



Tech Club webinarář

Cisco Secure WAN

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Solutions Engineer

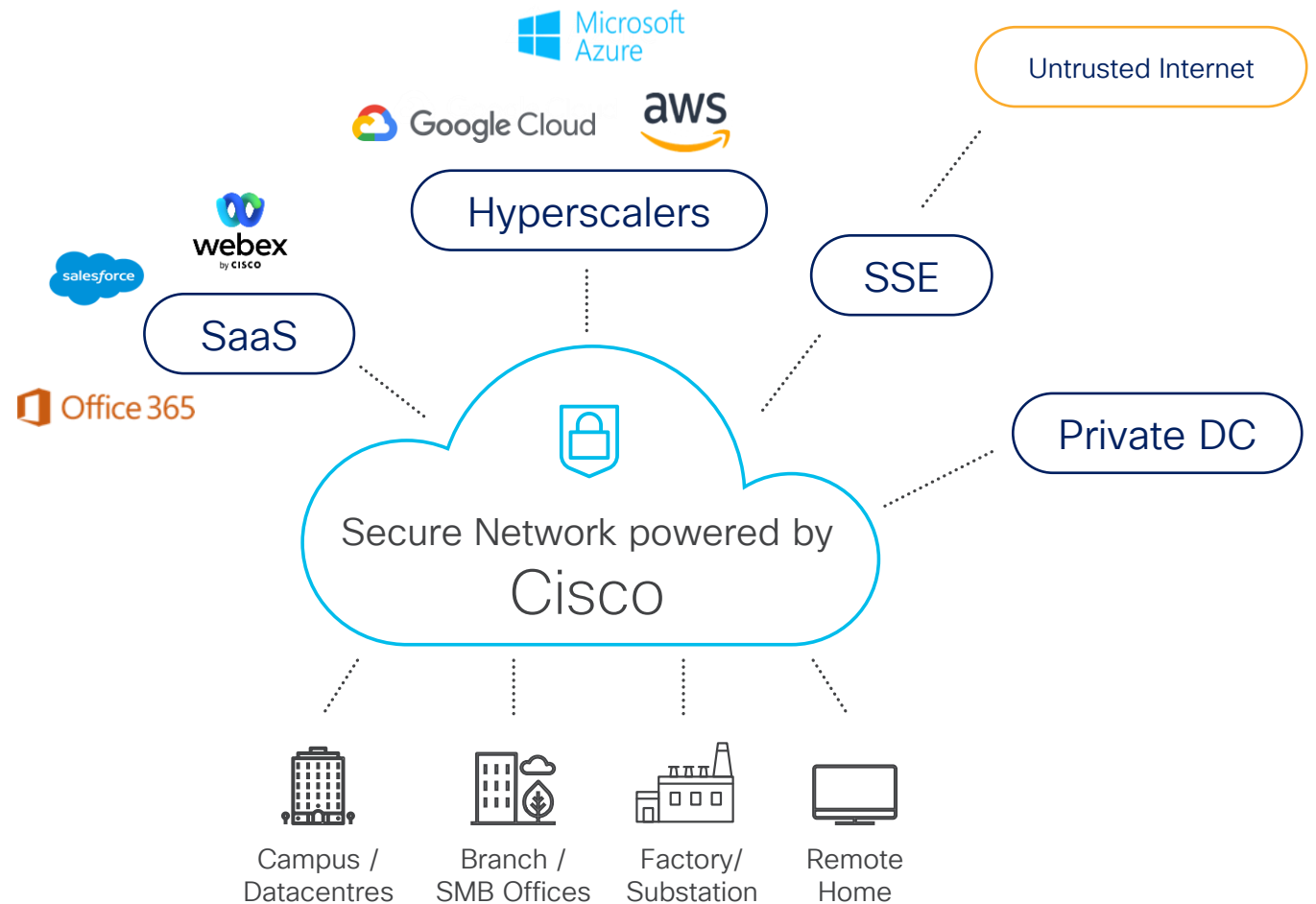
23.9. 2025

Agenda

- 01 Intro
- 02 Hardware Innovation & Key Networking Capabilities
- 03 Security Innovations
- 04 Product Specifications
- 05 Licensing for Cisco 8000 Series Secure Routers
- 06 Secure WAN Operational Simplicity
- 07 Conclusion

Customer trends transforming the WAN edge

- Apps moving to SaaS & IaaS → multicloud acceleration
- Work from anywhere
- Application/digital experience
- Secure, internet-only branch
- Simplify IT → centralized management distributed enforcement



Introducing the industry's most advanced secure router

Secure Networking Processor

Post Quantum Security capable
with 3x higher throughput

Advanced Security

NGFW and SASE with
3x Threat protection

Assurance

ThousandEyes with Traffic Insights
AI Troubleshooting

Simplified Licensing

Cisco Networking & Routing Subscriptions

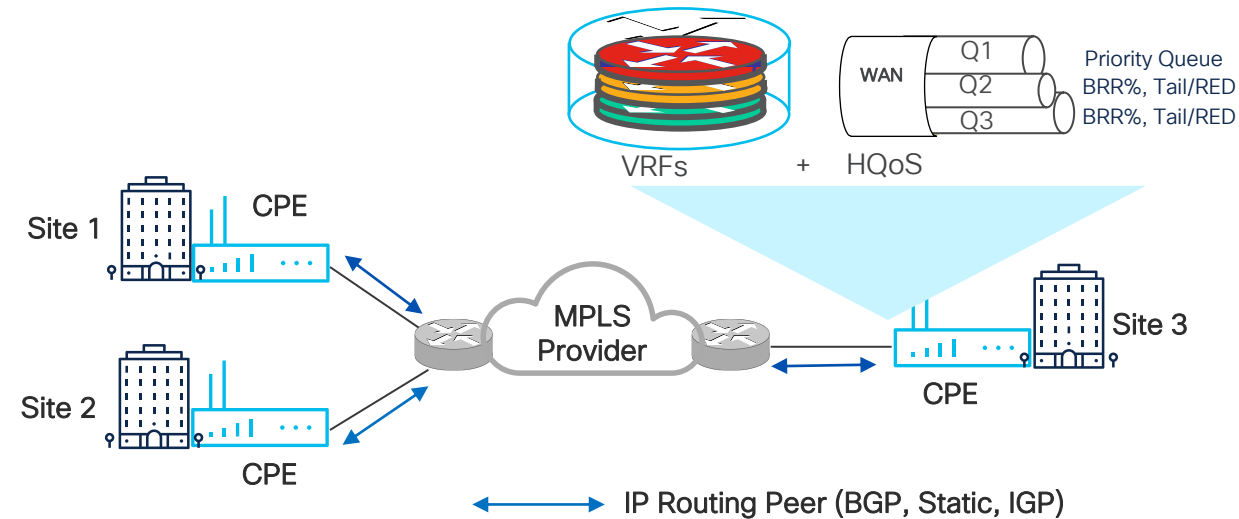


Cisco 8000 Series
Secure Routers

MPLS CPE

Products	Why the Secure Router is better*	VRF + HQoS Throughput @512B
C8100	<ul style="list-style-type: none"> Up to 2x faster* 	Up to 2.9Gbps
C8200	<ul style="list-style-type: none"> Up to 4x faster* 10GE & mGig WAN 	Up to 13.5Gbps
C8300	<ul style="list-style-type: none"> Up to 2x faster* 4x 10GE & mGig connectivity 	Up to 28Gbps
C8400	<ul style="list-style-type: none"> Up to 3x faster* 25GE WAN 	Up to 65Gbps
C8500	<ul style="list-style-type: none"> Continued perf excellence* 	Up to 150Gbps

- Better, faster than previous generation products
 - C8100 compared against C1121, C1161 ISRs
 - C8200 compared against Catalyst 8200 Series
 - C8300 compared against Catalyst 8300 Series
 - C8400 compared against C8500L-8S4X
 - C8500 compared against C8500-12X, C8500-12X4QC



SD-WAN

Application Aware Routing (AAR)

NIST Compliant
PQC

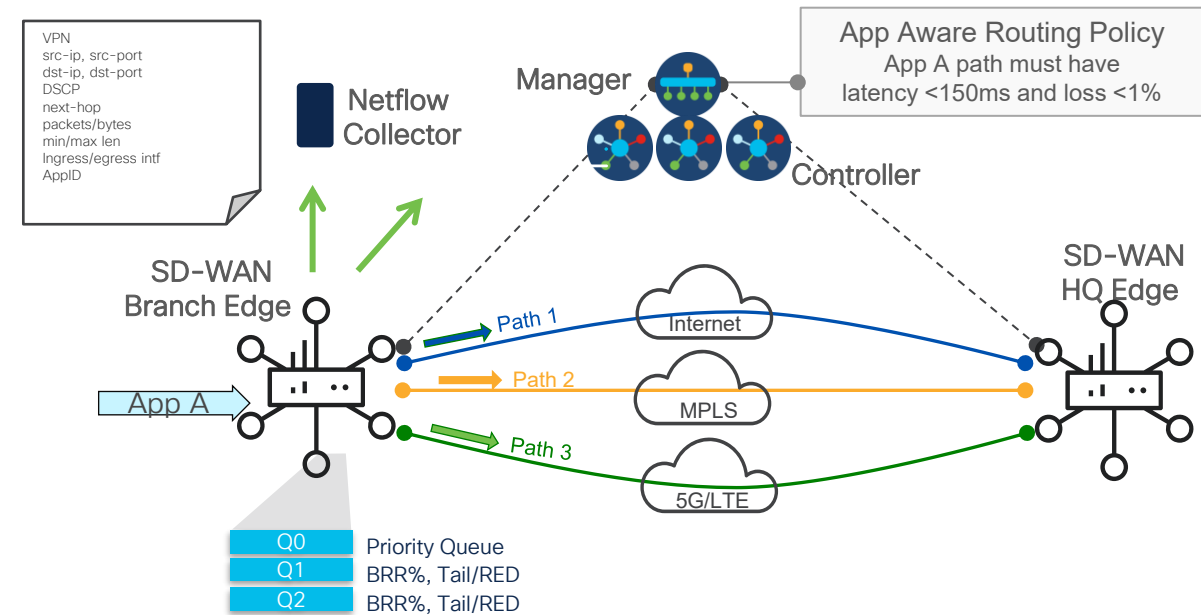


Ready for
IPsec/MACsec

Products	Why the Secure Router is better*	AAR ^[1] Throughput @512B
C8100	<ul style="list-style-type: none"> Up to 3x faster* 	Up to 940Mbps
C8200	<ul style="list-style-type: none"> Up to 4x faster* 10GE & mGig WAN 	Up to 4Gbps
C8300	<ul style="list-style-type: none"> Up to 4x faster* 4x 10GE & mGig connectivity 	Up to 15Gbps
C8400	<ul style="list-style-type: none"> Up to 2x faster* 25GE WAN 	Up to 21Gbps
C8500	<ul style="list-style-type: none"> Continued perf excellence 	Up to 22Gbps

* Better, faster than previous generation products

[1] AAR: IPsec+QoS+DPI+FNF



Secure Branch DCA/DIA

with Built-in Secure Firewall

Consistent Security Enforcement



Built-in Secure Firewall

Products	Why the Secure Router is better*	TP[2] Throughput @EMIX	50% DIA-TP[3] Throughput @EMIX
C8100	<ul style="list-style-type: none"> Up to 6x faster* TLS Decryption^[1] 	Up to 1Gbps	Up to 1Gbps
C8200	<ul style="list-style-type: none"> Up to 2x faster* 	Up to 2.4Gbps	Up to 1.9Gbps
C8300	<ul style="list-style-type: none"> Up to 3x faster* 	Up to 7Gbps	Up to 7Gbps
C8400	<ul style="list-style-type: none"> Up to 3x faster* 	Up to 11Gbps	Up to 11Gbps

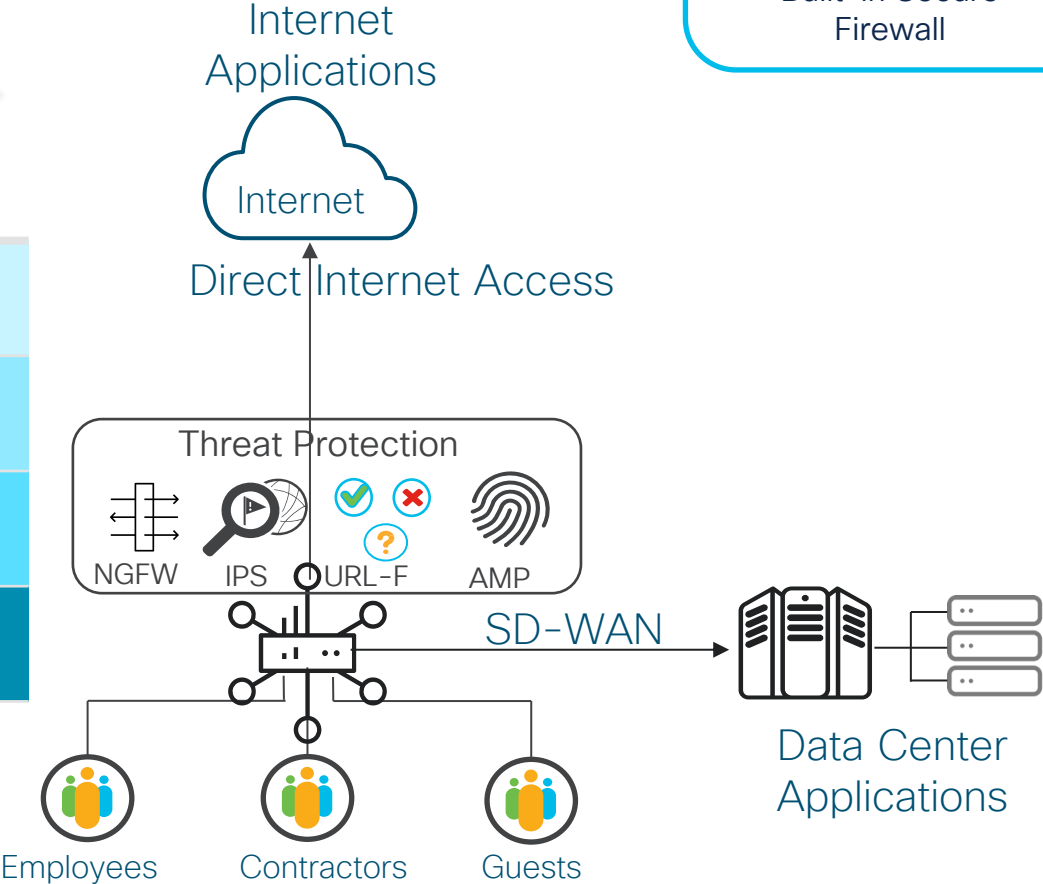
* Better, Faster than previous generation products

[1] TLS Decryption is new to small branch routers, already supported on previous gen medium/large branch and campus routers

[2] Threat Protection (TP): 100%DIA-NAT + NGFW + IPS + URL-F + AMP

[3] 50% DIA-TP: IPsec + QoS + DPI + FNF + DIA-NAT50% + ZBFW + IPS + URL-F + AMP + TG

For feature profiles and EMIX definition details, see [Unified Throughput Test Methodology](#)

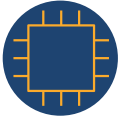


Hardware Innovation & Key Networking Capabilities

The Power of Cisco 8000 Series Secure Router

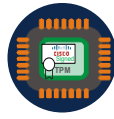
Hardware Innovation & Network Connectivity

Secure Networking Processor



HW accelerated
Security & Networking

Secure Boot



Post-Quantum
Safe (Future)

25GE WAN



Campus Router

HA w/ RPS



External
Redundant
Power Supply

Dying Gasp



Anticipate the
unexpected

mGig/10GE



Driven by Wi-Fi
6E & 7

Secure Networking Processor

Foster security and networking convergence



Security

- Inline Crypto
- PQC ready crypto engine
- Cisco Secure Firewall acceleration
- AI/ML engine



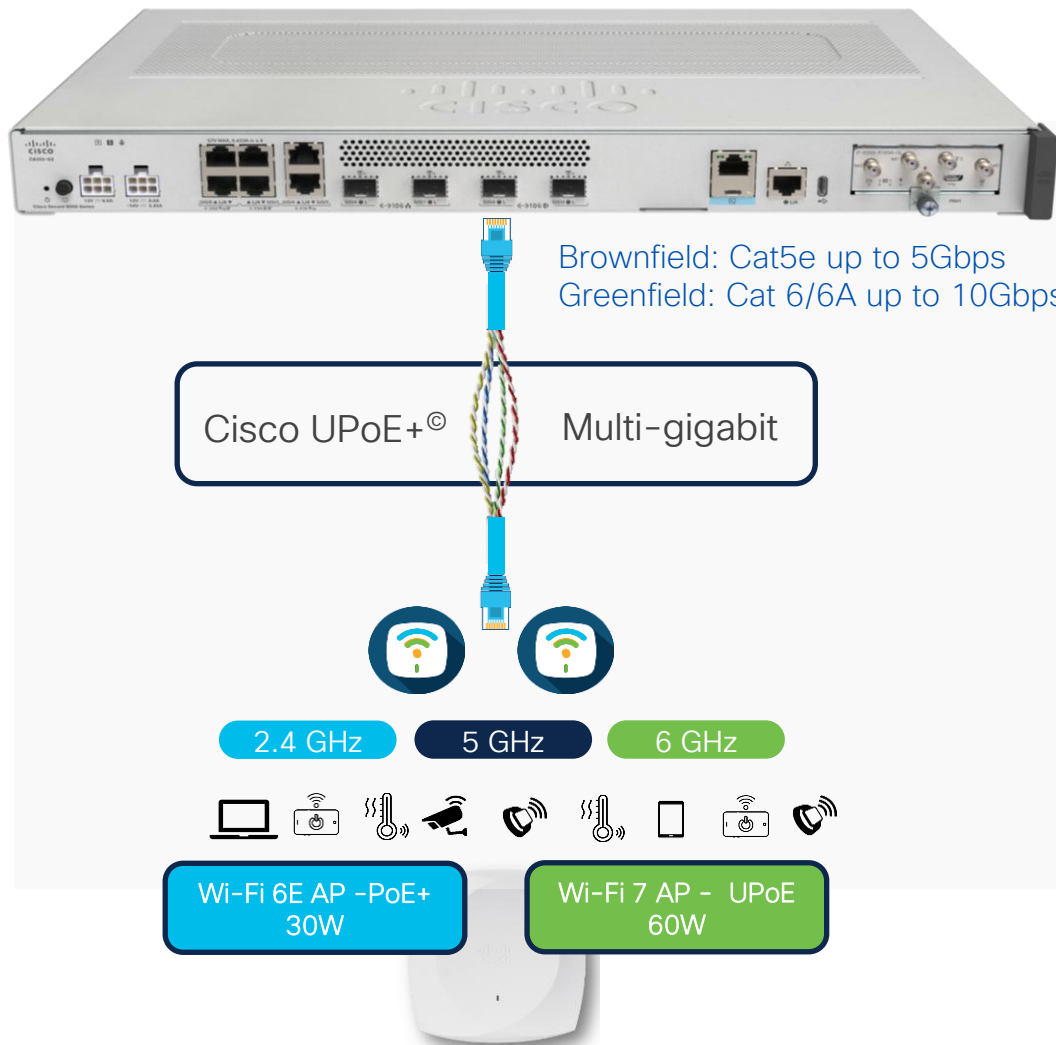
Networking

- Integrated hardware accelerators
- Integrated Ethernet Controller – 2.5mGig, 5mGig, 25GE
- Performance defined Power – 30%+ power saving
- Programmable uCode – protect IP, feature parity

C8200-G2, C8300-G2 and C8400-G2 powered by Secure Networking Processor

Multi-Gigabit Ethernet Capable Secure Router

Wi-Fi 6E & 7 driving mGig Access



mGig Capabilities

Model	1G	2.5mGig	5mGig	10G
C8231	4	4 1		2
C8235		8 2 2		2
C8355	2		4 4	4
C8375		4 2		2

Legend



Number of PoE+ port count

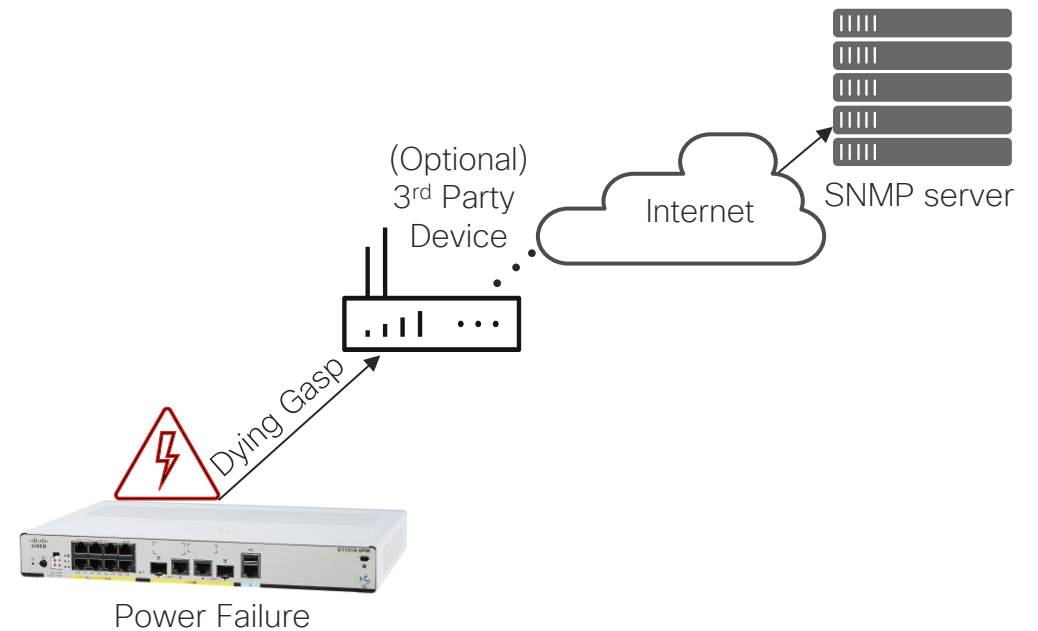


Number of UPoE+ port count

WAN Dying Gasp

Why is it important?

- Signal/alert generated when the device is about to go down due to a reset or power failure.
- The Dying Gasp feature supports the generation of Ethernet-OAM Dying-Gasp packets to notifying the remote peer device when the local device is going down.
- The system holds enough residual power to send out dying gasp messages after a power failure, notifying the admin or user.
- Supported over ethernet & cellular WAN interfaces



Security Innovations

The Power of Cisco 8000 Series Secure Router

Security Innovations

Consistent Security Enforcement



Built-in Secure Firewall

NIST Compliant PQC



Ready for IPsec/MACsec

Amazing Throughput



Up to 6x TP, 10x IPsec

Line rate MACsec



LAN/WAN MACsec on all built-in ports

Security AI/ML



Ready to offload (C8300/C8400)

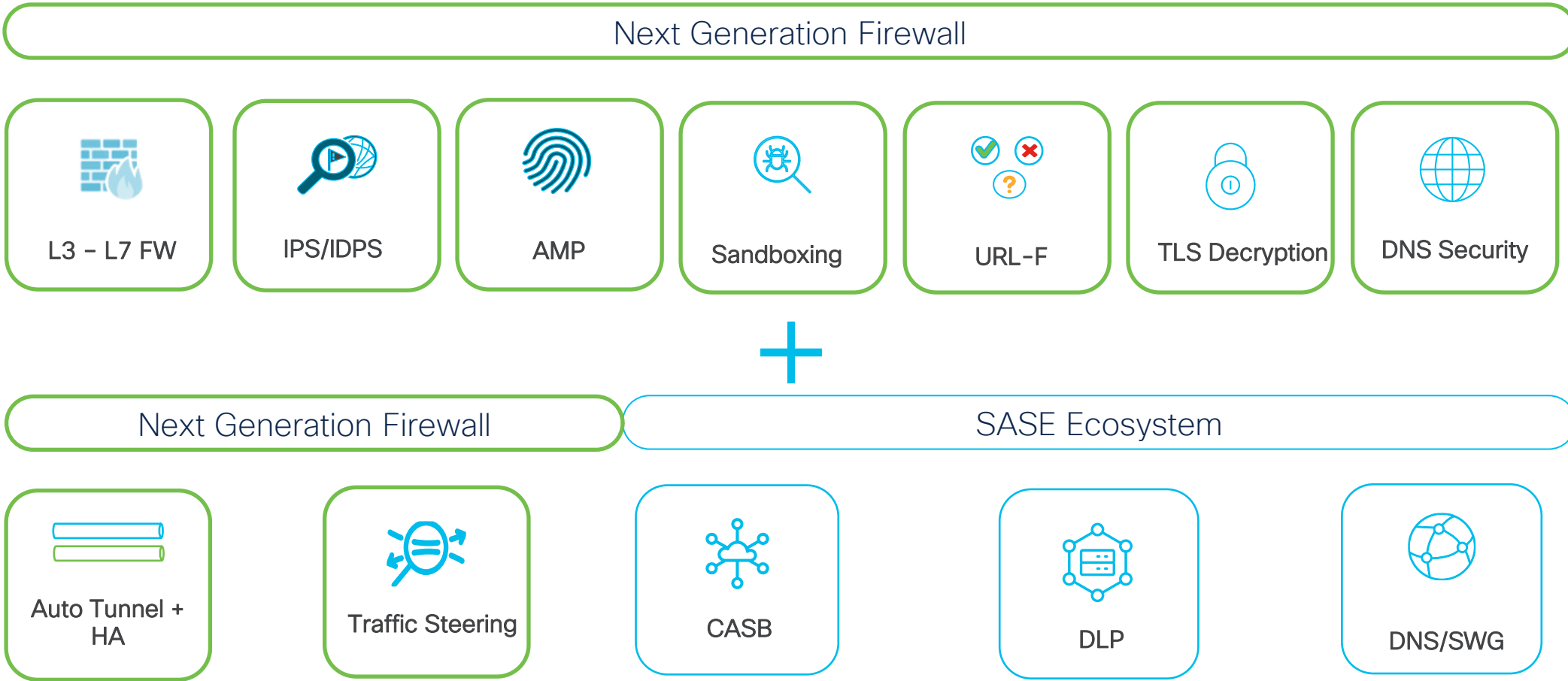
Physical Intrusion Detection



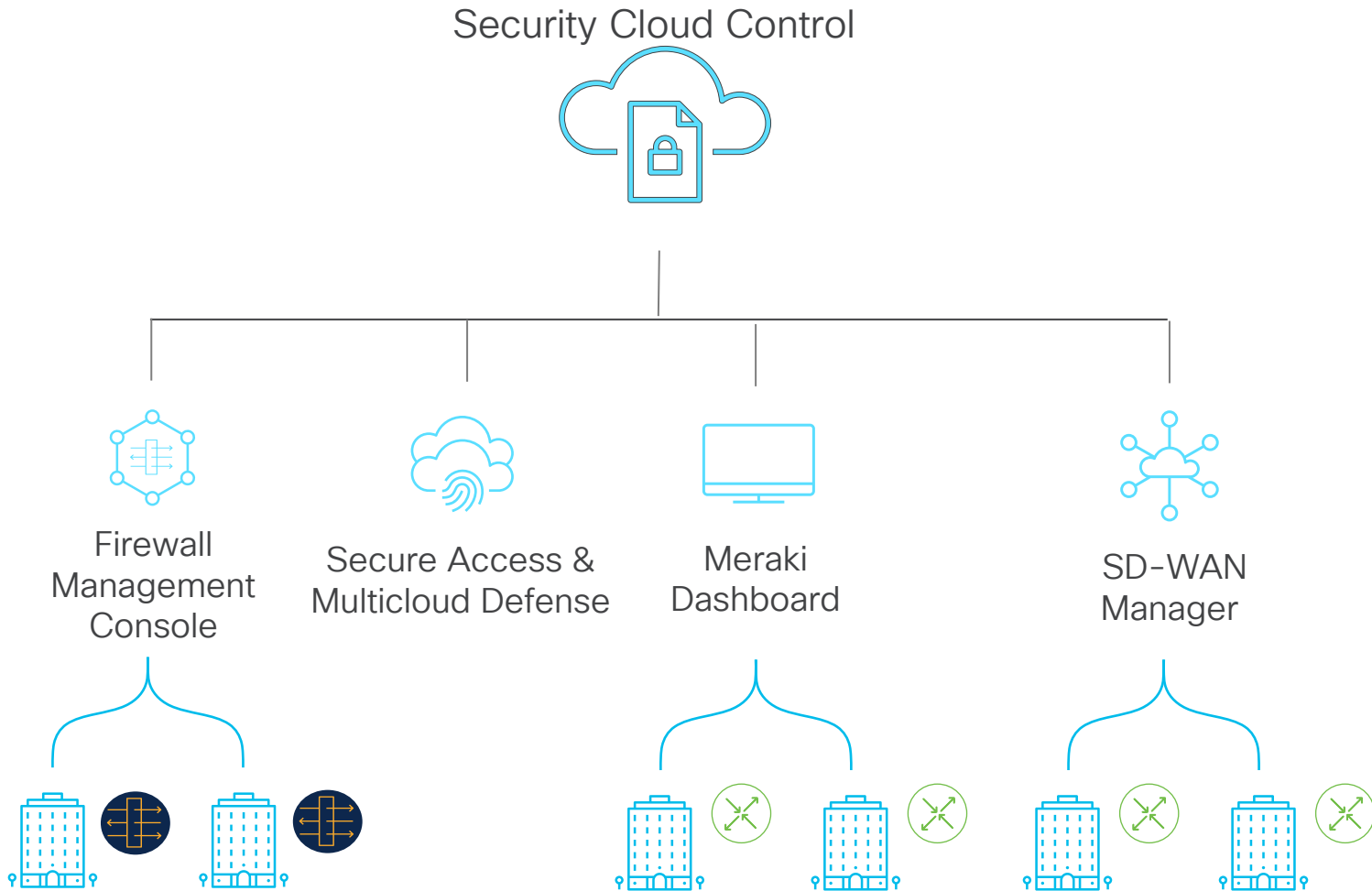
Even during power off

Secure Firewall embedded in the Secure Router

consistent NGFW capabilities



Management of Secure Router NGFW using SCC



Security Object/Policy Configuration

- Create security objects for Secure Router NGFW stack
- Push security policies to different security solutions using single orchestrator

Monitoring

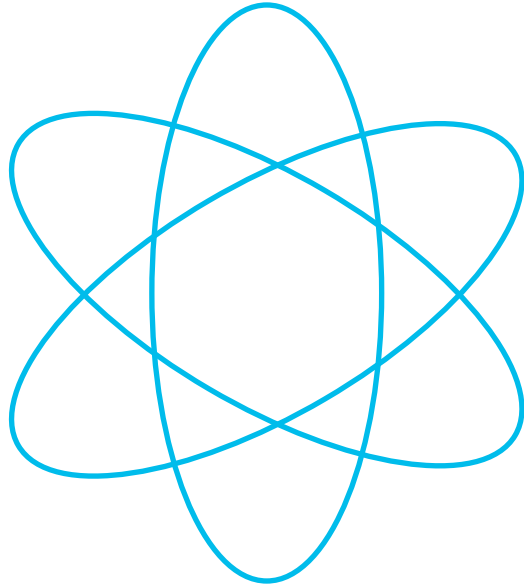
- Common logging repository via SAL (Security Analytics and Logging)

Troubleshooting (Future)

- Leverage SCC tools for security troubleshooting

Why WAN must be Quantum-safe?

"Harvest Now, Decrypt Later" Attacks Are Already Happening



Classical Cryptography Will Be Broken by Quantum Computers

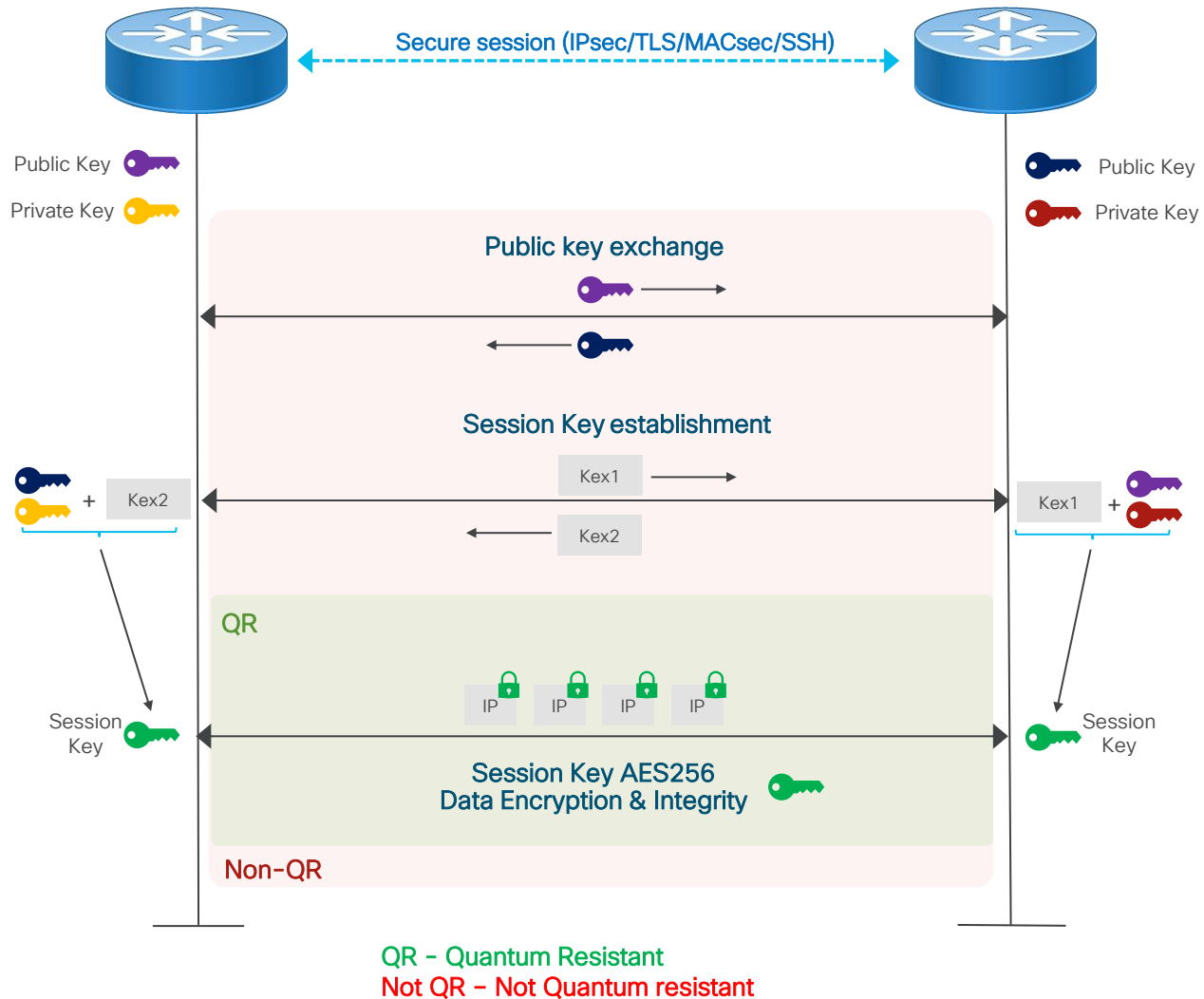
Regulatory & Standards (NIST, NSA, ETSI, CISA)

Infrastructure must become Quantum-safe, it has Long Lifecycle

SD-WAN, VPN, SASE architecture depend on Strong Crypto

Crypto-Agility Is a Strategic Advantage → Future proof

Quantum threat to Transport Security



- All dynamic secure session establishment are based on 2 phases:

1. Key exchange/Key establishment.

- Public key crypto: RSA, DHE, ECDHE
- Session key derived from exchange info.

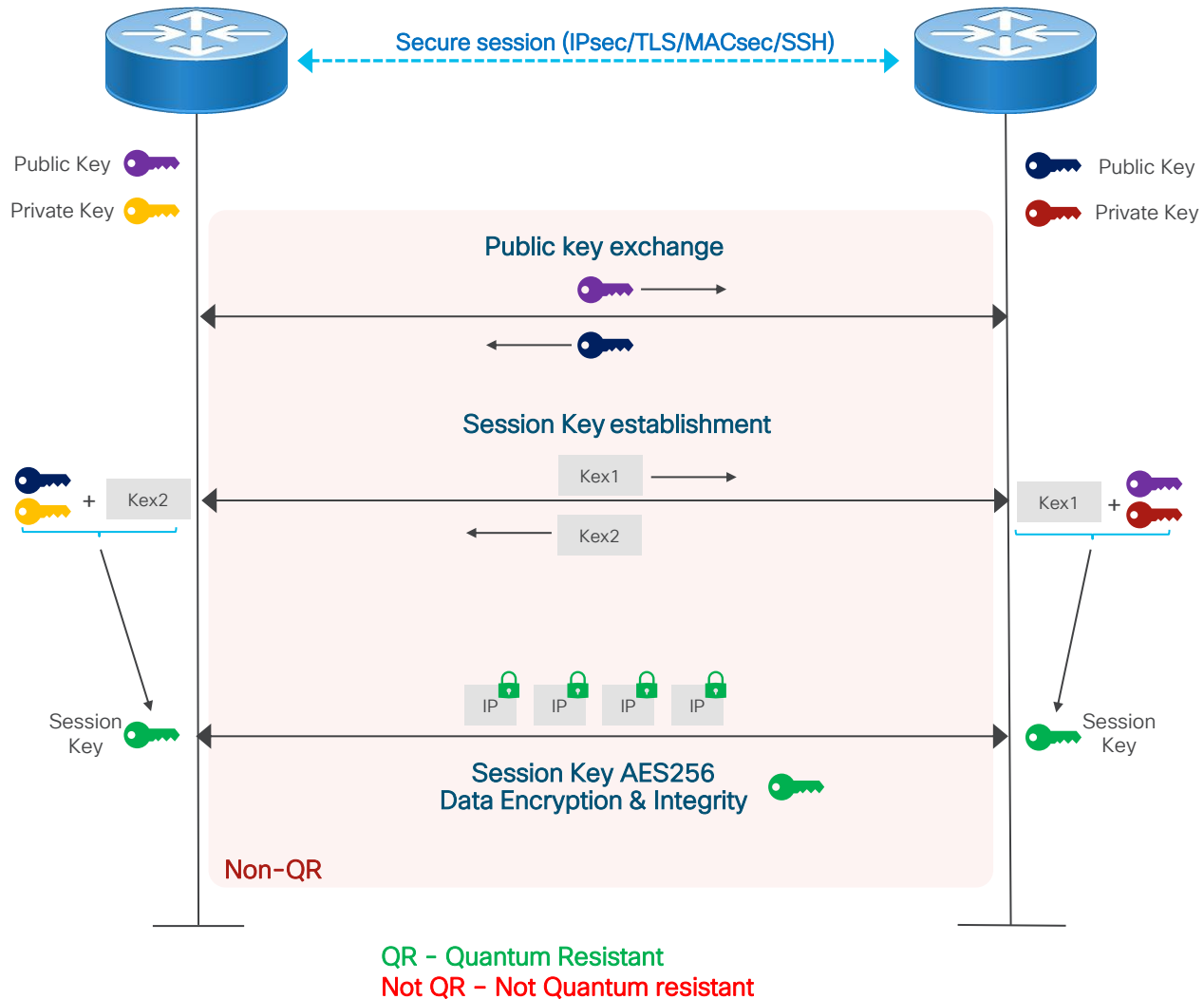
Key exchange phase is not quantum safe

2. Session encryption with session key.

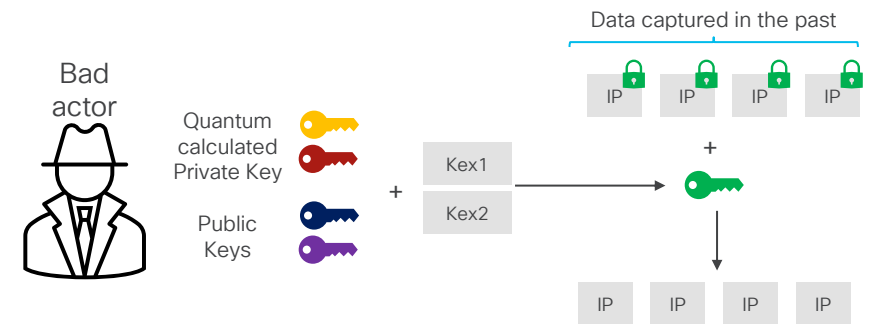
- Symmetric encryption: AES256

Session encryption is quantum safe

Quantum threat – HNDL



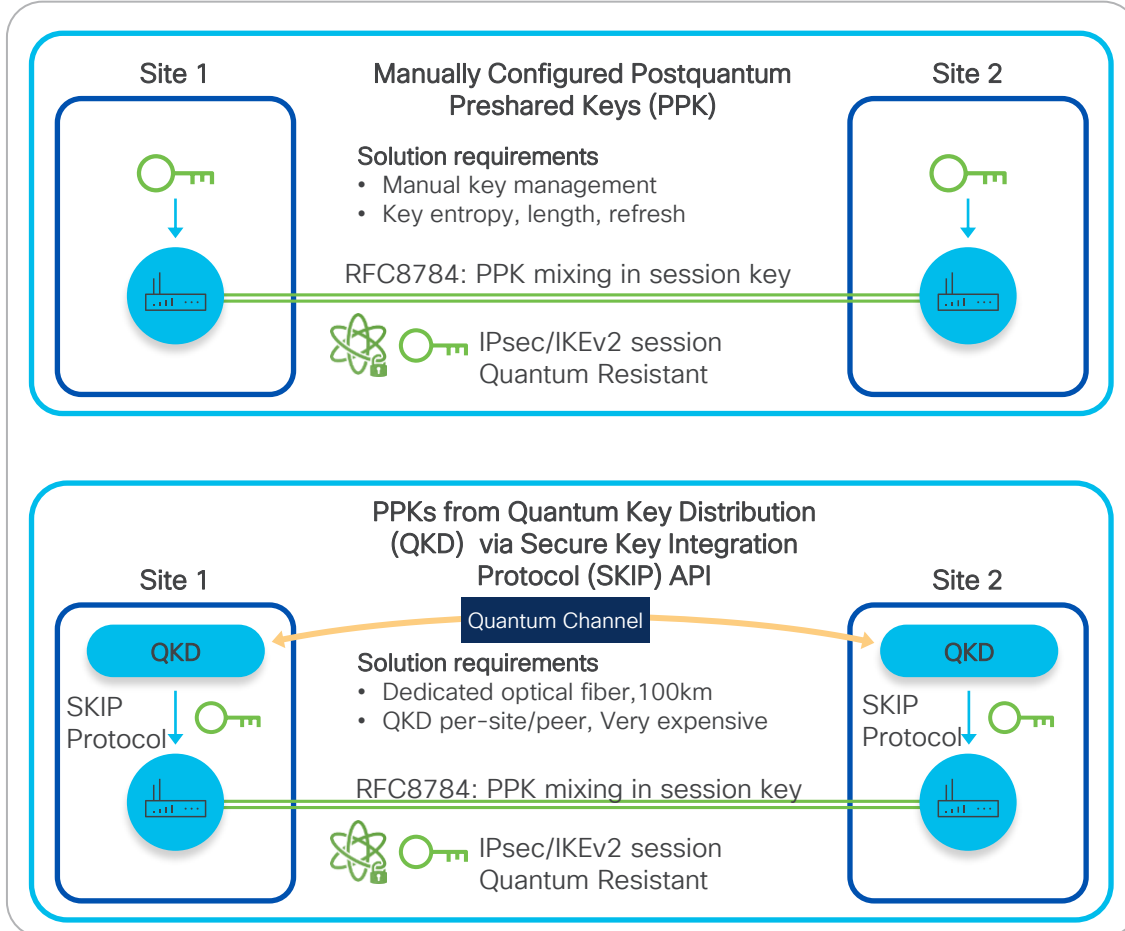
- Attacks HNDL (Harvest now, decrypt later)
 - Attacker only needs to capture the Key Exchange phase which is not quantum-resistant.
 - Session key used for encryption will be revealed on "Q-Day"
- Current traffic is exposed to quantum decryption in the future.



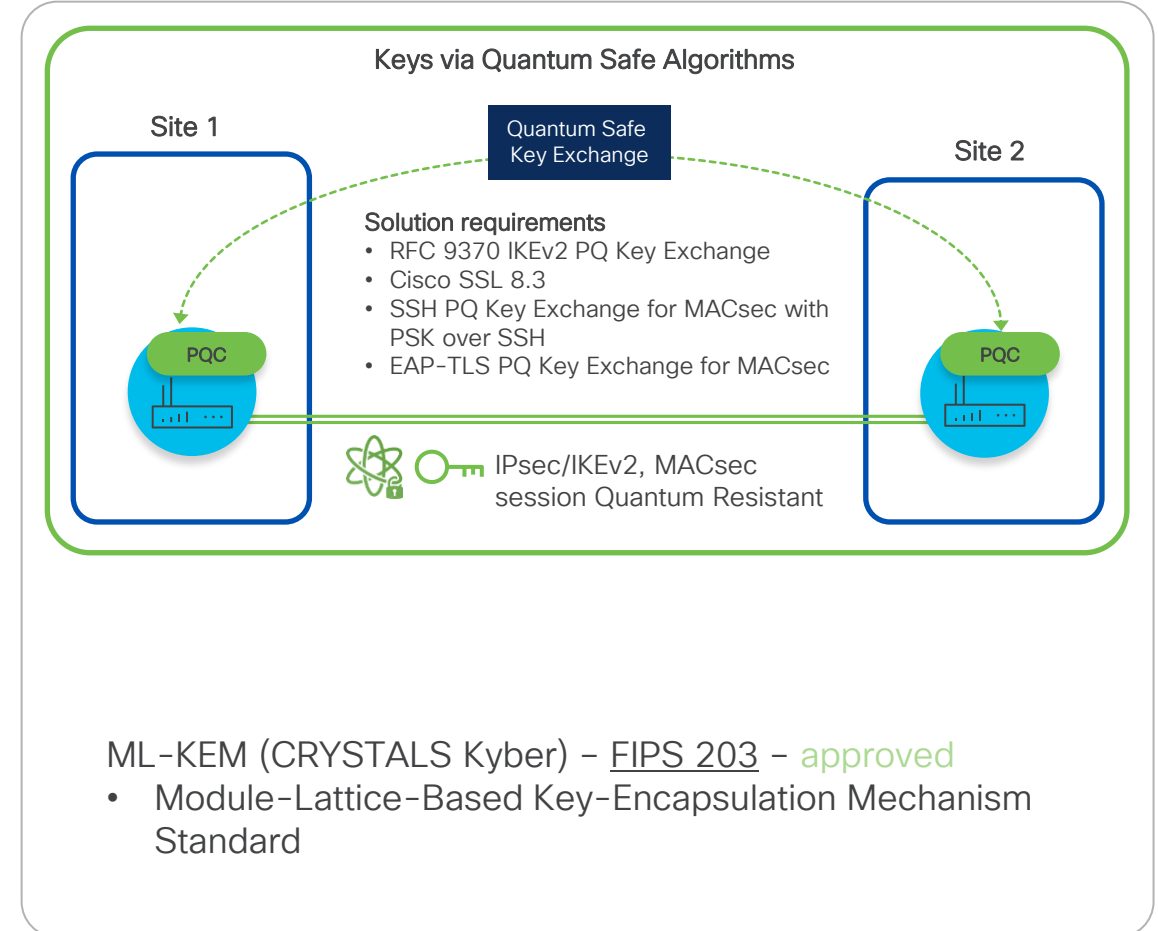
Cisco 8000 Series Secure Router PQC Ready

Post Quantum Cryptography (PQC) Solutions

Support at FCS



To be supported in post FCS



Tamper Detection/Chassis Intrusion

- Detect any chassis intrusion events and display it on console/logging
- Intent is to let customer know if box is tampered during transit or its operation
- Tamper detection is enabled by default, and it shows tamper events on every bootup or when cover open/close events are detected
- User can disable this feature by configuring “no platform tamper-detection”

Product Specifications

Cisco 8000 Series Secure Router Portfolio for every site

Small Branch



Cisco 8100

IPsec:
Up to 1.5 Gbps

SD-WAN:
Up to 1 Gbps

Threat Protection:
Up to 1 Gbps

Medium Branch



Cisco 8200

IPsec:
Up to 5 Gbps

SD-WAN:
Up to 4 Gbps

Threat Protection:
Up to 2.5 Gbps

Large Branch



Cisco 8300

IPsec:
Up to 30 Gbps

SD-WAN:
Up to 12 Gbps

Threat Protection:
Up to 7 Gbps

Campus Site



Cisco 8400

IPsec:
Up to 45 Gbps

SD-WAN:
Up to 22 Gbps

Threat Protection:
Up to 11 Gbps

Data Center



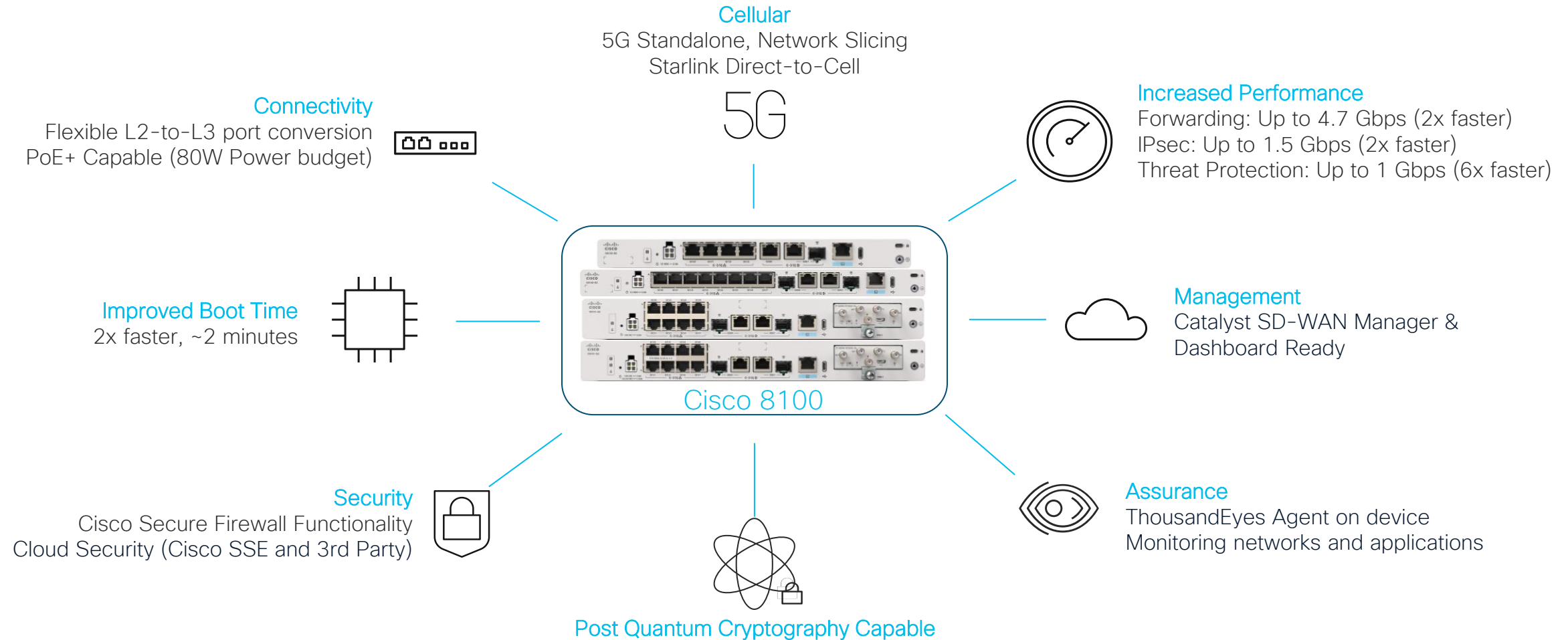
Cisco 8500

IPsec:
Up to 60 Gbps

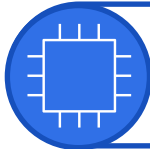
SD-WAN:
Up to 23 Gbps

IPSec Scale up to 10,000

Cisco 8100 Product Highlights



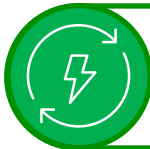
Cisco 8100 Series – What's New?



Secure networking processor
HW accelerated security & networking



TLS Decryption
Encrypted Traffic Inspection



High Availability
External RPS (Redundant Power Supply)

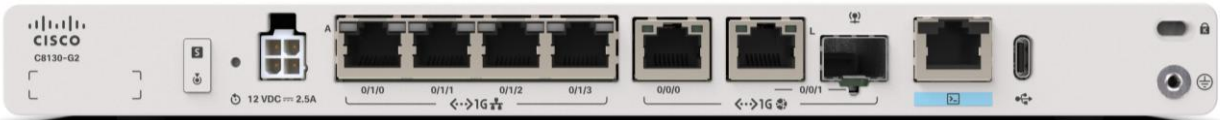


Tamper Detection
A physical breach triggers logging



Blue Beacon LED
Locates device in a rack

C8130-G2



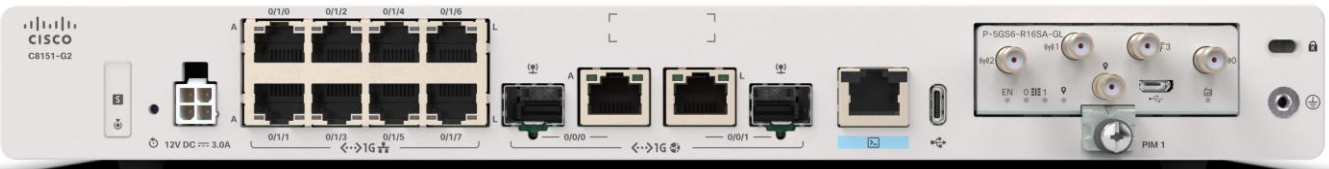
Ports: 4 x GE LAN, 1 x RJ45 GE WAN, 1 x RJ45/SFP GE WAN

C8140-G2



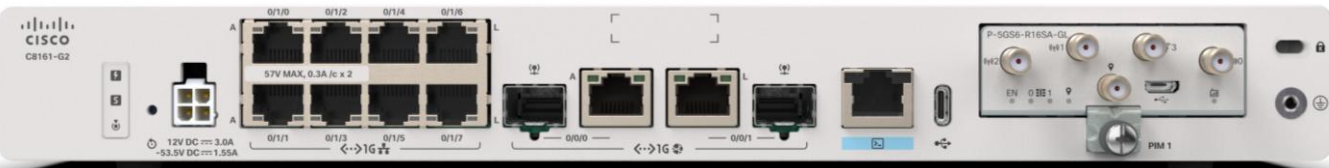
Ports: 8 x GE LAN, 2 x RJ45/SFP GE WAN

C8151-G2



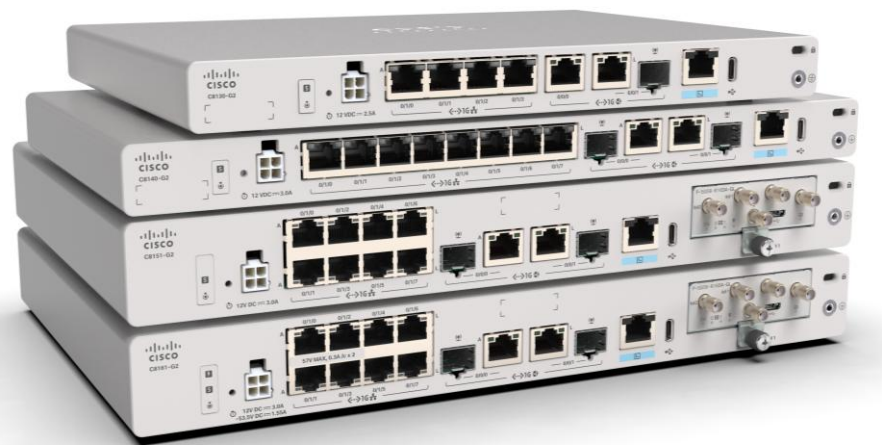
Ports: 8 x GE LAN, 2 x RJ45/SFP GE WAN, 1x PIM

C8161-G2



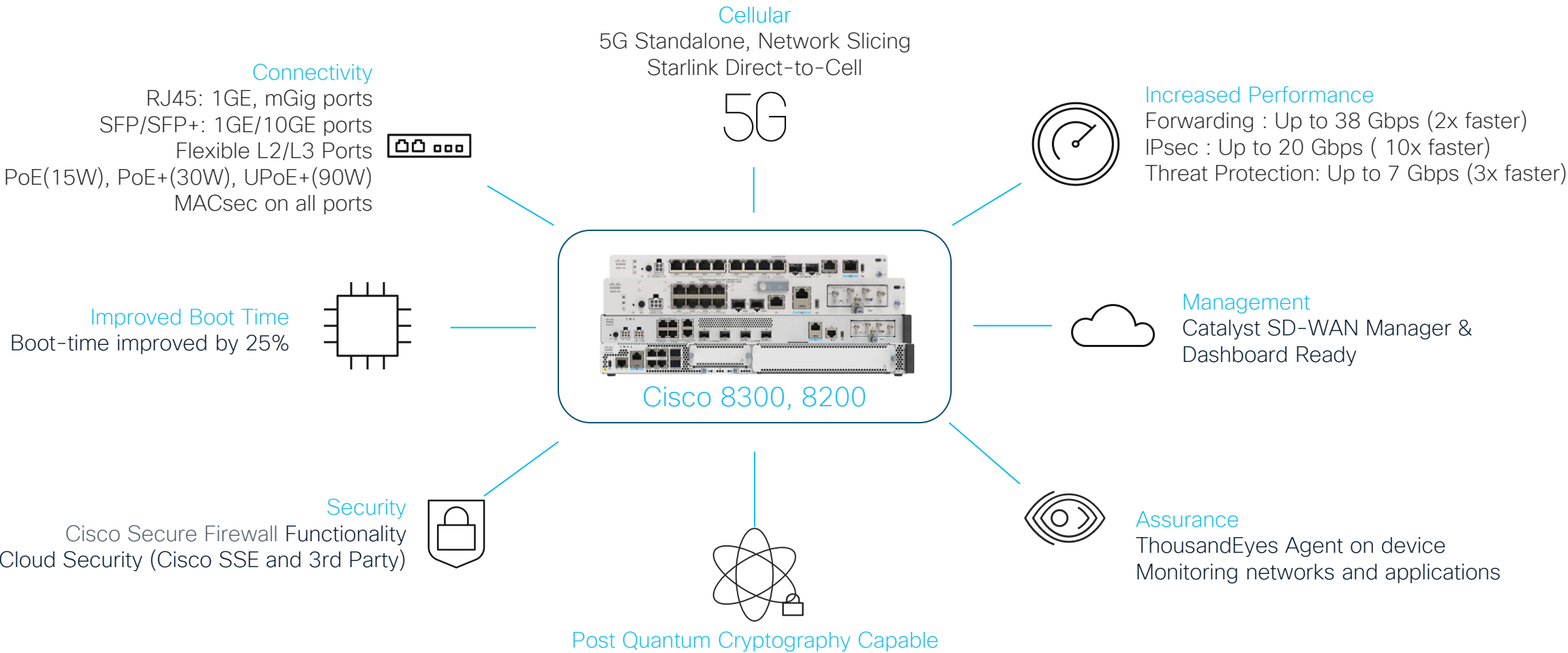
Ports: 8 x GE LAN w/PoE, 2 x RJ45/SFP GE WAN, 1x PIM

C8100 Series Secure Router



	C8130-G2	C8140-G2	C8151-G2	C8161-G2
Form Factor	Desktop	Desktop	Desktop	Desktop
L3 Ports	1xGE RJ45 + 1xGE RJ45/SFP	2xGE RJ45/SFP	2xGE RJ45/SFP	2xGE RJ45/SFP
L2 Ports	2xGE RJ45	6xGE RJ45	6xGE RJ45	6xGE RJ45
Flex L2/L3 Ports	2xGE RJ45	2xGE RJ45	2xGE RJ45	2xGE RJ45
Cellular WAN	via Cellular Gateway (CG)	via Cellular Gateway (CG)	PIM - 5G/CAT7 LTE or via CG	PIM - 5G/CAT7 LTE or via CG
Fan	Fanless	Fanless	Fanless	Fanless
PoE Ports, Power Budget	No	No	No	4xPoE or 2xPoE+, 80W
Power Supply (PS)	External, 30W/66W	External, 66W	External, 66W	External, 150W
PS Redundancy	w/ RPS Adaptor	w/ RPS Adaptor	w/ RPS Adaptor	w/ RPS Adaptor
SD-WAN	No	No	Yes	Yes
TE	No	No	Yes	Yes
Secure Firewall + TE	No	No	Yes	Yes

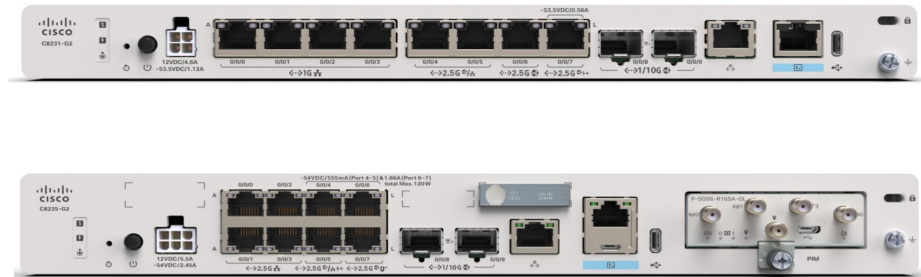
Cisco 8200/8300 Product Highlights



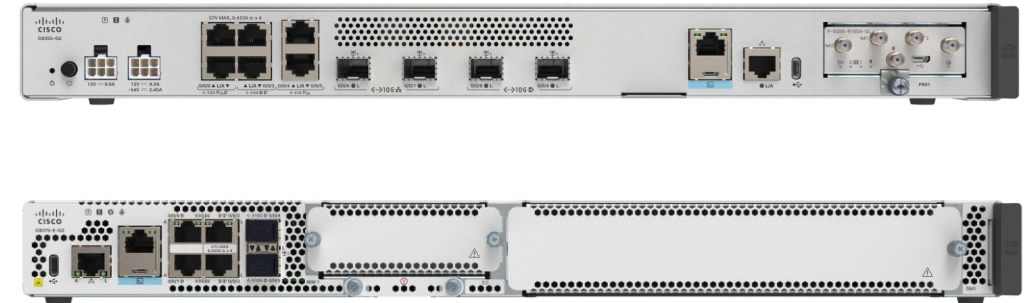
Cisco 8200 and 8300 Series

4 New models

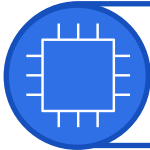
Cisco 8200 Series Secure Router



Cisco 8300 Series Secure Router



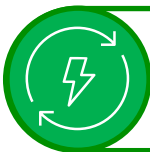
Cisco 8200 Series – What's New?



Secure networking processor
HW accelerated security & networking



Onboard Ports
mGig, 10 GE ports
MACsec on all ports



High Availability
External RPS (Redundant Power Supply)



Fan-Less Design
Silent Operation
Power efficient

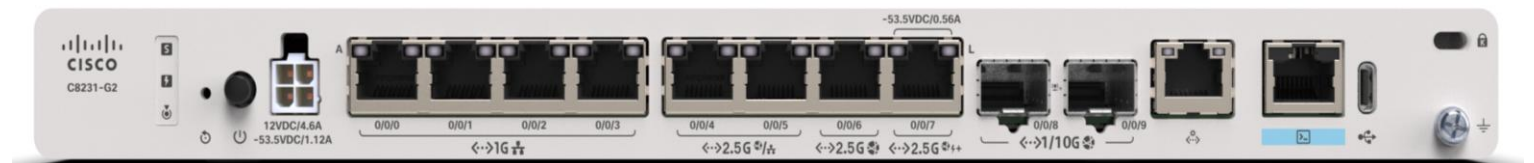


Tamper Detection
A physical breach triggers logging



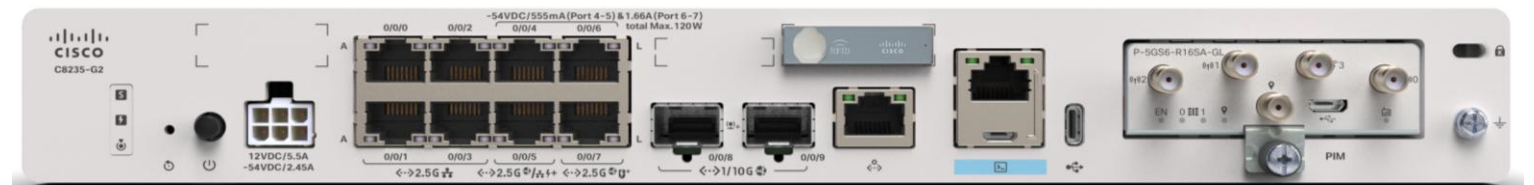
Blue Beacon LED
Locates device in a rack

C8231-G2



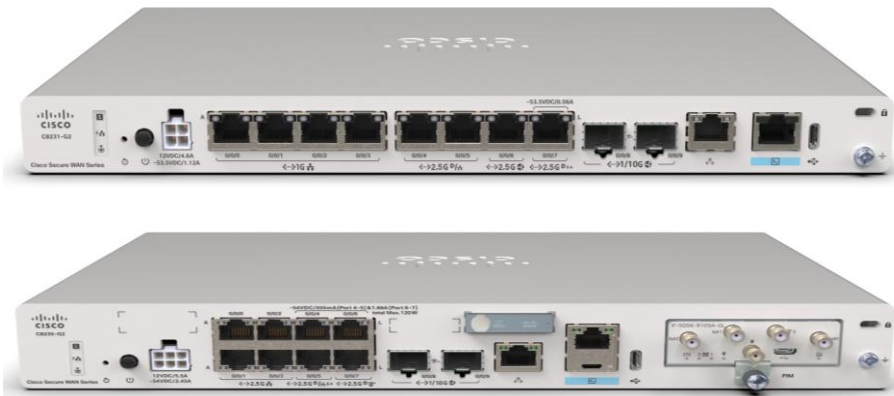
Ports: 2 x 10G SFP+, 4 x 2.5mGig RJ45, 4 x 1G RJ45

C8235-G2



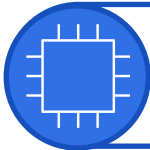
Ports: 2 x 10G SFP+, 8 x 2.5mGig RJ45, 1x PIM

C8200 Series Secure Router



	C8231-G2	C8235-G2
Form Factor	Desktop	Desktop
L3 Ports	2x10/1GE SFP+ + 2x2.5mGig RJ45	2x10/1GE SFP+ + 2x2.5mGig RJ45
L2 Ports	4xGE RJ45	4x2.5mGig RJ45
Flex L2/L3 Ports	2x2.5mGig RJ45	2x2.5mGig RJ45
MACsec	All built-in ports	All built-in ports
Cellular WAN	via CG	PIM - 5G/CAT7 LTE or via CG
Fan	Fanless	Fanless
PoE Ports, Power Budget	1x2.5mGig PoE+, 30W	2x2.5mGig PoE + 2x2.5mGig UPoE+, 120W
Power Supply (PS)	External, 66W AC (default), 115W AC (PoE)	External, 66W AC (default), 230W AC for PoE
PS Redundancy	w/ RPS Adaptor	w/ RPS Adaptor
SD-WAN	Yes	Yes
TE	Yes	Yes
Secure Firewall + TE	Yes	Yes

Cisco 8300 Series – What's New?



Secure networking processor
HW accelerated security & networking



Onboard Ports
mGig, 10 GE ports
MACsec on all ports



Power Over Ethernet
Provides Inline power on onboard ports (120W)



Tamper Detection
A physical breach triggers logging



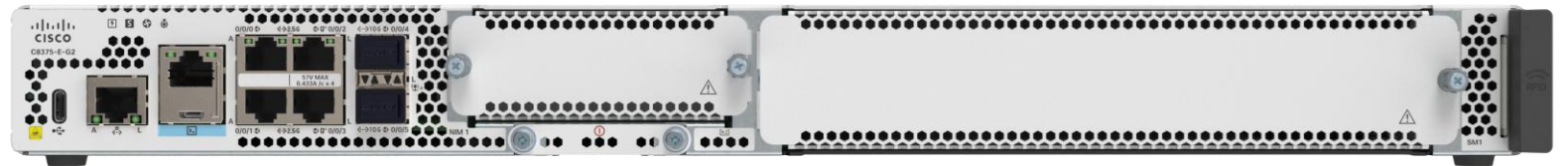
Blue Beacon LED
Locates device in a rack

C8355-G2



Ports: 4 x 10GE SFP+, 4 x 5mGig RJ45, 2 x 1G RJ45

C8375-E-G2



Ports: 2 x 10G SFP+, 4 x 2.5mGig RJ45

C8300 Series Secure Router



	C8355-G2	C8375-E-G2
Form Factor	1RU	1RU
L3 Ports	2x10/1GE SFP+ + 2x5mGig RJ45	2x10/1GE SFP+ + 4x2.5mGig RJ45
L2 Ports	2x10G/1GE SFP+	N/A
Flex L2/L3 Ports	2x5mGig RJ45 + 2x1GE RJ45	N/A
NIM/SM	N/A	Yes
MACsec	All built-in ports	All built-in ports & capable NIM & SM
Cellular WAN	PIM - 5G/CAT7 LTE or via CG	PIM - 5G/CAT7 LTE or via CG
Fan	Fanless	Field-replaceable FAN Tray
PoE Ports, Power Budget	4x5mGig UPoE+, 120W	2x 2.5mGig UPoE+, 360W (redundant), 720W (Boost)
Power Supply (PS)	External, 110W AC (default), 230W AC (PoE)	Internal, 400W AC (default), 760W AC (PoE), 500W DC
PS Redundancy	w/ RPS Adaptor (default)	default
SD-WAN	Yes	Yes
TE	Yes	Yes
Secure Firewall + TE	Yes	Yes

Supported Modules

PIM, NIM, SM

C8375-E-G2



Ethernet LAN/WAN	Cellular WAN	TDM WAN	WAN + Voice
C-NIM-WAN-4S C-NIM-WAN-2X C-SM-16P4M2X C-NIM-4X (2x L3) C-NIM-8T (2x L3) C-NIM-8M(2x L3)	P-LTEA7-EAL P-LTEA7-NA P-LTEA7-JP P-5GS6-R16SA-GL	SM-X-1T3/E3 NIM-1T (Serial) NIM-2T (Serial) NIM-4T (Serial)	NIM-1MFT-T1/E1 NIM-2MFT-T1/E1 NIM-4MFT-T1/E1 NIM-8MFT-T1/E1 NIM-1CE1T1-PRI NIM-2CE1T1-PRI NIM-8CE1T1-PRI

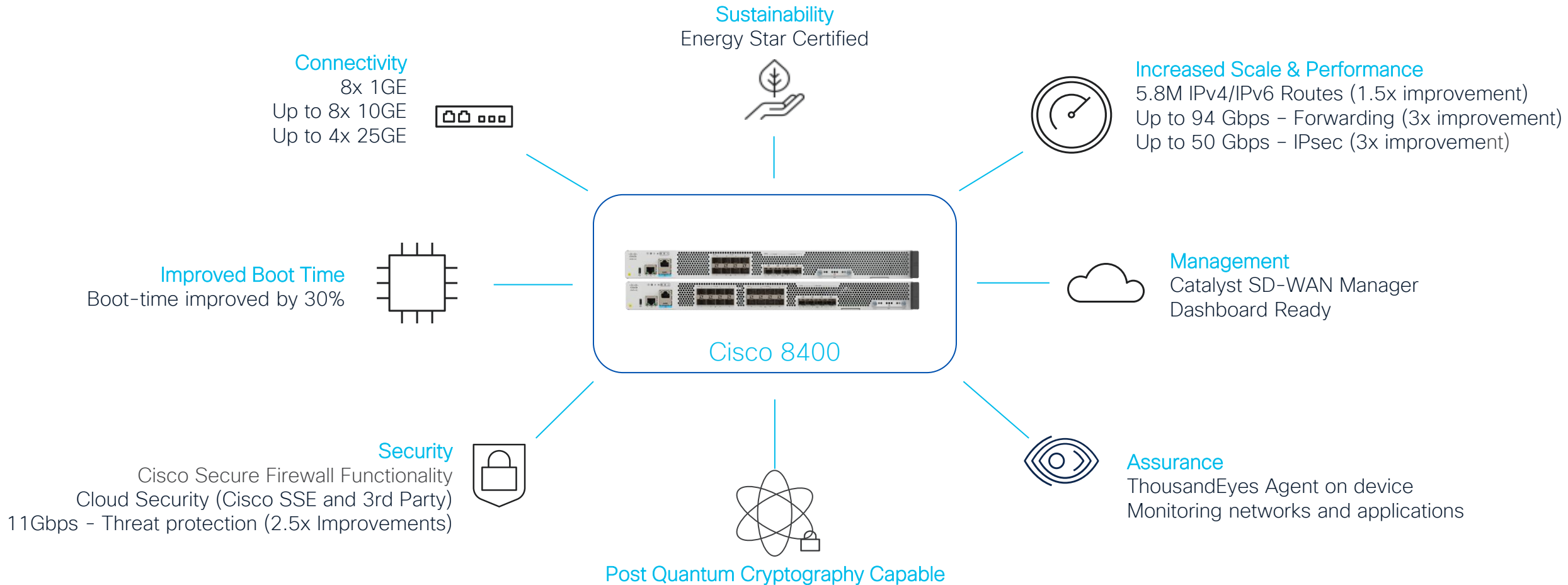
ASYNC	DSL	SM-NIM Adaptor
NIM-16A NIM-24A SM-X-64A	NIM-VAB-A NIM-VA-B NIM-VAB-M NIM-4SHDSL-EA	C-SM-NIM-ADPT

C8355-G2

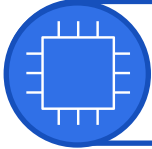


Cellular WAN
P-LTEA7-EAL P-LTEA7-NA P-LTEA7-JP P-5GS6-R16SA-GL

Cisco 8400 Product Highlights



Cisco 8400 Series – What's New?



Secure networking
processor
HW accelerated security
& networking



25 GE Interfaces
Campus 10 GE → 25 GE



Increased Memory
Increased Route Scale



Tamper Detection
A physical breach triggers
logging



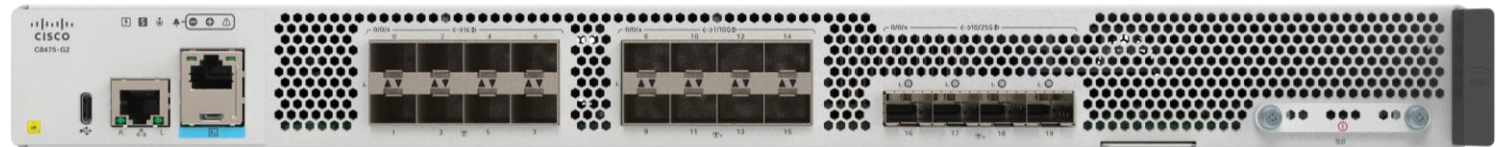
Blue Beacon LED
Locates device in a rack

C8455-G2



Ports: 8x 1GE, 2x 10GE, 2x 25GE

C8475-G2



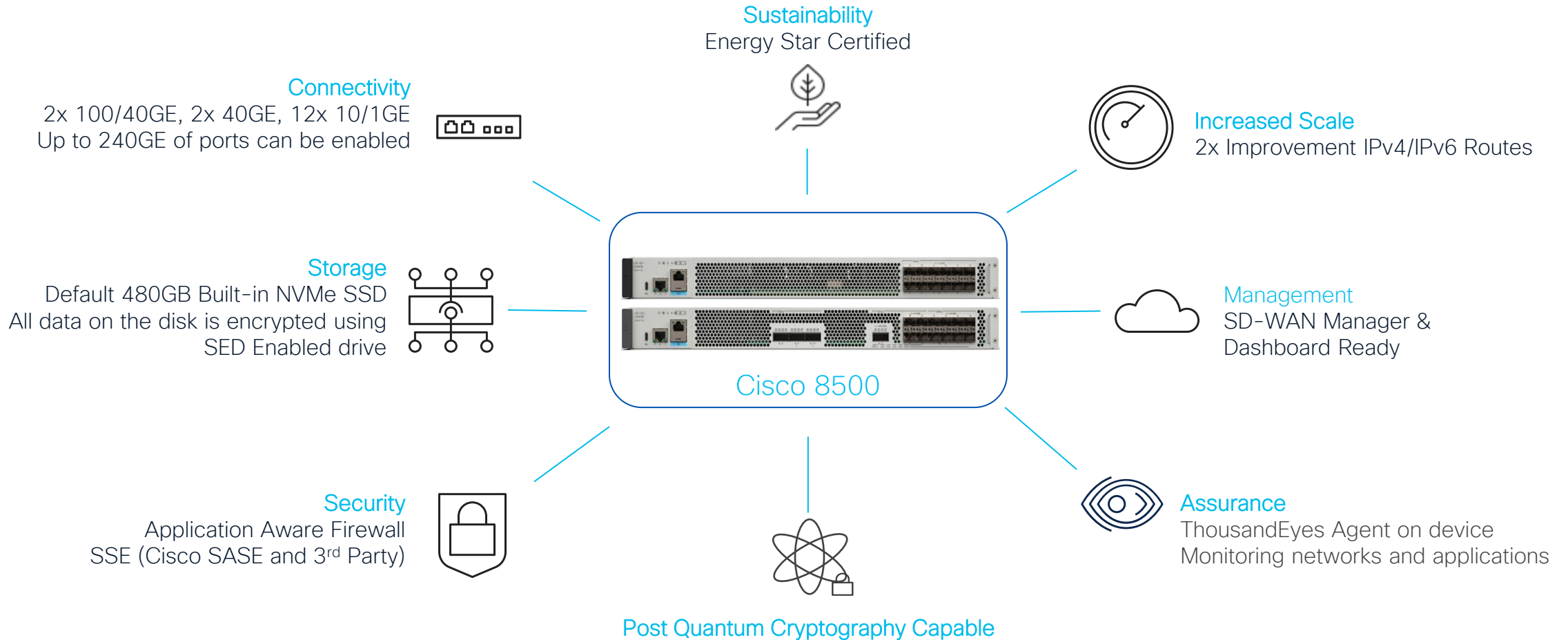
Ports: 8x 1GE, 8x 10GE, 4x 25GE

C8400 Series Secure Router

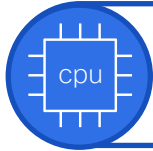


	C8455-G2	C8475-G2
Form Factor	1RU	1RU
L3 Ports	2x25/10GE SFP28 + 2x10/1GE SFP+ + 8x1GE SFP	4x25/10GE SFP28 + 8x10/1GE SFP+ + 8x1GE SFP
L2 Ports	N/A	N/A
Flex L2/L3 Ports	N/A	N/A
MACsec	All built-in ports	All built-in ports
Fan	Field-replaceable FAN Tray	Field-replaceable FAN Tray
Power Supply Options	AC, DC, HVDC	AC, DC, HVDC
PS 1+1 Redundancy	default	default
SD-WAN	Yes	Yes
TE	Yes	Yes
Secure Firewall + TE	Yes	Yes

Cisco 8500 Platform Highlights



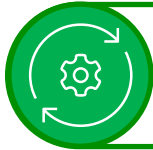
Cisco 8500 Series – What's New?



8 Core Control Plane High Speed CPU



Enhanced Application Hosting Capability



Increased Memory
Increased Route Scale

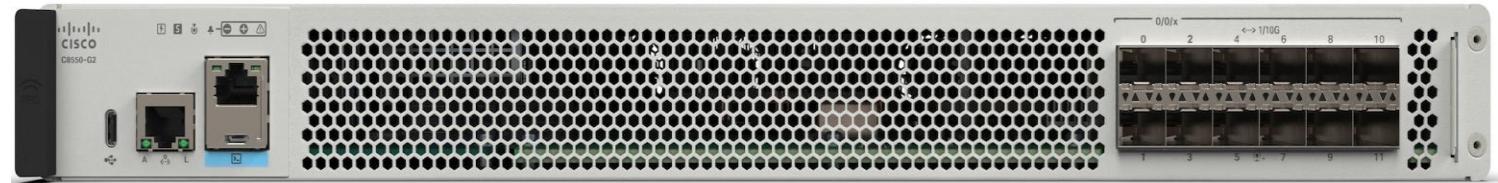


Tamper Detection
A physical breach triggers logging



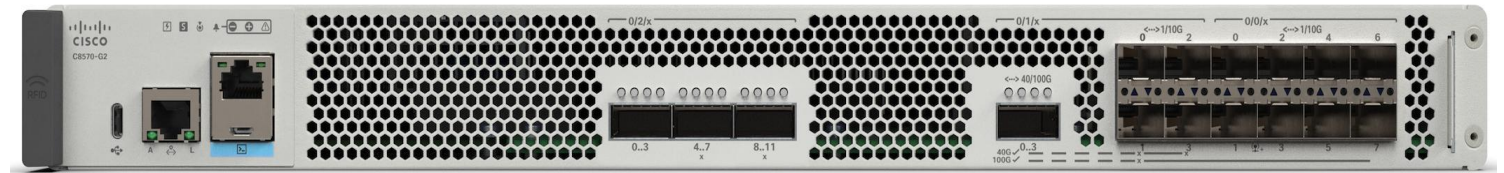
Blue Beacon LED
Locates device in a rack

C8550-G2



Ports: 12x 10/1GE

C8570-G2



Ports: 2x 100/40GE, 2x 40GE, 12x 10/1GE

C8500 Series Secure Router



	C8550-G2	C8570-G2
Form Factor	1RU	1RU
L3 Ports	12x10GE SFP+	2x100/40GE QSFP + 2x40GE QSFP + 12x10GE SFP+ (max 240G)
L2 Ports	N/A	N/A
Flex L2/L3 Ports	N/A	N/A
MACsec	All built-in ports	All built-in ports
Fan	Field-replaceable FAN Tray	Field-replaceable FAN Tray
Power Supply Options	AC, DC	AC, DC
PS 1+1 Redundancy	default	default
SD-WAN	Yes	Yes
TE	Yes	Yes
Secure Firewall	N/A	N/A

Licensing for Cisco 8000 Series Secure Routers

Introducing Next Generation Licensing available with Cisco 8000 Series Secure Routers



Cisco 8000 Series Secure Routers

Embedded Routing OS
Essentials perpetual feature
stack included with every
device purchase



**Subscription-based Routing
License:**
Cisco Routing Advantage*

*only available in an 84-month
subscription

OR

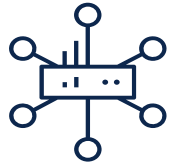


**Subscription-based WAN
Licenses:**
Cisco WAN Essentials
Cisco WAN Advantage

**Enables on-premises and cloud
management modes**

Security add-on licenses available:
Threat Protection
Malware Protection
Content filtering

Cisco 8000 Series Secure Router portfolio for every site



Industry's Most Reliable HW
2 Year Warranty

Small Branch



Cisco 8100-G2

Medium Branch



Cisco 8200-G2

Large Branch



Cisco 8300-G2

Campus



Cisco 8400-G2

Data Center



Cisco 8500-G2

Small

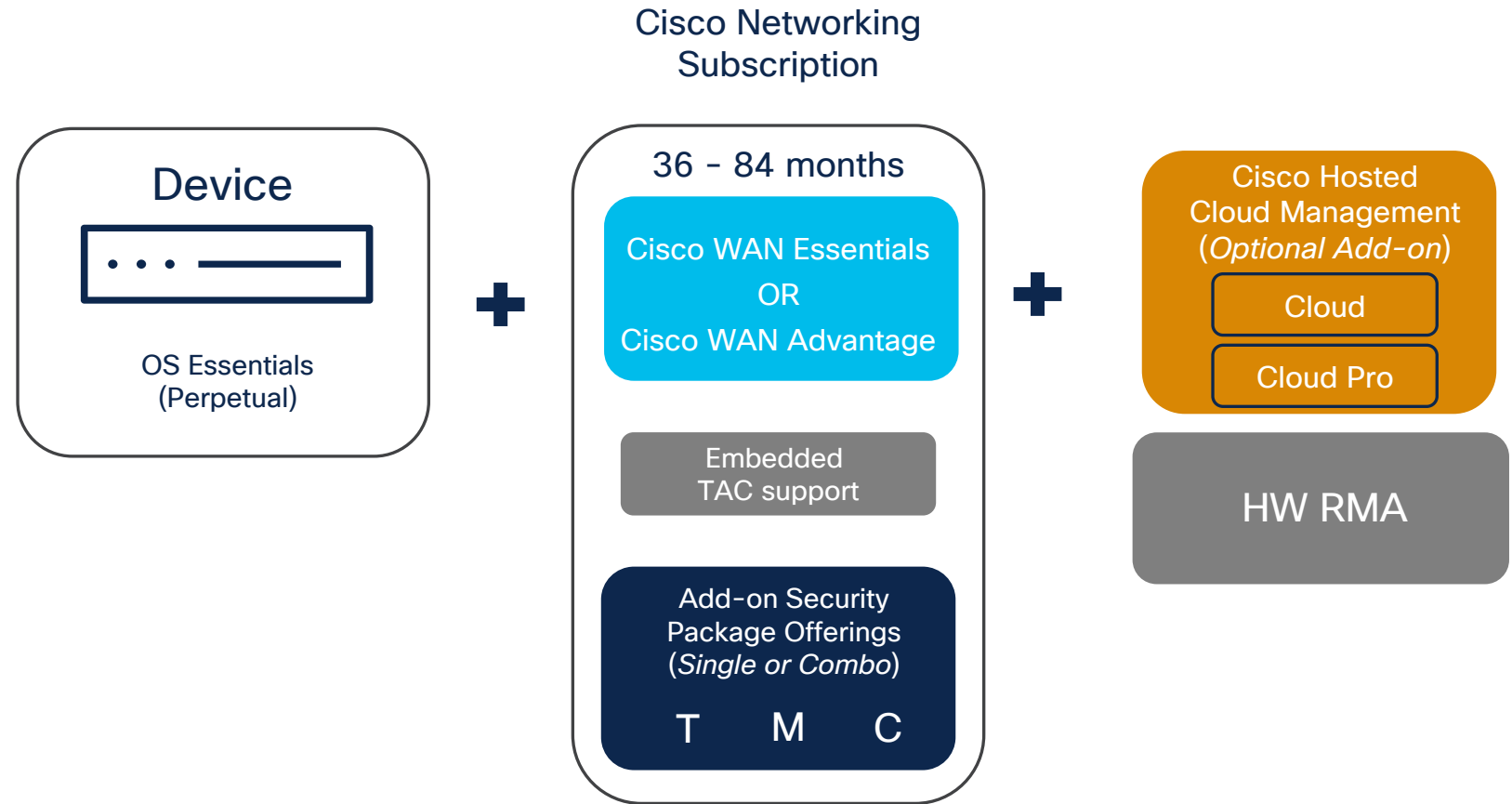
Medium

Large

XLarge

Cisco Networking Subscription Offer Structure

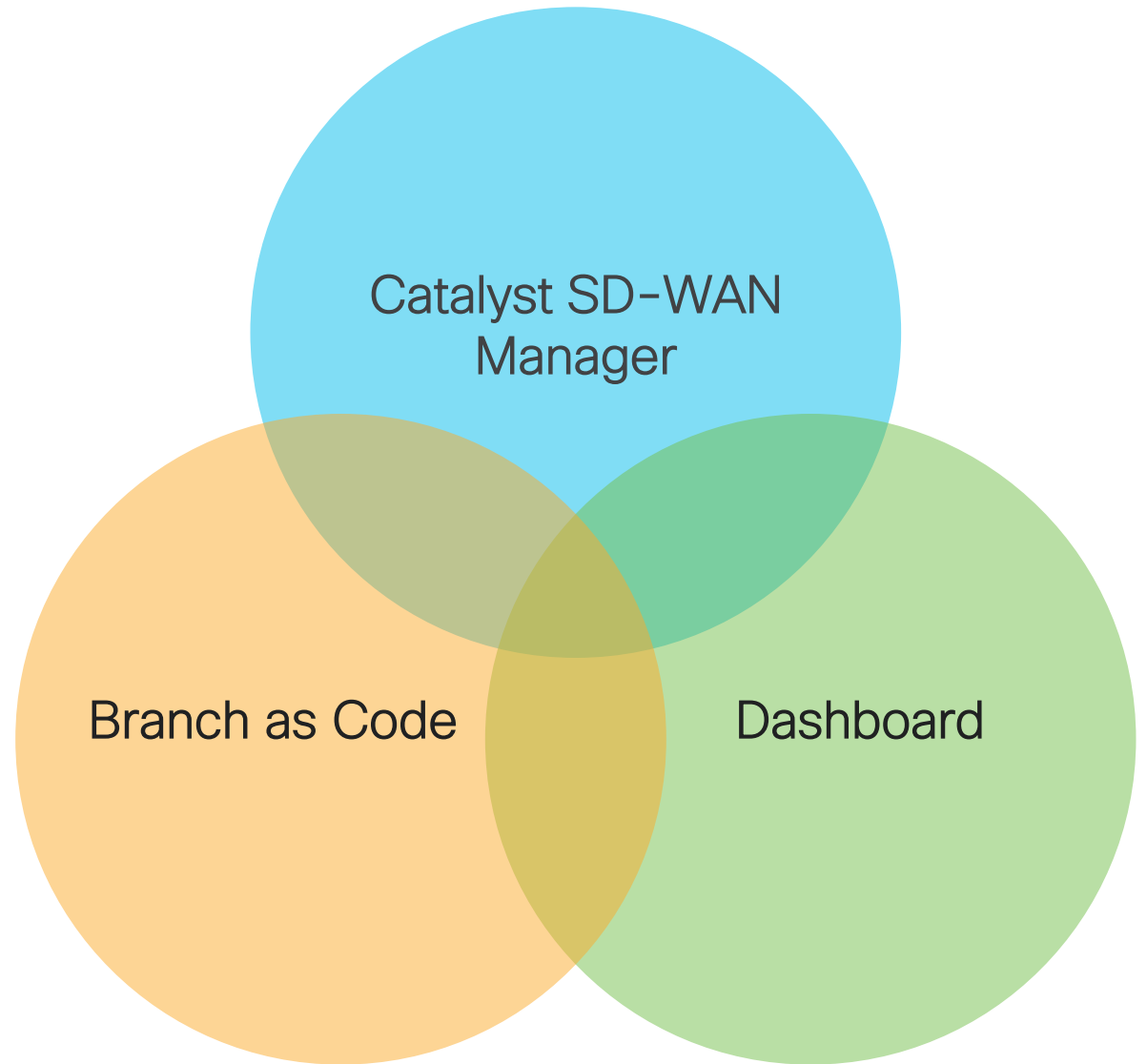
Secure SD-WAN w/ Cisco hosted Management



Secure WAN Operational Simplicity

Cisco Secure WAN – Flexible Management Options

One platform
One appliance
Your way



Secure WAN Operational Simplicity

SD-WAN Manager Dashboard



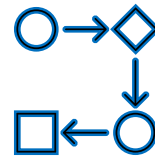
Cloud-delivered

Reduce operational burden



Zero-Touch (ZTP)

Easy Day-0 provisioning



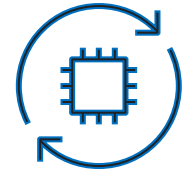
Guided Workflows

Step-by-step configuration



Access Control

RBAC, Resource grouping



Assured Upgrades

Extensive pre & post checks



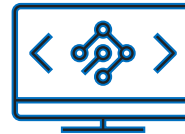
Self-service Portal

Manage fabric operations



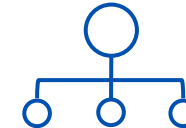
Configuration Catalog

Best-practice configs



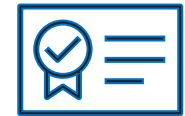
Programmability

API interface, Automation



Network Hierarchy

Site grouping, tagging

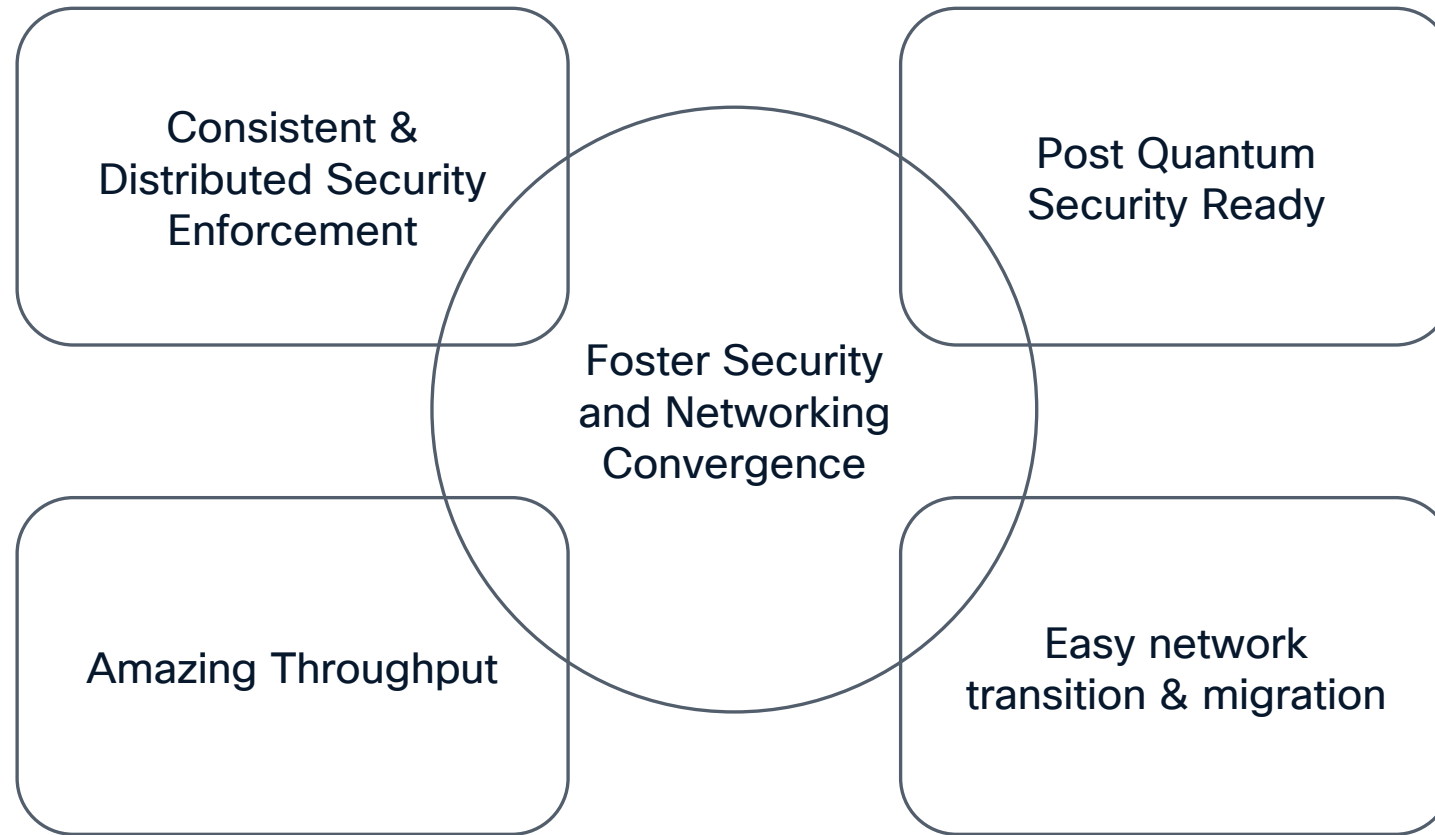


Advisories

Security, Field Notices, EoX

Summary

Cisco 8000 Series Secure Router connect Secure WAN to every site



Thank you





Děkujeme za Vaši pozornost

Následující Tech Club webinář:

07.10. Řešení pro moderní a chytré budovy

Přednášející: Dominik Soukup, Vlastimil Kouřimský

Registrovat se můžete na oficiálním webu **Cisco Tech Club webináře**

