Networking Essentials for Cloud Applications on AWS

AWS Classroom Training

Course description

The *Networking Essentials for Cloud Applications on AWS* course provides a comprehensive understanding of networking concepts and services within the Amazon Web Services (AWS) cloud environment. Designed for novice and experienced networking engineers, this course covers essential topics, best practices, and hands-on labs. Its purpose is to equip learners with the knowledge and skills that are required to design, configure, and optimize network infrastructure on AWS.

- Course level: Intermediate
- Duration: 1 day

Activities

This course includes presentations, demonstrations, knowledge checks, and three hands-on labs that revolve around a use case story

Course objectives

In this course, you will learn to:

- Design a networking infrastructure for a scalable production application, considering design trade-offs between different networking services.
- Configure networking services for a highly available, resilient, and scalable application.
- Implement the networking infrastructure according to evolving business requirements.
- Analyze and describe the stages of traffic flow through the networking infrastructure.
- Identify cost optimization strategies for networking services.
- Implement networking best practices to align towards AWS Well-Architected Framework.

Intended audience

This course is intended for:

- Newly Hired Cloud Engineers
- On-premises IT Engineers
- Cloud Architects
- Cloud Engineers
- Network Engineers

Prerequisites

We recommend that attendees of this course have:

- Basic knowledge of networking concepts
- Basic knowledge of AWS services

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- *AWS Technical Essentials* or *Cloud Practitioner Essentials*

Course outline

- Module 0: Course Introduction
    - Introductions
    - Course overview
    - Use case introduction
- Module 1: Networking on AWS
    - IP fundamentals
    - Amazon Virtual Private Cloud (Amazon VPC) fundamentals
    - Subnets
    - Amazon VPC IP Address Manager (IPAM)
    - Elastic Network Interfaces (ENI)
    - Elastic IP Addressing
    - Route table
    - Internet and NAT gateways
    - VPC traffic filtering fundamentals
    - Knowledge check
- Module 2: Load Balancing and Scaling on AWS
    - Elastic Load Balancing (ELB)
    - Demo: Load Balancer design patterns
    - Auto Scaling group (ASG) basics
    - Knowledge check
    - Use case part one
    - Hands-on-lab: Building a Multi-Availability Zone VPC Architecture
- Module 3: VPC Interconnectivity and Content Delivery
    - VPC endpoints
    - VPC peering
    - VPC transit gateway
    - Edge locations
    - Amazon CloudFront
    - AWS Global Accelerator
    - Knowledge check
    - Use case part two
    - Hands-on-lab: Accelerating Performance with Amazon CloudFront
- Module 4: High Availability with Amazon Route 53
    - Amazon Route 53 fundamentals
    - Amazon Route 53 hosted zones
    - Amazon Route 53 health checks
    - Amazon Rouge 53 routing policy
    - Amazon Route 53 Application Recovery Controller and routing controls
    - ELB zonal shift
    - Knowledge check

- Use case part three
- Hands-on-lab: Achieving Fault Tolerance and Global Traffic Optimization

- Module 5: Course Wrap-Up
  - Course reflection
  - Use case labs recap
  - Use case conclusion
  - Course feedback survey