

**Networking Essentials for Cloud Applications on AWS**

**Course Number:** AWS-188
**Duration:** 1 day

**Overview**

This Networking Essentials for Cloud Applications on AWS course provides a comprehensive understanding of networking concepts and services within the AWS cloud environment. Students of all skill levels and networking experience learn how to design, configure, and optimize network infrastructure on AWS.

Accelebrate is an AWS Training Partner (ATP), and this hands-on official AWS Classroom Training course is taught by an accredited Amazon Authorized Instructor (AAI).

**Prerequisites**

* Basic knowledge of networking concepts
* Basic knowledge of AWS services
* Taken the [AWS Technical Essentials course](file:////training/aws-technical-essentials) or the [Cloud Practitioner Essentials course](file:////training/aws-cloud-practitioner-essentials)

**Materials**

All AWS training students receive comprehensive courseware.

**Software Needed on Each Student PC**

A modern web browser and an Internet connection free of restrictive firewalls, so that the student can connect by SSH or Remote Desktop (RDP) into AWS virtual machines.

**Objectives**

* 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
* Implement networking best practices to align towards AWS Well-Architected Framework

**Outline**

* Course Introduction
	+ Course overview
	+ Use case introduction
* Networking on AWS
	+ IP addressing
	+ Amazon Virtual Private Cloud (Amazon VPC) fundamentals
	+ Subnets
	+ Amazon VPC IP Address Manager (IPAM)
	+ Elastic Network Interfaces
	+ Elastic IP addressing
	+ Route table
	+ Internet and NAT gateways
	+ Basic traffic filtering mechanisms for a VPC
	+ Knowledge check
* Load Balancing and Scaling on AWS
	+ Elastic Load Balancing (ELB)
	+ Cross-zone load balancing
	+ Auto Scaling group (ASG) basics
	+ Knowledge check
	+ Use case part one
	+ Hands-on lab: Building a Multi-Availability Zone VPC Architecture
* VPC Interconnectivity and Content Delivery
	+ VPC interconnectivity
	+ VPC peering
	+ VPC Transit Gateway
	+ VPC endpoints
	+ Edge locations
	+ AWS Global Accelerator
	+ Knowledge check
	+ Use case part two
	+ Hands-on lab: Accelerating Performance with Amazon CloudFront
* High Availability with Amazon Route 53
	+ Amazon Route 53
	+ Knowledge check
	+ Use case part three
	+ Hands-on lab: Achieving Fault Tolerance and Global Traffic Optimization
* Course Wrap-Up
	+ Course reflection
	+ Use case labs recap
	+ Use case conclusion