

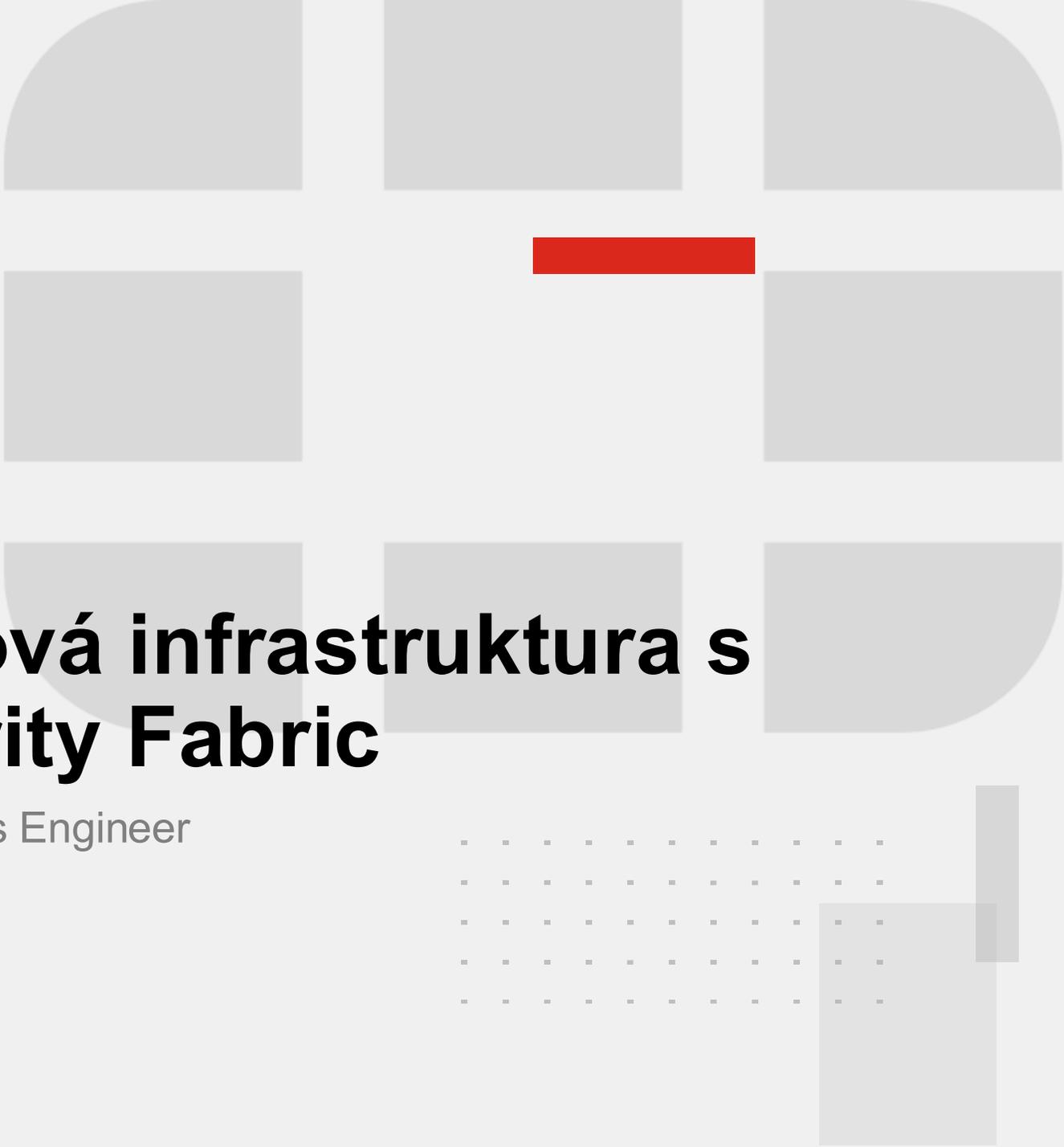
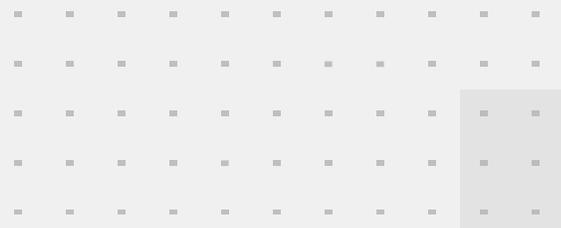


FORTINET

Bezpečná síťová infrastruktura s Fortinet Security Fabric

Ondřej Večl, Principal Systems Engineer

Fortinet



Cca před rokem touto dobou...

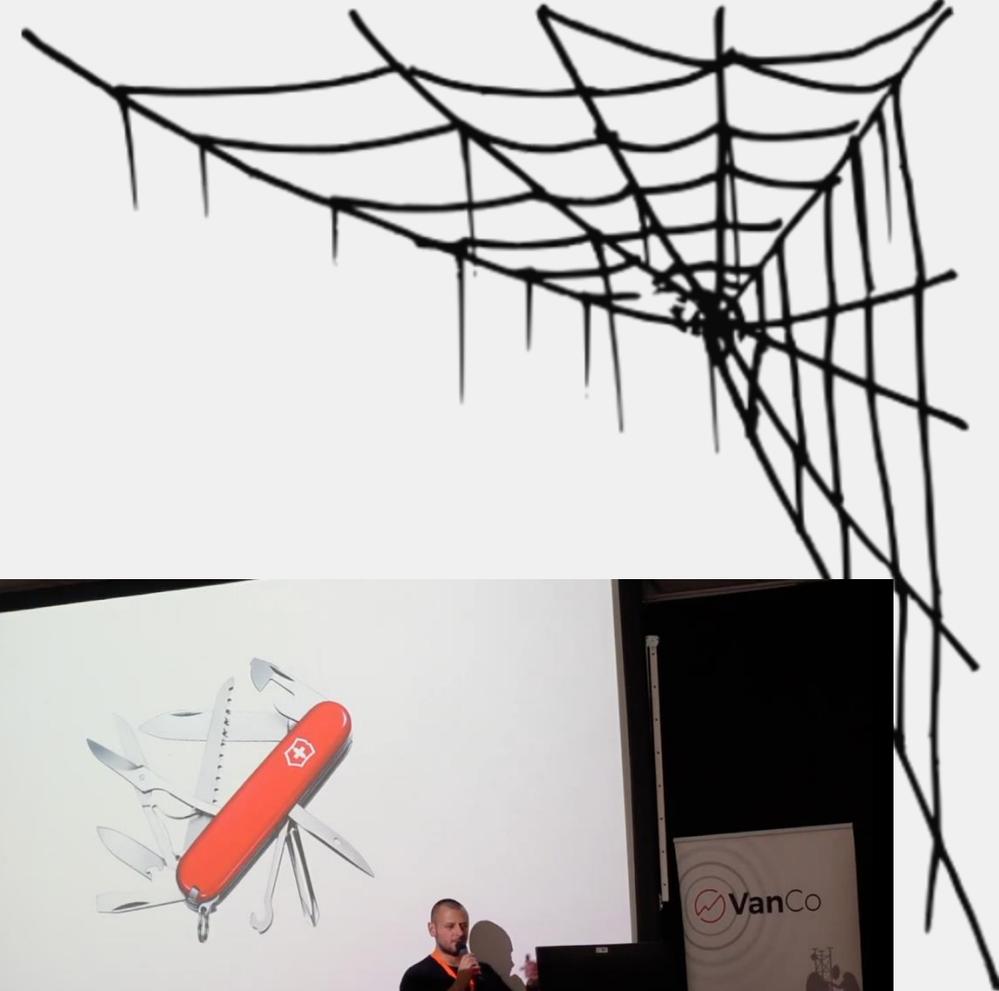


FORTINET

Praktické výhody nasazení Next-gen firewall v síti ISP

Ondřej Večl, Principal Systems Engineer

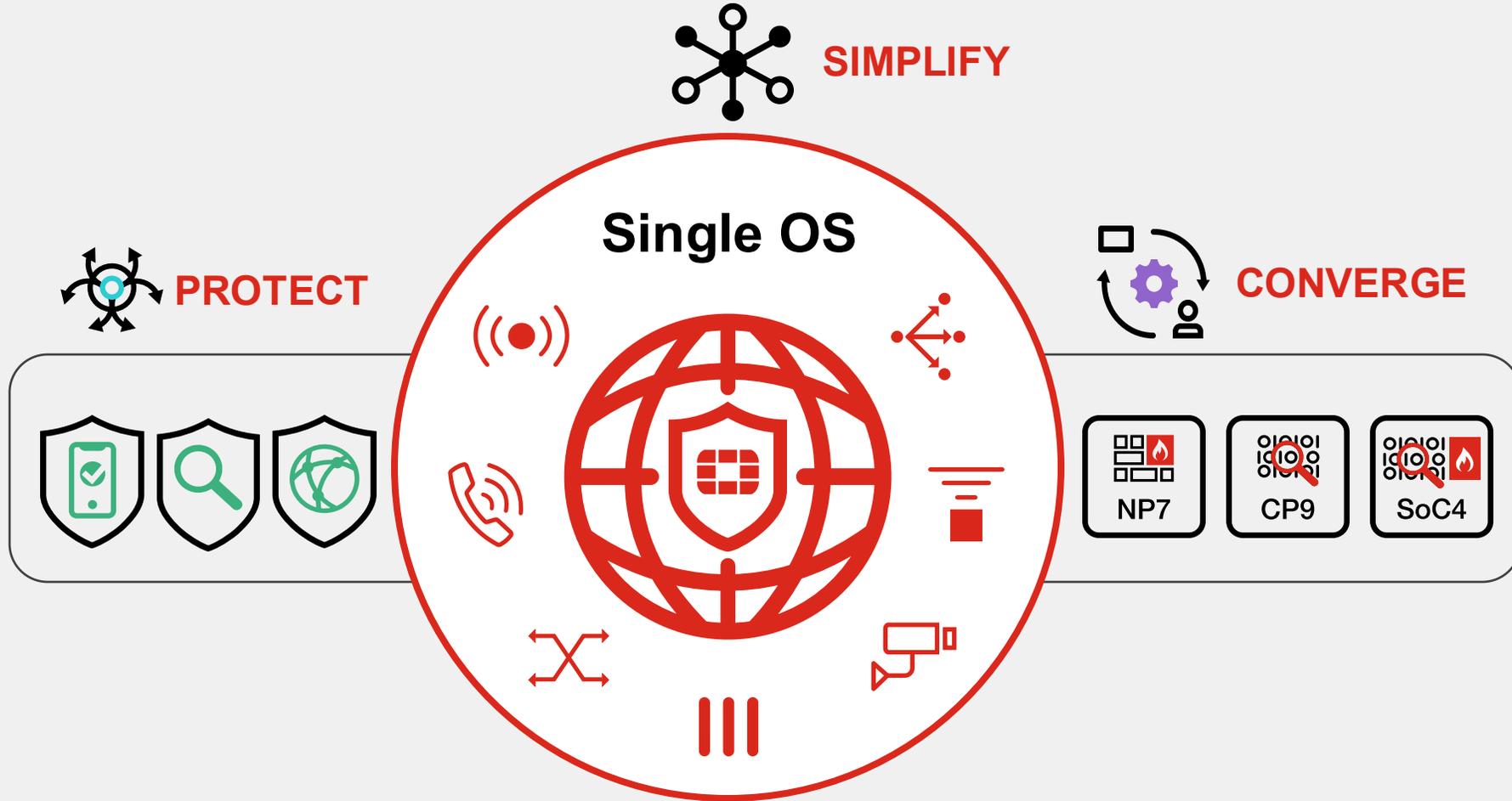
Fortinet



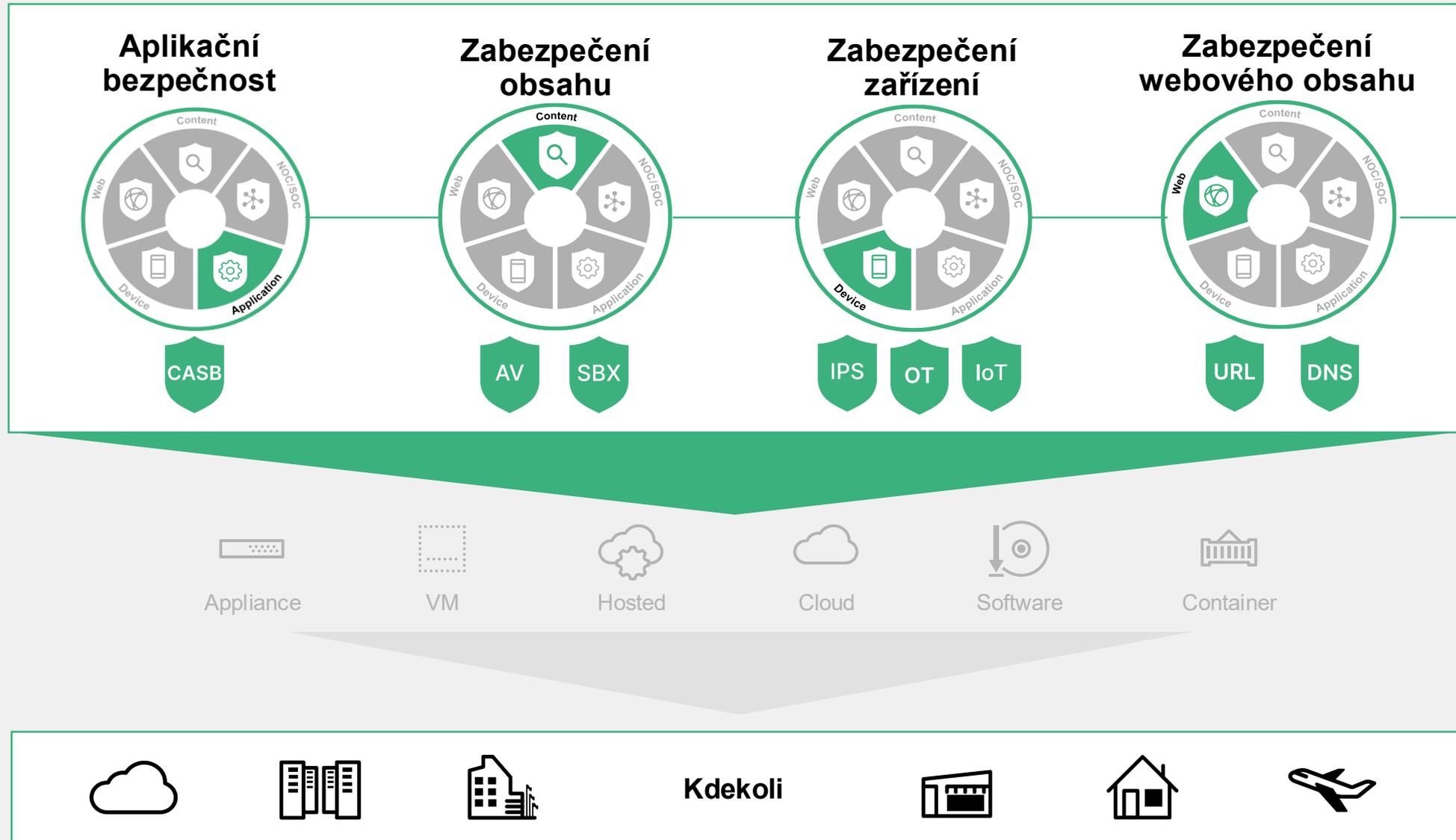
... co by měl umět dobře vychovaný firewall



The World's **Most Deployed** NGFW

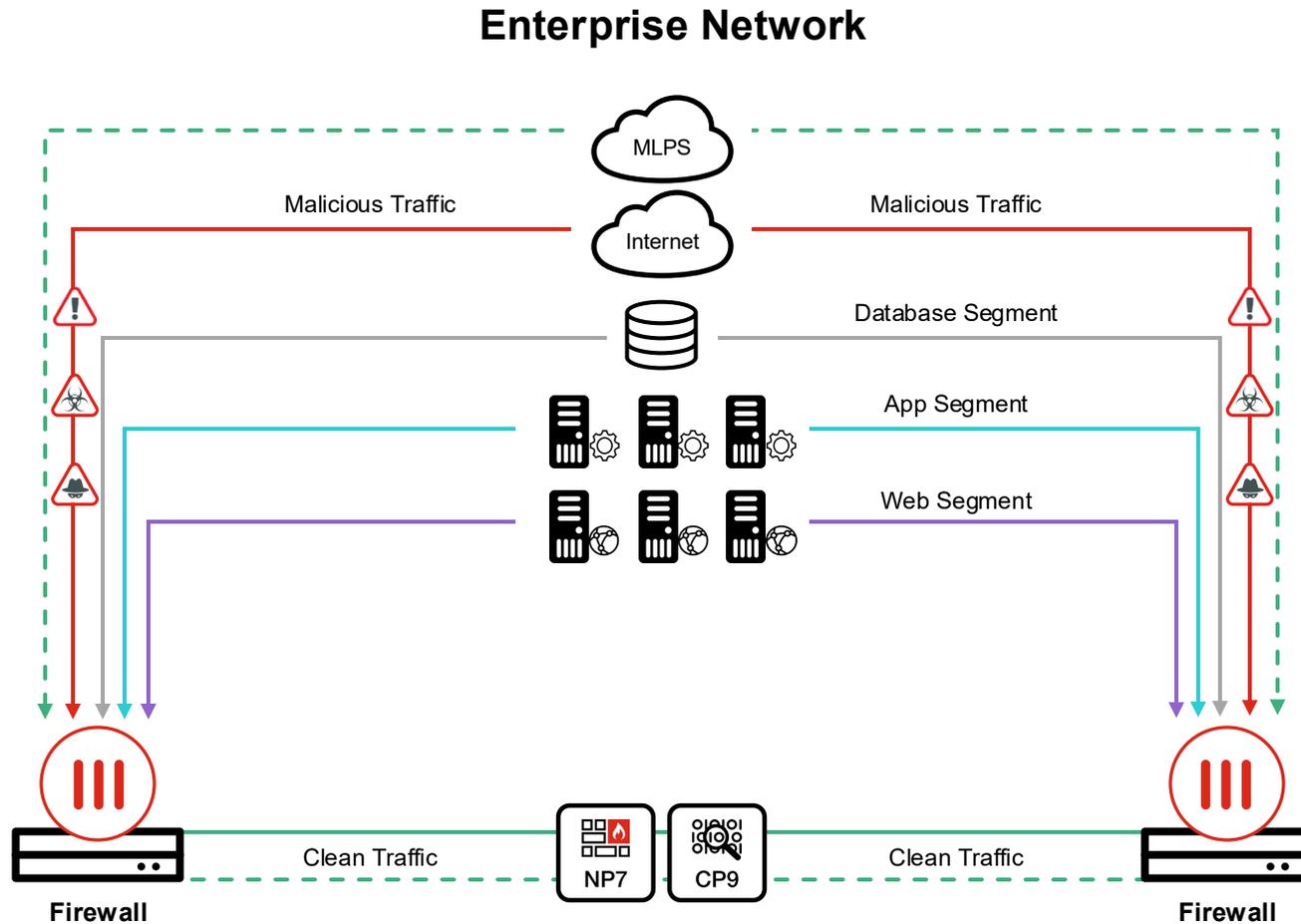


FortiGuard: Detekce hrozeb





Segmentation Use Case



Výhody

- Velmi nízká latence
- Rozšiřitelnost

Funkce

- End-to-end segmentace sítě
- Využití AI/ML a vysoký výkon v bezpečnosti
- Segment & connect fyzických i virtuálních sítí VXLAN a L4 Firewall

Benefity

- Prevence šíření malware
- Oddělení a kontrola v souladu s předpisy

Proprietary ASICs



Network processors operate inline to deliver unmatched performance for network functions and hyperscale for stateful firewall functions.



The security processor consolidates network and content processing, delivering fast application identification, steering, and overlay performance.



As a co-processor to the main CPU, content processors offload resource-intensive processing and drive content inspection to accelerate security functions

Fortinet Security Fabric

Broad

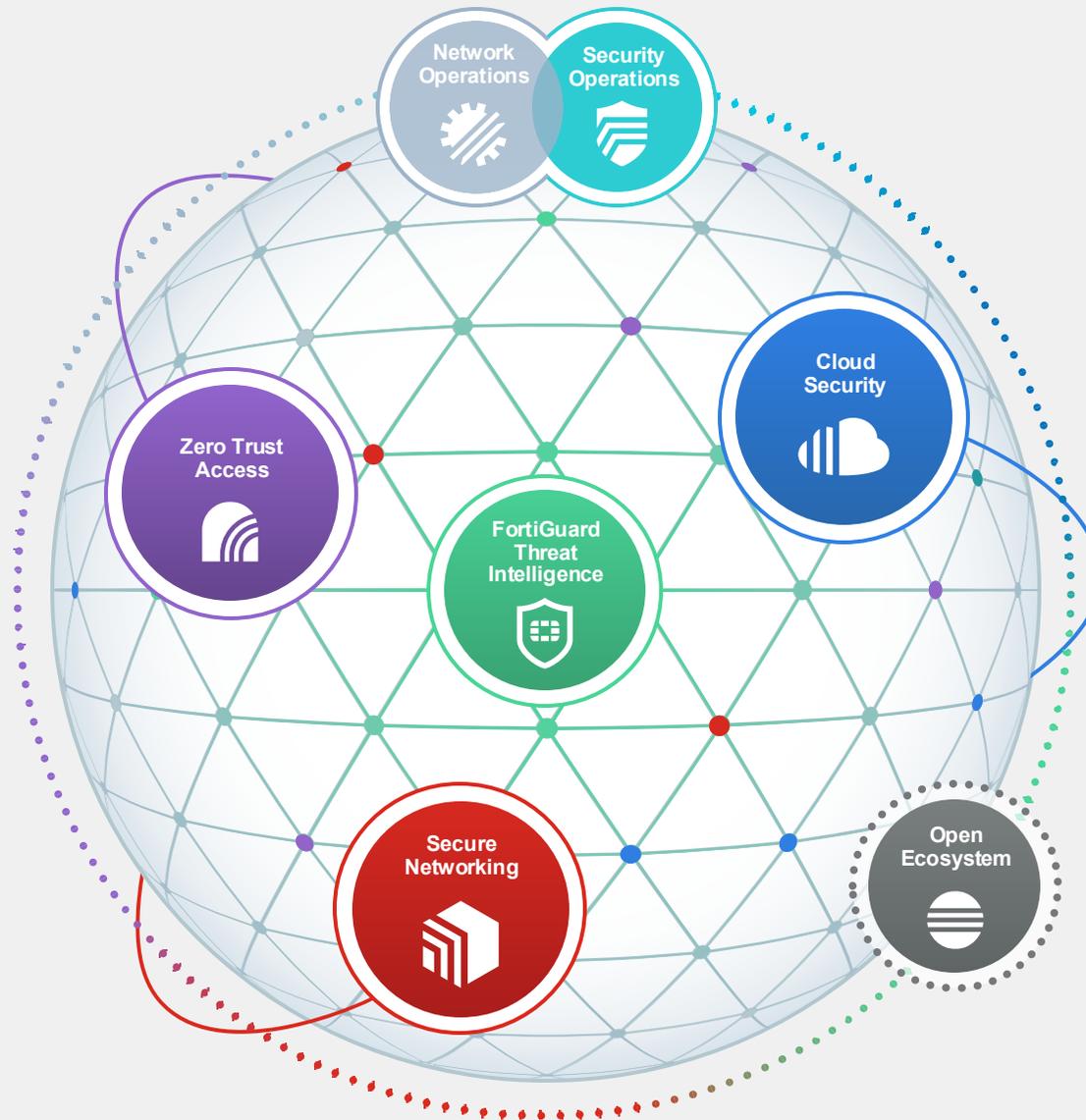
Visibility and protection of the entire digital attack surface to better manage risk

Integrated

Solution that reduces management complexity and shares threat intelligence

Automated

Self-healing networks with AI-driven security for fast and efficient operations



Secure Networking LAN Edge

Smart scalable networks converged with security



Thin Edge



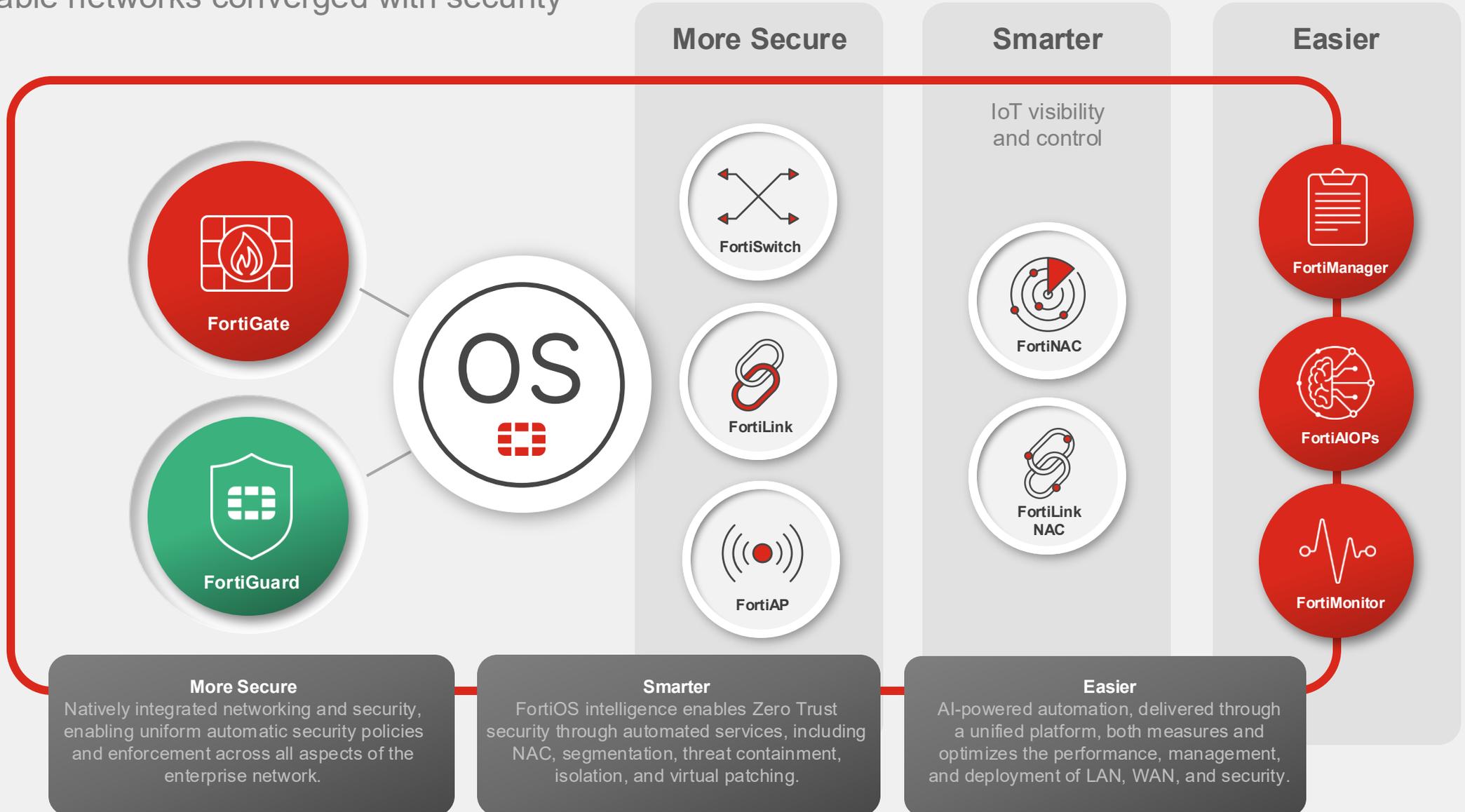
Branch



Campus



Datacenter



Secure SD-Branch

Securing and Simplifying Distributed Enterprise Through Convergence

SD-WAN secure business outcome driven WAN

- Simplifies traditional WAN complexity
- Better cloud application performance
- 5G/LTE Wireless WAN

Secure LAN Edge protecting the access edge

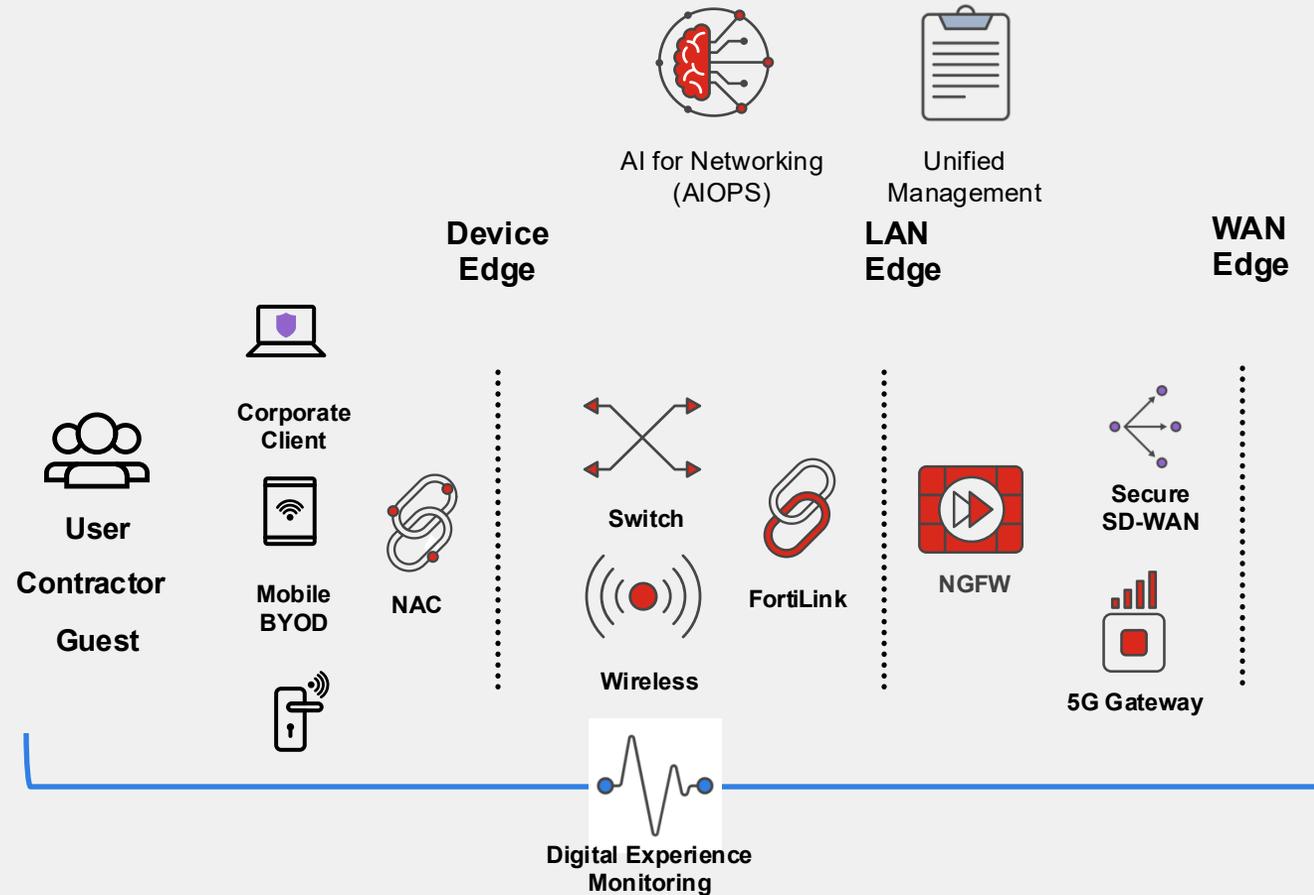
- Consolidation through convergence of security and network access

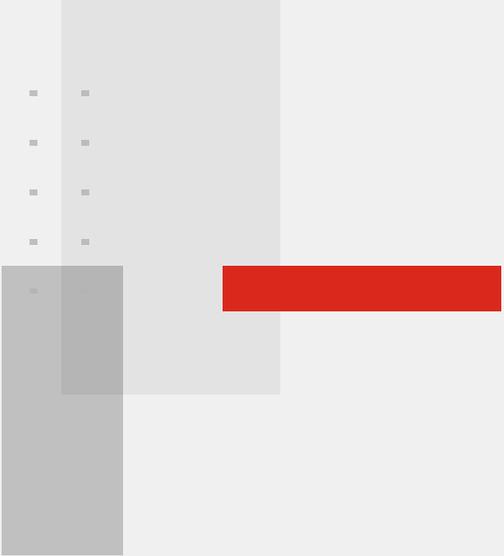
NAC protecting the device edge

- Discovery, classification, and secure onboarding of IoT devices

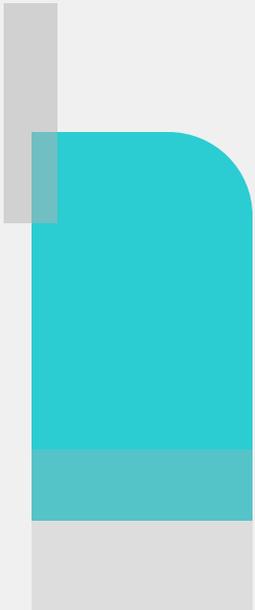
AI driven Management and Automation

- Single pane of glass management
- AI for Network Operations



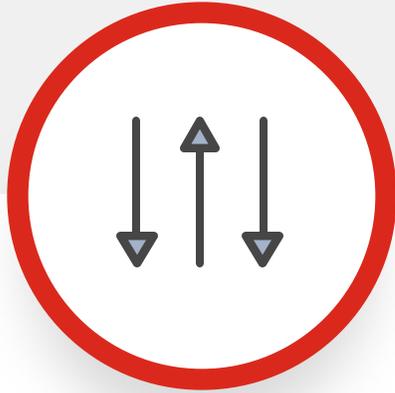


Solution Features



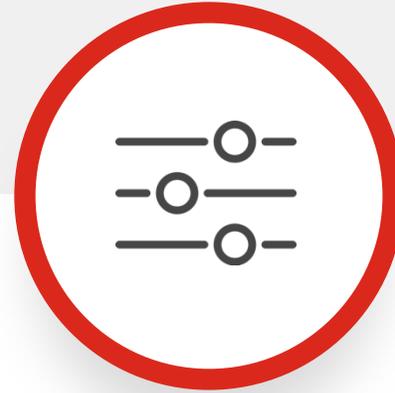
FortiLink

Direct control, configuration, and management through FortiOS



Configuration

- Agile deployment auto discovery



Control

- Extends the next-generation firewall (NGFW) features and inspection to the LAN



Management

- A significant step beyond centralized management
- Included with FortiOS, no additional licenses



Product Matrix

June 2025

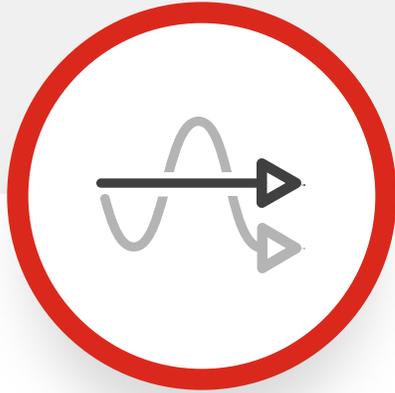
FortiGate® Network Security Platform - *Top Selling Models Matrix

	FG/FWF-30G ¹²	FG/FWF-40F ¹²	FG/FWF-50G ¹²	FG/FWF-60F ¹²	FG-70F
Firewall Throughput (1518/512/64 byte UDP)	4 / 4 / 3.9 Gbps	5 / 5 / 5 Gbps	5 / 5 / 4 Gbps	10/10/6 Gbps	10 / 10 / 6 Gbps
IPsec VPN Throughput (512 byte) ¹	3.5 Gbps	4.4 Gbps	4.5 Gbps	6.5 Gbps	6.1 Gbps
IPS Throughput (Enterprise Mix) ²	800 Mbps	1 Gbps	2.25 Gbps	1.4 Gbps	1.4 Gbps
NGFW Throughput (Enterprise Mix) ^{2,4}	570 Mbps	800 Mbps	1.25 Gbps	1 Gbps	1 Gbps
Threat Protection Throughput (Ent. Mix) ^{2,5}	500 Mbps	600 Mbps	1.1 Gbps	700 Mbps	800 Mbps
Firewall Latency	2.87 µs	2.97 µs	2.42 µs	3.3 µs	2.54 µs
Concurrent Sessions	600 000	700 000	720 000	700 000	1.5 Million
New Sessions/Sec	30 000	35 000	85 000	35 000	35 000
Firewall Policies	2 000	2 000	2 000	2 000	5 000
Max G/W to G/W IPSEC Tunnels	200	200	200	200	200
Max Client to G/W IPSEC Tunnels	250	250	250	500	500
SSL VPN Throughput	—	490 Mbps ¹⁰	—	900 Mbps ¹⁰	405 Mbps
Concurrent SSL VPN Users (Recommended Maximum, Tunnel Mode)	—	200 ¹⁰	—	200 ¹⁰	200
SSL Inspection Throughput (IPS, avg. HTTPS) ³	400 Mbps	310 Mbps	1.3 Gbps	630 Mbps	700 Mbps
Application Control Throughput (HTTP 64K) ²	830 Mbps	990 Mbps	2.8 Gbps	1.8 Gbps	1.8 Gbps
Max FortiAPs (Total / Tunnel)	16/8	16 / 8	16 / 8	64 / 32	64 / 32
Max FortiSwitches	8	8	8	24	24
Max FortiTokens	500	500	500	500	500
Virtual Domains (Default/Max)	—	10 / 10	5 / 5	10 / 10	10 / 10
Interfaces	4x GE RJ45	5x GE RJ45	5x GE RJ45	10x GE RJ45	10x GE RJ45



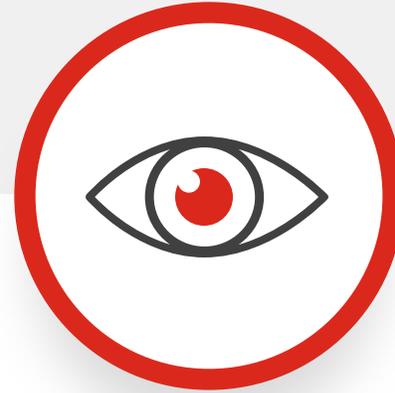
FortiLink NAC

Secure onboarding of devices



Simplicity

- Easy deployment, no design changes, no overlay
- Defaults are ready to go



Visibility

- Automatic discovery of endpoints and devices
- FortiGuard IoT service available

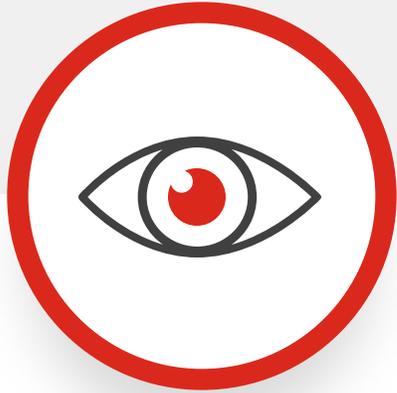


Security

- Policy application
- Enable devices on port(s) or entire network
- Actions can be port or device specific

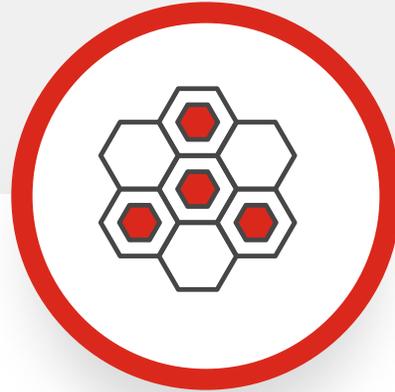
Virtual Patching

Isolate and Protect Vulnerable Devices



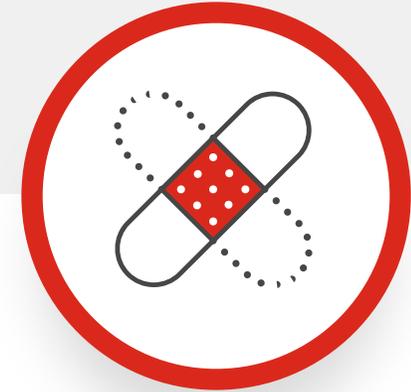
Identify Vulnerabilities

- FortiGate scans for vulnerable systems connected to the LAN
- Identifies unpatched vulnerabilities



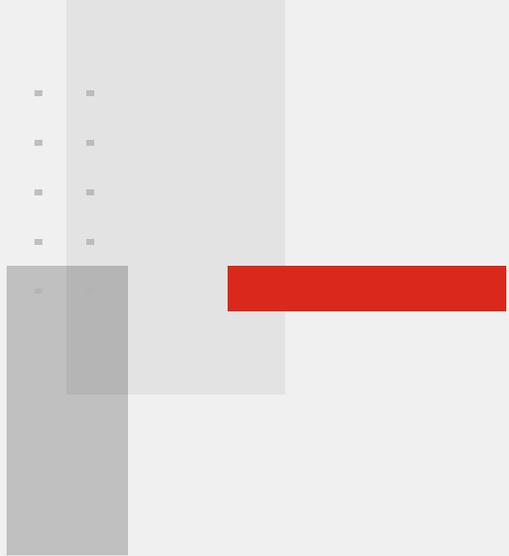
Isolate

- FortiLink NAC isolates device into separate VLAN segment
- Dynamic policy assignment based on device vulnerability status

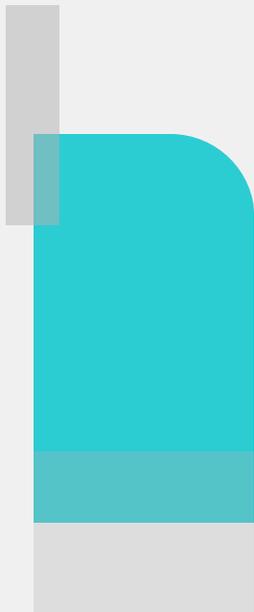


Virtual Patch

- IPS Virtual patching dynamically applied to protect device at port level.
- This patch prevents exploit of vulnerability

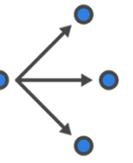


Solution Components



Secure SD-WAN

Enhance user experience and business productivity



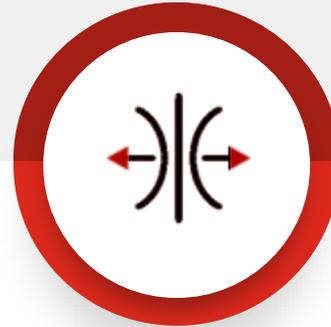
Secure

Securely connecting users to their business-critical applications and workloads



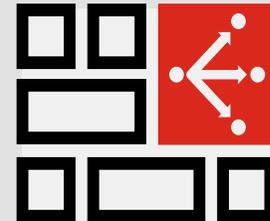
Intelligent

Dynamic intelligent traffic steering
Continuous Gen AI augmented learning with support for over 5K apps



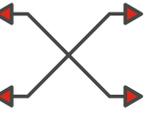
Reliable

Self-healing real-time optimization scalable to thousands of locations without performance impact



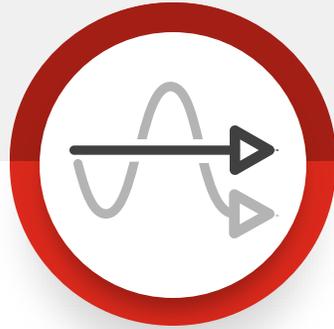
FortiSwitch Secure Ethernet Switching

A secure approach to Ethernet



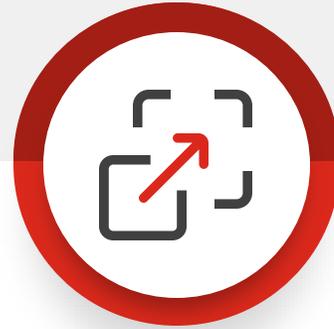
Secure

NGFW security
visibility and
control to Ethernet
networking



Simple

Zero touch
deployment
Easy to manage
whether integrated
or standalone



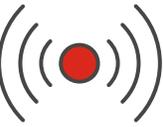
Scalable

Deployments from
the smallest branch
to largest campus



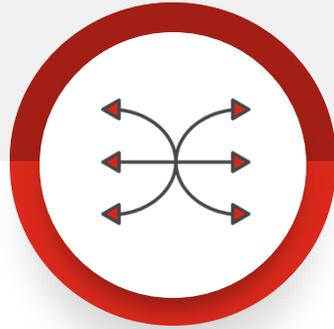
FortiAP Secure Wireless LAN

A secure approach to Wi-Fi networking



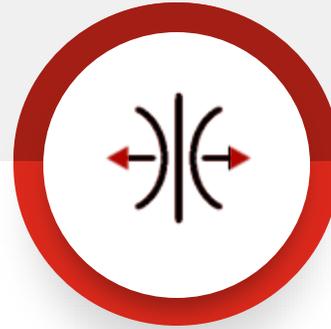
Secure

SSIDs directly controlled and secured by FortiOS



Flexible

Manageable via FortiGate, Cloud, or SASE, on-prem, hardware or VM



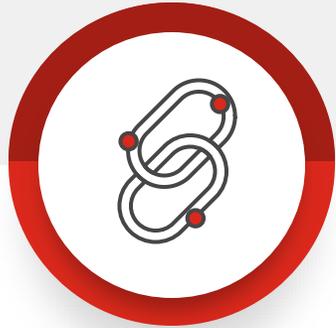
Resilient

Quad radio design for access + troubleshooting
Intelligence at all levels for peak connectivity



NAC

Visibility intelligence control



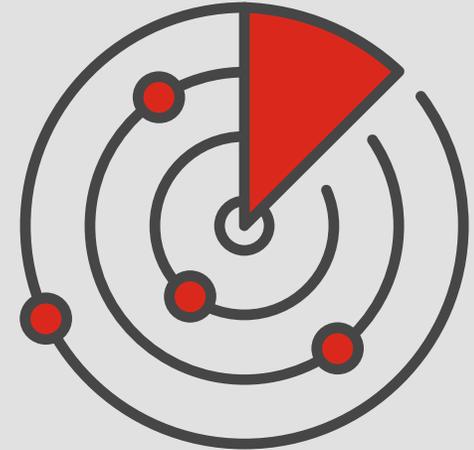
FortiLink NAC

Free Feature of Fortinet LAN Edge leveraging FortiOS profiling as well as FortiGuard service if needed



FortiNAC

Robust product offering supporting multivendor environments, bringing them into the Security Fabric



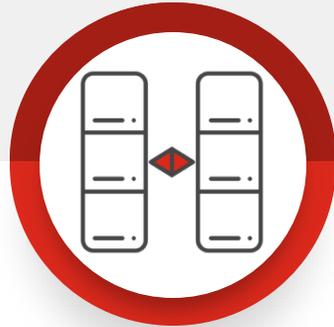
5G Wireless WAN

Enhanced Network Uptime, High Availability, and Disaster Recovery with FortiExtender



Uptime

- Improve network reliability 5X
- Migrate from MPLS 17X faster
- Reduce network costs up to 90%
- Provision branches 270% faster



High Availability

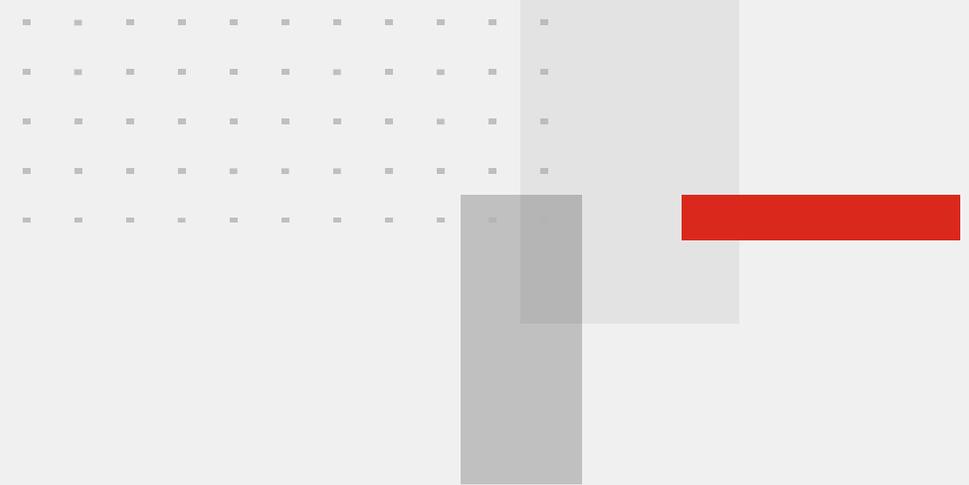
- VRRP provides HA with minimal hardware
- Automatically turns passive IP passthrough gateway into full NAT firewall during NGFW outage
- Restore passive device when systems restored



Disaster Recovery

- Out of Band management for branch device management during outage
- Leverage FortiExtender console port or USB port for OOB and maintain SLAs





Fabric





Convergence of Networking and Security



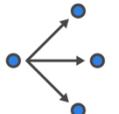
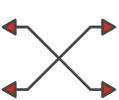
Requirements

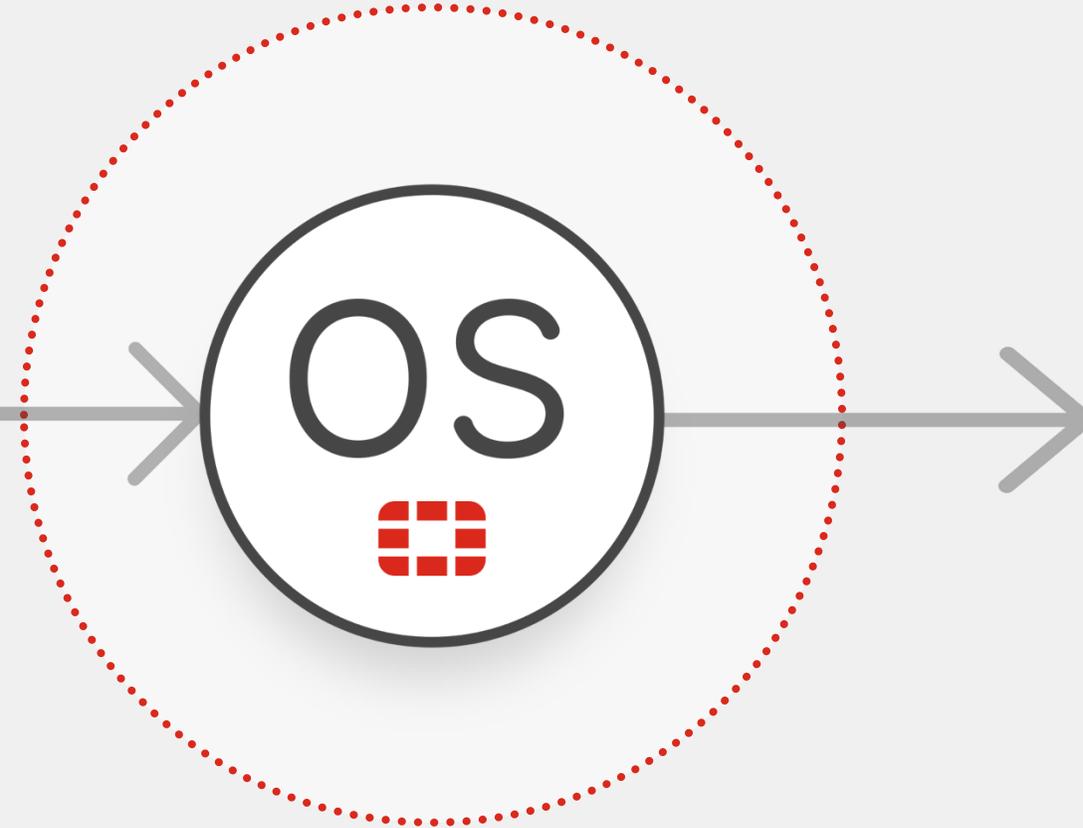


Convergence



High ROI & Low TCO

- NGFW 
- SD-WAN 
- Wireless 
- Switching 
- NAC 
- 5G / LTE 



One Console



One Config



Fewer Licenses
Simplified
Operations





 Fortinet
<https://www.fortinet.com> › fortis... › Přeložit tuto stránku

FortiSwitch Secure Access Series Data Sheet

Security, Ease of Use, and Scalability. The FortiSwitch™ Access Family is tailored to meet the unique demands of enterprise branch offices and small businesses.

 Fortinet
<https://www.fortinet.com> › fortis... › Přeložit tuto stránku

FortiSwitch™ Secure Campus Data Sheet

The FortiSwitch™ campus family offers an unparalleled combination of security and manageability, making it the ideal choice for the enterprise ...



FORTINET Data Sheet

FortiSwitch™ Secure Access



Highlights

- Standalone or integrated FortiLink deployment option
- Zero-touch deployment
- On premise and cloud-based management options
- Intuitive management allows for ease of set up for network access and security
- Easy-to-use network access control (NAC) at no cost
- User- and device-based access control and policy enforcement
- Secure access service edge (SASE) support
- Scalable and flexible for branches or small business
- Up to 48 access ports in a compact 1 RU form factor
- Power over Ethernet and PoE+ support
- Wire-speed switching with up to 10GE uplinks

Security, Ease of Use, and Scalability

The FortiSwitch™ Access Family is tailored to meet the unique demands of enterprise branch offices and small businesses. An unparalleled combination of security, ease of use, and scalability makes FortiSwitch™ the ideal choice for Ethernet infrastructure.

Managing a remote enterprise branch or small business network can be a challenging task due to various factors including a lack of visibility of connected devices, limited time and tools for LAN management, and a shortage of skilled personnel. The FortiSwitch Secure Access family seamlessly integrates Ethernet networking with advanced security features, effectively eliminating the silos that hinder day-to-day management. Feature-rich and easy to manage with a low total cost of ownership, FortiSwitch emerges as the optimal choice for remote enterprise-branch and small-businesses Ethernet networks.



FORTINET Data Sheet

FortiAP™ Series



FortiGate, FortiEdge Cloud, or SASE-managed access points

FortiAP™ access points are managed centrally by the integrated WLAN controller of any FortiGate® security appliance or through the FortiEdge Cloud provisioning and management portal. With the integration of the wireless controller functionality into the market-leading FortiGate appliance, these APs are perfect for campus and branch deployments. Fortinet's Security Fabric enables you to easily manage wired and wireless security from a single-pane-of-glass management console and protects your network from the latest security threats.

Highlights

- Unified management console simplifies operations, ensuring consistency in effective policy enforcement and compliance
- Built-in foundation for zero-trust network access (ZTNA) and secure access service edge (SASE), allowing you the flexibility to easily deploy microbranches with the security you need at the edge of your network
- Wireless LAN security done right, from the leader in network security. Integrated Firewall, IPS, Application Control, and Web Filter protect the wireless LAN from the latest security threats
- Protects the network from advanced wireless threats and satisfies industry compliance such as PCI DSS

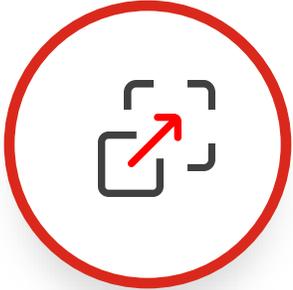
MODEL(S) (REFERENCE)	ANTENNA TYPE	INDOOR USE	OUTDOOR USE	BLE SUPPORT
802.11a/b/g/n				
FAP-641K	4x4 Indoor quad-radio 11ac 60GHz Capable APs	Internal	⊘	S1
FAP-643K	4x4 Indoor quad-radio 11ac 60GHz Capable APs	External	⊘	S1
FAP-641K	2x2 Indoor quad-radio 11ac 60GHz Capable APs	Internal	⊘	S1
FAP-643K	2x2 Indoor quad-radio 11ac 60GHz Capable APs	External	⊘	S1
FAP-231K	2x2 Indoor Tri-radio 11ac 60GHz Capable APs	Internal	⊘	S2
FAP-233K	2x2 Indoor Tri-radio 11ac 60GHz Capable Desktop APs	Internal	⊘	S2
802.11ax Wi-Fi 6E				
FAP-4310	4x4 Indoor Tri-radio 11ax 60GHz Capable APs	Internal	⊘	S2
FAP-4320	4x4 Ruggedized Tri-radio Indoor/Outdoor 11ax (60GHz) Capable APs	External	⊘	S1
FAP-4330	4x4 Indoor Tri-radio 11ax 60GHz Capable APs	External	⊘	S2
FAP-2310	2x2 Indoor Tri-radio 11ax 60GHz Capable APs	Internal	⊘	S2
FAP-2330	2x2 Indoor Tri-radio 11ax 60GHz Capable APs	External	⊘	S2
FAP-2340	2x2 Ruggedized Tri-radio Indoor/Outdoor 11ax (60GHz) Capable APs	Internal	⊘	S1
802.11ax Wi-Fi 6				
FAP-431F	4x4 Indoor Tri-radio 11ax AP	Internal	⊘	S2
FAP-433F	4x4 Indoor Tri-radio 11ax APs	External	⊘	S1
FAP-433F8	4x4 CIOE Certified Tri-radio 11ax AP	External	⊘	S2
FAP-431F	4x4 Indoor Tri-radio 11ax APs	Internal	⊘	S1
FAP-434F	2x2 Ruggedized Indoor/Outdoor Tri-radio 11ax AP	Internal	⊘	S2
FAP-231F	2x2 Wall-mount Tri-radio AP	Internal	⊘	S2
802.11ac (Wave 2) Wi-Fi 5				
FAP-221E	2x2 Indoor dual-radio APs	Internal	⊘	S1
FAP-221E	2x2 Indoor dual-radio APs	External	⊘	S1



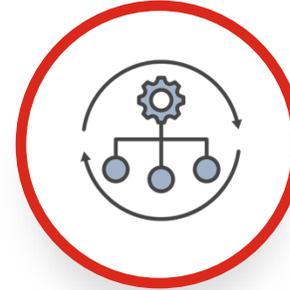


Fortinet Secure LAN

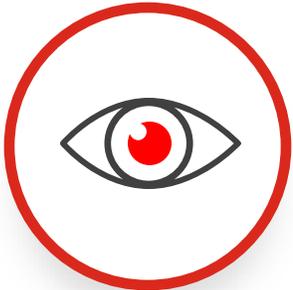
Key Takeaways



Simplicity



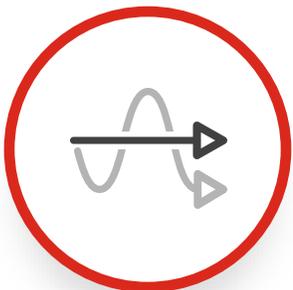
Zero Touch Deployment
and Orchestration



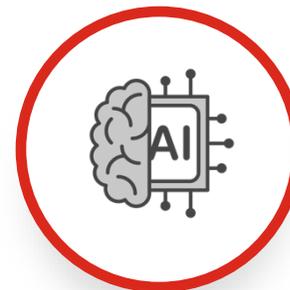
Visibility and Control
of every user and device



Management of Security
and Access via single console



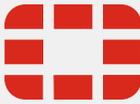
No complex licensing



Built-In Intelligence



The background features a grid of light gray squares and rounded rectangles. A red horizontal bar is positioned at the top left. Another red horizontal bar is located in the middle right section. A third red horizontal bar is at the bottom left. In the bottom right, there is a grid of small gray dots and a vertical gray bar.

F  **RTINET**