Plataformas de Networking para Redes de Alta Velocidad

Portfolio Update

Juan Antonio Castilleja
Systems Engineer

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Changing Business Environment

Wireless and Mobility

- 7 billion new wireless devices by 2015
- 50% surveyed allow personal devices for work use

Cloud and Virtualization

- 63% of enterprise adopting SaaS*
- 66 million virtual desktops connected by 2013 (Gartner)

Video and Collaboration

- 96% of enterprise have VoIP with 31% adopting SIP trunking*
- 50+% enterprises have deployed video/ collaborative applications**

*Forrester Enterprise Study, 2011.

**Forrester WAN Optimization Survey, Dec 2011.

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Borderless Network Architecture

Architecture for Agile Delivery of the Borderless Experience

POLICY

MANAGEMENT

APIs

BORDERLESS END-POINT/ USER SERVICES

Securely, Reliably, Seamlessly: AnyConnect

BORDERLESS NETWORK SERVICES

Mobility: Motion | Energy Management: EnergyWise | Security: TrustSec | App Performance: App Velocity | Multimedia Optimization: Medianet

BORDERLESS NETWORK SYSTEMS

Unified Access | Unified Fabric | Extended Edge | Extended Cloud

BORDERLESS INFRASTRUCTURE

Wireless | Routing | Switching | Application Networking/ Optimization | Security

SMART SERVICES: PROFESSIONAL AND TECHNICAL
Realize the Value of Borderless Networks Faster

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ISR G2 Portfolio

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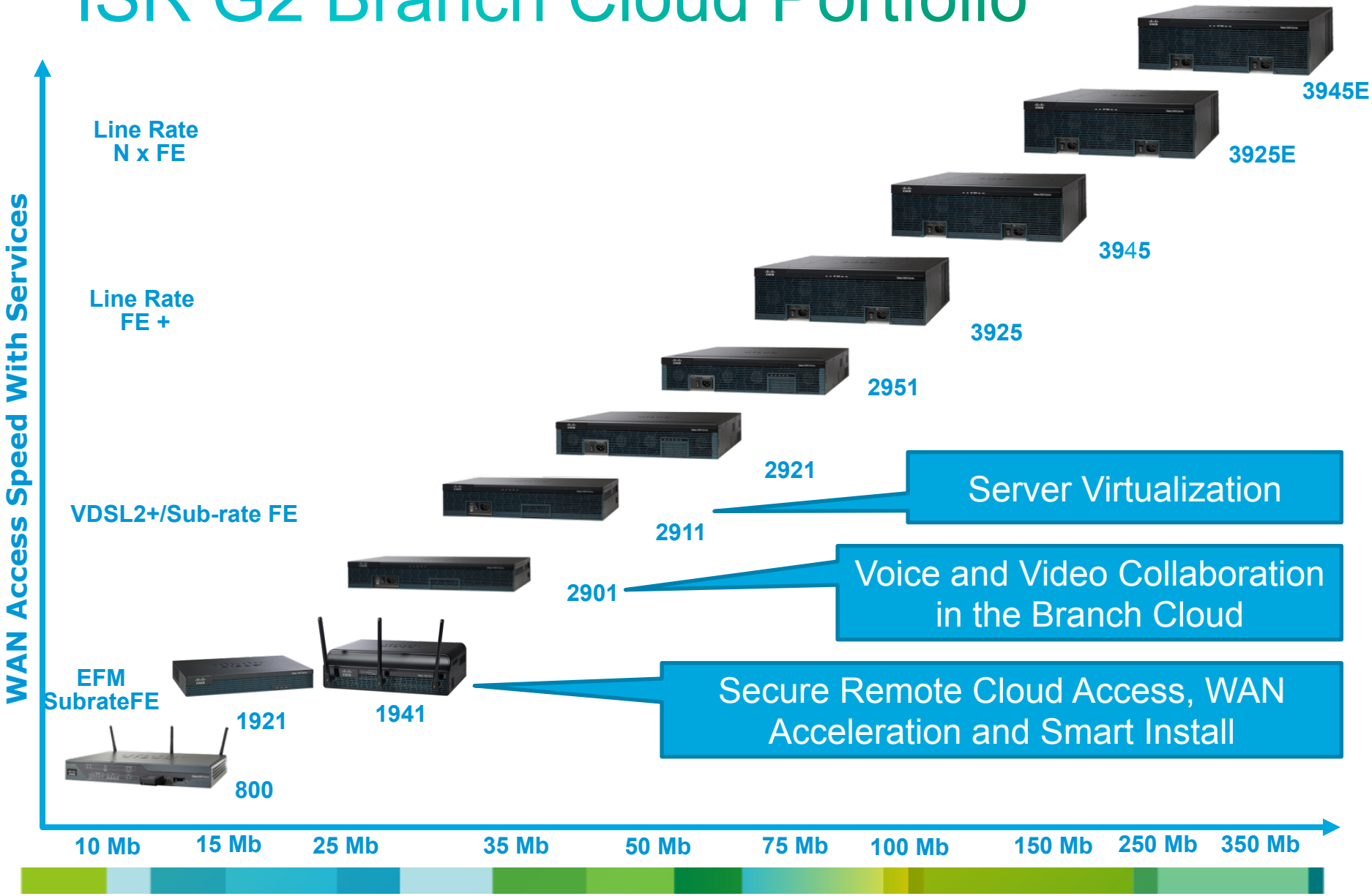
ISR G2 Branch Cloud Portfolio



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Next Generation Integrated Services Routers

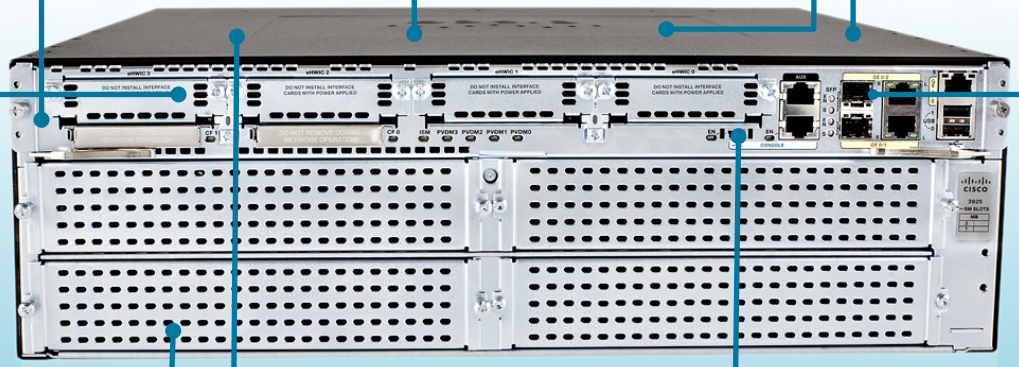
Under the Covers

Services Performance Engine (3900)
- Upgradeable engines
- SPE-200 & SPE-250

Multi-core Network Processor
- 5x- 7x performance increase

Multi Gigabit Fabric
- Module to module communications
- Packet prioritization and shaping

NG DSP Modules
- Video ready DSP modules
- 4x increase in audio conferencing and transcoding
- Configurable power savings modes



EHWIC
- 2x performance increase
- HWIC/WIC/VWIC/VIC support natively
- EPoE capable

GE Ports
- 4 on 3900E
- 3 on 2911+
- SFP slots on 2921 and above

Service Modules
- 3x-7x increase in service module performance
- Existing NM support through adapter
- EPoE capable

Internal Services Module
- 3x increase in service module performance
- Configurable power savings mode
- Not available on 3900E & 1941W

USB
- Console over USB
- Convenience storage
- Security credentials

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Cisco 3900 Series

Integrated Services Routers

	3945E	3925E	3945	3925
Field Upgradeable Motherboards	SPE-250	SPE-200	SPE-150	SPE-100
Onboard WAN	4GE (2 SFP)	4GE (2 SFP)	3GE (2 SFP)	3GE (2 SFP)
Perf w/ Services	350 Mbps	250 Mbps	150 Mbps	100 Mbps
SM Slots	4	2	4	2
ISM Slots	0	0	1	1
EHWIC Slots	3	3	4	4
Onboard DSP Slots	3	3	4	4
Opt Dual PS	Yes	Yes	Yes	Yes
Default Flash	256MB	256MB	256MB	256MB
Default DRAM	1 GB	1 GB	1 GB	1 GB
Form Factor	3RU	3RU	3RU	3RU

Scalable Rich-media Services Platform

New Services Performance Engine 200s:

- Up To 350Mbps WAN Access With Services
- 4 GE ports onboard

All 3900 Series:

- Up to 1040 watts with PoE Boost
- Configurable dual Integrated Redundant Power supplies
- Hot swappable fans and power supply

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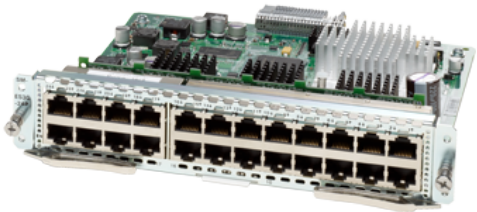
Ethernet Switch Module Overview

- Gigabit Ethernet 10/100/1000
- One L2/L3 and one pure L2 family offered
- 16, 24, and 48 ports of GE or FE LAN, Local line-rate Layer 2/3 switching
- Same feature set and roadmap as the latest LSBU Catalyst 3560-X/2960-S switches*
- Integration with the router's Multi Gigabit Fabric LAN optimizes traffic between modules, with no impact on CPU/WAN performance
- Smart Install
  - Zero touch Install/Replace/Backup
  - AutoImage, AutoConfig
  - Treat the ESM like a line-card or a standalone switch
- Higher availability, up to 2x when compared to a standalone switch
- Designed to promote Borderless Networks
  - Support the same features and configurations in the branch are in the headquarters
  - Integrates the latest enterprise switch features into the router
- Increased Power Over Ethernet
  - Enhanced POE (ePOE) Up to 20 watts per port
  - Takes advantage of 2900/3900 increased power levels offering up to 1040 watts per chassis
  - Per port autosensing and configuration of power levels
- EnergyWise per port-based and per slot-based power saving controls



* No CTS PHY Encryption , or POE+ (30w)

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App Velocity: Network and App Agility
Enables Business Continuity and Network Reliability

Unreliable WAN Leads to Poor Experience with Cloud/Data Center Hosted Applications

"Lean" Application Hosting Provides Branch-to-Cloud Application Survivability and Infrastructure Agility

Can My Network Optimize Performance of Applications Anytime, Anywhere?

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Lean Branch Office Applications
Edge Applications That Defy Centralization

Core Windows Services

- DNS and DHCP Servers
- Microsoft Active Directory
- Windows Print Services
- Windows File Services
- Others …

Microsoft Windows Applications

Mission Critical Business Applications

- Point of Sale Server
- Bank Teller Control Point
- Electronic Medical Records
- Inventory Management
- Others …

Client Management Services

- Software Update Service
- Client Monitoring Service
- Backup and Recovery
- Terminal Server Gateway
- Others …

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Cisco SRE x86 Blade Server

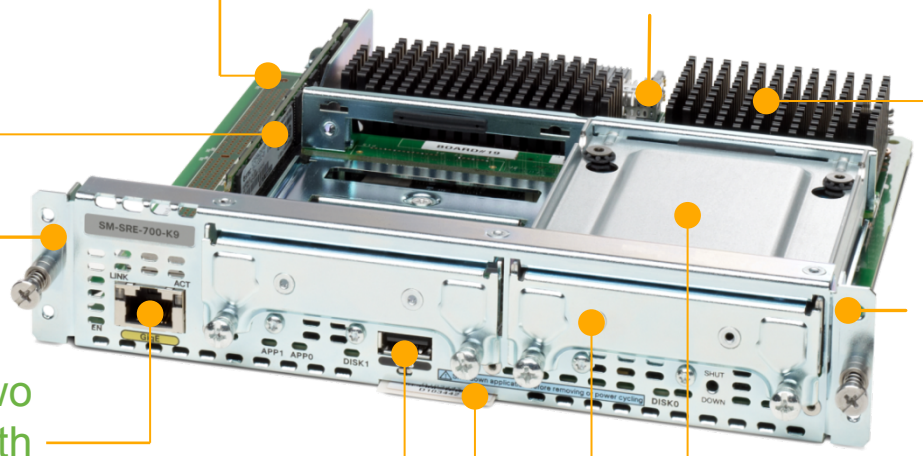
Compact, Multi-Purpose Blade Housed in ISR G2

Maximum 50W power draw
85% less than server

iSCSI initiator
hardware offload

Intel single and dual core
64-bit CPU options with
virtualization extensions

4GB and 8GB
DRAM options



Remote and
schedulable power
management

Single and multi-blade
provisioning and
configuration through
CIMC Express

One external and two
internal GE ports with
TCP/IP acceleration

One and two 500GB 2.5”
HDD options with field-
replacement protection

USB 2.0 port for
external device
connectivity

Non-RAID and RAID 1
configuration options with
hot-swap capability

Wire-free, plug-and-play modularity, low
shipping weight (2.5lb/1.1kg)

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Powered by VMware vSphere Hypervisor (ESXi)

Key Functions

- Runs directly on SRE
- Acts as virtual hardware
- Runs multiple OS concurrently
- Controls resources allocation
- Captures and restores OS state
- Provides OS re-hosting capability

vmware

vSphere Hypervisor™ (ESXi)

- Bare-metal hypervisor
- Version 4.1 and later
- Optimized for SRE blades
- Tailored for branch use cases
- vSphere Essentials equivalent
- vCenter management option

- Enterprise-class, production-class virtual server platform
- Most widely deployed, secure, production-proven hypervisor
- SRE-V solution jointly developed by VMware and Cisco

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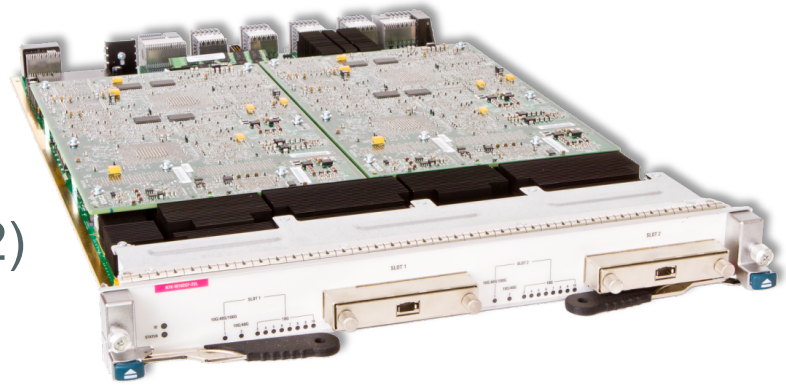
Nexus 7000 M2 100GbE Module
Optics Support

- **100G CFP Optics**
  - 100GBASE-LR4 (10km SMF) (6.1)
  - 100GBASE-SR10 (100m MMF) (6.2)
- **40G CFP Optics**
  - 40GBASE-SR4 (100m MMF)
  - 40GBASE-LR4 (10km SMF)



CFP Transceiver

24-fiber MPO Connector for 40GbE and 100GbE

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ASR 9000 40/100GE optics roadmap

- ASR9k 40GE: QSFP form factor
  - LR4 and SR4
- ASR9k 100GE: CFP form factor
  - LR4 , SR10

QSFP (40GE)

CFP

(100GE)

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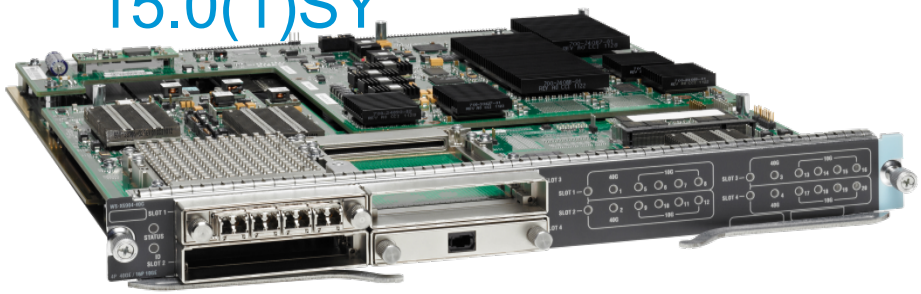
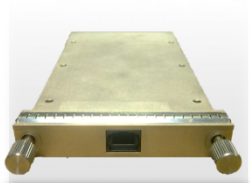
6500 WS-X6904-40G-2T / 2TXL

4 ports 40G / 16 ports 10G

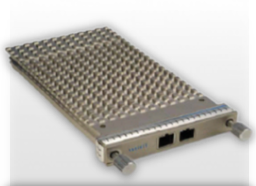
Supported in 15.0(1)SY



FourX Adapter



CFP-40G-SR4



CFP-40G-LR4

- Two SKUs: regular and XL tables (DFC4)
- IEEE 802.3ba standard compliant
- CFP Transceiver for 40G, SFP+ for 10G
- Wire Rate MacSec (IEEE 802.1AE)
- Up to 60Mpps local forwarding
- Ingress buffer (1 ms / 40 GE port – 1 ms / 10 GE port)
- Egress buffer (19.66 ms / 40 GE port – 19.66 ms/ 10 GE port)

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7600 Software and Hardware Strategy

Cisco 7600

12.(2)SR

- RSP 720
- ES+ LC
- SIP 200/400
- 67xx LC

No SUP2T, DFC4 , 68xx and 69xx Cards

- Existing Customers with ES+ WAN card
- HQoS Requirements
- 40G/Slot , ES+ Functionality
- 6xxx to ES+ upgrades
- Sup2/32 to RSP720

12.(2)SY

- Sup2T
- 68xx / 67xx DFC4
- 69xx
- SIP400

No RSP720 , ES+ and SIP-200 Cards

- Existing Customers with LAN cards
- 80G/ Slot
- 40G Interfaces
- 6xxx to 69xx upgrades
- Sup2/32 to Sup2T

Thank you.