SUCCESSFUL MIGRATION OF SAP ERP 6.0 EHP7 TO AWS FOR AHMAD A. ABED HOLDING

1. Overview

Ahmad A. Abed Holding, a diversified enterprise with key SAP interfaces like Bartender, CRM, and Webtel, faced persistent infrastructure bottlenecks with their on-premises landscape. Their SAP ERP 6.0 EHP 7 was running on Microsoft SQL Server 2012 R2 and Windows Server 2012, distributed across separate physical machines with limited storage configuration, causing frequent performance degradation.

Our team successfully migrated their entire SAP landscape to AWS Cloud, transforming their infrastructure from a fragmented, IOPS-starved setup to a highly available, cost-optimised, and secure cloud environment using AWS best practices.

2. Key Migration Approach

Source Environment (Before Migration)

- SAP ERP 6.0 EHP 7 on Windows Server 2012

- Microsoft SQL Server 2012 R2

- Separate servers for SAP and DB with only one additional disk beyond C:\

- No high-availability, backup automation, or network security segmentation

- SAPRouter configured with raw public IP access

Target Environment (AWS)

- Migrated Production system using AWS Migration Services (MGN) for lift-and-shift

- Built Development (DEV) and Quality (QAS) systems using SWPM and database backup and restore

- Windows Server 2012 R2 + SQL Server 2012 R2 retained due to licensing constraints

- Hosted all SAP workloads on AWS Dedicated Hosts (m6i) to leverage existing Microsoft and SQL Server licensing

- Adopted 3-Year Saving Plans for Dedicated Hosts to optimize long-term TCO

3. Storage & Performance Optimization

For DEV/QAS:

- 6 50 GB disks for the SQL database

- 1 separate disk for SQL logs

- 1 disk for SAP installation

- Swap configured as RAM 2

For Production:

- EBS-optimized volumes with provisioned IOPS

- Dedicated disk for DB backups (200 GB)

4. Backup & Disaster Recovery (DR)

- Daily full DB backups are moved to S3 using a mounted S3 drive on Windows.

- Log backup frequency:

- Production: every 2 hours

- Non-Production: every 4 hours

- Separate S3 buckets for DEV, QAS, and PROD backups

- DR Systems deployed in the UAE region using Elastic Disaster Recovery (EDR)

- DR mock test performed every 6 months

5. Network Security & Access Management

- Created separate subnets for DEV, QAS, and PROD

- Deployed SAPRouter on EC2, mapped via CNAME DNS instead of direct IP

- ALB (Application Load Balancer) configured:

- Public port: 3299 (SAPRouter)

- Forwarded only essential ports (32$$, 80, 80$$, etc.)

- Blocked all direct public/vendor access to SAP systems

- IAM roles, security groups, and firewall rules are strictly enforced

- Third-party interfaces accessed only via Load Balancer paths

6. Security & IAM Configuration

- Deployed strict AWS IAM Policies per the least-privilege model

- Enabled CloudTrail, Config, and GuardDuty

- Encrypted all volumes using KMS

- Multi-AZ architecture ensures resilience for production

7. Business Benefits

Area	Before Migration	After Migration
Performance	Poor due to a single disk	EBS-optimised with multiple volumes
Backup Strategy	Manual	Automated to S3 with rotation
DR	None	Implemented in the UAE with regular mock tests
Licensing	Underutilized	Maximised via Dedicated Host (m6i) + SAVING PLAN
Security	Exposed IPs	Load Balancer + CNAME + Port Filtering
Cost Optimization	High CapEx	Reduced TCO with 3-Year Saving Plans

8. Outcome

By migrating to AWS, Ahmad A. Abed Holding transformed their SAP infrastructure into a robust, modern, and cost-effective environment. They now benefit from:

- High performance with optimal disk layouts

- Enhanced security and controlled access

- Automated and reliable backups

- Reduced operational overhead and downtime risk

- Significantly lower Total Cost of Ownership (TCO)

9. Final Thoughts

This project is a testament to how strategic cloud migration, when paired with AWS-native services and SAP best practices, can turn around aging, underperforming IT infrastructure. With Ahmad A. Abed Holdings' ERP system now future-ready, they are well-positioned to scale, integrate further third-party apps securely, and innovate with confidence.

Full Whitepaper

A detailed whitepaper on this migration journey, including architecture diagrams, DR strategy, cost breakdown, and AWS service usage, is available upon request.