

Advanced Architecting on AWS

Duration: 3 Days **Course Code: GK1980** **Version: 3.11.7**

Overview:

In this course, each module presents a scenario with an architectural challenge to be solved.

You will examine available AWS services and features as solutions to the problem. You will gain insights by participating in problem-based discussions and learning about the AWS services that you could apply to meet the challenges. Over 3 days, the course goes beyond the basics of a cloud infrastructure and covers topics to meet a variety of needs for AWS customers. Course modules focus on managing multiple AWS accounts, hybrid connectivity and devices, networking with a focus on AWS Transit Gateway connectivity, container services, automation tools for continuous integration/continuous delivery (CI/CD), security and distributed denial of service (DDoS) protection, data lakes and data stores, edge services, migration options, and managing costs. The course concludes by presenting you with scenarios and challenging you to identify the best solutions.

Course level: Advanced

Duration: 3 days

Updated August 2026

Target Audience:

This course is intended for:

- Cloud architects
- Solutions architects
- Anyone who designs solutions for cloud infrastructures

Objectives:

- **In this course, you will learn to:**
- Describe best cloud design practices through review of poll questions and graphic diagrams
- Identify how to implement centralized permissions management and reduce risk while determining best practices based on use cases
- Explore AWS hybrid network designs to address traffic increases and scalability while ensuring security compliance
- Explore solutions available to design a hybrid infrastructure, including access to 5G networks, to optimize service and reduce latency for on-premises applications
- Identify and discuss container solutions and management options
- Examine how AWS developer tools optimize a CI/CD pipeline with updates based on various deployment strategies
- Identify the anomaly detection and protection services that AWS offers to defend against DDoS attacks
- Identify ways to secure data in transit, at rest, and in use with AWS encryption services
- Determine the best data management solution based on frequency of access, and data query and analysis needs
- Identify solutions to optimize edge services to eliminate latency, reduce inefficiencies, and mitigate risks
- Review AWS cost management tools to help reduce costs while optimizing performance
- Review AWS migration tools and services to implement effective cloud operation models based on use cases and business needs
- Apply technical knowledge and experience gained from this course within a lab environment

Prerequisites:

We recommend that attendees of this course have:

- at least 1 year of experience operating AWS workloads

Testing and Certification

None

Follow-on-Courses:

- GK1980 - Advanced Architecting on AWS
 - GK4532 - Migrating to AWS
 - GK821495 - AWS Well-Architected Best Practices
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Content:

Day 1

Module 1: Reviewing Architecting Concepts

- Hands-On Lab: Securing Amazon S3 VPC endpoint communications
- Architectural review
- Group Exercise: Review Architecting on AWS core best practices

Module 2: Single to Multiple Accounts

- Multi-account strategies
- AWS IAM Identity Center
- AWS Control Tower

Module 3: Hybrid Connectivity

- AWS Client VPN
- AWS Site-to-Site VPN
- AWS Direct Connect
- Amazon Route 53 Resolver

Module 4: Specialized Infrastructure

- AWS Storage Gateway
- VMware Cloud on AWS
- AWS Outposts
- AWS Local Zones
- AWS Wavelength

Module 5: Connecting Networks

- Hands-On Lab: Configuring AWS Transit Gateway
- AWS Transit Gateway
- AWS Resource Access Manager
- AWS PrivateLink

Day 2

Module 6: Containers

- Hands-On Lab: Deploying an application with Amazon EKS on Fargate
- Containers
- Container hosting on AWS
- Amazon ECS
- Amazon EKS

Module 7: Continuous Integration/Continuous Delivery (CI/CD)

- CI/CD
- Code services
- Deployment models
- AWS CloudFormation StackSets

Module 8: High Availability and DDoS Protection

- AWS WAF
- AWS Shield Advanced
- AWS Firewall

Module 9: Securing Data

- Cryptography
- AWS KMS
- AWS CloudHSM
- AWS Secrets Manager

Module 10: Large-Scale Data Stores

- Hands-On Lab: Setting up a data lake with Lake Formation
- S3 data management
- Data lakes
- AWS Lake Formation

Day 3

Module 11: Migrating Workloads

- Hands-On Lab: Migrating an on-premises NFS share using AWS DataSync and Storage Gateway
- Migration process
- Migration tools
- Migrating databases

Module 12: Optimizing Cost

- Cloud cost management
- Cost management tools
- Cost optimization

Module 13: Architecting for the Edge

- Amazon CloudFront
- [Lambda@Edge](#)
- AWS Global Accelerator

Module 14: Review Projects

Use the Online Course Supplement (OCS) to review use cases, investigate data, and answer architecting design questions about Transit Gateway, hybrid connectivity, migration, and cost

- optimization

Additional Information:

Activities:

This course includes presentations, group discussions, use cases, videos, assessments, and hands-on labs.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

info@globalknowledge.co.uk

www.globalknowledge.com/en-gb/

Global Knowledge, Mulberry Business Park, Fishponds Road, Wokingham Berkshire RG41 2GY UK