

Migration of SAP Applications to 'AWS' for a Major Auto Manufacturer from Japan



About The Customer

A leading global automaker was looking at increasing business effectiveness leveraging SAP advanced ERP enabling digital transformation by using AWS cloud. The on-prem hardware running the SAP application was going out of support. This required them to migrate, modernize, and transform their business-critical financial SAP applications.

Client Background and Challenges

The client is a leading auto manufacturer from Japan, Americas and the world's largest electric vehicle (EV) manufacturer. They wanted to transform SAP landscape moving to AWS as part of cloud first strategy.

Considering the on-prem hardware was running out of support, the challenge was to have the experienced team to migrate the system to AWS, test, inter-connect with external systems. The AWS infra to be configured as per the best practices and recommendations by SAP and AWS.

Scope of the Work

- ▶ Migrate integrated SAP ECC SOH solution that currently runs in their own datacenter to AWS cloud
- ▶ Migration of satellite systems of SAP ECC workloads, namely archiving, EIPP and Vertex servers / databases
- ▶ Re-route all existing native FTPs interfaces between mainframe and SAP ECC to go through CLEO cloud file-share
- ▶ Build a scalable solution on SAP S/4HANA Digital Core on AWS cloud platform

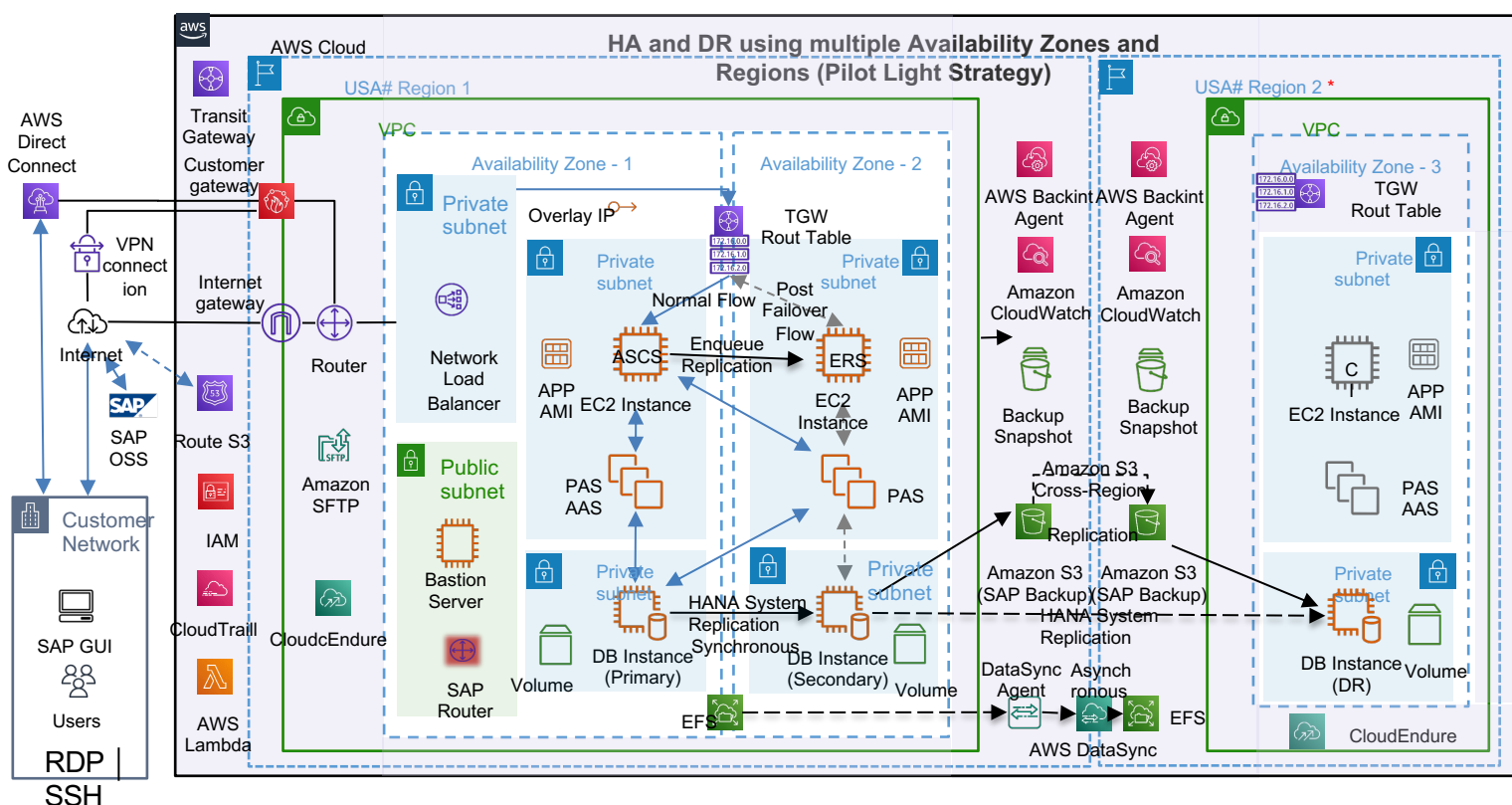
Our Approach and Solution

- ▶ SAP certified, memory optimized EC2 instances host the SAP application
- ▶ Multi AZ deployment for high availability of SAP application
- ▶ SAP router and NLB handles routing the requests to the right application server
- ▶ **SAP homogeneous migration using HANA system replication (HSR)**
- ▶ HANA DB hosted on multi-AZ mode with synchronous replication
- ▶ Direct connectivity with the on-prem application
- ▶ Transit gateway enables the routing for intra and inter-communication simple and easy
- ▶ GP3 EBS volumes used for file systems and EFS is used for SAP transport shares
- ▶ AWS NLB network load balancers configured to connect SAP GUI logins
- ▶ NACLs and Security groups ports implemented to secure SAP apps and DB
- ▶ **Amazon CloudWatch** is the monitoring solution for all AWS resources such as Amazon EC2 instances and AWS NLB
- ▶ **AWS CloudTrail** used for governance, compliance, operational auditing, risk auditing, monitoring AWS API activity and setting the alarm to trigger a notification

AWS Services consumed, deployed as part of solution

- ▶ EC2
- ▶ EFS
- ▶ VPC
- ▶ CloudTrail
- ▶ AWS Backup
- ▶ CloudFormation
- ▶ RDS
- ▶ S3
- ▶ NLB
- ▶ SSM
- ▶ Endpoints
- ▶ SFTP
- ▶ EBS
- ▶ Route 53
- ▶ Cloud Watch
- ▶ IAM
- ▶ Service Catalog

Infra Architecture



Note: Per customer's allowed products list, we propose to use 'SUSE Linux Enterprise Server for SAP Applications 12 SP4' for OS; * USA Region#2 is not yet provisioned for customer

Business and Community Impact

- ▶ Migrated servers from on-premises data center to AWS cloud Increased security by segregating the non-production and production in separate AWS account.
- ▶ Primary and the disaster recovery environment in separate region provides resiliency against regional failures. Use of multiple availability zones provide zonal HA- single region, multi-AZ deployment.
- ▶ Achieved recovery point objective (RPO) of zero data loss and recovery time objective (RTO) of 4 hours using robust disaster recovery (DR) strategy.
- ▶ Use of IaC tools like AWS CloudFormation stacks for provisioning and scaling the workloads ensure provisioning efficiency and reduced error.

- ▶ Monitoring with AWS CloudWatch and the integration with the Service Now for incident management ensuring faster turnaround for critical issues.
- ▶ The operational efficiency has been increased with the automation of alerts, backup process and faster business recovery/restore in case of disaster.
- ▶ Availability SLA achieved using the infra-architecture.
- ▶ Reduced total cost of ownership (TCO), enhanced security, improved the overall response time, reduced turnaround time, and improved availability.
- ▶ Post successful migration, Tech Mahindra provided 24*7 AWS managed services support (MSP). Tech Mahindra provided continuous optimization of AWS resources.
- ▶ Service catalogue is used for configuration management to maintain the infra and application. This ensures central management and consistent governance.
- ▶ Migrated workloads from on premises data center to AWS cloud with reduced downtime.
- ▶ Higher resiliency with effective HA and DR. enhanced security, better cost, and performance efficiency with AWS.

About Tech Mahindra

Tech Mahindra is an AWS Premier consulting partner and managed service provider. We help customers to secure their digital transformation journey by, addressing all their cloud security needs by protecting their cloud environment, providing unified visibility, and ensuring compliance.

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