Fortinet Secure SD-WAN
One WAN Edge Powered by One OS, One Management Transforming and Securing your WAN

Presenter
Q4 2021
Distributed Applications and Remote Workforce are Driving WAN Transformation

78%  Of organizations currently using IaaS

51%  Of organizations use multiple public clouds

70%  Of some of the workforce will work remotely at least five days a month by 2025

ESG: 2021 Technology Spending Intentions Survey
Enterprise Access Trends

Single Authentication  →  Continuous Verification of Identity & Risk

By 2024, 70% of application access will use MFA, up from 10% today\(^1\)

BYOD  →  IoT

By 2025, there will be 12B installed IoT devices\(^3\)

Growth of Remote Work

Workforce shifts from 4% teleworking to 30% teleworking by end of 2021\(^2\)

BYOD  →  IoT

Transition to Dynamic Hybrid Cloud

Since nearly every organization needs it, hybrid IT use-case requirements have become more common among Gartner clients.\(^4\)

---

\(^1\) Gartner Magic Quadrant for Access Management, 12 August 2019
\(^2\) Global Workplace Analytics
\(^3\) Gartner IoT Forecast
\(^4\) Gartner Magic Quadrant for Public Cloud Managed Services, 4 May 2020
Current Architecture is Insufficient and Complex

- Network Edge
  - Disparate Mgmt Console and Complex Architecture
  - Compliance, Difficulty Securing Users & Distributed Applications

- WAN
  - Cumbersome IP Routing Configurations
  - Limited Bandwidth Capacity Utilization & end-to-end Visibility

- Applications
  - Unpredictable Application Performance and Availability
  - Limited multi-cloud connectivity and security

Poor User Experience, High WAN Cost, Complex Operation, Increased Risks
Four Products (4 Management Consoles) + Analytics

SD-WAN  NGFW  Routing  ZTNA  Visibility & Analytics
## IT Outcomes

<table>
<thead>
<tr>
<th>Deliver Superior Quality of Experience at Scale</th>
<th>Simpler and Faster to Secure Networks</th>
<th>Achieve Operational Efficiencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dynamic app steering based on SLA and first packet classification [including encrypted traffic] of &gt; 5,000 apps with self-healing capabilities</td>
<td>One WAN edge for networking, security, routing and analytics</td>
<td>One management for automating configuration &amp; deployment, orchestrating policies, and analytics and reporting</td>
</tr>
</tbody>
</table>
Simplified Architecture and Management

Consolidated Functions into One WAN Edge Powered by One Device

Traditional Network Edge

- Efficiency
- Complexity
- Expensive

Secure SD-WAN
One WAN Edge Powered by One OS

- Simple
- Agile
- Cost-effective

FortiGate
Enabling Application Resilient Networks

Secure Local Internet Breakout

- Secure Local Internet Breakout
- 5,000+ App ID and Classification
- First packet steering including encrypted traffic
- SSL Inspection
- WAN remediation

Enhanced User Experience

- Intelligent Steering
  Traffic Agnostic
- Reliable Accuracy
  Including encrypted traffic
- Continuous Learning
  Brodest support 5k+ apps
- Self-healing
  Realtime Optimization

Branch Office

On-premises Data Center

SaaS

Public Cloud
Secure SD-WAN for Hybrid and Multi-clouds

Enabling the Cloud On-Ramp & Multi-Cloud

- Cloud-native connectivity integrations
- Automation for efficient cloud operations
- Superior Application QoE

Simplifies SD-WAN deployments across multi-cloud and hybrid clouds
Single Pane-of-Glass

Network Wide Visibility, Analytics & Orchestration

LAN
- Security Policies
- Segmentation
- LAN Routing (OSPF/BGP)
- Access Points
- DHCP
- Ports, VLANs

WAN
- WAN Links (MPLS, DIA, Broadband, LTE/4G/5G)
- NGFW, SSL Inspection
- WAN Routing (BGP/OSPF)
- IPSec VPN Overlays
- Broadband QoS
- App Steering Policies
- App Id & Classification

Cloud
- N-S Protection Rules
- E-W Protection Rules
- Gateway Integration
- Security Policies
- Multi-cloud Connectivity

Orchestration

End-to-End Visibility, Analytics and Reporting

© Fortinet Inc. All Rights Reserved.
Enforcing Zero Trust Access Across SD-WAN Edges

Securing Work-from-Anywhere with Explicit Application Access Per User

User Identity and Device Posture
ENFORCEMENT

User Identity  Policy Engine

Data Center

Access Proxy

User Contextual Rule Set
Access Specific Applications
Continuous Trust Check

Applications Can Be Anywhere

Users Can Be Anywhere

Campus
Branch
Home
Travel
User
ZTNA

Cloud
SaaS
Secure SD-WAN Expansion With LTE/5G

Outcomes

• Create 5G and LTE wireless interface to create SD-WAN rules and performance SLA’s
• Simplified operations with centralized orchestration and analytics for SD-WAN and SD-branches
• Fluid user experience for light branch users
Fast, Automated Secure Connectivity “to, in, between” Clouds

Industry’s First SD-WAN for Multi-Cloud Solution

Cloud On-Ramp
Connecting users to applications

Multi-Cloud
Connecting applications and workloads across multiple clouds

Cloud On-Ramp

- Transit Gateway
- Direct Connect
- Secure-SD-WAN
- Virtual WAN
- Express Route
- Interconnect

Multi-Cloud

- Internet
- Leased Lines

Branch Offices

On-Prem Data Centers

© Fortinet Inc. All Rights Reserved.
SD-WAN Leading Use-cases
Designed for the Cloud-first, Security-sensitive and Global Enterprises

Transform WAN and Security With One WAN Edge
Transform WAN and security with One WAN Edge powered by one OS, one management; built-in SD-WAN, advanced routing and NGFW protecting the entire digital attack surface

Simplified Secure SD-Branch
Simplify the branch architecture with Secure SD-WAN and integrated NAC, WLAN, LAN, and LTE/4G/5G. All centrally managed and scalable to 1,000s of sites

Optimize Hybrid Workforce Experience
Enhance work-from-anywhere over any transport with Secure SD-WAN, ZTNA and consistent management enabling a SASE framework

Secure, Enhance Network Performance of Hybrid, Multi-cloud
Enable secure, seamless, faster connectivity into the cloud, in the cloud and across clouds with a single VM reducing footprint and cloud-on-ramp orchestration

Enable Predictable Application Performance and Resiliency
Enable reliable user experience on any transport with rich routing and advanced WAN remediation for self-healing networks

Achieve Operational Efficiencies Across WAN and Cloud Edges
Automate the design, deployment and operation for large scale environments; single pane-of-glass providing network wide visibility, analytics, reporting and orchestration
Customer #1 - the inventors of the McNugget

1. MPLS
2. Satellite
3. Cellular APPN
4. VPN over Internet

Needed: extremely highly available Wide area connectivity
robust Wifi
Intra-plant network security
SDN → SD-WAN → SD-Branch

Software Defined X

where X = Wide Area Network

= Branch

Software defined networking depended on the idea that general hardware would get fast enough that non-network specific hardware would be needed. In this case, a generic platform could simply move network traffic as defined by software such as Infrastructure as a Code (IaaS).

HARDWARE MATTERS...
Focus on the goals:
- easy to manage
- flexible
- easy to deploy
- scalable
- future proof
- security

Leave the buzzwords behind

→ One pane of glass
→ can adapt to changing conditions
→ let the janitor do it
→ add as needed
→ technology improves but forklifts are expensive
→ threats change so technology needs to adapt
Please stop by and visit us at our booth!