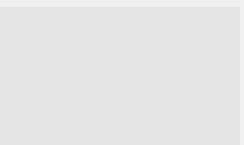



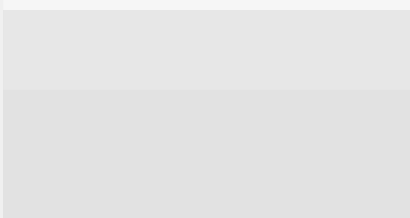


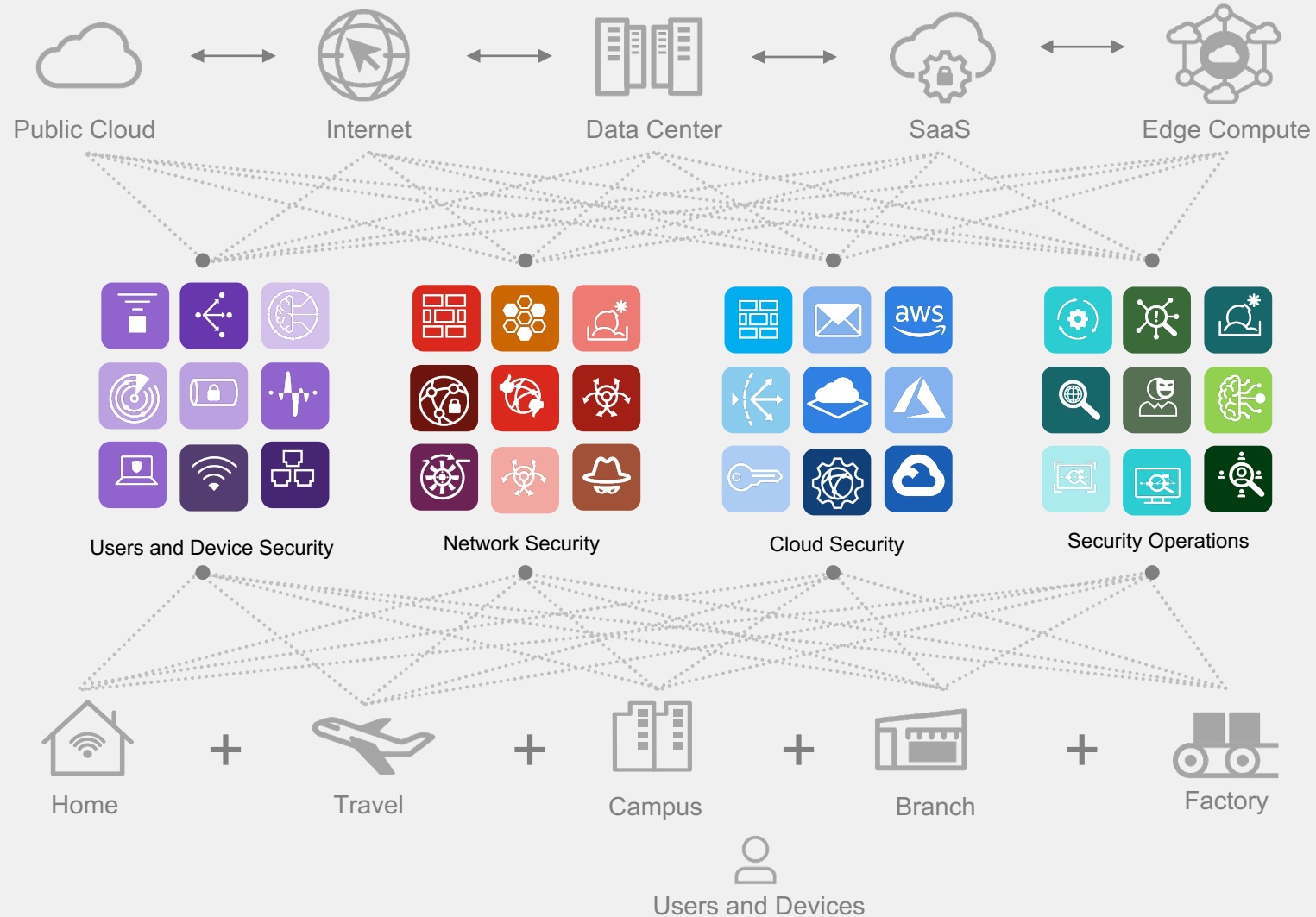
Firewall, Switch, WiFi AP, Log management + reporting + SOC. Proč mluvíme o integraci a automatizaci?

Adam Římský, Senior System Engineer, arimsky@fortinet.com



Narůstá komplexita prostředí

Počet administrátorů se nezvyšuje ...



Výzvy dneška

- Nároky na správce
 - Potřeba adopce správy mnoha různých produktů
 - Složitost integrace sofistikovaných produktů pro efektivní ochranu
 - Limitovaný vhléd do chování celé infrastruktury
- Nároky na organizace
 - Hledání správců infrastruktury
 - Náklady na jednotlivá samostatná řešení
 - Nároky a náklady na správu licencí a podpory
 - Schopnost reportovat plnění právních norem

Snižuje se přehled a podlužuje se reakční doba

59% společností má přehled pouze o méně než 75% svých zařízení

Viditelnost

- Discover connected devices in seconds.
- 100% coverage with great accuracy.

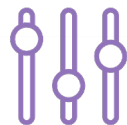


Přehled a klasifikace zařízení

57% IoT zařízení je zranitelných a vystavených útoku

Kontrola

- Dynamic policy with L2-L7 segmentation.
- Re-entry authentication for enhanced security



Segmentace, autentizace a autorizace

56% velkých společností řeší 1,000+ bezpečnostních incident každý den

Odezva

- Automated workflow
- Orchestration between NoC/SoC
- Incorporation with latest threat intelligence



Detekce, odezva a náprava



SECURITY/NETWORK OPERATING CENTER

 FortiAnalyzer Central Log & report	 FortiNAC IoT Access Control	 FortiSandbox File Analysis	 FortiNDR Virtual Security Analyst™	 FortiSIEM SIEM / UEBA	 FortiXDR XDR
 FortiManager Central Device Mgmt.	 FortiAuthenticator User Access Mgmt.	 FortiTester Network Tester	 FortiDeceptor Honeypot	 FortiSOAR SOAR	

HOSTED SERVICES

Cloud mgmt.
 FortiGate Cloud | FortiLAN Cloud |
 FortiExtender Cloud | FortiManager Cloud |
 FortiAnalyzer Cloud | FortiClient EMS Cloud |
 FortiToken Cloud | FortiSOAR Cloud

Cloud services
 FortiPresence | FortiMail Cloud | FortiPhish |
 FortiGSLB | FortiConverter | Fortinet SOCaaS |
 FortiSASE | FortiPenTest | FortiWeb Cloud |
 FortiSandbox Cloud | FortiVoice Cloud |
 FortiMonitor

MOBILE USERS

 FortiToken 2 Factor OTP Token	 FortiClient / FortiEDR VPN, ZTNA, EPP, and SASE Client
---	--

FortiCASB
FortiCNP

SaaS

Secure SD-WAN	 FortiGate Security Gateway
IPsec / SSL VPN	ZTNA
SASE	

 FortiDDoS L7 D/DOS Mitigator	 FortiADC Load Balancer
--	--------------------------------------

 FortiMail Mail Sec. Gateway	 FortiWeb Web App. Firewall
---	--

BRANCH OFFICE

 FortiWiFi Secure WiFi Access	 FortiExtender 3G/4G/5G WAN
--	--

LAN

 FortiSwitch Switch	 FortiAP Wireless Access Point
----------------------------------	---

 FortiRecorder Surveillance Manager	 FortiVoice IP PBX
--	---------------------------------

 FortiIsolator Browser Isolation	 FortiProxy Secure Web Gateway
---	---

CLICK ON PRODUCT NAME TO JUMP ONTO ITS SECTION

FortiCamera

FortiFone

DATA CENTER

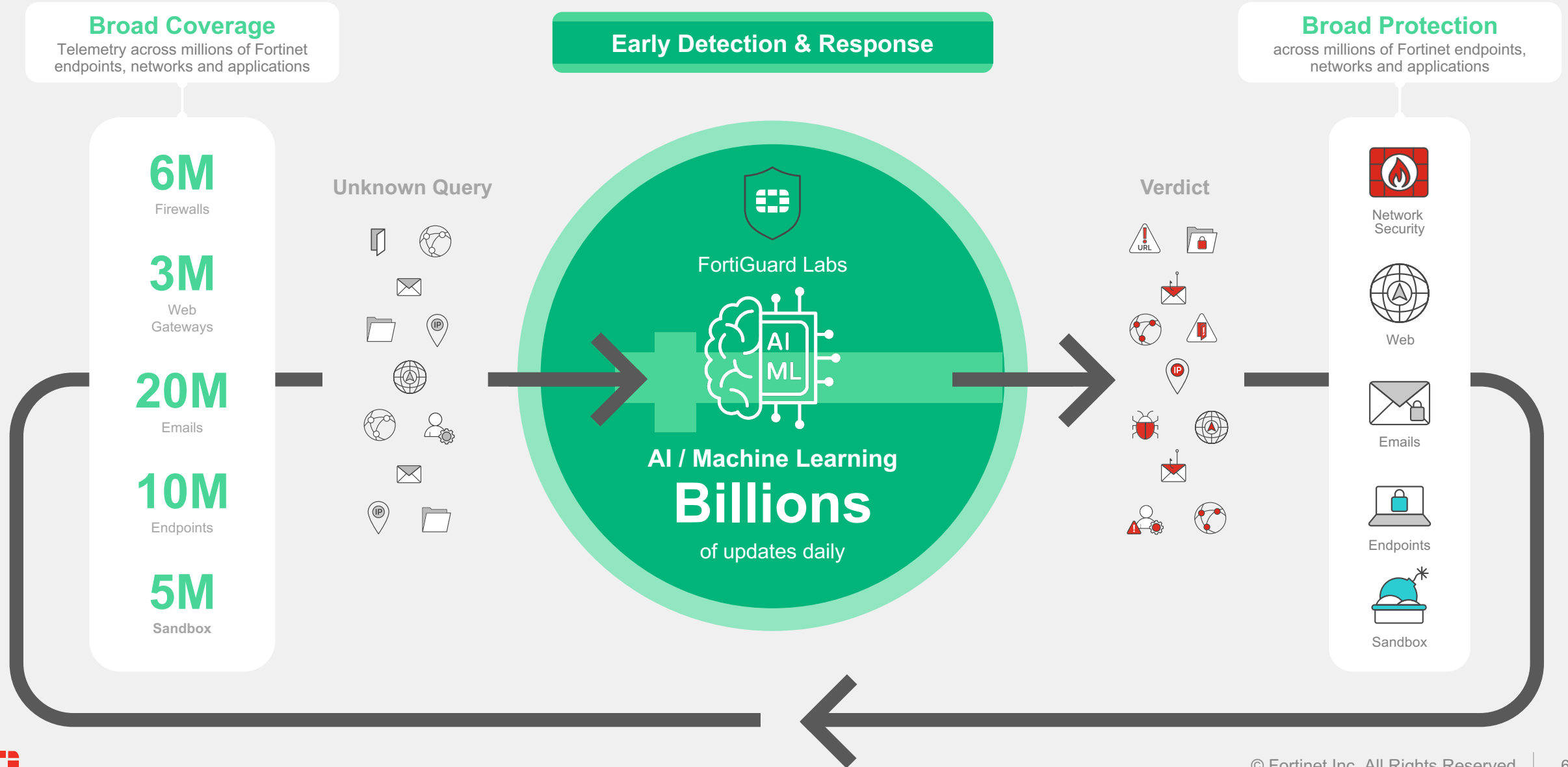
FortiOS V7.4

Configuration	Log & Report	Diagnostics	Monitoring	Operation	Systems Integration	Central Mgmt. and Provisioning	Cloud & SDN Integration
					Visibility	Automation	
Policy Modes	Device Identification		SSL inspection	Policy and Control	NAC	Compliance & Security Rating	ZTNA
Firewall	Application Control		Anti-Malware	Security	Advanced Threat Protection (ATP)		
VPN	IPS & DoS	Web Filtering	Email Filtering				
SD WAN	Explicit Proxy	IPv6	High Availability	Networking	Wireless Controller	Switch Controller	WAN Interface Manager
Routing/NAT	L2/Switching	Offline Inspection	Essential Network Services				
Physical Appliance (+SPU)	Virtual System	Cloud	SASE	Platform Support	Security Fabric		
			Hypervisor				

* Features availability may varied by models



FortiGuard AI-Powered Security at Breadth and Scale



Fortinet Security Fabric

Broad

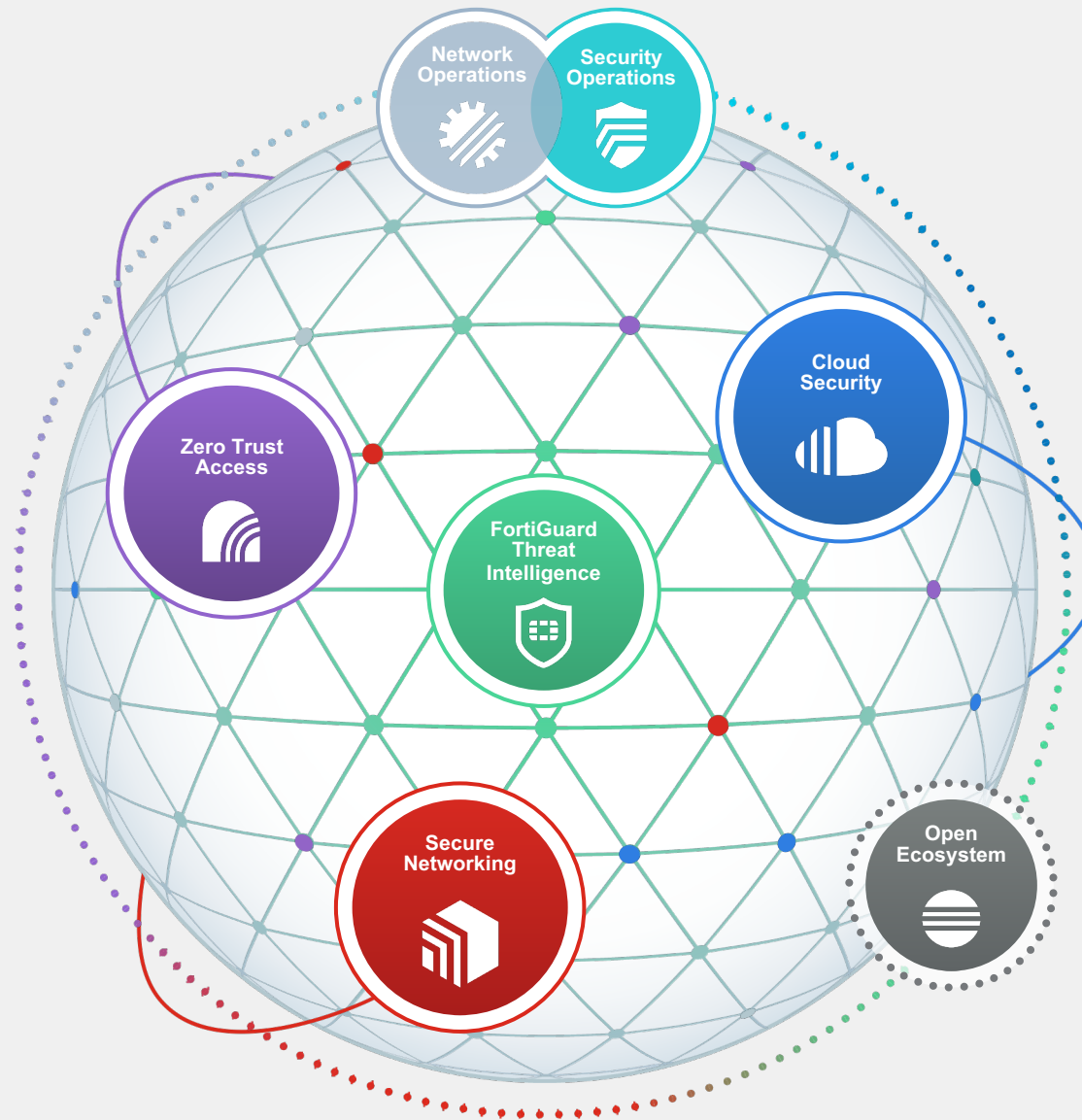
Visibility and protection of the entire digital attack surface to better manage risk

Integrated

Solution that reduces management complexity and shares threat intelligence

Automated

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



Appliance



Virtual



Hosted



Cloud



Agent



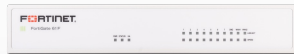
Container



FortiGate Network Firewalls – portfolio



40 to 80 Series



- 5–10 Gbps FW
- 600–950 Mbps TP
- 310–715 Mbps SSL Inspection

Branch

100 to 900 Series



- 20–140 Gbps FW
- 1–15 Gbps TP
- 1–15 Gbps SSL Inspection

Campus

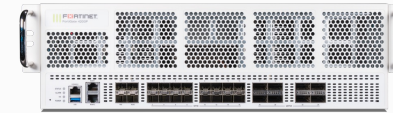
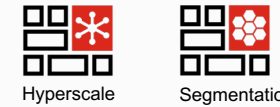
1000 and 2000 Series



- 80–198 Gbps FW
- 7–17 Gbps TP
- 10–20 Gbps SSL Inspection

Medium Data Center

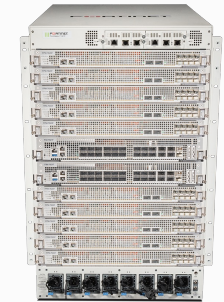
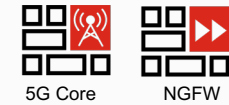
3000, 4000 and 6000 Series



- 239 Gbps-2.4 Tbps FW
- 17–100 Gbps TP
- 21–110 Gbps SSL Inspection

Hyperscale Data-Center

7000 Series



Nx

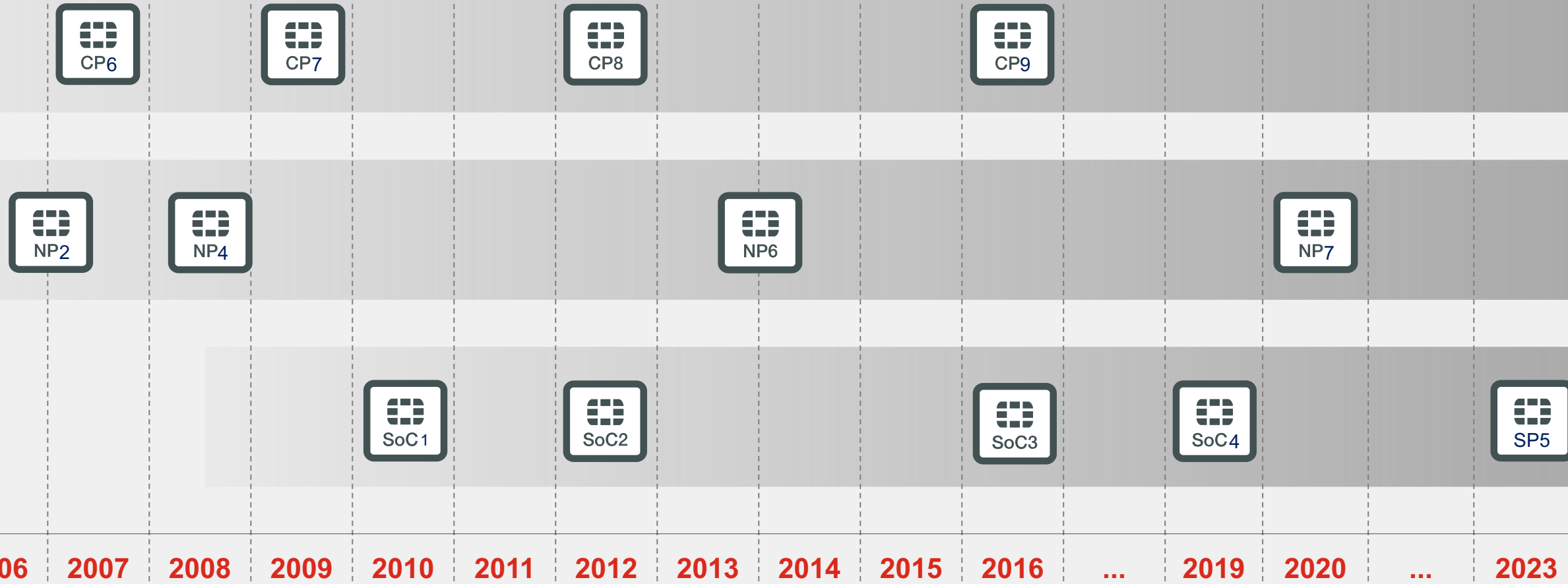
Nx

- 630 Gbps-1.89 Tbps FW
- 80–520 Gbps TP
- 80–540 Gbps SSL Inspection

Large Data Center



Fortinet Security Processor – přehled



Přerod NGFW do Hybrid Mesh Firewall řešení

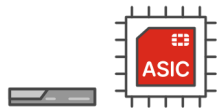


Single, Unified Management Console



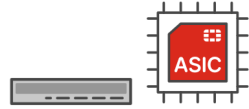
FortiManager

Branch



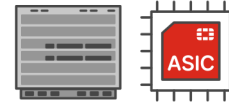
FortiGate
40-90 Series

Campus



FortiGate
100-900 Series

Data Center



FortiGate
1000-7000 Series

VM / Cloud / FWaaS



FortiGate VM



FortiCNF



FortiSASE

Networking Operating System Everywhere



Firewall



VPN



NGFW



Segmentation



Distributed
NGFW



DDoS



Low
Latency



Integrated
W/LAN



5G/LTE



HW SSL
Inspection



Secure
SD-WAN



Hyperscale



ZTNA



FortiGuard Labs
AI-Powered Threat
Intelligence

Device Security



North/South Inspection
East/West Inspection
SSL Inspection

Content Security



Anti-malware
Detect Malicious Files

Web Security



Stop DNS-based Attacks
Block Malicious URLs

Content Security



Prevent Data
Exfiltration

By 2026, more than 60% of organizations will have more than one type of firewall deployment, which will prompt adoption of hybrid mesh firewalls.

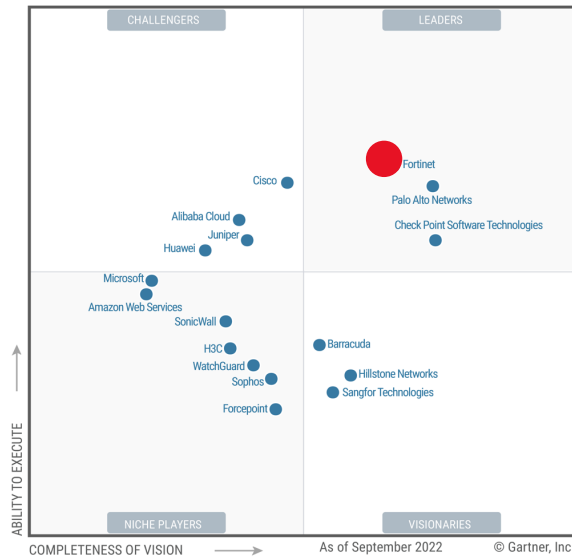


Gartner, Magic Quadrant for Network Firewalls, Rajpreet Kaur, Adam Hills, Tom Lintemuth, December 2022.

FortiGate NGFW – lídr napříč hodnocením

Gartner® and Forrester evaluations for network firewall

Dec. 2022 Gartner® Magic Quadrant™ for Network Firewalls



Fortinet positioned **highest** in ability to execute

June 2023 Gartner® Critical Capabilities for Network Firewalls

Vendors' Product Scores for Enterprise Data Center Use Case

Product or Service Scores for Enterprise Data Center

Fortinet	4.02
Palo Alto Networks	3.88
Juniper	3.87
Check Point Software Technologies	3.66
H3C	3.65
Alibaba Cloud	3.59
Sangfor Technologies	3.54
Huawei	3.53
Microsoft	3.44
Sophos	3.43
Cisco	3.40
Amazon Web Services	3.36
WatchGuard	3.36
Barracuda	3.34
Hillstone Networks	3.27
Forcepoint	3.24
SonicWall	3.03

As of 12 May 2023

© Gartner, Inc

Gartner

Fortinet is ranked **highest** for the enterprise data center use case

Oct. 2022 The Forrester Wave™: Enterprise Firewalls

Forrester Wave™: Enterprise Firewalls, Q4 2022

THE FORRESTER WAVE™
Enterprise Firewalls
Q4 2022



Fortinet named a **leader** in the Forrester Wave™

Gartner, Magic Quadrant for Network Firewalls, Rajpreet Kaur, Adam Hills, Tom Lintemuth, 19 December 2022. Gartner, Magic Quadrant for SD-WAN, Jonathan Forrest, Naresh Singh, Andrew Lerner, Karen Brown, 12 September 2022. GARTNER is a registered trademarks and service mark, and MAGIC QUADRANT is a registered trademark of Gartner, Inc. and/or its affiliates in the U.S. and internationally and are used herein with permission. All rights reserved. This graphic was published by Gartner, Inc. as part of a larger research document and should be evaluated in the context of the entire document. The Gartner document is available upon request from Fortinet. Gartner does not endorse any vendor, product or service depicted in its research publications, and does not advise technology users to select only those vendors with the highest ratings or other designation. Gartner research publications consist of the opinions of Gartner's research organization and should not be construed as statements of fact. Gartner disclaims all warranties, expressed or implied, with respect to this research, including any warranties of merchantability or fitness for a particular purpose.

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FortiSwitch – přehled


Nativní LLW záruka



Appliance



Access level Gigabit Switches with ease of use and low cost of ownership

 **Campus Core & Data Center**
1000-3000 Series



 **Campus**
400-600 Series



 **Access**
100-200 Series



Outstanding price, performance, and scalability to organizations with diverse operational needs.

Primary Benefits:

- ✓ High Port Density
- ✓ Integrated Power Over Ethernet
- ✓ Connect Access Points, Peripherals, Cameras, Phones
- ✓ Create an integrated, secure network



FortiSwitch řada Access

48 ports	 FSW-148F-POE	 FSW-248E-FPOE
	 FSW-148E/F-POE	 FSW-248E-POE
	 FSW-148E/F	 FSW-248D
26 / 32 ports		
24 ports	 FSW-124E/F-FPOE	 FSW-224D-FPOE
	 FSW-124E/F-POE	 FSW-224E-POE
	 FSW-124E/F	 FSW-224E
8 ports	 FSW-108F-FPOE	
	 FSW-108F-POE	
	 FSW-108F	















100 Series

+ 4x 10GE SFP+ uplinks
(148F Series)
+ 2 or 4x GE SFP uplinks (rest)

200 Series







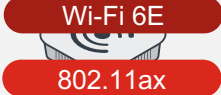




+ 4x GE SFP uplinks

FortiSwitch řady Campus & Data Center

48 ports	 FSW-448E-FPOE	 FSW-548D-FPOE					
	 FSW-448E-POE						
	 FSW-448E	 FSW-548D	 FSW-648F FSW-648F-FPOE	 FSW-2048F FSW-1048E			
26 / 32 ports	 FSW-M426E-FPOE			 FSW-3032E			
24 ports	 FSW-424E-FPOE	 FSW-524D-FPOE					
	 FSW-424E-POE						
	 FSW-424E FSW-424E-Fiber	 FSW-524D	 FSW-624F FSW-624F-FPOE	 FSW-T/1024E FSW-1024D			
8 ports							
400 Series		500 Series		600 Series		1000-3000 Series	
+ 2 or 4 x10GE SFP+ uplinks		+ 4x 10GE SFP+ and 2x 40GE stacking		+ 8x 25GE SFP28		Data Center Switches	

FortiAP – přehled

Nativní LLW záruka

Ports	Radios	Wall Plate	Outdoor	Indoor
8x8	3 Radio			 802.11ax FAP-831F
4x4	4 Radio			 Wi-Fi 7 FAP-441/443K
	3 Radio		 802.11ax FAP-432F FAP-432FR	 Wi-Fi 6E FAP-431/433G  802.11ax FAP-431/433F
2x2	3 Radio	 802.11ax FAP-23JF	 Wi-Fi 6E FAP-234G  802.11ax FAP-234F	 Wi-Fi 6E FAP-231/233G  802.11ax FAP-231F  802.11ac W2 FAP-221/223E



Fortinet Secure LAN Management – možnosti



FortiGate

Manage FortiSwitch & FortiAP in the FortiGate UI



FortiManager

Single point of management for the Security Fabric



FortiLAN Cloud

Cloud management for standalone (Non FortiGate managed) FortiSwitch and FortiAP



FortiSwitch Manager

On premise management of standalone FortiSwitch



Fortinet Secure LAN – povýšen do lídr MQ pro LAN/WLAN

Figure 1: Magic Quadrant for Enterprise Wired and Wireless LAN Infrastructure



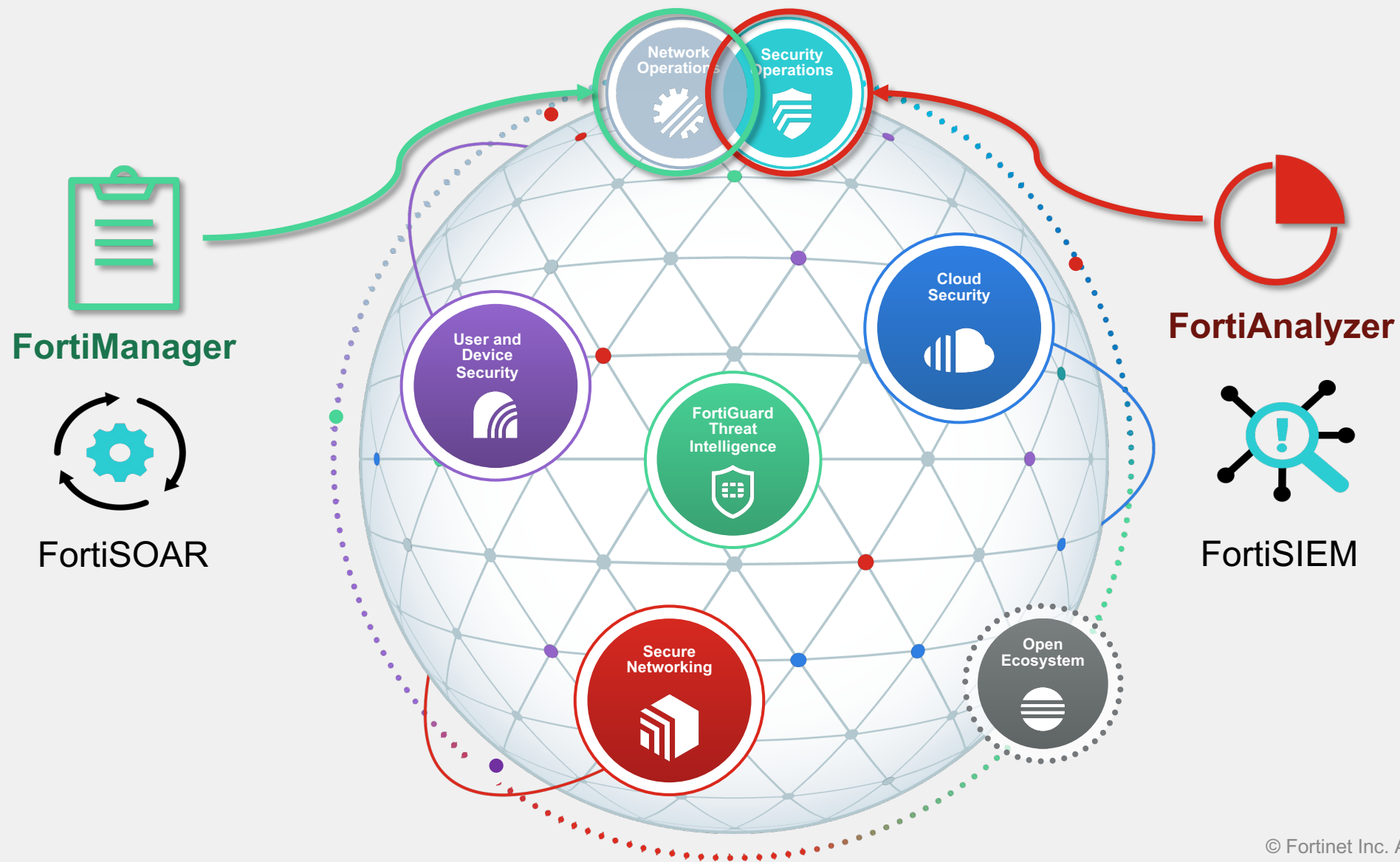
Fortinet Recognized as a Leader in the 2024 Gartner® Magic Quadrant™ for Enterprise Wired and Wireless LAN

Fortinet removes the silos between security and networking to deliver a complete wired and wireless LAN portfolio integrated with the Fortinet Security Fabric. Our converged networking and security approach offers enhanced security, improves visibility and control, and reduces total cost of ownership.

We believe our recognition as a Leader is due to our unique ability to enable:

- ✓ Streamlined networking and security operations
- ✓ AI-driven performance monitoring and issue remediation
- ✓ Comprehensive visibility across the entire network

NOC a SOC řešení



FortiManager & FortiAnalyzer – přehled



FortiManager

- Automation-driven centralized management
- Manages up to 100k FortiGates
- Full administration and visibility of network devices
- Streamlined provisioning and innovative automation tools
- Integrated with the Fortinet Security Fabric
- Build-in default and best practices templates
- Single-pane Management and provisioning
- Fabric Automation
- Monitoring, visibility, troubleshooting



FortiAnalyzer

- Powerful log management tool
- Single console to manage, automate, orchestrate and respond
- Proactive risk identification and remediation
- Complete visibility of the entire attack landscape
- Integrated with the Fortinet Security Fabric
- Real-time detection capabilities
- Centralized security analytics
- End-to-End Security posture awareness



FortiManager a FortiAnalyzer – integrace

The screenshot displays the FortiManager web interface. The top navigation bar includes the FortiManager logo, a menu icon, the text 'Enterprise_FortiManager', and a user profile 'demo'. The left sidebar contains a navigation menu with items like Dashboard, Device Manager, Policy & Objects, VPN Manager, AP Manager, FortiSwitch Manager, Extender Manager, FortiView, Log View, Fabric View, Incidents & Events, Reports, FortiGuard, Management Extensions, and System Settings. The main content area is divided into several widgets:

- System Information:** A table listing system details:

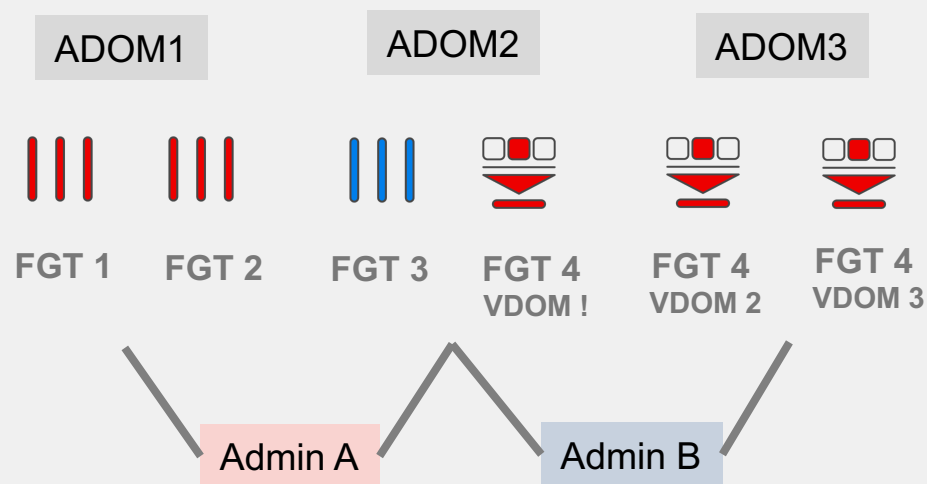
Host Name	Enterprise_FortiManager
Serial Number	
HA Status	Standalone
System Time	Tue Apr 23 02:38:37 2024 PDT
Firmware Version	v7.4.2-build2397 231220 (GA)
System Configuration	Last Backup: Wed Feb 21 14:16:00 2024
Current Administrators	demo / 5 in total
Up Time	55 days 13 hours 11 minutes 56 seconds
Administrative Domain	<input type="checkbox"/>
- System Resources:** Three donut charts showing usage: Average CPU Usage (8%), Memory Usage (21%), and Disk Usage (1%). A 'More Details' link is present.
- License Information:** A list of license statuses:
 - FortiCare S...: Registered (FortiCloud Account: tmgfortinet@gmail.com)
 - FortiGuard VM Mete...: Not Licensed
 - Secure D...: Not Licensed
 - Management Devices/...: 9 / 4,000 (0.2%)
 - ADOMs: 3 Used / 4,000 Total
 - FortiAPs: 17
 - FortiGate...: 10
- Unit Operation:** A section for 'FORTINET FortiManager-3000G' with four status indicators (1, 2, 3, 4).
- Connectivity:** A large green donut chart showing '6 Devices' connected. A legend indicates 'Connecti...' with a count of 6.

The Fortinet logo is visible in the bottom left corner of the interface, and the URL 'https://fortinet.com' is shown in the bottom right corner.



FortiManager a FortiAnalyzer – MSSP

Rozdělení obou řešení do samostatných administrativních domén – ADOM



KEY CAPABILITIES

- To divide administration of devices and control (restrict) access
- Assign device to a single ADOM and administrators to one or more ADOMs
- ADOMs group devices for administrators to monitor and manage
- Enable MSSP to service multiple customers

Závěrečné shrnutí

- Trendem dneška je integrace bezpečnostních a analytických funkcí s tradičními komponentami přístupové vrstvy LAN/WLAN
- Již/nově zakoupené NGFW FortiGate můžete bez dodatečných nákladů na licence využít
 - Pro správu LAN/WLAN prostředí
 - Zobrazení topologie
 - Jako Wireless kontroler pro FAP
 - Pro implementaci NAC řešení
 - Pro asset management
 - IPAM
- FortiSwitch a FortiAP můžete provozovat i bez FortiGate (Standalone, FortiLAN Cloud, SASE)
- FortiManager je centrální mgmt. platforma pro správu FortiGate, FortiSwitch, FortiAP a FEX
- FortiAnalyzer je centrální analytická platforma nad FortiGate, FortiSwitch, FortiAP a FEX



FORTINET®

Odkazy pro více informací

- FortiSwitch produktová stránka
<https://www.fortinet.com/products/ethernet-switches>
- FortiAP produktová stránka
<https://www.fortinet.com/products/wireless-access-points>
- FortiManager produktová stránka
<https://www.fortinet.com/products/management/fortimanager>
- Fortianalyzer produktová stránka
<https://www.fortinet.com/products/management/fortianalyzer>

