



Q&A
slido.com
#539 814



Platformy Cisco směrovačů pro WAN sítě

25. 11. 2021 | 9:30 – 13:00



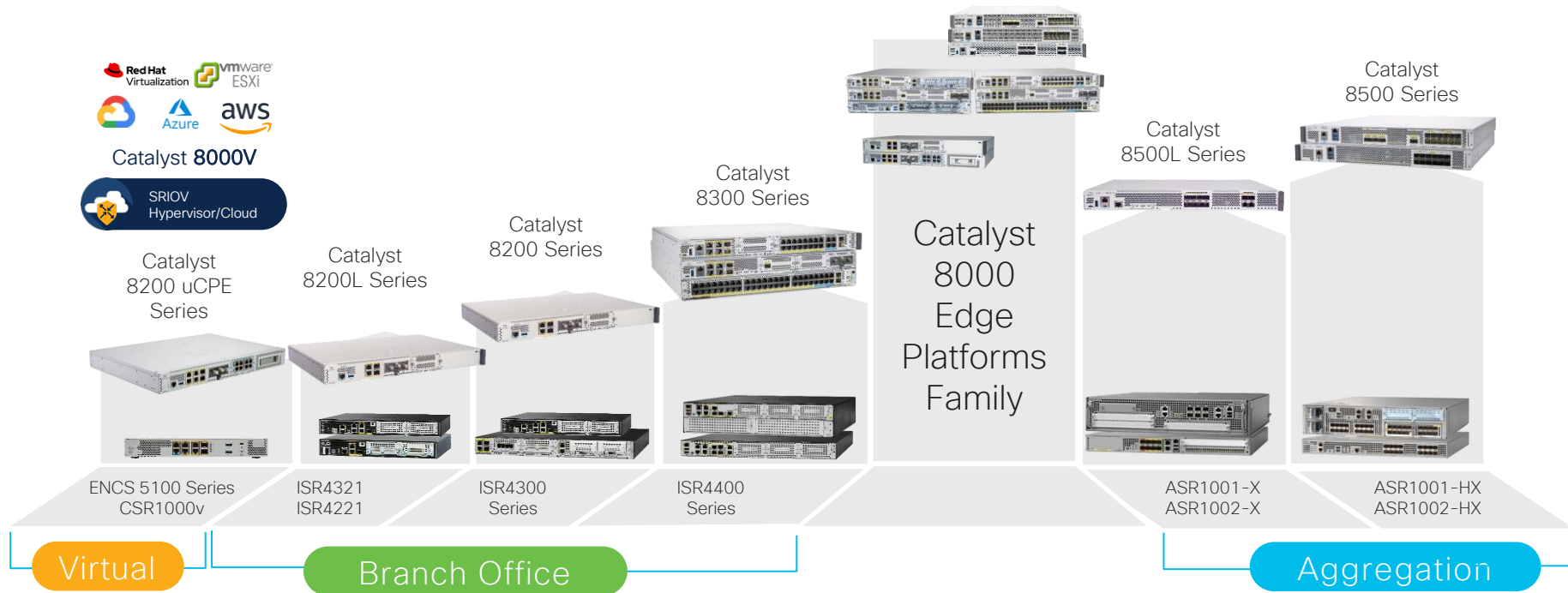
Miroslav Brzek

Technical Solutions Architect,
Cisco Systems Česká republika

Possibilities

Cisco offers the broadest portfolio for WAN transformation

Refreshed from Branch to Cloud



Catalyst 8000 Edge Platforms Family

Ready for ISR4000 and ASR1000 migration

Catalyst 8500/8500L

Up to 200 Gbps CEF



ASR 1K Fixed

Aggregation

Catalyst 8300/8200

Up to 12 Gbps CEF



ISR 4400/4300

Modular Access

Catalyst 8000V Edge Software Catalyst 8200 Edge uCPE



CSR 1000V/ENCS 5100

Cloud/Virtual

Delivering SASE for your Multicloud WAN Edge needs

Building Blocks

Cisco Third Generation QFP

Exceptional Data Path ASIC



Multi-threaded Parallel Processing

- 224 PPEs
- 896 processes per chip available to handle traffic

Inline Crypto

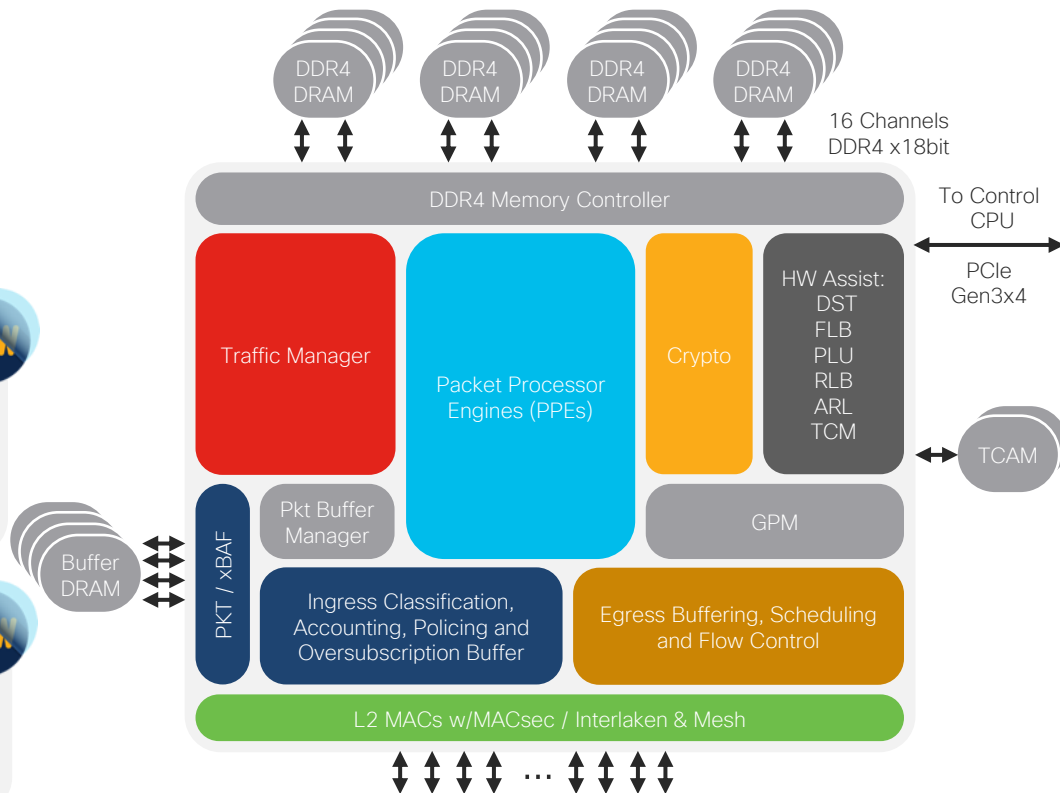
NEW

- 16 Crypto Engines with dedicated resources
- Next Generation Strong Encryption: Suite-B

Layer 2 Sub-system

NEW

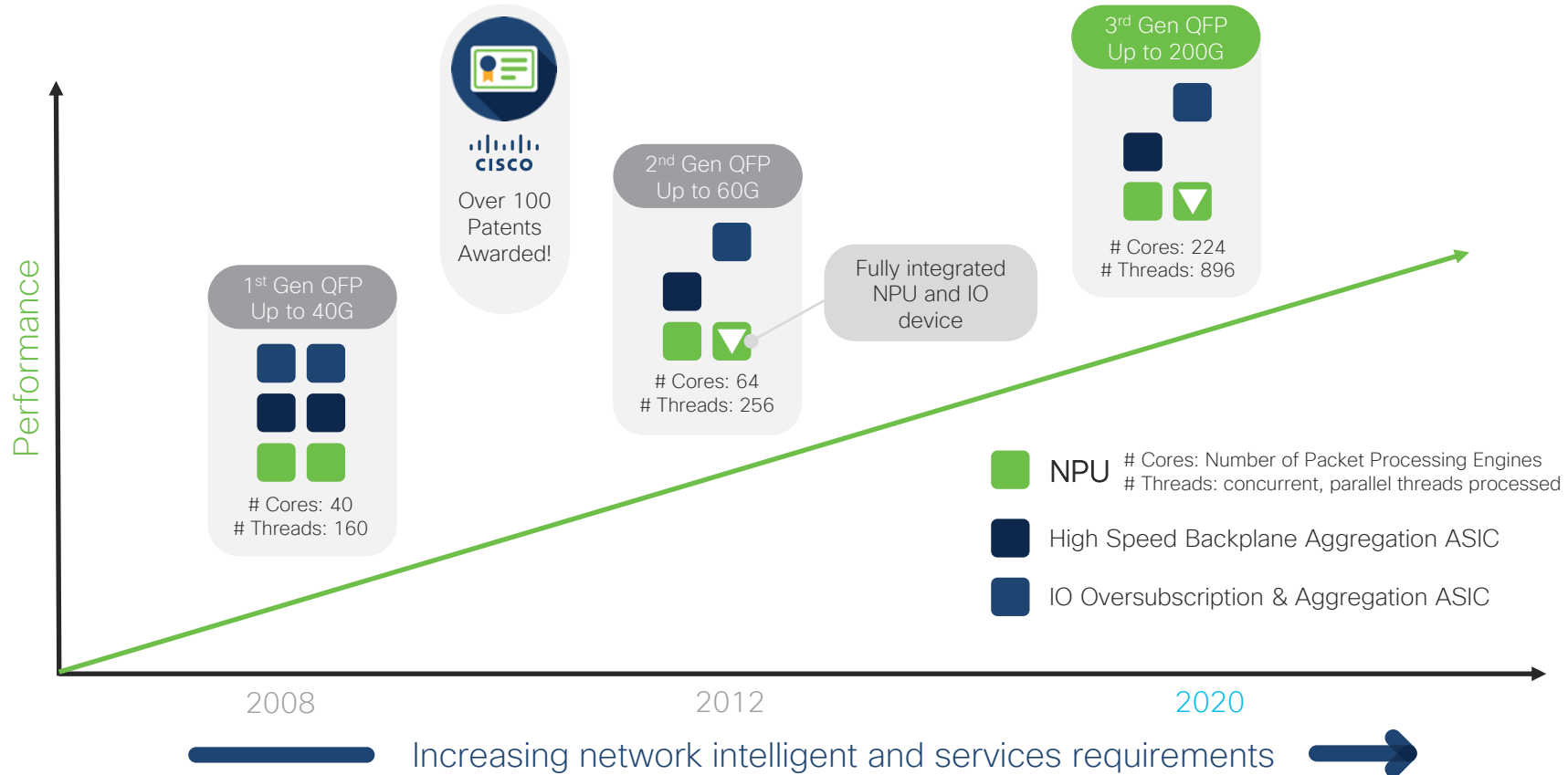
- Integrated cleartag MACsec support
- Per Port L2/L3 Classification and Accounting





Cisco Enterprise Routing ASIC Leadership

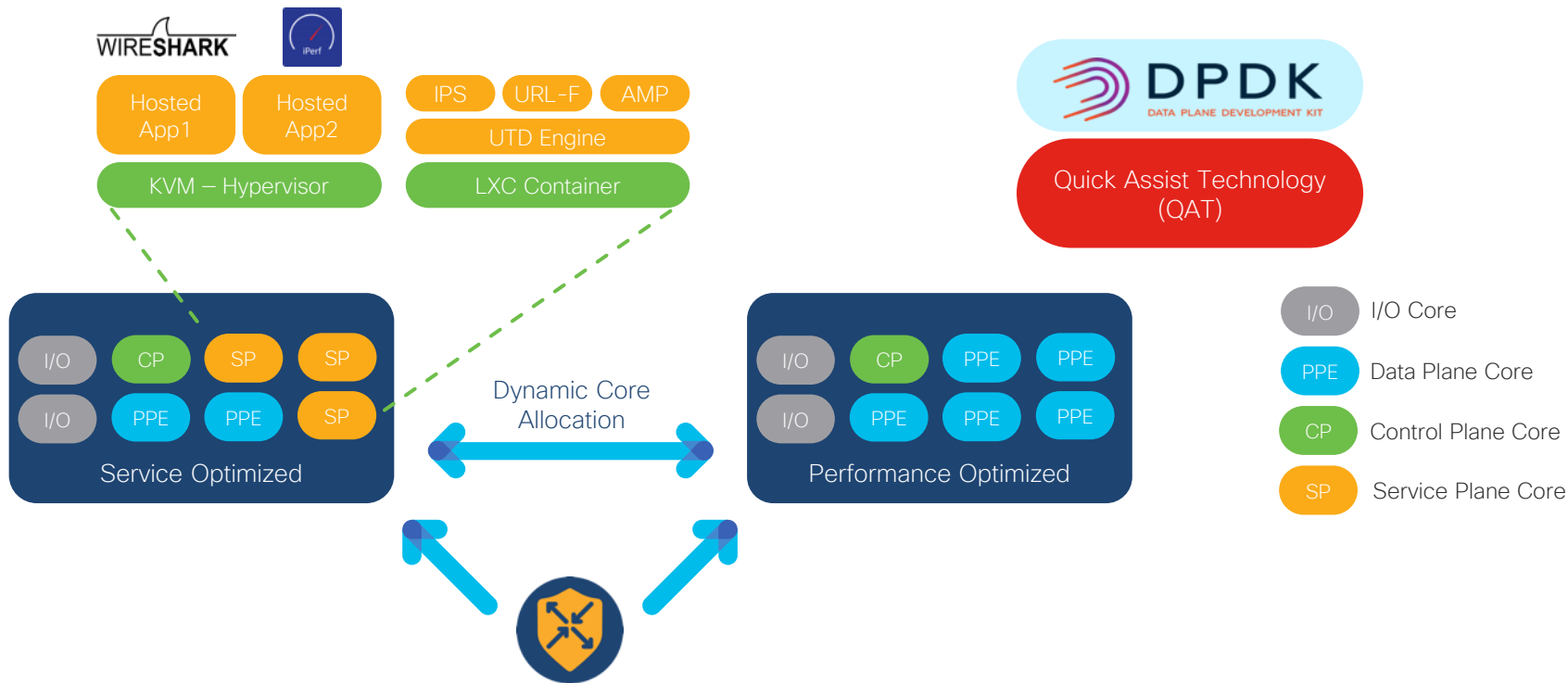
Continuing Investment in Network Processor Technology





X86 Multi-core CPU

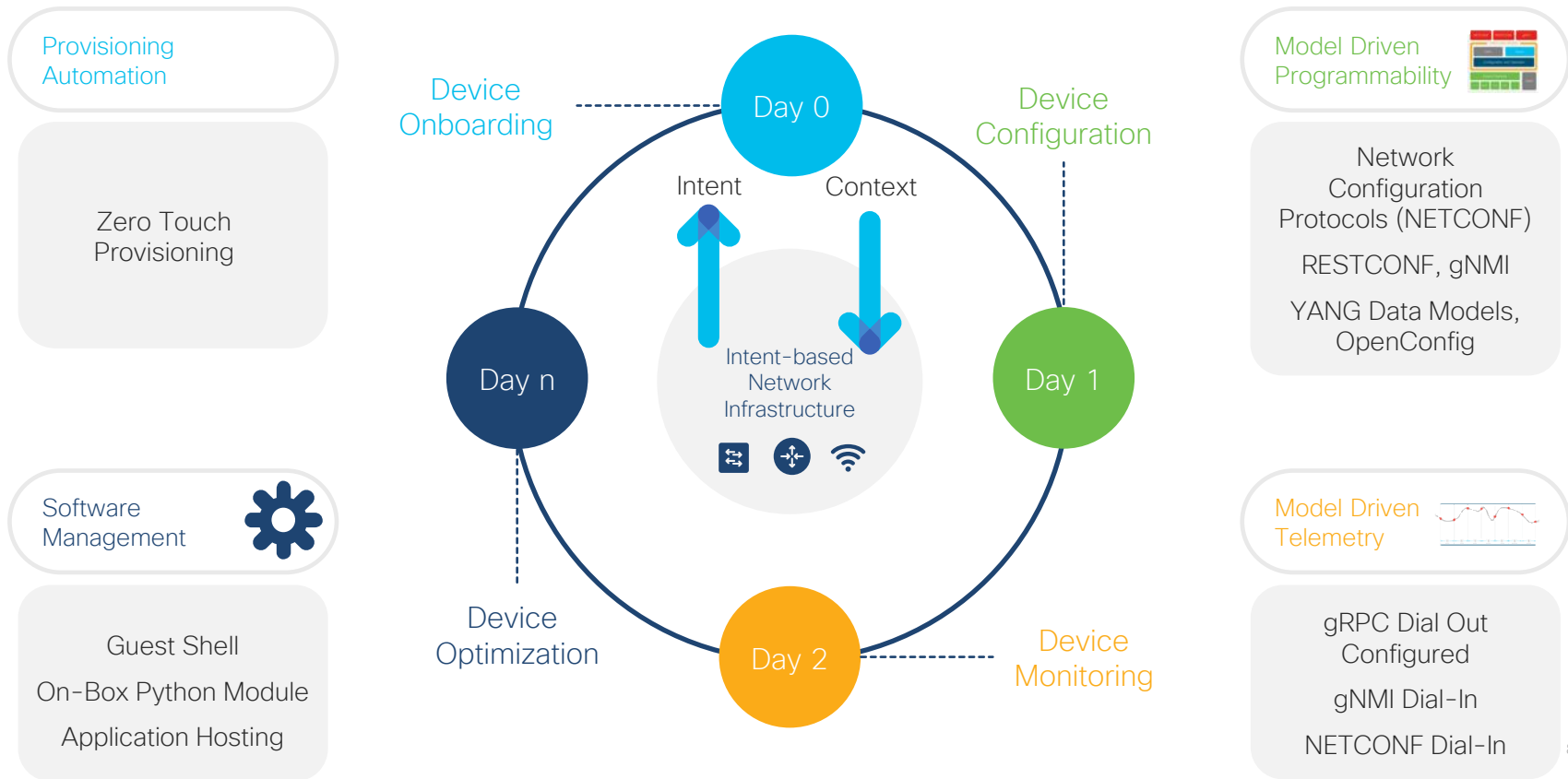
x86 System on Chip (SoC) Architecture



Flexible Core allocation – meet throughput and services demand

Open IOS XE – A Modern Operating System

Built for Day 0 – Day N User Experience

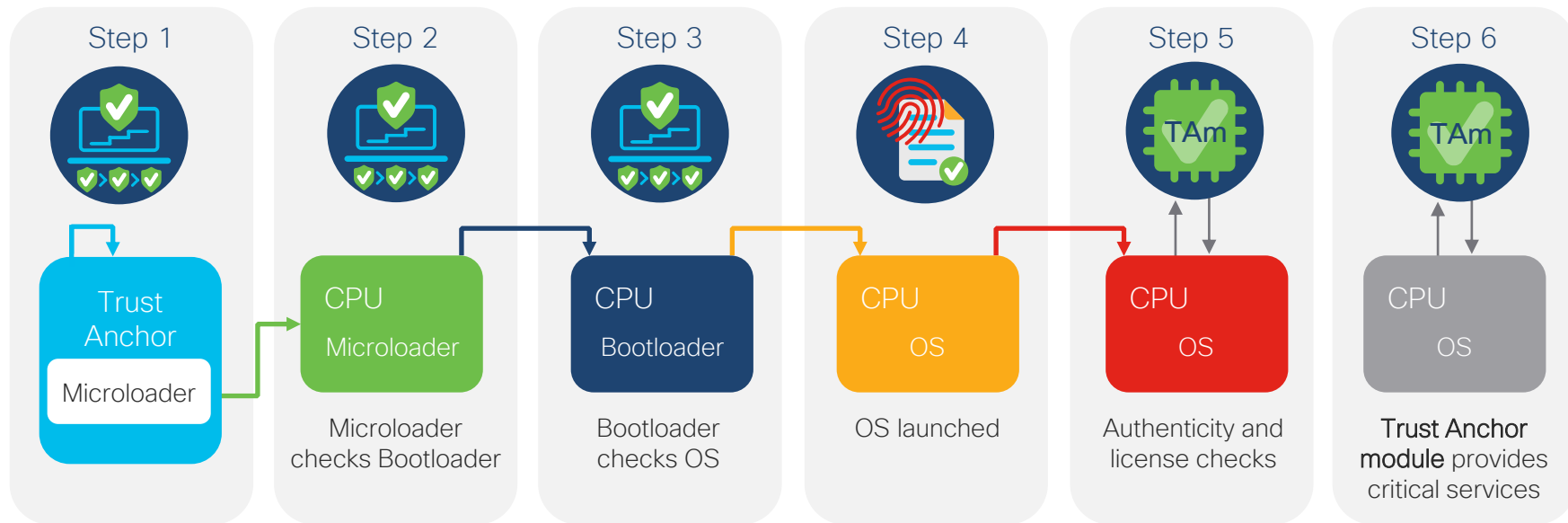


Easy operations with single Image & simplified Licensing





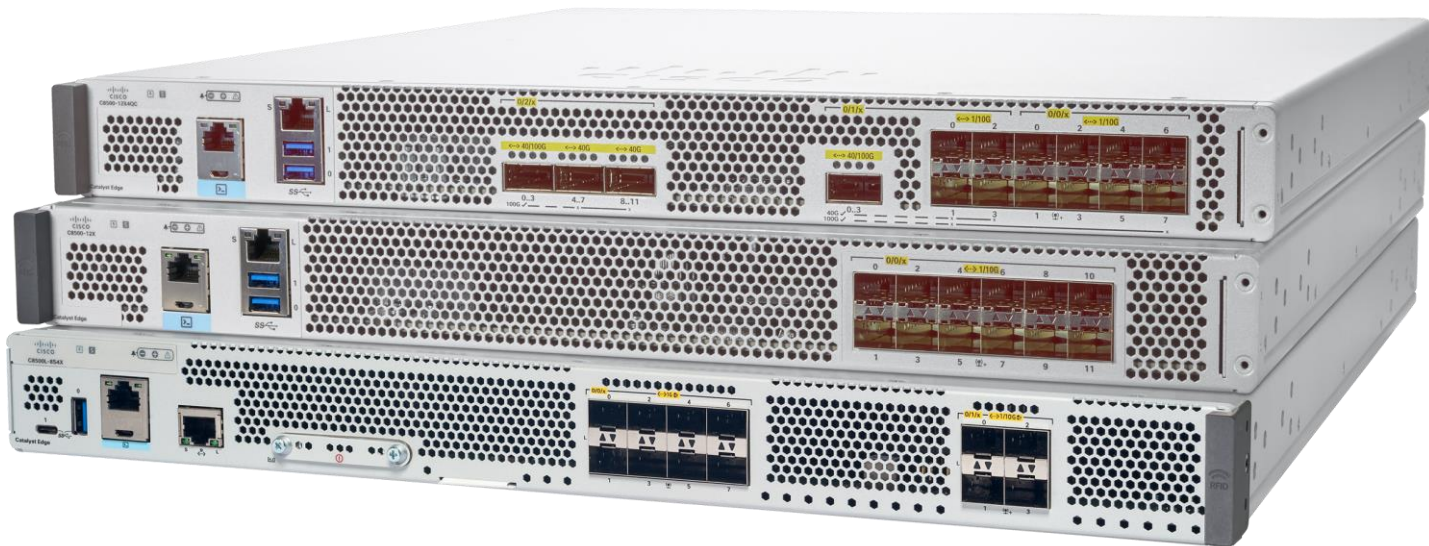
Secure Platform with Trustworthy Solutions



First instructions run on CPU stored in tamper-resistant hardware

SW Authenticity

HW Authenticity



Catalyst 8500

Aggregation Redefined

Cisco Catalyst 8500/8500L Series Edge Platforms

Highly Capable 1RU SD-WAN Headend



C8500-12X4QC

C8500-12X



QFP based hardware forwarding

Third generation QFP ASIC designed by Cisco

Port flexibility for 100/40/10 Gig interfaces
Up to 200 Gb/sec forwarding on C8500-12X4QC

Many H/W assists for accelerated processing



C8500L-8S4X



Advanced Flow based forwarding

x86 based SOC design

Dedicated cores for control, data, and services

Optimized technology for efficient packet processing

Core reallocation to balance forwarding, services needs

Up to 20 Gb/sec forwarding on C8500L-8S4X

IOS XE

5G Ready

WAN MACsec

Port flexibility

Catalyst 8500: One Platform, Many Solutions

SD-WAN

High SD-WAN performance
High SD-WAN scale
Highspeed DIA/DCA
40GE, 100GE
Port Connectivity

Internet Gateway

High Throughput Performance
High Scale NAT, AVC, Firewall
Direct Internet Access
1G/10G/40G/100GE
Port Offering

Cloud GW, CoLo

Multi-Tenant, VRF Aware
High Scale NAT, AVC, Firewall
Inter VRF
Communication-VASI
Stateless/Stateful
Box-to-Box Redundancy

Secure WAN

Site-to-site, Remote
Access VPN
GETVPN, DMVPN, FlexVPN,
IPSecoGRE, sVTI
High Scale NAT, AVC, Firewall
Cisco WAN MACsec

SD-Access

Control-Plane Node
Border Node
SD-A/SD-WAN Multi-Domain

DCI

EoMPLS, L2TPv3,
VPLS, MPLS
Overlay Transport Virtualization
VxLAN
Cisco WAN MACsec

Network Infra

MPLS, Segment Routing
L2VPN, L3VPN
mVPN
MPLS-TE
AVC, H-QoS
Route Reflector

Cloud MSP

Multi-Tenant, VRF Aware
VxLAN
Route Scale
Convergence Services
IPsec, NAT, Firewall
B2B Redundancy

Catalyst 8500

Inherits Cisco ASR 1000 features for IOS XE and IOS XE SD-WAN use-cases

Cisco Catalyst 8500 Series Edge Platforms

Highly Capable 1RU SD-WAN Headend



C8500L-8S4X

CEF: up to 20 Gbps
IPsec: up to 12 Gbps



C8500-12X

CEF: up to 120 Gbps
IPsec: up to 30 Gbps

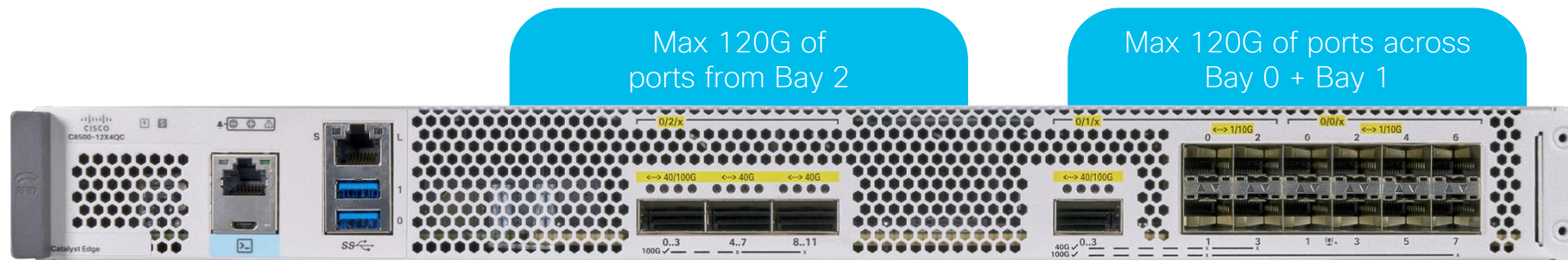


C8500-12X4QC

CEF: up to 200 Gbps
IPsec: up to 46 Gbps

C8500-12X4QC Port Connectivity

Purpose-built SD-WAN Headend Platform

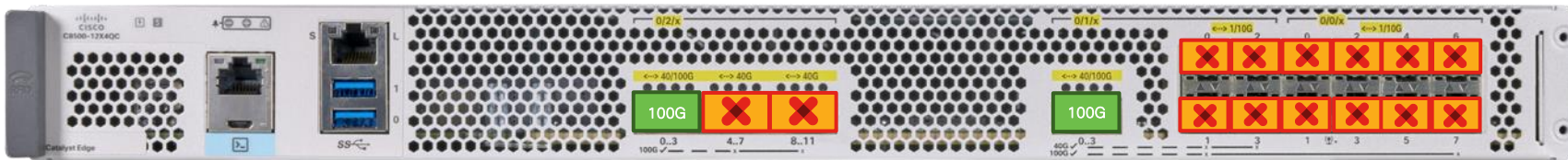
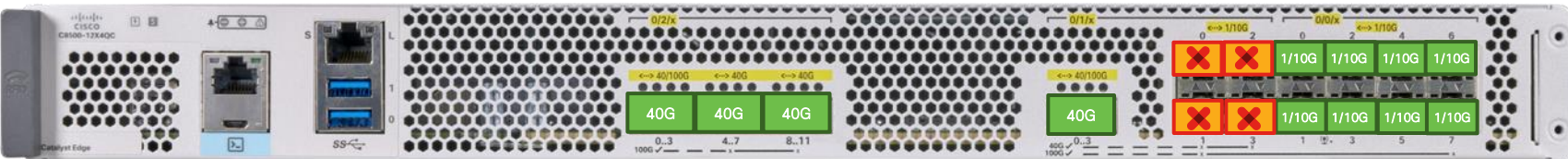


Option	Port Speed	Maximum Port Configuration
1	100G	2x100G
2	100/40G	1x100G + 3x40G
3	40/10G	4x40G + 8x10G
4	100/40/10G	1x100G + 1x40G + 8x10G
5	10G	12x10G
6	1G	12x1G

C8500-12x4QC

 Port Disabled

2 x 100G


$$4 \times 40G + 8 \times 10G$$


Catalyst 8500L – data or service plane focused

Data plane focus

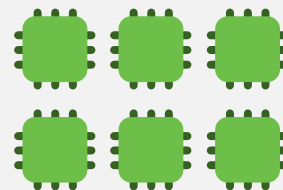
- 2 cores for control plane
- No cores for services
- 10 cores for data plane
 - 2 cores shared for I/O and queuing
 - 2 crypto cores (1 encrypt, 1 decrypt)
 - 6 cores for feature processing



Control plane



I/O & queuing



Data plane



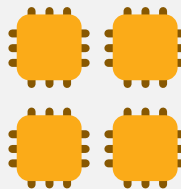
Crypto

Services focus

- 2 cores for control plane
- 4 cores for services
- 6 cores for data plane
 - 1 core shared for I/O and queuing
 - 1 crypto core (encrypt and decrypt)
 - 4 cores for feature processing



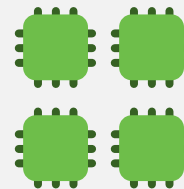
Control plane



Services plane



I/O & queuing



Data plane



Crypto

ASR1002-HX vs C8500-12X4QC

Product Comparison

Up to 100Gbps CEF, 25Gbps Crypto

8M NAT/PAT, 12M CGN Sessions

4GB DP Memory, 232K Queues

Ports: 8x 1G, 8x 10G, One EPA Slot

16GB to 32GB upgradable DRAM

QFP 2.0, 124 Cores, extra Crypto HW

Up to 200Gbps CEF, 46Gbps Crypto

16M NAT/PAT, 32M CGN Sessions

32GB DP Memory, 256K Queues

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

16GB to 64GB upgradable DRAM

QFP 3.0, 224 Cores, Inbuilt Crypto & L2



All perf numbers are aggregate IMIX throughput

ASR1001-HX vs C8500-12X

Product Comparison

Up to 60Gbps CEF, 16Gbps Crypto

2M NAT/PAT, 4M CGN Sessions

1GB DP Memory, 116K Queues

Ports: 8x 1G, 4x 10G, 4x 1/10G

16GB to 32GB upgradable DRAM

QFP 2.0, 124 Cores, extra. Crypto HW

Up to 120Gbps CEF, 30Gbps Crypto

12M NAT/PAT, 24M CGN Sessions

32GB DP Memory, 256K Queues

Ports: 12x 1/10G

16GB to 64GB upgradable DRAM

QFP 3.0, 224 Cores, Inbuilt Crypto & L2



All perf numbers are aggregate IMIX throughput

ASR1001-X vs C8500L-8S4X

Product Comparison

Up to 20Gbps CEF, 5.5Gbps Crypto

2M NAT/PAT, 15 Gbps NAT perf

4GB DP Memory, 16K Queues

Ports: 6x 1G, 2x 10G

8GB to 32GB upgradable DRAM

QFP 2.0, 31 Cores

Up to 20Gbps CEF, 13Gbps Crypto

2M NAT/PAT, 17 Gbps NAT perf

Max 4GB DP Memory, 16K Queues

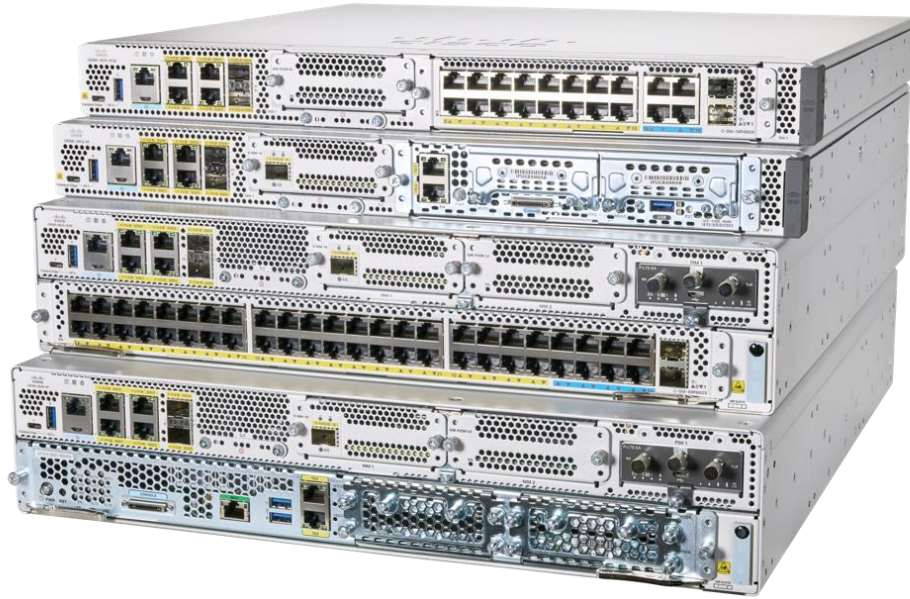
Ports: 8x 1G, 4x 1/10G

16GB to 64GB upgradable DRAM

x86, 12 Cores, Flow Based Architecture



All perf numbers are aggregate IMIX throughput



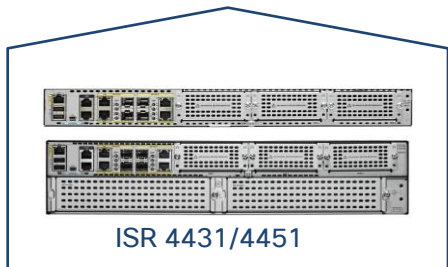
Catalyst 8300/8200

New Age Branch

Cisco Catalyst 8300, 8200 Edge Platforms

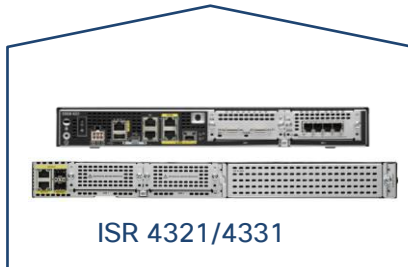
Transforming your branch...

Catalyst 8300 Series Edge Platforms



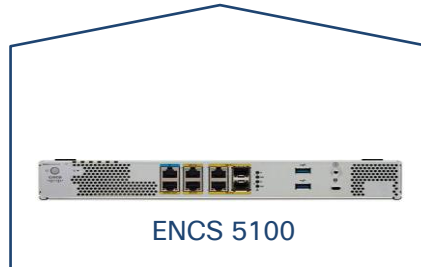
ISR 4431/4451

Catalyst 8200 Series Edge Platforms



ISR 4321/4331

Catalyst 8200 Series Edge uCPE



ENCS 5100

Modular Access

Optimized for **SASE** with
Cisco Secure Cloud-scale SD-WAN

Cisco Catalyst 8300/8200 Series Edge Platforms

Multi Gig SD-WAN branch with Accelerated Services – **All in One!**



5x Data plane Performance



4x Services Performance



Gigabit+ Cellular, 5G Ready



SD-WAN Voice Integration

SoC Architecture for
Dynamic Core allocations



Hardware
Accelerated Services



Up to 6000 SD-WAN
IPsec Tunnels



High Speed Cloud Access
With 10/1G Ports



Cisco Catalyst 8300 Series Edge Platforms

Introducing 10G in Access with higher port density

10G WAN Ports 'X'
& 5G IPsec

C8300-2N2S-4T2X (12C)



C8300-1N1S-4T2X (8C)



4 RJ45
2 SFP+

1G WAN Ports 'T'
& 2G IPsec

C8300-2N2S-6T (8C)



C8300-1N1S-6T (8C)



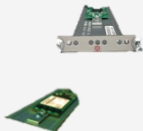
4 RJ45
2 SFP

M.2 USB/
NVMe Storage

UADP-based switch
modules/10G WAN module

User Centric Design
(RFID, QR label, FRUs)

Higher-efficiency AC
and DC power supplies



Cisco C8300 Series Edge Platforms

Features & Technology



Adv Security

Umbrella	Trustworthy Framework
Trustsec	ZBFW
uRPF	Crypto VPN
SSHv2	Snort IPS/IDS
CoPP	



Collaboration

CUBE	DSP Farm
Digital voice	SRST
Analog Voice	



Routing & Multicast

SD-WAN routing (OMP)
IPv4/v6 routing protocols,
Multicast routing
Policy-based routing (PBR)
First-Hop redundancy
MPLS



Wireless WAN

4G/LTE
5G
Cellular Gateway
GPS



Integrated Switching

NIM/SM-X Modules
Higher port-density
Higher port speed
Integrated Layer 2 security



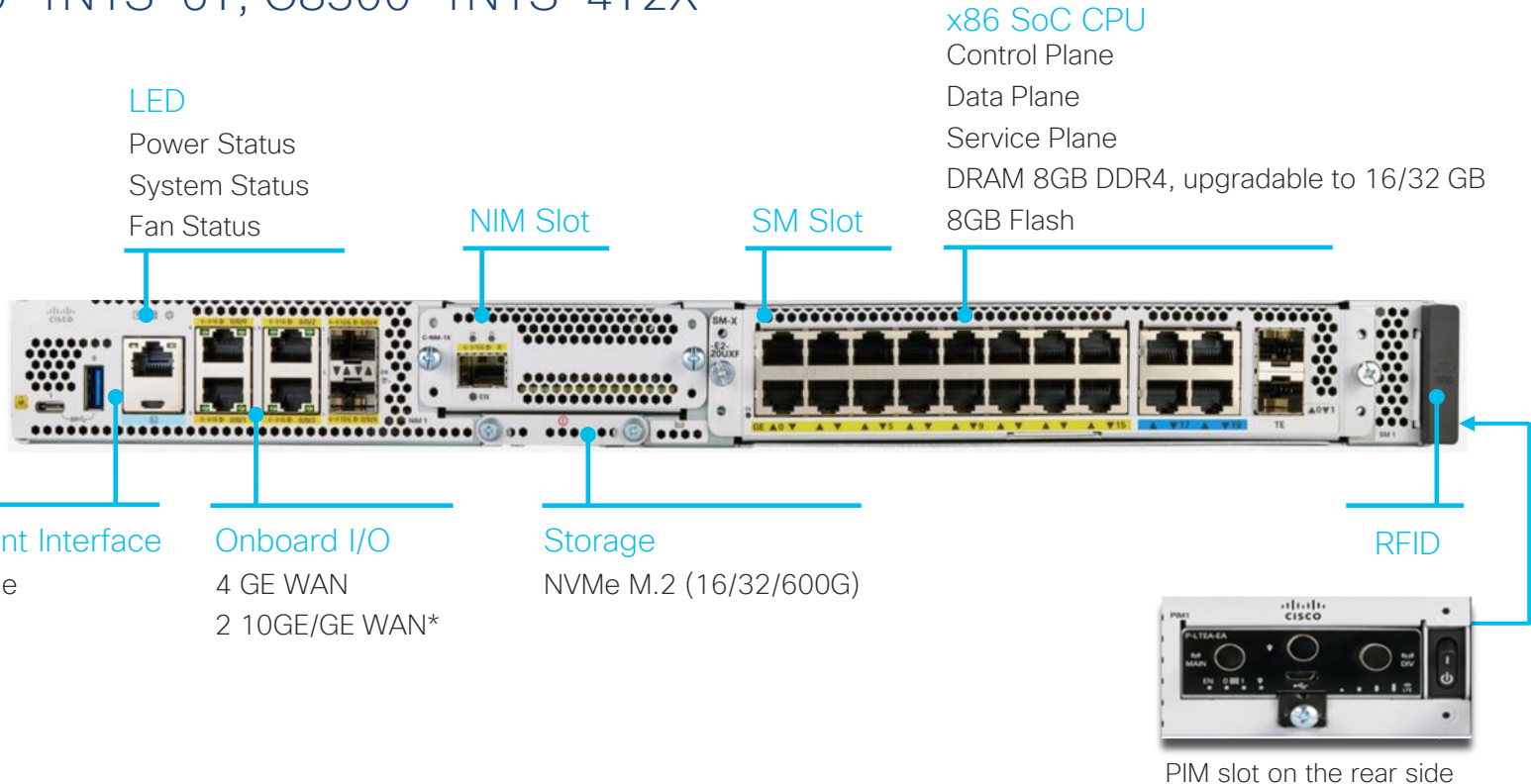
Application Services

PfR	NBARv2
SD-Access	AppQoE
QoS	vAnalytics
HQoS	

Service richness on C8300, Feature parity with ISR4400

Catalyst 8300 Series Front View

C8300-1N1S-6T, C8300-1N1S-4T2X



Catalyst 8300 Series Front View

C8300-2N2S-6T, C8300-2N2S-4T2X

LED

Power Status
System Status
Fan Status

Onboard I/O

4 GE WAN
2 10GE/G WAN*

x86 SoC CPU

Control Plane
Data Plane
Service Plane
DRAM 8GB DDR4, upgradable to 16/32 GB
8GB Flash

2xNIM Slot



Management Interface

RJ 45 Console
Micro-USB
USB Type A

Storage

NVMe M.2 (16/32/600G)

2xSM Slot

LTE WAN (PIM slot)

CAT 4/6/18 PIM

RFID

Cisco Catalyst 8300 Series Edge Platforms

The leading SD-WAN high performance branch router with rich services



Performance and Rich Services

C8300-1N1S-6T
(1G WAN Ports)



(1 RU, Up to 15 Gbps CEF
Up to 2 Gbps IPsec)

C8300-2N2S-6T
(1G WAN Ports)



(2 RU, Up to 15 Gbps CEF
Up to 2 Gbps IPsec)

C8300-1N1S-4T2X
(10G WAN Ports)



(1 RU, Up to 19 Gbps CEF
Up to 5 Gbps IPsec)

C8300-2N2S-4T2X
(10G WAN Ports)



(2 RU, Up to 20 Gbps CEF
Up to 5 Gbps IPsec)

IMIX traffic

CEF: Autonomous mode

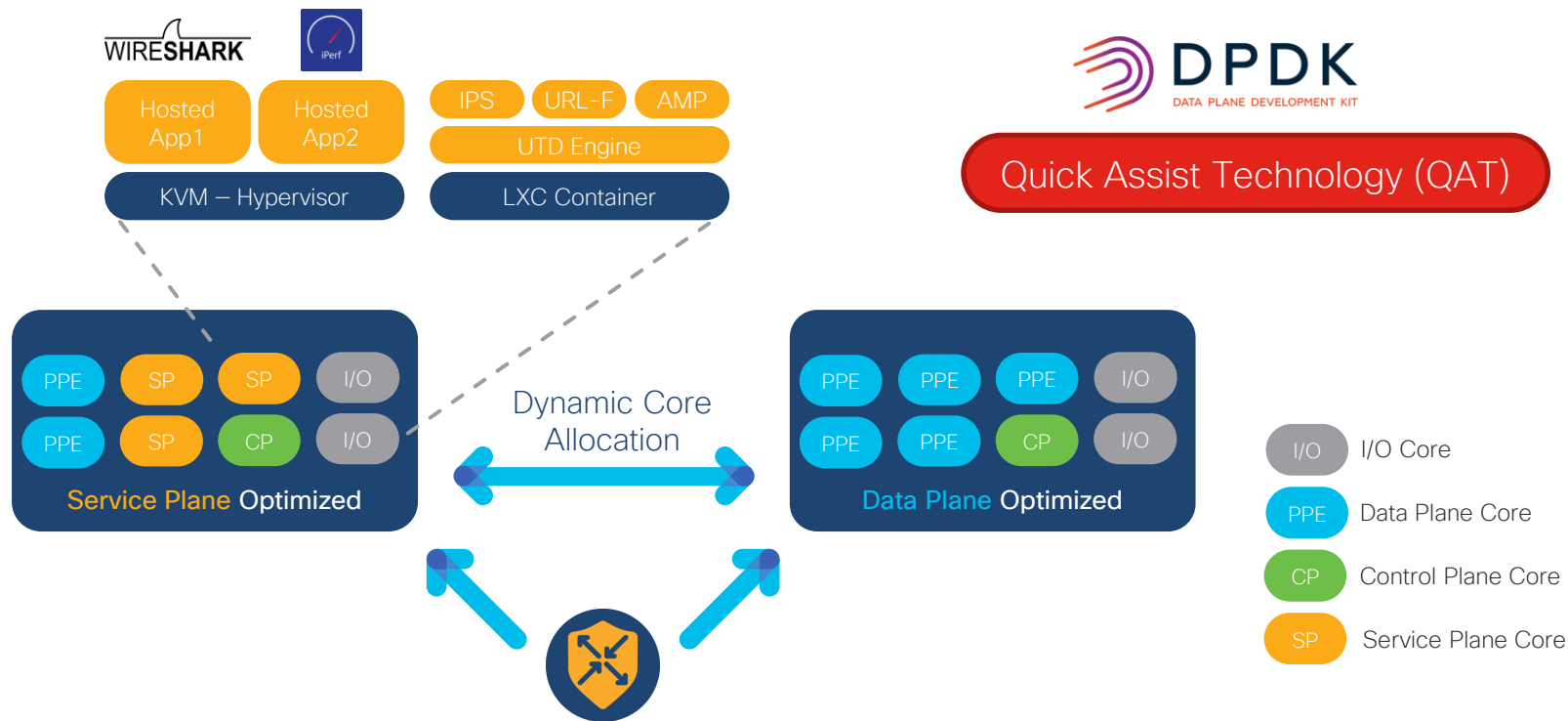
IPsec: Autonomous/Controller mode

Flexible SoC Architecture with Multiple Cores



X86 Multi-core CPU

Catalyst 8000 Edge Platforms Family – SoC



Dynamic Core allocation – meet throughput and services demand

Dynamic Core CPU Allocation

Platform	Service Plane Heavy	Data Plane Heavy
C8500L-8S4X	2CP + 6DP (1 IO, 1Crypto+ 4PPE) + 4SP	2CP + 10DP (2 IO, 2 Crypto, 6PPE)
C8300-2N2S-4T2X	1CP + 6DP (2 IO, 4PPE) + 5SP	1CP + 7DP (2 IO, 5PPE) + 4SP
C8300-2N2S-6T	1CP + 4DP (2 IO, 2PPE) + 3SP	1CP + 7DP (2 IO, 5PPE)
C8300-1N1S-4T2X	1CP + 4DP (2 IO, 2PPE) + 3SP	1CP + 7DP (2 IO, 5PPE)
C8300-1N1S-6T	1CP + 4DP (2 IO, 2PPE) + 3SP	1CP + 7DP (2 IO, 5PPE)
C8200-1N-4T	1CP + 4DP (2 IO, 2PPE) + 3SP	1CP + 7DP (2 IO, 5PPE)

ISR 4451 vs C8300-2N2S

Product Comparison

Up to 4000 IPsec Tunnels

Up to 3.8Gbps CEF, 2Gbps Crypto

240Mbps IPS/IDS + URL-Filtering

4GB to 16GB upgradable DRAM

Ports/Slots: 4P , 2NIM/2SM

Split CP/DP, 4C+6C

Up to 6000 IPsec Tunnels

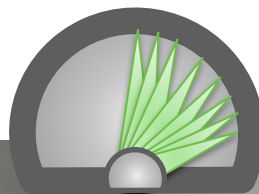
Up to 12Gbps CEF, 5Gbps Crypto

900Mbps IPS/IDS + URL-Filtering

8GB to 32GB upgradable DRAM

Ports/Slots: 4P+2xGE/TE, 2NIM/2SM/1PIM

X86 SoC, 12C/8C Cores, HW Crypto



All perf numbers are aggregate throughput

ISR 4431 vs C8300-1N1S

Product Comparison

Up to 3500 IPsec Tunnels

Up to 3.8Gbps CEF, 1Gbps Crypto

150Mbps IPS/IDS + URL-Filtering

4GB to 16GB upgradable DRAM

Ports/Slots: 4P , 1NIM/1SM

Split CP/DP, 4C+6C

Up to 6000 IPsec Tunnels

Up to 12Gbps CEF, 5 Gbps Crypto

600Mbps IPS/IDS + URL-Filtering

8GB to 32GB upgradable DRAM

Ports/Slots: 4P+2xGE/TE, 1NIM/1SM/1PIM

X86 SoC, 8C Cores, HW Crypto



All perf numbers are aggregate throughput

Cisco Catalyst 8200 Series Edge Platforms

Optimized for Multicloud SD-WAN branch

Integrated Rich Services

Voice Survivability, Forward Error Correction
& Packet Duplication, TCP Optimization

5G Ready

5G Integrated Module
5G External Gateway



Scale

Up to 2x IPsec and IP CEF Performance
Core Availability for 2x Services Performance

Multi-layer Security

SSL Acceleration
Application Firewall
IPS/IDS, URL Filtering
AMP, Threat Grid
Umbrella SIG

1G WAN Ports 'T'
& 1G IPsec



2 RJ45
2 SFP

Manageability

vManage

DNA Center

Open APIs

Analytics

Cisco Catalyst 8200L-1N-4T

High Throughput SASE Compliant Secure Cloud

Integrated Rich Services

Voice Survivability, Forward Error Correction
& Packet Duplication, TCP Optimization

SASE Compliance

Cloud based Security for the small branch



Scale

Up to 2x IPsec and CEF Performance*
Up to 1500 SDWAN tunnels

SASE Compliant Security

High Throughput IPsec
Trustworthy Solutions
Umbrella SIG

* Compared to ISR4321

Connectivity

Higher
WAN Port
density

Default
4G DRAM

PIM
Support

Less than
12" depth

5G Ready

Manageability

vManage

DNA Center

Open APIs

Analytics



Cisco Catalyst 8300, 8200 Series Edge Platforms

The leading SD-WAN high performance branch router with rich services

Performance and Rich Services

C8300-1N1S-4T2X
(5Gbps IPsec)



C8300-2N2S-4T2X
(5Gbps IPsec)



C8300-1N1S-6T
(2Gbps IPsec)



C8300-2N2S-6T
(2Gbps IPsec)



C8200-1N-4T
(1Gbps IPsec)



C8200L-1N-4T
(500Mbps IPsec)

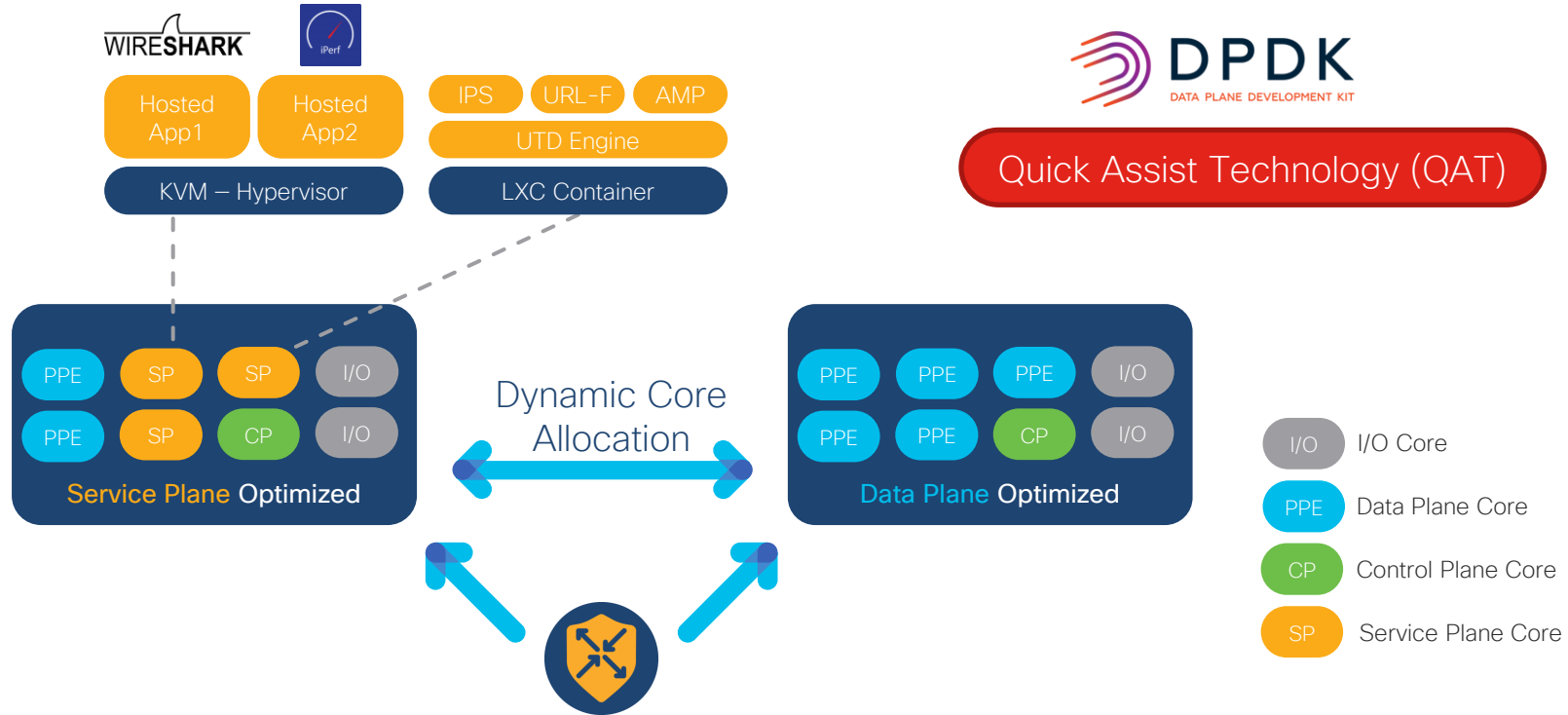


Flexible SoC Architecture with Multiple Cores

Catalyst 8200 Edge Platforms Family – SoC



X86 Multi-core CPU



Dynamic Core allocation – meet throughput and services demand

ISR 4331 vs C8200-1N-4T

Product Comparison

1500 Up to IPsec Tunnels

Up to 1.8 Gbps CEF, 0.57 Gbps Crypto

4GB to 16GB upgradable DRAM

Ports/Slots: 4P , 1NIM/1SM

X86 SoC, 8 Cores

Up to 2500 IPsec Tunnels

Up to 3.8 Gbps CEF, 1 Gbps Crypto

8GB to 32GB upgradable DRAM

Ports/Slots: 4P , 1NIM/1PIM

X86 SoC, 8C Cores, HW Crypto



All perf numbers are aggregate throughput

WAN Branch Platform with Rich Connectivity

70+ Varieties of Modules and Interfaces

ISR 4400 Modules*

New Modules

UCS-E M3
SM Modules

Compute

SD-WAN Perf. MACsec

Ethernet WAN

L3 1x10G
WAN Module



4P/8P/8P PoE
NIM Modules

Ethernet LAN

L2 1G/2.5mG/10G
Switch Modules



CAT4/6
NIM Modules

LTE/5G

5G/CAT18 LTE
PIM



FXS/FXO/BRI/T1E1
SM-NIM Modules

Voice

Voice DSP Modules for
IP Services



Serial/Async/DSL

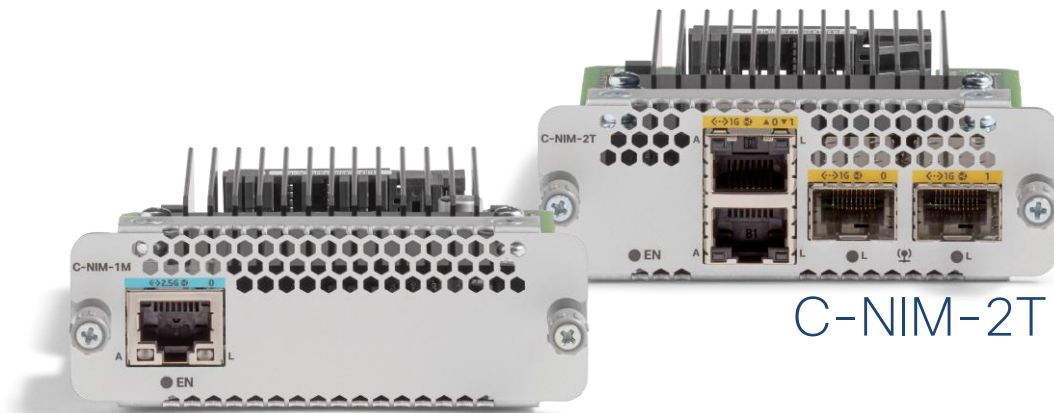
Legacy WAN

Voice

*ISR 4K Modules Not Supported: UCS-E M1/M2, Ethernet SM, Ethernet WAN, SM-NIM Carrier

New WAN modules for port flexibility

C8300/C8200 NIM Modules for 1G and mGig WAN



C-NIM-1M

C-NIM-2T

L3 1Gbps WAN Modules

Layer 3 features 100% on par with router's embedded ports

WAN MACsec for Secure WAN (C-NIM-2T)

mGig 2.5Gbps (C-NIM-1M)

90W PoE 802.3 (C-NIM-1M)

Flexible Connection Media. Mix Copper & Fiber ports (C-NIM-2T)

100Mbps/1Gbps (C-NIM-2T)

SD-WAN support



Port Speed and Diversity
(100Mbps/1Gbps/2.5Gbps)



WAN MACsec
(C-NIM-2T)

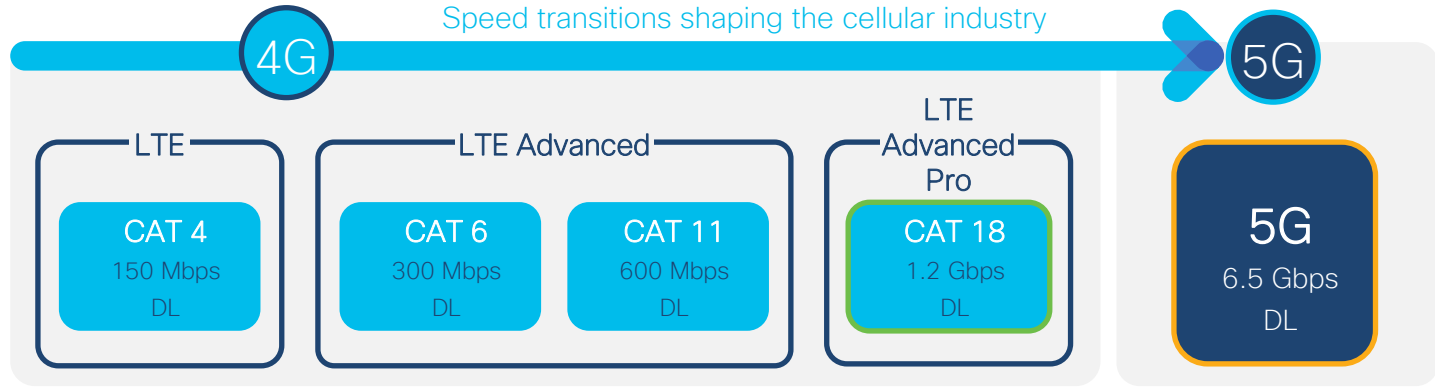


Interface and Media
Flexibility



SD Managed

Enabling Secure, High Speed Wireless Connectivity



Integrated Solutions

ISR1K/C8K

Pluggable Interface
Modules



4G/Cat18 (PIM)

5G/sub-6 (PIM)



Cellular Gateways



4G/Cat18



5G/Sub-6

Going beyond backup connectivity, extending high-speed connectivity, expanding revenue opportunities

5G Sub-6GHz module

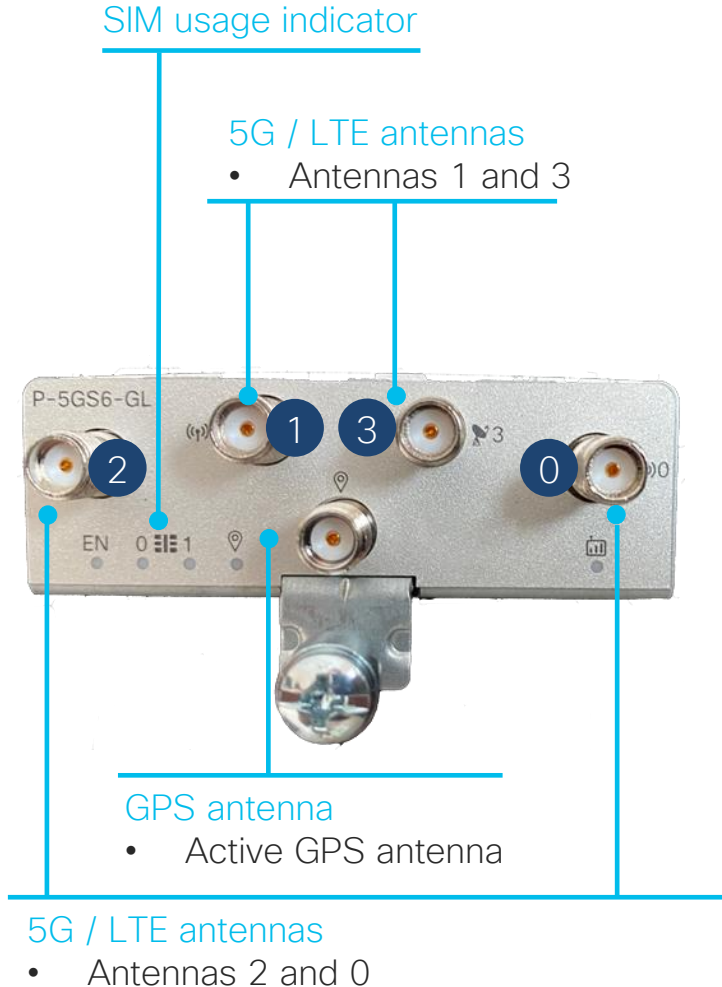
5G Sub-6GHz
CAT 20 LTE

3.3 ↓ Gbps
400 ↑ Mbps

SD-WAN support

Dual Micro SIM

Supported today in
all 8200 and 8300
platforms



Cellular Gateway CG522-E

Sub 6GHz 5G
CAT 20 LTE

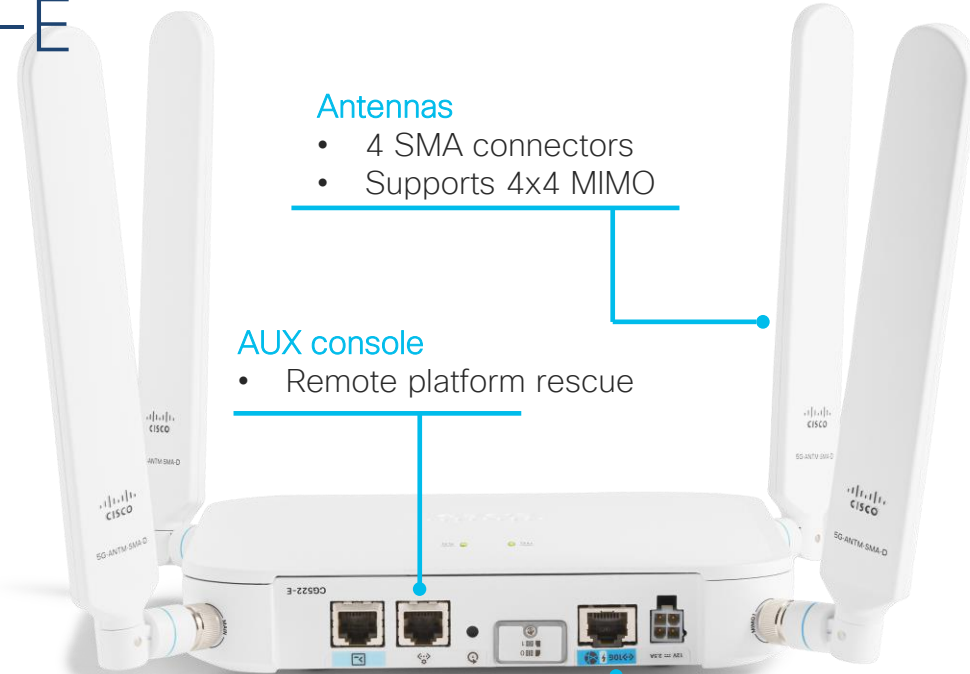
3.3 ↓ Gbps
420 ↑ Mbps

SD-WAN support

No L3 / L4 function, passthrough device only

Supported with
any DHCP
compliant platform.

Dual Micro SIM



Antennas

- 4 SMA connectors
- Supports 4x4 MIMO

AUX console

- Remote platform rescue

Ethernet

- CG418-E: mGig 2.5G ethernet link to the client device
- CG522-E: 10G Ethernet link to the client device
- Optional PoE+ power

Cisco Catalyst 8200 Edge uCPE Platform

uCPE with Higher port density and LTE WAN

C8200-uCPE-1N8

6x1G LAN/WAN
Ports



4 RJ45
2 SFP

NVMe and SFF
Storage



T1/LTE NIM WAN/
CAT18 LTE PIM



User Centric Design
(QR label, FRUs)



Catalyst 8000V



Catalyst 8000V
Future of Cloud

Cisco Catalyst 8000V Edge Software

Enterprise-class Networking and Security with Flexibility of a x86 Based VNF

Multiservices Support

Feature-rich IOS XE and XE SD-WAN software
Supported features such as NAT, Firewall, NBAR
QoS, etc.
Runs on any x86 VM platform

Cloud Integration

Extends connectivity, visibility, security into public
and private clouds
Auto-scaling capability
Integration with Azure vWAN and AWS TGW
Supports wide variety of cloud instances



Catalyst 8000V

SRIOV
Hypervisor/Cloud

Performance Elasticity

CPU Hypervisors: 1 - 8 vCPU
Cloud Providers: 1 - 16 vCPUs
Memory Scale: 4 - 16Gb

Multi-layer Security

Secure object storage
High Throughput IPsec
IPS/IDS, URL Filtering, AMP/TG

Catalyst 8000V



SRIOV
Hypervisor/Cloud

Highlights

Up to 10
Gbps
IPsec
in cloud

ENCS NIM
support

TGW and
vWAN
integration

DPDK IO

SD-WAN
in AWS,
Azure,
and GCP

Manageability

vManage

DNA Center

Open APIs

Analytics

Available in all major cloud marketplaces



C5n class, C5 class, T3.medium



F32, F16,
DS4_v2, DS3_v2, DS2_v2



Google Cloud Platform

N1-standard-8, 4, 2

Catalyst 8000V supports more than 20 different instance profiles across the three clouds

Effortlessly deploy on x86 hypervisors



Enterprise Linux 7.5
Enterprise Linux 7.7



ESXi 6.5 Update 2
ESXi 6.7 Update 3



NFVIS on ENCS &
CSP Platforms



Hyper-V
(roadmap)

Elastic resource allocation



Physical Hardware:

- CPU – Intel Nehalem or AMD
- CPU with clock frequency ≥ 2.0
- TenGigabit and Gigabit Ethernet interfaces

Catalyst 8000V

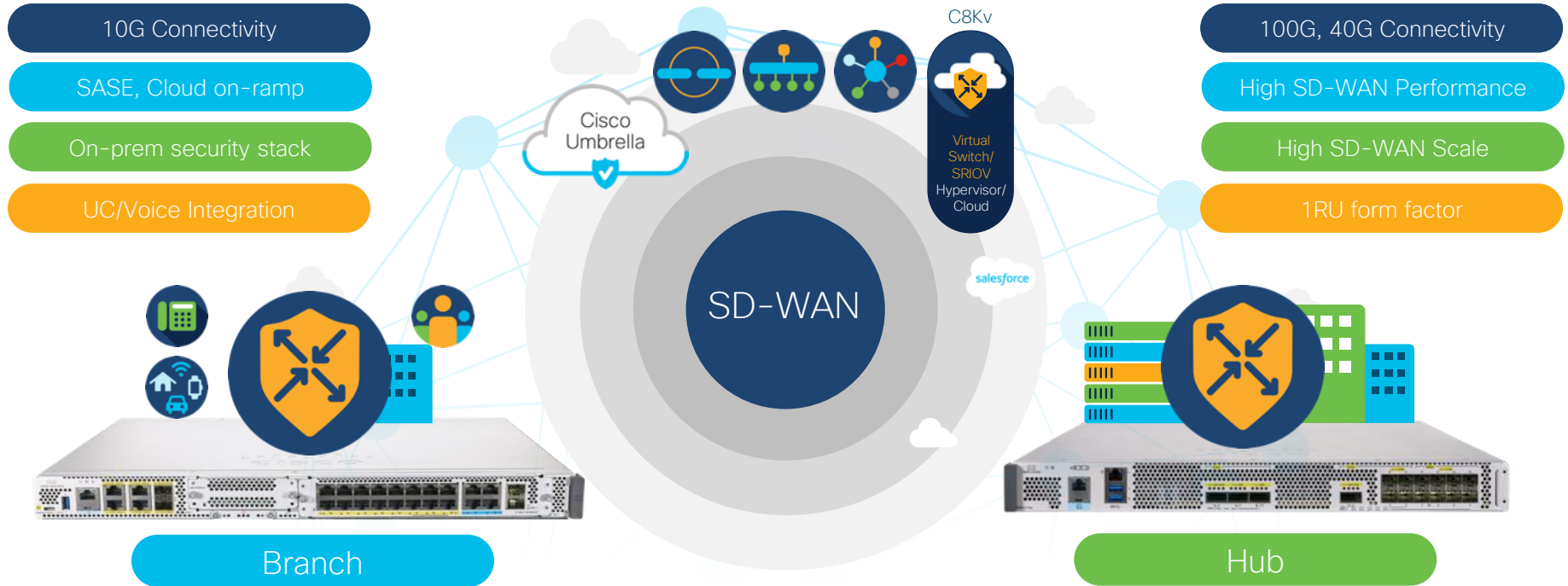


Catalyst 8000V Virtual Machine specs:

- CPU: 1 to 16 virtual CPUs
- Memory: 4 GB to 16 GB
- Disk space: 8 GB or 16GB
- Virtual Network Interface Cards (vNICs):
 - ESXI – A maximum of 8 vNICs is supported;
VMXNET3, iXGBevf, and i40evf
 - KVM – A maximum of 26 vNICs is supported;
Virtio, ixgbevf, or i40evf

Solution and Use Cases

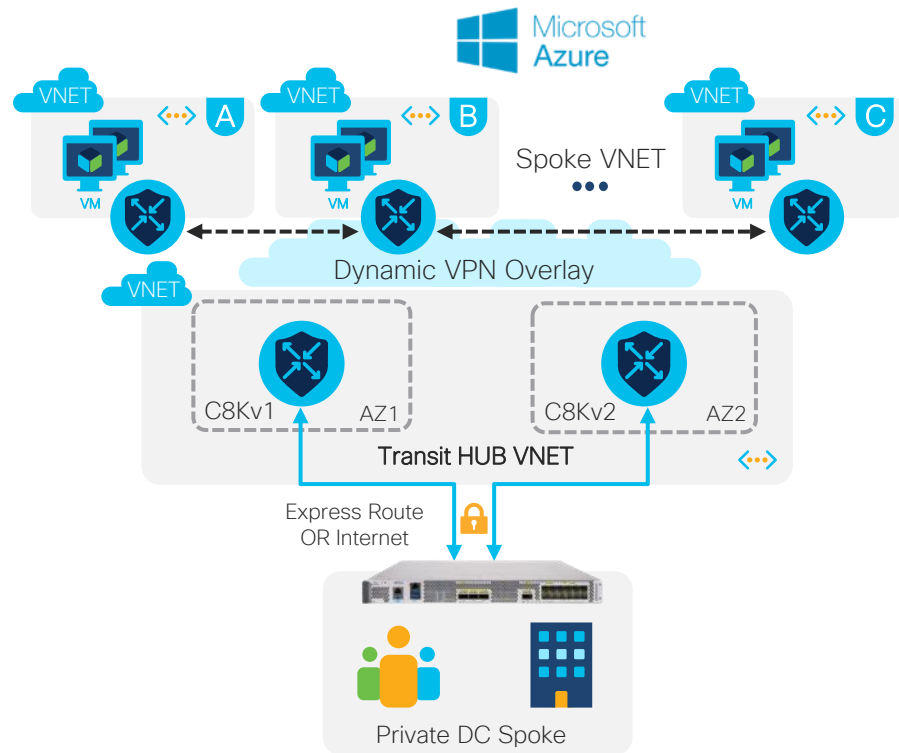
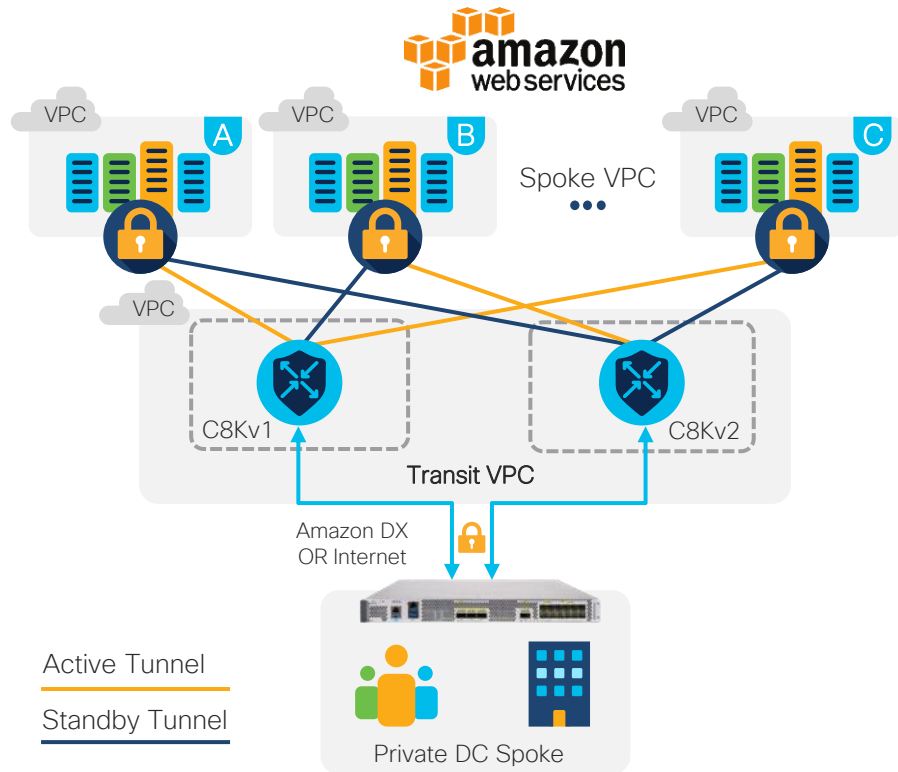
SD-WAN Hub, Branch and Cloud



The diagram illustrates a comprehensive network architecture. On the left, three main user groups are shown: Mobile Users (represented by a smartphone icon), Campus (represented by a building icon), and Branch (represented by a server rack icon). These groups are connected to a central WAN (Wide Area Network) hub, which is depicted as a complex network of nodes and links. The WAN hub is labeled 'WAN' in large blue letters. From the WAN hub, the network flows through two 'WAN Aggregation' points (represented by blue hexagons with white arrows) to a central 'DCI' (Data Center Interconnect) point (represented by a blue hexagon with a white arrow). The DCI point then connects to an 'Internet Gateway' (represented by a blue hexagon with a white arrow) and a 'C8Kv' (Cloud Edge) point (represented by a blue hexagon with a white arrow). The Internet Gateway connects to the 'Internet' (represented by a blue cloud icon). The C8Kv point connects to the 'Cloud Edge' (represented by a blue cloud icon). The Cloud Edge connects to 'IaaS' (Infrastructure as a Service), 'SaaS' (Software as a Service), and 'DC/Private Cloud' (Data Center/Private Cloud). The diagram also highlights various network capabilities and services, including 'High Speed Customer Edge', 'Secure Network Edge', 'WAN MACsec', 'DMVPN, FlexVPN, GETVPN', 'L2 and L3 VPN', 'Data Center Interconnect', 'Internet Gateway', and 'High Speed Cloud Access'. These are represented by colored bars at the bottom of the diagram.

Public Cloud Applications

AWS Transit VPC, Azure Transit VNET



Summary

Cisco Catalyst 8000 Edge Platforms Family

High Performance SD-WAN Headend, Intelligent Branch and Agile Cloud Edge



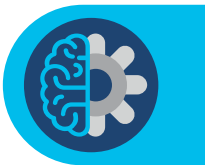
Ready for the Agile Cloud Journey

- High Speed Cloud Access
- Multi-Cloud Application Optimization
- Compact, Powerful 1RU/2RU



Ready for 5G, Edge Compute

- QFP and x86 higher performance
- SASE driven Feature Innovations
- Full-stack on-premise security



Ready for Edge Intelligence

- Headend 100/40/10/1GE Port flexibility
- Branch for 10/1G WAN, LTE, DSL, PoE+



Equipped with User Centric Design

- Operational Ease for better Tracing
- Passive Radio Frequency ID
- Easy Access Label Tray
- Field Upgradable Options

