Cisco SD-WAN Security

Connect to any cloud, anywhere, securely

Cisco Knowledge Network
November 15, 2018
What we announced
November 13, 2018

Lloyd Noronha
Connecting Users to the Data Center was the Priority
Then the Way We Worked Changed

Devices & Things

Campus & Branch Users

Mobile Users

WAN

Office 365

Google Cloud

Cisco Webex

salesforce

Amazon Web Services

Dropbox

Azure
Applications Moved to Not One Cloud, But Many

Devices & Things

WAN

Campus & Branch Users

Mobile Users

DC/Private Cloud

SaaS

IaaS
Resulting a Highly Complex and Dynamic Network

More user, things and applications, everywhere
Opening Up the New Cloud Edge

Greater risk exposure
Inconsistent user experience
Increasing complexity

Every WAN device must become software defined and secure
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

Aligned to Cisco Intent-based Networking Strategy | Availability begins Q4CY2018

One console for SD-WAN and network security simplifies management
Today, Backhauling Impacts SaaS Performance

A single path for all mission critical business applications
Up to 40% Faster Office 365 Performance

Increased reliability and utilization of best path to Office 365
Challenges Balancing Security & User Experience

1. Continue Backhauling
   Pro: Security is simple
   Con: Poor user experience

2. DIA via Cloud Security
   Pro: Improves user experience
   Con: Limited control

3. DIA via UTM
   Pro: Improves user experience
   Con: Complex to manage

4. Security Everywhere
   Pro: Efficient traffic flows for experience
   Con: Difficult to maintain policy

How can IT maintain choice and control connecting a cloud first world?
Enterprise Firewall
Classification of +1400 layer 7 apps

Intrusion Protection System
Most widely deployed IPS engine in the world

URL-Filtering
Web reputation score using 82+ web categories

Simplified Cloud Security
Easy deployment of Cisco Umbrella

Combining Best-of-Breed in Security & SD-WAN

Cisco Security

Cisco SD-WAN

Hours instead of weeks and months
Broadest SD-WAN Portfolio is Expanding

New SD-WAN platforms for the branch and campus

**New**

**ISR 1111X-8P**
Compact fixed branch platform with rich services, integrated Wi-Fi and LTE
Available now, starting price: $1595 list USD

**New**

**ISR 4461**
Highest performing and scalable modular branch platform with storage and compute
Available now, starting at $24K list USD

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Meraki MX | ENCS 5000 | Public Cloud | vEdge | ISR 1000 | ISR 4000 | ASR 1000
PLUS:

More than a million installed branch routers can get these capabilities just through a software upgrade
Cisco SD-WAN is Open & Programmable

Enterprises
- Learning and hands-on content
- Sandbox
- Code exchange

Managed Service Providers
- OSS/BSS integration
- Multi-tenant

Partners
- Dev Center
- Ecosystem exchange
Opportunity for Managed Service Providers

Security

$6B in 2016
$10.8B in 2022
9.7% CAGR

SD-WAN

$225M in 2015
$8B in 2021
69% CAGR
Now let’s take a closer look at security

Kureli Sankar
Ent Firewall App Aware

• Zone Policies

• Application Visibility and Granular control

• 1400+ layer 7 applications classified

• Allow or block traffic by application category or specific application

• Segmentation

• PCI compliance

Inspect policy allows only return traffic to be allowed and drops any new connections
Intrusion Prevention (IPS/IDS)

- Snort IPS is the most widely deployed engine in the world
- Backed by global Threat Intelligence (TALOS) signatures updated automatically
- Signature whitelist support
- Real-time traffic analysis
- PCI compliance
URL Filtering

- 82+ Web Categories with dynamic updates
- Block based on Web Reputation score
- Create custom Black and White Lists
- Customizable End-user notifications

Requests for “risky” domain requests

White/Black lists of custom URLs

Block/Allow based on Categories, Reputation

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DNS/web-layer security

Leading Security Efficacy for malware, phishing, and unacceptable requests by blocking based on DNS requests

- Supports DNScrypt
- Local Domain-bypass option
- Supports https decryption
- Intelligent Proxy

Cisco Umbrella

Safe requests

Blocked requests

Users and Devices
Advanced Malware Protection

Integration with AMP
- File reputation
- File retrospection

Integration with ThreatGrid
- File Analysis

Backed with valuable Threat Intelligence
## vManage 18.4 – Security Support for Q4CY18

<table>
<thead>
<tr>
<th>Platforms/Features</th>
<th>Ent FW</th>
<th>Ent FW App Awareness</th>
<th>IPS/IDS</th>
<th>URL Filtering</th>
<th>DNS/web-layer Monitoring *</th>
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** Stateful Firewall and DPI using Qosmos are separate on the vEdge
* Need Umbrella Subscription for enforcement
Protecting Workers Wherever They Are...

Unified Access Security

SD-WAN and Firewall/IPS/URL Filtering

Branch/Campus

Cisco Umbrella

Secure Internet GW

Data Center/Private Cloud

Internet/SaaS

IaaS
Combined Security and SD-WAN Licensing

Centralized Management
- On-prem or cloud managed
- Zero touch deployment
- Branch virtualization with Cisco VNF orchestration
- Day 0 and Day 2 provisioning
- Lifecycle management

Secure Connectivity
- Unlimited segmentation
- SD-WAN and advanced WAN topologies
- Limited segmentation
- Cloud connectivity
- Secure VPN overlay
- Enterprise firewall*
- IPS/IDS with Talos signatures*
- URL filtering*
- Umbrella (DNS Layer* Monitoring)
- Basic application visibility

Policy Based Automation
- Advanced network and application visibility
- WAN optimization
- Application aware policies using path control, bandwidth optimization
- Cloud OnRamp
- Forwarding error correction
- Contextual insights with assurance
- Encrypted traffic analytics

Analytics and Assurance
- Network optimization analytics
- Application trending and forecasting

*For Security enforcement with Umbrella, customers must purchase a separate license
But what about service creation and delivery in a service provider’s environment ...
Cisco Managed Services Accelerator

Kurt Rosenthal
Cisco Managed Services Accelerator (MSX)

Cisco MSX is a cloud-native, multi-tenant service creation and delivery platform that helps service providers **quickly, easily, and cost-effectively** develop and deliver managed services to business customers.
MSX Reduces SP Complexity and Costs

Lower cost to integrate ... lower cost to operate

One-time OSS / BSS Integration

Increased service velocity and differentiation

MSX Platform

IOT  SDA  Branch NFV  SD-WAN  SPN  SP DC NFV  Cloud  Meraki  Umbrella  Collab

Identity Mgmt  Device Mgmt  Data Platform  Billing  Catalog System  Message Handler  UI Frontend  Service Lookup
Simple Service Deployment and Management

Multi-tenant services deployed and managed from a simple, customizable UI.
MSX Can Rapidly On-board Many SD-WAN devices

- SD-WAN physical devices
- SD-WAN VNFs in virtual branches
- SD-WAN VNFs in the Cloud
- Manage licenses, images, secure mgt tunnels
- Register devices with correct SD-WAN Control Plane for each tenant
- Simple CSV file uploads
MSX Creates and Manages SD-WAN Control Planes for 100s of Tenants

- MSX creates SD-WAN control plane VMs for each tenant
- MSX provides single sign on and RBAC for each tenant
- MSX provides SD-WAN OSS/BSS interface for each tenant
Managing the New Cisco SD-WAN software

- Full-Stack Security
- Simplified Cloud Security
- Up to 40% Faster Office 365 performance

Firewall, Intrusion Protection Service (IPS), URL-Filtering on SD-WAN platforms
Faster deployment and greater visibility with Cisco Umbrella
Increased reliability with utilization of best path using OnRamp

One user interface for SD-WAN and network security simplifies management
Combining Best-of-Breed in Security and SD-WAN

MSX installs SD-WAN & Security templates for 100s of tenants and sites

Cisco SD-WAN + Security

Enterprise Firewall
Classification of +1400 layer 7 apps

Intrusion Protection System
Most widely deployed IPS engine in the world

URL-Filtering
Web reputation score using 82+ web categories

Simplified Cloud Security
Easy deployment of Cisco Umbrella

MSX simplifies multi-tenant SD-WAN + Security from the Cloud
MSX Simplifies Service Creation & Delivery

Faster Time to Market
Multiple Deployment Options
Reduced Development Costs
Differentiated Services

One Platform; Many Services
MSX is a full-stack solution that integrates into a BSS/OSS once and enables multiple service offers.
Why Cisco SD-WAN?

Security at enterprise scale
Proven technology across 100s of customers, now with the best threat intelligence and ability to deploy right security in the right place, quickly.

Choice and control
Deliver the best user experience without compromise over any connection to any cloud with IT simplicity and flexibility.

Easy to manage and consume
Unified architecture that combines best in class SD-WAN and Security into a single user interface and a single consumption model.

Designed for Intent-Based Networking end-to-end
What you can do now

Explore more about SD-WAN and MSX here:

• [www.cisco.com/go/sdwan](http://www.cisco.com/go/sdwan)
• [www.cisco.com/go/msx](http://www.cisco.com/go/msx)

Join others in the DevNet community


• Check out a demonstration
• [www.cisco.com/go/sdwandemos](http://www.cisco.com/go/sdwandemos)