

# Investment Protection with Catalyst 9000 Series Switches and Wireless

**CISCO** Live !

A Competitive Edge

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Technical Leader, Technical Marketing Engineer  
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# About Me



**Meghan  
Kachhi**

 [linkedin.com/in/meghankachhi](https://www.linkedin.com/in/meghankachhi)

Technical Marketing Engineer, Technical Leader

Enterprise Networks (Cisco) **6+ years**

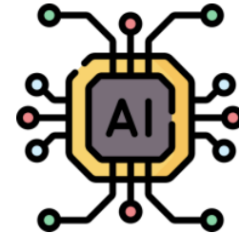
## Focus areas:

- AI-Ready Data Center
- Catalyst 9000 Switching
- Catalyst Center (Automation & Assurance)
- Campus Fabric solutions
- Cisco SD-WAN
- Competitive Evaluation

**Hobbies:** Reading, Blogging, Video Games, Travelling,  
Binge-watch anything interesting (or not!)

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NEWSLETTER

## Scale Up AI Networking

Weekly Dose of learnings from AI in Networking to  
Networking in AI



By **Meghan Kachhi**

Technical Leader, Technical Marketing Engineering ...

Published weekly

**704 subscribers**

**Writer maintaining a newsletter  
& Avid Reader**



**Occasional Gamer**  
Assassin's Creed, God of War, Ghost of Tsushima, Far Cry

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Kshitij  
Mahant

 <https://www.linkedin.com/in/kshitij-mahant/>

Sr. Manager, Technical Marketing

Enterprise Networks (Cisco) **12+ years**

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- Campus Fabric solutions
- Competitive Evaluation

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with my kid

# Cisco Webex App

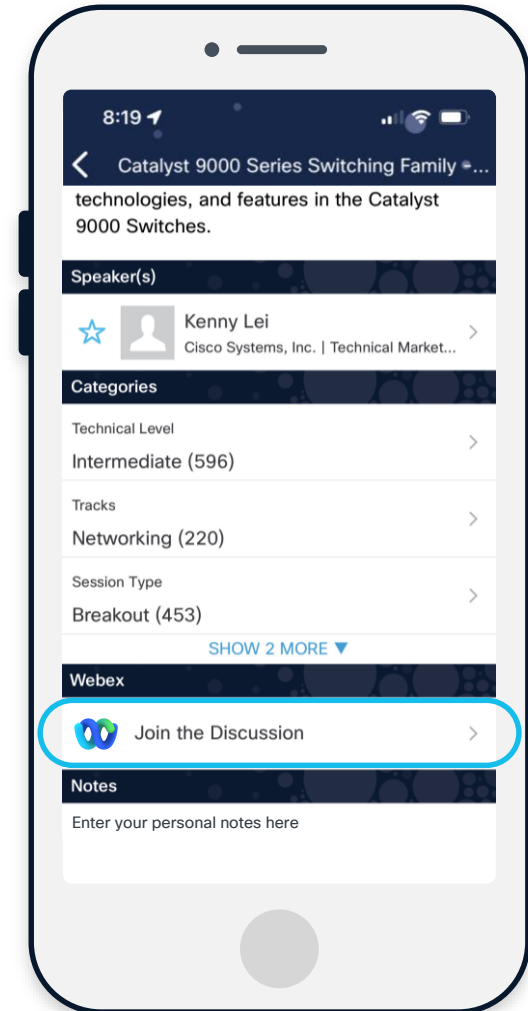
## Questions?

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/#BRKARC-1012>

# Agenda

- 01 Introduction
- 02 Longer Product Lifecycle
- 03 Resilient Campus
- 04 End-to-End Security
- 05 Energy Efficiency
- 06 Operational Simplicity



# BRKARC-1012

## Session Expectations



*Introductory*

*Not a technical  
deep-dive*

*Accessible to all  
levels*

# Typical Campus Architecture



Management & NAC

Core

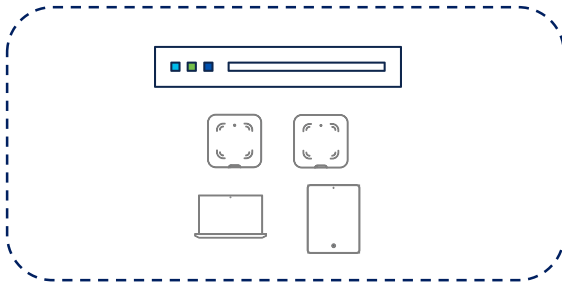
Distribution

Access

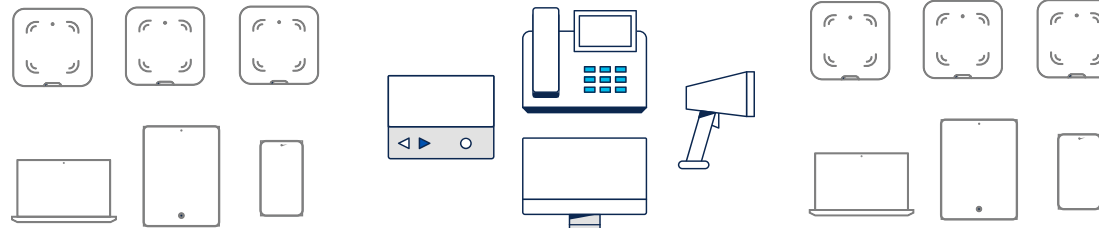
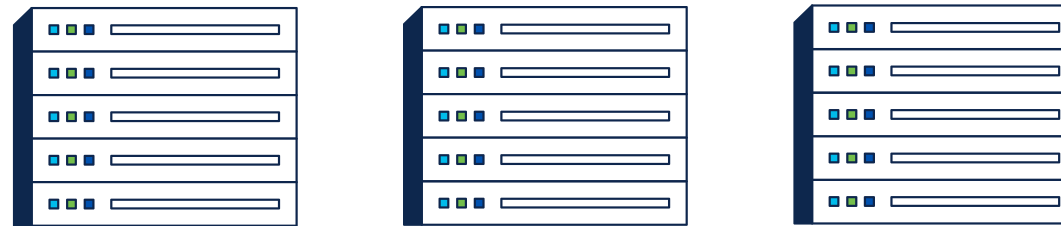
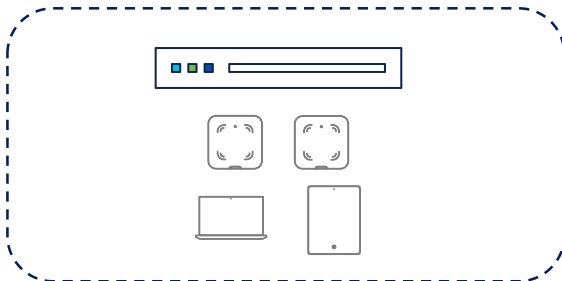
Wireless AP

Wired and Wireless Endpoints

Branch



Branch



## Attendee Distribution Dashboard



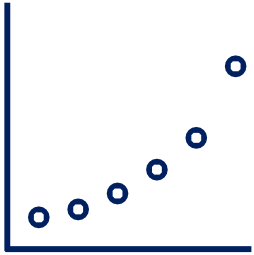
Education Healthcare Retail Government Technology Telecommunications Finance Energy Hospitality Manufacturing Media





*“I want to **modernize** the infrastructure  
while **maintaining my investment**”*

# Investment Protection Pillars



**Longer  
Lifecycle**



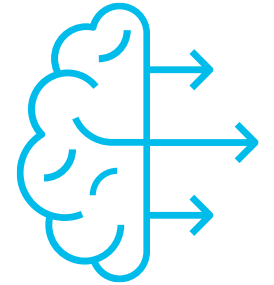
**Resilient  
Campus**



**Secure**



**Energy Efficient**

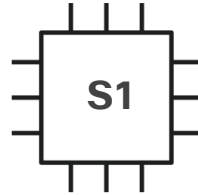
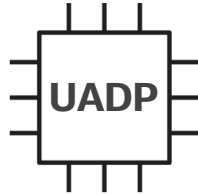


**Operational  
Simplicity**

# ***Longer Product Lifecycle***

# The crucial role of ASIC

## Custom Silicon



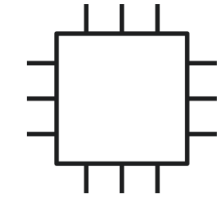
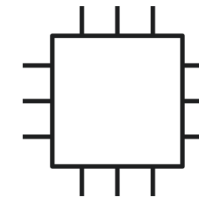
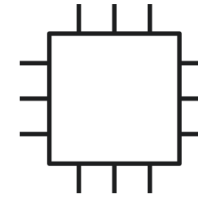
### Cisco Unified Access Data Plane (UADP)

- Cisco's home grown UADP ASIC
- Fundamental in driving multiple Enterprise switching products and been industry proven with success of Catalyst 9000 Series platforms

### Cisco Silicon One (S1)

- First network silicon to break the 10-Tbps barrier
- Comprehensive routing, with switching efficiency
- Flexible P4 NPL programmable packet processing

## Merchant Silicon



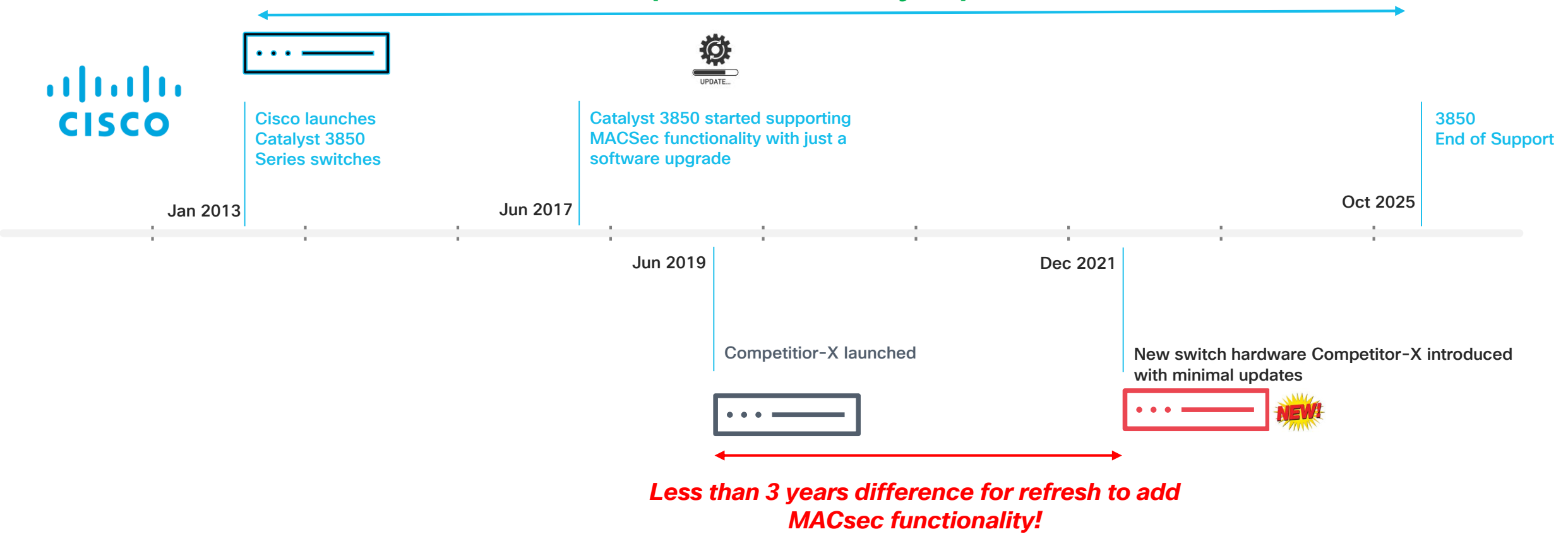
### Merchant Silicon:

- Competitors rely on merchant silicon with disparate operational models, CLI and troubleshooting
- Campus switches with common family of merchant silicon across competitors – No additional differentiation



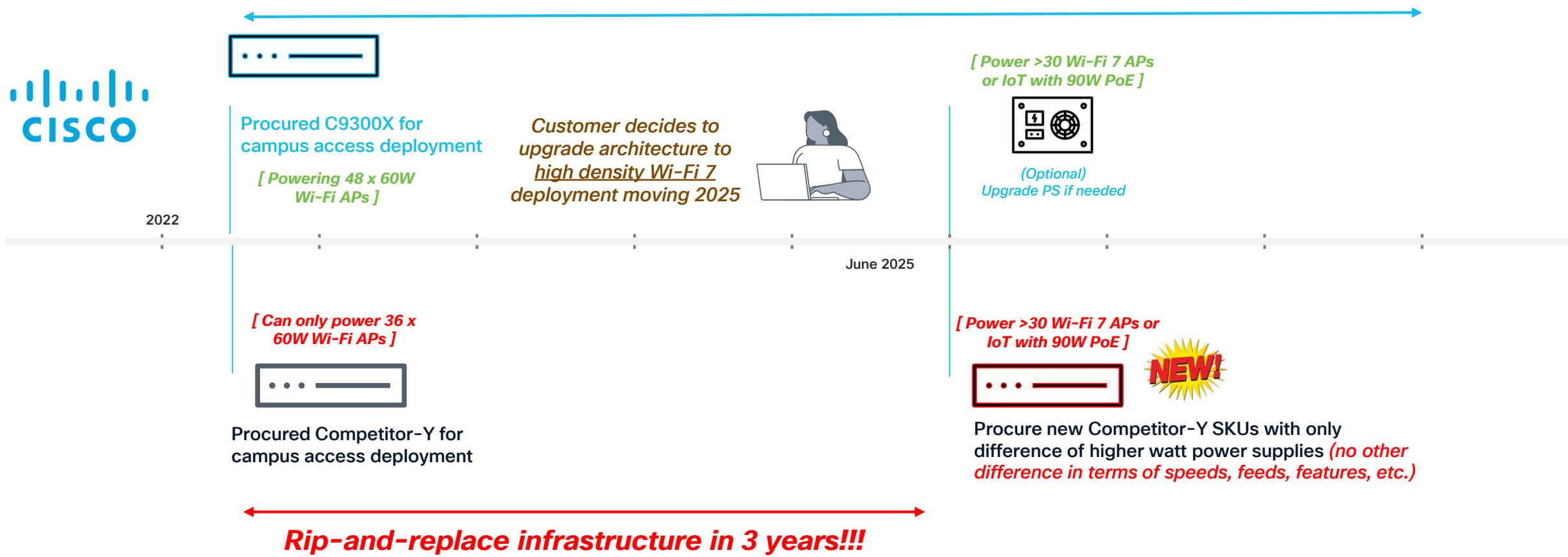
# How **silicon** ties in with investment protection?

*Investment Protection: No rip-and-replace required with Catalyst switches  
(>14 Years Lifecycle)*



# Longer Product Lifecycle with **fixed platforms**

*Investment Protection: No rip-and-replace required with Catalyst switches*



# Longer Product Lifecycle with **fixed platforms**

*Investment Protection: No rip-and-replace required with Catalyst switches*



Procured C9300X for campus access deployment

*[ Support 48x1/2.5/5/10G multi-gigabit ethernet ports ]*

*Customer decides to upgrade architecture to high density deployment of beyond Wi-Fi 7 generations*



2026+

*[ As previous generation support only limited e.g., 12x1/2.5/5/10G ports out of 48 ]*



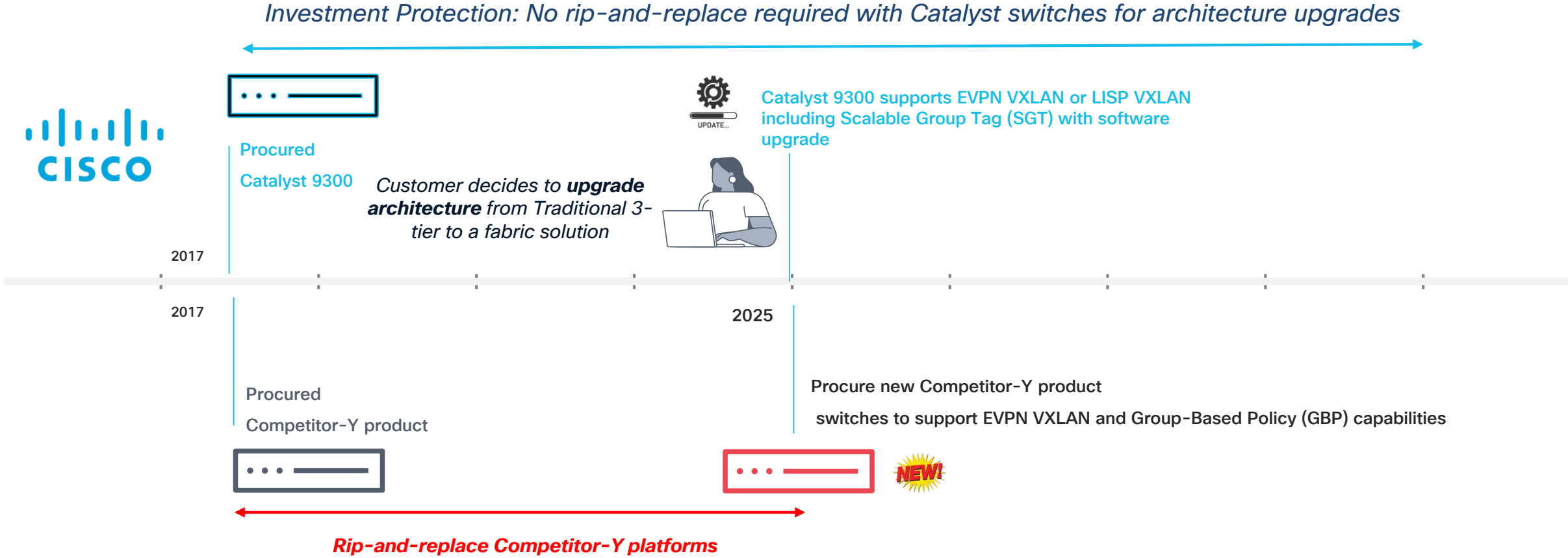
Procured Competitor-Y for campus access deployment



Procure new Competitor-Y switches to support 48x10G switches

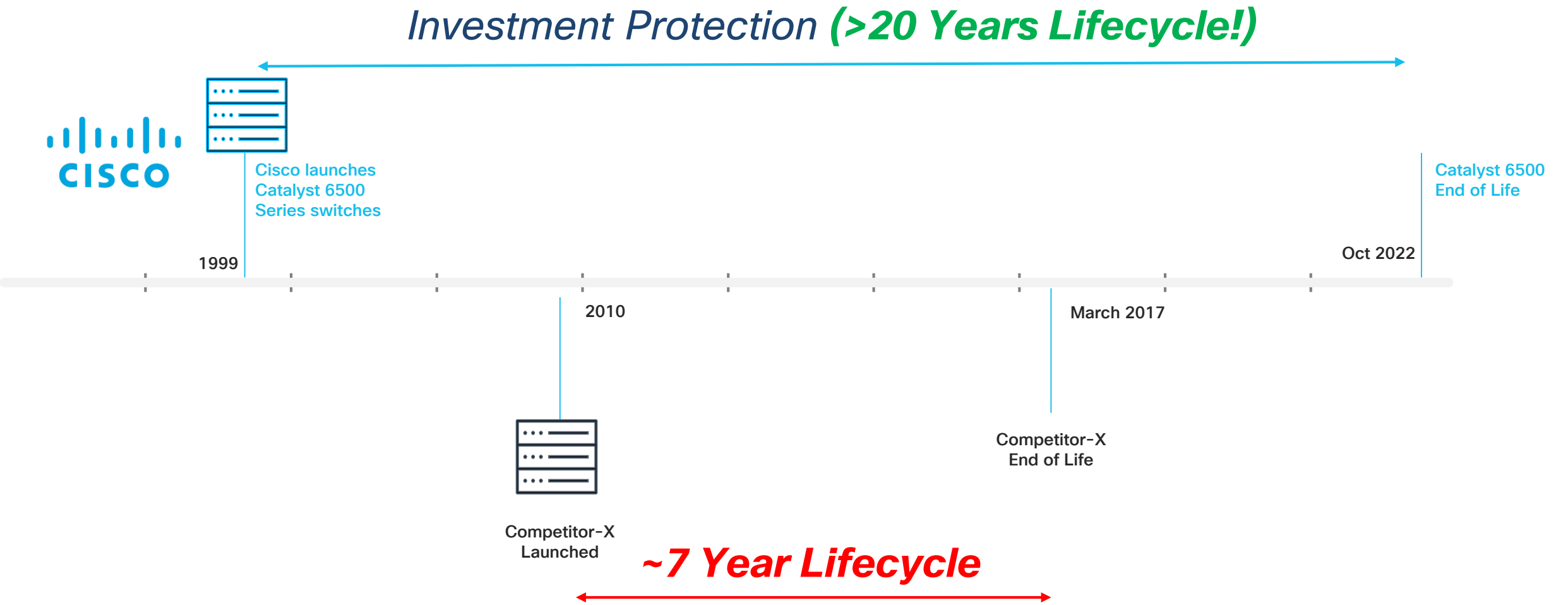
***Rip-and-replace infrastructure?!***

# Investment Protection with architectures





# Longer Product Lifecycle with modular platforms



# Architectural Flexibility with Cisco 9000 Series

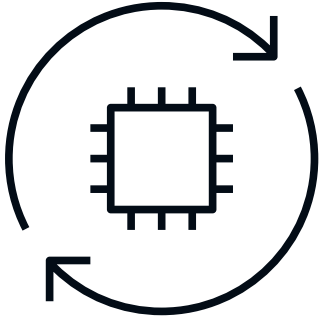


Architecture	Why?
Collapsed Core (STP/MLAG/SVL)	<i>To support traditional architecture</i>
Layer 3 Core	<i>To support high port density, BW</i>
Layer 3 Core + Edge	<i>To support edge services, complex HQoS, OGACL, VPN, etc.</i>
LISP/VXLAN	<i>To support campus optimized fabric for mobility and unified wired/wireless segmentation</i>
Fabric-in-a-box	<i>To support mini sites with unified fabric and wireless functionalities</i>
Native TrustSec	<i>To support microsegmentation without implementing fabric deployment</i>
EVPN VXLAN	<i>To support common fabric from DC to campus</i>
MPLS	<i>To support MPLS based deployments</i>
Customizable ACL Templates	<i>To carve TCAM resources as per customer requirements</i>

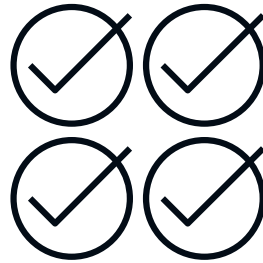
*Catalyst 9000 Switches supports most flexible architectures in the industry*

# Key Cisco Advantages:

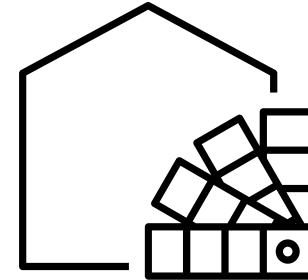
## Investment Protection



Power of **custom ASICs** for  
best in-class hardware



Investment protection with  
industry-leading **longer lifecycle**



Only vendor to provide **architectural flexibility** catering all types of deployments

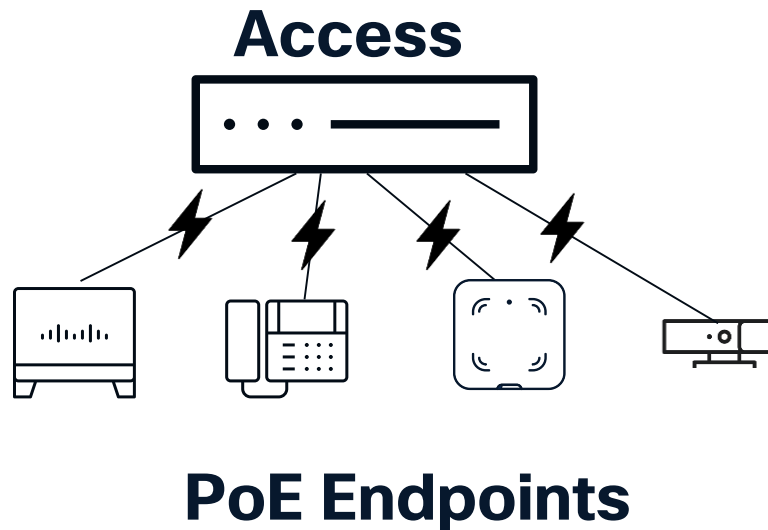
# ***High Availability***



# Cisco 2-event classification vs. Competition



- No need to wait for any CDP/LLDP packet exchange
- Physical layer negotiation (**< 1 second**)



## Competition

- Wait for any CDP/LLDP packet exchange
- **5-8 seconds** based on protocol



Cisco **5-8x** faster in negotiating power with PoE endpoints

# 2-event classification Configuration

This example shows how you can configure **2-event classification**:

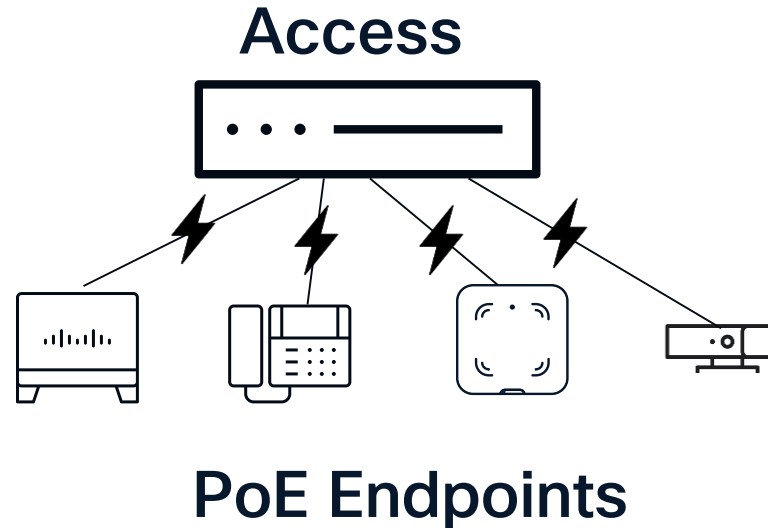
```
Device# configure terminal  
Device(config)# interface gigabitethernet2/0/1  
Device(config-if)# power inline port 2-event  
Device(config-if)# end
```

***Introduced:*** Cisco IOS XE Everest 16.5.1a

# Cisco Fast PoE vs. Competition



- Bypasses Cisco IOS® control plane boot
- Restores power to Powered Device (PD) within **15-20** seconds of power resumption



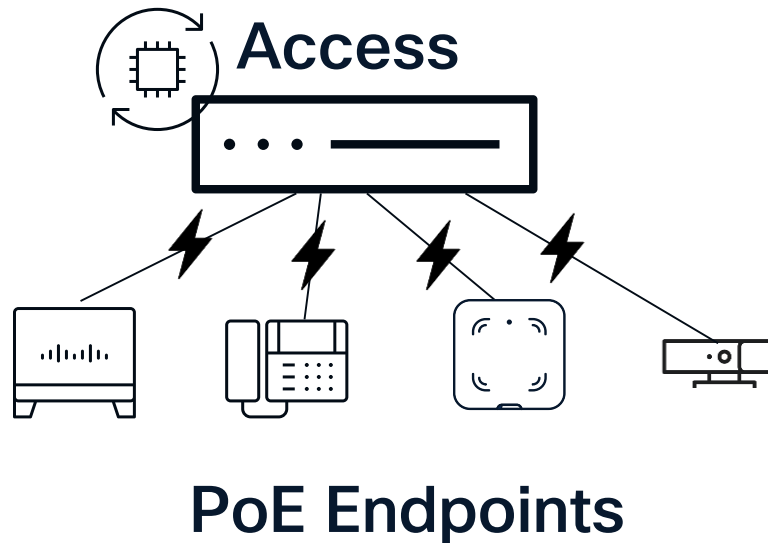
## Competition

- Competitors **followed** Cisco capability and support it in the latest models of switches

# Cisco Perpetual PoE vs. Competition



- Uninterrupted PoE power during control plane reboot
- Zero downtime\*



## Competition

- Competition does not support Continuous PoE during Stateful Switch over (SSO)
- Minutes of downtime in such scenarios



Cisco provides *uninterrupted PoE (zero downtime)* during control plane reboot



# Fast & Perpetual PoE Configuration

This example shows how you can configure **perpetual PoE** on the switch.

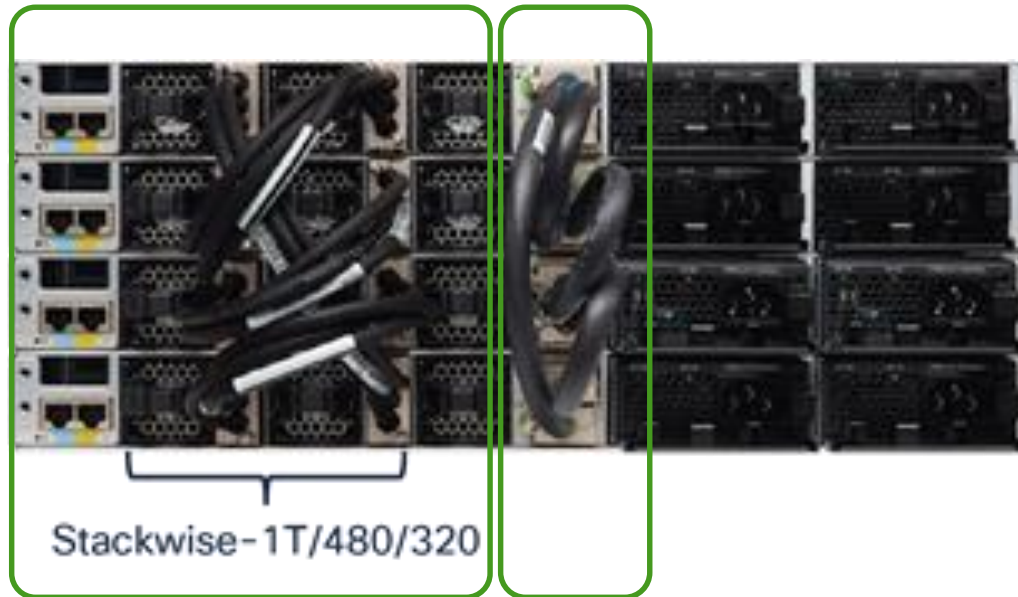
```
Device# configure terminal  
Device(config)# interface gigabitethernet2/0/1  
Device(config-if)# power inline port perpetual-poe-ha
```

This example shows how you can configure **fast PoE** on the switch.

```
Device# configure terminal  
Device(config)# interface gigabitethernet2/0/1  
Device(config-if)# power inline port perpetual-poe-ha  
Device(config-if)# power inline port poe-ha
```

***Introduced:*** Cisco IOS XE Everest 16.5.1a

# Cisco StackWise for campus access switching



Stackwise-1T/480/320

*Dedicated Stacking BW  
of up to 1Tb*

*Dedicated StackPower  
(Power Pooling)*



*No uplinks burnt*

*Cisco provides **100% uplink, 100% PoE availability** and **dedicated stack bandwidth** for efficiency*

# Cisco StackWise: Automated Stack deployment

## Stack discovery

- Broadcast, followed by neighborcast

Stack discovery initiated

Complete full ring

Active detects the new addition

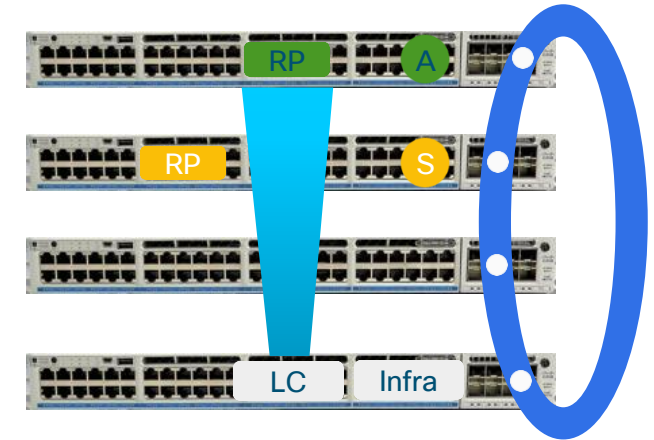
Active is not preempted by high-priority member

## Stack member addition

- Stack discovery initiated

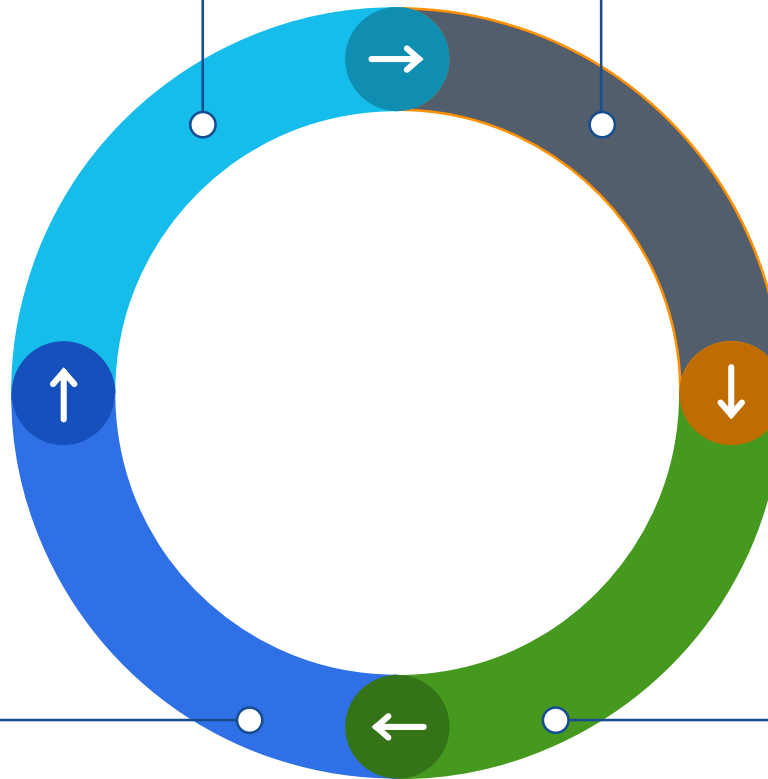
## Stack active election

- Lowest MAC address



## Stack initialization

- Active starts RP domain



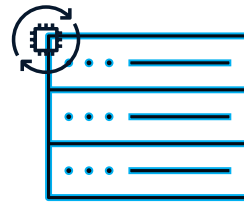
Cisco provides *automated stack deployment* that **reduces OpEx significantly**

# High Availability at Access: Why is it important?

Hospital



Access  
Switch



Endpoints



**Continuously sending traffic to central monitoring station**  
***- Minimal traffic disruption expected while upgrading***

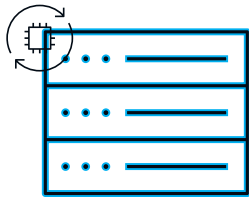
# Extended Fast Software Upgrade (xFSU)

For Catalyst 9300 Series Switches in both standalone and stack

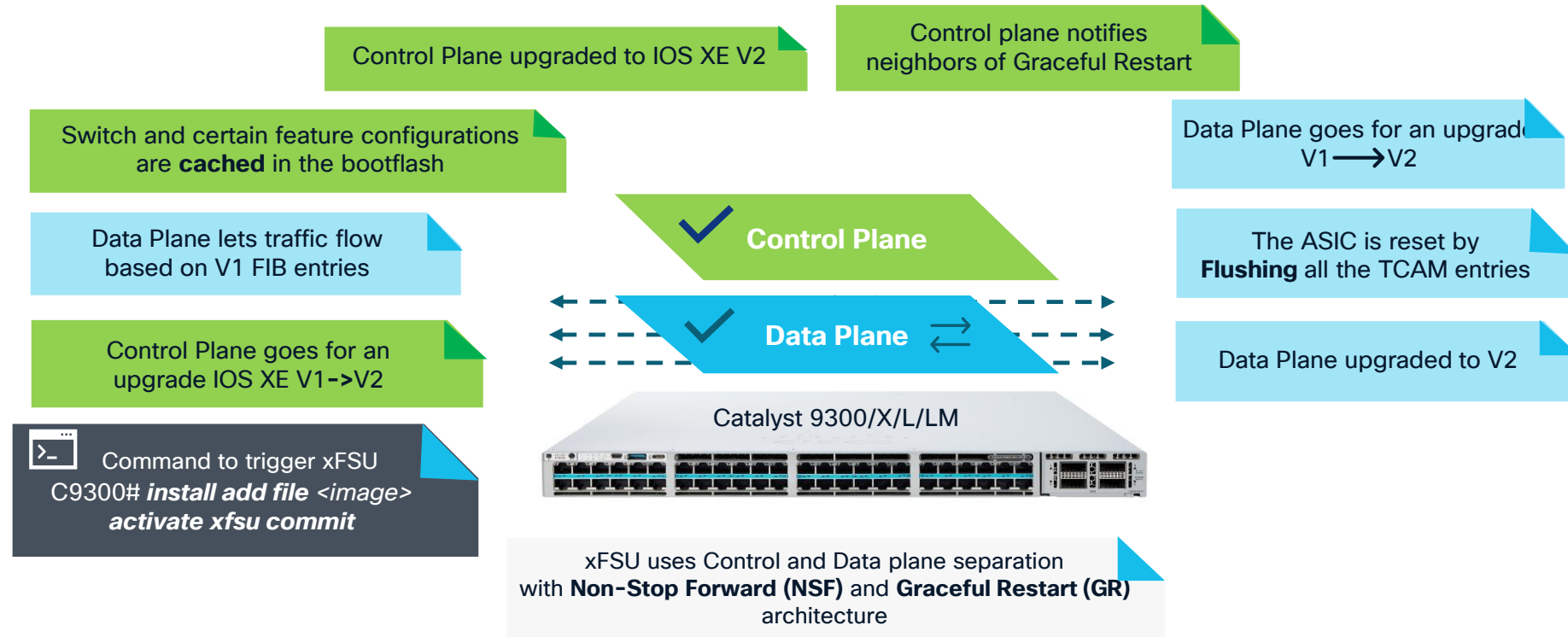
Hospital



Access Switch



Endpoints



## Extended Fast Software (xFSU) on C9300

~5 sec traffic downtime – Standalone or Stack upgrade

# xFSU Configuration on Catalyst 9300

Upgrading Switch with Software Upgrade

```
Device# install add file flash:cat9k_iosxe.V178_1A_FC2_2.SSA.bin activate xfsu commit
```

Reloading Software on a Switch

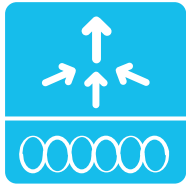
```
Device# reload fast
```

**Introduced: IOS-XE 17.3.2 (~30 sec) | 17.5.2 (~5 sec)**



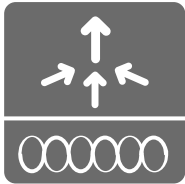
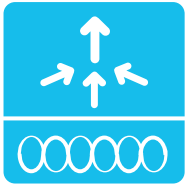
# Wireless Controller High Availability during unplanned event

Standalone



Depending on the failure 10s of minutes for clients and APs

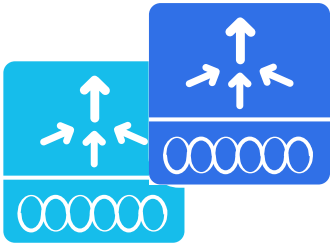
N+1



Noticeable outage for AP and client.  
Typically, ~60 sec

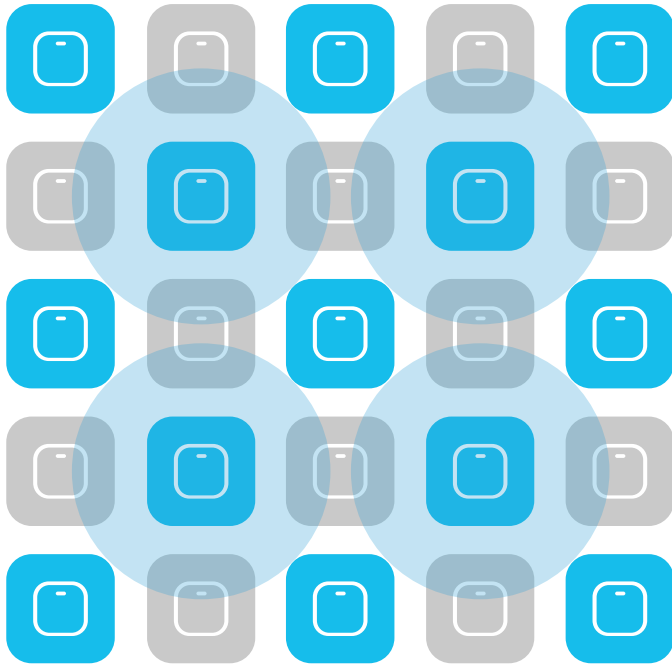


Stateful Switchover (SSO)



Sub-seconds downtime

# High Availability during software upgrade: Rolling AP Upgrade

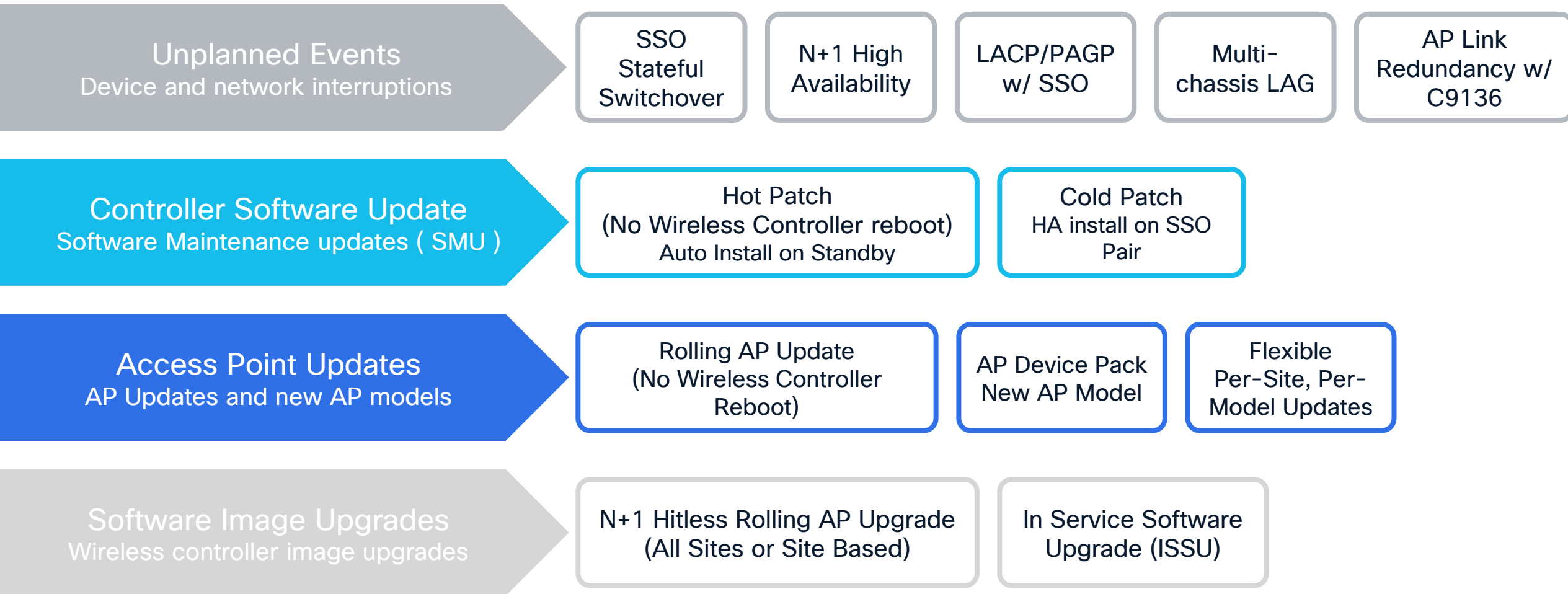


## How does it work?

- Group APs into multiple groups and upgrade one group at a time.
- Grouping is done based on RF neighbors
- Admin user can control the impact and determines the number of iterations taken and the Rolling Upgrade time
- Candidate AP selection
  - With  $N = 4$ : If the AP in blue is selected and 4 of its best neighbours marked unavailable for selection. The resultant selection will be about  $P = 50\%$  of APs
  - For  $P = 25\%$ ,  $N = 6$ , expected iterations all ap upgrade  $\sim 5 > \sim 1h$
  - For  $P = 15\%$ ,  $N = 12$ , expected iterations all ap upgrade  $\sim 12 > \sim 2h$
  - For  $P = 5\%$ ,  $N = 24$ , expected iterations all ap upgrade  $\sim 22 > \sim 4h$
- APs reload and re-join (AP image pre-download is used) determines the Rolling AP Upgrade time

# High Availability

## Reducing downtime for Upgrades and Unplanned Events



# Easy ISSU upgrade with Wireless Controller WebUI

Administration > Software Management [Click here for Latest Recommended Software](#)

**Software Upgrade**

Software Maintenance Upgrade (SMU)

AP Service Package (APSP)

AP Device Package (ADP)

Upgrade Mode:  Current Mode (until next reload): INSTALL [Manage](#)

Transport Type:  [Remove Inactive Files](#)

File System:  Free Space: 19689.41 MB [Rollback](#)

Source File Path\*:  [Select File](#) **1**

ISSU Upgrade (HA Upgrade) ☒ **2**

Override ISSU Compatibility Check ☐

Auto terminate timer (hours):

**AP Upgrade Configuration**

AP Upgrade per Iteration:

Client Steering ☒

[Download & Install](#) **3**

There is an AP predownload/upgrade operation in progress. Please wait till it completes...

Upgrade Mode:  Current Mode (until next reload): INSTALL

Transport Type:

File System:  Free Space: 19689.96 MB

Source File Path\*:  [Select File](#)

ISSU Upgrade (HA Upgrade) ☒

Override ISSU Compatibility Check ☐

Auto terminate timer: 05:32:26

**AP Upgrade Configuration**

AP Upgrade per Iteration:

Client Steering ☒

[Download & Install](#) [Commit](#) [ISSU Terminate](#)

**Status**

- ✓ Download Image/Package
- ✓ Install Image/Package
- ✓ AP Image Predownload
  - Total: 5
  - Initiated: 0
  - Predownloading: 0
  - Completed predownloading: 0
  - Failed to predownload: 0
- ✓ Upgrading Stand-by
- ✓ Upgrading Active
- ✓ Switchover to Stand-by

**AP Image Upgrade**  
Percentage complete: 16

[Commit](#)

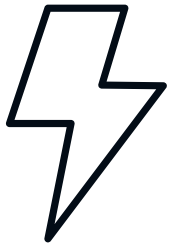
[Show Logs](#)  
[AP Upgrade Statistics](#)

1. Select the image you want to upgrade to
2. Enable ISSU and select % for Rolling AP upgrade
3. Click Download and Install

*Any time you can click on the Show Logs to see what's going on...*

# Key Cisco Advantages:

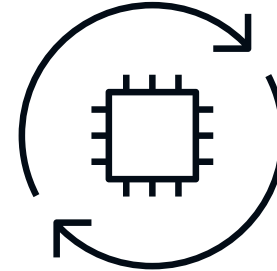
## Resilient Campus Technologies



Cisco is **5-8x faster** in negotiating power



Cisco provides **100% uplink** availability and dedicated stack bandwidth for efficiency



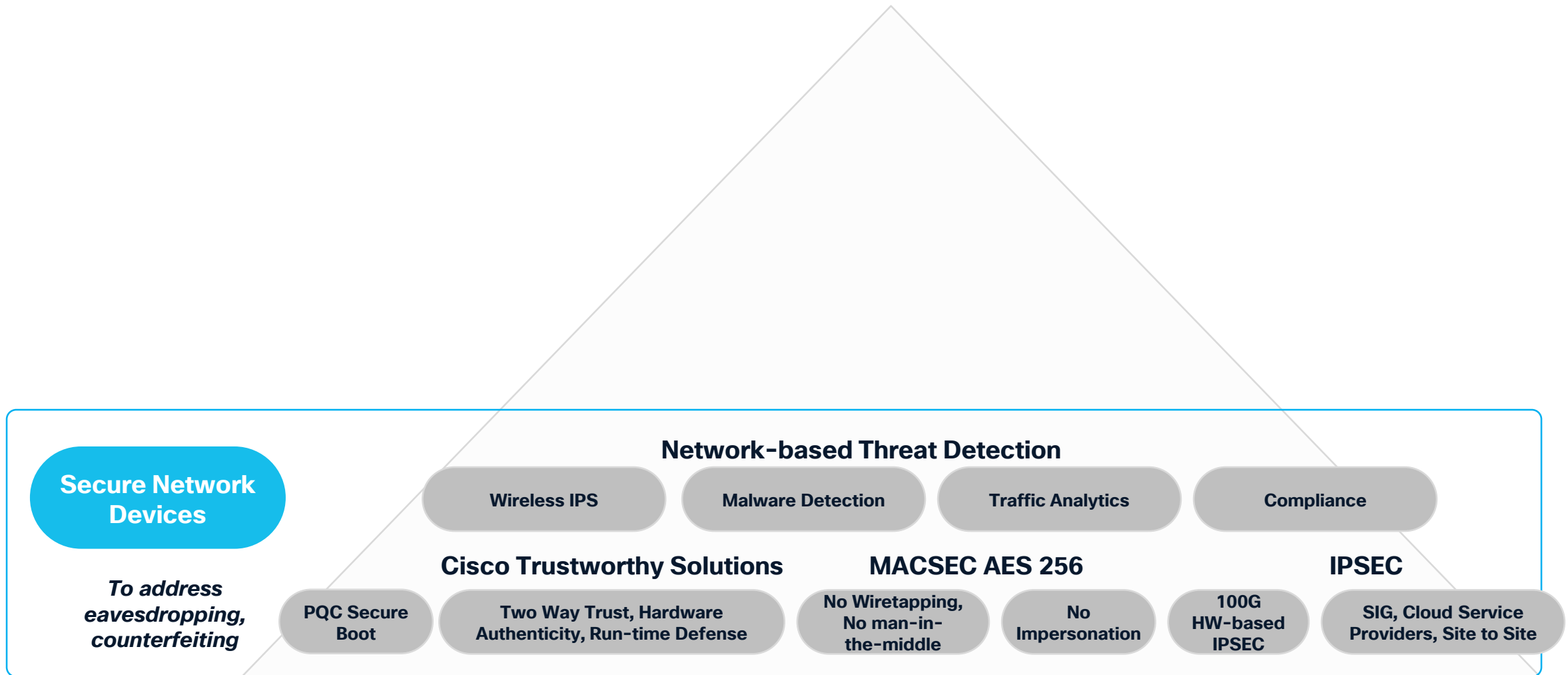
Cisco xFSU and hitless AP upgrades provide **very minimal downtime**



# ***End-to-End Security***



# End-to-end security with Catalyst 9000



# Trustworthy Technologies for Enterprise Networking



## Post Quantum Compliant (PQC) Secure Boot

Helps verify that code is authentic and unmodified. Anchors the microloader in immutable hardware, establishing a root of trust and preventing Cisco devices from executing tainted software.

## Hardware Authenticity Check

Uses a X.509 SUDI certificate to verify hardware authenticity. Runs only after the secure boot process has completed and software has been verified to be trusted.

## Image Signing

Creates a unique digital signature for a block of code. Signed images may be checked at runtime to verify that software has not been modified.

## Runtime Defenses

Built-in operating system features that protect against malware being injected into running code.

## Simplified Factory Reset

One command to reset the device to factory-original settings to protect sensitive corporate data when device is out of direct control.

## Trust Anchor Module (TAm)

A Tamper-resistant chip featuring nonvolatile secure storage, SUDI, and crypto services including RNG, key store, and crypto engine.

## SUDI for Cisco Plug & Play

The Secure Unique Identifier (SUDI) is an X.509 certificate that provides factory-installed device identity. Prevents spoofing and MITM attacks. Enables remote on-boarding of devices.

## Boot Integrity Visibility

Allows platform identity and software integrity information to be visible and actionable. Admins can verify whether the platform has booted with trusted code.

## Modern Cryptography

Provides secure, up-to-date encryption so that encrypted data communications in-transit and at-rest remains confidential.

## Secure Development Lifecycle (SDL)

A repeatable, measurable process designed to reduce vulnerabilities and enhance the security and resilience of Cisco solutions.

Supported across **ALL** the Catalyst 9000 series switches

# Post Quantum (PQ) Secure Hashes

## Software Download

Downloads Home / Switches / Campus LAN

Q Search...

Expand All Collapse All

Suggested Release

Dublin-17.12.5(MD) ★

Cupertino-17.9.6a(MD) ★

Latest Release

IOSXE-17.15.3(ED)

**IOSXE-17.17.1(ED)**

Cupertino-17.9.7(MD)

Dublin-17.12.5(MD) ★

All Release

17

Details

Description : CAT9300/9400/9500/9600 Universal

Release : IOSXE-17.17.1

Release Date : 27-Mar-2025

FileName : cat9k\_iosxe.17.17.01.SPA.bin

Min Memory : DRAM 8192 Flash 16384

Size : 1194.31 MB ( 1252327976 bytes)

MD5 Checksum : c39d28fc4c3133bdcbbcec5a59653ba7d

**SHA512 Checksum :fd4664f808b9a5034eda54130e0008a8 ...**

Advisories

300X-48HXN Switch / IOS XE Software- IOSXE-17.17.1(ED)

Switch

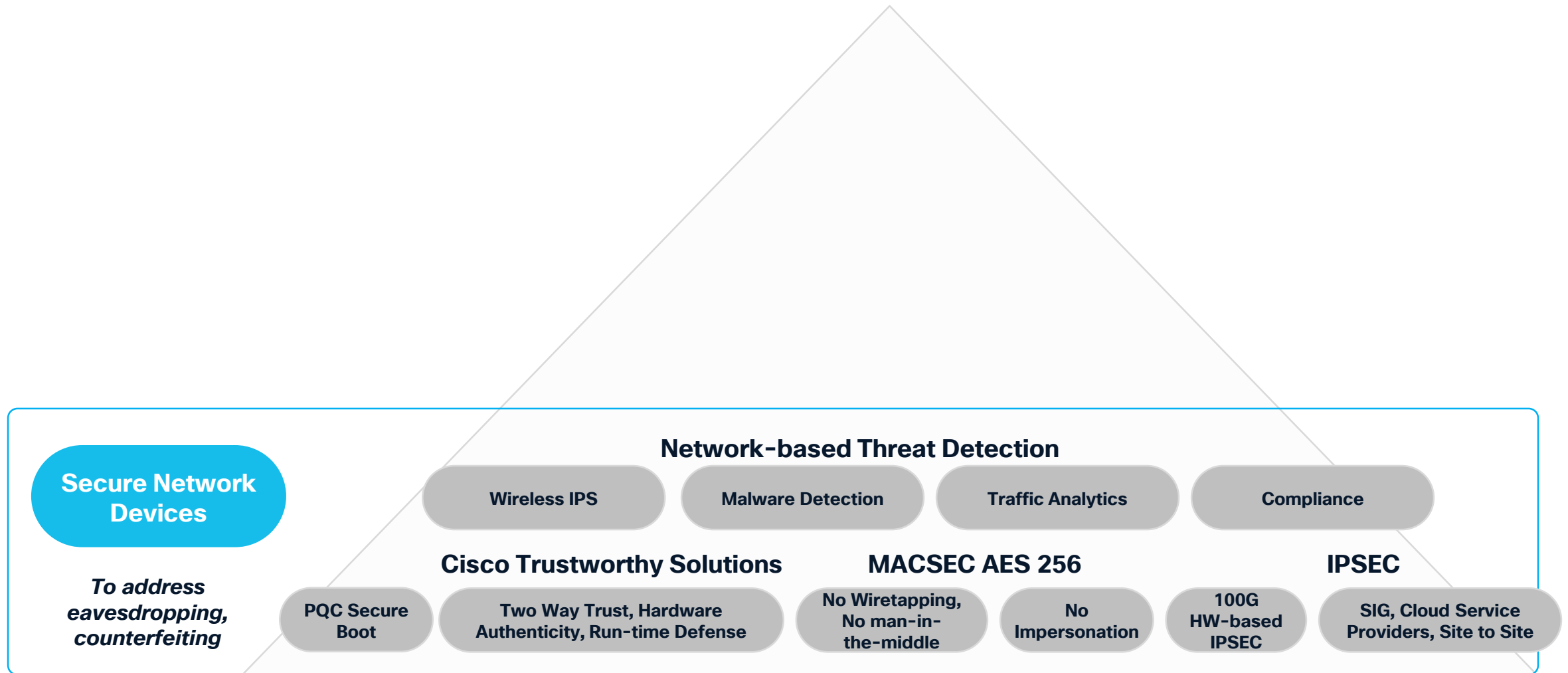
Related Links and Documentation

- No related links or documentation -

	Release Date	Size	
<div>CAT9300/9400/9500/9600 Universal</div> <div>cat9k_iosxe.17.17.01.SPA.bin</div> <div>Advisories</div>	27-Mar-2025	1194.31 MB	<div><div>↓</div><div>🛒</div><div>📄</div></div>
<div>CAT9300/9400/9500/9600 UNIVERSAL - NO PAYLOAD</div> <div>ENCRIPTION</div> <div>cat9k_iosxe_npe.17.17.01.SPA.bin</div> <div>Advisories</div>	27-Mar-2025	1187.87 MB	<div><div>↓</div><div>🛒</div><div>📄</div></div>

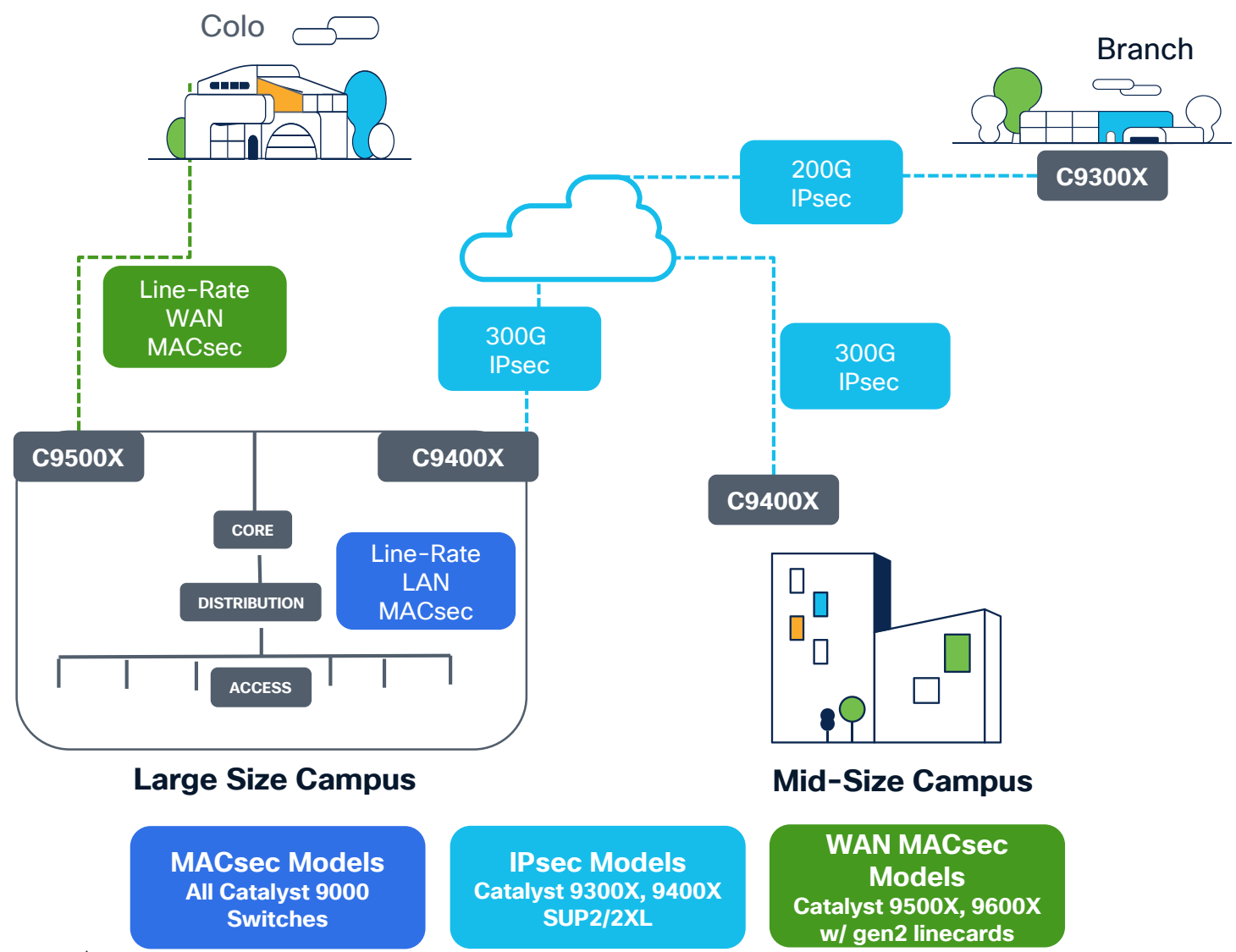
For more details on PQ Trust Anchor, read the whitepaper:  
[https://www.cisco.com/c/dam/en\\_us/about/doing\\_business/trust-center/docs/post-quantum-trust-anchors-wp.pdf](https://www.cisco.com/c/dam/en_us/about/doing_business/trust-center/docs/post-quantum-trust-anchors-wp.pdf)

# End-to-end security with Catalyst 9000



# Catalyst 9000 Secure Hybrid Connectivity

MACsec, WAN-MACsec and IPsec Encryption



# Example Config: Switch to Switch Pre-Shared Key MKA

```
interface <interface-id>
  macsec network-link
  mka policy <policy-name>
  mka pre-shared-key key-chain <key-chain name>
  channel-group <number> mode active
```

Use "network-link"

For Ether-Channels apply MACsec on physical Port Members

```
key chain <keychain1> macsec
  key AA
    cryptographic-algorithm aes-128-cmac
    key-string p
    lifetime local <time>
  key BB <optional for transparent key change>
    cryptographic-algorithm aes-128-cmac
    key-string p
    lifetime local <time>
```

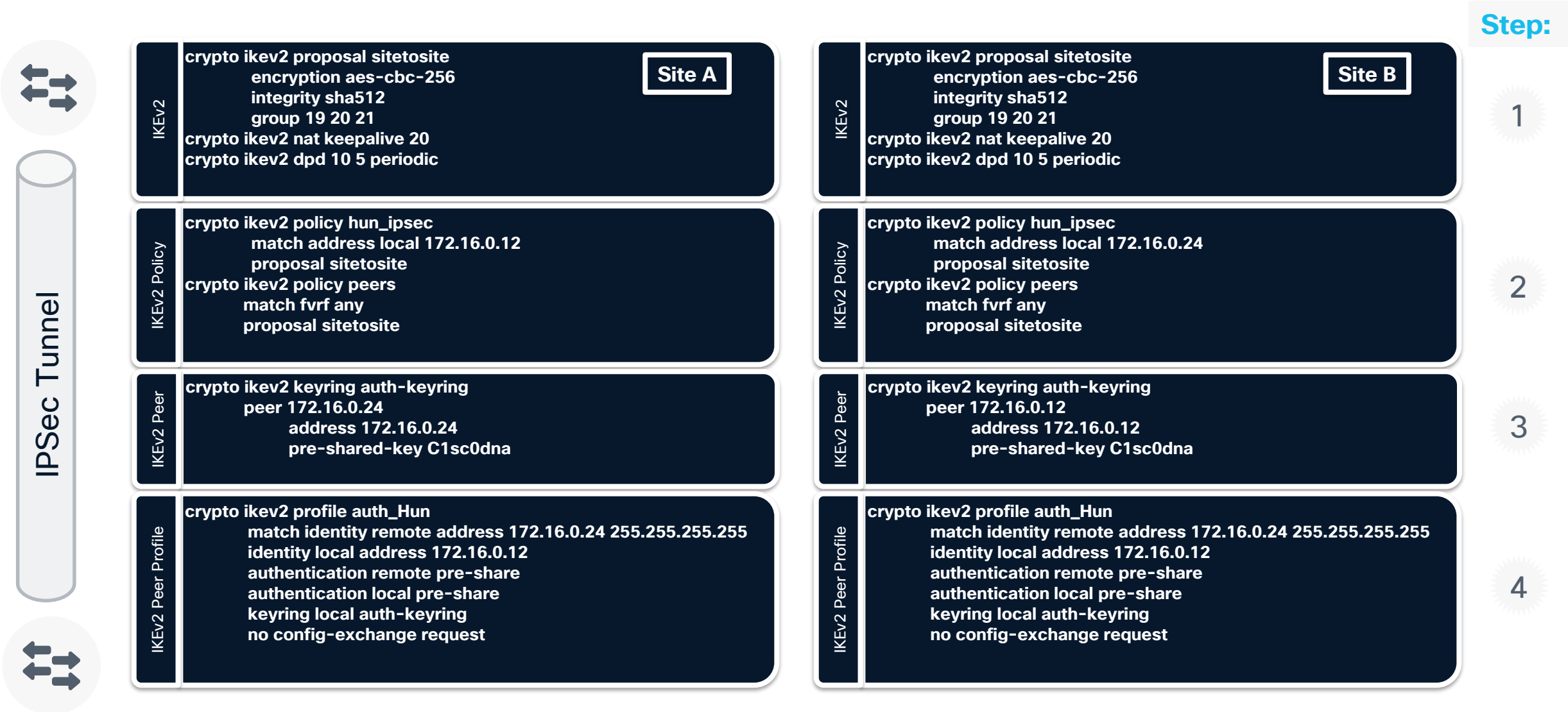
Use NTP to sync the time for the keychains

```
mka policy <policy name>
  macsec-cipher-suite gcm-aes-128
```

Using key with overlapping time frame can do transparent key change

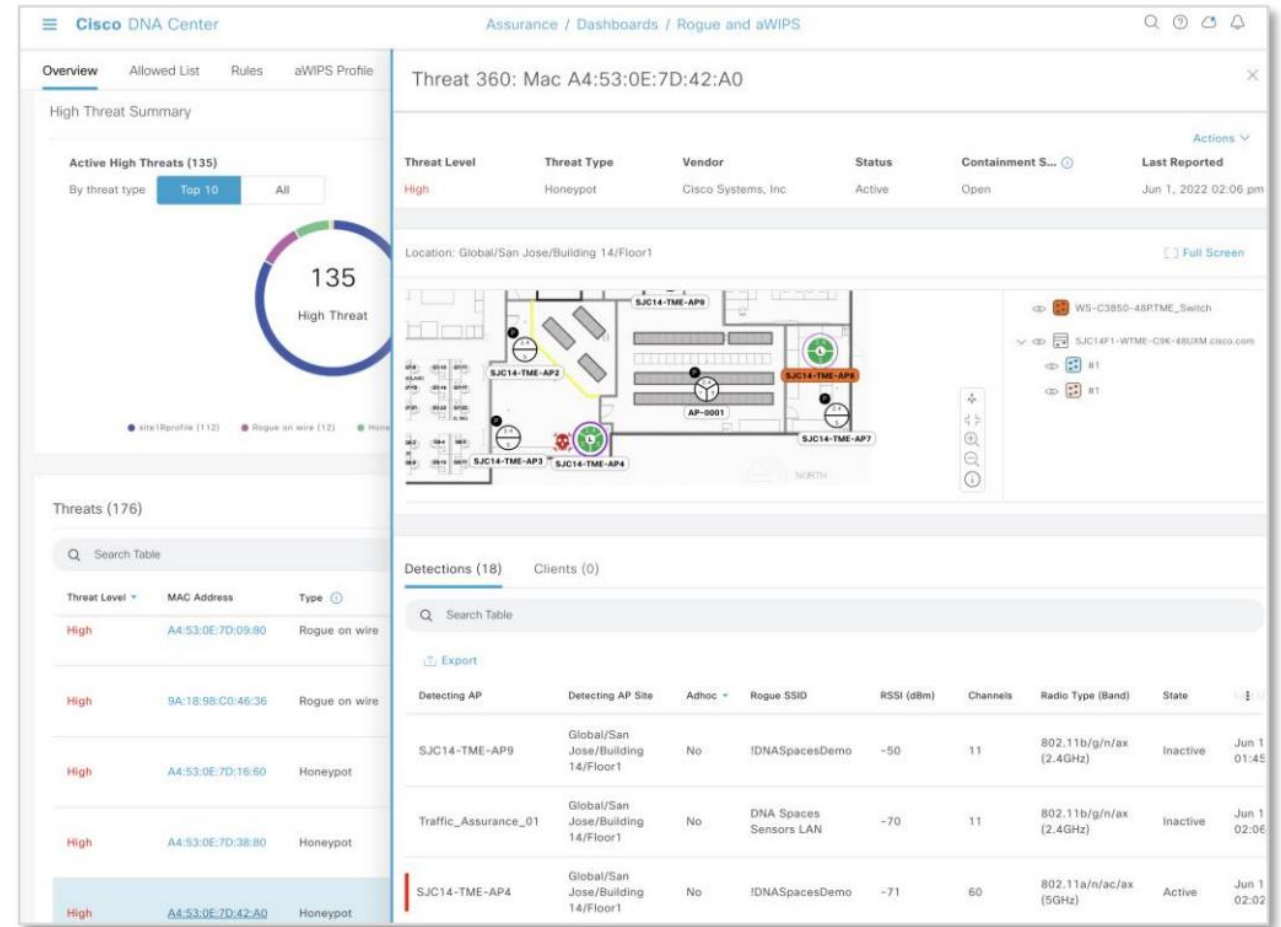
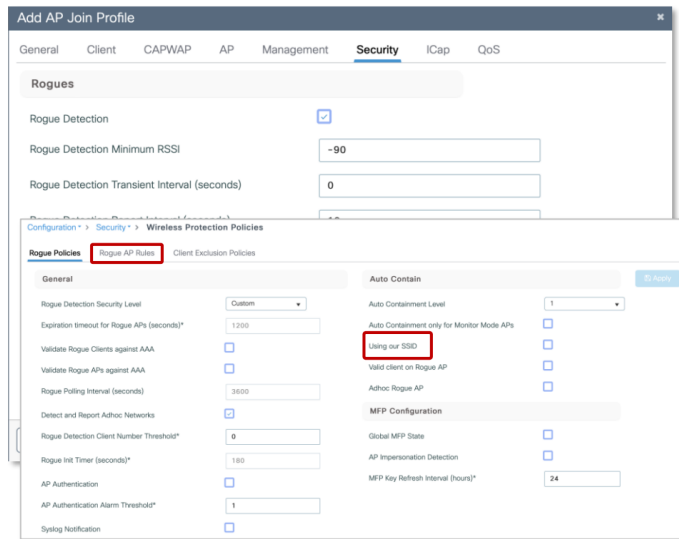


# Example Config: IPSec Site to Site / Point to Point with PSK

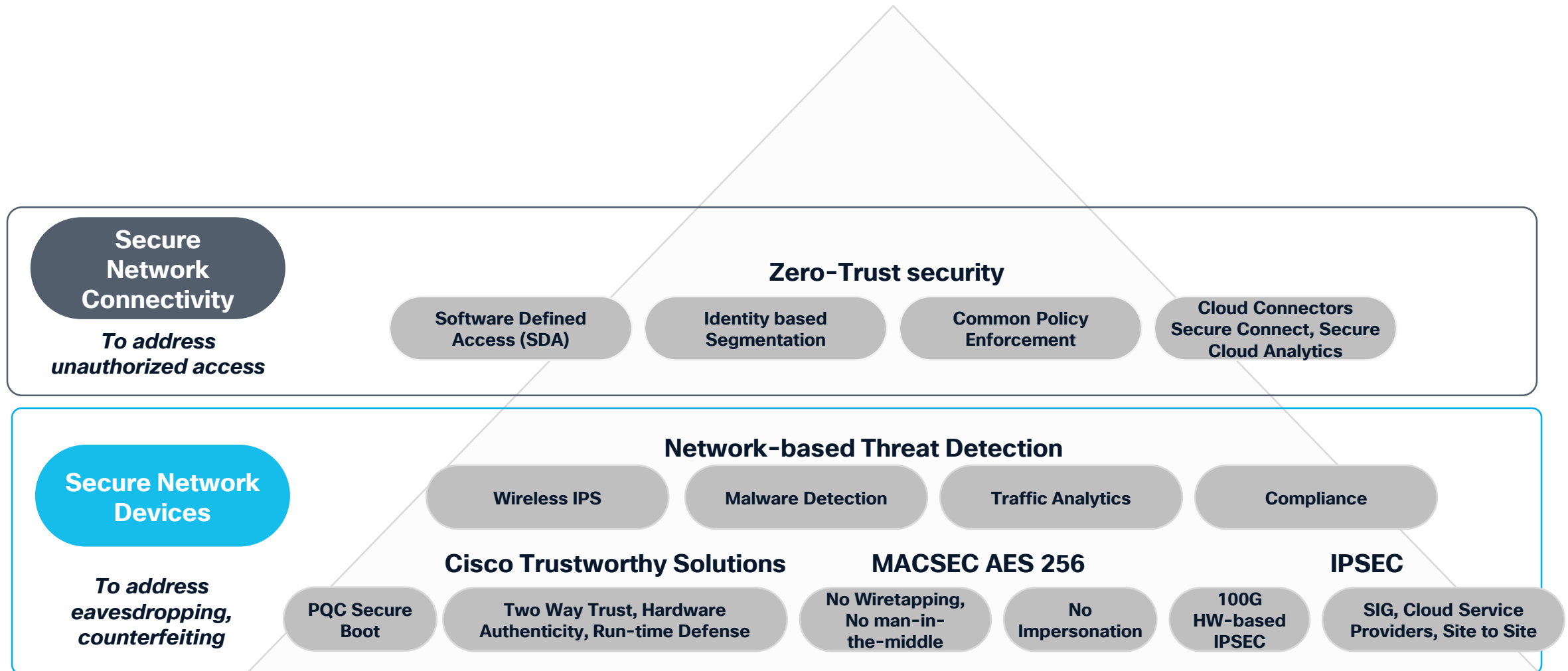


# Robust Wireless Security

- Dedicated auxiliary radio – CleanAir Pro
- Rogue detection and classification
- Rogue location and mitigation
- Event correlation
- Security compliance reporting
- Wireless threat detection
- Forensic capture



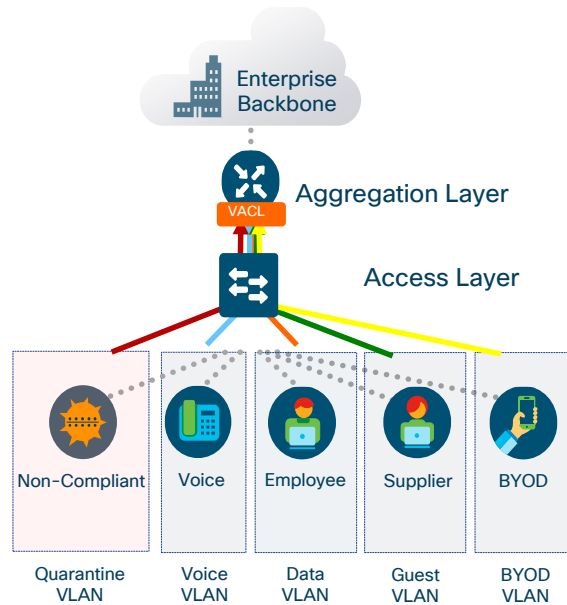
# End-to-end security with Catalyst 9000



## Group-Based Policy logically segments the network

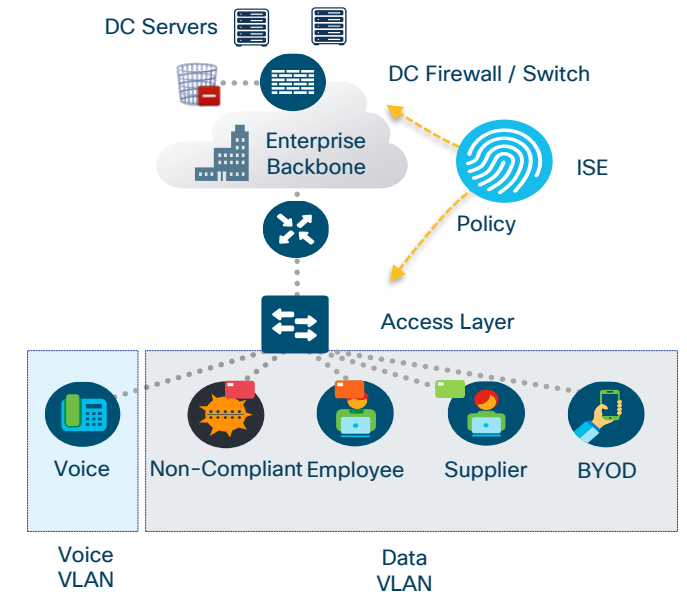
## TrustSec/Scalable Group Tag (SGT)

- VLAN and IP address-based
- Create IP-based ACLs for access policy
- Deal with policy violations and errors manually



## SGT Policy

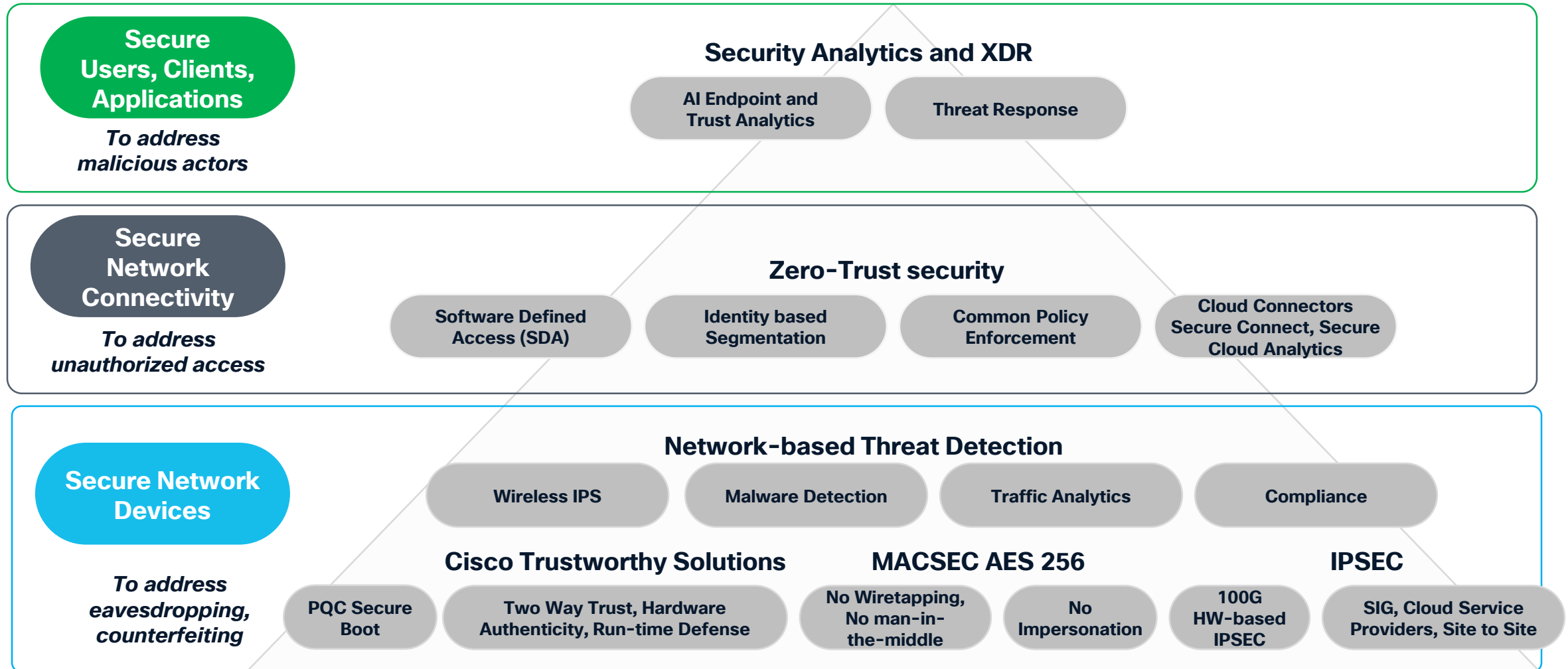
- No VLAN or subnet dependency for segmentation and access control
- Define one consistent policy
- Policy follows identity



Use existing topology & automate security policy to reduce OpEx

## Implementing the foundation of Zero Trust simplified with Cisco

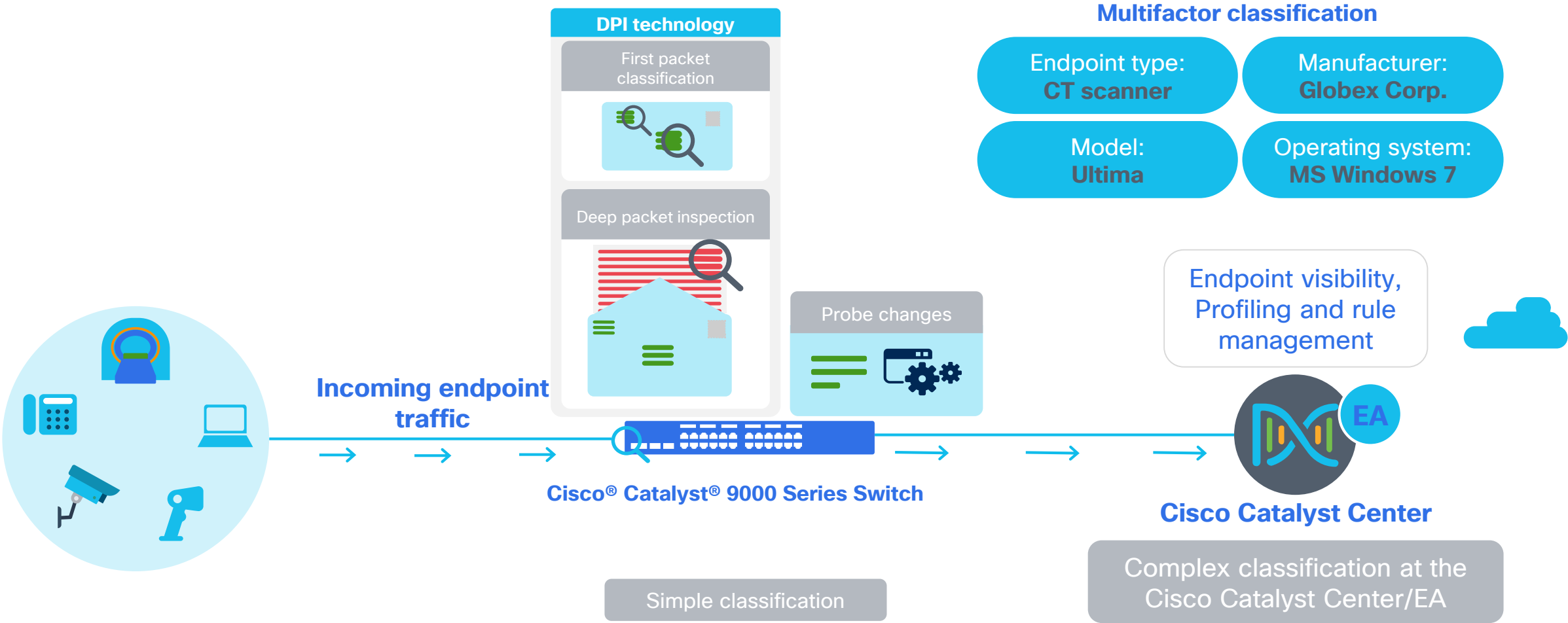
# End-to-end security with Catalyst 9000



# AI Endpoint Analytics

Identify Endpoints, Enforce Policies, and Stop Threats

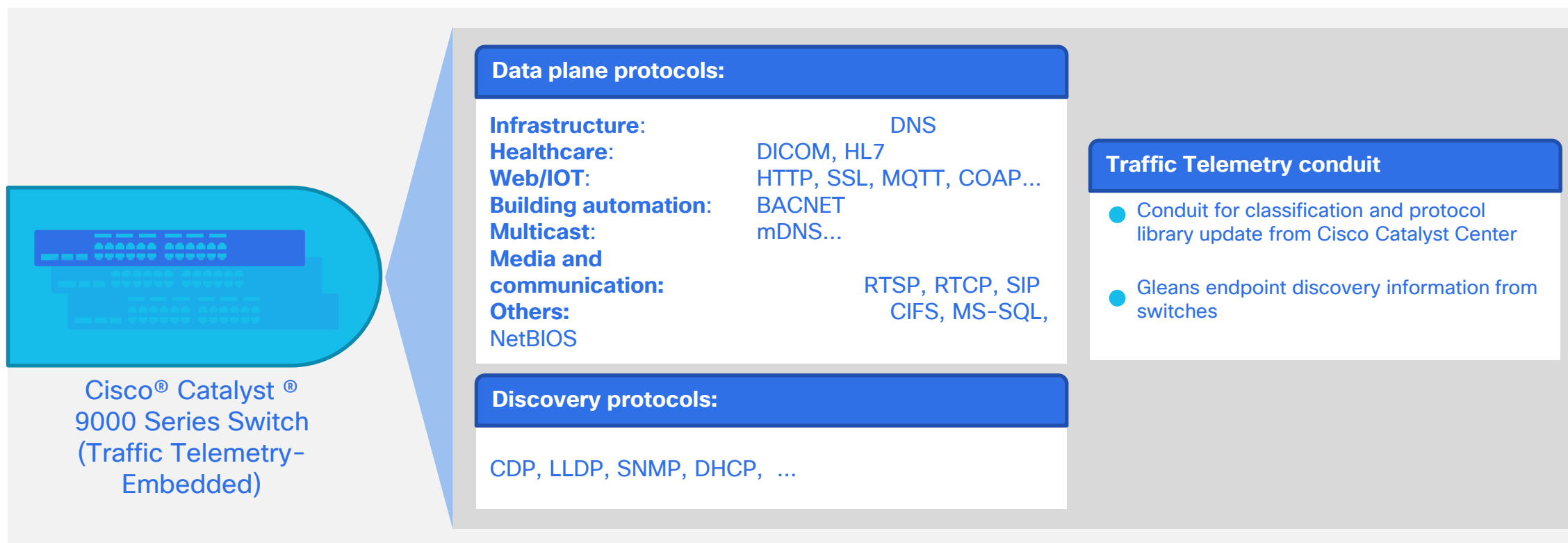
Catalyst Center 2.1.1.3  
IOS-XE 17.2.1  
ISE: 2.7 p1, 2.6 p5+, 2.4 p11+





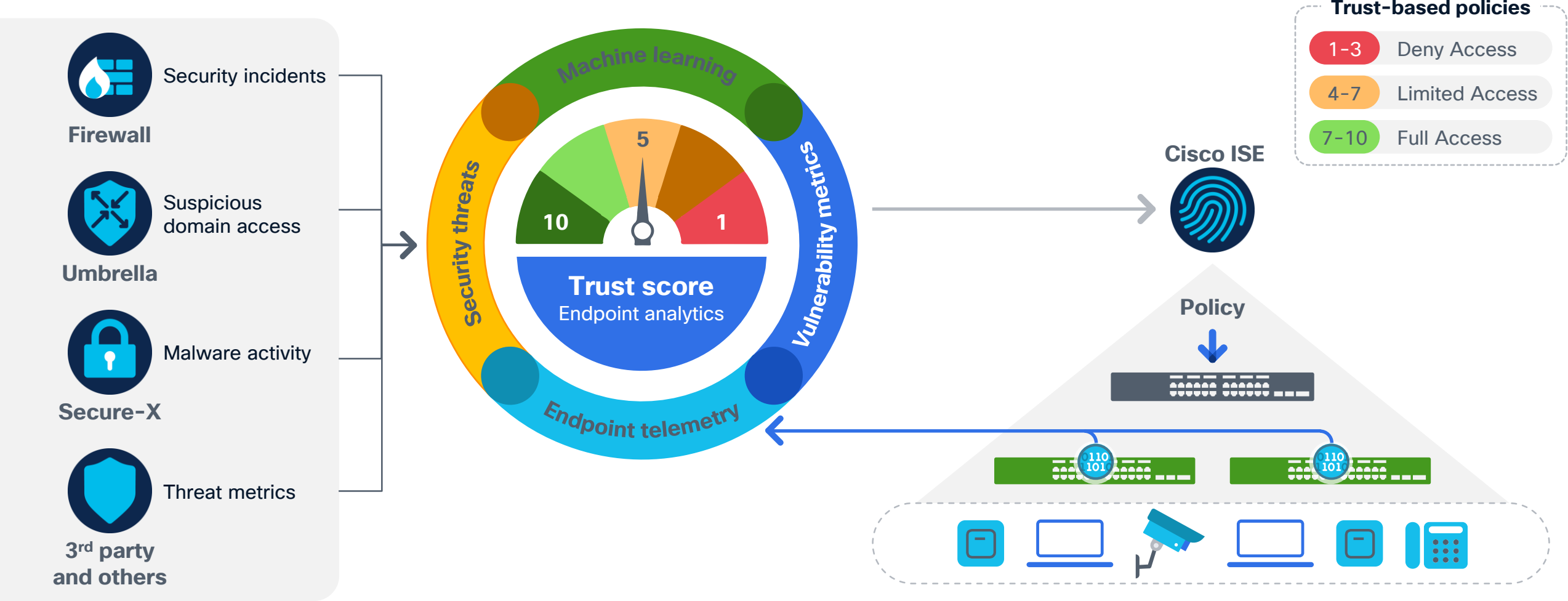
# Traffic Telemetry Protocols

Support for 1400+ application protocols  
Protocol library gets updated via Cisco Catalyst Center



Protocol Library: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos\\_nbar/prot\\_lib/config\\_library/nbar-prot-pack-library.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/qos_nbar/prot_lib/config_library/nbar-prot-pack-library.html)

# Trust Analytics for Continued Trust Verification



OverviewEndpoint InventoryTrust ScoreProfiling RulesHierarchy

Trust Score

Trust Score assesses the trustworthiness of a given endpoint on the network to help achieve zero trust outcomes. Value 1 (low trust) to 10 (high trust) and are calculated using several sources that provide context about the endpoint (e.g. posture authentication), its vulnerability [View More...](#)

AlertsEndpoints

Endpoints (2) Focus: Trust Score - Default view

Endpoint Trust Score

0 SelectedReset Trust ScoreMore Actions

<input type="checkbox"/>	MAC Address	Is Random MAC	Endpoint Trust Score	IP Address	IPv6	Auth
<input type="checkbox"/>	F0:25:72:78:8A:72	No	1	3.11.3.4	-	W
<input type="checkbox"/>	F0:25:72:78:8A:70	No	1	3.11.3.5	-	W

2 Record(s)

F0:25:72:78:8A:72

HostnameSEP189C5D21F518Trust Score1

DetailsTrust ScoreAttributes

Trust Score Total: 1

Endpoint Context

> Authentication Method

WiredMAB (Lookup)Last Authenticated Nov 30, 2023 4:11 AM

> Posture

Not Detected

Threat and Vulnerability Context

> AI Spoofing Detection

Low TrustLast Score: Nov 16, 2023 12:16 AM

> Endpoint Attribute Conflict

Not Detected

> Unauthorized Ports

Globally Disabled

> Credential Vulnerability

Globally Disabled

Network Context

Reset Trust Score

Apply ANC Policy

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BRKARC-1012

CISCO

# Threat and Vulnerability Context

## ✓ AI Spoofing Detection

● Low Trust

Last Scored: Nov 16, 2023 12:16 AM

AI Spoofing Detection detects endpoints being spoofed by comparing endpoint behavior with AI based behavioral models. This detection runs in the cloud using trained models, considering the endpoint classifications and the flow information for supported endpoint types.

Severity 100 Confidence 100

Expected Endpoint Type IP Phone

Active Applications

echo  
finger  
imap  
mysql  
nntp  
pop3  
shell  
smtp  
sunrpc



Enabled

Reset

Was this accurate ?





# Apply ANC Policy

Choose an ANC Policy to apply to **F0:25:72:78:8A:72**. Doing so will affect the endpoints accessibility to your network based on the ANC Policy applied.

Apply ANC Policy

Q

Search

ancQuarantine

ancReAuth

 Don't see a policy you like?



Cancel

Apply

# Key Cisco Advantages:

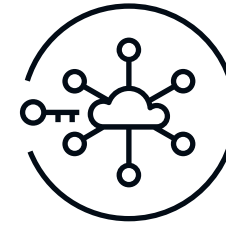
## End-to-End Security



Cisco only vendor to provide **pervasive security** from ASIC to Cloud



Cisco is the pioneer in providing **identity-based segmentation**



Cisco provides a **common policy** across the multiple domains in networking infrastructure



# Sustainability & Energy Efficiency



# Sustainability Pillars of Catalyst 9000 series

Accelerating customer's sustainability journey through its lifecycle

## Manufacturing

### Simplified architecture

Parts designed to serve multiple functions  
Global SKU AP for any region for any deployment

### Reduced plastic usage

Removed cosmetic plastic bezel, significantly reducing the plastic used in the product.

### No wet paint

Eliminated use of oil-based wet paint, reducing environmental impact of manufacturing process.

## Transport

### Sustainable packaging

Redesigned packaging to remove all foam, replacing it with a recyclable fiber-based solution. Reduced weight for transportation

### No paper manuals

Leverage postcard size pointer card to connect user to digital documentation.

### Accessory opt in

Customers can opt-in to receive only the product accessories they need.

Wireless APs use same mounting bracket from 15 years

## Use

### Increased Performance per Watt

ASIC and HW innovations enable higher bandwidth at less than proportionate increase in power

### Platinum or Titanium PSU\*

### Energy Management and Automation

Energy reporting for all devices in one view reporting energy usage, mix, cost and CO2e allowing you to make smart energy choices (C9200, C9300, C9400)

### Auto-offline hardware\* (LED, SFP, PSU)

### AP Calendar Profiles/ Port scheduling



## End of Use

### Take-back Program

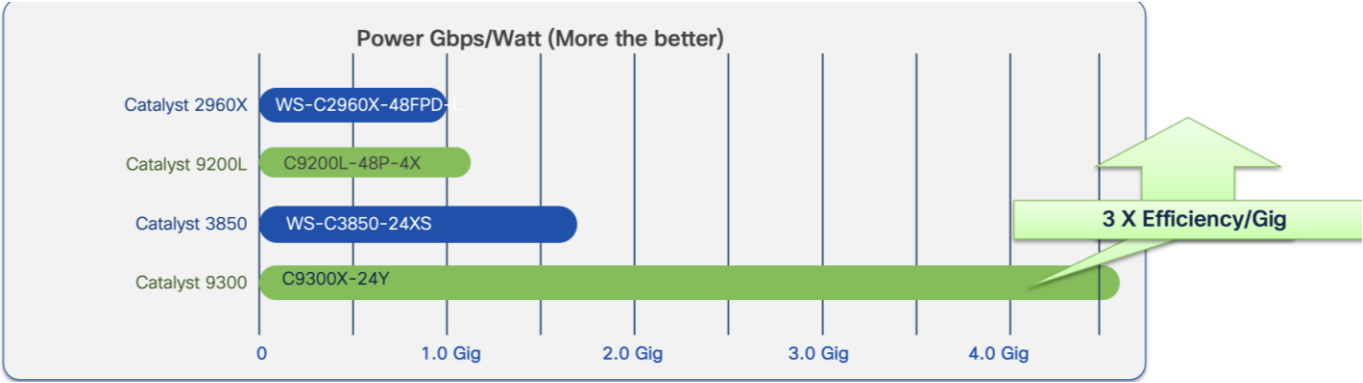
Cisco picks up the product when done and recycles it, ensuring that your end-of-life emissions are minimal.

### Cisco refresh

Nearly 100% of products returned to us are reused or recycled

# Sustainability Built into Cisco Product Design

## Cisco Catalyst 9000 Series Switches

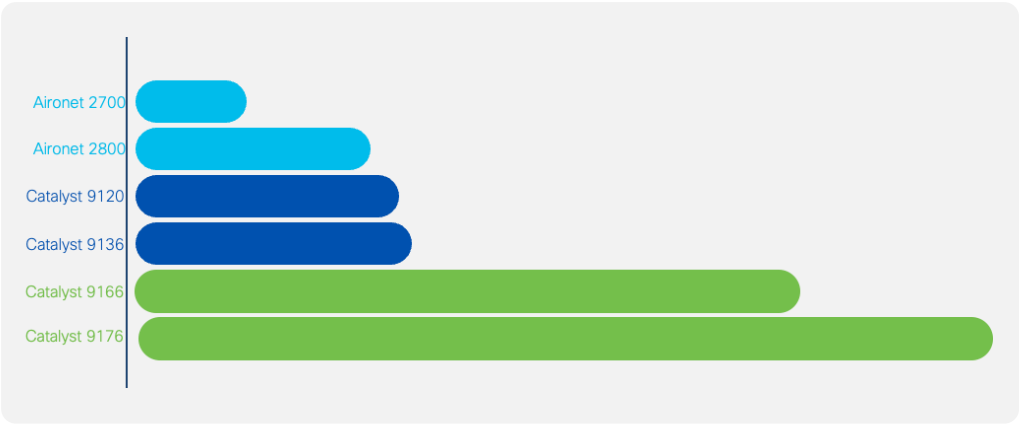


Catalyst 9000 Fixed Access Efficiency



Catalyst 9000 Modular Access Efficiency

## Cisco Catalyst 9000 Series Access Points



Higher Throughput per Watt with newer generation of Catalyst 9000 series Access Points



## Welcome to Catalyst Center!

Explore

Some of your license compliance requirements have not been met. [Learn more.](#)

### Assurance Summary

#### Health

Healthy as of Sep 24, 2024 1:23 PM

95%

Network Devices

--%

Wireless Clients

50%

Wired Clients

[View Details](#)

#### Critical Issues

Last 24 Hours

0

P1

2

P2

[View Details](#)

#### Trends and Insights

Last 30 Days

--

AP Performance  
Advisories

--

Trend Deviations

[View Details](#)

### Network Snapshot

#### Sites

As of Sep 24, 2024 1:23 PM

5

DNS Servers : 0

NTP Servers : 0

[Add Sites](#)

#### Network Devices

As of Sep 24, 2024 1:23 PM

21

Unclaimed: 0

Unprovisioned: 0

Unreachable: 1

[Find New Devices](#)

#### Network Profiles

As of Sep 24, 2024 1:23 PM

1

Wireless: 1

Routing: 0

Switching: 0

Assurance: 0

WAN: 0

[Manage Profiles](#)

#### Images

As of Sep 24, 2024 1:23 PM

#### Software Image Updates

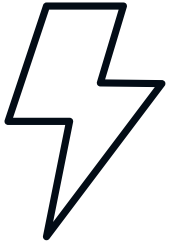
As of Sep 24, 2024 1:23 PM

#### Cisco DNA Licenses

As of Sep 24, 2024 1:23 PM

# Key Cisco Advantages:

More energy efficient Infrastructure



Highest density of **Multi-gigabit** & **90W** PoE



Among the first to achieve Energy Star certification in the Large Network Equipment category



First in campus to provide comprehensive **energy management** visibility and analytics



>20% energy cost reduction with Cisco Smart Spaces



# Operational Simplicity

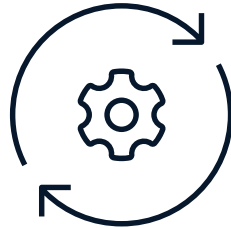
# Key Cisco Advantages:

## Operational Simplicity

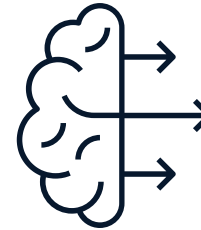
*Flexible deployment options with **on-prem** or **cloud***



**Secure app hosting** container for observability, security, AI apps natively



**Simplifies lifecycle management** from understanding configuration drifts to Software Image Management (SWIM) to Compliance



**AI-Powered Operational Experience** offering AI-powered Radio Resource Management (AI-RRM), Machine Reasoning Engine (MRE) workflow, AI Analytics, etc.

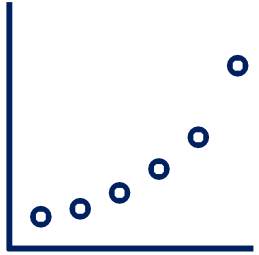


**End-to-end Observability** with actionable insights into owned and unowned networks, powered by ThousandEyes





# Investment Protection



**Longer  
Lifecycle**



*No frequent rip-  
and-replace*



**Resilient  
Campus**



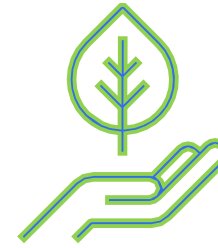
*Business  
continuity with  
minimum  
downtime*



**Secure**



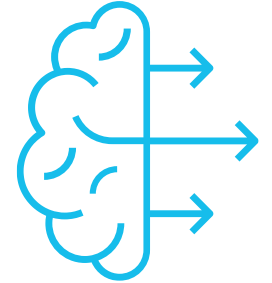
*Robust  
Zero Trust  
Network*



**Energy Efficient**



*Save Power,  
Save Money,  
Save the  
environment*



**Operational  
Simplicity**



*Reduced  
operational  
expenses*



***“I **HAVE** modernized the infrastructure while  
maintaining my investment with Cisco”***



# BRKARC-1012

## Session Expectations



*Introductory*

*Not a technical  
deep-dive*

*Accessible to all  
levels*





***Key Takeaway:***  
*Cisco Catalyst 9000 Series Switches and Wireless  
are built with investment protection in mind*

# Complete Your Session Evaluations



**Complete** a minimum of 4 session surveys and the Overall Event Survey to be entered in a drawing to win 1 of 5 full conference passes to Cisco Live 2026.



**Earn** 100 points per survey completed and compete on the Cisco Live Challenge leaderboard.



**Level up** and earn exclusive prizes!



**Complete your surveys** in the Cisco Live mobile app.

# Continue your education



**Visit** the Cisco Showcase for related demos



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



**Attend** the interactive education with DevNet, Capture the Flag, and Walk-in Labs



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

**Contact me at:** [mkachhi@cisco.com](mailto:mkachhi@cisco.com), [linkedin.com/in/meghankachhi](https://linkedin.com/in/meghankachhi)



Thank you

**CISCO** Live !

