Automating Software Defined Networks: Escape the Margin-Crunching Vise

Cisco Knowledge Webinar

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Today’s Presenters

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Agenda

- Business trends and challenges
- Cisco’s Software Defined Transport Network offer
- Overview and key components
- Supported use cases
- Demo
- Business outcomes
The Networking Landscape Is Changing

Can you deploy services at the speed that your customers demand?

- Customers want and expect more
- Traditional services planning and deployment models no longer work
- The current business model makes investment for transformation challenging
Service Provider Economics are Changing
The importance of investing for scale

$1 CAPEX in 2022
11X work it did in 2012

Sources: IHS Technology, “Service Provider CapEx, OpEx, Revenue, and Subscribers Database, Q1 2017”; Cisco Visual Networking Index (VNI)
How do you think people will most likely use 5G?

A. More bandwidth for higher definition consumer video
B. Lower latency for autonomous driving
C. Cheap, narrow bandwidth for smart cities and smart homes
An Answer to the Challenges
Software Define Transport Networks

1. Plan, design, and build for dynamic scalability to meet demand
2. Agilely pursue new, profitable business opportunities
3. Simplify operations and architectures to do more with less

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Define How You Operate Your Network

Get results by simplifying, automating, and optimizing your network

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<th>Reduce OpEx</th>
<th>Differentiate Services</th>
<th>Optimize CapEx</th>
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<td>Simplify operations with full lifecycle automation</td>
<td>Automate service delivery paired with software-defined policy</td>
<td>Improve visibility and dynamic capacity control</td>
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Cisco Software Defined Transport Network

Bandwidth and Management Suite
SR Segment Routing (SR-PCE)
WAE*
NSO NSO
EPNM

(CX Services)

(*) WAE is becoming Crosswork Optimization Engine
Built on a common, programmable, & validated reference architecture
A Suite of Solutions for SDN Transport

Network Services Orchestrator (NSO)
Deploys the intent by automating service adds, changes and deletions across network in real time

WAN Automation Engine (WAE)*
Performs "what if" analyses of failure impacts and optimizes bandwidth

Segment Routing Path Computation Element (SR-PCE)
Computes segment routing paths dynamically in the network with global visibility

Evolved Programmable Network Manager (EPNM)
Monitors network, policies and assures they are running properly

(*) WAE is becoming Crosswork Optimization Engine
Continuous Bandwidth Optimization

1. Plan SLA policy
2. Detect network state change
3. Check state for policy violation and compute tactical routing path
4. Deploy explicit routing path

Network Planner

Optimization Engine

SR-PCE Controller

Topology & Traffic

IGP path

Explicit path

Congestion

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Bandwidth On Demand

1. Design service with bandwidth guarantee
2. Deploy service configuration
3. Request service path
4. Compute path with bandwidth guarantee
5. Get service path
6. Monitor and validate bandwidth SLA

*90% < Hot link < 100% capacity = lower bandwidth
Improved Customer Outcomes

- CAPEX Savings: 60%
- OPEX Savings: 66%
- Faster Time-to-Revenue: 80%
Built from Proven Global Success

Key Reference Customers

- PLDT
- airtel
- SK Telecom
- Vodafone
- STC
Customer Success Story
Protect your software defined network and business with the strongest security team on the planet.
Why Cisco

1. Networking market leadership
2. Global multivendor network deployments
3. Commitment to open standards
4. Most comprehensive network automation portfolio
5. Most comprehensive security portfolio
For more information on Cisco’s Automation Portfolio please visit Cisco.com/go/crosswork
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Questions?