

AWS CLOUD FOR Z/OS PROFESSIONALS

COURSE CURRICULUM | COURSE CODE C0XX

11	20 hrs	EVILT	z/OS & Mainframe basics
MODULES	TOTAL INSTRUCTION	DELIVERY METHOD	PREREQUISITES

Z/OS-TO-AWS CURRICULUM			MODULES 1 - 4
MODULE 1	AWS Cloud & Architecture	- AWS Global Infrastructure: Regions, Availability Zones, Edge Locations - Cloud characteristics: Scalability, Elasticity, High Availability, Fault Tolerance - AWS Shared Responsibility Model - AWS Well-Architected Framework - On-premises vs Cloud; z/OS to AWS service mapping - AWS Organizations, Control Tower and CloudFormation overview	
MODULE 2	IAM & Enterprise Security	- IAM users, groups, roles and policies - Authentication, authorization, MFA and least privilege - IAM roles for EC2 and Lambda; resource-based policies - KMS, Secrets Manager and Parameter Store - CloudTrail and security auditing - LAB: IAM role, policy and secure application access	
MODULE 3	Compute & Application Hosting	- EC2: Instance types, AMIs, EBS, key pairs and lifecycle - EC2 networking, security groups and user data - Auto Scaling and application availability - Elastic Beanstalk: Application, environment and deployment - Containers: Docker, ECR and ECS overview - Lambda: Serverless compute and execution model - EC2 vs Elastic Beanstalk vs ECS vs Lambda	
MODULE 4	Networking & Load Balancing	- VPC, CIDR and subnet design - Public vs private subnets and route tables - Internet Gateway and NAT Gateway - Security Groups vs NACLs - Application Load Balancer and health checks - Route 53 and DNS fundamentals - VPC Endpoints and private AWS service access - LAB: Multi-tier VPC with ALB, EC2 and private subnet	

Z/OS-TO-AWS CURRICULUM		MODULES 5 - 8
MODULE 5	Storage	• S3: Buckets, objects, keys and storage classes • S3 versioning, lifecycle, encryption and bucket policies • EBS: Block storage, volumes and snapshots • EFS: Shared file storage • S3 Glacier and archival strategies • Mainframe storage mapping: Datasets, files, shared storage and archives
MODULE 6	Databases & Caching	• RDS fundamentals and supported relational databases • RDS connectivity, security, backups and Multi-AZ • Read Replicas and database scalability • Amazon Aurora overview • DynamoDB: NoSQL and key-value workloads • ElastiCache: Caching and performance • Db2/VSAM to AWS database and storage mapping
MODULE 7	Integration, Messaging & Serverless	• API Gateway and REST API concepts • Lambda integration with API Gateway • SQS: Queues, decoupling and asynchronous processing • SNS: Publish/Subscribe and notifications • EventBridge: Event-driven architecture • Step Functions: Workflow orchestration • Mainframe mapping: MQ, CICS transactions, batch and event processing • LAB: API Gateway → Lambda → SQS workflow
MODULE 8	Monitoring & Operations	• CloudWatch metrics, logs and log groups • CloudWatch alarms and dashboards • CloudWatch Logs Insights and application troubleshooting • CloudTrail, audit trails and API activity • Systems Manager: Session Manager and automation • AWS X-Ray and distributed tracing overview

Z/OS-TO-AWS CURRICULUM		MODULES 9 - 11
MODULE 9	DevOps & CI/CD	• Git fundamentals: Repository, branch, commit and pull request • CI/CD concepts and deployment pipeline • CodeBuild: Build and test automation • CodePipeline: Continuous delivery • CodeDeploy and deployment strategies • Elastic Beanstalk / ECS deployment through CI/CD • Infrastructure as Code: CloudFormation and CDK overview
MODULE 10	Mainframe Modernization	• Modernization strategies: Rehost, Replatform, Refactor, Repurchase, Retain, Retire • COBOL, JCL, CICS, VSAM, Db2 and IMS modernization considerations • AWS Transform for mainframe application transformation • Assessment, dependency analysis, data migration and testing • Migration architecture, cutover and post-migration operations • Case study: Mainframe workload to AWS architecture
MODULE 11	Capstone Project	• Design enterprise architecture for Employee Salary Processing System • Implement IAM, VPC, security groups and networking • Deploy application using Elastic Beanstalk/ECS • Integrate RDS, S3, SQS/Lambda and monitoring • Review architecture, security, scalability and deployment flow