Deliver Managed SD-WAN
Simply and Securely

Mike Betz, Director SD-WAN
Cisco Knowledge Network - Service Provider Webinar Series

February, 22, 2019
Today’s Presenters

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Attending MWC Next Week? Come See Us

Mobile World Congress
- Barcelona, February 25 – 28
- Cisco Booth Located in Hall 3 Booth #3E30
Agenda

• Market Evolution and Opportunity
• Why SD WAN Matters
• Cisco’s SD-WAN Managed Solution for SPs
• Use Cases & Demo
• Partnering with Service Providers in Service Creation
Connecting Users to the Data Center was Priority

Consumers
- Users
- Devices

Provider
- Applications

Branch Campus
WAN
Data Center
Applications Moved to Not One Cloud, But Many

Consumers
- Users
- Devices

WEB

Cloud
Edge

Provider
- DC/Private Cloud
- SaaS
- IaaS

SD-Branch
SD-Campus

SD-WAN
### Customer Needs Are Evolving

<table>
<thead>
<tr>
<th>Cloud</th>
<th>Mobility</th>
<th>SaaS Apps</th>
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<tbody>
<tr>
<td>3x Hybrid Cloud adoption grew 3x last year from 19% to 57% (2)</td>
<td>40% Annual growth rate of mobile traffic over the next 5 years (3)</td>
<td>80% Of organizations will use SaaS by 2018 (4)</td>
</tr>
</tbody>
</table>

By 2020 Cloud Will Account For Over 92% of Data Center Traffic (1)

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1. 2017 Cisco VNF Index
3. 2017 Cisco VNF Index
4. 2017 Better Cloud *State of the SAAS powered workplace*
Customers Are Demanding A New WAN Strategy

One carrier
Multiple carriers

Single global WAN
Multicloud focused WAN

Single Link
Multiple Links
FY19 Represents a MASSIVE Opportunity...

- $8.1BN SDWAN Market in FY19
- 70% Customers Making SD-WAN Decision
- 1.3M Eligible ISR/ASR Endpoints
- $9BN Security Market Disrupted
- Multi-cloud is reality Five clouds average
- EA Deal value $5.9M
Why Software Defined WAN

- Significant Cost Optimization
- Rapid New Services Rollout
- Pervasive Strong Security
- Advanced Application Services
- End To End Service Management
What’s your customer looking for?

- **Operational Agility & Efficiency** through Simplified Operations
- **Consistent End User Experience** across all Applications & Services
- **Ubiquitous Security** across all networks and all datacenters
- **Cost Optimization**, Operations and Connectivity
- **Extend Control & Visibility** to all Network connectivity
SD-WAN delivers **WAN savings** and **flexible connectivity options**

**Extending Segmentation** across the SD-WAN reduces the need for complex Access Control List management.

**Automated** configuration + support for NFV services reduces the need for expensive appliances / site visits.

**Analytics** delivers visibility to ensure consistent application performance over any connection.
Cisco SD-WAN
Intent-based networking for the branch and WAN

4x Improved application experience

40% WAN opex savings

3.24h Time to threat detection

Better user experience
Deploy applications in minutes on any platform with consistent application performance

Greater agility
Simplify the deployment and operation of your WAN and get faster performance using less bandwidth

Advanced threat protection
Securely connect your users to applications and protect your data from the WAN edge to the cloud
Why SD-WAN matters for Service Providers?

SD-WAN will be a Managed Solution!

“We expect more than half of customers will eventually choose to use a managed services provider for their SD-WAN solution rather than run it themselves, creating a large opportunity for service providers.” - William Blair

$4.5B Market estimate
Why SD-WAN matters for Service Providers?

SP Managed SD-WAN is ~ $4.5B market

Why Consume SD-WAN as a Managed Service?

Key End User Advantages of a SP Managed SD-WAN Solution:

✔ Network Competency and Assurance
  - SPs understands the network infrastructure offering expertise and resources enterprises often lack
  - Service delivery implementation and management handled by third party experts
  - Assured uptime and performance with SP managed service-level agreements (SLAs)
  - SP focuses on network so customer can focus on their business

✔ Improved Productivity and Enhanced Cost Effectiveness:
  - Ease of consumption: Customers pay for the features they use and have the agility to increase or decrease the levels of functionality
  - SD-WAN aaS can helps enterprises reduce their WAN costs by 90 percent or more vs. private WAN networks
  - Options for migrate existing services to include Hybrid WAN

✔ Enhanced Security
  - Integrated security solutions managed by the service provider, allowing for greater flexibility and more efficient protection
SD-WAN Variables for Service Providers

1. Product Offering
   • Mature
   • Scalable
   • Extends the MPLS to other network connectivity

2. Service Creation to match market requirements
   • Service Definition
   • Time to Market
   • Service Delivery Support

3. Go to Market Support
   • Brand Name Awareness
   • Market Presence
   • Market Pull
Why are SPs choosing Cisco SD-WAN?

- Enterprise Scalable SD-WAN Solution Portfolio Deployed on all Viptela and Cisco EN CPEs
- Brand Name Awareness creates market pull/demand Reduces the barrier to engage
- Global Sales, Services and Support presence
Cisco SD-WAN Overview
Cisco SD-WAN Secure Extensible Fabric
Enabling the Journey to the Cloud and Beyond

An extensible FABRIC that securely and reliably connects users to applications from any location across any transport, in the public or private cloud.
Cisco SD-WAN Fabric
Networking for the Cloud Era

Enabling the Digital Transformation
Differentiator:
MPLS Like visibility and control over any network connection
Cisco SD-WAN Architecture

- Orchestration Plane
- Management Plane (Multi-tenant or Dedicated)
- Control Plane (Containers or VMs)
- Data Plane (Physical or Virtual)

Network Components:
- vManage
- vSmart
- vBond
- vEdge

Network Protocols:
- 4G
- INTERNET
- MPLS
- ORCHESTRATION
- ANALYTICS

Locations:
- Data Center
- Campus
- Branch
- Home Office
Why Cisco SD-WAN?
One solution driving multiple use cases across Enterprises and Managed Service Providers

Secure NG Overlay
Transport independent, SP agnostic fabric providing a secure scalable NG overlay

Simplified Operations
Single pane of glass of the entire network with open, extensible APIs to plug into 3rd party

Cloud Native
Multi-tenant, cloud-native platform delivered, managed and hosted on-prem or in the cloud

Application Experience
Optimized application level (L4–L7) experience and visibility with cloud delivered analytics

ARCHITECTURAL
Highly scalable, secure, sophisticated

END-POINT
Physical or virtual rich services or lite Branch, Agg, Cloud

CONSUMPTION
Enterprise or SP As-a-Service SW consumption/ELA offers

FLEXIBILITY
SDWAN Drives Security to Top-of-Mind

### Customer Intent

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<tr>
<th>Compliance</th>
<th>Guest Access</th>
<th>Direct Cloud Access</th>
<th>Direct Internet Access</th>
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<td>I need to protect my sensitive data (card holder data, patient data) against data breaches before during and after a transaction.</td>
<td>I need to protect my company against liability and prevent guest users from disrupting my network when browsing the internet via guest Wi-Fi.</td>
<td>I want to reduce bandwidth expenses and provide a better user experience by leveraging the local internet path for application hosted in the public cloud. If I open up my branch office to the internet I increase the attack surface and I need to protect my network.</td>
<td>I want to leverage the local internet path for mission critical data; I need to protect myself against potential threats coming into my network.</td>
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### Compliance

- IPsec VPN
- App Aware Firewall
- Snort IPS

### Guest Access

- IPsec VPN
- App Aware Firewall
- URL Filtering

### Direct Cloud Access

- IPsec VPN
- App Aware Firewall
- Snort IPS
- Umbrella (Cloud SIG)

### Direct Internet Access

- IPsec VPN
- App Aware Firewall
- Snort IPS
- Umbrella (Cloud SIG)
Introducing new Cisco SD-WAN software

- Full-Stack Security
  - Integrated Firewall, IPS and URL-Filtering on SD-WAN platforms

- Simplified Cloud Security
  - Faster deployment and greater visibility with Cisco Umbrella

- Up to 40% Faster Office 365 performance
  - Increased reliability with utilization of best path using OnRamp

One user interface for SD-WAN and network security simplifies management
What is Cisco SD-WAN?
“SD-WAN v2.0” with integrated Security

For Service Providers:
• Upsell customers with SD-WAN & Security in 1 agreement
• Integrated solution, ease of deployment & management
• Increased customer revenue and control
SD WAN Evolution - Differentiated Positioning

Security
AppFW, IPS/IDS, URLF
Umbrella

Cloud Networking
Multi-cloud onRamp
Cloud Dock

Operational Simplicity
Network builder
vAnalytics
Multi-tenancy

Cloud Edge

App Assurance
AppQOE
Voice / UC

Virtualization
NFVIS
Orch

Platforms & Infra

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SD-WAN Managed Service Use Cases
Connectivity and Overlay
Service Provider Deployment - One Solution delivering different access models

- End-to-end SD-WAN with APP level SLA
- MPLS
- 4G LTE
- Hosted Services
- Internet
- Data Center
- Cloud

- MPLS Extension over last mile + Offnet
- Internet
- 4G LTE
- MPLS

- Pure Over-the-Top
- Hosted Services
- Internet
- Data Center
- Cloud

- Backbone Connect
- Internet
- 4G LTE
- MPLS
- Backbone
Managed Security

**Hosted On-Premise**
(Managed Firewall, IPS/IDS, etc.
ISR, ENCS or Stand-alone)

- Private IP
- Internet
- Cloud

**Hosted in the SP Core/CNF**
(Managed Firewall, IPS/IDS, etc)

- Private IP
- Internet
- Cloud

**Cloud Security for DIA**
(Managed Security with Cisco Umbrella)

- Private IP
- Cisco Umbrella
- Cloud

Managed, Advisory, Implementation Services
Cloud Networking-XaaS With SLA
IaaS & SaaS

One Click Cloud Networking (IaaS)
Branch to Public Cloud SD-WAN

- E2E SD-WAN connectivity to business applications in public cloud
- Transport diversity & app aware routing (PIP & Inet) at branch & public cloud
- Secure private connection to public cloud

Optimized access to SaaS

- Enabling optimal Cloud OnRamp for optimal user experience
- SP provided interconnect
- Direct peering with SaaS/Cloud providers
Value Added Services
Analytics and Application Experience as-a-Service

vAnalytics, Visibility & Control

Multi-path Opt & Traffic Steering

Application & WAN Optimization

Intelligence and Insights
Detect/Categorize 1,000+ applications automatically

Application Categories

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<tr>
<th>Consumer Apps</th>
<th>Voice and Video</th>
<th>File Sharing</th>
<th>Business and Productivity Tools</th>
<th>Social Networking</th>
<th>Software Updates</th>
<th>Instant Messaging</th>
<th>Database</th>
<th>Gaming</th>
<th>Browsing</th>
<th>Email</th>
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1. Set app rankings and policies
Business Relevant – High Priority
Business Irrelevant – Low Priority
Default – Medium Priority

2. Use Internet as the 2nd WAN
Active-Standby ➤ Active-Active

3. Route app path based on policies

Enable Business Initiatives

Mobile Apps | Digital Signage
Guest WiFi | Catalogs
Video Conferencing | On-demand Training

End to end application visibility application and control
Cisco Is Delivering For Service Providers

Faster deployment cycles
- Pay as you Grow Virtual Branch and Cloud Based Routing
- Deploy in minutes not weeks / months
- Ongoing Access to Newest Features

Scalable consumption
- Control scaling what, when, where they want
- Dynamic license consumption
- Faster time to value (quicker deployment)

Financial benefits
- Hardware Independence and Freedom of Choice
- License Portability for added Flexibility
- Lower cost of entry
Cisco SD-WAN Product Demo

Stefan Olofsson
Technical Solutions Architect
Cisco
Partnering for Profitability

With our Cloud and Managed Service Program, Cisco helps our Service Provider partners get to market faster, enhance their profitability, and achieve top-line growth in their managed and cloud businesses.

Expedite Go-to-Market
Enable profitable growth and increase customer satisfaction by offering customers ready to deploy Cisco Powered solutions that accelerate their digital transformation.

Go to market confident that their services are exceptional backed by our superior technology, support and security.

Secure Financial Rewards
Get recognition for your investment in Cisco through our financial rewards.
Simple and predictable incentives drive business in key growth areas.
Increase their margins with discounts, incentives, promotions, and market development funding.

Achieve Marketing Velocity
Reach new markets and new customers more efficiently using our sales enablement and marketing tools, events, as well as, designation and branding.
Use MDF funds to create more demand by using our marketing resources such as marketing campaigns and digital tools.
Partner GTM Support Aligned to the Buyer Journey

SP Brandable Collateral

How SD-WAN will Transform the Network
And lead to innovative, profitable business outcomes

Infographic(s)

Email Campaigns

Social
For more information

Visit
www.cisco.com/go/sdwan
or contact your Cisco
account representatives
Questions?