The bridge to possible

NCS 5500 / 5700

High Scale Aggregation Routers for Today's Critical Communication Networks

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MIG Product Management

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MIG Technical Marketing

October 5, 2021

Agenda

1. MIG Portfolio Overview
2. New Hardware Introduction
3. Use Cases
4. Key Takeaways

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MIG Portfolio Overview

MIG Routing & Optical Portfolio

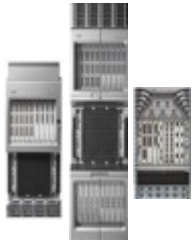
Cisco 8000

400 GE
260Tb System
14.4T per Slot

NCS 5500/5700

400 GE
153.6Tb System
9.6T per Slot

ASR 9000



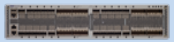
400 GE
80Tb System
4.0T per Slot

NCS 500

400 GE
800GB System

IOS XR

SR
EVPN

NCS 1000  **Optical Switches** **NCS 4000 & 2000**

Pluggable Optics

Management & Orchestration

Traditional and Flexible Consumption Models

Software Innovation

©

IOS XR the Foundation of Device Programmability

IOS XR

Lean

Transport simplification
Simplified transport with Segment Routing

Service simplification
EVPN for Unified Service Delivery, Cloud Native BNG

Operational simplification
NSO, Yang Development Kit, Yang Suite

Modern

Advanced telemetry
Visibility to enable analytics and machine learning

APIs into all levels of software
Creativity and flexibility through model-driven programmability

Extendable to Third Party Software
Complement the IOS XR foundation with targeted third party software

Trusted

Trustworthiness begins in hardware
Anti-counterfeit and Trust Anchor infrastructure

A trustworthy network OS
Image signing and secure boot infrastructure

Trustworthy at runtime
Run-time defense, encrypted transport, DDoS protection

The NCS 5500 Success Stories

DC/Web OTT

Core/LSR

Aggregation

Peering

2015

Launched

76,000+ Systems

1.7M+ 100GE ports shipped

17K+ 400GE ports shipped

1000+ Customers

NEWS

Rakuten

NTT

Telia

packetfabric

Automotive Manufacturing Energy Finance Utilities Retail Medias Government Cities Education Healthcare Service Providers

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NCS 5500/5700 Portfolio Evolution

Jericho

Jericho+

Jericho2

Jericho2C

Fixed

NCS 5502/SE

NCS 5501/SE

NCS-55A1-48Q6H

NCS 55A1-36H-S/SE

NCS 55A1-24H

NCS 55A2-MOD-S/SE/HD/HX

NCS-55A1-24Q6H-S/SS

NCS-57B1-6D24/5DSE*

NCS-57C3-MOD-(SE)-S*

Linecards

NC55-36X100G/-S

NC55-24H12F-SE

NC55-24X100G-SE

NC55-18H18F

NC55-6x200-DWDM-S

NC55-MOD-A-S/SE

NC55-36X100G-A-SE

NC55-32T16Q4H-A

NC57-18DD-SE*

NC57-36H-SE*

NC57-24DD*

NC57-36H6D-S*

Modular

NCS 5504

NCS 5508

NCS 5516

4/8/16 J2 Ready FC2* & FAN2*

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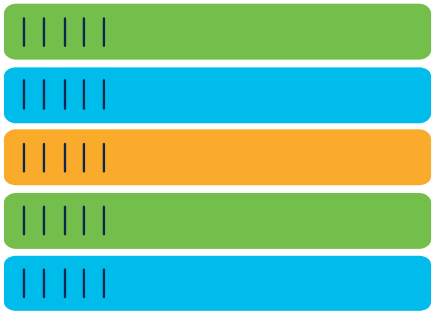
*New Additions

NCS 5700
Fixed Routers
Growing Family with new Capabilities



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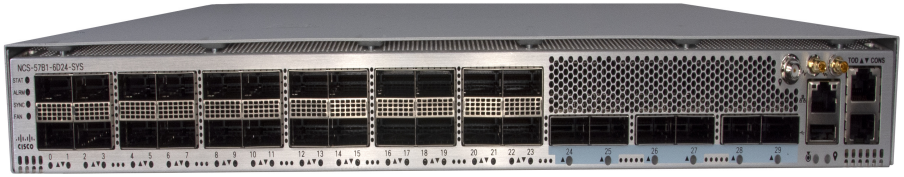
NCS-57B1 Overview



Ideal for 5G xHaul, Core and Peering Fabric, Converged SDN Transport and Cloud

- Base: 4.8 Tbps | Scale: 4.4 Tbps
- 24x 100G and 6x 400G (Base) / 5x 400G (Scale) QSFP-DD ports
- Flexible ports: 10G - 400G; 400G ZR/ZRP, 100G ZR, and Breakout Supported
- Compact 1RU, 600mm depth, F2B air-flow
- Supports MACsec, Class C timing

For more information, please refer to NCS 57B1 data sheet

Video: Introducing NCS 57B1 Router

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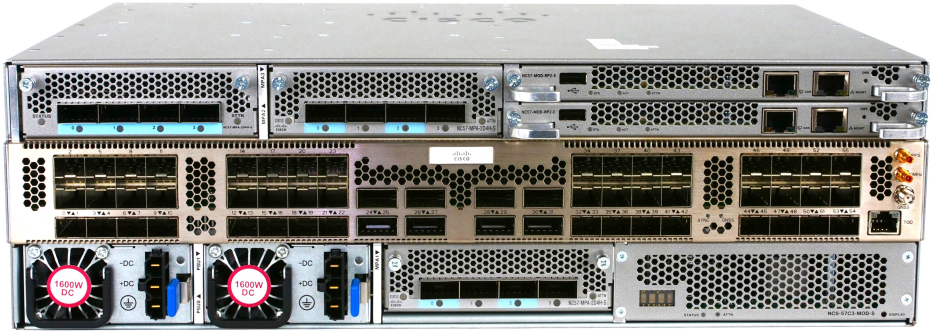
NCS-57C3-MOD Overview



Ideal for Aggregation/Pre-Aggregation, Core/LSR, and Peering

- Base: 4 Tbps | Scale: 3.6 Tbps
- 48x 1/10/25G SFP28 and 8x 100G QSFP28 (Base) / 4x 100G QSFP28 (Scale) ports + 2x MPAs (800G) + 1x MPA (400G)
- Compact 3RU, 284mm depth, F2B air-flow, dual Route Processor, redundant PSU, 5+1 redundant fan trays
- Supports MACsec, Class C timing

For more information, please refer to NCS 57C3 MOD data sheet

Video: Introducing NCS 57C3 MOD Router

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Modular Port Adaptors

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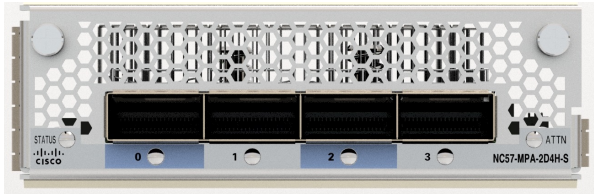
Modular Port Adapters

800G



NC57-MPA-2D4H-S

- 4x QSFP-DD ports
- Supports operable modes of 400G, 100G and breakouts of 25G, 10G

NC55-MPA-12T-S

12x 10G SFP+ ports

NC55-MPA-1TH2H-S

1x 200G/100G CFP2 +
2x 100G QSFP28 ports

400G

NC55-MPA-4H-S

4x 100G QSFP28 ports

NC55-MPA-2TH-S

2x 200G/100G CFP2 ports

For more information, please refer to
800G MPAs: NCS 5700 MPA data sheet
400G MPAs: NCS 55A2 MOD data sheet

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NCS 5700
Modular Linecards

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NCS5700 – 400GE Line Cards

NC57-24DD (Base)

Ideal for Core/LSR, DCI & Aggregation

- 9.6T line card
- 24 x 400G Base Line Card
- Flexible ports enabling 40GE, 100GE, 200GE, 400GE
- Class B timing support on all ports

J2

NC57-18DD-SE (Scale)

Ideal for Peering & High Scale Aggregation

- 7.2T line card
- 18 x 400G or 30 x 200G/100G Scale Line Card
- Flexible ports enabling 40GE, 100GE, 200GE, 400GE
- Class B timing support on all ports

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For more information, please refer to 400G & 100G LC Data Sheet

NCS5700 – 100GE Line Cards

NC57-36H6D-S (Base)

Ideal for Core/LSR, DCI & Aggregation

- 4.8T line card
- 24x100GE + 12 flex ports (6x400GE or 12x 200GE/100GE) ports Base Line Card
- Flexible ports enabling 10GE, 40GE,100GE, 200GE, 400GE
- Class C timing and MACsec support on all ports

J2

NC57-36H-SE (Scale)

Ideal for Peering & High Scale Aggregation

- 3.6T line card
- 36 x 100GE ports Scale Line Card
- Flexible ports enabling 10GE, 40GE, 100GE
- Class B timing support on all ports

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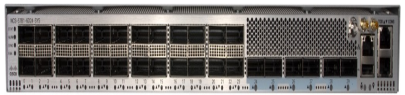
For more information, please refer to 400G & 100G LC Data Sheet

Optics

Coherent Optical – 400G ZR/ZRP Capability

Fixed Routers

Support with XR 7.3.2



NCS-57B1-6D24/5DSE

Support coming soon!

NCS-57C3-MOD-(SE)-S

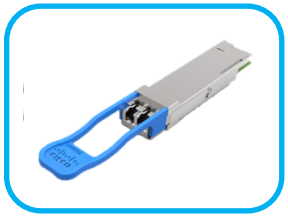
Line Cards

NC57-24DD

NC57-18DD-SE

NC57-36H6D-S

NC57-36H-SE



400GE QSFP56-DD ZR/ZRP Technology

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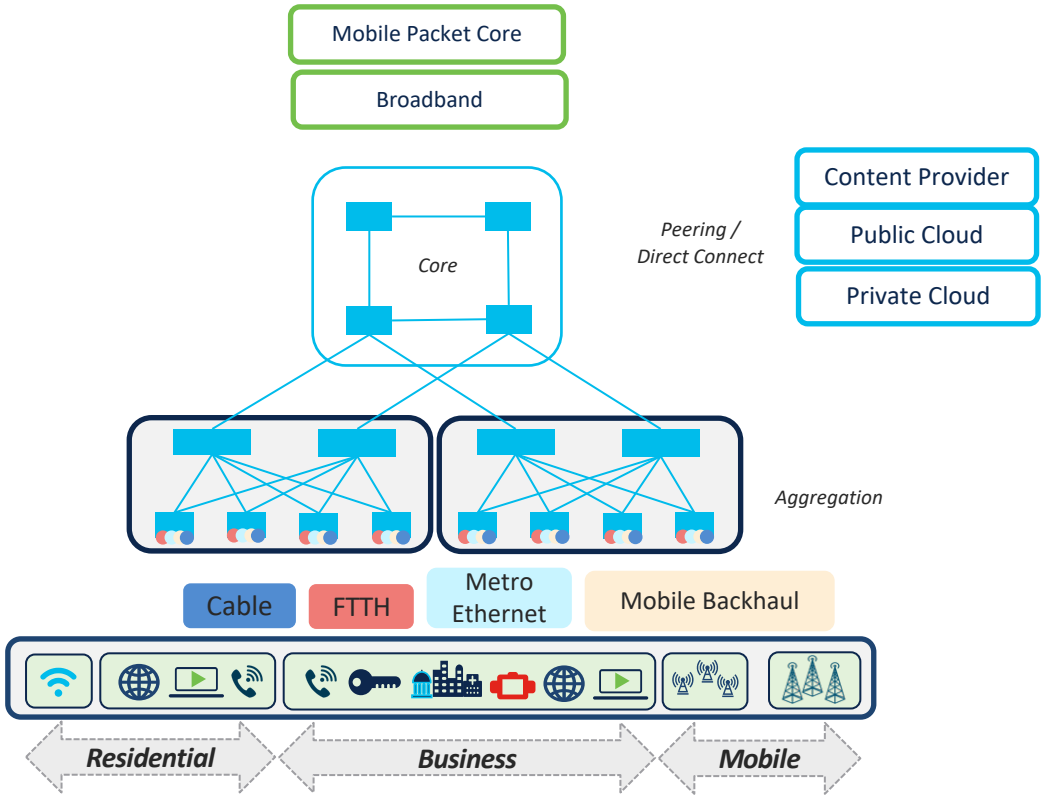
Use Cases

High Scale Converged SDN Network



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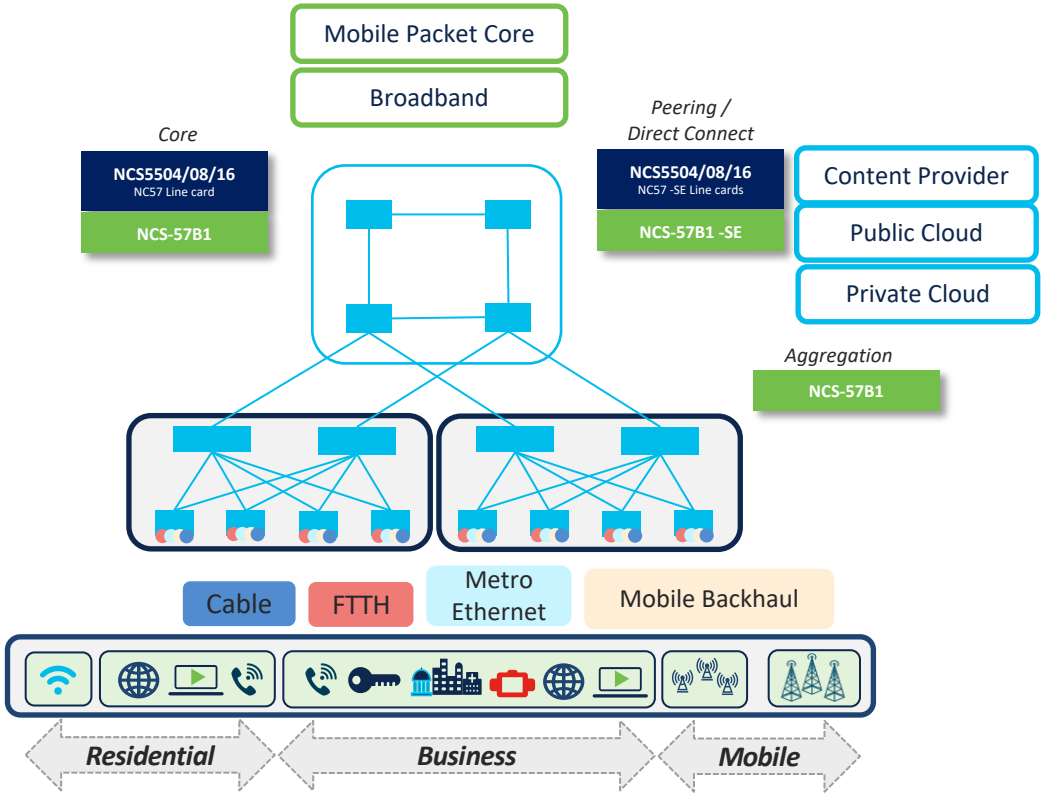
High Scale Converged SDN Network



NCS 5504/08/16

Modular: up to 9.6T/slot
153.6Tb System

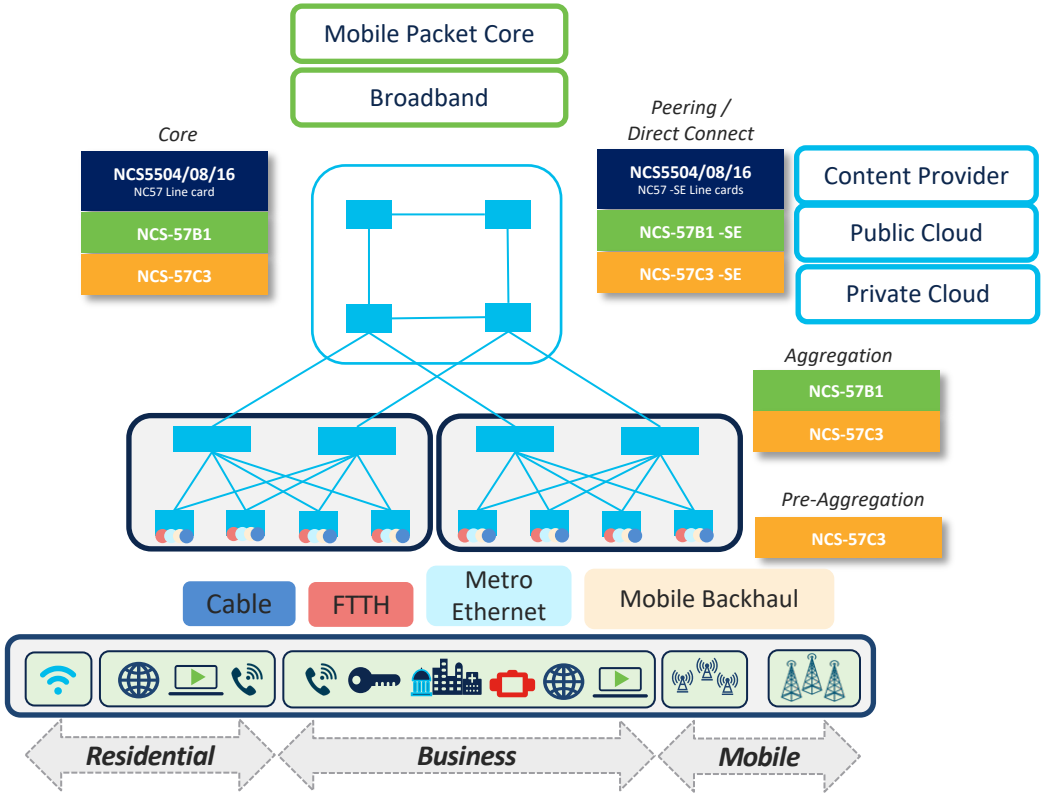
NC57-24DD
NCS57-18DD-SE
NC57-36H-SE
NC57-36H6D-S

NCS 57B1

Fixed: Up to 4.8T

NCS-57B1-6D24H
NCS-57B1-5D24H-SE

High Scale Converged SDN Network



NCS 5504/08/16

Modular: up to 9.6T/slot
153.6Tb System

NC57-24DD
NCS57-18DD-SE
NC57-36H-SE
NC57-36H6D-S

NCS 57B1

Fixed: Up to 4.8T

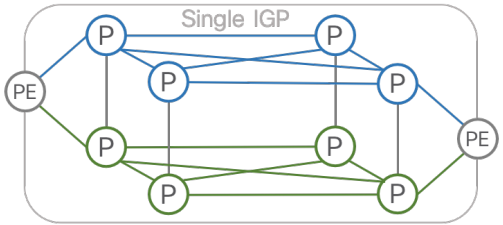
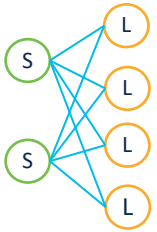
NCS-57B1-6D24H
NCS-57B1-5D24H-SE

NCS 57C3

Fixed: Up to 4T

NCS-57C3-MOD
NCS-57C3-MOD-SE
NC57-MPA-2D4H

Mass Scale Infrastructure

Industry	Enterprise Public Sector Utility Finance Education
Solution	 *Wan/Core*  *Cloud Fabric*
Design Elements	Intelligent Core SDWAN High Availability 400G Automated Steering

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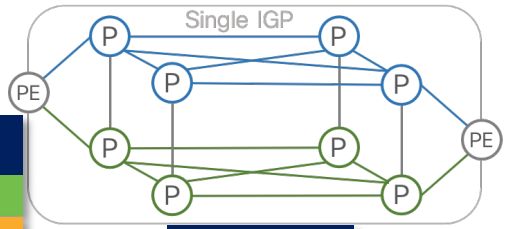
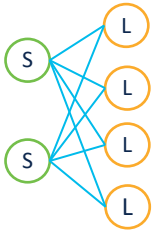
Mass Scale Infrastructure

Enterprise Public Sector Utility

Finance Education





NCS5504/08
NC57 -SE Line cards
NCS-57B1 -SE
NCS-57C3 -SE

NCS5504/08
NC57 Line cards
NCS-57B1
NCS-57C3

NCS-57B1 NCS-57C3

Intelligent Core SDWAN High Availability

400G Automated Steering

NCS 5504/08/16

Modular: up to 9.6T/slot
153.6Tb System

NC57-24DD
NCS57-18DD-SE
NC57-36H-SE
NC57-36H6D-S

NCS 57B1

Fixed: Up to 4.8T

NCS-57B1-6D24H
NCS-57B1-5D24H-SE

NCS 57C3

Fixed: Up to 4T

NCS-57C3-MOD
NCS-57C3-MOD-SE
NC57-MPA-2D4H

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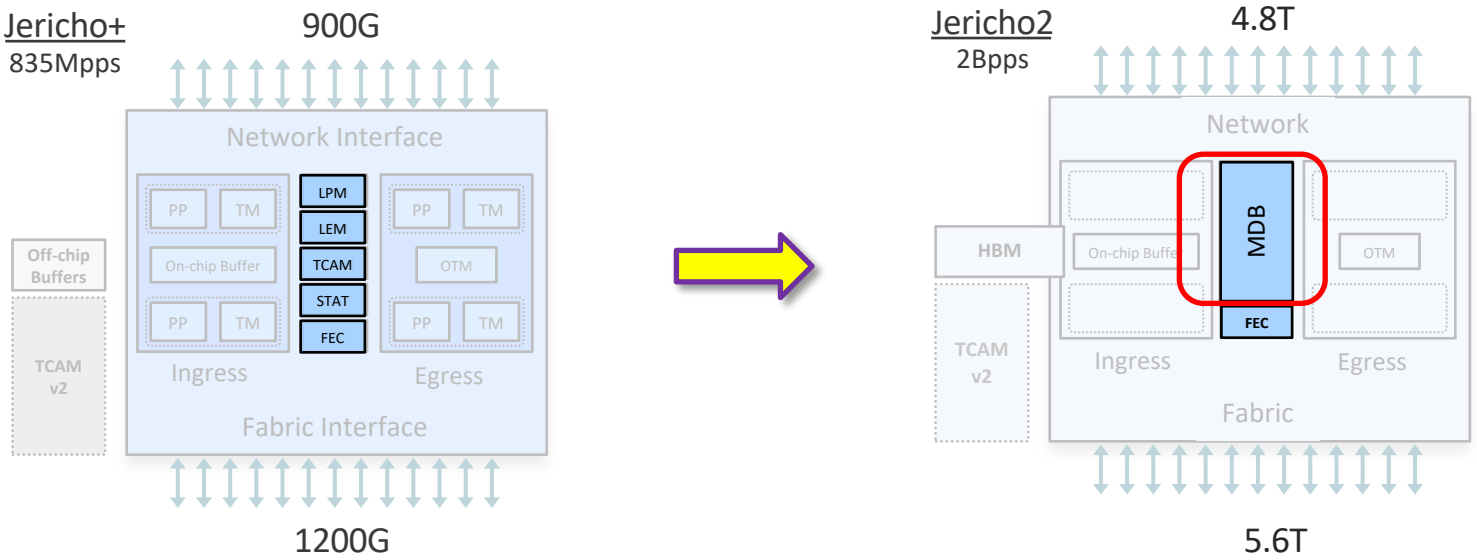
Future Ready through Software Innovation

- Combining ASIC Modular memory ability and power of IOS XR
- Profile design for Popular SP, Web Scale customer needs



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Summary

Takeaways

- Trusted Platform across many network types
- Strong Roadmap with new generation ASIC
- Future Proof design with versatile Hardware and Flexible Pricing Models
- Continuous investment in NCS-5500 portfolio and IOS-XR
- Leadership in 400G, Converged Services, 5G and RON solutions

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Resources:

- NCS 5500 Web Page
- NCS 5700 Web Page
- NCS 57B1 Fixed Routers Datasheet
- NCS 57C3 Fixed Routers Datasheet
- NCS 5700 Line Cards Datasheet
- NCS 5500 Tutorials
- NCS 5500 and NCS 5700 White Paper

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The bridge to possible