 leaf's, # of flows etc.)

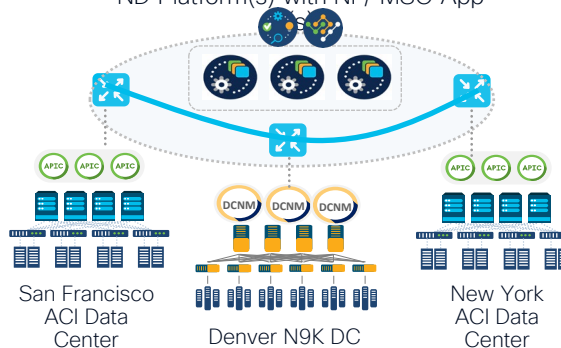
ND Platform with NI / MSO App



Multiple Fabrics with co-hosting of App(s)

- ND platform support multiple domains with standby node
- App(s) can be co-hosted in the same ND platform as long as it's within the boundary conditions

ND Platform(s) with NI / MSO App



Multiple Fabrics with local App(s)

- ND platform can be used to link together for user experience
- App(s) and their data are locally saved but global view is shown using ONE view

Nexus Dashboard

Supported site types and apps

ND Form Factor

- Physical Cluster

Site Types & Apps on ND

- Sites: ACI, DCNM
- Apps:
 - NI on ND (NIR + NIA): ACI only
 - MSO on ND: ACI, DCNM
 - NAE on ND: ACI, DCNM

ND 2.0.1

App Versions

- MSO 3.2
- NI 5.0
- NAE 5.1

ND Form Factor

- Physical Cluster
- Virtual and Cloud (MSO 3.3 only)

Site Typs & Apps on ND

- Sites: ACI, DCNM, Cloud
- Apps:
 - NI on ND: ACI, DCNM
 - MSO on ND: ACI, DCNM
 - NAE on ND: ACI, DCNM

ND 2.0.2

App Versions

- MSO 3.3
- NI 5.1
- NAE 5.1

ND Form Factor

- Physical, Virtual and Cloud Cluster

Site Types & Apps on ND

- Sites: ACI, DCNM, Cloud
- Apps:
 - NI on ND (NI+NAE): ACI, DCNM
 - MSO on ND: ACI, DCNM, Cloud
 - NDB on ND
 - 3rd Party: Service Now, Splunk

ND 2.1

App Versions

- MSO 3.4
- NI 6.0
- NDB 3.10.1

Nexus Dashboard

Insight Use cases

Visibility & Monitoring

Anticipate
risk, maintain
compliance and
reduce downtime

Analytics & Correlation

Leverage AI/ML
base insights

Advisories & Tools

Eliminate unplanned
outages, improve
uptime and SLA

Flow analytics—AppD

		Time	Before	After	
Tier 0 Ops	User raised a trouble ticket for erratic access to ERP				User raised a trouble ticket for erratic access to ERP
	NetOps checked connectivity e.g. ping, trace, routing	30 mins			NI Flow analytics shows application flows but notices AppD anomaly with performance impact events
	Did hop-by-hop diagnostics and found everything ok	1-2 hours	  		NetOps can check historical details to immediately root cause
Tier 1 Ops	Requested user to report recurrence to do real time troubleshooting	Day(s)		0 mins	
	User reported recurrence	Day(s)		0 mins	
Tier 2 Ops	NetOps worked with multiple teams/ tools but found nothing wrong with the network	Hours	  	0 mins	
	NetOps suspected application misbehaving. There are back and forth calls with app team(s)	Day(s)		0 mins	
	RCA: Misbehaving process on server is causing application performance issue				RCA: Misbehaving process on server is causing application performance issue

Compliance

	Risk/ Agility	Before	After	
HR team needed access to shared services	A High	✓	✓	HR team needed access to shared services
NetOps plans changes, create reports	A Low R Medium	✓		NetOps used Nexus Insights to model and validate config before applying on production environment with assured compliance
NetOps gets CAB approval	A Low	✓	✓	Take assurance report to CAB with confidence
NetOps planned schedule change window	A High			
NetOps made configuration change and gave access to shared services (unfortunately route leaking violated PCI compliance)	A High R High			
Tests between HR users and shared services passed. Change window closed	A High R High			
Security audit revealed PCI compliance violation	Time Bomb	✗		
NetOps rectified the configuration		✓		NI highlighted the compliance violation and prevented security loophole

Licensing



How to buy Nexus Dashboard

Software included with Switch Subscription Licenses

NEW

DCN Day2Ops

Nexus Dashboard with
Nexus Insights*, plus



Multi DC
(DCN Advantage)

or



Single DC
(DCN Essential)

NEW

DCN Advantage

Nexus Dashboard with
Multi-Site Orchestrator

NEW

DCN Premier

Nexus Dashboard with
Nexus Insights and
Multi-Site Orchestrator

Install Base (ACI/ NX-OS)

New Purchase (ACI/ NX-OS)

*NX-OS customers can use Nexus Insights w/o using DCNM for fabric management

Resources & Learn More

- [Cisco Nexus Dashboard Capacity Planning](#)
- [Cisco Data Center Networking Applications Compatibility Matrix](#)
- [Cisco Nexus Insights White Paper](#)
- [Cisco Nexus Dashboard Deployment Guide](#)
- [Cisco Nexus Dashboard At-a-Glance](#)
- [Cisco Nexus Dashboard Datasheet](#)
- [Cisco Nexus Dashboard FAQ](#)
- [Cisco Nexus Dashboard Buying Guide](#)

Cisco Nexus Dashboard

cisco.com/go/nexusdashboard

Cisco Nexus Insights

cisco.com/go/nexusinsights

cisco.com/c/en/us/solutions/data-center/webinars.html



Continue your education



Demos in the Cisco campus



Meet the engineer 1:1 meetings



Walk-in labs



Related sessions





The bridge to possible

Thank you

CISCO *Live!*

#CiscoLive



The background is a vibrant, abstract composition of numerous overlapping, elongated, teardrop-like shapes in various colors including dark blue, light blue, green, yellow, orange, and red. These shapes radiate from a central point, creating a starburst or sunburst effect. Scattered throughout the composition are several small, solid-colored circles in blue, yellow, and red. The overall aesthetic is modern, energetic, and celebratory.

TURN IT UP

CISCO *Live!*

#CiscoLive