# Secure SAP on Azure with Fortinet

**Azure Migration - Security & Managed Services – Epi-Use Labs & Fortinet**

# Why should you be concerned ?

End users are responsible for the security of any data and applications they deployed on Azure, including SAP

## Shared responsibility model

| Responsibility | SaaS | PaaS | IaaS | On-prem | |
|---|---|---|---|---|---|
| Information and data | ■ | ■ | ■ | ■ | **RESPONSIBILITY ALWAYS RETAINED BY CUSTOMER** |
| Devices (Mobile and PCs) | ■ | ■ | ■ | ■ | |
| Accounts and identities | ■ | ■ | ■ | ■ | |
| Identity and directory infrastructure | ◣ | ◣ | ■ | ■ | **RESPONSIBILITY VARIES BY SERVICE TYPE** |
| Applications | | ◣ | ■ | ■ | |
| Network controls | | | ◣ | ■ | |
| Operating system | | | ■ | ■ | |
| Physical hosts | | | | ■ | **RESPONSIBILITY TRANSFERS TO CLOUD PROVIDER** |
| Physical network | | | | ■ | |
| Physical datacenter | | | | ■ | |

☐ Microsoft   ■ Customer

# Why discuss SAP S/4HANA ?

SAP will end support for older solutions by 2027

Most S/4HANA deployments will be cloud-based

SAP is a natural target for cyber-attack

Fortinet solutions for SAP can reduce risk of security exposure

Fortinet has tested & validated architectures for SAP S/4HANA

# Solution Summary

- Unified Approach - EPI-USE Labs, Fortinet and Microsoft based on in depth understanding of customers requirements.

- Use proprietary SAP-related intellectual property and cloud migration know-how
    - Extensive experience in servicing the needs of multinational, medium size and smaller corporations
    - Solution for managing and migrating SAP Estate or a portion of it, e.g. Human Capital Management (HCM) system to the Microsoft Azure with Fortinet's world leading Security framework.

- All-inclusive managed cloud solution for customers starting or have completed their journey to the public cloud.

Microsoft Partner

# Summary (continued)

Our solution is tailored around customers' general requirements, and ensuring that future innovation is made possible.
Some of the following benefits are envisaged included in our public cloud solution:

**Stability**

**Infrastructure Scalability**

**Managed Services**

**Modern Integration**

- Platform stability and visibility across all SAP systems;

- On-demand infrastructure scalability;

- Managed Services to ensure ongoing compliance across all systems;

- SAP HANA database conversion that will enable the SAP system upgradability to SAP's S/4HANA solution;

- Improved platform level automation capabilities through the combination of EPI-USE's proprietary software suite and porting the solution into Azure;

- Integration services covering best-of-breed middleware, services-orientated architecture and API management;

- Performance measured against one Service Level Agreement.

- World leading compliance and security through the Fortinet public cloud framework

# Benefits of running SAP systems in Azure with EPI-USE and Fortinet

By running the SAP systems in Azure, Customers can leverage their existing investment in Microsoft and Fortinet technologies especially their identity, authentication and modern workplace tools.  The EPI-USE solutions advantage is that we can optimise your architecture and secure data when moving workloads in Azure, using our Cloud Lift for Azure approach.

**Key benefits include:**

**Time savings:** Reduce the time taken for SAP system copy process and introduce more flexible system refresh cycles. System provisioning and change management is also facilitated through our integrated service desk.

**Cost reduction:** Reduce the infrastructure required for non-production systems and have additionally flexibility for testing and training systems.

**Increased security:** Scramble data on non-production systems and deploy to a security-by-design architecture on Azure. This is in addition to Azure's more than 25 industry compliance and trust certifications as well as the industry leading SAP framework from Fortinet

**Centralised management:** Azure will enable the entire software stack including operating system, databases, applications, networking, security - allowing easier root cause analysis and remediation using our certified cloud engineering team.

**Security Value Proposition:** Fortinet secures the Intelligent Enterprise running SAP – by protecting all SAP data generated by edge devices, endpoint systems, users, AI, applications, databases, 3rd party systems in multi-cloud environments and on-premises.

# Why Fortinet with SAP?

Fortinet provides a consistent security framework for SAP across multiple locations and regions worldwide
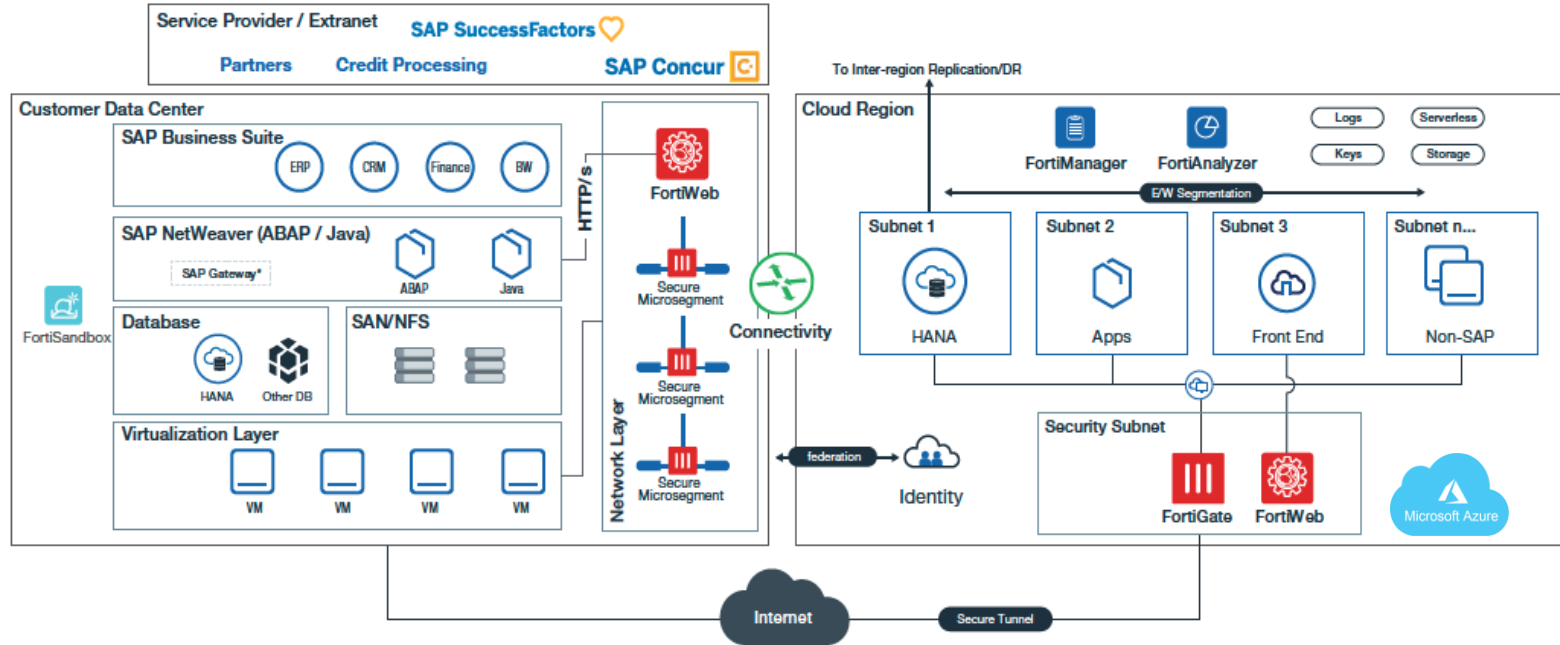
Fortinet increases SAP data security

Fortinet delivers scale, performance and resilience for SAP

Fortinet provides secure, optimized connectivity to SAP systems and beyond

Fortinet decreases S/4 HANA deployment time

# SAP Infrastructure Security



This model aligns with version 2.0 of the SAP Security Baseline Template for segmenting SAP application zones.

The Fortinet Security Fabric unifies SAP system platforms and edges in a single security context by generating real-time threat intelligence shared across the entire SAP security boundary

# Fortinet Reference Architecture for SAP S/4HANA on Azure
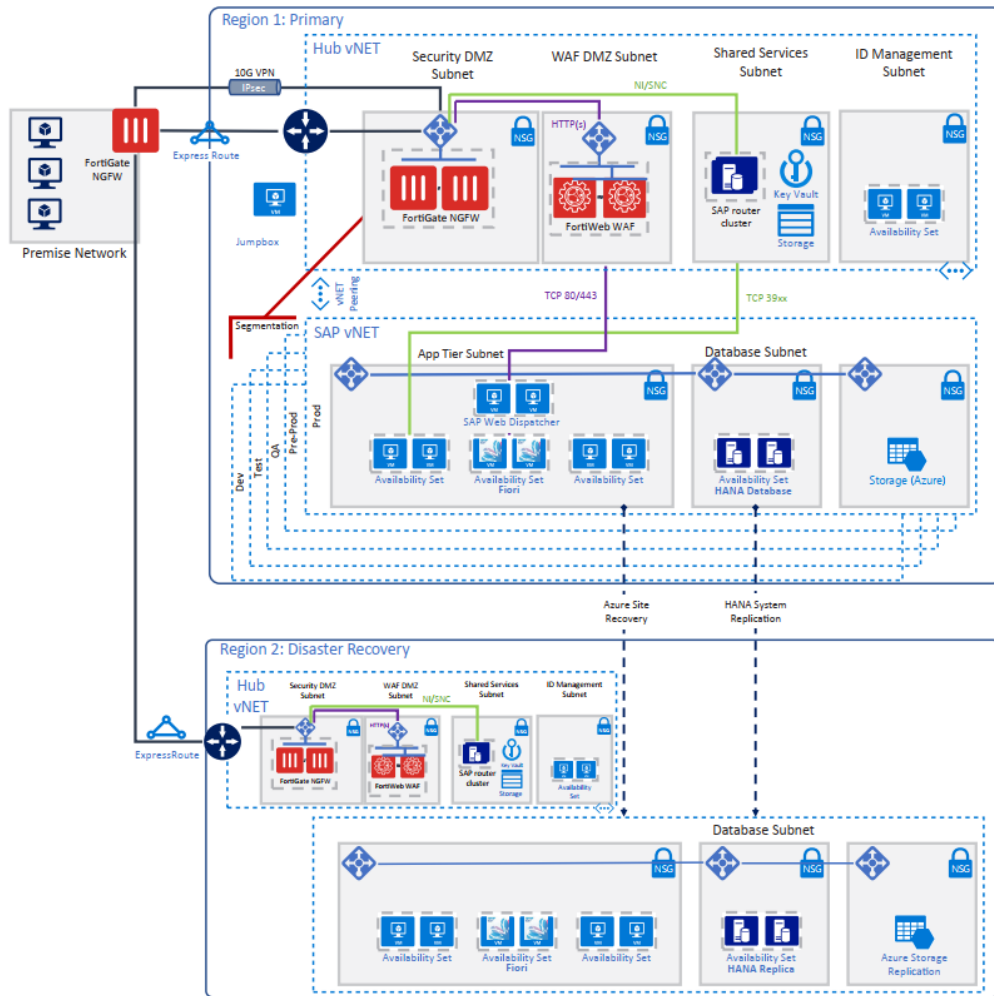
# Epi-Use Labs Managed Services – AMS, Azure Managed Services Catalogue
## [24 / 7 global support (SLA)]

**Service Management (AMS)**

Incidents

New business request

Problem management

Service level agreement

Configuration management

Maintain global template design principles

Provide supporting documentation

Health checks, audit, governance and compliance

Client Central ticket management, trends and root cause analysis

Product related escalations to SAP other 3rd parties

Continuous maintenance & housekeeping

**Monitoring Services Scope (Cloud & Hosting)**

Azure Monitor access (read-only)

Monitoring IaaS (24/7)

Monitoring OS (24/7)

Automated email alert for daily usage overrun

Automated email alert for Azure service issue

**Core Services Scope (Cloud & Hosting)**

Azure Subscription creation

Azure Subscription Administrator access (Limited)

Automated daily email on Azure best practices

Automated weekly email showing usage

Automated monthly email showing usage and billing

Automated monthly invoice for Azure subscription usage

Automated monthly invoice for Azure Managed Service

Monthly recommendations on Azure subscription optimisation

**Patching Services Scope (Cloud & Hosting)**

Windows patching with standard maintenance window

Linux patching with standard maintenance window

Windows patching with custom maintenance window

Linux patching with custom maintenance window

**Networking (Cloud & Hosting)**

Azure-side ExpressRoute configuration

VPN (Site to Site) configuration

VPN (Point to Site) configuration

**Anti-Virus Services (Cloud & Hosting)**

Anti-virus and malware scanning for Windows

Anti-virus and malware scanning for Linux

Standard scan schedule and policies

Custom scan schedule and policies

VM/File level restores as a result of a virus outbreak (Azure Backup)

**Managed Azure Backup (Cloud & Hosting)**

Backup service with standard daily schedule

Backup retention with standard 30-day policy

Backup service with custom schedule

Backup retention with custom policy

Request recovery for VM and files

Modify backup configuration

Resolution time for backup settings change (12 Hours)

Ticket response for VM and files restoration (12 Hours)

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# (continued): Managed Services – Basis Catalogue

## Daily Checks and Housekeeping

Monitor process overview (SM50)

Monitor overall system process overview (SM66)

Monitor application server's status (SM51)

Monitor for any pending locks (SM12)

Monitor for Dumps in the system (ST22)

Monitor System log for any errors (SM21)

Monitor for excessive swapping (ST02)

Monitor for critical job status e.g. backup, update stats

Monitor for long running/failed jobs status (SM37)

Monitor database alert logs and performance (ST04)

Monitor spool job status (SP01)

Monitor for Database locks (DB01)

Interface monitoring (in/outbound queues on all systems)

Resource Monitoring (CPU, Page, MEM, Filesystem)

Maintain logon groups

SAP Change Management (Transport Management)

Implement recommendations by RTCCTOOL

Implement recommendations by RSECNOTE

Run TemSe consistency check

Optimize SAP profile parameters

Apply basis corrections supplied by SAP

## SAP Basis Administration scope

SAP Monitoring

SAP Alerting

SAP Daily Checks and Housekeeping

SAP Backups (including DB)

SAP Database Administration

SAP Patch Management

SAP Performance Tuning

SAP Client Administration

SAP Transport Management

SAP System Refreshes included

SAP Authorizations & Roles

SAP Basis System Security

SAP Capacity Planning

SAP Database replication

## Disaster Recovery

Compile end to end Disaster Recovery test plan

Perform Disaster Recovery test

Execute Disaster Recovery process

## SAP Monitoring & Alerting

System outage

System unresponsive

System long running jobs

High CPU usage period

Dialog response time high

## Database scope

Database monitoring and daily checks

Database backup and recovery

Database security

Database administration

Capacity planning

Database patching

## SAP Upgrade Services

Upgrade Operating System version

Upgrade Database version

Upgrade NetWeaver stack version

SAP major release technical upgrades

## Operating System scope

Monitoring the Operating System

Improving system performance

Operating System administration

OS Capacity planning

Operating System Patching

Operating System Anti-Virus

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Should EPI-USE be successful in this engagement, 1% of net revenue derived therefrom will be channeled towards ERP projects in Africa. As customer you would be presented with a range of projects to choose from, and ongoing evaluation and monitoring reports will be provided regularly. Site visits would be welcomed, and customers would have the opportunity to brand the project, if so desired.
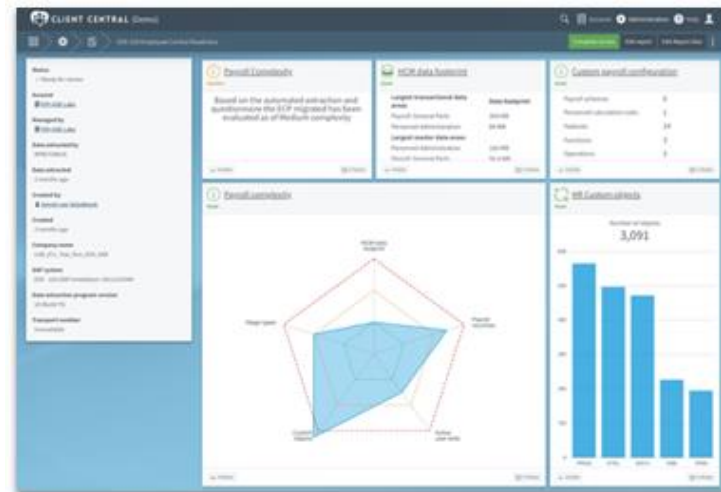
ERP™

ELEPHANTS | RHINOS | PEOPLE

WE BELIEVE THAT EMPOWERING COMMUNITIES IN RURAL AFRICA IS ESSENTIAL TO THE PRESERVATION OF ELEPHANTS AND RHINOS.

# SAP Cloud Lift for Azure

EPI-USE has worked extensively with Microsoft and has an architecture and approach vetted by Microsoft's cloud architecture team. The Cloud Lift for Azure offering was specifically designed to help customer transform their on-premise SAP landscapes to Azure.

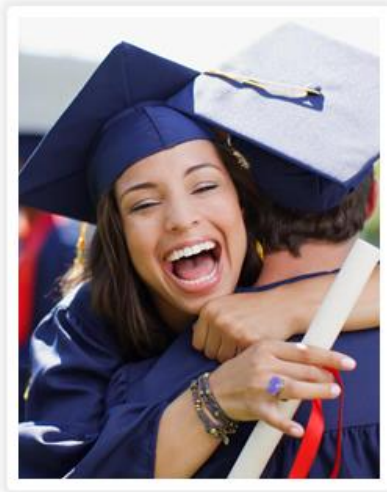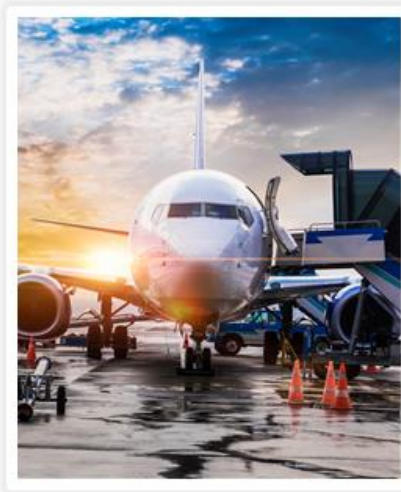More information can be found [here](#).

# Appendix B: Success Stories

This Appendix includes selected relevant Success Stories of how we have helped our clients transform their landscapes:

**Purdue University**

**Menzies Aviation**

**The Isle of Wight Council**

# Purdue University: transforming the future with S/4HANA

- A leading US university with over 30,000 employees was upgraded to S/4HANA as part of the Transform Purdue initiative
- Purdue entrusted the migration, hosting and management of all its SAP systems to EPI-USE
- We performed a rapid two-week cloud-based migration and conversion to S/4HANA
- Data Sync Manager™ was used to slice their legacy ECC system and create lean, secure non-productive landscapes

> *Moving to SAP S/4HANA allowed us to modernize our business processes, resulting in year-over-year cost savings while leveraging our SAP investment. Couple this with EPI-USE's extensive reputation for transforming how higher education does business, and we had a winning combination.*
>
> Victoria Farnsworth, Executive Director, IT Enterprise, Purdue University

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value through innovation

Microsoft Azure

F⊡RTINET®

Microsoft Partner

# Menzies Aviation:
# payroll hosting on behalf of SAP

- SAP selected EPI-USE as a partner for SAP SuccessFactors Managed Payroll. Under this agreement, SAP subcontracts EPI-USE to deliver all hosting and managed services for the SAP's Managed Payroll product worldwide.

- This partner selection process was rigorous, and SAP did a tremendous amount of due diligence before awarding us this partnership to ensure that their customers' SAP payroll systems will perform according to SAP's contracted rigorous Service Level Agreements and quality standards.

- EPI-USE was contracted by SAP and Menzies to host and manage the SAP payroll landscape in the cloud.

- This included an SAP enterprise carve-out of the Menzies Aviation payroll from the parent company. The newly provisioned system, SAP ECC EHP7, was made up of a Development, Test and Production system.

- Furthermore, a new Solution Manager was provisioned along with PI and Adobe document server. On cutover and go-live, EPI-USE continued providing services for ongoing managed private Cloud Hosting and SAP Basis Managed Services support.

# The Isle of Wight Council:
# smooth migration to the EPI-USE Labs cloud

- Using Data Sync Manager™ suite, rapid migration of SAP environment to cost-effective cloud infrastructure, with ongoing hosting and Managed Services
- Seamless transition and successful migration
- Re-platforming of systems to newer operating system and database version
- Future-proofing of SAP solution for future HRSPs
- Refreshed landscape
- Improved resilience; better backup tools, ability to recover from snapshots
- On-boarding of EPI-USE Cloud and Basis Managed services for SAP landscapes

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> *I would genuinely say there is a large percentage of the users that didn't know it happened. So it was the ideal project, with an improvement of performance and little to no interruption to access, because the migration was that smooth.*
>
> Gavin Muncaster, Strategic Manager of ICT & Digital Services, Isle of Wight Council
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# Thank you

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