Cisco Network Convergence System

Mobile traffic growth has exploded. Video is everywhere. Machine-to-machine (M2M) traffic is also growing. More companies are moving to cloud-based services. No wonder bandwidth consumption is increasing across service provider networks like never before.

How can providers like you meet these demands efficiently and cost-effectively? With an Evolved Programmable Network (EPN) that provides new levels of programmability, agility, and performance.

The Cisco® Network Convergence System (NCS) family of products delivers an EPN, based on an array of Cisco innovations. These include highly programmable silicon, intelligent hardware, service orchestration, and a highly advanced operating system. The result? A simplified network offering high-quality mobile, video, M2M, and cloud user experiences along with a lower total cost of ownership.

What's Different About Cisco NCS?

Cisco NCS lets you simplify network operations, reduce network costs, and make your network more dynamic. All while providing the services and features your customers want in the Internet of Everything era. It's a bold, new solution that provides the fabric that integrates the network with the unified data center infrastructure, providing an intelligent and programmable network for exceptional scale in cloud-based services. Network resources can be shifted dynamically, in real-time, across converged IP and optical transport networks, so you can speed service delivery while simplifying the network and reducing costs.

Cisco NCS provides:

- Greater bandwidth capacity at Layers 0 to 3 for faster service delivery and improved operational efficiency
- Automated service and application orchestration integrated across both network and cloud to accelerate business agility
- Programmability and virtualization that can help you transition to SDN and network functions virtualization (NFV) solutions and improve revenues
- Industry-leading routing capabilities that can handle higher volumes of traffic

Cisco NCS platforms have been built based on industry-leading Cisco innovations and features, including:

- **nPower programmable silicon,** with the industry's first 400 Gbps single chip technology that offers one terabit per slot performance
- **Virtualized Cisco IOS® XR Software** that provides service chaining and supports virtualized network functions that save money, increase service velocity, and help service providers squeeze more revenue from their network
- **Intelligent convergence** that integrates multiple functions onto a single device, for higher performance and programmable network processing units (NPUs) consuming lower power per bit
- **Full virtualization,** so network functions can operate in parallel on virtual machines (VMs) that reside on route processors and line cards
- **Leading scale and port density,** through multichassis, fabric, and Cisco industry-leading CMOS photonic technology, Cisco CPAK™, which Cisco has shown to be 70 percent smaller and 70 percent more power-efficient than other transceiver models

The Cisco NCS Family

The Cisco NCS family delivers a complete solution and is optimized to work together as one integrated system.

- **The Cisco NCS 6000 Series IP Router** offers industry-leading 100 Gbps density. The Cisco NCS 6000 delivers unmatched Petabyte scale with network agility and packet optical convergence at the lowest total cost of ownership (TCO). This intelligent, distributed system provides the network fabric for the EPN. It's built on the industry-leading nPower X1 network processor, and features the industry's first terabit-per-slot performance.
- **The Cisco NCS 4000 Series offers the first converged packet optical transport platform.** It provides multi-terabit scalability with multichassis capability, plus multilayer service aggregation, bringing DWDM, OTN, Ethernet and IP services within a single converged platform and thus greatly improving network efficiency and simplification.
- **The Cisco NCS 2000 Series delivers an agile Flex Spectrum ROADM platform** that delivers touchless programmability and massive 100 Gbps and beyond scale for ultra-long-haul and metro performance.

Benefits

Cisco NCS helps you build the foundation for a highly programmable network, so you can:

- Keep your customers ahead of rapidly growing network traffic and bandwidth demands
- Create new service bundles quickly, and dynamically move functions and resources anywhere
- Offer dynamic, revenue-generating, on-demand services and high-quality experiences to customers
- Scale and simplify networking and operations, and optimize resource use, lowering TCO by up to 45 percent and reducing power consumption by up to 60 percent, according to Cisco calculations
- Automate service and application orchestration; provide better visibility, analytics and capacity planning in the network to accelerate business agility
- Take advantage of a petabyte system that can support trillions of events across a connected fabric

Why Cisco?

Cisco offers a holistic network approach that supports virtualized services for increased agility; allows flexible, automated programming capabilities; and includes a converged infrastructure. It can all add up to improved profitability and cost-savings for providers.

Cisco can help you transition your networks. Our comprehensive set of services across the infrastructure lifecycle includes Plan, Build, Manage, and Customize offerings. We can help you put Cisco NCS to work, to optimize network design and operations, accelerate service delivery all while lowering TCO.

Next Steps

To learn more about Cisco NCS, visit the Convergence web page.