



Cybersecurity for SAP, Everywhere You Need It.

Securing SAP Solutions for the Digital Enterprise

Roland Wartenberg / SAP Alliance / Fortinet, Inc.

House keeping

 The slides with the SAP logo in the upper right corner are either original SAP slides or are based on content produced/owned by SAP

2. This is an interactive session. Have your smart phones ready.



An SAP life ... 1986 2010 2016 2022 1991 1997 2017 NetApp University Digital SAP Citrix Genband **Fortinet** Equipment Artificial Premium Global SAP SAP & ISV Consultant SAP Global SAP Intelligence Consultant Alliance Channels Digital Alliance Alliance Robotics Dev Manager Archiving Alliances for Electrical / Product SAP Data Engineering Owner Protection, Applied Chief Security, Big Virtualization Computer Data, IoT, Al Evangelist Graphics System and SAP Bigband Network Administrator https://www.linkedin.com/in/rolandwartenberg

Fortinet is one of the largest cybersecurity companies in the world.



Founded: October 2000

Founded by: Ken Xie and Michael Xie

Headquarters: Sunnyvale, CA

Fortinet IPO (FTNT): November 2009

Listed in both: NASDAQ 100 and S&P 500 Indices

Member of: 2023 Dow Jones Sustainability World and North America Indices

Global Customer Base

730K+

Customers

>50%

Global Firewall Shipments

2023 Billings

\$6.4B+

(as of Dec. 31, 2023)

~\$2.5B+

Investment in Innovation since 2017, with 91% R&D (as of Dec. 31, 2023)

Market Capitalization

\$44.5B

(as of Dec. 31, 2023)

Security Investment Grade Rating:

BBB+ Baa1

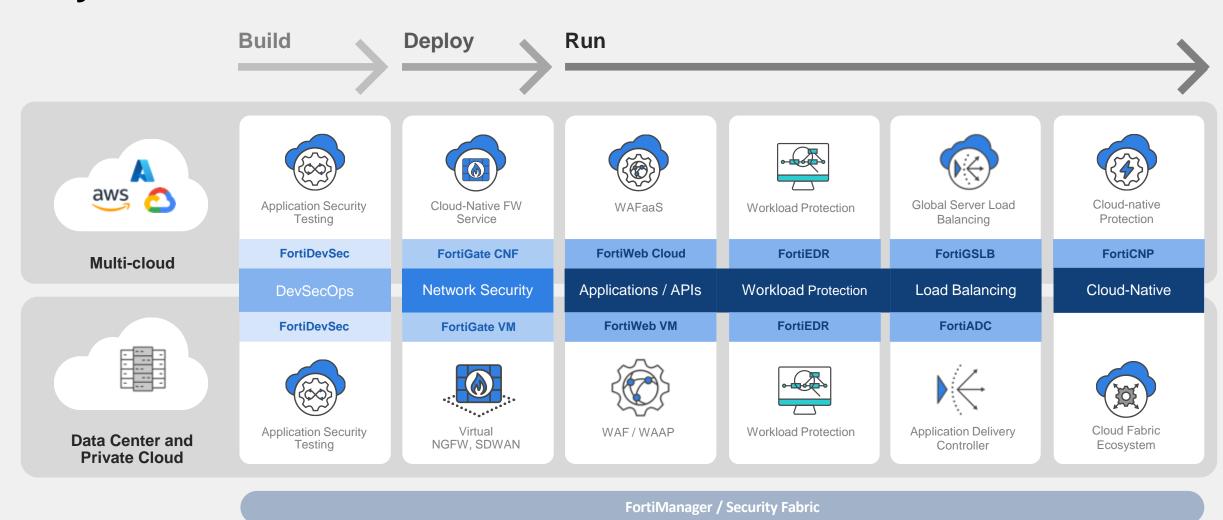
Global Reach and Support

Majority of our R&D is based in North America





Consistent Security for Applications That Can Live Anywhere



FortiGuard Al-Powered Security Services







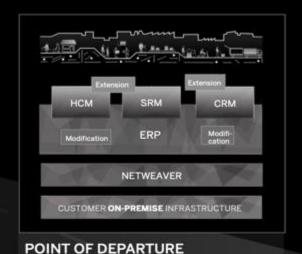






SAP customers' transformation journey





WITH AGILITY & SPEED

ON-PREMISE



HOLISTIC BUSINESS TRANSFORMATION INTELLIGENT ENTERPRISE

Innovate and drive resiliency, profitability & sustainability

SAP's approach to security



Cloud solutions from SAP

Business technology platform

SAP S/4HANA

Line-of-business solutions



Deliver trusted cloud operations while helping protect customers' SAP applications and data





Software development

Secure software development and operations lifecycle



Security solutions and features

Solutions and features for enhanced security



Cloud environments

Secure-by-design environments (SAP and cloud service providers)



Run securely



Automated

Preventive and detective controls



Integrated

Intelligence, operations, and response orchestration



Transparent

Attestations and reports for our security processes and controls



Act securely



Employees

Security is part of our DNA affecting how we organize, train, and protect people and assets



Customers

Feedback loop supports continuous improvement



Partners

Vast partner ecosystem enhances security



to help protect confidentiality and integrity of data

Business process security

to support compliance with regulatory requirements

Risk mitigation

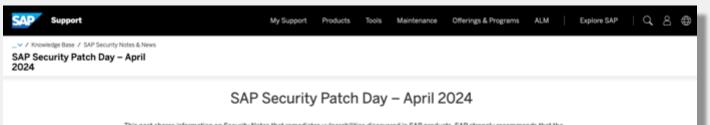
with continuous improvement across operations

Zero trust architecture

Shared fate

Frameworks (NIST and ISO)





This post shares information on Security Notes that remediates vulnerabilities discovered in SAP products. SAP strongly recommends that the customer applies patches on priority to protect their SAP landscape.

On 9th of April 2024, SAP Security Patch Day saw the release of IO new Security Notes. Further, there were 2 updates to previously released Security Notes.

Note#	Title	Severity	cvss
3434839	[CVE-2024-27899] Security misconfiguration vulnerability in SAP NetWeaver AS Java User Management Engine		
	Product - SAP NetWeaver AS Java User Management Engine, Versions - SERVERCORE 7.50, J2EE- APPS 7.50, UMEADMIN 7.50	High	8.8
3421384	[CVE-2024-25646] Information Disclosure vulnerability in SAP BusinessObjects Web Intelligence	High	7.7
	Product - SAP BusinessObjects Web Intelligence, Versions - 4.2, 4.3	rigii	LL
3438234	[CVE-2024-27901] Directory Traversal vulnerability in SAP Asset Accounting Product- SAP Asset Accounting, Versions - SAP_APPL 600, SAP_APPL 60		
			7.2
3442741	Stack overflow vulnerability on the component images of SAP Integration Suite (EDGE INTEGRATION CELL)	ntegration Suite (EDGE INTEGRATION Medium	
	Product - SAP Edge Integration Cell, Versions older than 8.13.5	THE CONTRACTOR	6.8





SAP's approach to security



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SAP S/4HANA

Line-of-business solutions



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SAP's shared security responsibility model



RISE WITH SAP

S/4HANA Cloud, Private Edition

SAP Enterprise Cloud Services (ECS)

- ✓ Resilient platform architecture (HA and DR)
- ✓ Single Tenanted Landscape
- ✓ Managed Backup and Restore
- ✓ Building Secure Virtual Machines, Operating systems, networking, HANA Database
- ✓ HANA DB Management
- ✓ Technical Managed Services (R&R Link)
- ✓ Operational Security and Managing security incidents
- √ 24x7 Security Monitoring
- ✓ Personal Data Breach Notification
- ✓ SLA and Support Services
- √ Threat Management & Patch Management
- ✓ Physical Data Center Security in multiple Regions
- ✓ Resilient Network Connectivity and Availability Zones
- ✓ Underlying Physical, Virtual Infrastructure & Hypervisor
- ✓ Network Availability with built-in basic DDoS protection
- ✓ Audit, Security and Compliance on laaS

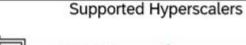
Customer

- ✓ Dedicated Private Connectivity to Hyperscaler
- √ Application User Identity Management
- ✓ Application User Authentication and Authorisation Management
- ✓ Application User Roles, User Groups, Access Control
- ✓ Customer Data Ownership
- ✓ Compliance to Government & Industry Regulations
- ✓ Application Security Audit Logging (SAL)
- ✓ Integration and Extensions, Custom Applications Development
- ✓ Configuration of the Customer Business Processes
- ✓ Application Change Management

laaS Provider

(Customer selected deployment Region)

Managed by SAP SE









Source: Securing RISE with SAP



SAP Secure Operations Map



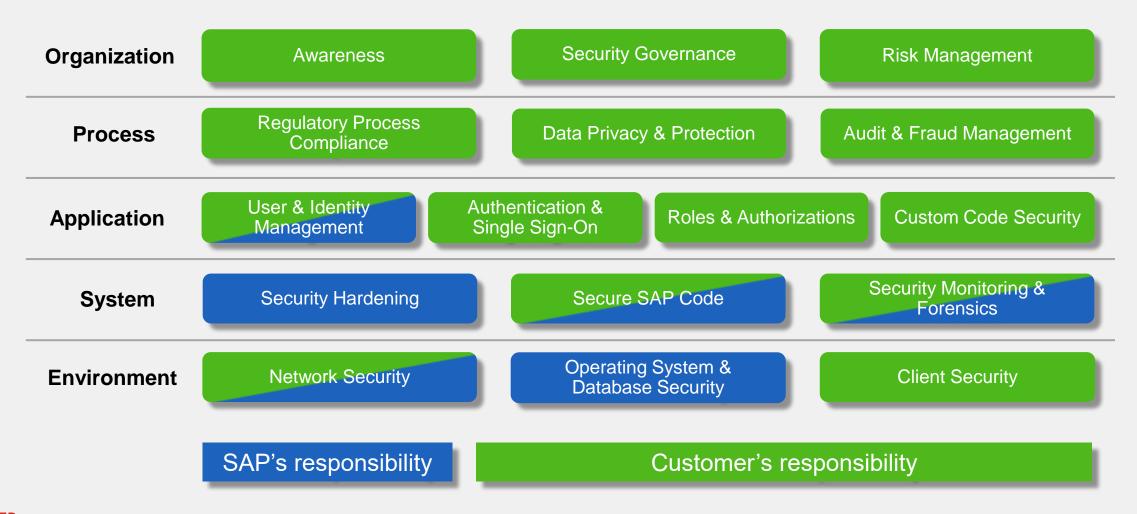
Organization	Awareness	Security Governance	Risk Management
Process	Regulatory Process Compliance	Data Privacy & Protection	Audit & Fraud Management
Application	User & Identity Management Authentication & Single Sign-On Roles & Authorizations Custom Code Security		
System	Security Hardening	Secure SAP Code	Security Monitoring & Forensics
Environment	Network Security	Operating System & Database Security	Client Security



SAP Secure Operations Map

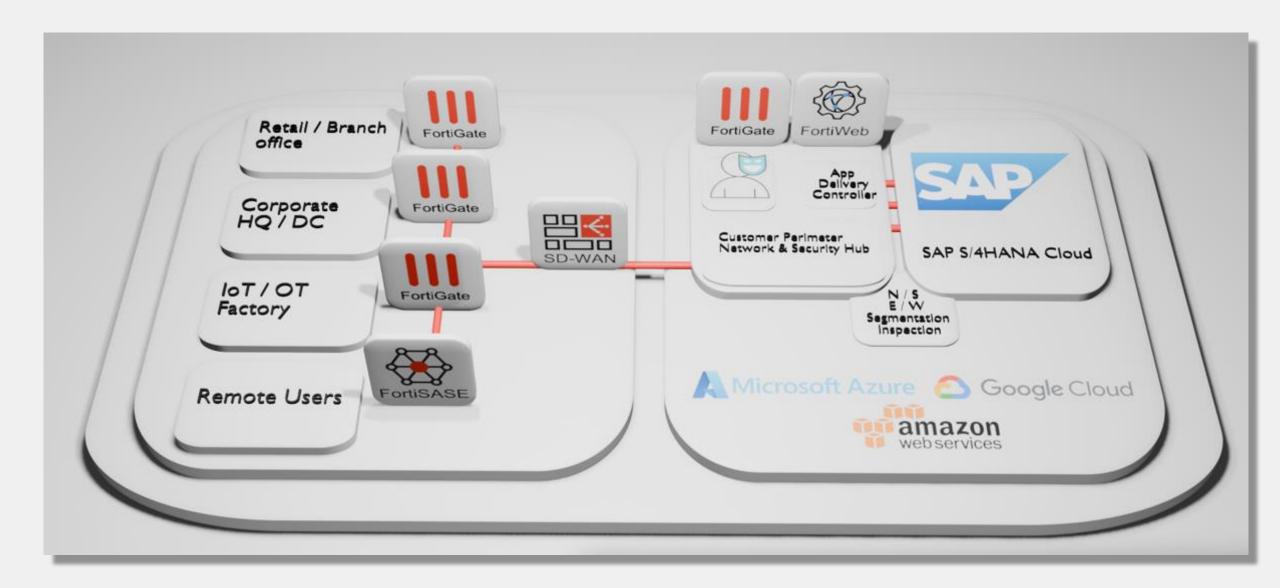


Core & shared responsibilities per architectural setup for RISE





Schematic Fortinet/SAP landscape





ASUG 2024 Pulse of the SAP Customer Research

SAP S/4HANA Cloud Environments



Cloud (Private, Managed Cloud, Public Cloud)

62%



Hybrid Cloud

18%



On-premise bare metal or basic virtualized systems

21%



Highlights Customer Responsibility

RISE with SAP and Fortinet

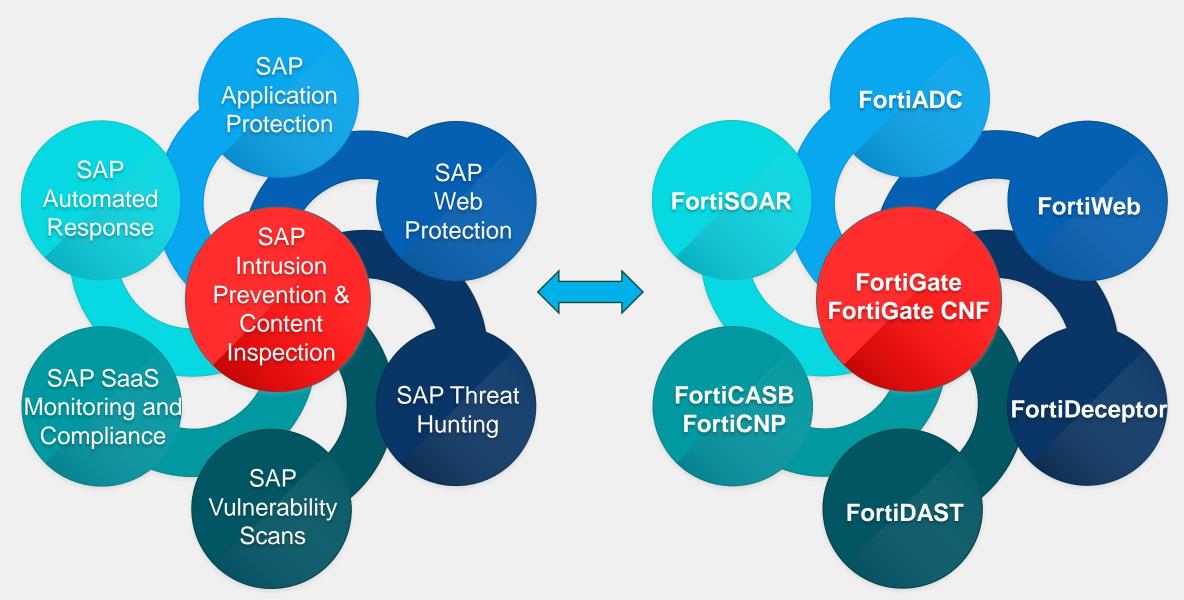
Customer Responsibility	What it means	Fortinet solution	
Dedicated Private Connectivity to Hyperscaler	Customers need to implement a Customer Security Hub in Hyperscaler and secure N/S and E/W traffic to hub and to RISE with SAP environment	FortiGate SD-WAN to create private connectivity to Hyperscalers and secure N/S traffic; FortiGate NGFW to secure E/W traffic; FortiWeb WAF to secure Web application traffic	
Compliance to Government & Industry Regulations	Customer is responsible to meet various compliance regulations	FortCNP can verify if compliance criteria are met and report issues and alerts	
User Management	Customer is responsible to deploy users with authentication, providing authorizations and secure access	FortiClient enables zero-trust architecture. FortiSOAR uses automated playbooks to add/remove users from SAP applications (using Entra if needed)	
Integrations and Extensions / Custom Applications Development	Customer is responsible for securing application integration when extending their applications to cloud and other applications	FortiADC and FortiWeb provide services for Web Application Firewall and API protection when interacting with other SaaS or cloud applications	



Fortinet Products integrated with SAP deployment

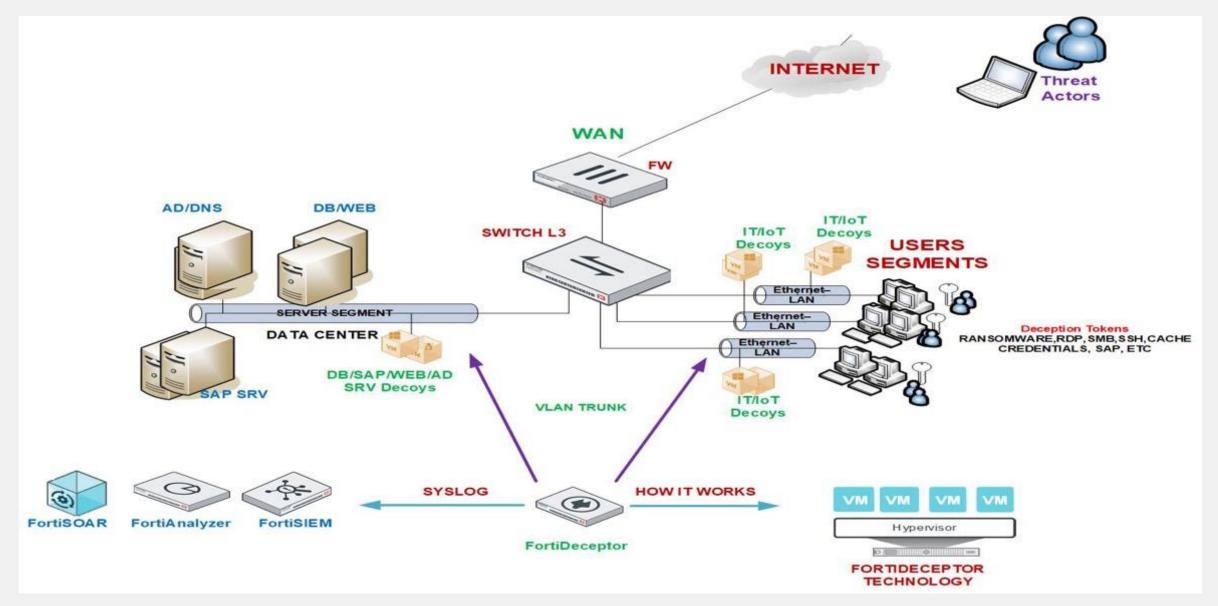
Product	Integration	RISE/GROW/self with SAP	
	Application Control	Yes (segmentation within SAP controlled environment not available)	
FortiGate	Intrusion Prevention	Yes (segmentation within SAP controlled environment not available)	
	SDN Connector for SAP	-	
	Web Application Firewall	Yes	
FortiADC	API protection	Yes	
	SAP Connector	-	
FortiWeb	Web Application Firewall	Yes	
Fortiveb	API protection	Yes	
FortiDeceptor	SAP Decoy	Yes, when decoy is deployed in customer-controlled network	
FortiDAST	SAP Exploit Signatures	Yes	
FortiDAST	SAP Vulnerability Scanner	Yes	
FortiCASB	SAP SuccessFactors (DLP/AV)	Yes	
FULLICASE	SAP IAS	Yes	
FortiCNP	Cloud Infrastructure compliance	Yes (SAP SaaS Applications not included)	
FortiCOAD	SAP ETD Connector	Yes (FortiSOAR not yet integrated with SAP ETD Cloud edition)	
FortiSOAR	SAP RFC Connector	Yes	
FortiFlex	Flexible, points-based usage licensing that simplifies procurement and operational overhead		

Fortinet Use Cases and Products for Securing SAP





SAP Attack Simulation – LAB Diagram





Speed The Time to Fully Investigate and Remediate Incidents from 18.5 Hours to an Average of 10 Minutes.

Before







Fortinet SecOps Platform











SAP Security isn't like other Security





SAP Specific
Vulnerabilities and
Attacks



Requires both N/S and E/W security



Reconnaissance detection requires SAP specific honeypots and lures

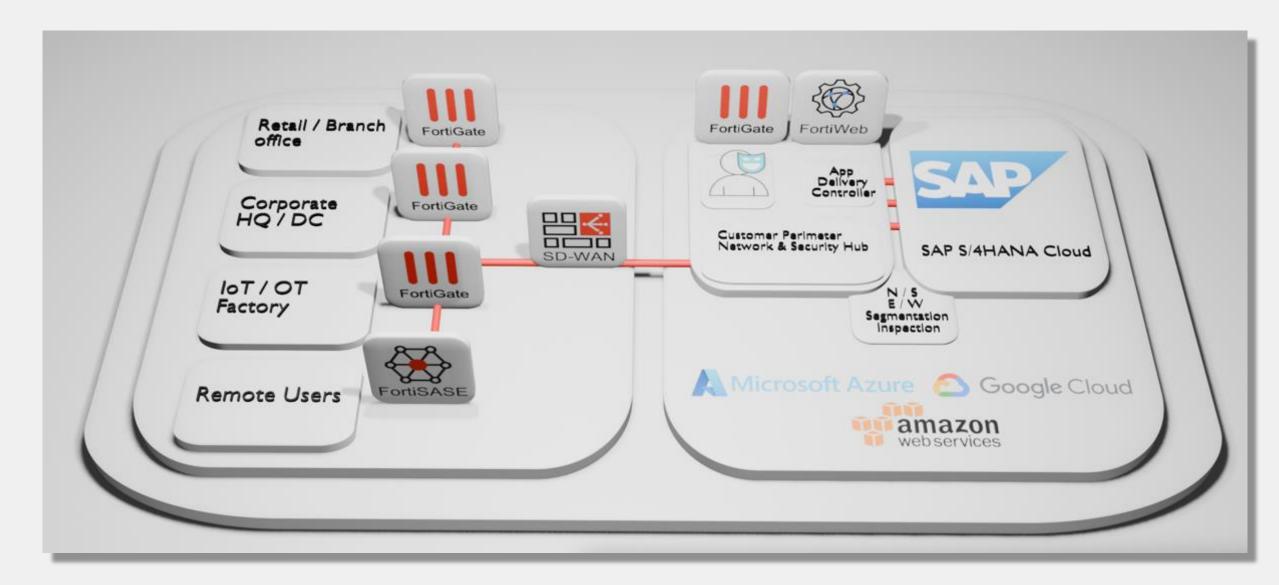


Requires tested and validated security architectures

It requires a Security Fabric from Fortinet

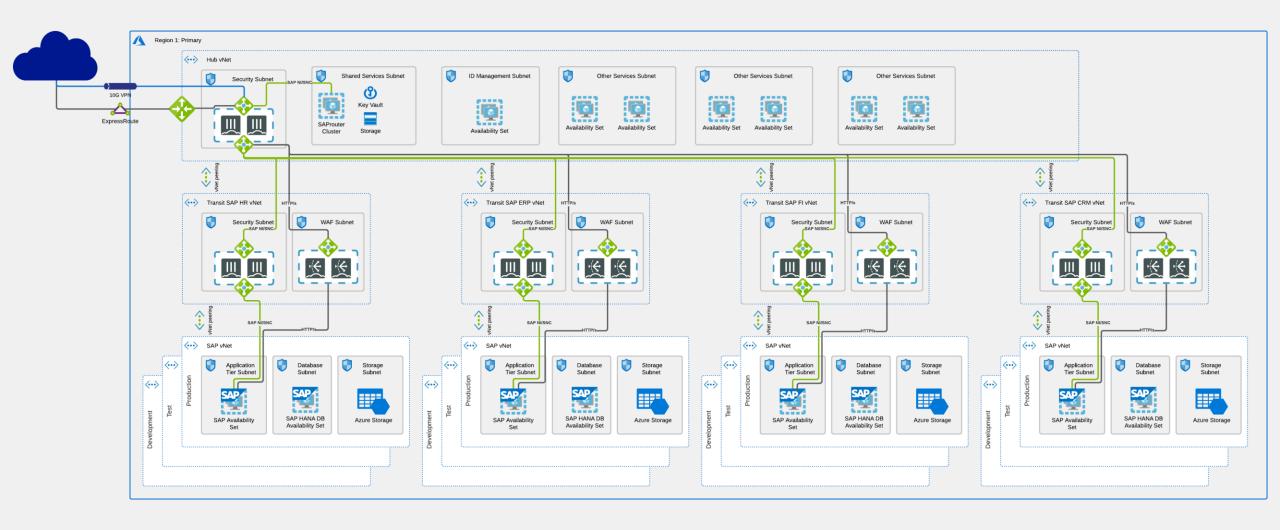


Schematic Fortinet/SAP landscape





Example for a reference architecture

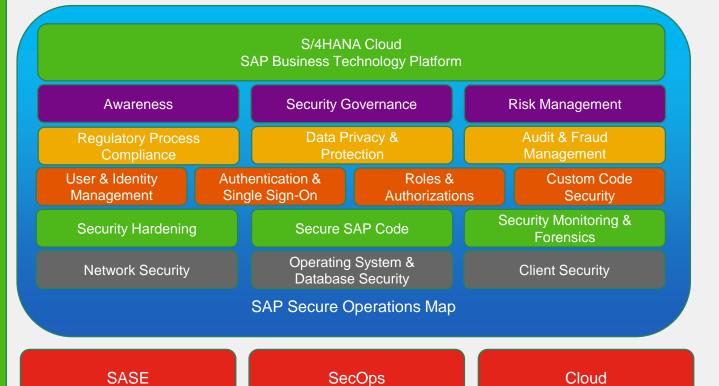




Fortinet for SAP Solutions

Aerospace / Automotive / Banking / Chemicals / Defense & Security / Healthcare High Tech / Insurance / Life Sciences / Oil & Gas / Public Sector / Retail / Telco / Utilities





FortiADC

FortiCNP

FortiWeb

FortiCNF

FortiDAST

FortiSOAR







C

S

0

M

R

FortiGate

FortiDeceptor

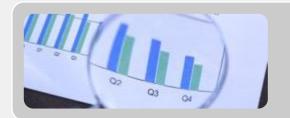
SD-WAN

FortiCASB

Executive Summary



SAP systems are mission critical, and SAP security failures lead to business disruption



SAP secures their solutions – the customer is responsible to secure the whole business



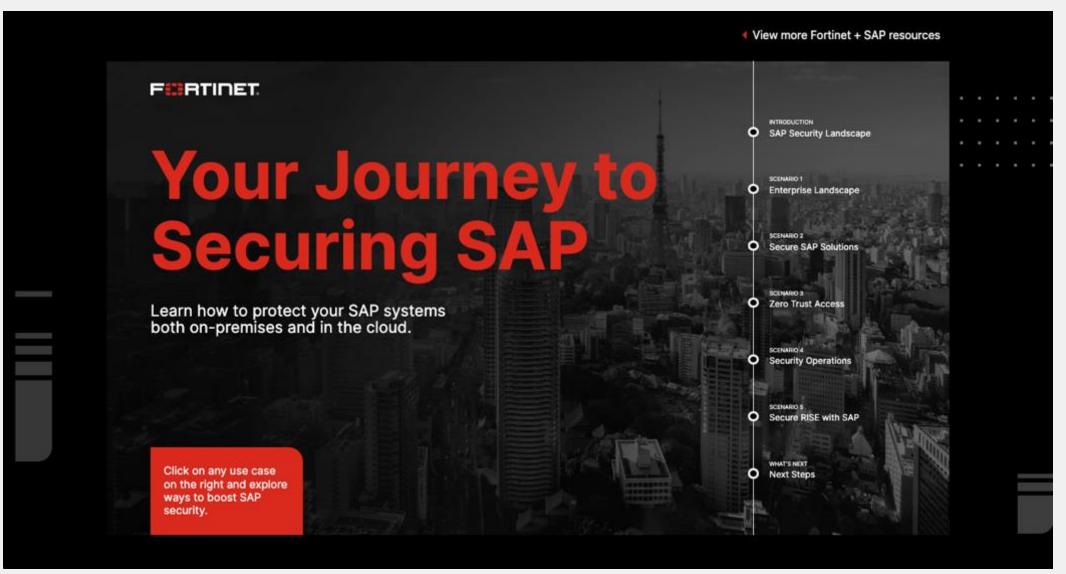
Only Fortinet offers a comprehensive protection for your SAP landscapes



Fortinet is securing people, device and data everywhere

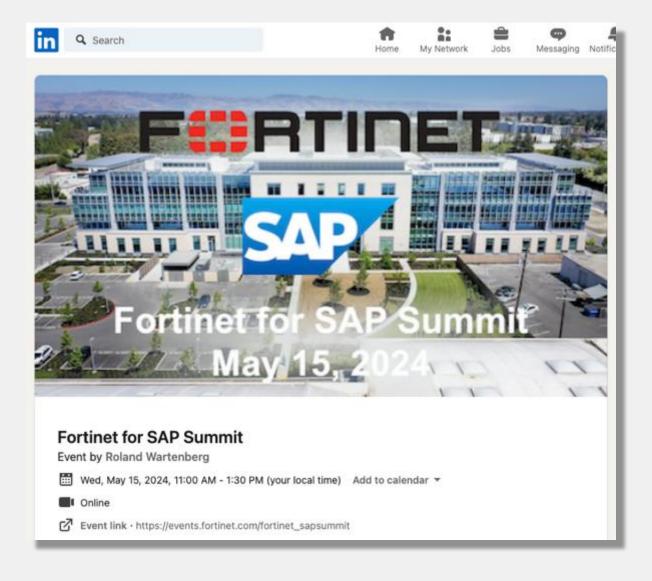


https://fortinetsecuressap.com/





https://events.fortinet.com/fortinet_sapsummit/waitlist









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