



The bridge to possible

# Running Predictive, Adaptive, and More Efficient Operation:

Enabling Better Experiences

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# 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 until February 24, 2023.



# Agenda

- Introduction
- Automation plays a key role in business and IT efficiency
- AI & ML are embedded into Cisco management and AIOps
- Your IT, Your way with Catalyst and Meraki
- Conclusion

# Introduction



# The stakes are high

## Application experience drives business success

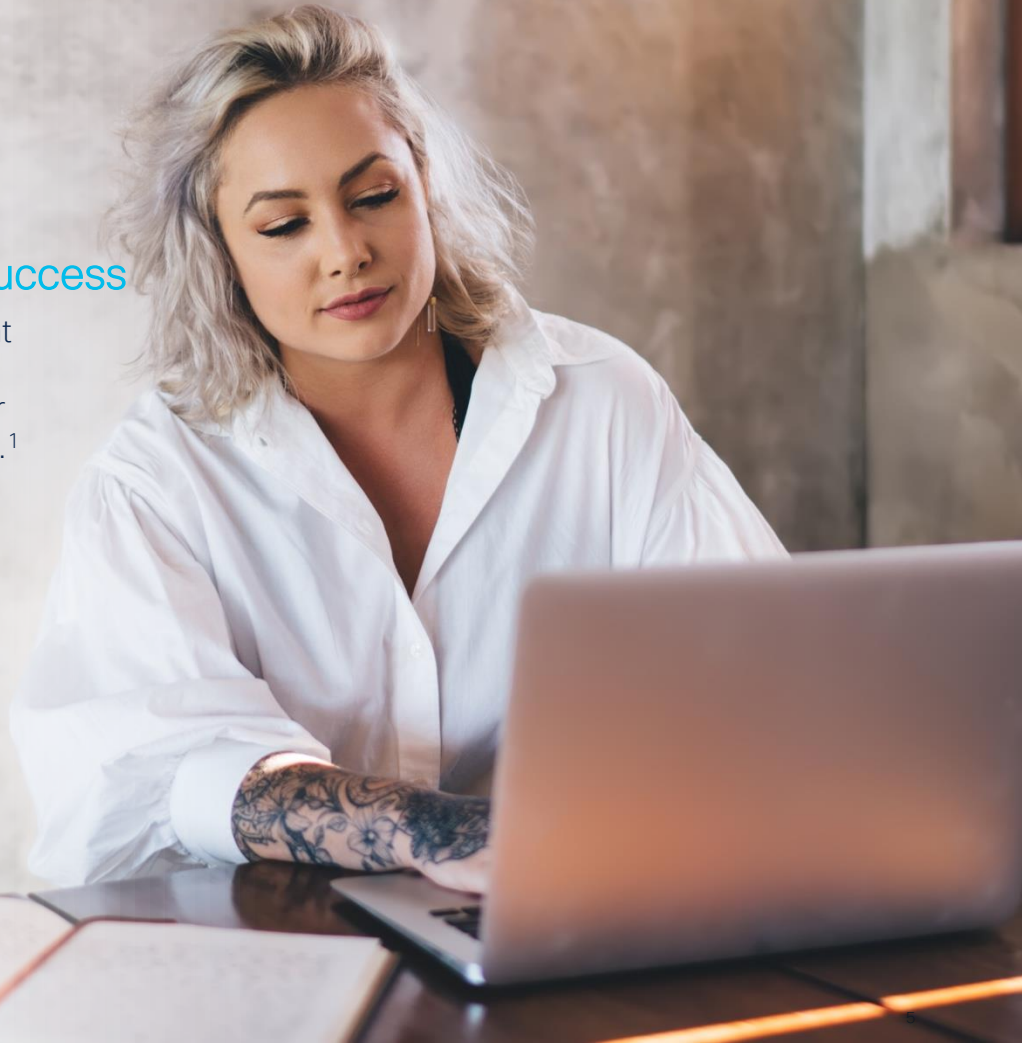
**89%** of CIOs and IT leaders say ensuring consistent application performance across both the application and infrastructure to drive a greater user experience is important or very important.<sup>1</sup>

## Everything has accelerated

**30%** of organizations will bring their long-term initiatives in digital transformation, modernization, and user experience forward to 2022 due to the disruption of COVID-19.<sup>2</sup>

<sup>1</sup> Cisco: "Accelerating Digital Agility Report 2021"

<sup>2</sup> Gartner: "Market Impact – Cloud Shift 2022–2025", Feb-22



# Humans Need Help

## The Power of Mass Production

The Industrial Revolution liberated humans from the limits of their **physical** capabilities



Minimum Automation

## The Power of Big Data

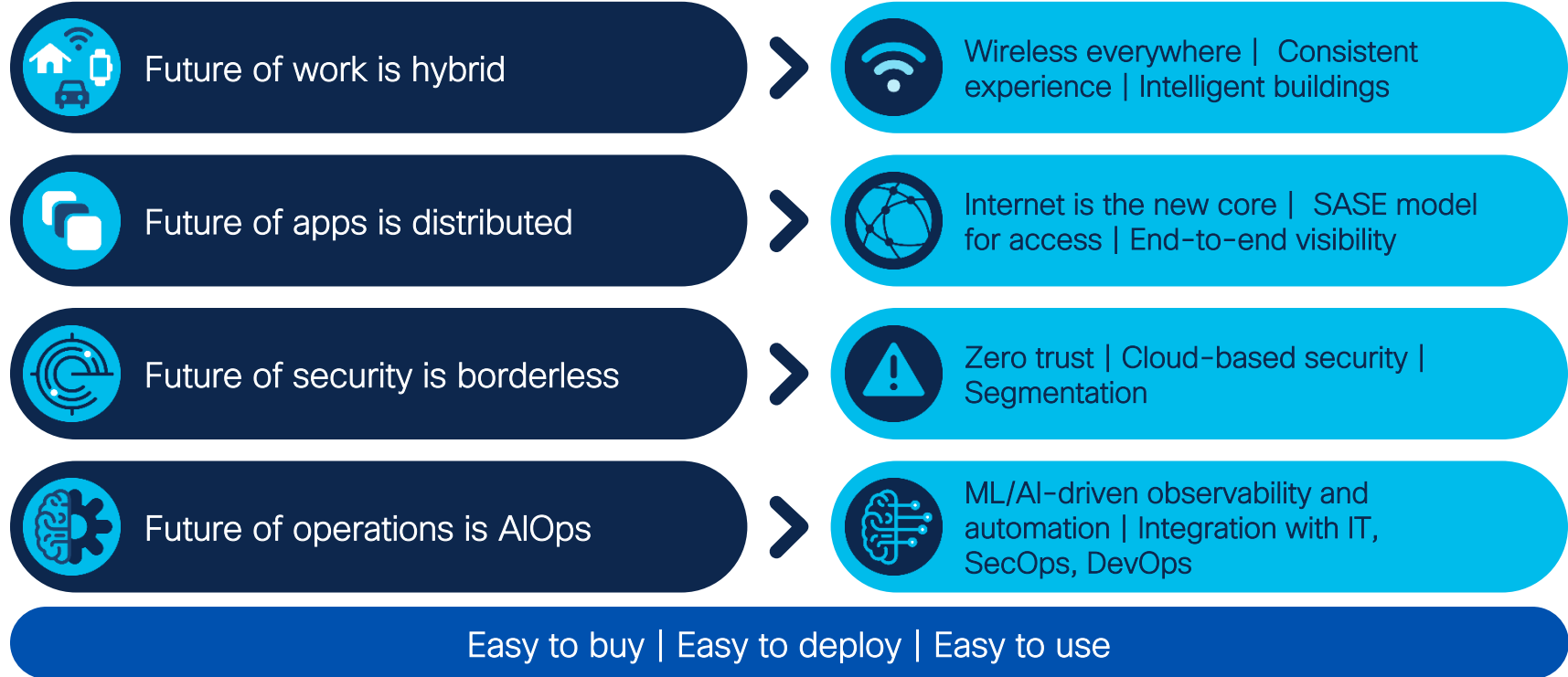
The Digital Revolution liberates humans from the limits of their **mental** capabilities



- **AIOps**
- Contextualized Analytics
- Real-time Processing

Intent-Based Networking

# These trends have implications for your network


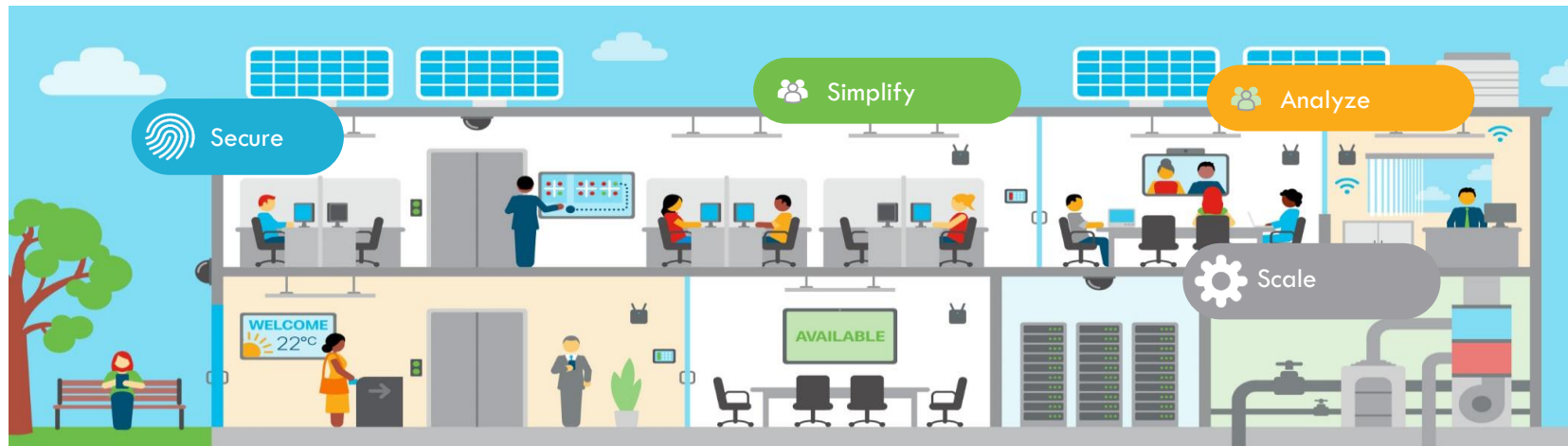


Automation plays  
a key role in  
business and IT  
efficiency





# Build a network that gives you peace of mind



## Simplify onboarding and provisioning

Use automated workflows to quickly configure and provision new devices on the network according to your network policies.



## Control access with ease

Use artificial intelligence and machine learning (AI/ML) to identify and classify endpoints, implement security policies, and display the most critical alerts for action.



## Maintain network health

Use telemetry data and simple management tools to show client, network, and application health insights.



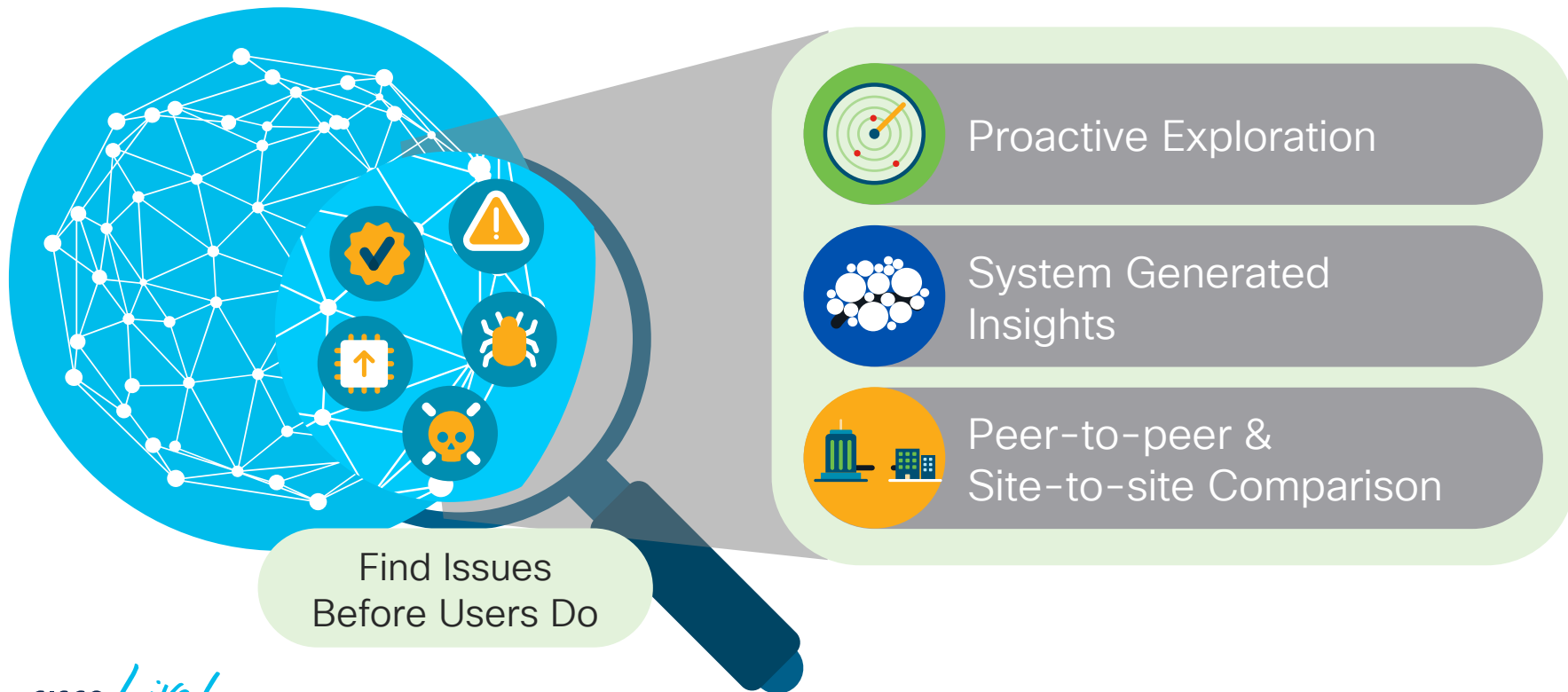
## Scale your network to match demand

Simplify scalability with flexible router-port configuration to meet demand dynamically. And with Cisco Smart Licensing, it's easy to activate ports when and where you need them

AI & ML are  
embedded into  
Cisco  
management and  
AIOps

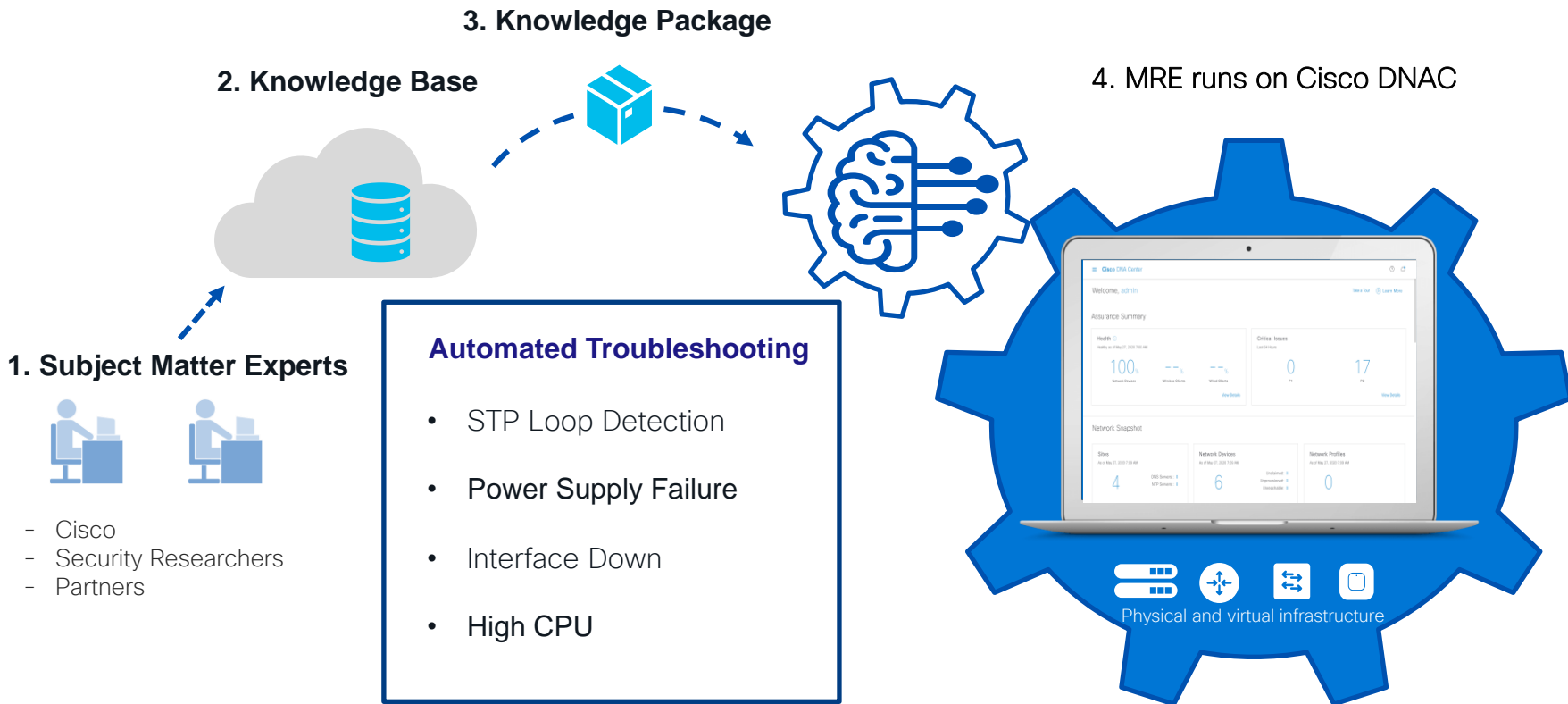


# Proactive & Predictive Insights Intelligent Analysis



# Machine Reasoning Engine

End to End

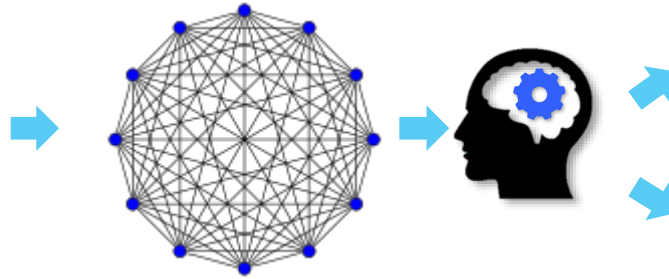


# Machine Learning

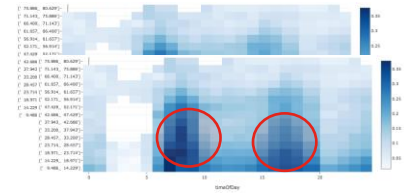
## Possible Reasons For Low Throughput

- RSSI
- Interference
- Channel Utilization
- Channel used
- Channel change count
- Time of Day
- Number of Clients
- ...

Possible combinations –  
too many to analyze by  
hand



ML to find regions that  
indicate high density of  
low throughput events

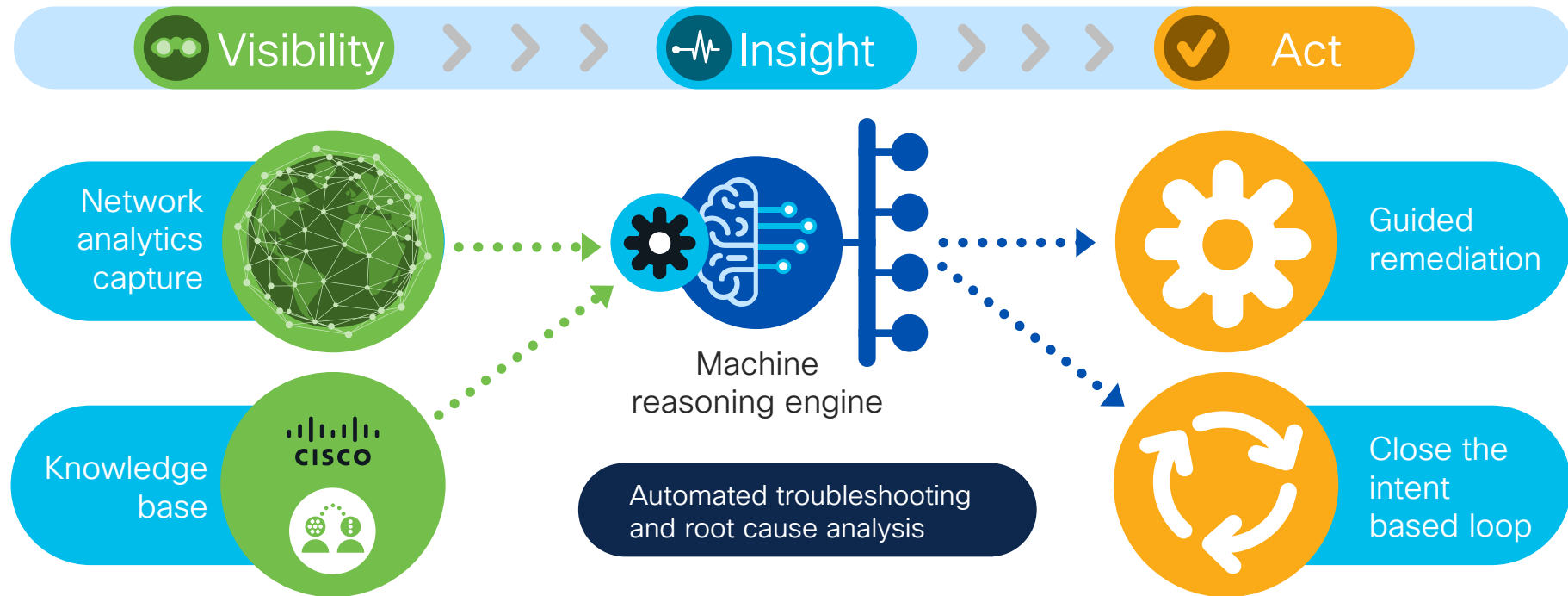


```
"event": "LT", "radio-meanCliCount": "hi" – 29APs affected  
{ "event": "LT", "partOfDay": "morning", "radio-meanCliCount": "hi" } – 6 APs affected  
{ "event": "LT", "partOfDay": "morning" } – 20 APs affected  
{ "event": "LT", "partOfDay": "afternoon", "radio-meanCliCount": "hi" } – 2 APs affected  
{ "event": "LT", "lowRssiFracBelow-minus-80": "hi", "radio-meanCliCount": "hi" }  
{ "event": "LT", "lowRssiFracBelow-minus-80": "hi" } – 20 AP affected
```

ML to Identify problem APs  
and their common traits

# Accelerated Remediation

## Powered by Machine Reasoning Algorithms



A few  
examples..



# Service assurance with ThousandEyes

Integrating ThousandEyes with Catalyst helps IT and OT customers fill the visibility gap

## Path visualization



- End-to-end path from branch/campus to data center/cloud
- Detailed hop-by-hop metrics

## Application experience

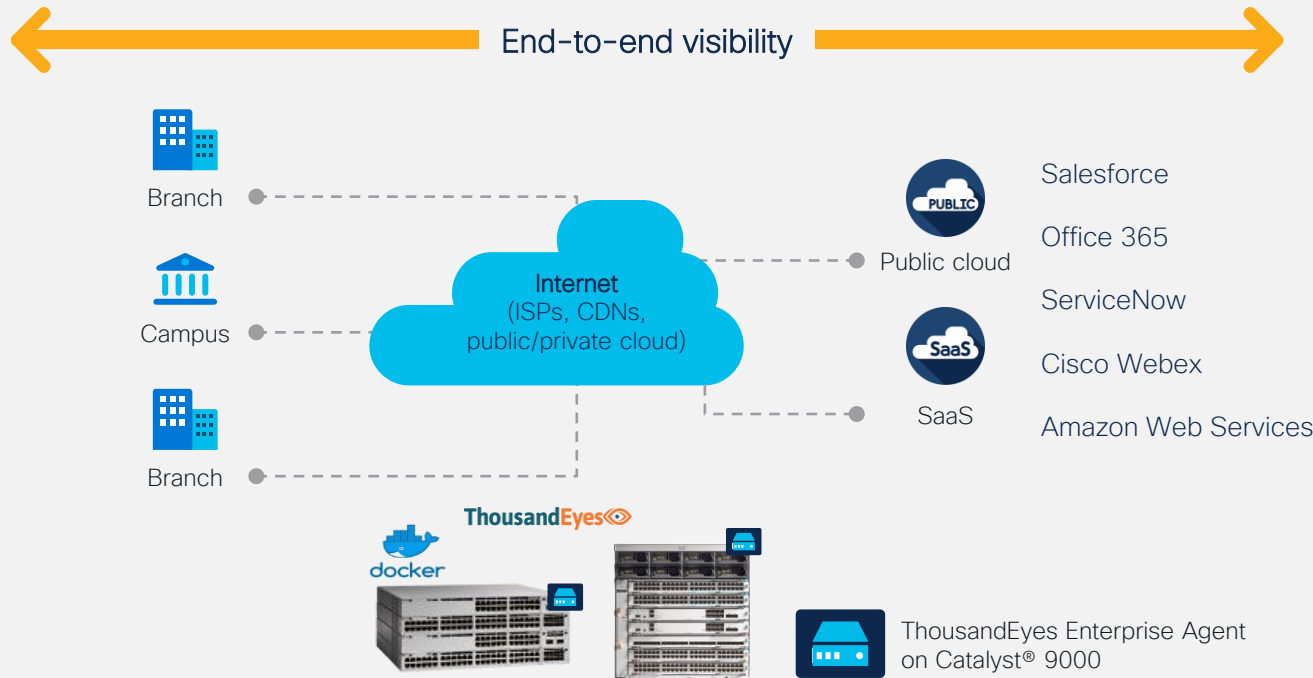


- Analysis of user experience
- Visualization of traffic flow patterns

## Anomaly detection

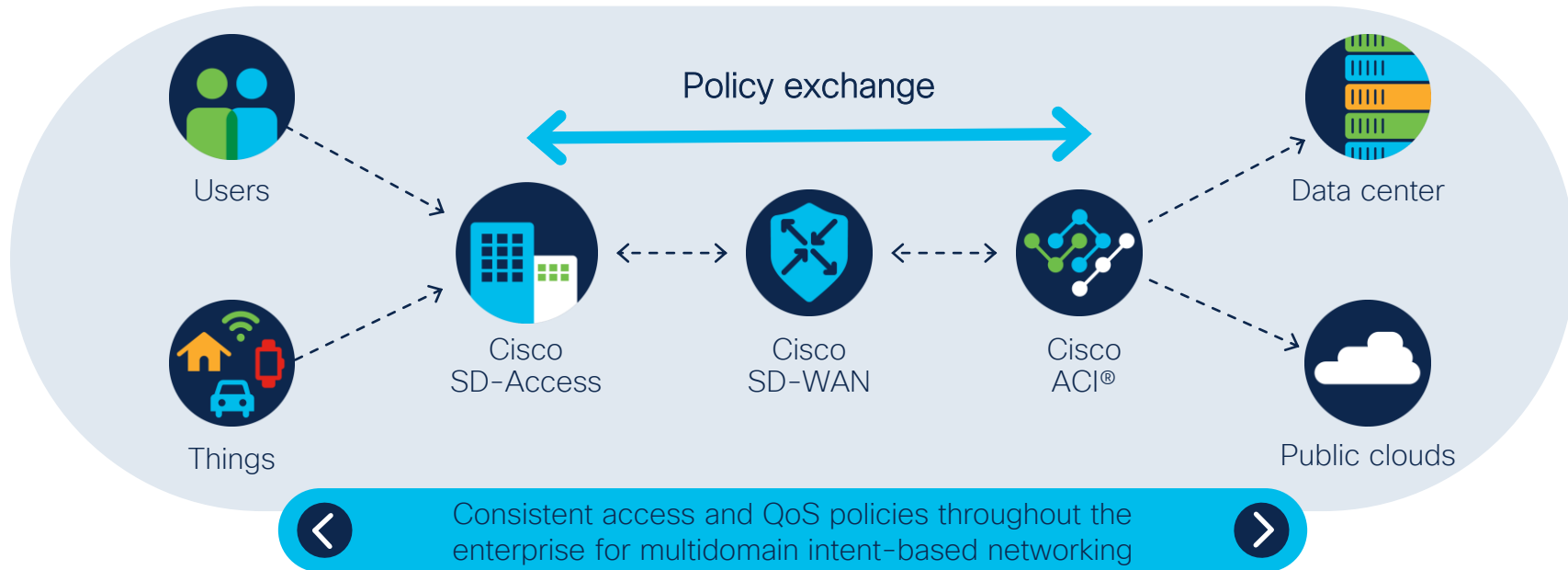


- Benchmark routine performance of network and applications
- Proactive resolution, and outage detection

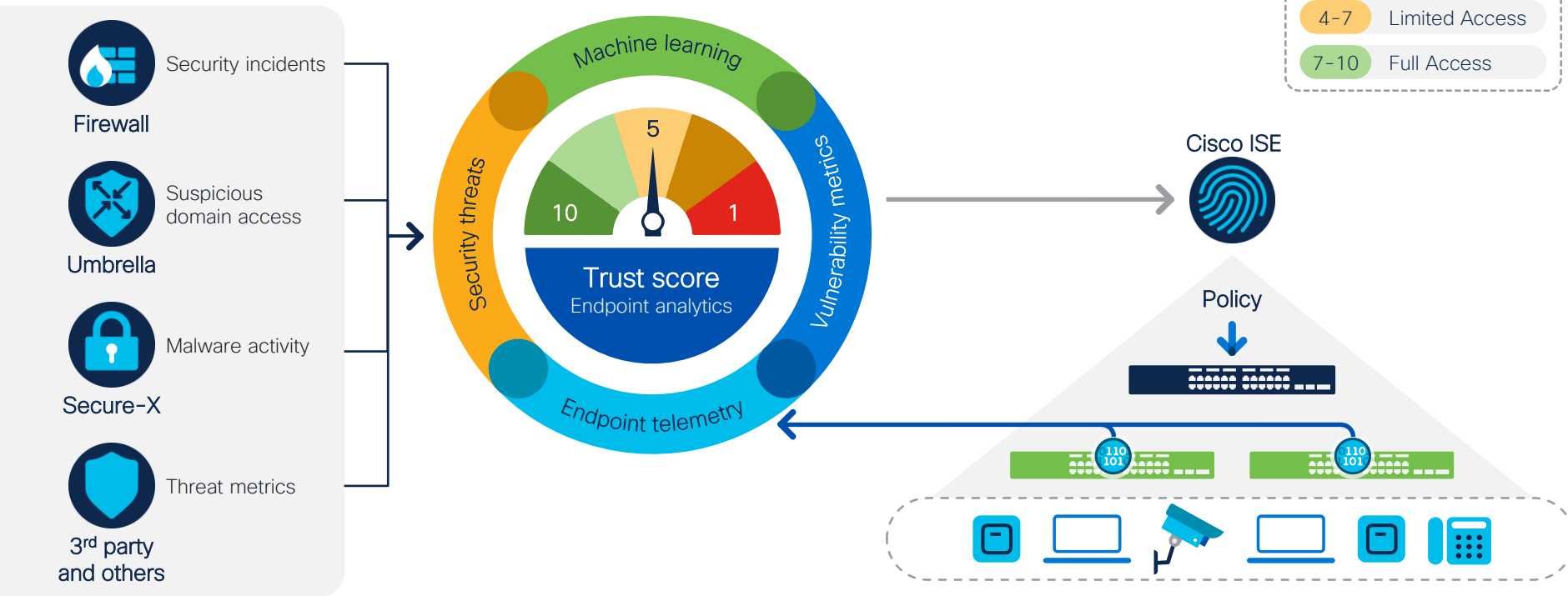




# SD-Access extends policies across the enterprise's networking domains



# SD-Access performs behavior analytics for continued trust verification

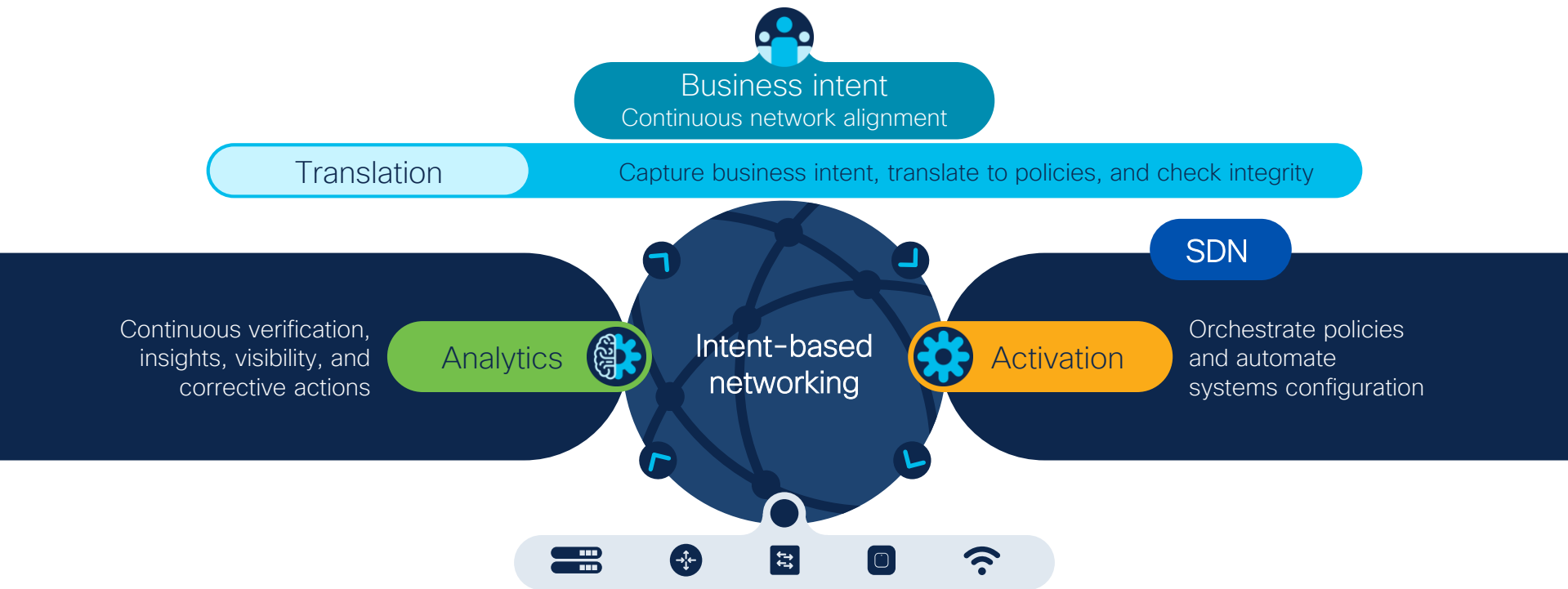


Your IT, Your way  
with Catalyst and  
Meraki



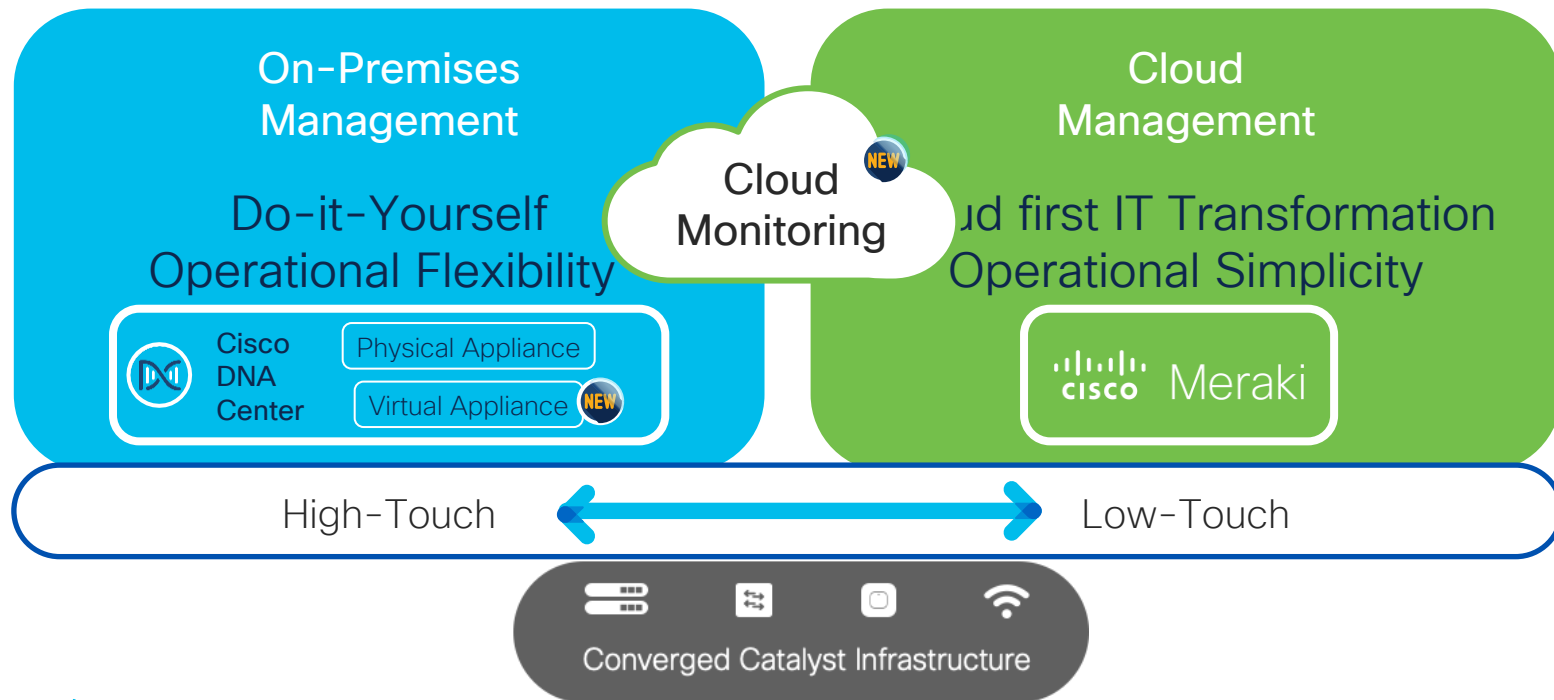
# Focus on “what” instead of “how”

Cisco DNA based on intent-based networking extends software-defined networking (SDN) to meet business demands



# Your IT, Your Way

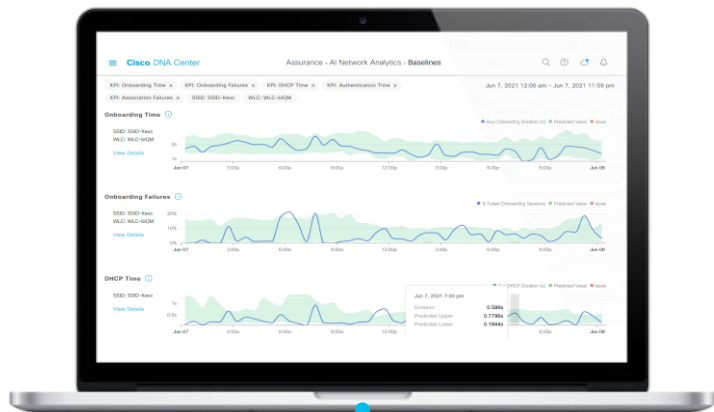
Flexibility, Choice, and Simplicity



# Cisco DNA Center is a foundational platform technology

## Command and control center for Cisco Catalyst

### Cisco DNA Center



Physical and virtual infrastructure



Cisco and third party



NetOps

Automation and workflows simplify building and maintaining large scale networks. AI/MR streamlines and simplifies complex tasks



AIOps

AI/ML and insights to ensure the health, performance and reliability of applications and infrastructures



SecOps

AI/ML and DPI Identify and classify endpoints, enforce security policies and mitigate threats for a complete workplace zero trust solution



DevOps

Mature APIs, SDKs, and closed-loop integrations, untangle the complexities of interconnecting third party systems

# Transform your IT organization with Automation

## Simplify IT Experience

- Persona-centric Menus
  - Who am I, what is the task?
- Guided Workflows
  - DNA Sense contextual help
- Complex Task Automation
  - Machine Reasoning
- Technology Partner Integrations
  - Apple, Samsung, Intel

## Empower Active Operations

- Operational Transformation
  - ITSM and IPAM integration
- Visibility Control and Rollback
  - Risk-free automation
- Full Lifecycle Management
  - Smart License, ZTP, Template hub, SWIM, Auto-RMA
- IoT endpoint ID and control
  - Endpoint analytics
  - Behavior monitoring
  - PoE Analytics

## Enable Proactive Management

- Self-healing wireless
  - AI-Enhanced RRM
- Self-aware inventory
  - Always-on configuration drift
- Self-monitoring Power
  - PoE analytics
- Predictive Analytics
  - AI/ML Trends and Insights
- User Experience-aware
  - AIOps for Webex & Teams

# DNA Center Platform

## Operational Deployment Flexibility



Physical appliance



Virtual appliance

### Specifications

- CPU: 32vCPU
- Mem: 256GB
- Storage: 2TB
- IOPS Bandwidth: 180Mbps (bi-directional max)
- IOPS: 2000-2500

### Features

Feature Parity from Guardian release and above across:

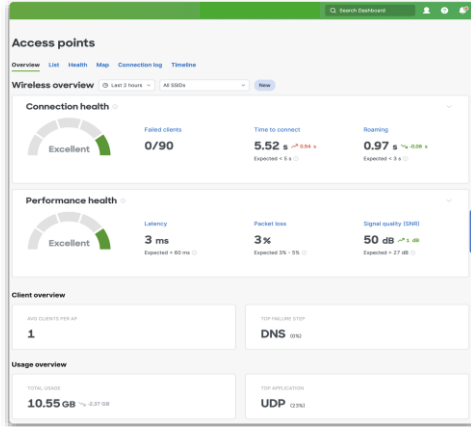
- Automation, Assurance, System, SPA, SDA and integrations

Scale parity with DN2-HW-APL(44 core appliance):

- 25K End points
- 5K Devices
- 1500 sites (TBC)

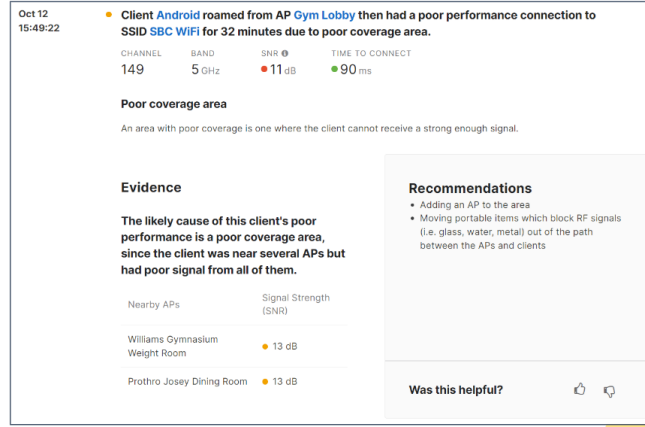


# AI Powered Intelligent Wi-Fi



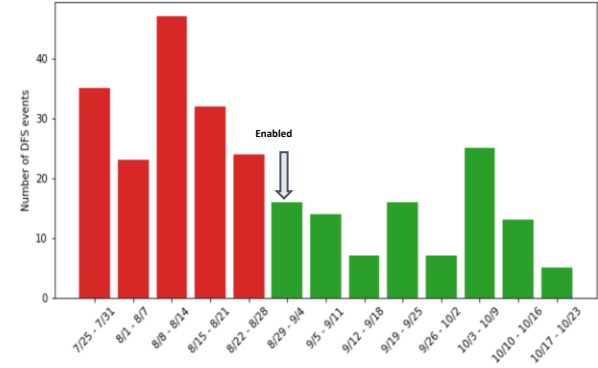
## Wireless Experience Dashboard

- At-a-glance client experience KPIs
- Troubleshooting workflows
- API accessible for SPs and large Enterprises



## AI Powered Root Cause Analysis

- Complex troubleshooting made simple with AI/ML
- Auto-baselining, Smart Alerts, Root Cause
- Coverage Hole and Sticky Client Detection



Visible impact in reducing DFS hits for the network

## AI powered Channel Planning and Busy Hour

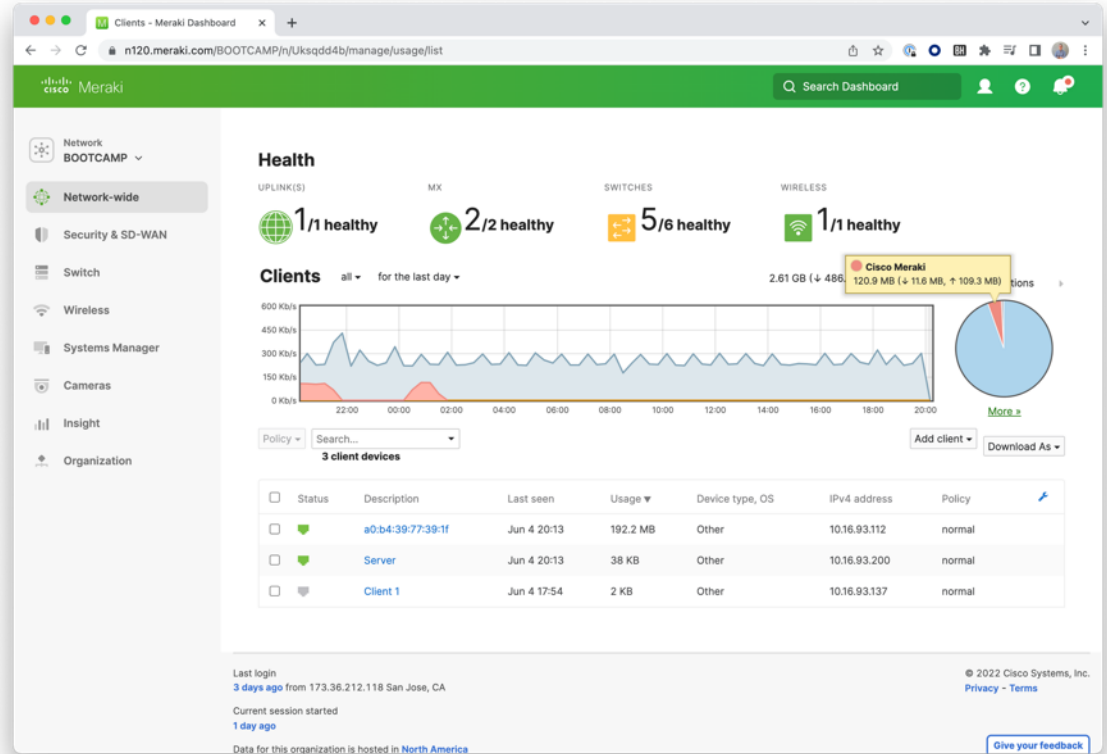
- Using ML to tune and select channels best suited for your network environment
- Learning your network usage patterns to auto determine busy hours
- Optimizing to enhance client experience

# Cisco Meraki – Cloud managed

See connected devices  
across your network


Detailed network usage  
and traffic statistics

Application visibility  
into network traffic



# Conclusion





*“Automation is to modern infrastructure  
what blood is to the body. It is core, you  
cannot have modern infrastructure  
without it.”*

Gartner

# Key Takeaways



- Automation plays a key role in business and IT efficiency
- AI & ML are embedded into Cisco management and AIOps
- Your IT, Your way with Catalyst and Meraki
- Visit WoS demos on stands # to see these in action

# Continue Your Education



Visit the Cisco Showcase for related demos.



Book your one-on-one Meet the Engineer meeting.



Attend any of the related sessions at the DevNet, Capture the Flag, and Walk-in Labs zones.



Visit the On-Demand Library for more sessions at [ciscolive.com/on-demand](https://ciscolive.com/on-demand).

# Complete your Session Survey

- Please complete your session survey after each session. Your feedback is important.
- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at <https://www.ciscolive.com/emea/learn/sessions/session-catalog.html>





The bridge to possible

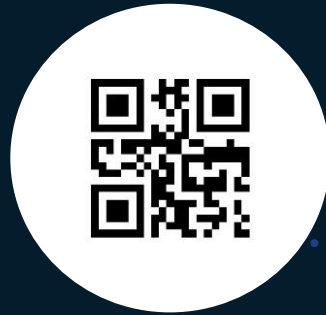
# Thank you

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ALL IN