F#RTINET® Úvod

Václav Molík

Major Account Manager - Telco/ISP

Rekapitulace – Fortinet na KKDS

KKTS Plzeň 9/18 Kybernetická bezpečnost – Výzvy a příležitosti pro ISP

KKTS Olomouc 5/22 Nabídka Fortinet pro ISP

KKTS Plzeň 9/22 (1) Návrh řešení DR projektu pro RETE internet s.r.o. (2) FortiGate v síti ISP

KKDS Olomouc 4/23 Jak mohou nejen ISP splnit požadavky NIS2

KKDS Plzeň 9/23 SOC formou služby



Y/NETWORK OPERATING CENTER



FortiAnalyzer

Central Log & report



FortiManager

Central Device Mgmt.



FortiNAC

IoT Access Control



FortiSandbox

File Analysis



FortiNDR

Virtual Security Analyst TM



FortiSIEM

SIEM / UEBA



FortiXDR

XDR



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



FortiAuthenticator

User Access Mgmt.



Network Tester



FortiDeceptor

Honeypot



SOAR

OBILE USERS



FortiToken

2 Factor OTP Token

FortiWiFi

Secure WiFi

Access

BRANCH OFFICE



FortiClient / FortiEDR

VPN, ZTNA, EPP, and SASE Client



FortiCASB



FortiCNP



IPsec / SSL VPN

SASE



Security Gateway

ZTNA



FortiDDoS

L7 D/DOS **Mitigator**



Load Balancer



FortiMail

Mail Sec. **Gateway**



Web App. **Firewall**



Fortilsolator

Browser Isolation



FortiProxy

Secure Web Gateway





FortiExtender

3G/4G/5G WAN



Switch



Wireless Access Point



Surveillance



IP PBX







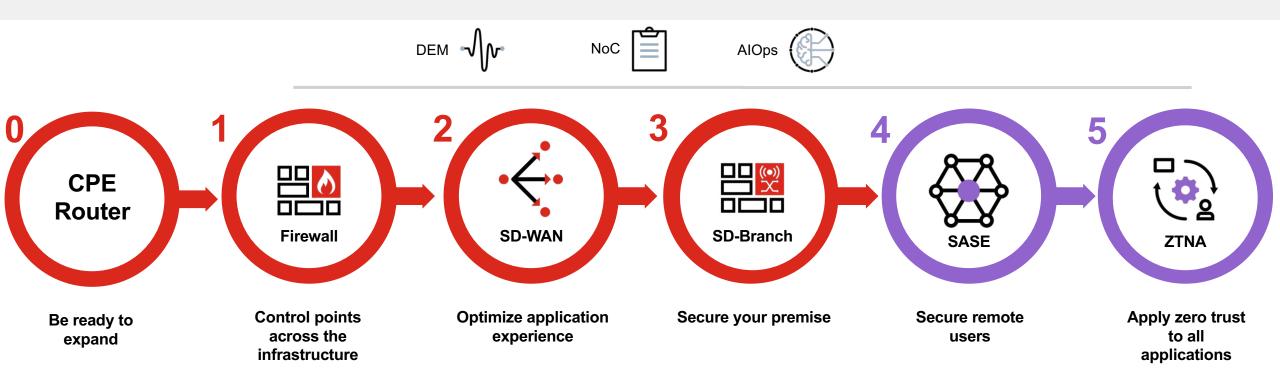
Secure Networking Journey

Secure Networking



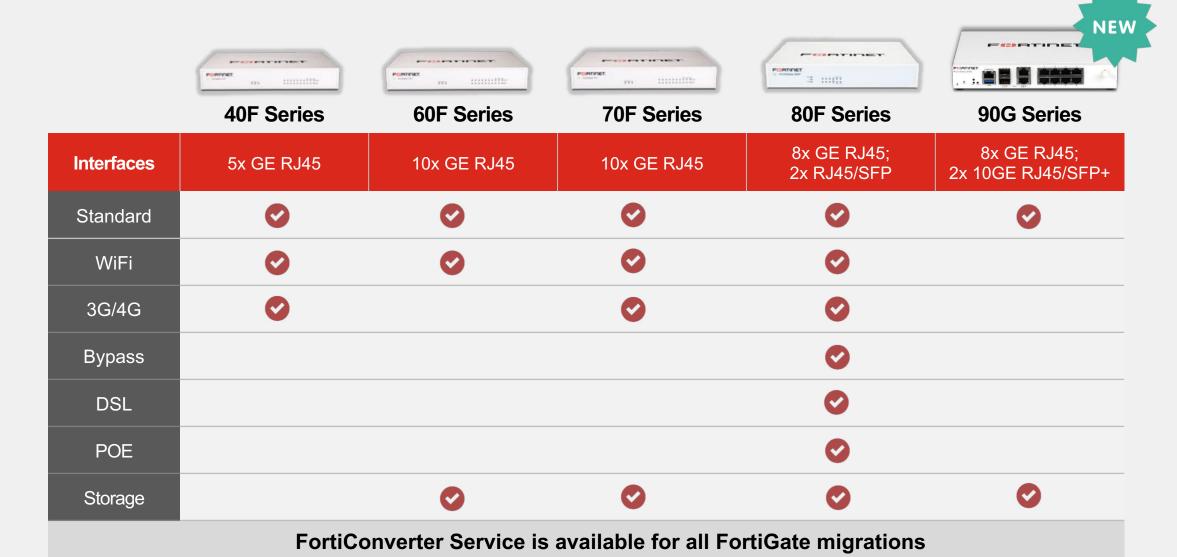


The convergence of networking and security across WLAN, LAN, SD-WAN, ZTNA, SASE, and network firewall enables networking that is location, user, device, content, and application aware.





FortiGate Entry-level NGFW Family



3rd-party to FortiGate: 1-2 days

FortiGate to FortiGate: 4 hours



FortiGate Entry Level Series - Overview



Feature-rich Security Appliances For Small/Home Offices & Small Branch Offices



FG-90G Series

FG/FWF- 80F Series

FG-70F Series

FG/FWF- 60F Series

FG/FWF- 40F Series



NGFW



Secure SD-WAN



5 Gbps – 28 Gbps
Firewall throughput



800 Mbps – 2.5 Gbps
NGFW Throughput



10GE RJ45 | 10GE SFP+ | GE RJ45 | GE RJ45 PoE/+ | GE SFP

Variants: WiFi | In-built 3G4G | In-built DSL | Ruggedized



1 Gbps – 4.5 Gbps





600 Mbps – 2.2 Gbps

Threat Protection Throughput



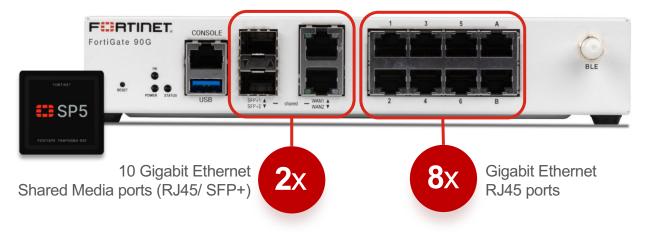
Introducing the FortiGate 90G Series

First SP5-powered FortiGate for distributed branches

Far outperforms the competition with Fortinet's latest ASIC technology

Only firewall in its class with 10GE ports for faster and more secure connections

Converged security and networking to support Hybrid Mesh Firewall deployment across branches



	Industry Average	FortiGate 90G	Security Compute Rating
Firewall Throughput	3.13 Gbps	28 Gbps	9x
NGFW Throughput	0.96 Gbps	2.5 Gbps	2.6x
IPsec VPN Throughput	1.53 Gbps	25 Gbps	16.3x
Threat Protection Throughput	0.98 Gbps	2.2 Gbps	2.3x
Concurrent Sessions	0.85 Million	1.5 Million	1.8x
Connections Per Second	31,000	124,000	4x

Note: Performance numbers taken from external datasheets to match as close as possible and different testing methodologies may be applied by different vendors.



FortiGate Mid-Range Series - Overview



High-Performance, Top-Rated Network Security for Mid-Sized **Enterprises**



- ## FG-900G Series
- ## FG-600E/F Series
- ## FG-400E/F Series
- FG-200E/F Series
- ## FG-100F Series



NGFW



Secure SD-WAN



SWG (600 series+)



IPS (600 series+)



20 Gbps – 164 Gbps Firewall throughput



1.6 Gbps – 22 Gbps NGFW Throughput



2.6 Gbps – 26 Gbps IPS Throughput



1 Gbps – 20 Gbps

Threat Protection Throughput



GE RJ45 | GE SFP | 10GE SFP+ | 25GE SFP28



FortiGate High End Series - Overview



Data Center Firewall / Large Enterprise NGFW with High-Speed Interfaces



- ## FG-4000F Series
- ## FG-3000E/F Series
- ## FG-2000E/F Series
- ## FG-1000E/F Series





NGFW, IPS



Segmentation



SWG



Mobile Security



80 Gbps — 3.1 Tbps
Firewall throughput



9 Gbps – 82 Gbps
NGFW Throughput



GE RJ45 | GE SFP 10GE SFP+ 25GE SFP28 40GE QSFP+ 100GE QSFP28 200GE QSFP56 400GE QSFP-DD



11.5 Gbps – 94 Gbps

IPS Throughout



5.4 Gbps – 75 Gbps

Threat Protection Throughput



FortiExtender Vehicle for Secure Mobility

Semi-Rugged FortiExtender with integrated Wi-Fi for Mobile Fleets





Vehicle	211F
Price	\$1,975
Cellular	CAT-12 LTE
Top D/L Speed	600Mbps
Deployment	Vehicle/OT
Benefit	Wi-Fi, Dual-SIM Public Safety
Connection	7-36VDC
Support	North America/Global



Překvapení na Fortinet stánku









Pozvání na Fortinet Security Day



Pozvánka na naši největší zákaznickou konferenci

Fortinet Security Day 16.10. 2023 Veletržní palác, Praha 7

https://events.fortinet.com/SecurityDayPraha





Pozvání na Fortinet Security Day - 16.10. 2023



PROGRAM

pondělí, 16. října 2023				
8:30 - 9:00	Příchod a registrace			
9:00 - 10:00	Úvodní slovo: Bezpečnost a jak na ní do budoucna?	Ondřej Šťáhlavský - Fortinet		
10:00 - 10:30	NIS2 a nový zákon o kybernetické bezpečnosti	Mgr. Jan Hénik - Národní úřad pro kybernetickou a informační bezpečnost		
10:30 - 10:50	Přestávka na kávu			
10:50 - 11:50	Jak se nestat obětí kybernetických útoků - Fortinet Security Fabric	Jan Václavík - Fortinet		
11:50 - 12:00	Case Study			
12:00 - 12:10	Case Study			
12:10 - 12:50	SASE - budoucnost vzdálených uživatelů	Ondřej Večl - Fortinet		
12:50 - 13:00	Case Study			
13:00 - 14:00	Oběd			
14:00 - 14:30	Jasná výhoda - identifikace bezpečnostních incidentů	Martin Ignjatović - Fortinet		
14:30 - 15:15	Spravujete svou infrastrukturu efektivně?	Adam Římský - Fortinet		
15:15 - 15:25	Case Study			
15:25 - 15:45	Přestávka na kávu			
15:45 - 16:30	Unikátní nástroje pro Security Operations a automatizaci	Ondřej Počta - Fortinet		
16:30 - 16:40	Case Study			
16:40 - 17:00	Ochraňte své cloudové prostředí	Piotr Nowotarski - Fortinet		
17:00 - 17:10	Case Study			
17:15	Konec oficiální části konference a networking			

FINETS FortiCloud SOCaaS

Ondřej Večl

Senior Systems Engineer





Ecosystem Complexity Trends

Volume of Alerts & Lengthy Manual Processes







The magnitude of alerts to investigate mask threats & are layered with countless manual workflows – producing increased vulnerabilities, false positives & alert fatigue

Skill Shortage & Lack of Team Collaboration







Organizations are struggling with retaining and acquiring senior level staff – Cybersecurity teams experience difficulty cohesively working together, often due to silos created by technology

Firewall Complexity



Through 2025, policy **misconfigurations**, not firewall flaws, will remain the cause of 99% of firewall breaches and bypasses.²

The Demand for Automation







Organizations experiencing complexities require machine assistance to reduce TCO, improve efficiency, and security posture. By 2025, more than 90% of enterprises will have an automation architect ¹



SOCaaS At a Glance

Cloud-based log monitoring, incident triage and escalation service with direct access to highly trained experts, cloud portal, reports, security hardening



Cloud Managed SOC

- 24x7 monitoring, incident triage and escalation
- Remediation recommendations
- Live expert support
- Reports
- Cloud Service Portal



Hardening Best Practices

- Logging Best Practices
- Health Monitoring
- Tuning Recommendations
- Security Posture Review



MITRE Mapped Use Case

- Compromised Hosts
- Malware Detection
- Unauthorized Access
- Policy Violation
- Botnet / C&C
- Lateral Movement



SOCaaS Overview – Where we fit





Service Locations 1-2 24x7 99.99% **FortiGate Unlimited** Days **x365** logs change **Ingest Log Data** Onboarding **Availability Service Hours Log Capacity** FRANKFURT BURNABY **PRAGUE** SINGAPORE Data **SOC Ops** Center

FortiCloud SOC-as-a-Service Deployment Models

Forwarding FortiGate logs to SOCaaS via FortiAnalyzer-cloud

Direct log Forwarding to SOCaaS

PRO:

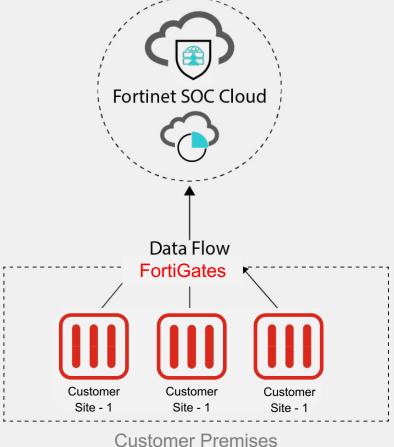
- Easy to implement
 - Simple configuration:



No additional On-Prem Installation required

CON:

- Internet access required for every FGT
- Logs only stored in Fortinet DC
- Not easy to Filter logs before sending to SoCaaS







FortiCloud SOC-as-a-Service Deployment Models

Forwarding FortiGate logs to SOCaaS via On-premise FortiAnalyzer

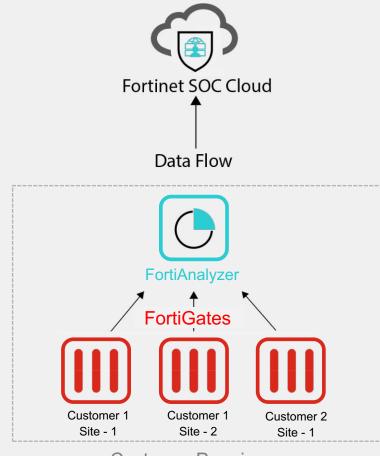
Log Forwarding via FortiAnalyzer

PRO:

- Logs also stored locally
- Easy to manage log forwarding from a single point
 - Big advantage for larger networks
- Posibility to mask or exclude log fields before sending to SoCaaS. (e.g user names or other private Info)
- Different deployment options available (Appliances, VMs)

CON:

Additional equipment on-prem



Customer Premises

Log forwarding from customer FortiAnalyzer (Appliance or VM)



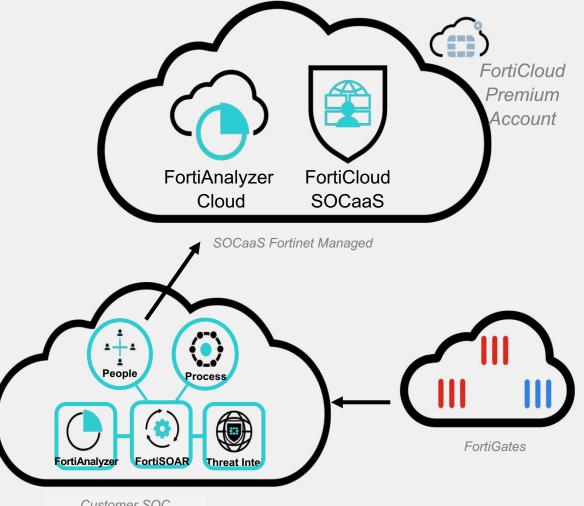
Self Managed SOC complimented by Fortinet Managed

Powered by Fortinet Al-Driven Security Operations Technology Stack

Own SoC complimented with SoCaaS

PRO:

- Own SoC Team
- SoCaaS helps to provide 365/24/7
- Expand SOC coverage by offloading common use cases to Fortinet's SOCaaS
- Utilize skilled resources to refocus efforts on more advanced initiatives and priority business scenarios
- CON:
- Need for highly trained dedicated experts
 - Security Analyst is a full-time job
- Additional tools required to build own SoC (SOAR solution)







SLA Matrix

Response time by severity



CRITICAL (P1, Priority 1) Escalation Time Phone: 15 min. Email: 15 min.

HIGH (P2, Priority 2) Escalation Time Phone: 45 min. Email: 90 min.

MEDIUM (P3, Priority 3) Escalation Time Phone: NA Email: 90 min.

LOW (P4, Priority 4) Escalation Time Phone: N/A. Email: 6 hours



Fortinet Escalated Alerting

SOCaaS Incident notification email example

Fortinet-SOC New Alert#76427



Fortinet-SOC@fortinet.com
To Ohristian Hutter

A security alert from SOCaaS for Customer

Fortinet's SOC Team



Provides an alert assessment and mitigation in the SOC Analysis and SOC Recommendations on the SOCaaS Portal.

Alert ID	76427
Alert Severity	Critical
Alert Type	Intrusion
Detection Time	2023-01-17 09:20:22 +00:00

For more details about this alert, please go to SOCaaS Portal. You may add comments to Alerts on SOcaaS portal to reach SOC team for additional help. We recommend not to reply to this email with confidential information.

SOCaaS Team

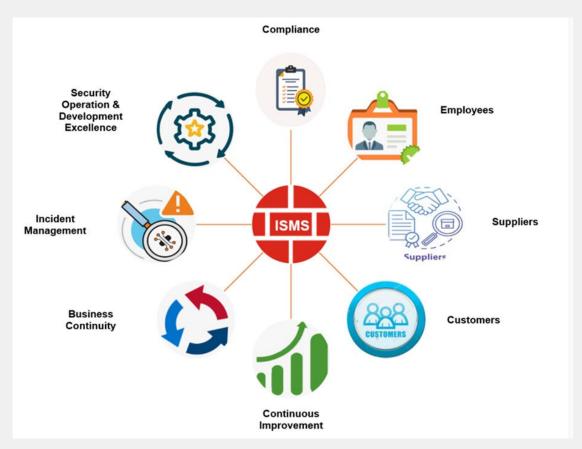
CONFIDENTIALITY NOTICE: The contents of this email message and any attachments are intended solely for the addressee(s) and may contain confidential and/or privileged information and may be legally protected from disclosure.



ISO/IEC 27001 & SOC 2 Certification

A certified ISMS demonstrates a commitment to information security by an organization, and provides assurance that information security is addressed properly by means of:

- ✓ Compliance compliance with laws, regulations, and contractual obligations.
- ✓ Customers ensure customer data privacy, integrity, and confidentiality requirements.
- ✓ Employees highly skilled, well-trained, and security-aware workforce.
- ✓ Suppliers suppliers that align both business and security objectives with Fortinet.
- ✓ Secure Operation/Development Excellence security injected into daily operation and development activities.
- ✓ Business Continuity ensure business continuity with a welldefined BCP and readiness for execution.
- ✓ **Incident Management** an incident occurrence is not a matter of 'if' but 'when' and a robust, responsive Incident Management Program reduces the impact of an incident to a minimum.
- ✓ Continuous Improvement a certified ISMS will facilitate and drive continual improvement.







FortiCloud SOC-as-a-Service Summary

Our Differentiators



Mature Operation

- 24x7 Operations
- Live experts support
- Three SOC centers
- SOC2 & ISO27001 Certified





Skilled Experts

- Experienced SOC People
- Direct access to FortiGuard Labs
- Fortinet Best Practices



Automated Process

- SOAR for SOC automation
- Al assisted incident triage
- Scalable



Integrated Services

- FAZ-Cloud integration for easy onboarding
- Managed FortiGate Service integration for fast Containment
- Forensic Service Integration for endpoint remediation



Best-In-Class Technology

- Fortinet owns the SOC technology endto-end
- Innovation Leader
- Priority access to product support
- FortiGuard Bigdata and Al



FortiClient Forensic Service



FortiClient Forensic Service

 FortiClient Forensic Service provides analysis to help endpoint customers respond to and recover from cyber incidents.

Collection:

 Collecting disk artifacts and memory snapshots that may be relevant to the investigation. Collections are conducted securely via a remote agent with minimal customer interaction.

Examination:

Examining file system contents, processing log files, and extracting statistical results to prioritize high value items for analysis.

Analysis:

Analyzing targeted digital evidence to determine the initial attack vector, establish timeline of malicious activity, and identify the extent of compromise.

Reporting:

Synthesizing the findings in a high-level executive summary with details on remediation recommendations.

FortiClient Forensic Service is only available for EMS-Cloud today

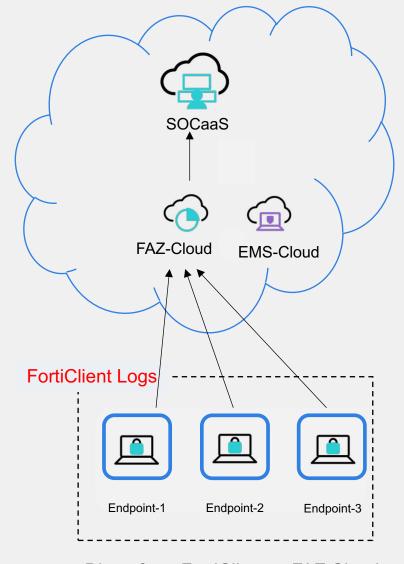


Forensic Service Deployment Models

Forwarding FortiClient logs to SOCaaS via FortiAnalyzer-cloud

Log Forwarding via FAZ-Cloud to SOCaaS:

- Requires EMS-Cloud with Forensic Service Subscription
- Requires FortiAnalyzer-Cloud Storage Add-On Subscription



Direct from FortiClient to FAZ Cloud

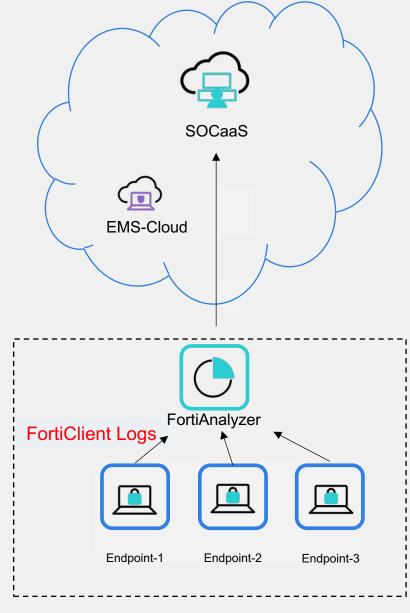


Forensic Service Deployment Models

Forwarding FortiClient logs to SOCaaS via On-Prem FAZ

Log Forwarding via On-Prem FAZ to SOCaaS:

Requires only EMS-Cloud with Forensic Service Subscription







Managed FortiGate Service



NOC Challenges

Human Errors

occurred during the manual and lengthy migration process



Complexity

due to the increasing number of apps, devices, users connected to the network



Lack of Expertise

in firewall configurations and security best practices



82% of data breaches involved a human element.

Source: Verizon 2022 Data Breaches Investigations Report

41.6 billion of connected IoT devices by 2025, with a 28.7% CAGR.

Source: IDC

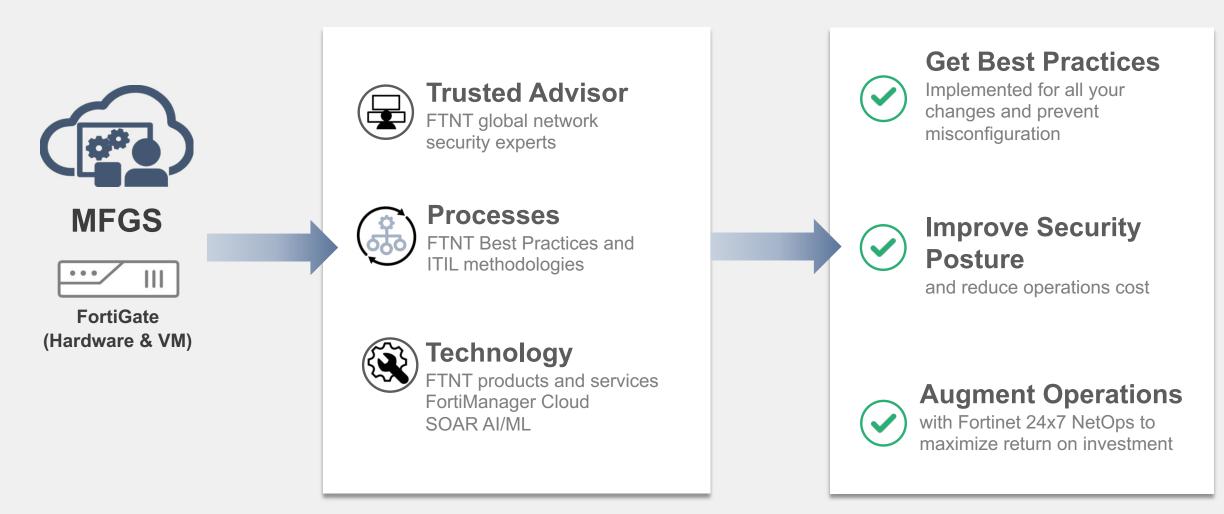
60% of organizations struggle to recruit cybersecurity talent and 52% struggle to retain it.

Source: Fortinet 2022 Cybersecurity Skills Gap Global Research Report



How Can Managed FortiGate Service Help?

24x7 Cloud-based, fully managed global network operations service





What will Manage FortiGate Experts Perform?



Change Management

- Evaluation / Implementation /
 Verification of change requests
- FSBP and ITIL methodology



System Hardening

- SOCaaS Incident Remediation
- PSIRT Advisories Response
- Fortiguard Outbreak Response
- System Audit
- Security Posture Review



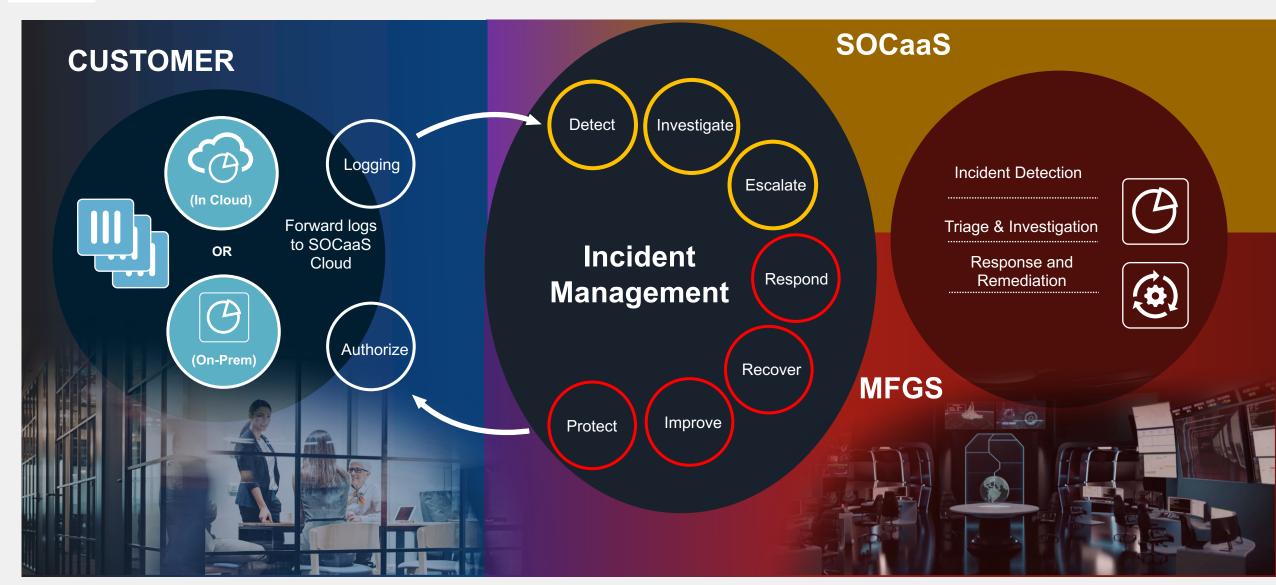
Device Provisioning

- NGFW Deployment
- Security Fabric Setup
- Secure SD-WAN
- ZTNA
- Remote Access



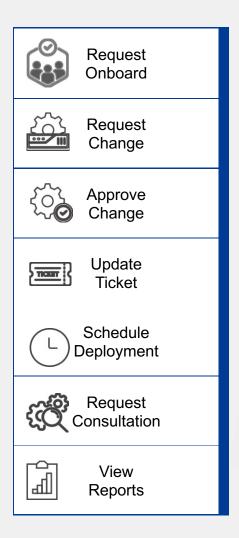


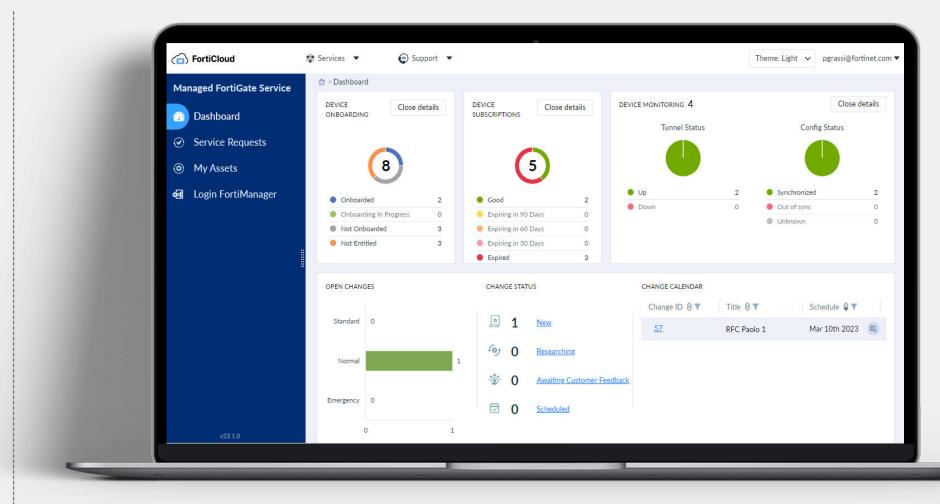
Incident Response – SOCaaS + MFGS





How does the customer engage with our Experts?







What are the SLAs of Managed FortiGate Service?



Emergency

Evaluation Time 1 Hour

Implementation Time 4 Hours



Normal

Evaluation Time 4 Hours

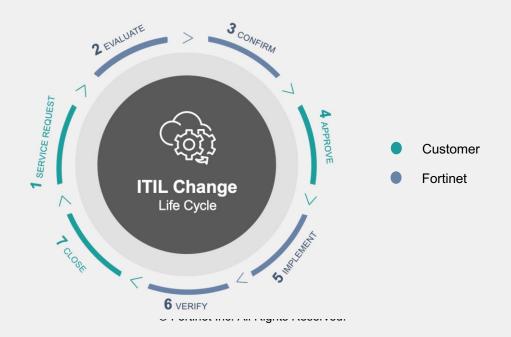
Implementation Time 1 B Day



Standard

Evaluation Time 1 B Day

Implementation Time 2 B days





Customer Benefits

Fortinet Best Practices Audit, Use Case Coverage, System Hardening, Policy Tuning Recommendations, Security Posture Review, PSIRT Response, and Outbreak Response.



Fortinet NOC experts to manage the full lifecycle of your Fortinet FortiGates

Simplify Operations

Change management driven by Fortinet best practices using ITIL™ Continual Service Improvement

Predictable Costs

Customers have a predictable cost for their network security operations

Full Visibility

Gain full visibility of the service, raise change requests, review implementation schedules, and post-implementation reports.



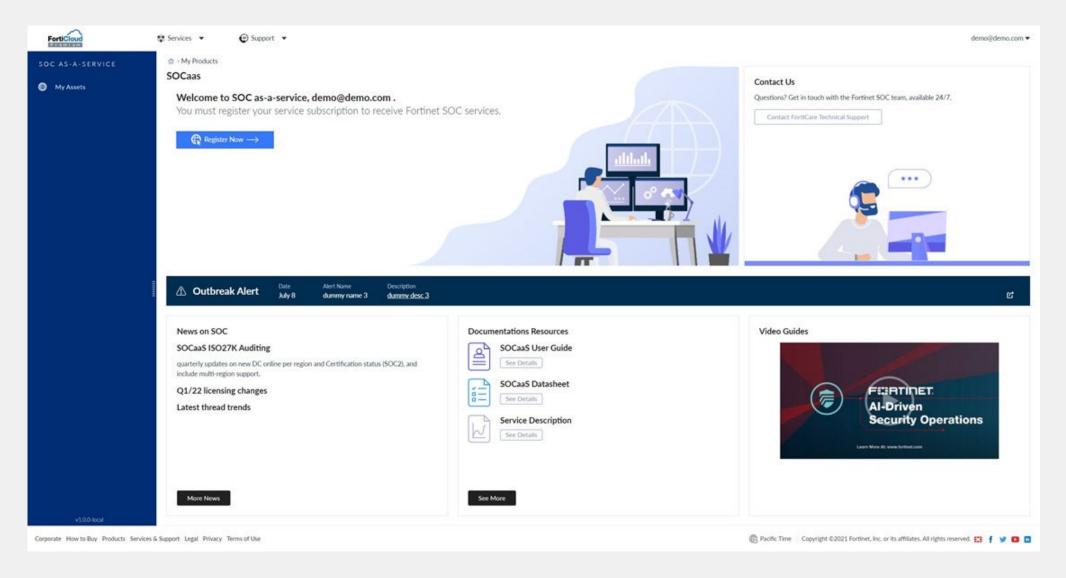


SOC as a Service

SOCaaS Portál - ukázka

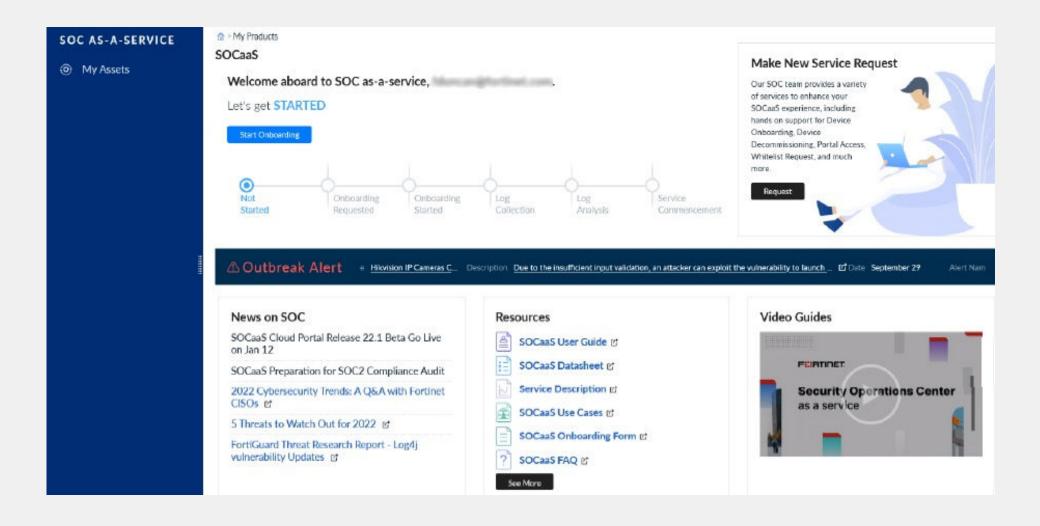


Home Page (For customers without SOC subscription)



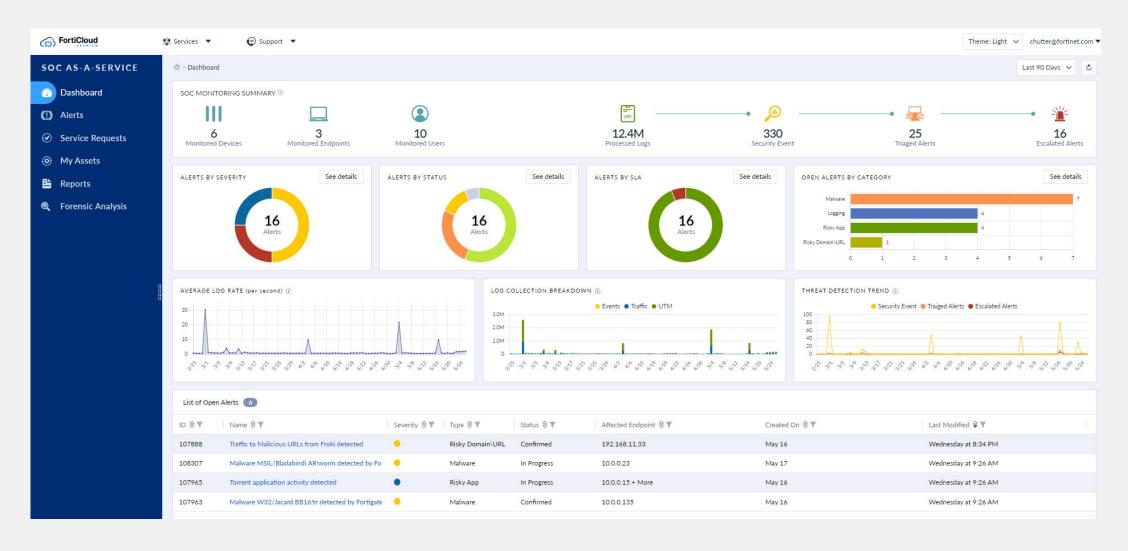


Home Page (For customers with SOC subscription)



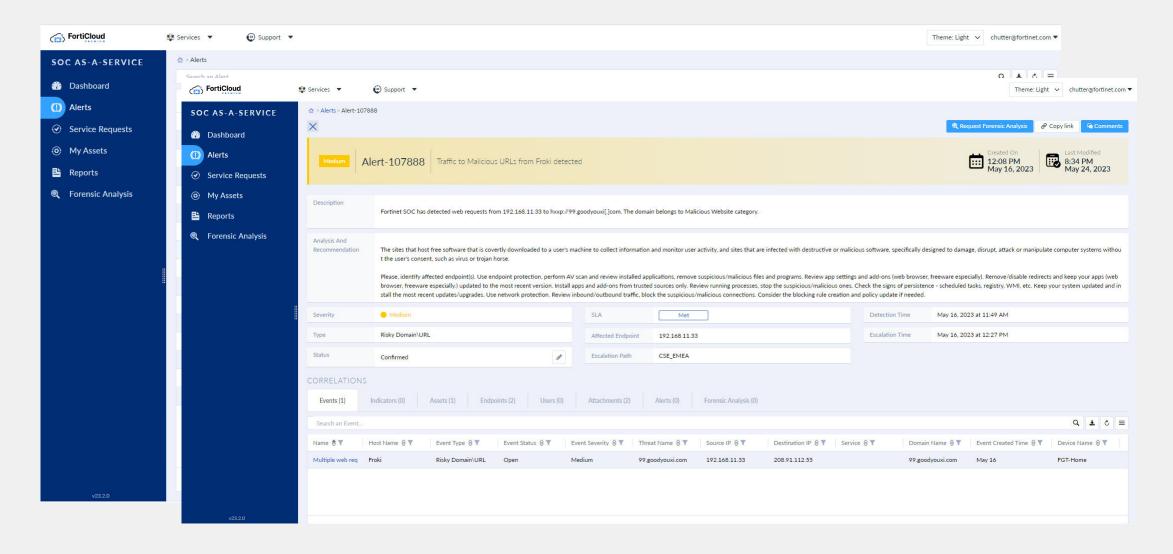


Dashboard



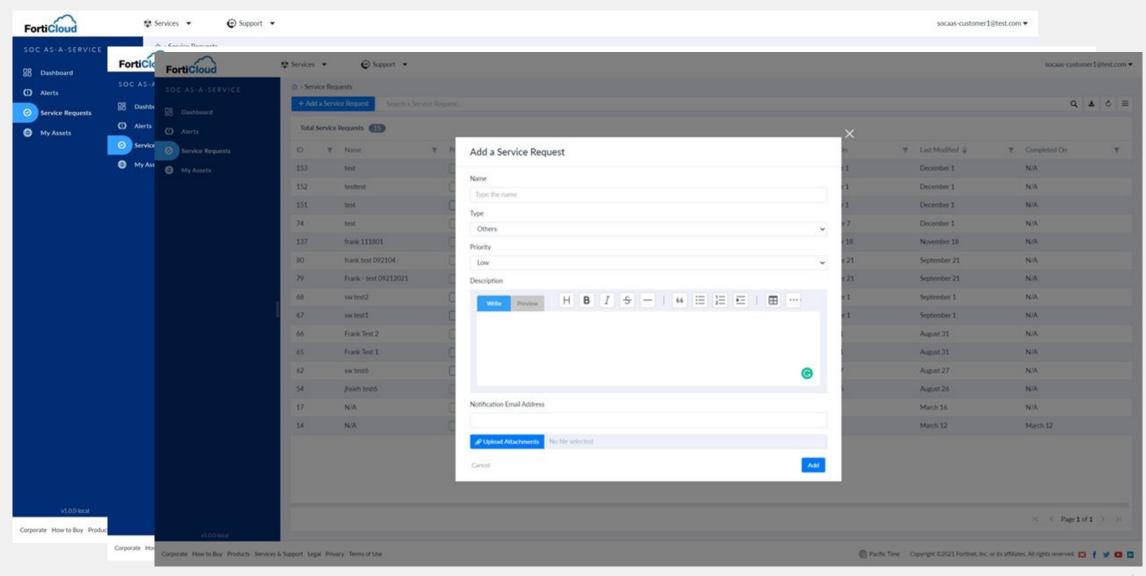


Alerts



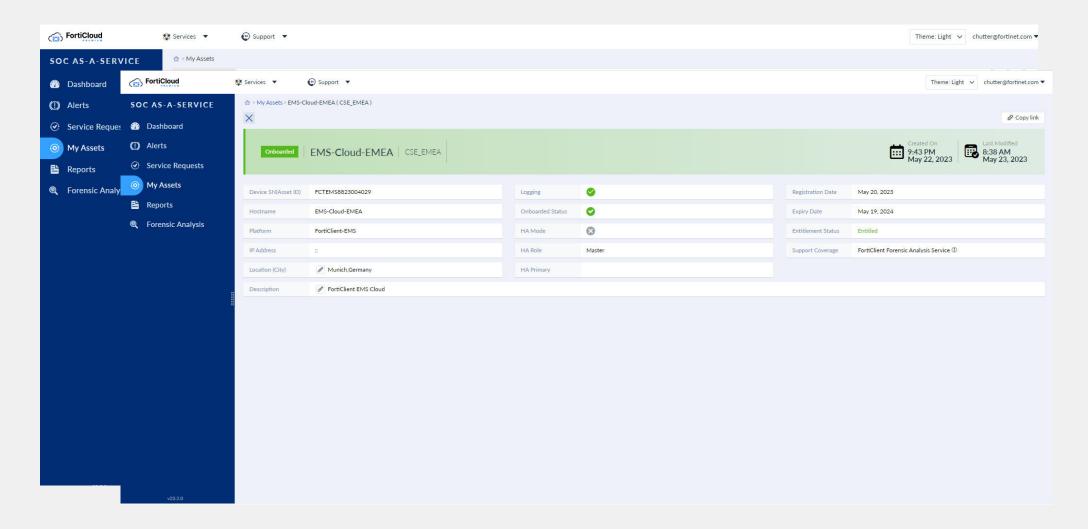


Service Requests



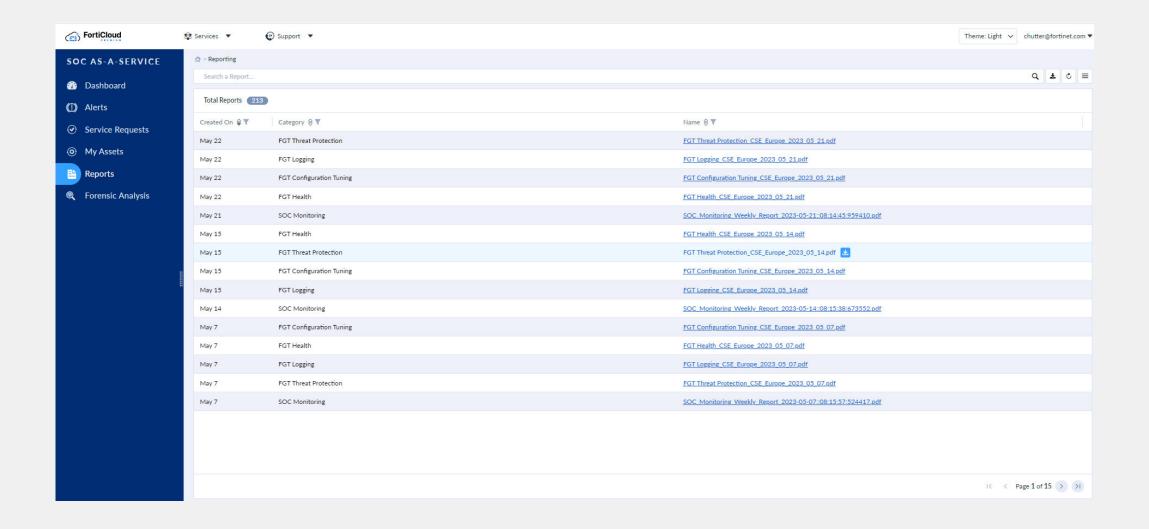


My Assets





Reports





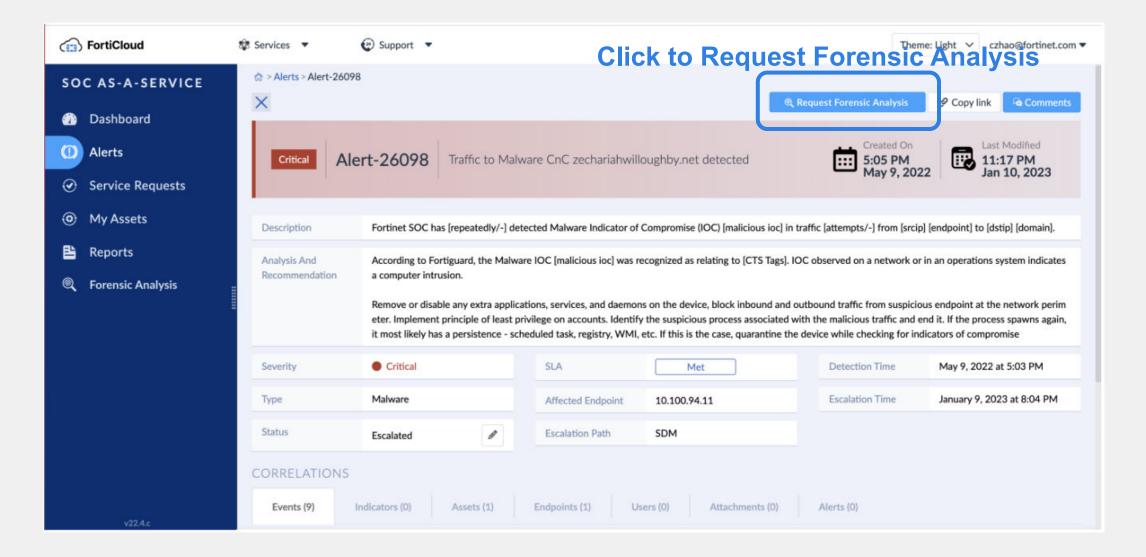
Endpoint Forensics

ukázka

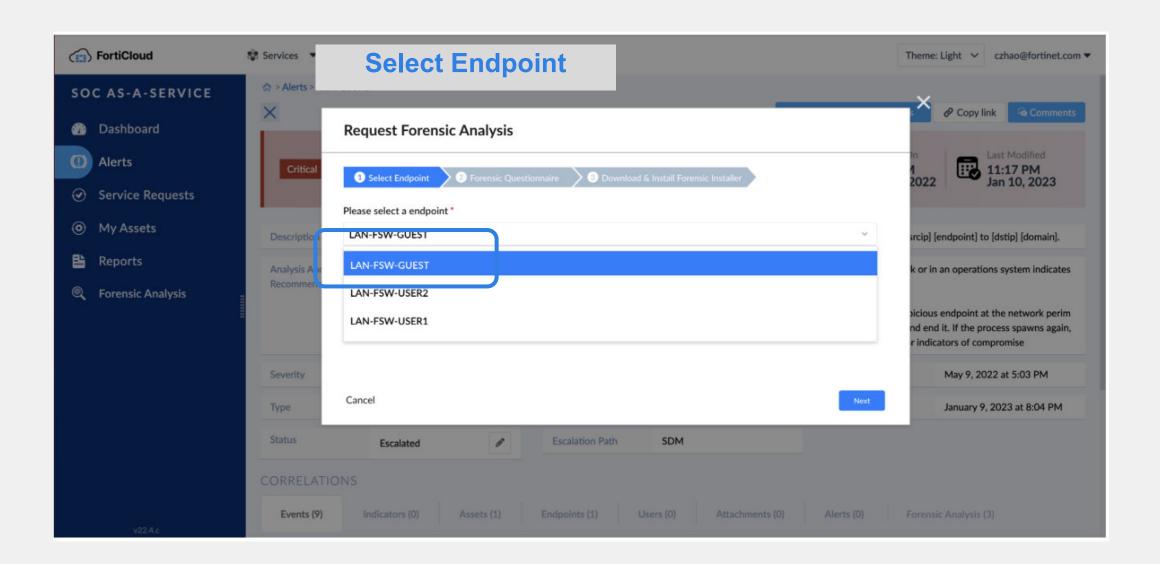




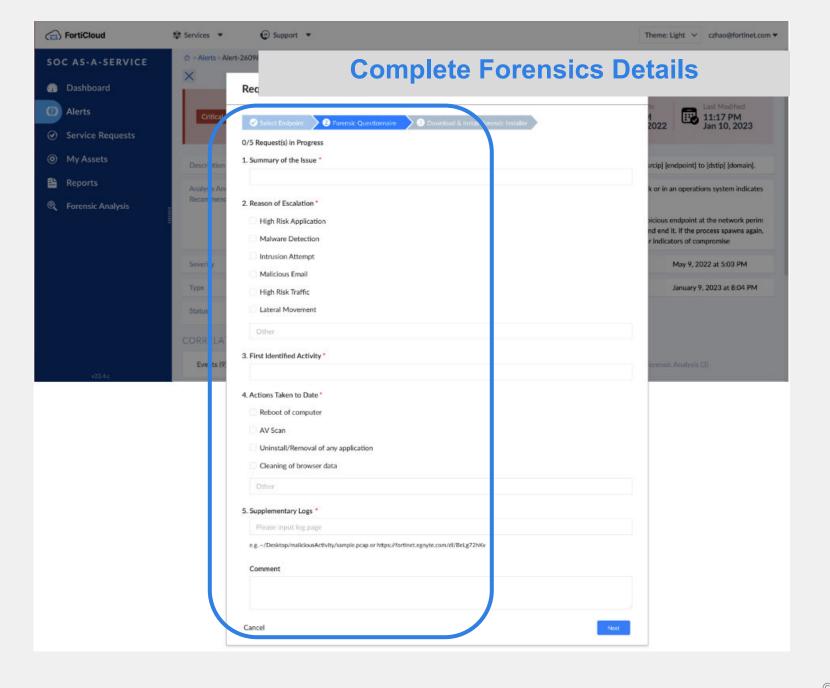
Incident Response Endpoint Forensics



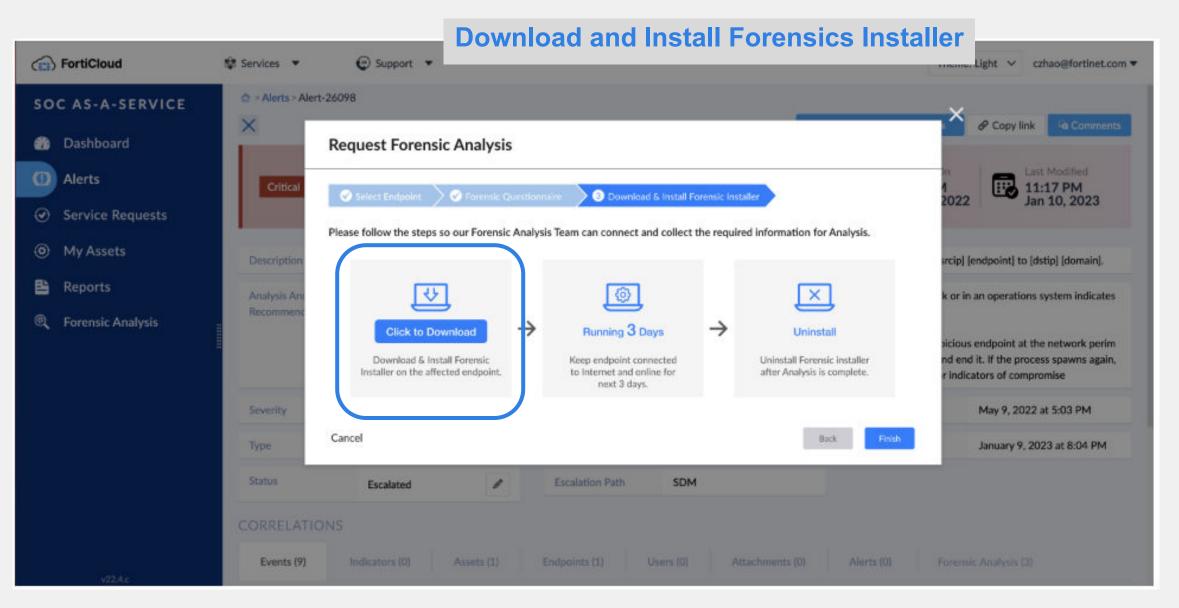












Forensic Agent will automatically collect the necessary data and send it to the Forensic Team



