Course Description
This two-day workshop covers the foundational elements of Amazon Web Services (AWS). An interactive workshop with real-time demos, it is designed to serve the needs of engineers who want to understand how AWS can be used to solve real-world problems using Cloud Architecture best practices.

Learning Objectives
After this course you should be able to:
+ Describe the foundational elements of AWS
+ Understand the core architectural practices of AWS IaaS and PaaS services
+ Articulate the benefits of AWS and its services to real-world use cases

Who Should Attend
+ Data Center Architects
+ Cloud Solution Architects
+ Cloud Administrators
+ System Administrators
+ Security Team Personnel
+ Executive Sponsors

Prerequisites
+ Understanding of Server System Design and Architecture
+ Familiarity with Server Virtualization
+ Understanding Application Architecture
+ Familiarity with Data Center Networking Technologies and Storage Concepts
+ Familiarity with Cloud Computing Concepts
Module 1: Cloud Architecture Design Principles and Best Practices
- Business Challenges
- AWS Well Architected Framework
- Service Model Use Cases – IaaS, PaaS, SaaS

Module 2: AWS Foundation
- Components of AWS
- Regions + Availability Zones
- Amazon Resource Names (ARN)
- AWS Orgs and Account Structures
- Support Structures
- Tagging Strategies

Module 3: Network
- Getting to the Cloud with INET VPNs and DirectConnect
- Intra Cloud-VPC fundamentals
- VPC Peering and VPN
- Securing VPC with NACLs/SGs and Appliances
- Load Balancing options-NLB +ALB

Module 4: Compute
- EC2 VMs
- AMI Best Practices
- Elastic Beanstalk and Lambda
- Container Options
- AutoScaling Groups

Module 5: Storage
- Choosing the Right Storage for the Application
- S3, Glacier + EFS
- VM Storage with EBS
- Moving Large Datasets into the Cloud

Module 6: Security
- Cloud Shared Responsibility Model
- Compliance Concerns
- NACLs and Security Groups
- Encryption
- GuardDuty
- Certificate Manager

Module 7: Identity
- Directory Services in AWS
- Identity and Access Management (IAM)
- Federation
- MFA

Module 8: Business Continuity
- Prepare for Failure
- AWS Backup Options
- Be Prepared and Test – Ongoing failure injection

Module 9: Automation
- The Need and Benefits of Automation
- AWS CLI and PowerShell
- IaC with CloudFormation and Terraform

Module 10: Migration
- Greenfield, Lift and Shift and Refactor
- Migration Planning
- Carrying out the Migration
- Server + DB Migration Service

Module 11: Database Options
- Advantages of DBaaS vs DIY on EC2
- RDS + Aurora
- NoSQL with DynamoDB
- Sizing and Scaling your DBs
- HA and Global Redundancy

Module 12: Day 2 Ops-Monitoring and Alerting
- Native AWS Tools and 3rd Party Integrations
- The Basics: CloudTrail and CloudWatch
- AWS Config

Module 13: AWS Costing
- How to Manage and Monitor Cost
- AWS Native and 3rd Party Tools
- Understanding AWS Service Pricing
- Right Sizing and Monitoring

To register for an ePlus cloud training course, contact us today.

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