All you need to know about ISR Fixed Branch Platforms

Abhishek and Prakash
Technical Marketing Engineering Technical Leader
August 2021

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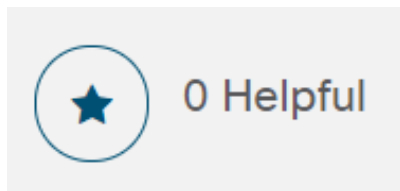
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Enterprise Branch ISR Fixed Platforms

Abhishek Keswani and Prakash Khilolani
Technical Marketing, IBNG Routing

August 2021

Agenda

1 Introduction

2 ISR 1000 Platform Deep Dive

3 ISR 1100X Platform Deep Dive (Viptela OS and XE SD-WAN)

4 Performance and Test Methodology

5 ISR 900 Platform Overview

6 ISR 800 Platform Overview

7 ISR 800/900 to 1000 Migration Options

8 FAQs & References

9 Promotions & Offers

Cisco Enterprise Branch ISR Fixed Platforms Portfolio

Enterprise Branch, SMB, Remote Worker, Managed CPE

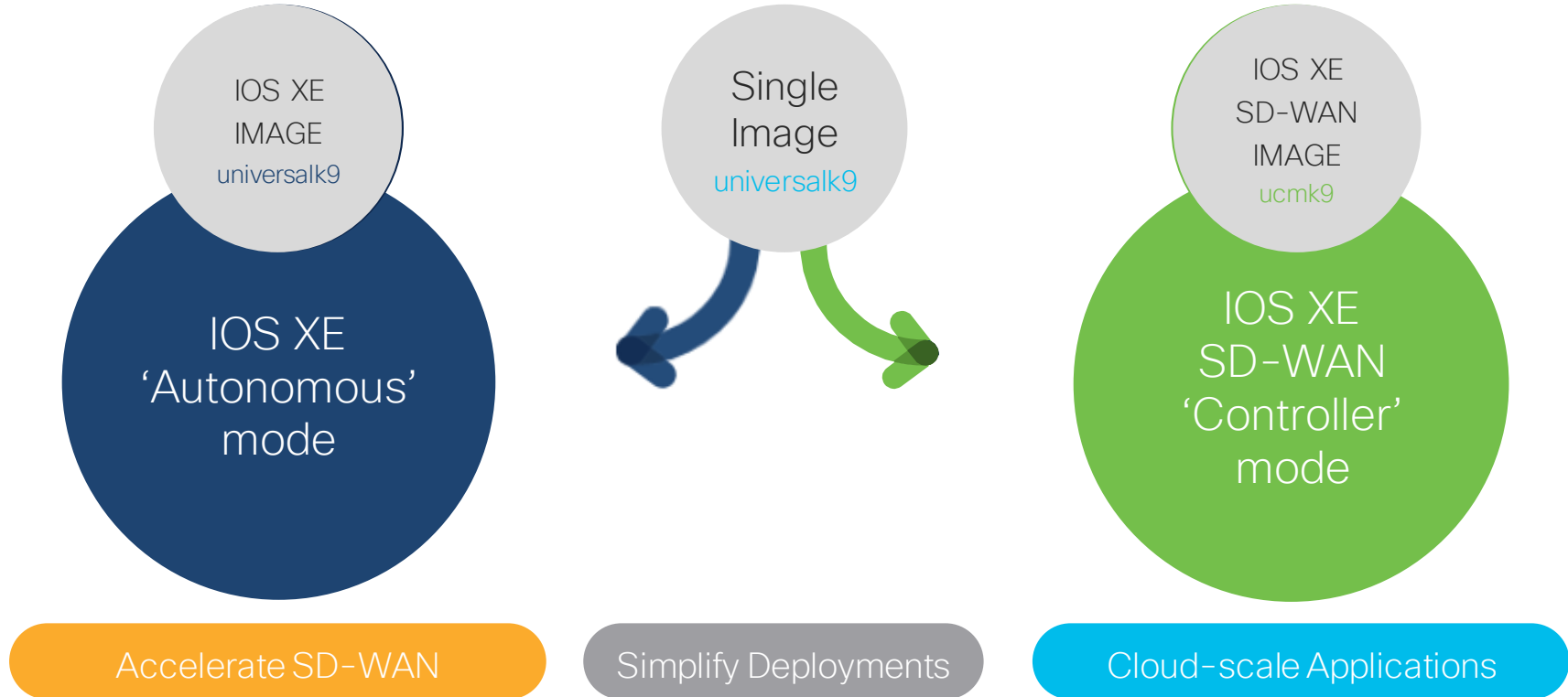|		
Classic IOS	Classic IOS Feature Set (All PIDs EoL, except 892FSP, 867VAE, C888 and C841M) ISR 900	Up to 250 Mbps Fixed and fanless Cisco IOS based High performance VPN
IOS-XE / IOS-XE SD-WAN	SD-WAN + Services (IOS XE) ISR 1101 ISR 1111 ISR 1121	Up to 350 Mbps Cisco SD-WAN Ethernet/ Cat4/Cat6/Cat18 LTE
Viptela OS / IOS-XE SD-WAN	Pure Play SD-WAN Support with Viptela OS OR Feature Rich SD-WAN with IOS-XE SD-WAN ISR 1100-4G/6G/LTE ISR1100X-4G/6G NEW	Up to 428 Mbps Viptela or Cisco SD-WAN Ethernet/Cat4 LTE

Key Building Blocks

Easy Operations with Single Image
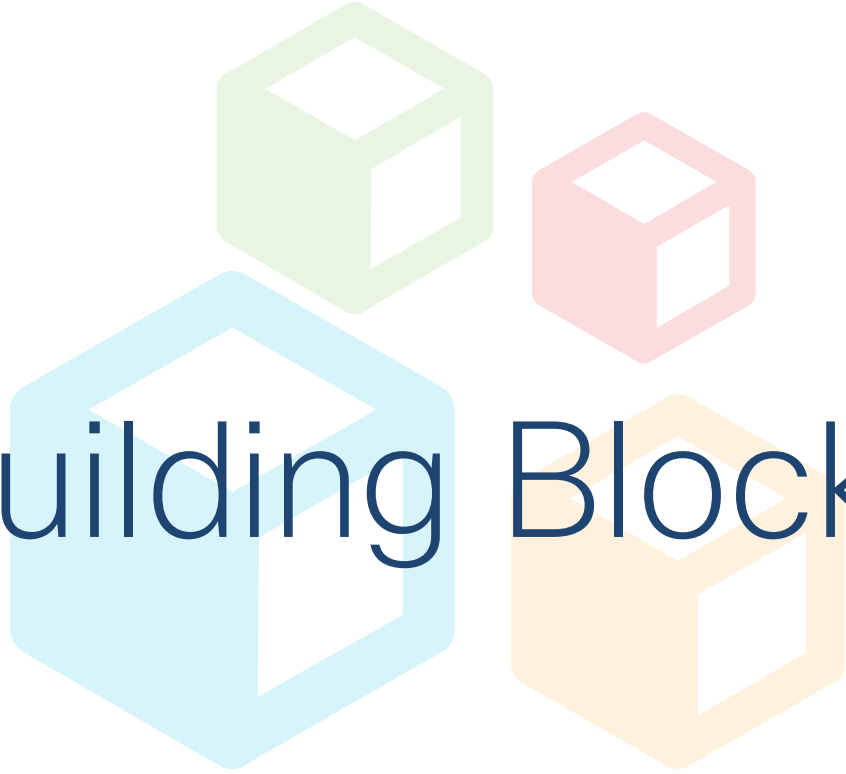
```
Router# controller-mode ?
    disable   controller-mode disable
    enable    controller-mode enable
    reset     controller-mode reset
```
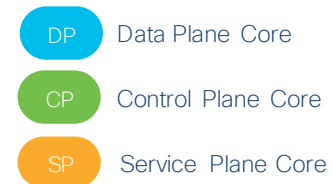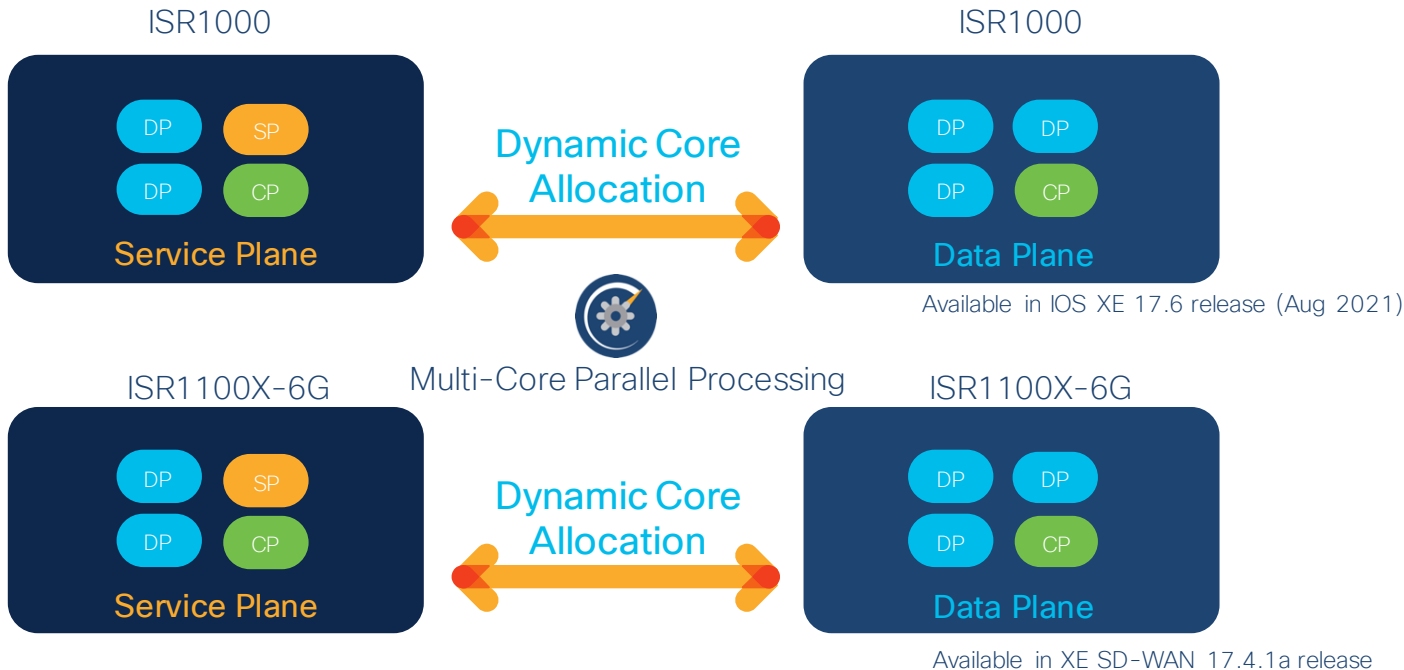
IOS XE
IMAGE
universalk9

Single
Image
universalk9

IOS XE
SD-WAN
IMAGE
ucmk9

IOS XE
'Autonomous'
mode

IOS XE
SD-WAN
'Controller'
mode

Accelerate SD-WAN

Simplify Deployments

Cloud-scale Applications

"DP Heavy" SoC Architecture
Key Datapath Innovations

X86 Multi-core CPU

ISR1000

| DP | SP |
| DP | CP |

Service Plane

Dynamic Core Allocation

ISR1000

| DP | DP |
| DP | CP |

Data Plane

Available in IOS XE 17.6 release (Aug 2021)

Multi-Core Parallel Processing

ISR1100X-6G

| DP | SP |
| DP | CP |

Service Plane

Dynamic Core Allocation

ISR1100X-6G

| DP | DP |
| DP | CP |

Data Plane

Available in XE SD-WAN 17.4.1a release

DP — Data Plane Core

CP — Control Plane Core

SP — Service Plane Core

Secure Platform with Trustworthy Solutions

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6
Hardware Anchor / Microloader	CPU Microloader	CPU Bootloader	CPU OS	CPU OS	CPU OS
	Microloader checks Bootloader	Bootloader checks OS	OS launched	Authenticity and license checks	**Trust Anchor module** provides critical services
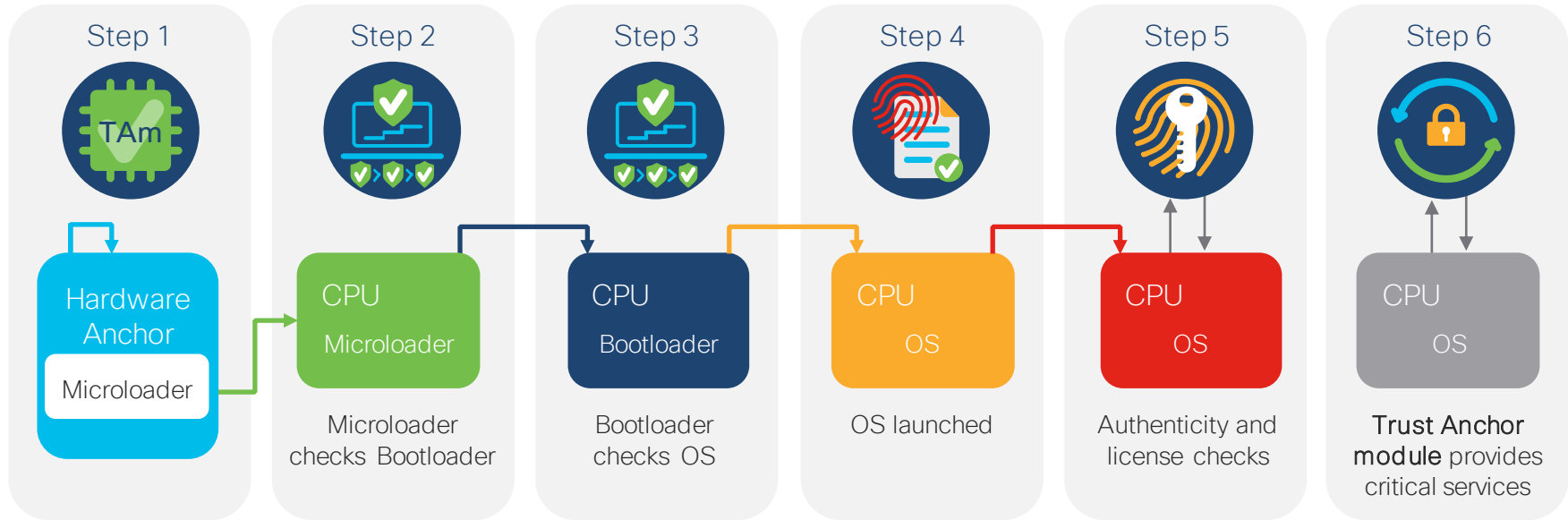
First instructions run on CPU stored in tamper-resistant hardware

Confidentiality   **Integrity**   **Authenticity**

ISR 1000 Platforms
Running IOS-XE and XE SD-WAN images

Cisco ISR 1000 Branch Platforms Family

| C1161X-8P* | C112xX-8P* | C1111X-8P* | C111x-8P | C1101-4P | C1109-4P | C1109-2P |

*4GB DRAM – FW AppAware, DNS/web-layer security
8GB DRAM – FW AppAware, IPS, URL-F, AMP&TG, DNS/web-layer security

SD-WAN	SD-WAN	SD-WAN	SD-WAN	SD-WAN	SD-WAN	SD-WAN
SD-WAN Security	SD-WAN Security	SD-WAN Security	LTE	LTE	LTE	LTE
LTE	LTE	PoE/PoE+	Wireless	Wireless	Wireless	Semi-Ruggedized
Wireless	Wireless		PoE/PoE+		Semi-Ruggedized	
PoE/PoE+	PoE/PoE+		DSL			
	DSL					

ISR1100 and ISR1100X

SD-WAN
SD-WAN Security (ISR1100X)
Integrated LTE (ISR1100-4GLTE)

Flexible Secure Connectivity Options for your Small to Medium Branch Deployments

Cisco ISR 1000 Series Routers

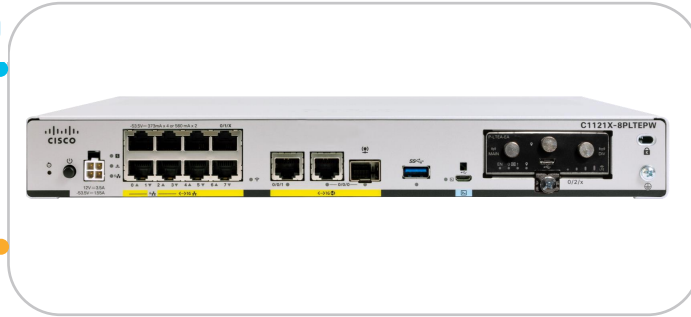### WAN and Application Assurance

Forward Error Correction, TCP Optimization & Packet Duplication, SGT Propagation, Custom Applications

Advanced Mobility

Pluggable LTE (Cat 4|6|18)
USB Dongle for non-LTE SKUs
Integrated WiFi capabilities

High Performance & Scale

Up to 350Mbps of IPsec throughput
Dynamic Core Allocation
Up to 200 IPsec and GRE Overlay Tunnels

Comprehensive Security

IPS
URL Filtering
Advanced Malware Protection
Enterprise FW with Application Awareness
Umbrella SIG

Full Featured SD-WAN

Rich Services with Enhanced Performance

| Ethernet/LTE | 8GB DDR4 | IOS-XE/ XE SD-WAN |

Manageability

vManage

WebUI

DNAC On Prem

Polling Question #1

All ISR1K routers support embedded security features

- True
- False

How to read a router PID – C1121X-8PLTEPWB

Supported Wireless Domains for C1121

E	Europe
B	North America
Z	Australia/Brazil New Zealand
O	Japan

Supported Wireless Domains for C1121X

E	Europe
B	North America
Z	Australia/Brazil New Zealand
A	Canada
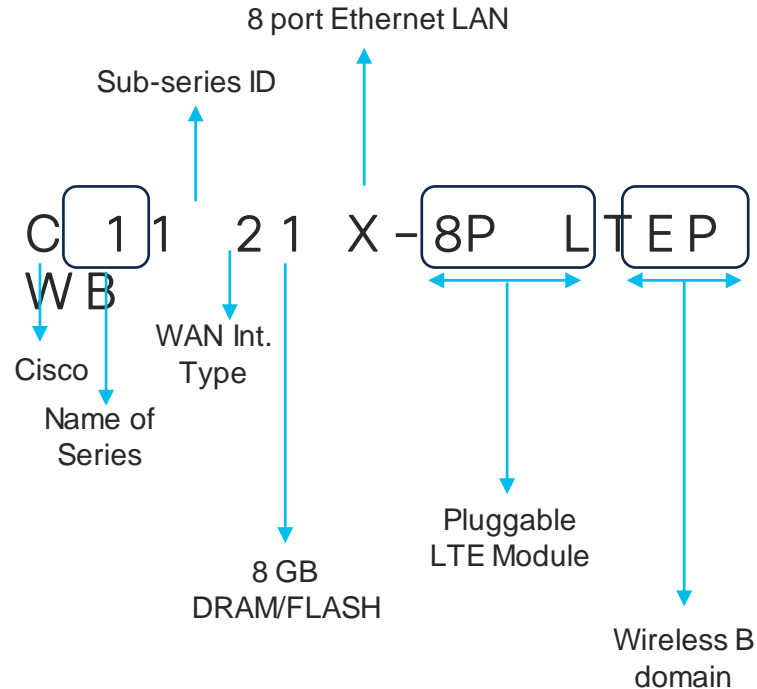
DSL PIDs

C1126	DSL Annex B&J
C1127	DSL Annex A&M
C1128	G.SHDSL

Series Variants

C112x	CPU 1.2 GHz
C1161	CPU 1.6 GHz

8 port Ethernet LAN

Sub-series ID

C 1 1 2 1 X – 8P L T E P W B

Cisco

Name of Series

WAN Int. Type

8 GB DRAM/FLASH

Pluggable LTE Module

Wireless B domain

Cisco ISR 1000 Series Routers Block Diagram

DRAM

Flash – 4GB/8GB

4 Core CPU

DDR4

TAM

RJ45/Micro-USB Console

LAN

WAN

USB 3.0

DSL

WLAN AP

4/8 x 1GE RJ45

1GE RJ45

1GE RJ45/ SFP

Pluggable/ Integrated LTE

DRAM 8 GB

SoC with High Performance

Dynamic Core Allocation

Rich Connectivity
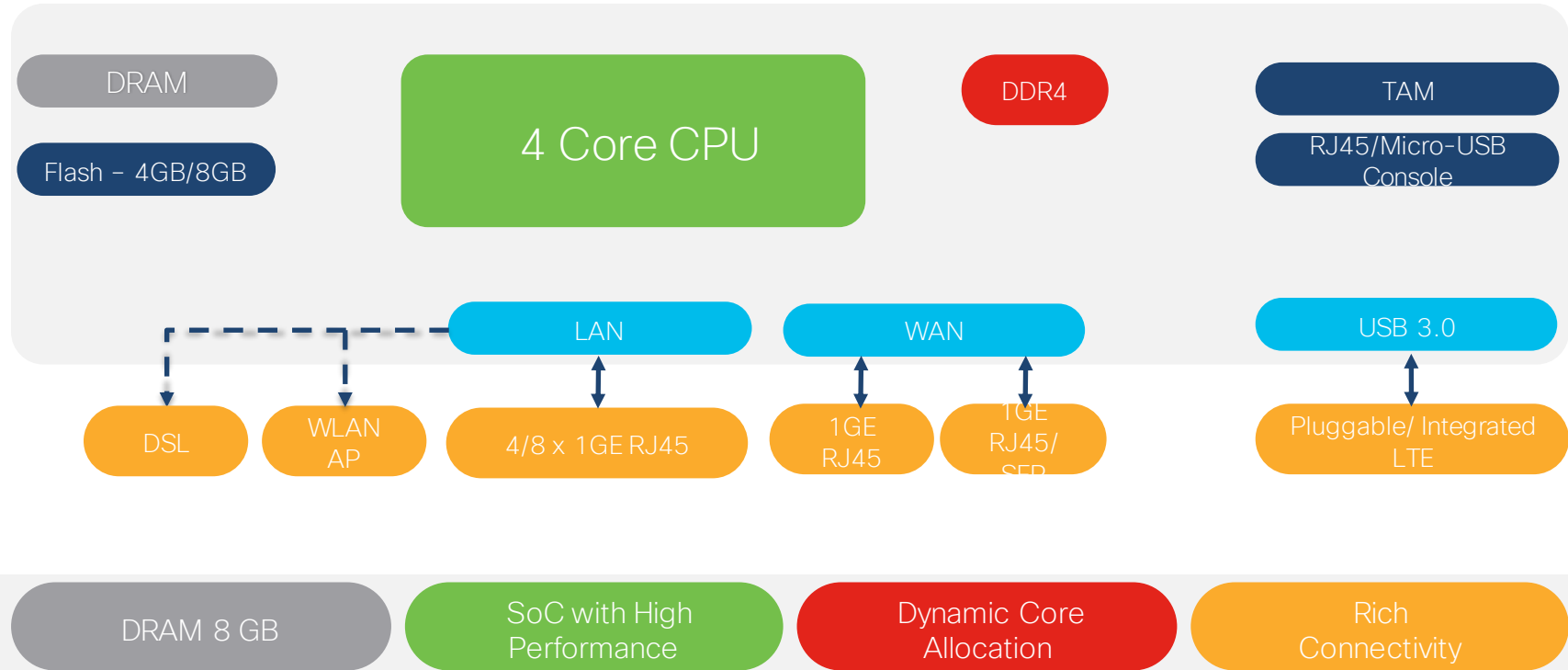
C1121X-8PLTEPWx

DRAM/FLASH **
8GB/8GB

SD-WAN Ready

802.11ac
Wave2

External PSU

Status and physical security
- Status LED
- Power button
- Reset button
- Power connector

*4 Port (2 PoE or 1 PoE+) variants available
** 4GB versions available in C1121 models

Data Interfaces
- 4 PoE or 2 PoE+ Capable* Ethernet LAN
- RJ45/SFP GE WAN

Management Interface
- USB 3.0, Type A
- Micro-USB
- LTE Debug Port, Micro-USB

CAT 4|6|18 Pluggable LTE

C1117-4PLTE
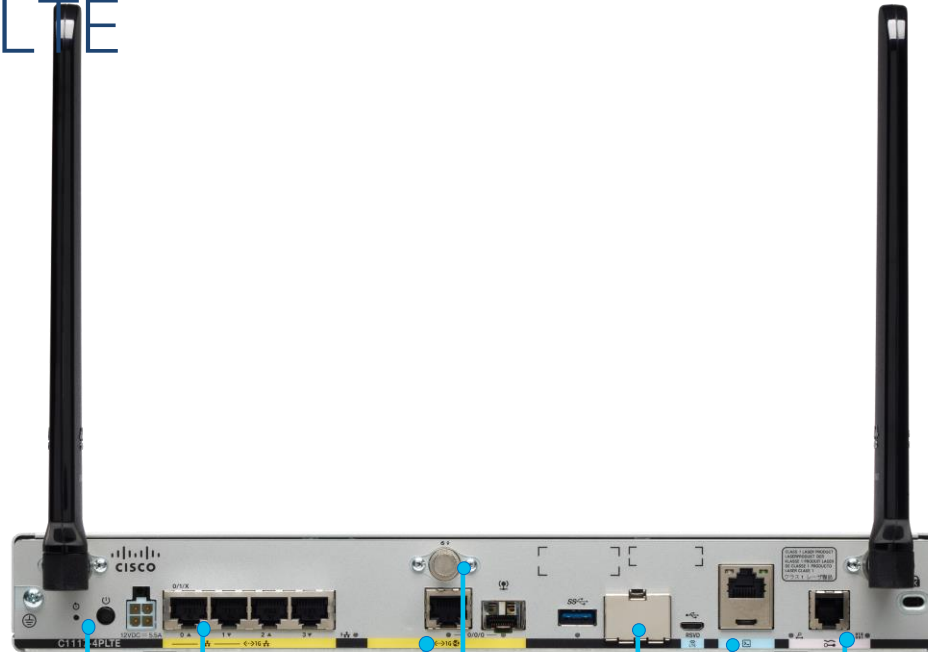
External PSU

DRAM/FLASH: 4GB/4GB

Integrated CAT6 Modem

DSL

SD-WAN Ready

Status and physical security
- Power button
- Reset button
- Power connector

Data Interfaces
- PoE Capable Ethernet LAN

Data Interfaces
- 1 x GE WAN

GPS Connector

Dual Sim

Management Interface
- USB 3.0, Type A
- RJ-45/Micro-USB

DSL

CAT18 PIM module

- Utilizing LM960A18 LTE Modems
- Dual Micro SIM (field replaceable)
- SD-WAN Support
- SMA Antenna
- Max Throughput 1200Mbps(DL)/200Mbps(UL)
- Supported on ISR1120 and ISR1160

SIM usage indicator

Diversity antennas
- Used for additional reception or remote antennas

Micro USB Modem Debug
- For modem diagnostics

Main antennas

PID	Operating Regions	LTE Bands
P-LTEAP18-GL	Global	1, 2, 3, 4, 5, 7, 8, 12, 13, 14*, 17, 18, 19, 20, 25, 26, 28, 29, 30, 32, 38, 39, 40, 41, 42, 43, 46, 48, 66, 71

* Support for LTE band dedicated for use by emergency services

CAT18 PIM Supported ISR1000 platforms

- C1121
  - C1121-4PLTEP
  - C1121-4PLTEPWy
  - C1121-8PLTEP
  - C1121-8PLTEPWy
  - C1121X-8PLTEP
  - C1121X-8PLTEPWy
- C1126
  - C1126-8PLTEP
  - C1126X-8PLTEP

- C1127
  - C1127-8PLTEP
  - C1127-8PMLTEP
  - C1127X-8PLTEP
  - C1127X-8PMLTEP
- C1128
  - C1128-8PLTEP
- C1160
  - C1161-8PLTEP
  - C1161X-8PLTEP

Where:
y=B,E,Q,Z

CAT18 PIM Unsupported platforms

- ISR800 series

- ISR900 series

- ISR1100-4G

- ISR1100-6G

- Any other ISR1000 platforms not listed on previous slide

- ENCS platforms

- ISR4000 series

- vEdge platforms

USB Based CAT4 LTE Dongle

- Utilizing SWI WP76xx LTE Modems
- Single Micro SIM (field replaceable)
- Powered through USB
- Sub-miniature version – A (SMA) Antenna
- CAT4 LTE-Only Support
- Max Throughput 75Mbps(DL)/50Mbps(UL)

SMA Antenna
Length: 2.46 in
Weight: 0.3 oz

Compact Form
Dimensions: 3.69 in x 1.30 in x 0.39 in
Weight: 1.1 oz

Micro-SIM Card Slot
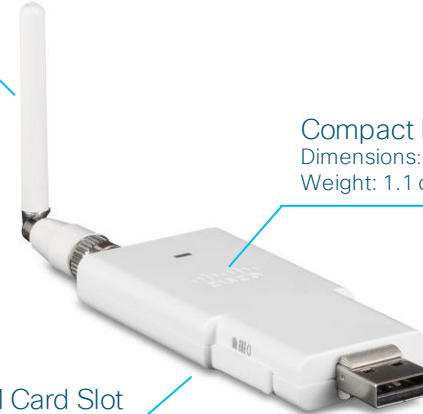
PID	Description	Operating Regions	Bands
D-LTE-GB	CAT4 LTE Dongle for EMEAR	EMEAR	Bands 1,3,7,8,20,28
D-LTE-AS	CAT4 LTE Dongle for ASEAN	India, China, Hong Kong, Indonesia, Malaysia, Philippines, South Africa	Bands 1,3,5,8,40,41
D-TE-NA	CAT4 LTE Dongle for North America	North America	Bands 2,4,5,12,13,14,17

Supported on select Cisco 1000 Series Integrated Service Routers (ISRs)

LTE Categories

Category	Label	Max Downstream Mb/s	Max Upstream Mb/s	Max download MIMO layers	3GPP Release
CAT4	LTE	150	51	2	Release 8
CAT6	LTE Advanced	301	51	2 or 4	Release 10
CAT18	LTE Advanced Pro	1174	200	2, 4, or 8	Release 13
Sub-6	5G	3300	420		Release 15+

D-LTE max data rates are
75 Mb/s downstream and 50 Mb/sec upstream

D-LTE is CAT4 hardware

CAT4 USB Dongle Supported ISR1000 platform

- C1101
  - C1101-4P
  - C1101-4PLTEP
  - C1101-4PLTEPWx

- C1121
  - C1121-4P
  - C1121-4PLTEP
  - C1121-4PLTEPWy
  - C1121-8P
  - C1121-8PLTEP
  - C1121-8PLTEPWy
  - C1121X-8P
  - C1121X-8PLTEP
  - C1121X-8PLTEPWy

- C1126
  - C1126-8PLTEP
  - C1126X-8PLTEP

- C1127
  - C1127-8PLTEP
  - C1127-8PMLTEP
  - C1127X-8PLTEP
  - C1127X-8PMLTEP

- C1128
  - C1128-8PLTEP

- C1160
  - C1161-8P
  - C1161-8PLTEP
  - C1161X-8P
  - C1161X-8PLTEP

- From Viptela OS 20.4
  - ISR1100-4G
  - ISR1100-6G
  - ISR1100X-4G
  - ISR1100X-6G

  Where:

  x=A,B,D,E,F,H,N,Q,RZ

  y=B,E,Q,Z

CAT4 USB Dongle Unsupported platforms

- ISR800 series

- ISR900 series

- Any other ISR1000 platforms not listed on previous slide

- vEdge hardware

- ISR1100-4GLTE

- ISR4000 series

- ENCS

Antenna Portfolio

Description	Part Number	Connector type	Use Cases	Picture
Multi-Band Swivel Mount Dipole Antenna-Faceplate Mount (dual included)	LTE-ANTM-D LTE-ANTM-D= (Spare)	TNC	Default antennas, attached directly to router antenna ports when there is good LTE signal, or clear line of sight.	
Multi-Band Swivel Mount Dipole Antenna-Faceplate Mount (dual included) SMA	LTE-ANTM-SMA-D	SMA	Default antennas, attached directly to router antenna ports when there is good LTE signal, or clear line of sight.	
Multi-Band Omnidirectional Antenna-Ceiling Mount	4G-ANTM-OM-CM 4G-ANTM-OM-CM= (Spare)	TNC	* Single Antenna * Indoor ceiling mount	

Cisco 4G Accessory
## Cables, Extensions, Bundles & Other

Name	PID	Length
LMR 400 Cable (Ultra Low Loss) TNC to TNC	4G-CAB-ULL-20 4G-CAB-ULL-50	20 ft (6 m) 50 ft (15 m)
LMR 400 Cable (Ultra Low Loss) TNC to N-type	CAB-L400-20-TNC-N CAB-L400-50-TNC-N	20 ft (6m) 50 ft (6m)
LMR 240 Cable TNC to TNC	4G-CAB-LMR240-25 4G-CAB-LMR240-50 4G-CAB-LMR240-75	25 ft (7.5 m) 50 ft (15 m) 75 ft (22.5 m)
Antenna Extension Base	4G-AE010-R 4G-AE015-R	10 ft (3 m) 15 ft (4.5 m)
Lightning Arrestor	4G-ACC-OUT-LA	

Antenna LMR 240 20/50/75 ft Cable
**Antenna LMR 400 20/50 ft Cable**
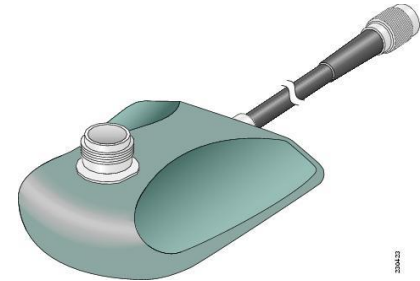
Antenna Extension Base
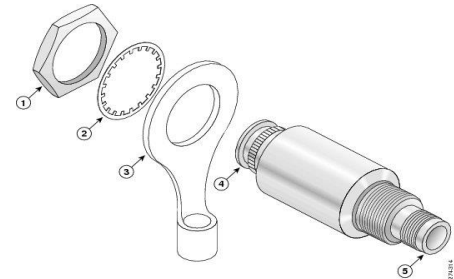
Lightning Arrestor

Wireless LAN Hardware Overview

- WLAN Module based on the Cisco Aironet 1815i

- 1GB DRAM, 256MB Flash, 4MB Boot Flash

- 802.11ac Wave 2 Dual Radio (2.4GHz & 5GHz)

- 2x2, 2 SS MU-MIMO

- No BLE

- Internal antenna

- Console access via the router console
  - `hw-module session 0/x`

- 1Gbps uplink to the host CPU

  *Mobility Express is the default image installed.

1GB Memory | 256MB Flash | 4MB Bootflash

2.4 GHz | WLAN Module | 5 GHz

1Gbps

Switching Module
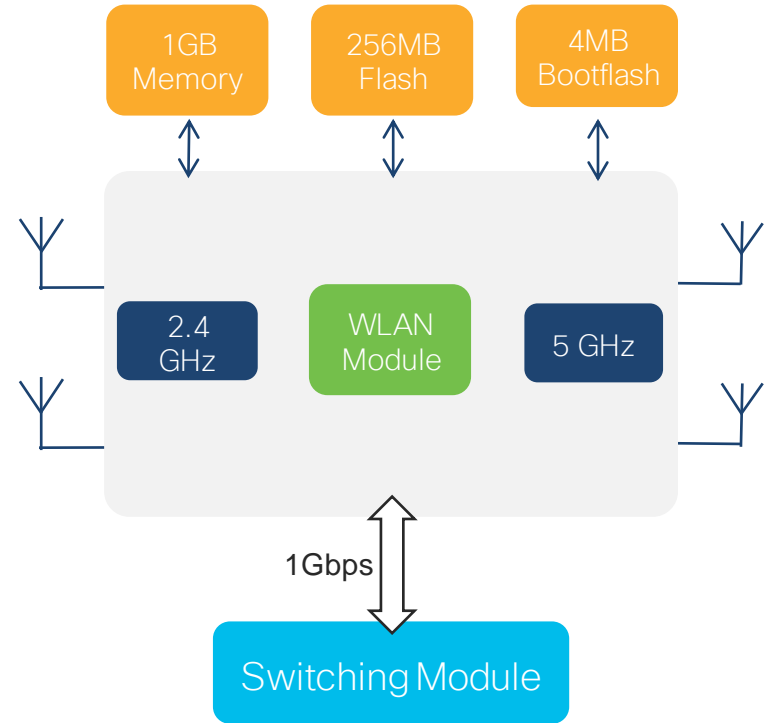
Wireless LAN Software Overview

- Unified Mode and Mobility Express
- Software feature parity with the Cisco Aironet 1815i
    - Transmit Beam Forming
    - Band Select
    - Rogue AP Detection
    - Flexconnect
    - Spectrum Analysis instead of CleanAir
- 10 regulatory domains for C111x
    - –E, –B, –A, –Z, –N, –Q, –H, –R, –F, –D
- 5 regulatory domains for C1101 and C1109
    - –E, –B, –A, –Z, –Q, –D

Supported Wireless Domains for C1121	
E	Europe
B	North America
Z	Australia/Brazil New Zealand

Supported Wireless Domains for C1121X	
E	Europe
B	North America
Z	Australia/Brazil New Zealand
A	Canada

ME Setup on PC Step 2: Controller Setup CiscoAirProvision
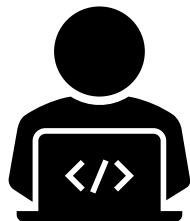
CAPWAP Setup with option
# VLAN hopping
DHCP   43
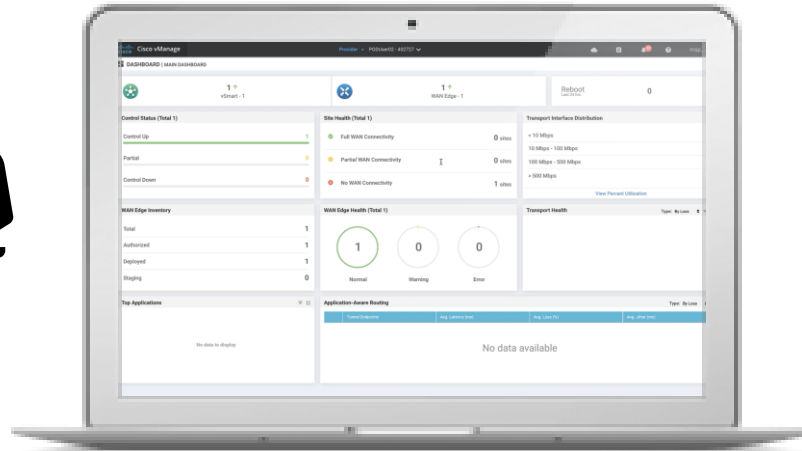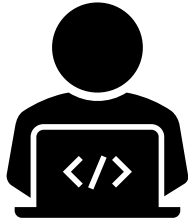
vManage

ADSL/VDSL2

- VDSL 2 Profiles 8a, 8b, 8c, 8d, 12a, 12b, 17a
- Theoretical speeds: 22Mbps – 150 Mbps*
- Supported Platforms
  - C1126-8PLTEP / C1126X-8PLTEP
  - C1127-8PLTEP / C1127X-8PLTEP
  - C1127-8PMLTEP / C1127X-8PMLTEP
  - C1116-4P / C1117-4P / C1117-4PM

DSL Interface

DSL Technology	C1127-8P	C1127-8PM	C1126-8P	C1117-4P	C1117-4PM	C1116-4P
Multi-mode over POTS, Annex A	Yes	–	–	Yes	–	
Multi-mode over POTS, Annex M	–	Yes	–	–	Yes	–
Multi-mode over ISDN, Annex B/J	–		Yes	–		Yes

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G.FAST/VDSL2

- Supports G.FAST and VDSL2

- Profile 35b, 106a, 106b

- Theoretical speeds: 150Mbps – 1Gbps*

- Supported Platforms
  - C1113-8P / C1113-8PM
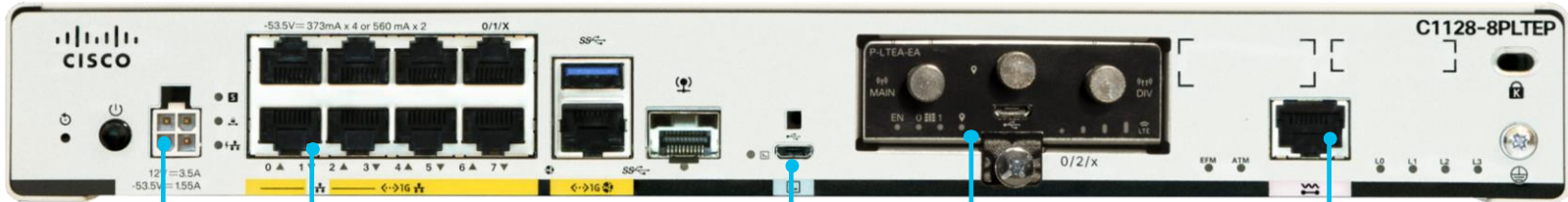 - C1112-8P

DSL Interface
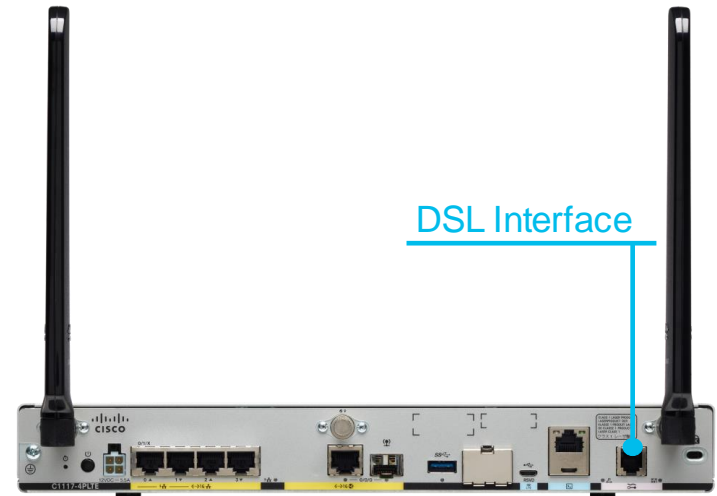
DSL Technology	C1113-8P	C1113-8PM	C1112-8P
Multi-mode over POTS, Annex A	Yes	–	–
Multi-mode over POTS, Annex M	–	Yes	–
Multi-mode over ISDN, Annex B/J	–	–	Yes

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G.SHDSL

- Performance up to 15.36 Mbps*

- Supported Platforms
  - C1118-8P / C1128-8PLTEP

Status and physical security
- Status LED
- Power button
- Reset button
- Power connector

Data Interfaces
- 4 PoE or 2 PoE+ Capable Ethernet LAN
- RJ45/SFP GE WAN

Management Interface
- USB 3.0, Type A
- Micro-USB
- LTE Debug Port, Micro-USB
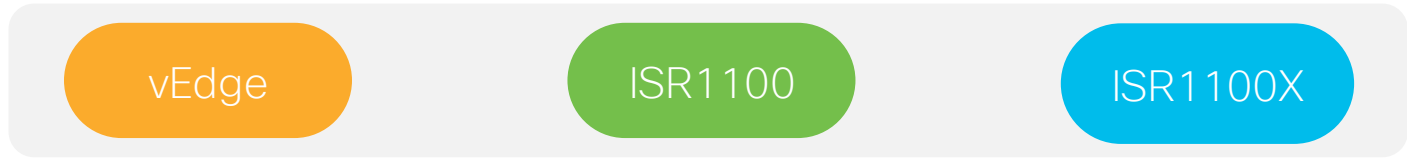
LTE Technology
- CAT 4/6/18 Pluggable

G.SHDSL

ISR1100X Platform for SD-WAN Branch
Bridge to Feature Rich SD-WAN from Viptela OS

ISR1100 and ISR1100X Series Platform Evolution

NEW

|	vEdge	ISR1100	ISR1100X
	vEdge 100B vEdge 100M vEdge 1000	ISR1100-4G ISR1100-4GLTE ISR1100-6G	ISR1100X-4G ISR1100X-6G
Ports	5 – 8 WAN ports	4 – 6 WAN ports	4 – 6 WAN ports
Operating System	Viptela OS	Viptela OS, Upgradable to IOS-XE SD-WAN	Viptela OS or IOS-XE SD-WAN
DRAM	2 - 4 GB DRAM	4 GB DRAM	8 GB DRAM
Feature Support	Basic SD-WAN	Basic SD-WAN with Viptela OS, Feature rich SD-WAN with IOS-XE	Basic SD-WAN with Viptela OS, Feature rich with full Security SD-WAN with IOS-XE
Scale	Up to 1500 IPsec and GRE Tunnels	Up to 1500 IPsec and GRE Tunnels	Up to 3000 IPsec and GRE Tunnels

Superior Hardware

Branch Security

Cisco ISR1100 and ISR1100X Series Routers for SD-WAN

Integrated Rich Services

Forward Error Correction, TCP Optimization
& Packet Duplication, SGT Propagation, SD-AVC
Custom Applications

Advanced Mobility

Integrated LTE (Cat 4)
USB Dongle for non-LTE SKUs (Viptela OS only)
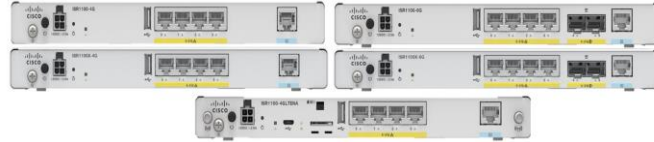
High Performance & Scale

Up to 428Mbps of IPsec IMIX performance
Dynamic Core Allocation
Up to 3000 IPsec and GRE Overlay Tunnels

Comprehensive Security

IPS
URL Filtering
Advanced Malware Protection
Enterprise FW with Application Awareness
DNS/Web-Layer Security (Umbrella)
Umbrella SIG

Full Featured SD-WAN

Rich Services with Enhanced Performance

| Ethernet/LTE | 8GB DDR4 (ISR1100X Series) | XE SD-WAN/ Viptela OS |

Manageability

vManage

Open APIs   Analytics

Cisco ISR1100X Series Routers
Bridge to Feature Rich SD-WAN from Viptela OS

XE SD-WAN 17.4.1a or Viptela OS 20.4.1 onwards

NEW

ISR1100X–4G

8GB DRAM

8GB Flash

4x1GE Ethernet

ISR1100X–6G

8GB DRAM

16GB Flash

4x1GE Ethernet
2x1GE SFP

SD-WAN to the branch

Cisco ISR1100 Series Routers
Bridge to Feature Rich SD-WAN from Viptela OS

4GB DRAM

8GB Flash

4x1GE Ethernet

2x1GE SFP (ISR1100-6G)

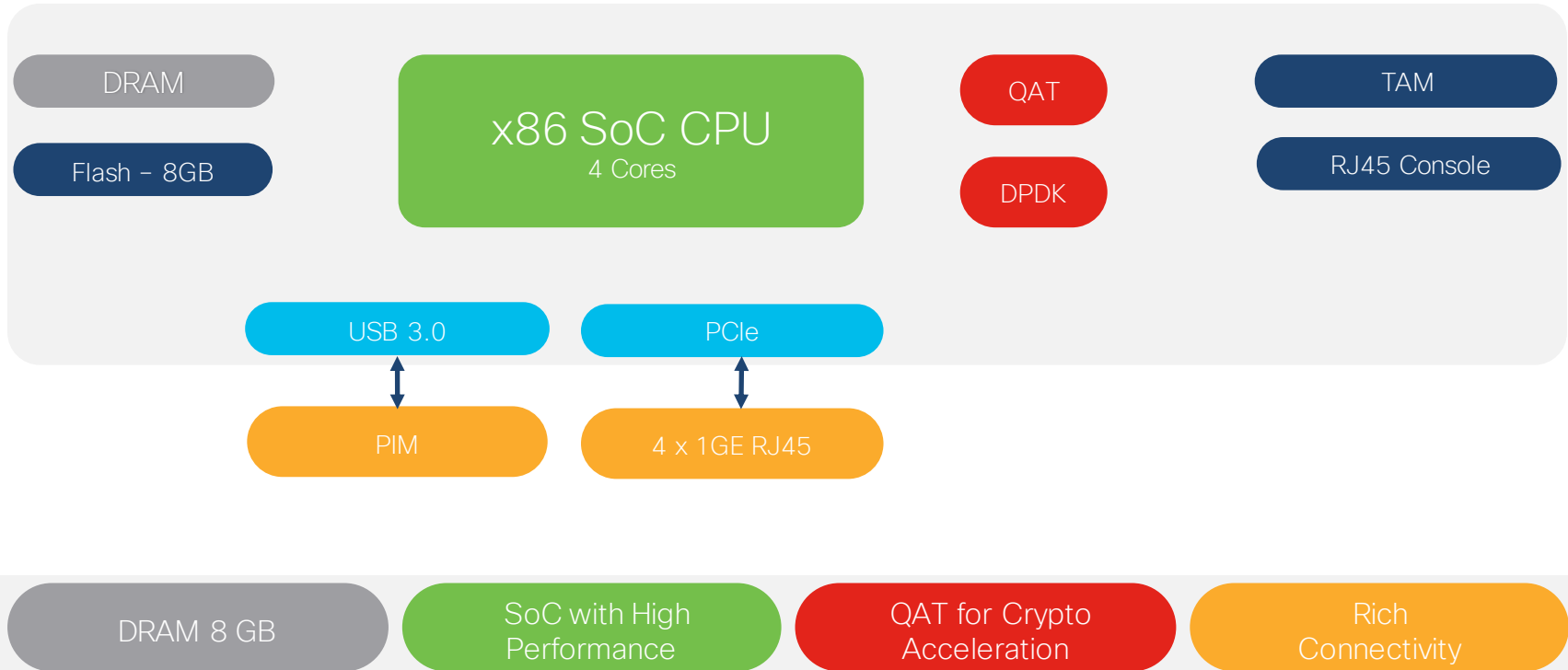Integrated LTE (ISR1100-4GLTE)

ISR1100−4G

ISR1100−6G

ISR1100−4GLTE
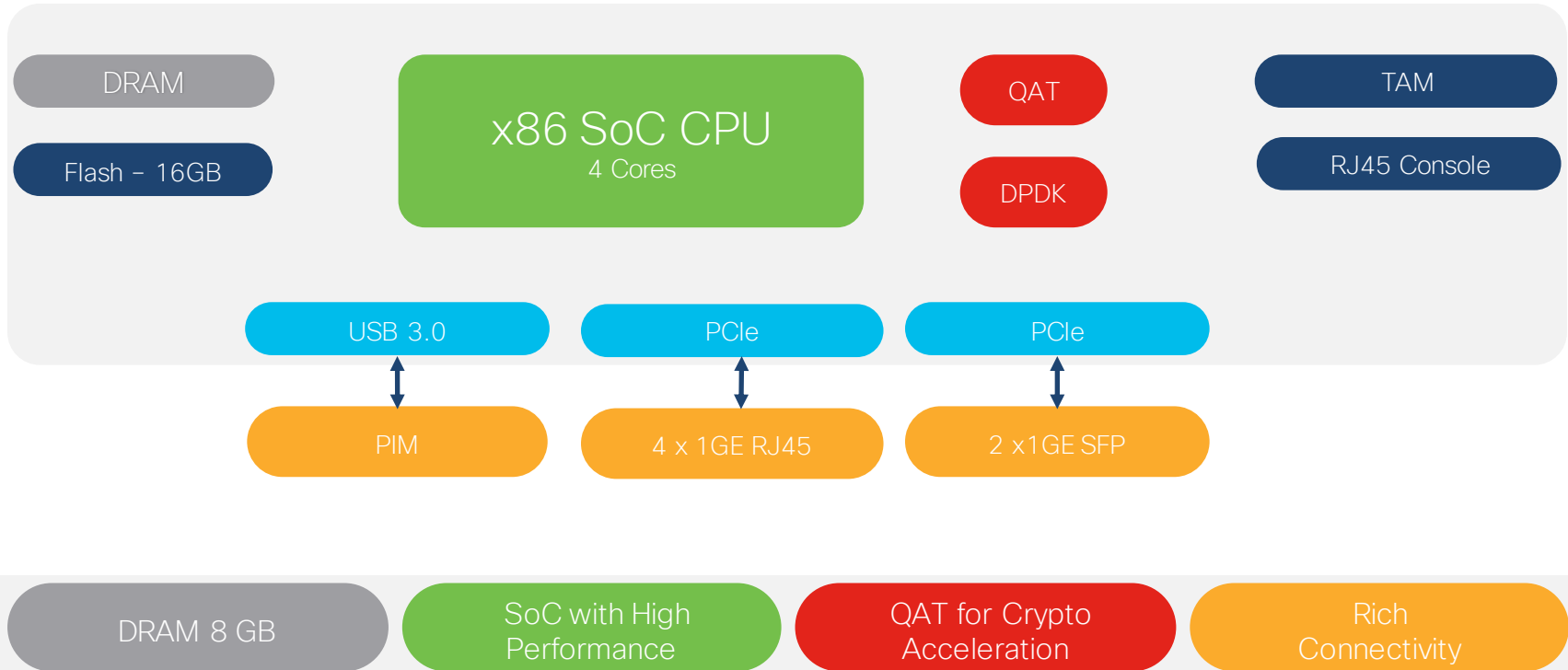

SD-WAN to the branch

Cisco ISR1100X-4G Series Routers Block Diagram

Cisco ISR1100X-6G Series Routers Block Diagram

DRAM

Flash – 16GB

x86 SoC CPU
4 Cores

QAT

DPDK

TAM

RJ45 Console

USB 3.0

PCIe

PCIe

PIM

4 x 1GE RJ45

2 x1GE SFP

DRAM 8 GB

SoC with High Performance

QAT for Crypto Acceleration

Rich Connectivity

ISR1100-4G vs ISR1100X-4G
Product Comparison

ISR1100-4G
CPU: x86 2.2GHz 4-core
Memory: 4GB DDR4, ECC
Bulk Flash: 8GB eMMC pSLC
WAN Ports: 4x GE
Integrated LTE US and Global): No USB Dongle support (Viptela OS only)
Console: 1x RJ45
USB Type A: USB3.0, 4.5W
Power supply: External Adapter, 30W
Form Factor: 10.2" x 7" x 1.1"

ISR1100X-4G
CPU: x86 2.2GHz 4-core
Memory: 8GB DDR4, ECC
Bulk Flash: 8GB eMMC pSLC
WAN Ports: 4x GE
Integrated LTE (US and Global): No USB Dongle support (Viptela OS only)
Console: 1x RJ45
USB Type A: USB3.0, 4.5W
Power supply: External Adapter, 30W
Form Factor: 10.2" x 7" x 1.1"

ISR1100-6G vs ISR1100X-6G
Product Comparison

ISR1100-6G
4-core x86 CPU
Memory: 4GB DDR4, ECC
Bulk Flash: 8GB eMMC pSLC
WAN Ports: 4x GE + 2x SFP (6 individual ports)
Integrated LTE (US and Global): No USB Dongle support (Viptela OS only)
Console: 1x RJ45
USB Type A: USB3.0, 4.5W
Power supply: External Adapter, 30W
Form Factor: 10.2" x 7" x 1.1"

ISR1100X-6G
4-core x86 CPU
Memory: 8GB DDR4, ECC
Bulk Flash: 16GB eMMC pSLC
WAN Ports: 4x GE + 2x SFP (6 individual ports)
Integrated LTE (US and Global): No USB Dongle support (Viptela OS only)
Console: 1x RJ45
USB Type A: USB3.0, 4.5W
Power supply: External Adapter, 30W
Form Factor: 10.2" x 7" x 1.1"

XE SD-WAN vs Viptela OS Comparison
ISR1100X – Bridge to Feature Rich SD-WAN from Viptela OS

XE SD-WAN Benefits

Comprehensive Security now available on ISR1100X Series Routers with XE SD-WAN

SD-WAN Security	Features	Viptela OS				IOS-XE SD-WAN			
		1100-4G	1100X-4G	1100-6G	1100X-6G	1100-4G	1100X-4G	1100-6G	1100X-6G
	IPS	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢
	URL Filtering	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢
	AMP	🔴	🔴	🔴	🔴	🔴	🟢	🔴	🟢
	ENT FW	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
	DNS Web Layer Security (Umbrella)	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
	TCP Optimization	🟢(BBR1)	🟢(BBR1)	🟢(BBR1)	🟢(BBR1)	🔴	🟢(BBR2)	🔴	🟢(BBR2)
	IPv6	🔴**	🔴**	🔴**	🔴**	🟢	🟢	🟢	🟢
	SGT Propagation	🔴	🔴	🔴	🔴	🟢	🟢	🟢	🟢
	SD-AVC	🔴	🔴	🔴	🔴	🟢	🟢	🟢	🟢
	Custom App	🔴	🔴	🔴	🔴	🟢	🟢	🟢	🟢
	Service side NAT	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢
	Route Leaking	🟢	🟢	🟢	🟢	🟢	🟢	🟢	🟢

*Viptela OS supports only Prefix, Protocol, Port based matches conditions, however IOS-XE SD-WAN supports App based match along with 5-tuple match
**Viptela OS supports Static IPv6 addressing on Transport side
Please check Cisco documentation on exact details around feature support
BBR– Bottleneck Bandwidth & Round-trip propagation time

Polling Question #2

ISR1100-4G/6G routers can be migrated to IOS-XE supporting controller mode from which release?

- 17.3
- 17.4
- 17.5
- 17.6

Upgrading ISR1100 and ISR1100X Series Routers

Pre 20.4/17.4

Until 20.4/17.4 release:
- ISR1100-4G, ISR1100-4G-LTE, ISR1100-6G can be deployed with Viptela OS for the pure play SD-WAN use cases
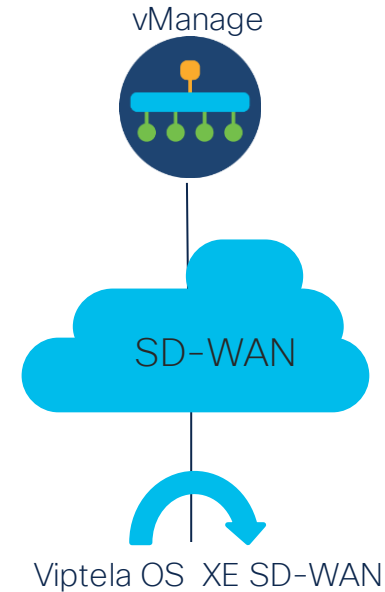- Minimum software release supported on these platforms is Viptela OS 19.2

With 20.4/17.4

Starting with 20.4/17.4:
- We have option to run the XE SD-WAN code on ISR1100 and ISR1100X series routers and leverage all services such as Security, AppQoE, SD-AVC which are supported on IOS-XE SD-WAN software
- Minimum software release supported on ISR1100X series routers is Viptela OS 20.4 or XE SD-WAN 17.4
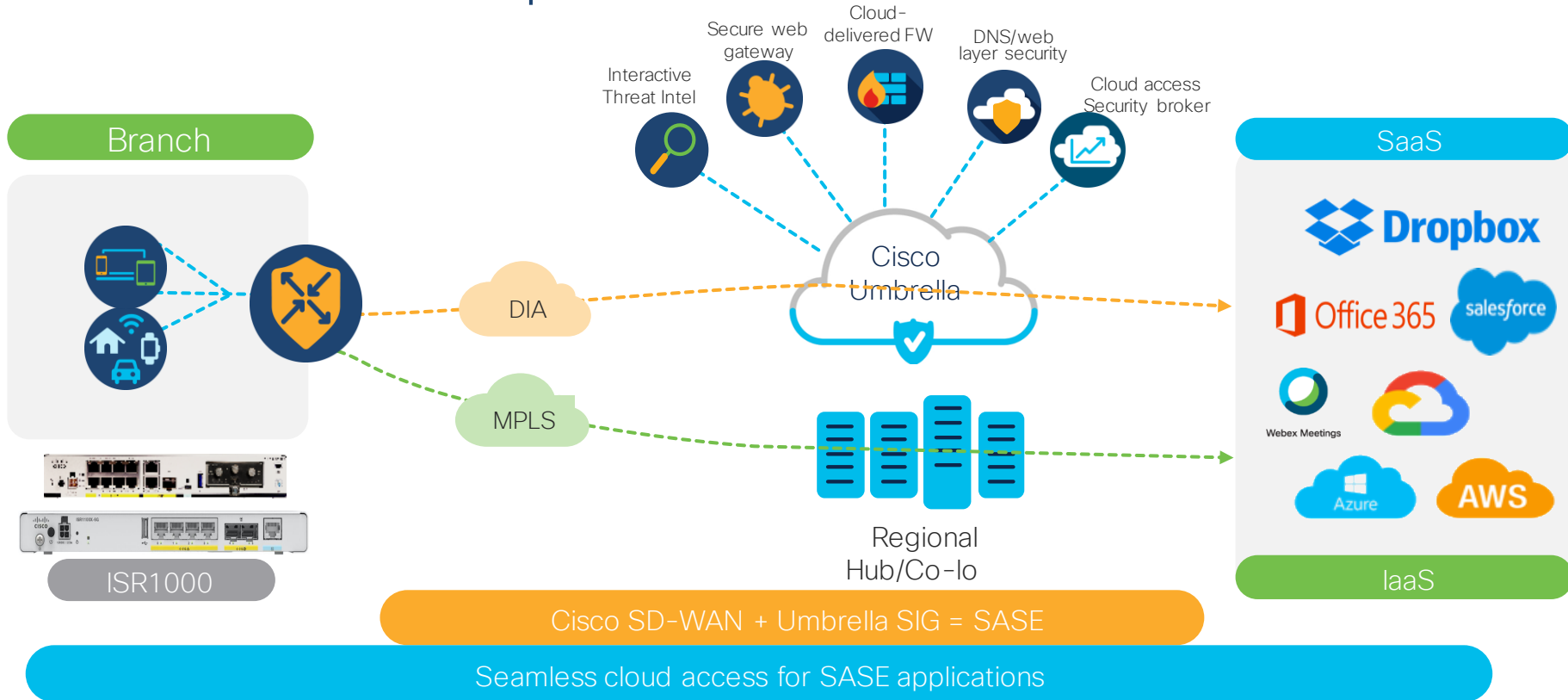
Prerequisites

ISR1100 router should be first upgraded to 20.4 Viptela OS code to upgrade the firmware and then we can migrate to XE SD-WAN 17.4 code
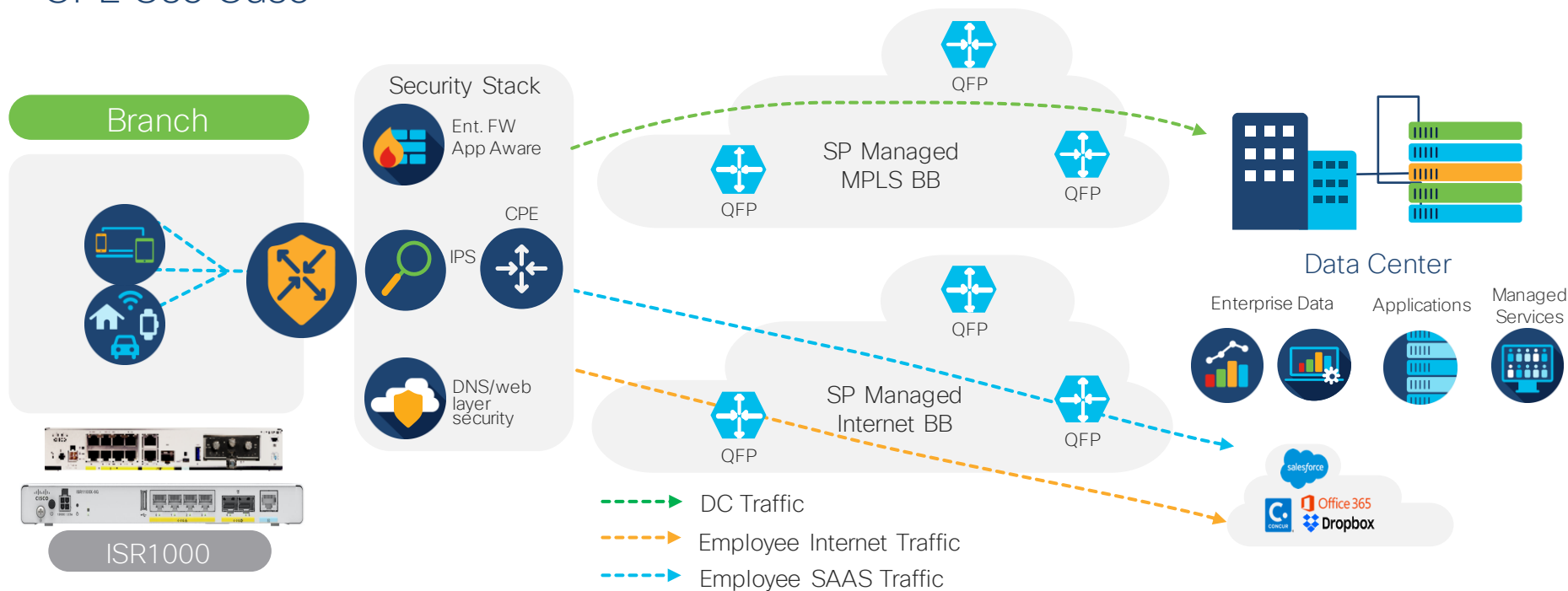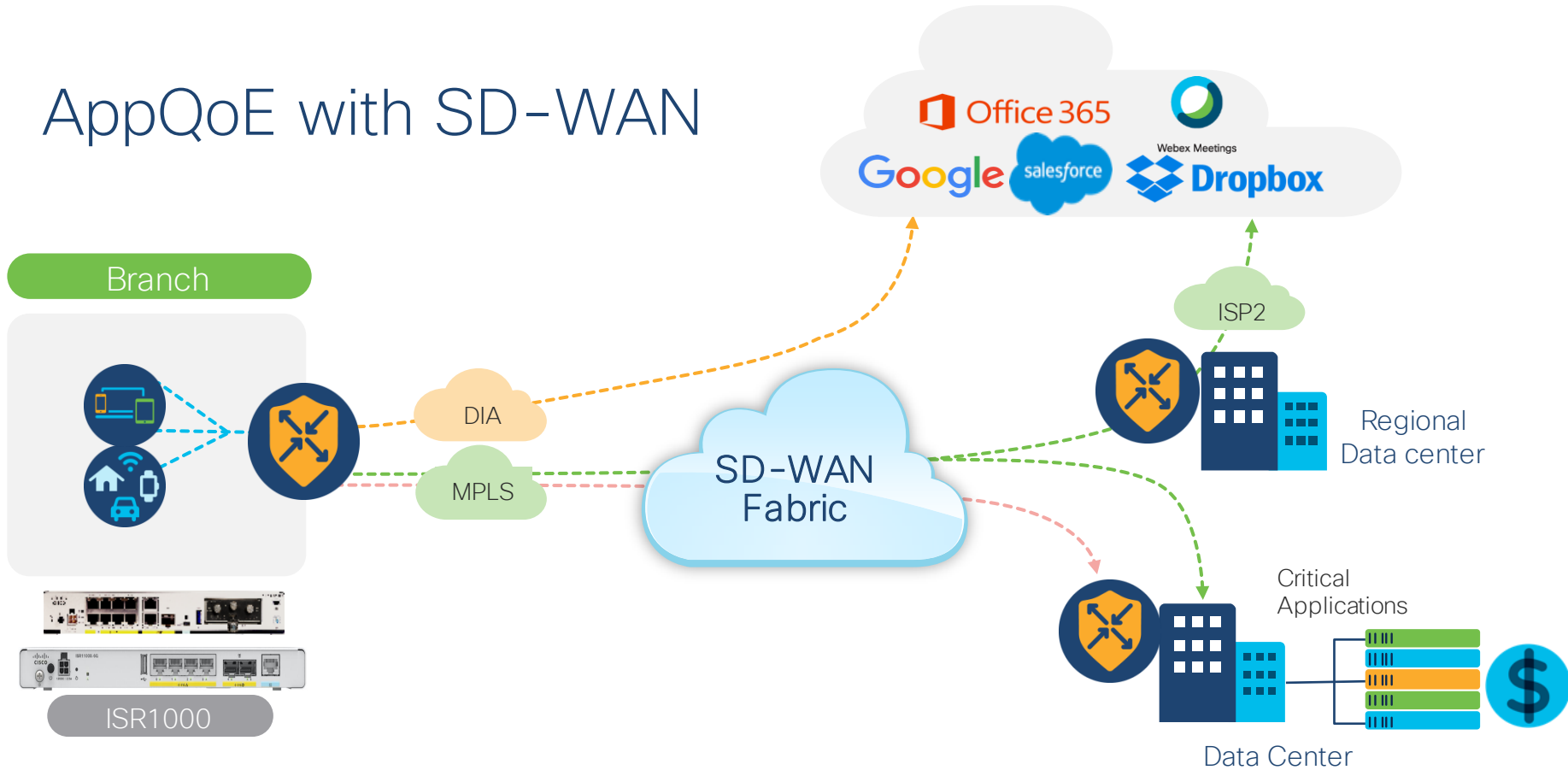
vManage

SD-WAN

Viptela OS XE SD-WAN

Only Controller Mode is supported with support of
XE SD-WAN. Autonomous Mode is not supported.

Use Cases

SASE Cloud Adoption with SD-WAN

Interactive Threat Intel

Secure web gateway

Cloud-delivered FW

DNS/web layer security

Cloud access Security broker

Branch

Cisco Umbrella

SaaS

DIA

MPLS

Regional Hub/Co-lo

ISR1000

Dropbox

Office 365

salesforce

Webex Meetings

Azure

AWS

IaaS

Cisco SD-WAN + Umbrella SIG = SASE

Seamless cloud access for SASE applications

Managed Service Providers
CPE Use Case

Branch

Security Stack

Ent. FW
App Aware

CPE

IPS

DNS/web
layer security

ISR1000

QFP

SP Managed
MPLS BB

QFP

QFP

QFP

SP Managed
Internet BB

QFP

QFP

QFP

Data Center

Enterprise Data   Applications   Managed Services

salesforce
CONCUR   Office 365   Dropbox

- - - - ▶ DC Traffic
- - - - ▶ Employee Internet Traffic
- - - - ▶ Employee SAAS Traffic

High Performance, SP Managed Network, SP Managed Services

AppQoE with SD-WAN

Branch

ISR1000

DIA

MPLS

SD-WAN Fabric

Office 365
Google
salesforce
Webex Meetings
Dropbox

ISP2

Regional Data center

Critical Applications

Data Center

TCP Optimization, Forward Error Correction, Packet Duplication, Enhanced Application Quality experience

Remote Worker: Zero Touch Deployment

Home Office

ISR1000

Security Stack

- Ent. FW App Aware
- IPS
- AMP
- DNS/web layer security
- URL Filtering

LTE

Ethernet

DIA

SD-WAN Fabric

Cisco Umbrella

Data Center

salesforce
CONCUR
Office 365
Dropbox
Webex Meetings
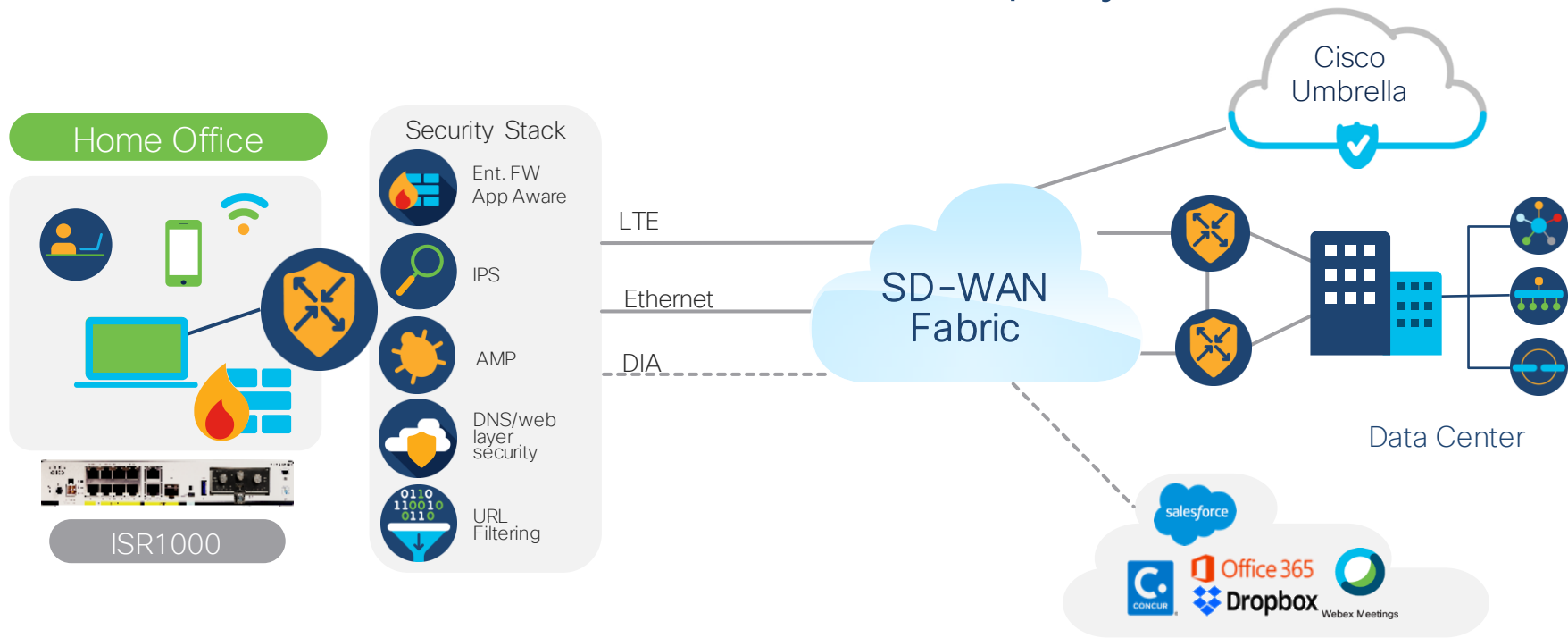
Integrated Security, Visibility & Analytics, Cloud OnRamp for SaaS, Office in a Box (WiFi + LTE)

Unified Throughput Test Methodology
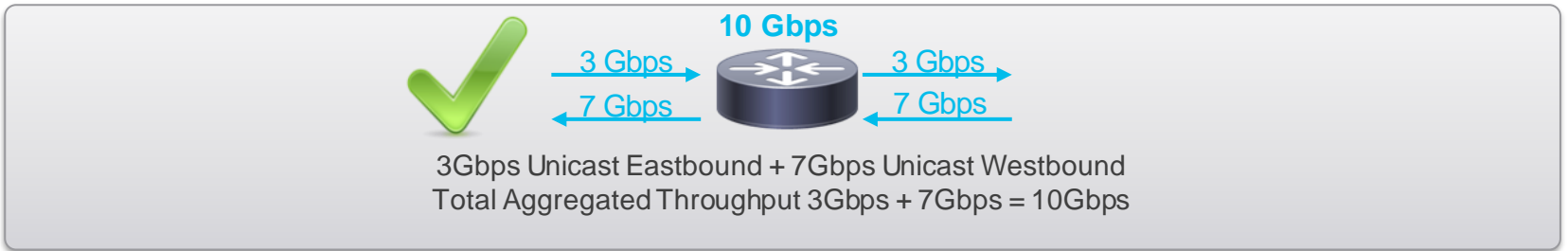
Polling Question #3

ISR1K published throughput numbers are always:
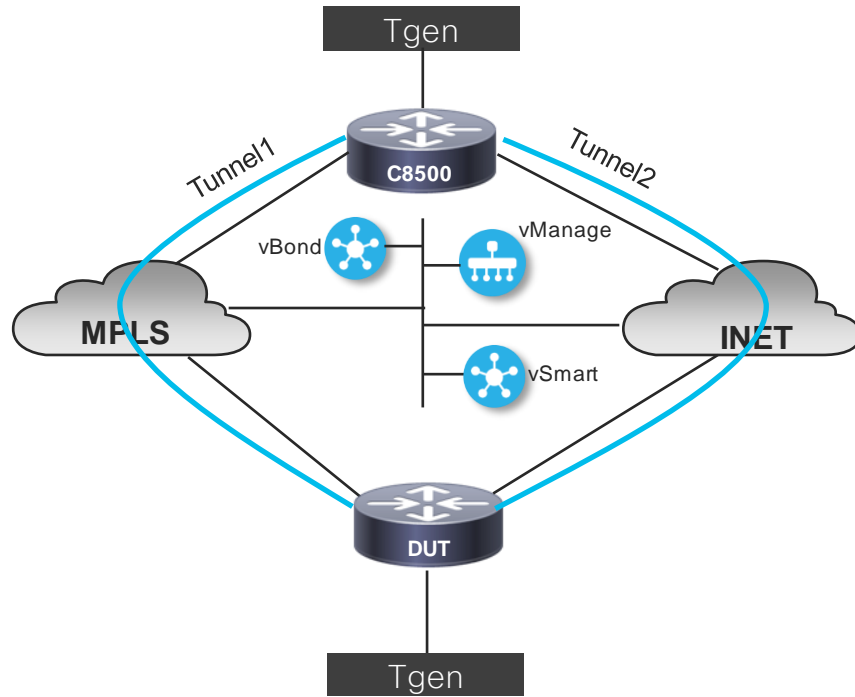
- Aggregated
- Unidirectional

Throughput Definition

The posted result is aggregated throughput.

For example, a platform is measured with 10Gbps throughput, that is aggregated throughput which could be 3Gbps eastbound + 7Gbps westbound.

10 Gbps

3 Gbps   3 Gbps

7 Gbps   7 Gbps

3Gbps Unicast Eastbound + 7Gbps Unicast Westbound
Total Aggregated Throughput 3Gbps + 7Gbps = 10Gbps

SD-WAN Testbed Topology

- DUT– Device Under Test
- Tgen: Traffic Generator
- Bi Directional Traffic
- Test Duration - 120 seconds
- No Drop Rate (NDR)

Traffic Profiles – Packet Sizes

Packet Size	IPv4 Unicast
Small Packets	64B/72B*
IMIX	64B/72B*, 594B, 1400B 7:4:1 ratio
Large Packets	1400B

* 72B for UDP frame in NAT/FW profiles

- Packet size is defined as Ethernet frame size:
  Ethernet Header (DMAC/SMAC/EtherType) + Ethernet FCS + IP Header

Traffic Profiles – Flows

100
Servers

Many to Many Flows
Bi Directional Traffic

1000
Clients
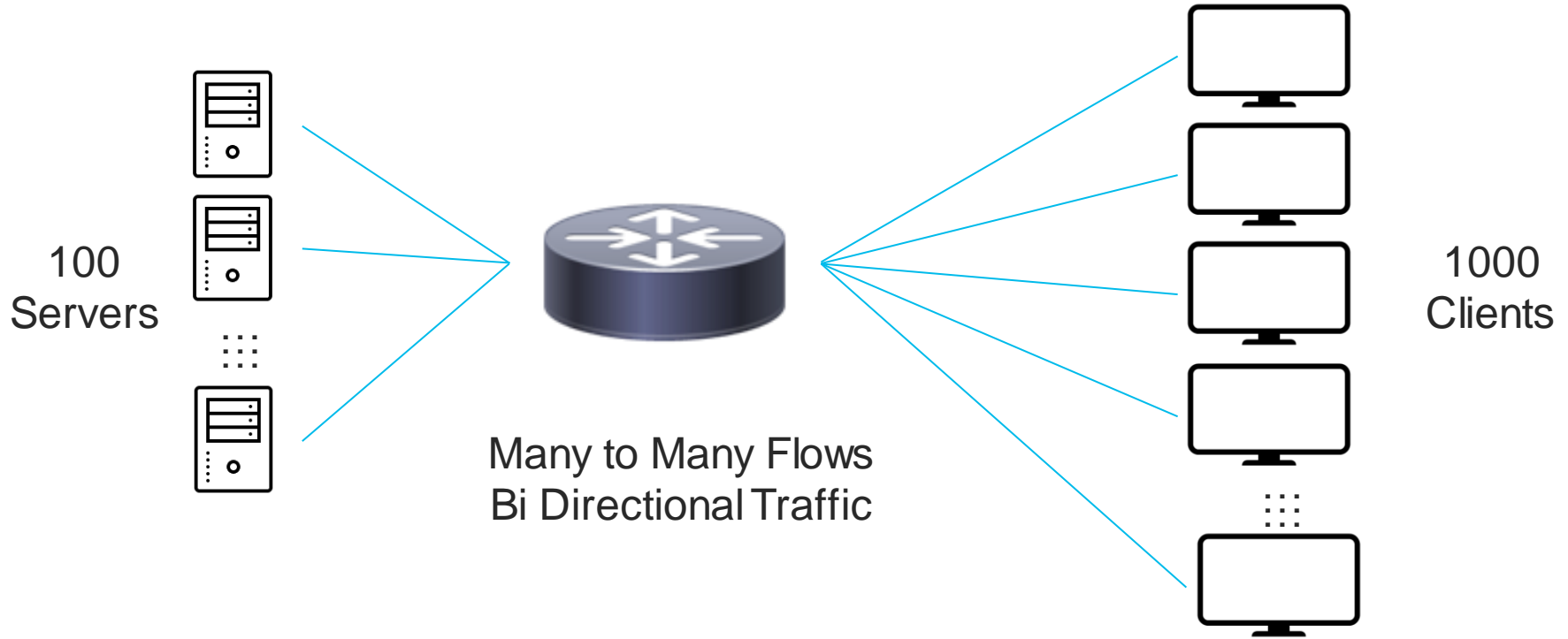
SD-WAN Throughput Profiles (1)

1. IPsec (v4, v6, v4mcast)

2. IPsec + QoS

3. IPsec + QoS + DPI + FNF (v4, v6, v4mcast)

4. IPsec + QoS + DPI + FNF + NAT

5. IPsec + QoS + DPI + FNF + ZBFW

6. IPsec + QoS + DPI + FNF + NAT + ZBFW

SD-WAN Throughput Profiles (2)

7. IPsec + QoS + DPI + FNF + ZBFW + IPS

8. IPsec + QoS + DPI + FNF + DIA-NAT50% + ZBFW

9. IPsec + QoS + DPI + FNF + DIA-NAT50% + ZBFW + IPS + URLF

10. IPsec + QoS + DPI + FNF + DIA-NAT50% + ZBFW + IPS + URLF + AMP + TG

11. IPsec+QoS+DPI+FNF+DIA-NAT50%+ZBFW+IPS+URLF+AMP+SSL proxy (DIA only)

12. IPsec+QoS+AppQoE with 250 msec latency

13. IPsec+QoS+DPI+FNF+AppQoE+DIA-NAT50%+ZBFW+IPS+URLF with 250 msec latency

Note 1: SD-WAN Security features set IPS, URLF, AMP and TG only apply to ISR4k and ISR1k (8GB DRAM) platform.

Note 2 : AppQoE will include BBR, Packet deduplication, DRE cache when available. Excluded FEC, because FEC and PktDup are mutually exclusive.

Note 3 : AppQoE features are applied on traffic from Branch(applied at source, not receive direction)

Non SD-WAN

DUT

- Bidirectional Traffic
- Test Duration - 120 seconds
- No Drop Rate (NDR) – zero packet drop on physical platforms.
- Packet Drop Rate (PDR) - 0.01%. In the virtual platforms it is common practice to set the PDR rate at 0.01% as there are external factors may cause packet drop, i.e. vSwitch, Hypervisor.

Ensure No Bottleneck on Supporting Devices

Traffic Profiles – Packet Sizes

Packet Size	IPv4 Unicast	IPv6 Unicast	IPv4 Multicast	IPv6 Multicast
Small Packets	64B/72B*	94B	64B	94B
IMIX	64B/72B*, 594B, 1400B*/1518B 7:4:1 ratio	94B, 594B, 1400B*/1518B 7:4:1 ratio	64B, 594B, 1518B 7:4:1 ratio	94B, 594B, 1518B 7:4:1 ratio
Large Packets	1518B 1400B* (IPsec)	1518B 1400B* (IPsec)	1518B	1518B

* 72B for UDP frame in NAT/FW profiles
* 1400B for IPsec to ensure no fragmentation

- Packet size is defined as Ethernet frame size:
  Ethernet Header (DMAC/SMAC/EtherType) + Ethernet FCS + IP Header

Non SD-WAN Throughput Profiles

1. CEF (v4, v6, mcast)

2. ACL

3. HQoS

4. GRE

5. PBR

6. FNF Optimized Mode

7. NAT

8. ZBFW

9. IPsec Multi Tunnels (v4, v6)

10. IPsec Single Tunnel (v4, v6)

11. IPsec + QoS + FNF + NBAR

12. IPsec + QoS + ACL + NAT + AVCPerfMon
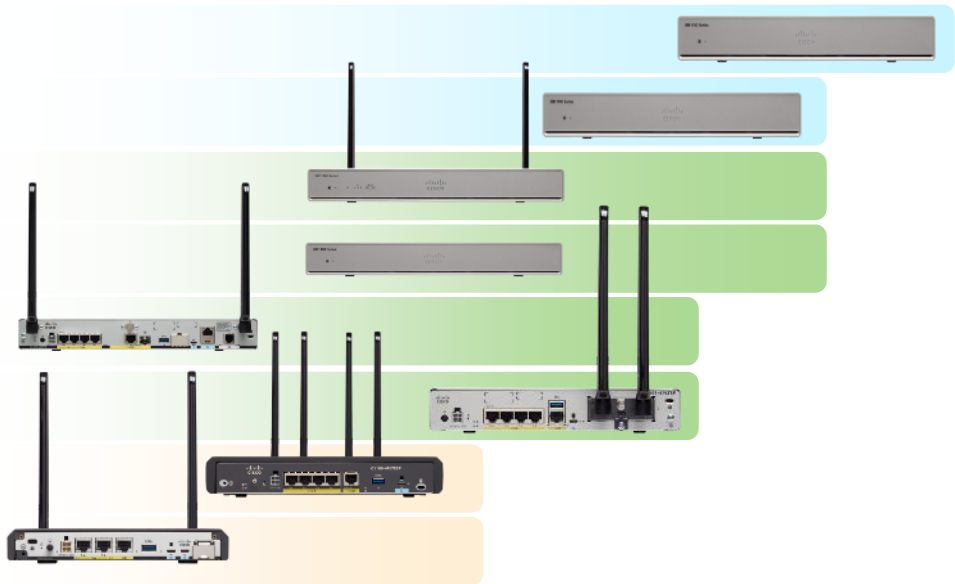
Public cloud instances are only tested with profile 1 and 10 with IPv4 unicast traffic

Cisco ISR 1000 Series Routers

https://salesconnect.cisco.com/#/program/PAGE-11288

Legend:
- SD-WAN
- LTE Pluggable
- SD-WAN Security
- DSL [G.FAST/35b]
- Wireless [ME]
- PoE/PoE+

** VDSL2, ADSL2+ only

* SD-WAN IMIX Perf

Model	Performance
ISR 1161X-8P	Up to 350 Mbps*
ISR 1121X-8P	Up to 290 Mbps*
ISR 111x-8P	Up to 290 Mbps*
ISR 1111X-8P	Up to 290 Mbps*
ISR 111x-4P	Up to 200 Mbps*
ISR 1101-4P	Up to 200 Mbps*
ISR 1109-4P	Up to 165 Mbps*
ISR 1109-2P	Up to 135 Mbps

M2M
Extended temperature & dual LTE

Remote Workers

Managed Service Provider CPE

Branch in a box

Cisco ISR 1000 – CEF Throughput

CEF Performance

ISR1109-2P

900 Mbps

ISR1109-4P

1 Gbps

ISR1101-4P

1.1 Gbps

ISR111x-4P

1.1 Gbps

ISR1111X-8P

1.6 Gbps

ISR1121X-8P

1.6 Gbps

ISR1161X-8P

1.89 Gbps
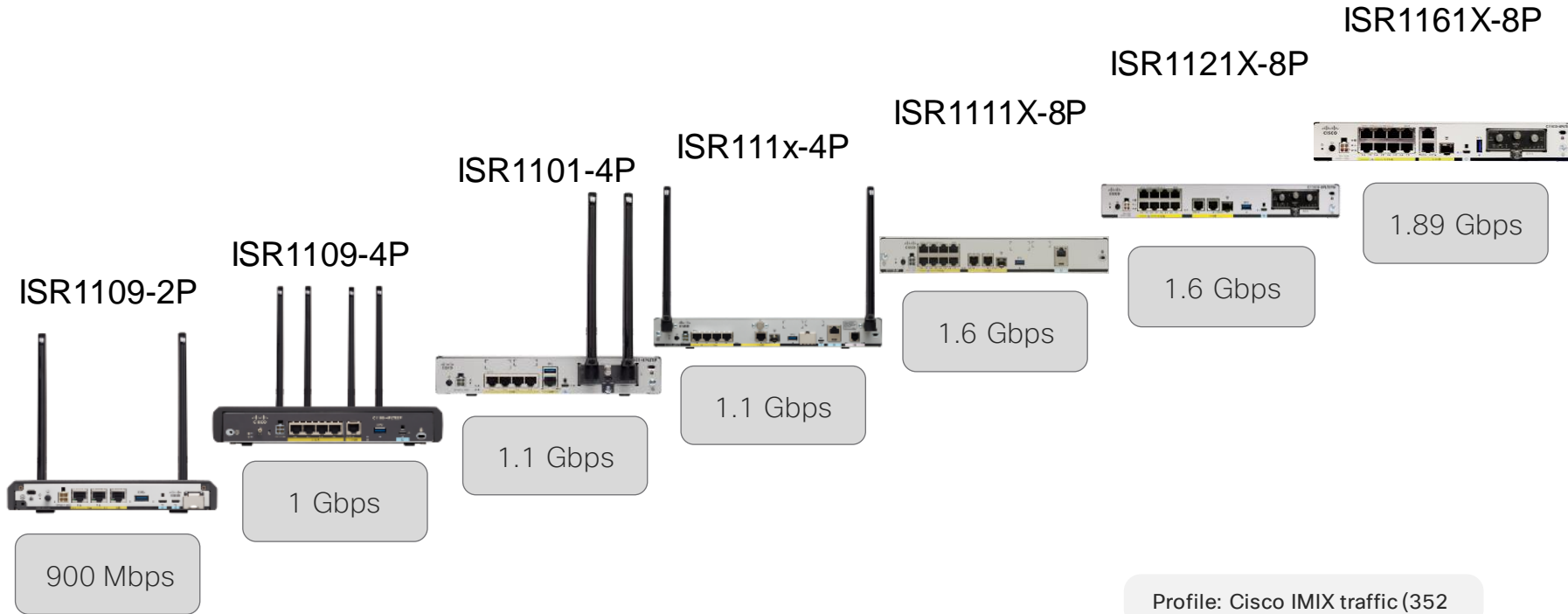
Profile: Cisco IMIX traffic (352 Bytes)

Cisco ISR 1000 – 1D Scale

IOS XE SD-WAN	C1161X-8P	C1121X-8P	C1121-4P	C1111X-8P	C1111-8P	C1111-4P	C1101-4P	C1109-4P	C1109-2P
IPsec Overlay Tunnels	200	200	200	200	200	200	200	200	200
GRE Overlay Tunnels	200	200	200	200	200	200	200	200	200
DPI Flows	32K	32K	32K	32K	32K	32K	32K	32K	32K
cFlows Entries	32K	32K	32K	32K	32K	32K	32K	32K	32K
OMP Routes (overlay)	120K	120K	120K	120K	120K	120K	120K	120K	120K
IPv4 Routes	120K	120K	120K	120K	120K	120K	120K	120K	120K

Higher Scale with XE SD-WAN

Cisco ISR1100 and ISR1100X Series Routers
Performance

	Legend
🔵	SD-WAN
🟢	Integrated LTE
🔵	SD-WAN Security
🟠	CAT4 USB Dongle (Viptela)

ISR1100X-6G up to 428 Mbps*

ISR1100X-4G up to 399 Mbps*

ISR1100-6G up to 428 Mbps*

ISR1100-4GLTE up to 399 Mbps*

ISR1100-4G up to 399 Mbps*

* SD-WAN IPsec IMIX Performance (Aggregate)

Better Performance with XE SD-WAN with SD-WAN Security

Cisco ISR1100 and ISR1100X Series Routers
Scale

	1100-4G	1100X-4G	1100-6G	1100X-6G
	Viptela OS			
IPsec Overlay Tunnels	247	250	1500	1500
GRE Overlay Tunnels	247	250	1500	1500
DPI Flows	14K	14K	14K	14K
cFlows Entries	8K	8K	65K	65K
OMP Routes (overlay)	30K	30K	128K	128K
IPv4 Routes	30K	250K	128K	250K

1100-4G	1100X-4G	1100-6G	1100X-6G
IOS-XE SD-WAN			
250	500	1500	3000
250	500	1500	3000
50K	256K	50K	256K
50K	256K	50K	256K
200K	512K	200K	512K
256K	512K	256K	512K

Higher Scale with XE SD-WAN

Cisco 900 Series Integrated Services Routers
Enterprise-class Connectivity and Security

Ease to Deploy and Manage

Application Visibility & Control, QoS
Fixed, Compact Design
Cisco IOS

Advanced Connectivity

Ethernet
ADSL and VDSL
CAT4 LTE

High Performance

Up to 1.8 Gbps of CEF IMIX
Performance
Up to 250 Mbps of VPN Throughput

Integrated Security

High performance VPN
Firewall
Trustworthy Systems

Classic IOS Feature Set

| Fanless | 1GB RAM | SOHO/SMB |

Manageability

Cisco DNA Center   CCP Express

ISR900 Platform Overview

	ISR 921	ISR 926	ISR 927	ISR 931
CPU	x86	x86	x86	x86
Memory	1GB	1GB	1GB	1GB
Flash	2GB	2GB	2GB	2GB
WAN Ethernet	2 GE	1 GE	1 GE	2 GE
Managed Switch Ports	4 GE	4 GE	4 GE	4 GE
VDSL2/ADSL2/2+	No	Yes	Yes	No
LTE	Cat4	Cat4	Cat4	Cat4
Voice	No	No	No	No
PoE	No	No	No	No
VLANs	50	50	50	50
Console Ports	RJ45	RJ45	RJ45	RJ45
Power supply	Internal	External	External	Internal
USB	1 USB 2.0	1 USB 2.0	1 USB 2.0	1 USB 2.0
Mounting	Desk/Rack	Desk/Rack	Desk/Rack	Desk/Rack

How to read ISR 900 PID

4 x GE-LAN

Regions

C 927 – 4P / 4PM / 4PMLTEGB

Cisco

Product Type

1 GE WAN + 1 ADSL2/2+/VDSL – Annex M + 4 x GE-LAN

Integrated CAT4 LTE
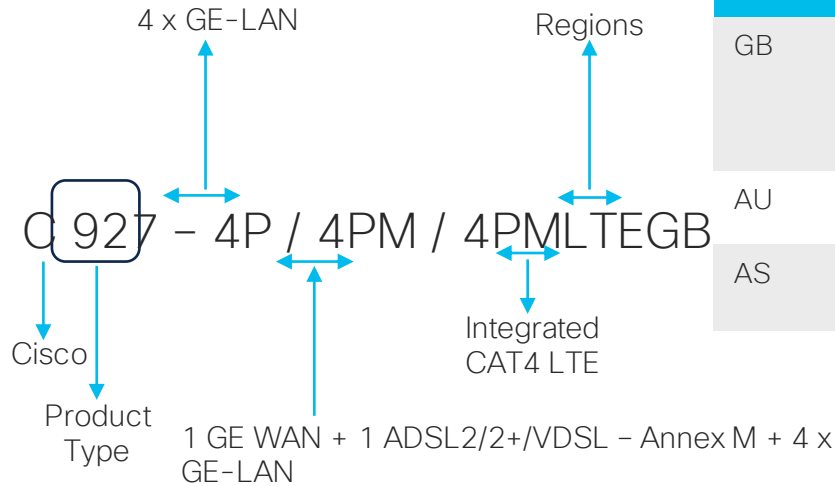
	LTE	Regions
GB	Global	Mexico, Europe, Middle East with specific LTE bands/frequencies
AU	Australia	Australia
AS	Asia	China, India, Southeast Asia

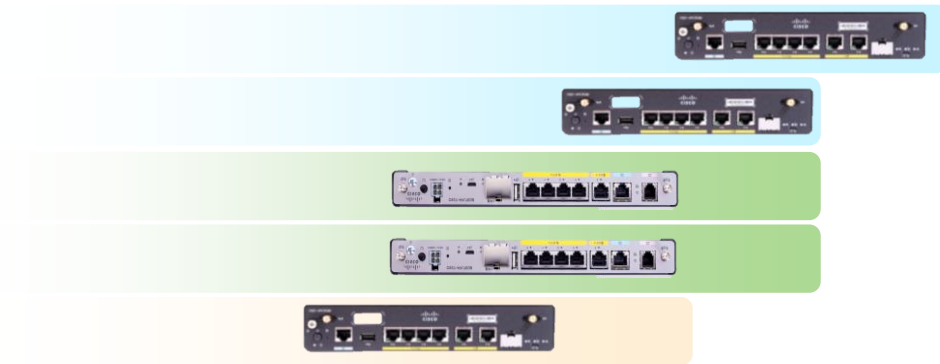| Product Type	
C921 / C931	ISR900 series router with Dual GE WAN
C926	ISR900 series router with 1 GE WAN+ 1 ADSL2/2+/VDSL – Annex B,J
C927	ISR900 series router with 1 GE WAN+ 1 ADSL2/2+/VDSL – Annex A

Cisco ISR 900 Series Routers

CAT4 only
VADSL2 and ADSL2+

| | | LTE (one SIM) |
| | | DSL [G.FAST/35b] |

* IPsec IMIX on IOS

C921-4P Up to 120 Mbps*

C926-4P Up to 120 Mbps*

C927-4P Up to 120 Mbps*

C927-4PM Up to 120 Mbps*

C931-4P Up to 205 Mbps*

| SOHO | Managed Service Provider CPE | Small Business | Metro Ethernet |

Cisco 800 Series Integrated Services Routers
Enterprise–class Connectivity and Security

Ease to Deploy and Manage

Application Visibility & Control, QoS
Fixed, Compact Design
Cisco IOS

Connectivity

Gigabit/Fast Ethernet
ADSL and VDSL
CAT4 LTE

High Performance

Up to 170 Mbps Performance

Integrated Security

High performance VPN
Firewall
Trustworthy Systems

Classic IOS
Feature Set

Fanless

256MB to 1GB
RAM

SOHO/SMB

Manageability

Cisco Prime

CCP Express

APIC-EM

ISR 800 Migration Options

ISR 900

- Increased Throughput – 200 Mbps IPsec
- No SD-WAN
- LTE – 150 Mbps/50 Mbps
- No Voice Support
- No PoE Support
- Not available for sale in USA

ISR 1000

- Higher Throughput – 580 Mbps IPsec
- SD-WAN / non SD-WAN use cases
- LTE Advanced Pro – 1.1 Gbps/200 Mbps
- Voice support
- PoE/PoE+ support
- Security – UTD, Firewall, Umbrella

Multiple Migration Options Available with Investment Protection

ISR 800 vs ISR 900 vs ISR 1000 – Product Comparison

	ISR 800	ISR 900	ISR 1000
CPU	Dual Core	Dual Core	4 Core
Memory	256MB – 1GB	1GB	4GB/8GB
Flash	128 MB to 256 MB	2GB	4GB/8GB/16GB
WAN Ethernet	GE / FE	GE	GE
Managed Switch Ports	FE	GE	GE
VDSL2/ADSL2/2+	Yes	Yes	Yes
LTE	Cat4	Cat4	USB Dongle, Cat4|6|18
Voice	Yes	No	Yes
PoE	Yes	No	Yes
Power supply	External	Internal / External	External
USB	1 USB 2.0	1 USB 2.0	1 USB 3.0
Mounting	Desk/Rack	Desk/Rack	Desk/Rack/Wall
OS	Classic IOS	Classic IOS	IOS-XE
SD-WAN	No	No	Yes

Software Features – ISR 800 vs ISR 900

Feature	ISR 800	ISR 900
OS	Cisco IOS Classic	Cisco IOS Universal Image
Cisco Plug-and-Play (PnP)	✔	✔
RIPv1/v2	✔	✔
EIGRP	✔	✔
BGP	✔	✔
OSPF	✔	✔
IPv6	✔	✔
PFR	✔	✔

FYI

Software Features – ISR 800 vs ISR 900

Feature	ISR 800	ISR 900
VLANs	25 VLANs	50 VLANs
Storm Control	✔	✔
SPAN	✔	✔
PoE/PoE+	✔ *	✘
MAC Filtering	✔	✔
802.1x	✔	✔
Port Security	✔	✔
Protected Port	✔	✔

FYI

*PoE is only supported on the ISR 880, 890

Software Features – ISR 800 vs ISR 900

FYI

Feature	ISR 800	ISR 900
CME	✅	❌
SRST	✅	❌
CUBE	✅	❌
LLQ	✅ C880 & C890	✅
WFQ	✅ C880, C890 & C860	✅
CBWFQ	✅ C880, C890 & C860	✅
CBWRED	✅ C880 & C890	✅
Hierarchical QoS (HQoS)	✅ C880 & C890	✅

Software Features – ISR 800 vs ISR 900

FYI

Feature	ISR 800	ISR 900
GETVPN	✔	✔
DMVPN	✔	✔
FLEXVPN	✔	✔
Stateful Firewall	✔	✔
Site – to –Site VPN	✔ (Only ISR 860 & ISR 880)	✔
GRE	✔ Only ISR 860, 880 & 890	✔
IPsec	✔ Only ISR 860, 880 & 890	✔
MACSEC	✔ Only on ISR 890	✔

Software Features - ISR 800 vs ISR 900

FYI

Feature	ISR 800	ISR 900
L3VPN	✅	✅
L2VPN	❌	✅
NAT	✅ (With 880 & 890)	✅
NAT64	✅ (With C860, 880 & 890)	✅
802.11 Wireless	✅	❌
SD-WAN	❌	❌
Flexible Netflow	✅	✅

Software Features – ISR 900 vs ISR 800

FYI

Feature	ISR 800	ISR 900
Multicast Routing	✅ C880 – IPv4 & IPv6 Routing C890 – Yes	✅
IGMP	✅ C880 – IGMPv3 Snooping C890 – IGMPv3 Snooping	✅ (IGMP Version 3)
PIM	✅	✅
DVMRP	✅	✅
Centralized Management	✅	✅

Software Features – ISR 900 vs ISR 800

Feature	ISR 800	ISR 900
PnP	✔️ Minimum Version 15.5(3)M1	✔️ (NG PnP)
Smart Licensing	❌	❌
SNMP	✔️	✔️ Version 3
SYSLOG	✔️	✔️

Frequently Asked Questions

Does ISR1K support....?

- SGT
  - SGT Inline tagging is supported. Static SGACL is supported. SGACL enforcement is available only on WAN interface
  - From 17.5, static SGACL can be enforced on SVI as well
  - From 17.5, dynamic SGT assignment and SGACL on WAN and SVI from ISE will be supported.

- Voice
  - CUBE is supported, but only on IOS XE
  - From 17.6 SRST support will be added as well (IOS XE)

- VPN
  - EzVPN server only, IPsec VPN, DMVPN, GETVPN & FlexVPN

- VDSL2 35b
  - Only on G.FAST DSL platforms – C1112, C1113

- Embedded Security
  - Supports entire SD-WAN security stack – ZBFW, IPS/IDS, URL-Filtering, AMP/TG, DNS/Web Layer Security

- WiFi in SD-WAN
  - Yes for CAPWAP mode. Starting 17.6, ME can be configured via SD-WAN feature templates

- CAT4 USB LTE Dongle in SD-WAN
  - Currently on-track for 17.8 release image

- FirstNet (Band 14) for CAT18 LTE PIMs
  - Currently on-track for end of CY21

- Active-Active LTE
  - C1109 variants support 2 LTE PIMs each operating in active-standby mode, providing 2 active LTE connections simultaneously

EN Offers & Promotions

Level up to Catalyst 8000
Cisco Catalyst 8000 Upgrade Promotion
Offer Expires January 29, 2022

G2 to C8K Config Steps
Leverage LDoS for Install Base Migration

Step 1 - Choose C8300/8200 Bundle

Choose C8300 Bundle - Up to 28% discount
Choose C8200 Bundle - Up to 38% discount

Select Appropriate Platform Bundle
ISR 3900/ISR4400 to C8300 (C8300-DNA-PM21)
ISR 2900/ISR4300 to C8200 (C8200-DNA-PM21)

Step 3 – Choose Cisco DNA

Minimum 3Y Cisco DNA

- C8300 Bundle : Tier1/Tier2 Cisco DNA
- C8200 Bundle : Tier0/Tier1 Cisco DNA

Step 2 - Add a module (if applicable)

Switch Module[1]   O R   Cellular Module

[1] Offer 22P on Modules : Applicable for C8300

Step 4 – SmartNet

- Device Management (SmartNet Portal)
- Advance Hardware Replacement
- TAC Support
- Software Updates

First Year on Cisco
Purchase Cisco DNA Licenses at a Lower Price
Offer Expires January 29, 2022

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CISCO
The bridge to possible

What is the Cisco SD-WAN "First Year On Cisco" offer?

For customers who have already bought qualified Cisco SD-WAN capable routers, Cisco is offering a limited-time opportunity to purchase Cisco DNA licenses at a significantly lower cost.

The first 12 months on 3-year licenses are completely free!
Even better, 5-year licenses get 20 months, and
7-year licenses get 28 months, all on us.

The best time to buy Cisco SD-WAN is now.

Remote worker SD-WAN offer: Executive summary

What	
	• Price optimized Cisco ISR 1101 and 1121X options with Wi-Fi and LTE Bundles
	• Offer based on DNA Essentials. Optional upgrade to DNA Advantage (Cloud-OnRamp, vAnalytics, and advanced security)
	• Optional integration with Umbrella SIG Essentials

Why	
	• Extend existing enterprise infrastructure to the home office environment
	• Centralized management and monitoring ensuring consistent policy and security across remote workers
	• Migrate toward a SASE framework with cloud-based security

How	
	• Flexible consumption model based on 12 and 36 month terms
	• Compelling pricing to make SD-WAN a mainstream solution for home office and remote workers
	• Accelerate the adoption of remote work SD-WAN solution by offering lower TCO with higher capabilities

Offer matrix

	Cisco 1101 Integrated Service Router	Cisco 1121X Integrated Service Router	Licensing
Lan ports	4	8	Remote worker support for L2/3 routing (incl IPv6), essential security, basic S-DWAN & AppQoE
Wan ports	x1	X2 (1GE/SFP)	
LTE support	Pluggable Cat 6	Pluggable Cat 6 & Cat 18	
Wi-Fi support	802.11ac Wave 2		
PoE (PoE+) ports	0	4 (2)	
IPsec performance	300Mbps	400Mbps	
Essential security	Application aware firewall		
Advanced security	No	ISSL Proxy, URL-filtering, AMP	Remote worker advanced support for COR, vAnalytics, advanced on-prem Security
vAnalytics	Yes		
Cloud OnRamp	Yes		
Umbrella	Yes		Umbrella SIG essential

CISCO The bridge to possible

100on100 Offer
To support small scale deployments
Offer Expires January 29, 2022

Offer components

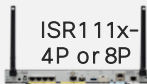ISR1K Platform configurations

Branch
(up to 250MB)

ISR111X-8P

ISR111x-4P or 8P

ISR1100-4G

ISR112x-8P

HQ
(up to 1G)

ISR1100-6G

ISR1161X-8P

Management

vBond

vManage

vSmart

vAnalytics

EPLUS Bundle with 15% discount

Cisco DNA-EPLUS
* See Technical Solution Guide for details

All the features of DNA-Essentials super-charged with advanced Analytics and Security

Cloud/Analytics

- Cloud OnRamp for SaaS: M365
- vAnalytics

Security/ Compliance

- Segmentation (3+1)
- Cisco AMP*
- URL filtering/SSL Proxy* Support

+ No Bandwidth Tier!*

*BW limited by router max

*8Gb DRAM & Boot Flash needed for advanced security
**SSL/TLS Proxy not supported on ISR1K platform

Cisco SD–WAN DNA Essentials and DNA EPLUS
Details

EPLUS Bundle with 15% discount

Cisco DNA Essentials

Connectivity/Mgmt

- Cloud or On-Prem Management
- Flexible Topology
  - Hub and Spoke
  - Full Mesh/Partial Mesh
- App and SLA based policy
- Dynamic Routing (BGP, OSPF)
- VNF Lifecycle Management

Security

- Enterprise Firewall with Talos-powered IPS and application controls
- Cisco Umbrella DNS Monitoring (visibility only)

SD-WAN Services

- Basic Path optimization with FEC and Packet Duplication
- TCP Optimization

Cisco DNA EPLUS

Bandwidth Flexibility

- No Bandwidth Tiering (up to platform max)

Cloud

- Cloud OnRamp SaaS: M365*

Analytics

- vAnalytics

Security

- Segmentation (3+1 VPNs)
- Cisco AMP*
- URL filtering/ SSL Proxy Support*

Cisco DNA EPLUS

Cisco DNA Advantage

Cloud/Analytics

- Cloud OnRamp for IaaS and SaaS
- Automated Service Stitching
- Encrypted Traffic Analytics
- vAnalytics

Security

- Segmentation (Unlimited VPNs)
- Cisco AMP and SSL proxy
- URL filtering
- Cisco Umbrella app discovery

X-domain Innovations

- Integrated Border for Campus (SD-Access)
- Integration with ACI for Application SLA

Services

- Web Caching, DRE (incl. SSL proxy)
- Voice Module and SRST Integration
- Multicast

Cisco DNA Essentials

*8Gb DRAM & Boot Flash needed for advanced security
**SSL/TLS Proxy not supported on ISR1K platform

DNA-EPLUS – SKUs for Supported Platforms

ISR 1100-4G Platform

- ISR1100-4G
- ISR1100-4G-LTENA
- ISR1100-4G-LTEGB
- ISR1100X-4G**

ISR 1100-6G Platform

- ISR1100-6G
- ISR1100X-6G**

Can be upgraded from Viptela OS to XE

C1101 Platform

- C1101-4PLTEPWA
- C1101-4PLTEPWB
- C1101-4PLTEPWD
- C1101-4PLTEPWE
- C1101-4PLTEPWQ
- C1101-4PLTEPWZ

C111X Platform

- C1111-8PLTEEAWA
- C1111-8PLTEEAWB
- C1111-8PLTEEAWE
- C1111-8PLTEEAWR
- C1111-8PLTELAWA
- C1111-8PLTELAWE
- C1111-8PLTELAWF
- C1111-8PLTELAWH
- C1111-8PLTELAWN

C112X Platform

- C1121-8PLTEPWB
- C1121-8PLTEPWE
- C1121-8PLTEPWZ
- C1121-8PLTEPWQ
- C1121X-8P
- C1121X-8PLTEP
- C1121X-8PLTEPWB
- C1121X-8PLTEPWA
- C1121-4PLTEP
- C1121-8PLTEP

Supports XE SD-WAN Software only

EN Offers & Promotions

More details available on SalesConnect

https://salesconnect.cisco.com/#/content-detail/4bd18320-6806-4390-b776-005373a06164

The best time to buy Cisco SD-WAN is now.

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- Hardware Installation Guide: https://www.cisco.com/c/en/us/td/docs/routers/access/1100/hardware/installation/guide/b-cisco-1100-series-hig/isr1k-hig-overview.html

- Remote Workforce Routing Solution – Step by step guide– https://community.cisco.com/t5/networking-documents/remote-workforce-routing-solution-cisco-sd-wan/ta-p/4049385

- Blogs:
  - Remote Worker : https://community.cisco.com/t5/networking-blogs/simplify-your-remote-worker-network-with-cisco-sd-wan/ba-p/4308306
  - Everything ISR1000 : https://community.cisco.com/t5/networking-blogs/your-one-stop-shop-for-soho-routing/ba-p/4270343

Cisco ISR1100 and ISR1100X Series Routers for SD-WAN Branch

- Datasheet: https://www.cisco.com/c/en/us/products/collateral/routers/1000-series-integrated-services-routers-isr/datasheet-c78-742893.html

- OS Migration Guide: https://www.cisco.com/c/en/us/td/docs/routers/sdwan/configuration/isr1100series-migration/sw-install-and-upgrade-guide-isr1100-series.html

- Hardware Installation Guide: https://www.cisco.com/c/en/us/td/docs/routers/sdwan/hardware/isr1100-4g-6g/cisco-isr-1100-4g-6g-hig.html

- Blog: https://community.cisco.com/t5/networking-blogs/cisco-isr1100-and-isr1100x-series-routers-for-sd-wan-branch/ba-p/4280554

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- FAQ: https://www.cisco.com/c/en/us/products/collateral/routers/900-series-integrated-services-routers-isr/q-and-a-c67-741630.html

- ISR 800 to ISR 900 and ISR 1000 Migration Guide: https://salesconnect.cisco.com/#/content-detail/395cd85c-1cb2-449a-b1bc-fd067d8cb3df

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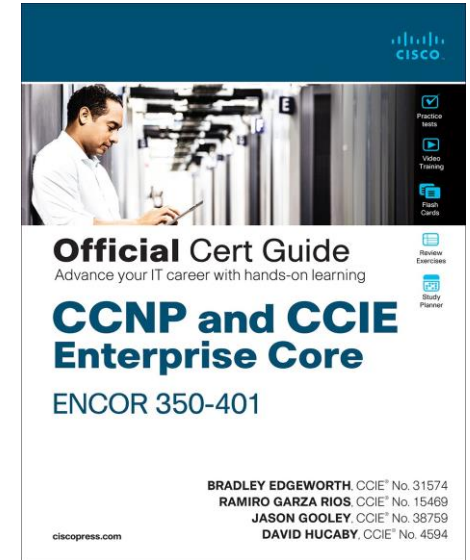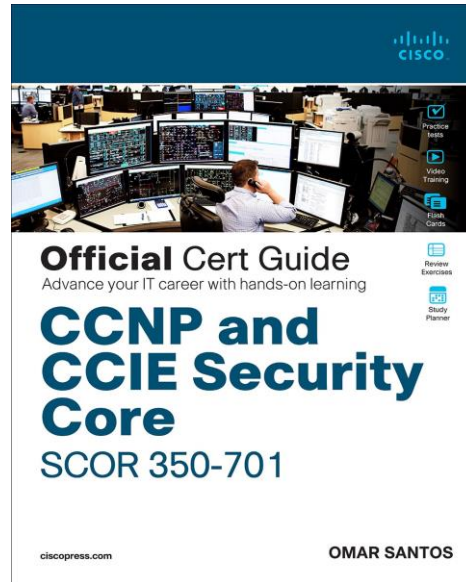https://cisco.com/go/techseminars
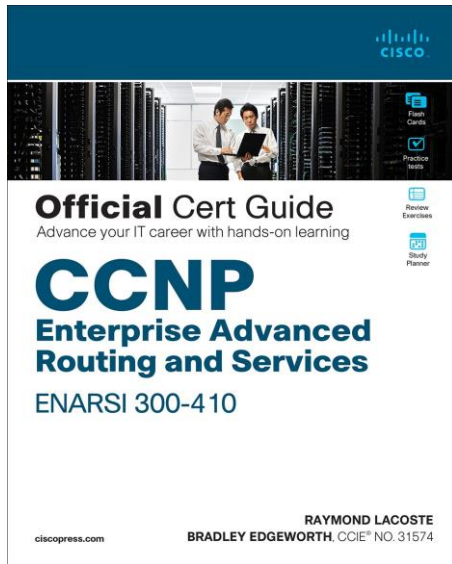
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