

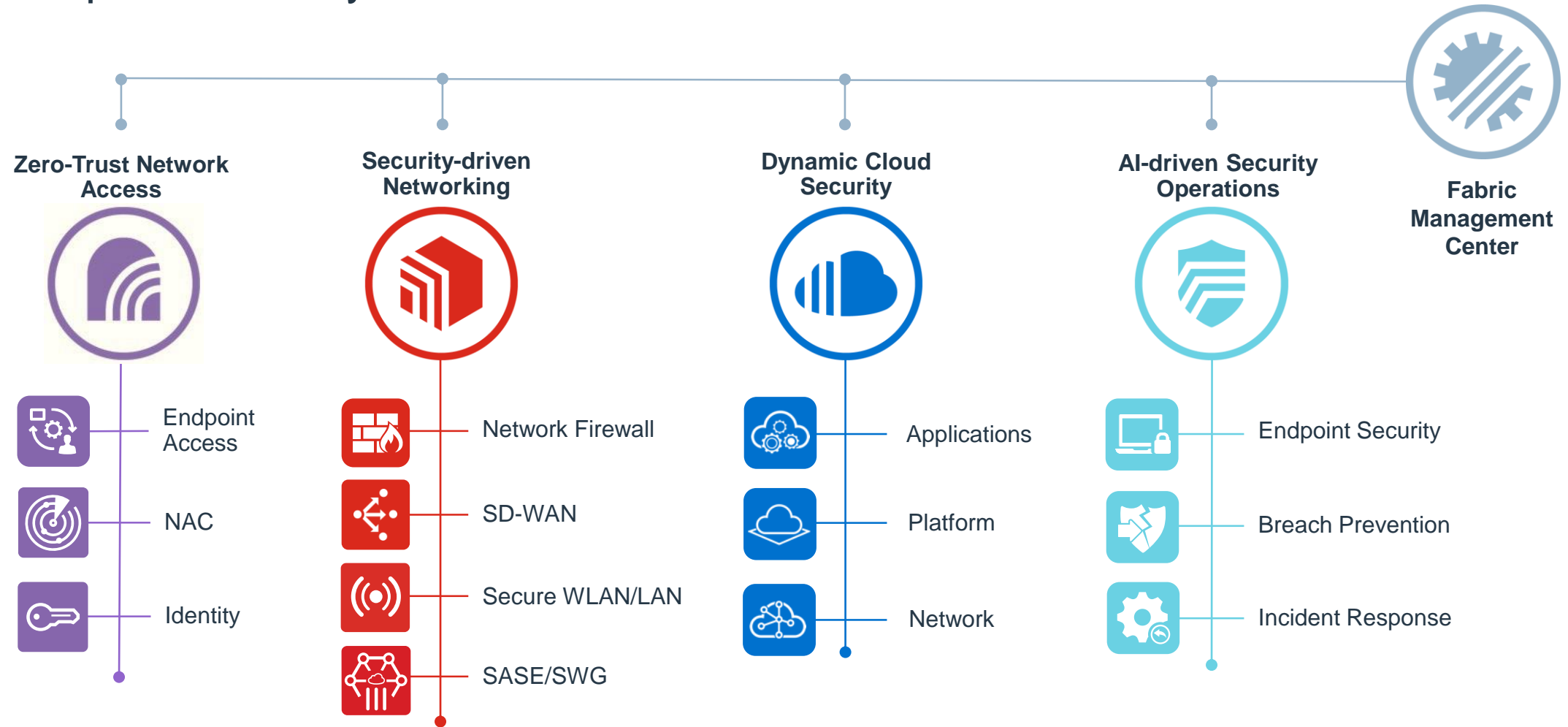


# Fortinet Secure SD-WAN

Nirav Shah – Senior Director, Products and Solutions

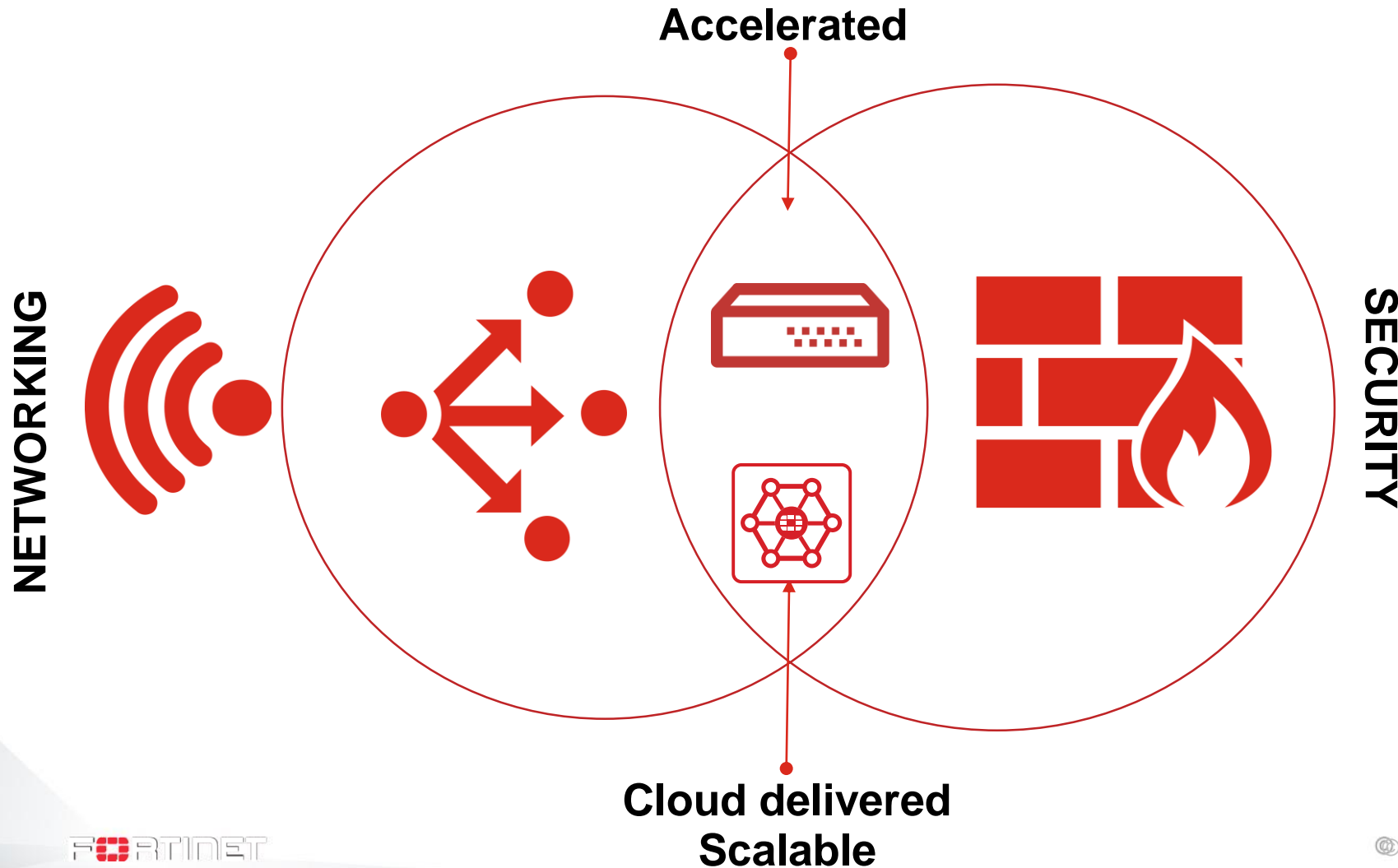
# Fortinet Cybersecurity Platform

## Enterprise Security Fabric



# Security-driven Networking Vision

Convergence of networking and security across all edges and users



Accelerated  
convergence of  
Networking and  
Security

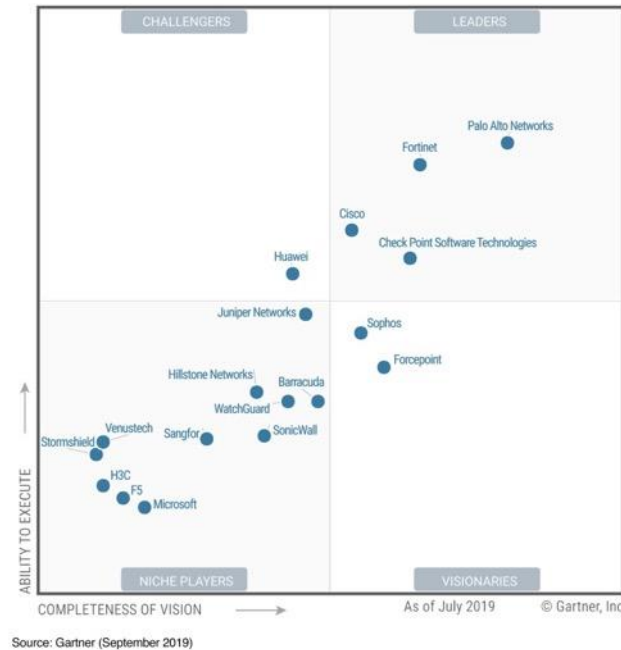
Flexible, anywhere and  
anytime security

# Recognized As a Leader for Network Firewalls and WAN Edge Infrastructure

## Convergence of Security and Networking Using Single Platform

### Sept. 2019 Magic Quadrant for Network Firewalls

Figure 1. Magic Quadrant for Network Firewalls

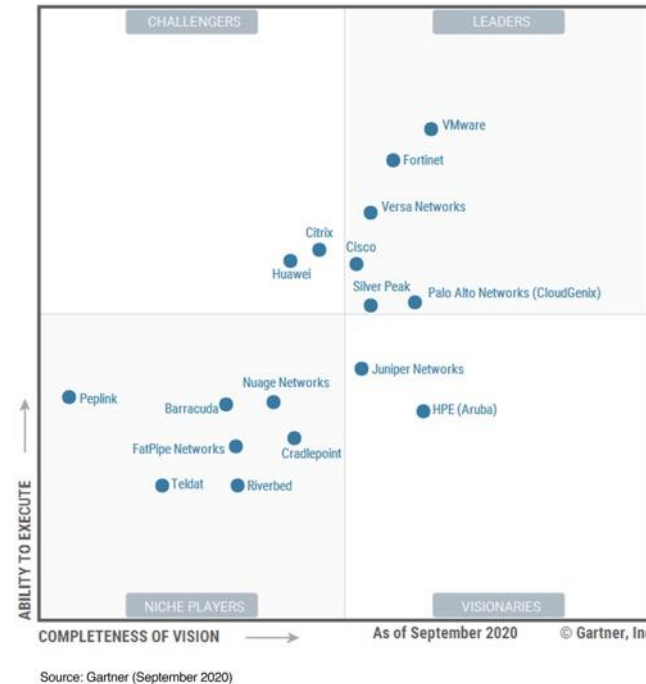


#### Fortinet Recognized as a Leader

2019 was 10<sup>th</sup> time in a row that Fortinet is in the Gartner Magic Quadrant for Network Firewalls

### Sept. 2020 Magic Quadrant for WAN Edge Infrastructure

Figure 1. Magic Quadrant for WAN Edge Infrastructure



#### Fortinet Recognized as a Leader

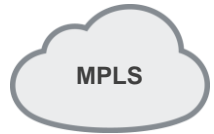
With Higher Ability to Execute and Further Completeness of Vision Than the Previous Year

Gartner Footnote Placeholder

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# **Secure SD-WAN**

# Market Trends for WAN Edge Infrastructure



Traditional



Broadband

By 2023, to deliver flexible, cost-effective scalable bandwidth, 30% of enterprise locations will have only internet WAN connectivity, compared with approximately 15% in 2020



Legacy Routers



SD-WAN

By 2024, to enhance agility and support for cloud applications, 60% of enterprises will have implemented SD-WAN, compared with about 30% in 2020.



SD-WAN



SASE

By 2024, more than 60% of software-defined, wide-area network (SD-WAN) customers will have implemented a secure access service edge (SASE) architecture, compared with about 35% in 2020.



Manual



AI-driven

By 2024, 20% of SD-WAN centralized configuration and troubleshooting will be touchless via an artificial intelligence (AI) assistant, compared with none in 2020

# WAN Transformation Challenges



Poor User Experience



High WAN Costs



Limited Security



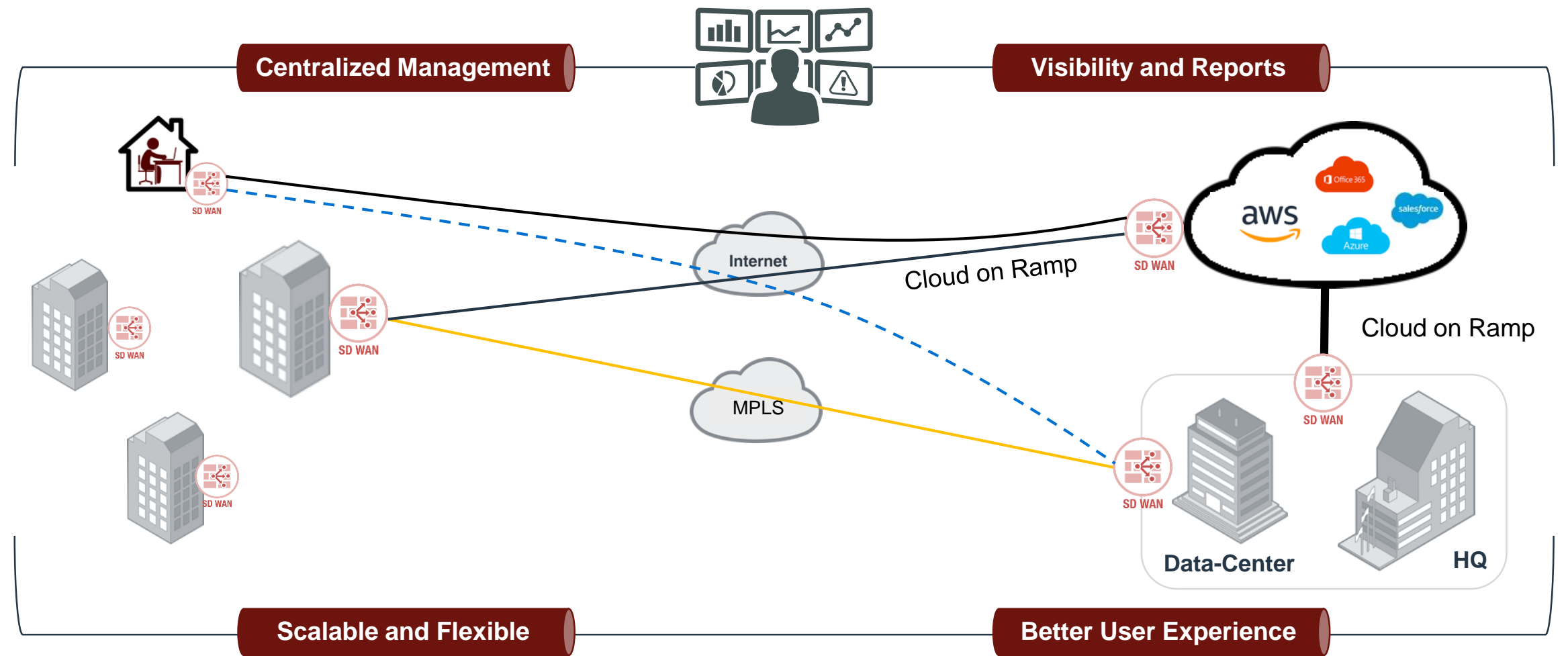
Manual Operations

## Transform

### WAN Edge Operations

With better User Experience,  
consistent security posture,  
automated operations while  
reducing TCO

# Fortinet Secure SD-WAN Scales to all Deployment Sizes





# Gartner Recognized WAN Edge Infrastructure Use Cases



## Large Global WAN

Complex Infrastructure with  
focus on Best Application  
Experience



## Small Footprint Retail

Distributed Infrastructure  
with focus on Best TCO  
with simplification



## Security Sensitive

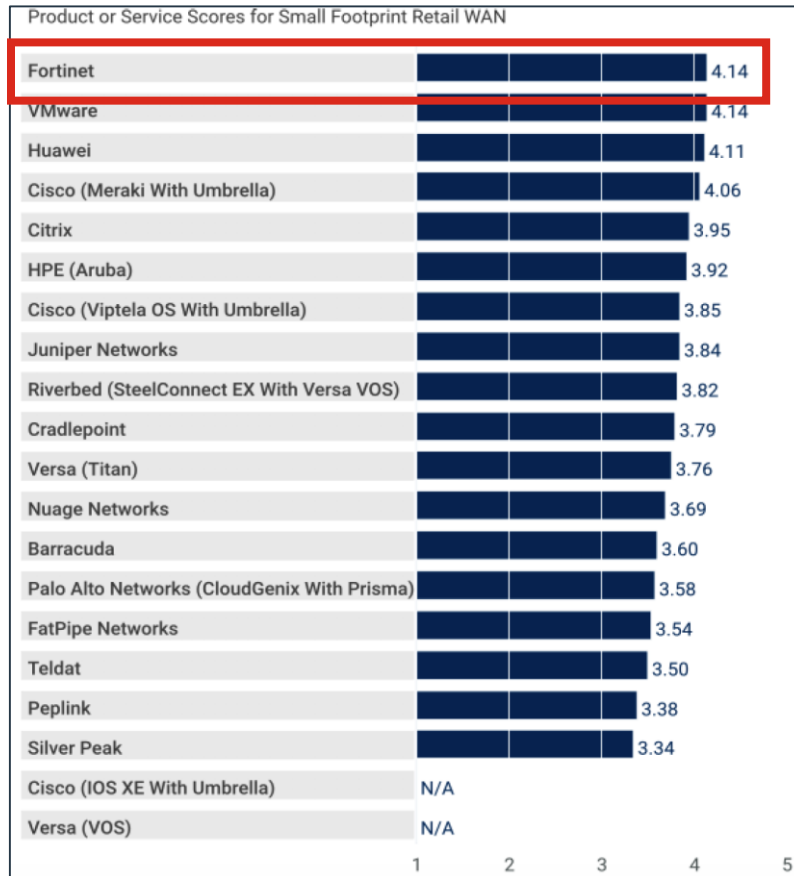
Direct Internet Access with  
focus on secure and  
reliable connectivity



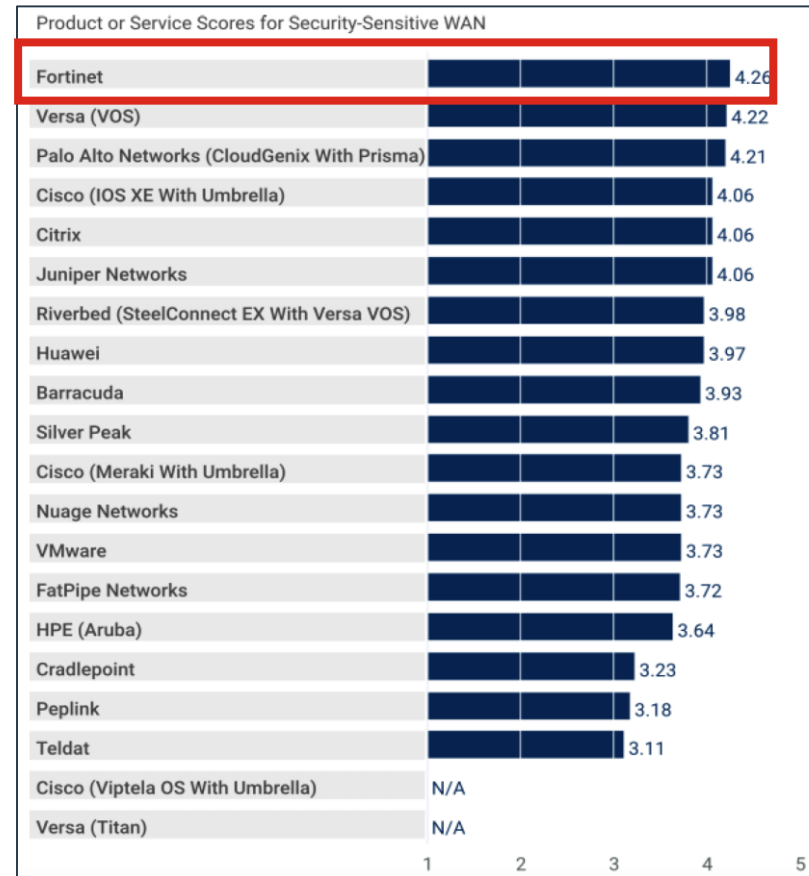
## Cloud First

Cloud adoption with  
focus on optimized  
SaaS access

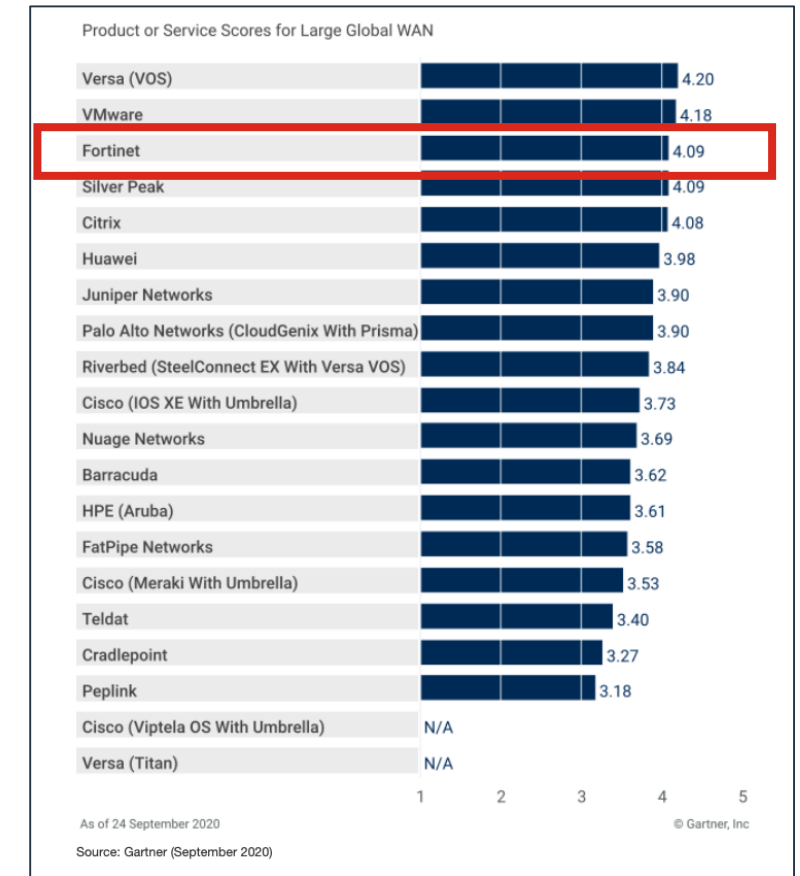
# Fortinet Leads Gartner Critical Capability Report of WAN Edge



#1 SD-Branch



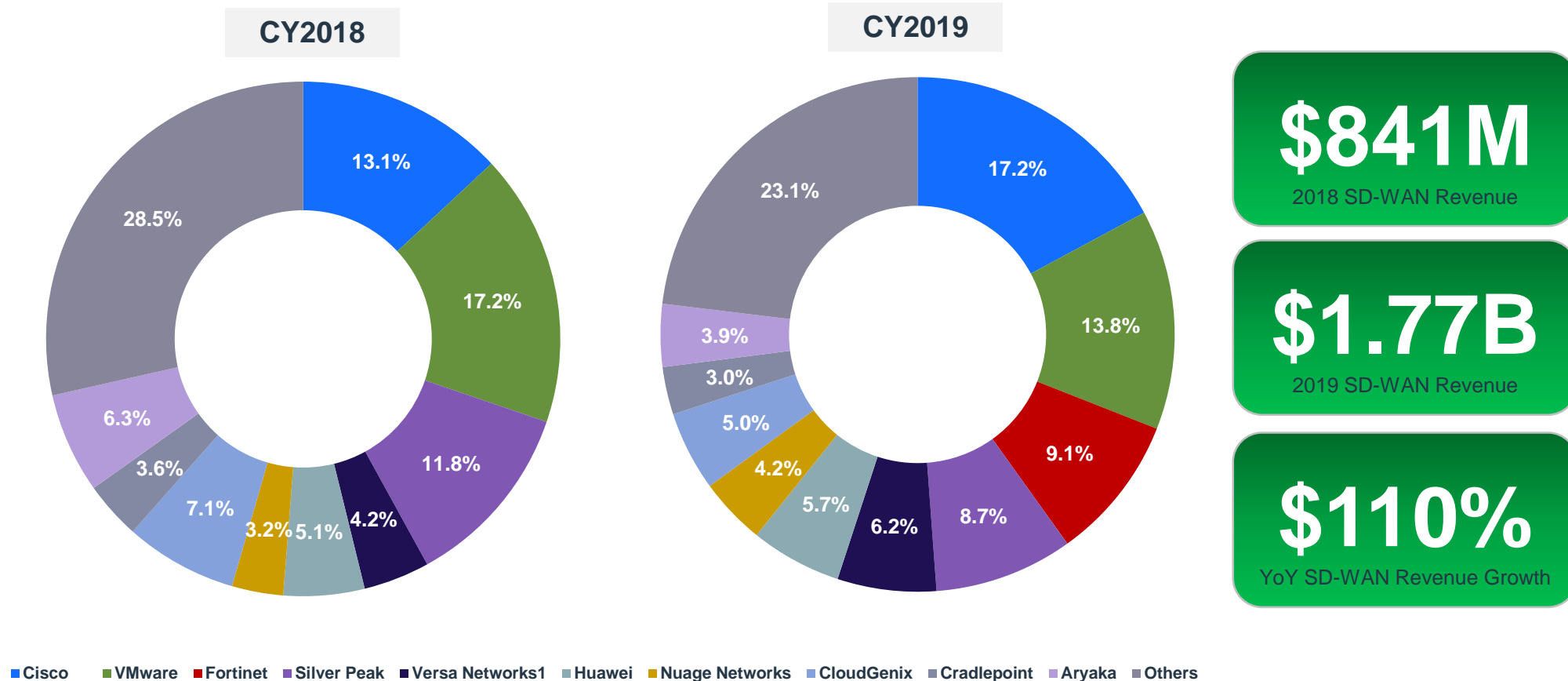
#1 Secure SD-WAN



Top-3 SD-WAN for Large Enterprise

# SD-WAN: Fortinet in Top 3 SD-WAN Vendors

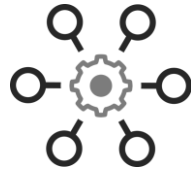
SD-WAN Grew 110% from 2018 =>2019



Gartner Source: Market Share: Enterprise Network Equipment by Market Segment, Worldwide, 4Q19 and 2019, Table 16.1, March 2020

# Fortinet Offers the Most Comprehensive SD-WAN Solution

## Simplified Operations



### Quick. Efficient Provisioning and Automation



Zero Touch



Management



Orchestration



Analytics



Cloud connectors

## Instant ROI Benefits



### Consolidation of Networking and Security



Advanced Routing



SD-WAN



WAN Remediation



VPN



NGFW



SSL Inspection

## Improve User Exp.



### Innovation for Accelerated, Scalable and Flexible WAN



SoC4



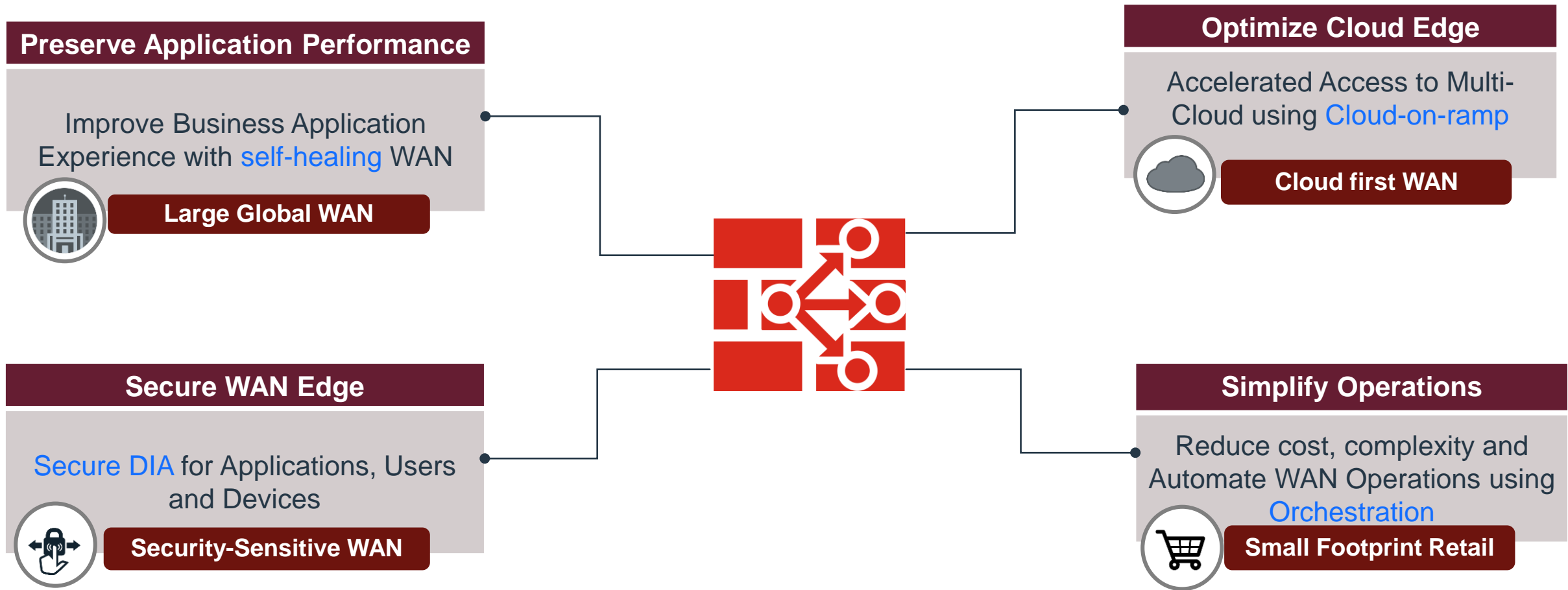
6.4



vSPU

# **Secure SD-WAN Use Cases**

# Fortinet Secure SD-WAN Use-Case



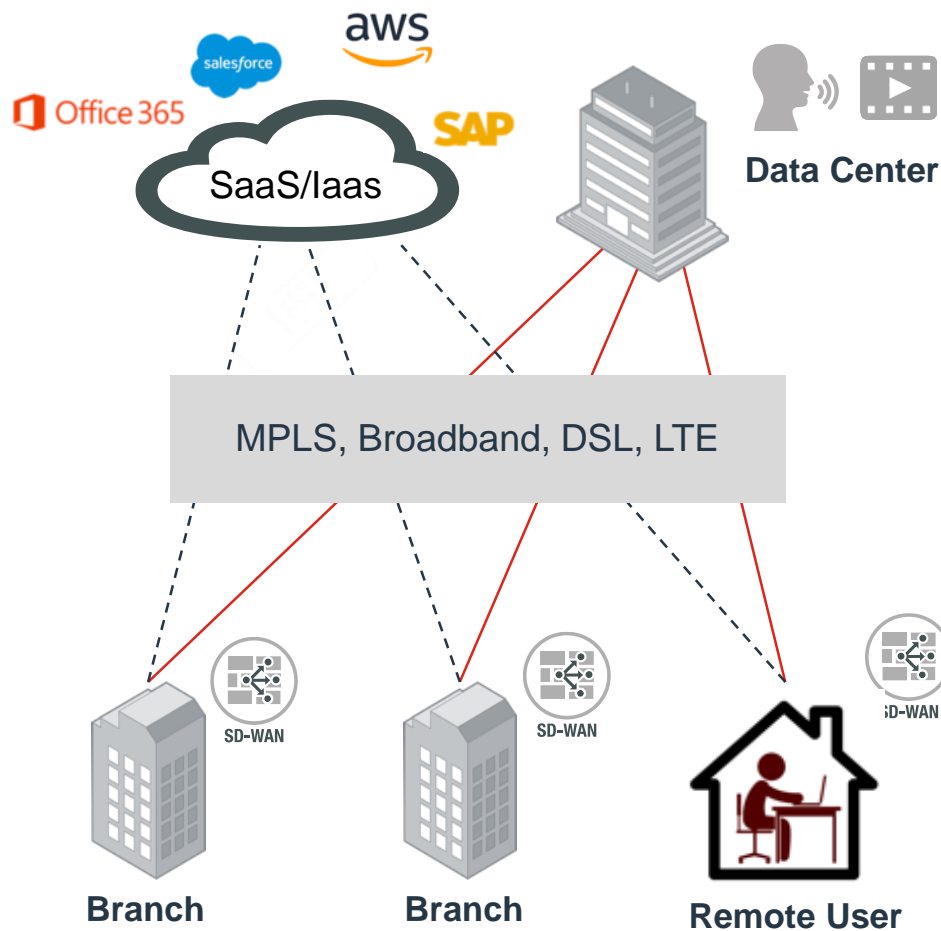


# **Use Case 1:** **Improve Application Experience**



# Preserve Application Experience

Recommended for Large Global WAN



## GOAL

- Improve Application Experience with self-healing SD-WAN

## CAPABILITIES

- 5000+ Application Recognition
- Real-time WAN remediation for optimum performance
- Assured application performance over any WAN transport to reduce cost

## BENEFIT



Enhanced User Experience





# Self-Healing SD-WAN for Best Application Experience



Application Identification



Accelerated Switchover



WAN Remediation



Optimization at all Edges

# NSS Labs “Recommends” Fortinet’s SD-WAN



Vendor	QoE for VoIP		QoE for Video		TCO per Mbps	Overall Rating
Barracuda Networks	2.49	Below Use Case	2.75	Below Use Case	\$85	Caution
Citrix Systems	4.25	Above Use Case	4.04	Above Use Case	\$119	Verified
Cradlepoint	3.52	Above Use Case	1.10	Below Use Case	\$496	Caution
FatPipe Networks	4.31	Above Use Case	3.85	Above Use Case	\$84	Verified
Forcepoint	4.20	Above Use Case	4.04	Above Use Case	\$44	Verified
Fortinet	4.38	Above Use Case	4.26	Above Use Case	\$5	Recommended
Talari Networks	4.37	Above Use Case	4.47	Above Use Case	\$197	Recommended
Versa Networks	4.09	Above Use Case	4.09	Above Use Case	\$77	Verified
VMware	4.27	Above Use Case	4.21	Above Use Case	\$97	Recommended

Figure 2 – NSS Labs’ 2018 Recommendations for Software-Defined Wide Area Network (SD-WAN)

Highest Voice Experience in 2018

Vendor	Vendor-Claimed	NSS-Tested
	3 -Year TCO/ Vendor-Claimed Throughput	3-Year TCO/ (NSS-Tested VPN Throughput (Mbps) + MOS Impairments)
Barracuda Networks	\$21	\$16
Citrix Systems	\$19	\$24
Forcepoint	\$14	\$23
Fortinet	\$2	\$4
Oracle (Talari)	\$15	\$20
Silver Peak	\$32	\$37
Versa Networks	\$8	\$10
VMware	\$22	\$28

Figure 10 – Value Based on TCO per Mbps (US\$)

Highest Value in 2019 Test

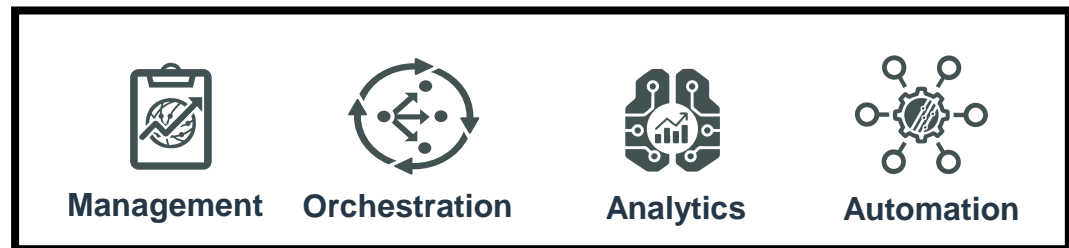


# **Use Case 3: Simplify and Automate Operations**



# Simplify and Automate Operations

Deploy at scale across any Edge



WAN Edge

Security

LAN Edge

## GOAL

- Simplify deployment to scale at speed

## CAPABILITIES

- Centralized Orchestration with ZTP
- Advanced Analytics & Reporting
- Branch Consolidation with SD-Branch

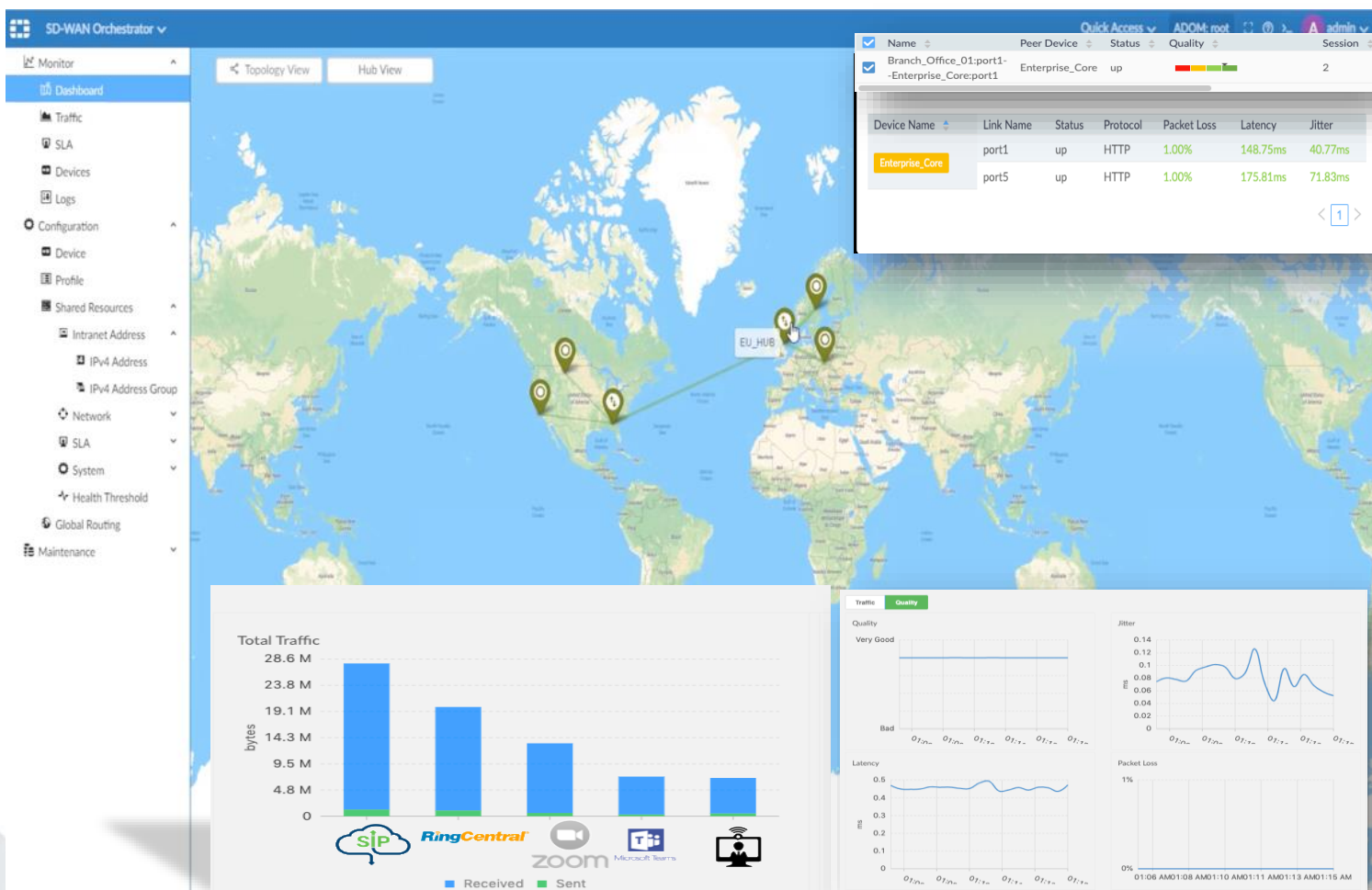
## BENEFIT



Reduce CAPEX and OPEX



# Intuitive Workflow with Centralized Orchestrator



## Application Controls

SLA based performance



## Integrated Operations

NOC & SOC enabled



## Cloud Connectors

Overlay & Native Integration



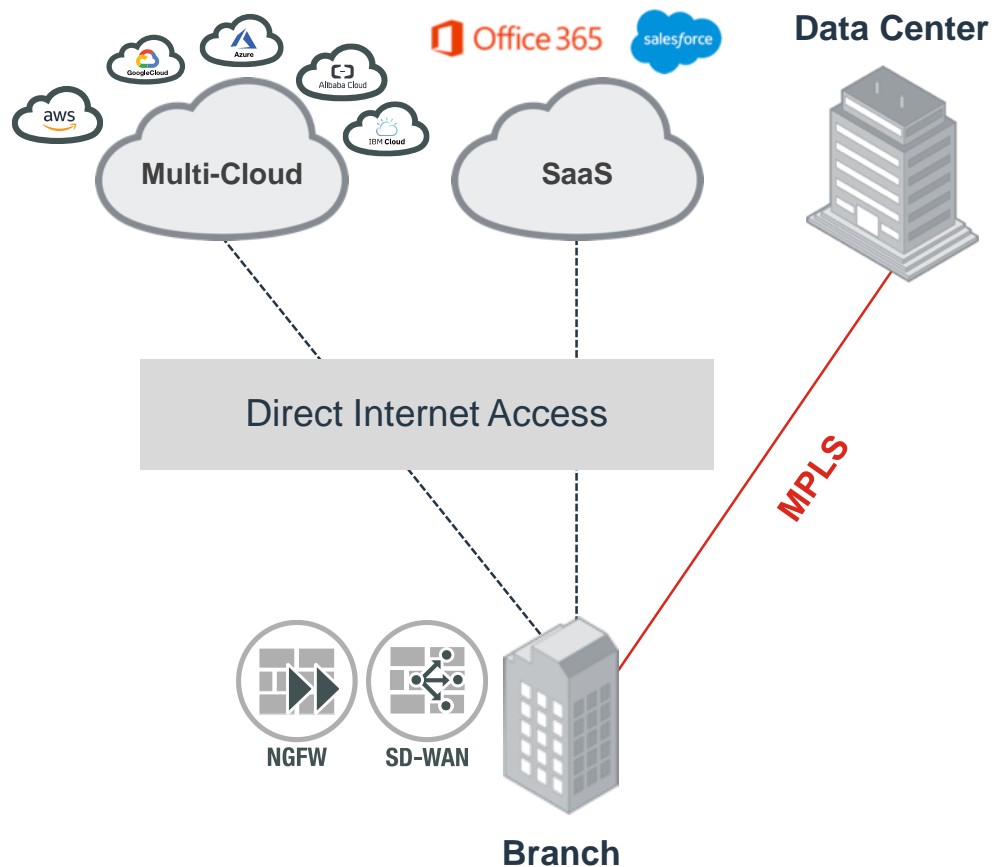
## Automated Overlays

Seamless full mesh



# Optimize Cloud Edge

## Accelerated Cloud and SaaS Performance



### GOAL

- Provide comprehensive support for easy, automated and flexible cloud access

### CAPABILITIES

- Cloud-on-Ramp for better application experience for cloud workloads
- Multi-Cloud SD-WAN for better visibility and control
- Vision with SASE for flexible security and SaaS optimization

### BENEFIT



Accelerated Cloud Performance

# Fortinet Secure SD-WAN for Cloud

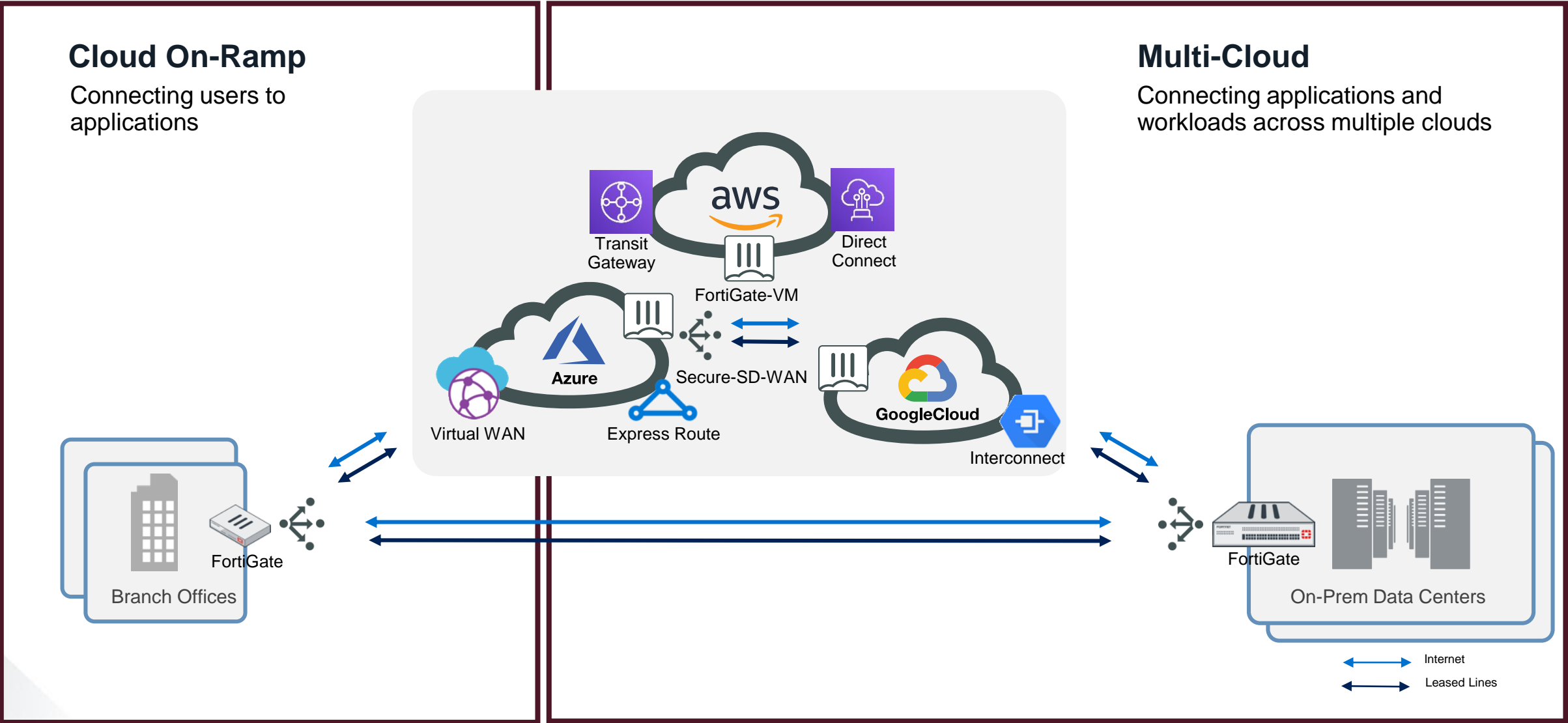
Use cases for connecting users, applications & clouds

## Cloud On-Ramp

Connecting users to applications

## Multi-Cloud

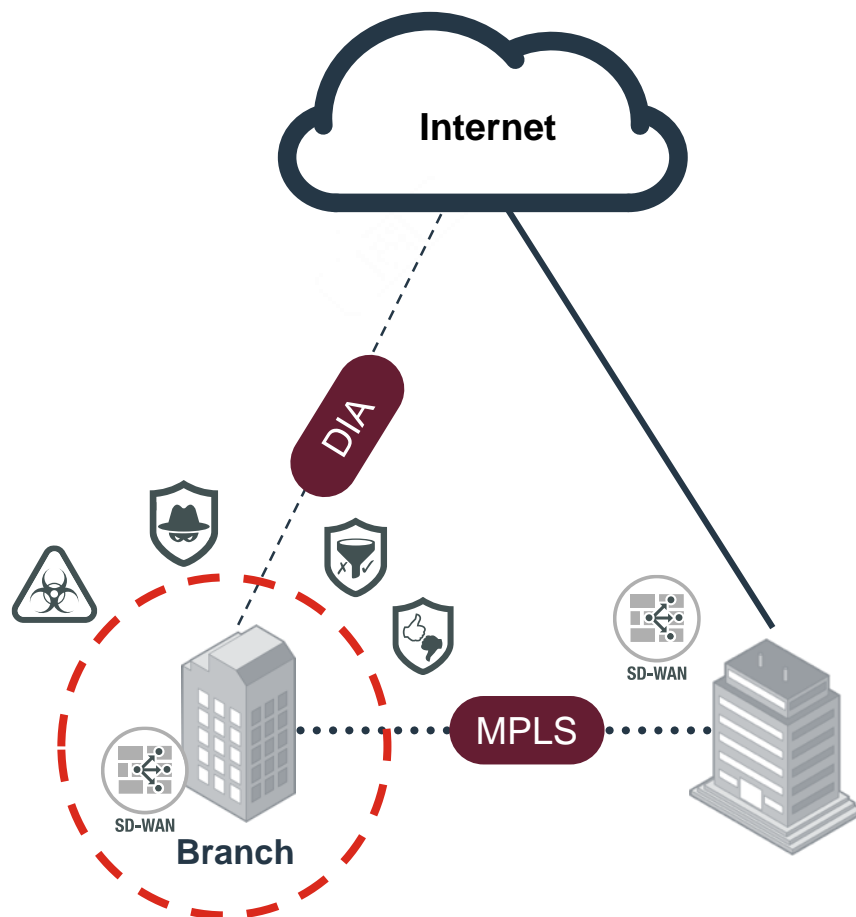
Connecting applications and workloads across multiple clouds





# Security for WAN Edge

## Secure Direct Internet Access



### GOAL

- Secure Applications, Users and endpoints from all threat landscape

### CAPABILITIES

- Integrated NGFW or Cloud delivered SASE
- Advanced Threat Protection
- Intelligent Real-time FortiGuard Services

### BENEFIT

 Flexible Security consumption models





# Secure Connectivity for all Threat Landscape

Built-in Security at WAN Edge with Industry's Leading Performance

## Advanced Malware Protection



Antivirus



Advanced Threat Protection

## Content Security



Antispam



Web Filtering



## Application Security



Application Control



Web Application



**Competitive**

# FortiGate Secure SD-WAN - Comparison

**FORTINET**

**velocloud**<sup>TM</sup>  
Now part of VMware

**paloalto**<sup>®</sup> NETWORKS | **CLOUDGENIX**  
A PALO ALTO NETWORKS COMPANY

Advance SD-WAN and NSS  
Labs Test Recommended



In-built NGFW Security and  
Leader in Gartner MQ



Advanced Routing and WAN  
Optimization



Extension to SD-Branch  
(AP and Switches)



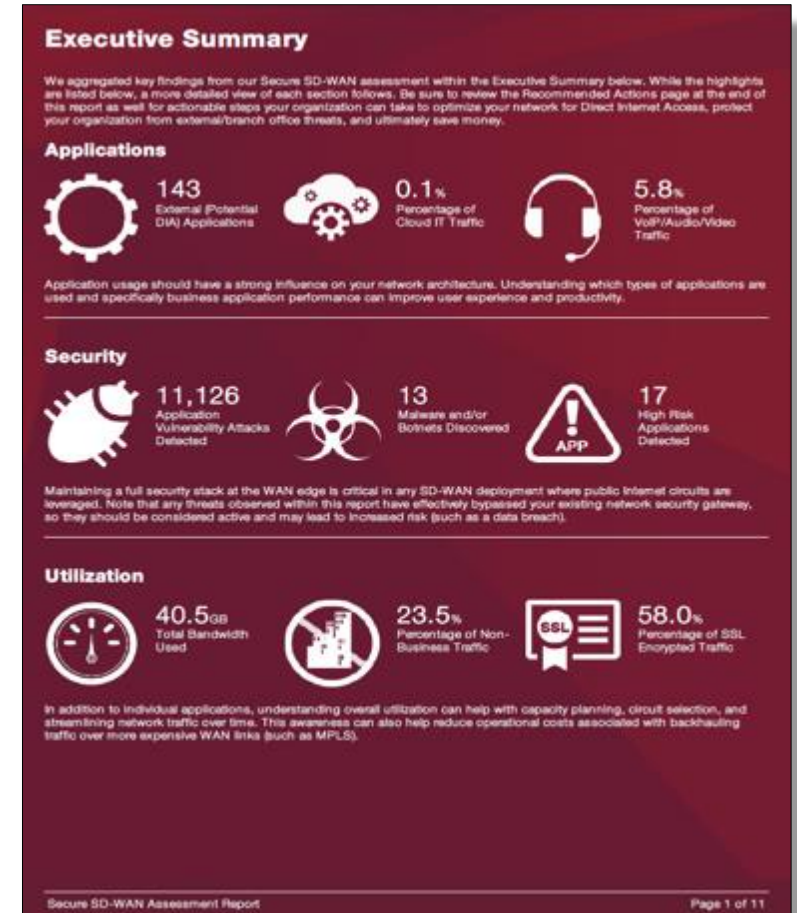
Single Pane of Glass  
Management.  
(Security, SD-WAN and SD-Branch)



# Introducing New Secure SD-WAN Assessment



- **Replace Legacy Routers**
  - Fortinet partners help in running this tool
  - No changes to the network and collect the logs
- **Purpose:** Get Visibility into
  - Application Usage
  - Security Posture
  - Bandwidth Utilization
- **Outcome:** Enable WAN Edge Transformation with Fortinet Secure SD-WAN approach



# New Secure SD-WAN Assessment (CTAP SD-WAN)

## Executive Summary

We aggregated key findings from our Secure SD-WAN assessment within the Executive Summary below. While the highlights are listed below, a more detailed view of each section follows. Be sure to review the Recommended Actions page at the end of this report as well for actionable steps your organization can take to optimize your network for Direct Internet Access (DIA), protect your organization from threats, and ultimately save money.

### Applications



Application usage should have a strong influence on your network architecture. Understanding which types of applications are used and specifically business application performance can improve user experience and productivity.

### Security



Maintaining a full security stack at the WAN edge is critical in any SD-WAN deployment where public Internet circuits are leveraged. Note that any threats observed within this report have effectively bypassed your existing network security gateway, so they should be considered active and may lead to increased risk (such as a data breach).

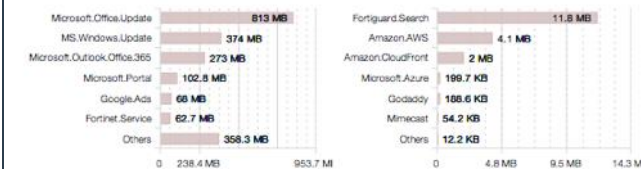
### Utilization



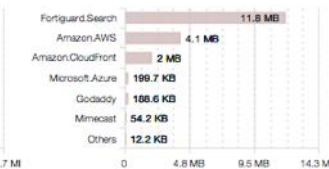
In addition to individual applications, understanding overall utilization can help with capacity planning, circuit selection, and streamlining network traffic over time. This awareness can also help reduce operational costs associated with backhauling traffic over more expensive WAN links (such as MPLS).

## Applications

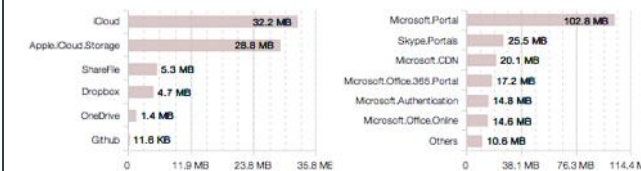
### Top Business Applications



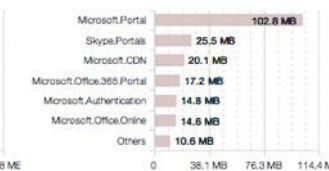
### Top Cloud IT Applications



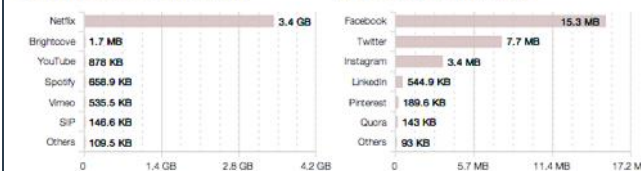
### Top Storage Backup Applications



### Top Collaboration Applications



### Top VoIP/Audio/Video Applications



### Top Social Media Applications



## Security

### Quick Stats

- 652 application vulnerability attacks detected
- 0 known botnet detected
- 2 malicious websites detected
- 5 high risk applications detected
- 0 phishing websites detected
- 0 known malware detected

### High Risk Applications

The FortiGuard research team assigns a risk rating of 1 to 5 to an application based on the application behavioral characteristics. The risk rating can help administrators to identify the high risk applications quickly and make a better decision on the application control policy. Applications listed below were assigned a risk rating of 4 or higher.

#	Risk	Application	Category	Technology	Users	Bandwidth	Sessions
1	5	SOCKS5	Proxy	Network-Protocol	18	56.93 MB	748
2	5	SOCKS4	Proxy	Network-Protocol	3	205.49 KB	22
3	5	Proxy-HTTP	Proxy	Network-Protocol	2	11.52 KB	12
4	4	RDP	Remote.Access	Client-Server	9	7.81 MB	1,757
5	4	BitTorrent	P2P	Peer-to-Peer	7	639 B	8

### Top Application Vulnerability Exploits Detected

The performance gains and cost savings from leveraging public Internet circuits in an SD-WAN deployment need to be protected by a full security stack at the WAN edge. Application vulnerabilities at the branch can be exploited to compromise the security of your entire network. The FortiGuard research team analyzes these vulnerabilities and then develops signatures to detect them. FortiGuard currently leverages a database of more than 5,800 known application threats to detect attacks that evade traditional firewall systems. For more information on application vulnerabilities, please refer to FortiGuard at: <https://www.fortiguard.com/intrusion>.

#	Risk	Threat Name	Type	Victims	Sources	Count
1	5	Netcore.Netis.Devices.Hardcoded.Password.Security.Bypass	Improper Authentication	1	4	12
2	5	HTTP.URILjava.Code.Injection	Code Injection	1	5	5
3	2	Traceroute	Information Disclosure	44	23	423
4	2	TCP.Overlapping.Fragments	Buffer Errors	18	59	180
5	2	TCP.Out.Of.Range.Timestamp	DoS	2	14	19
6	2	VuWorks.WDB.Debug.Service.Version.Number.Scanner	Other	1	4	5
7	2	TCP.Data.On.SYN	Permission/Privilege/Access Control	1	1	3
8	2	SNMP.Oversized.Item	Anomaly	1	1	3
9	2	SNMP.Spec.Violation	Anomaly	1	1	1
10	2	IKE.Exchange.DoS.Version	DoS	1	1	1

# **SD-WAN Customers**

# A Gartner Peer Insights Customers' Choice™

Recognized by 3,600+ Customers in Multiple Categories and Markets



## Customers' Choice

[Enterprise Firewall](#)

[WAN Edge/SD-WAN](#)

[Wired and Wireless LAN Access Infrastructure](#)

**Top 5**

Vendor in 8  
markets

**3600+**

Reviews

**14**

Markets

The GARTNER PEER INSIGHTS CUSTOMERS' CHOICE badge is a trademark and service mark of Gartner, Inc. and/or its affiliates and is used herein with permission. All rights reserved. Gartner Peer Insights Customers' Choice constitute the subjective opinions of individual end-user reviews, ratings, and data applied against a documented methodology; they neither represent the views of, nor constitute an endorsement by, Gartner or its affiliates.

# Healthcare Provider Achieves Best User Experience

Preserve Application Performance even at high Volume by Remote Customers & Employees



Founded 2005

100 + Offices in North America

Secure DIA Connectivity for UCaaS Applications

## Solution Requirements



Native Integration to Azure



Drastic Remote Users Increase



Contact Centers

## Business Outcomes



Better Application Performance  
to Office365



Positive User Experience with  
Hybrid WAN



Secure DIA connectivity for  
Applications





1968  
Founded

50 Countries

\$3.2B  
Revenue



10K

700+



# Solution Requirements

Simplified  
Intelligent  
Future Proof

## Application Aware



VoIP & Video



O365



Business/Custom



Pandora

## Multi-Path Intelligence



Availability



Packet Loss



Latency



Jitter

## Simplified Management



Single Pane of Glass



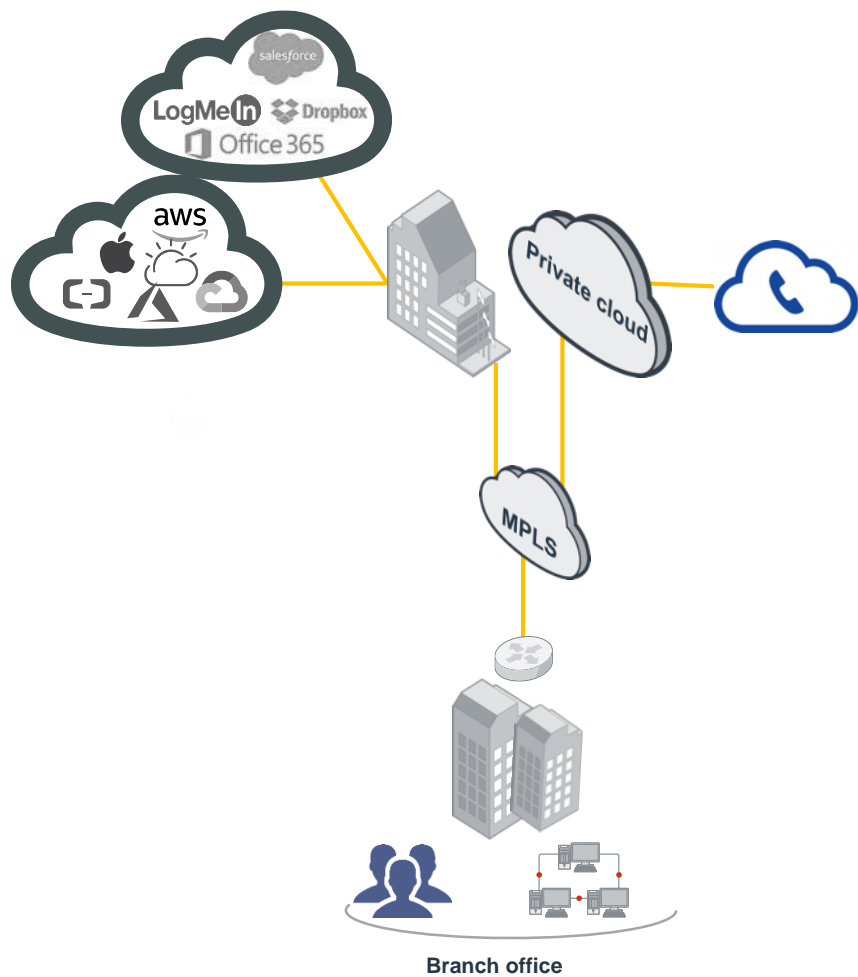
Simple to Procure



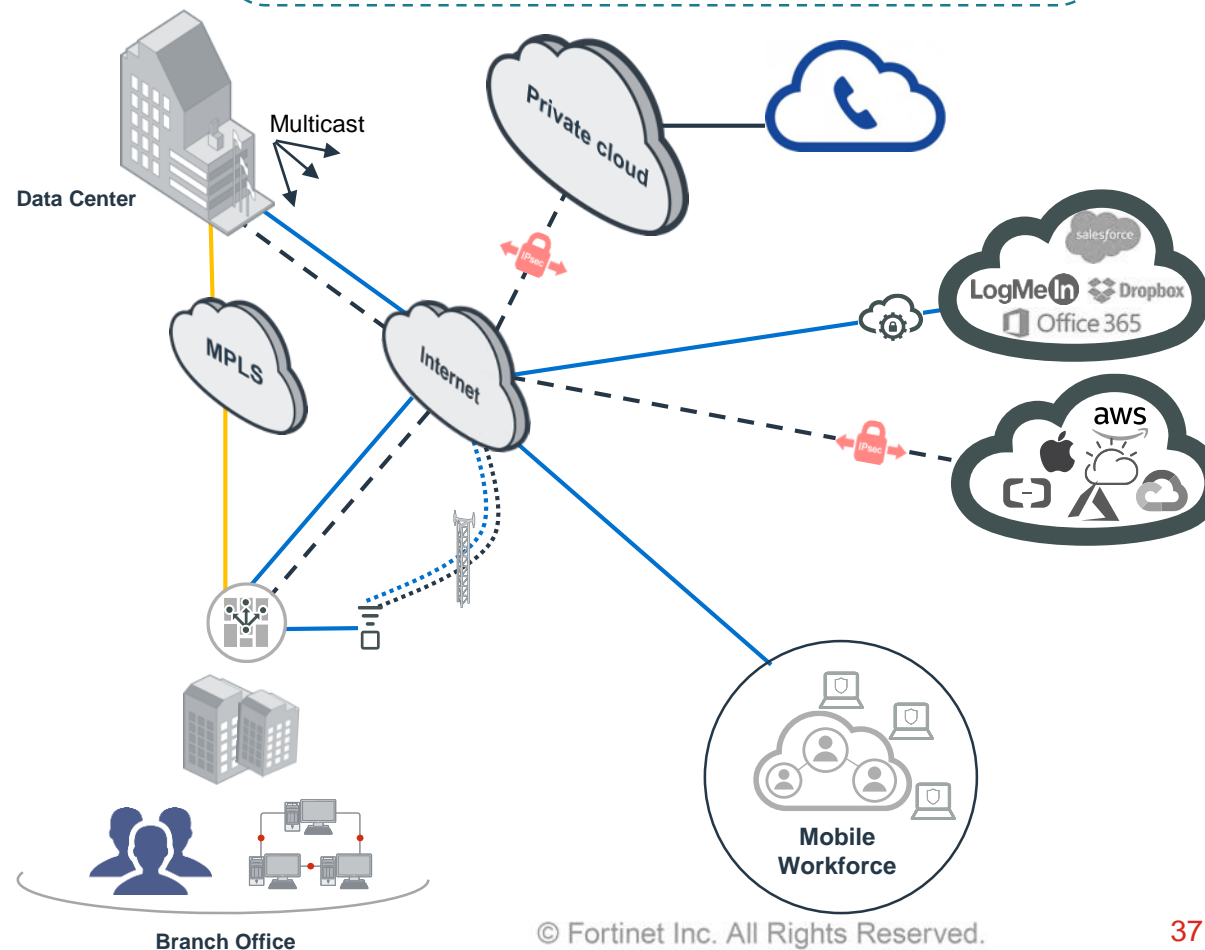
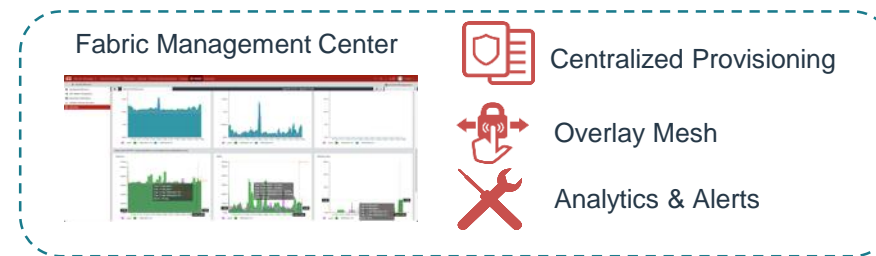
Integrated  
Network & Security



# Rollins Secure SD-WAN adoption



Branch office



Branch Office

# Review

- ✓ SD-WAN is one of the fastest growing technology (40%+ Y/Y)
- ✓ SD-WAN is a top of mind technology for digital initiatives
- ✓ Extend SD-WAN to SD-Branch and simplify the entire branch

Resources: Where to Learn More [FUSE SD-WAN](#)

**Discovery Guide**  
**Fortinet Website**  
**SD-WAN Community on Fuse**  
**Playbook & Sales Guide**  
**Field Briefs**  
**Competitive Battlecards**



