

# **AWS Certified Advanced Networking - Specialty**

## Module-1: AWS Networking Fundamentals

- Introduction to VPC
- Selecting Region for VPC
- Working with Default VPC
- Limits in AWS VPC

## Module-2: AWS VPC Subnets and Routing

- Understanding AWS VPC Router and VPC Route Table
- Reserved Addresses in an AWS VPC
- Dual-Homed Instances in an AWS VPC
- Introduction to Internet Gateway
- Creating Public and Private Subnets
- Public and Private IP addresses in AWS
- Elastic IP Address
- Elastic Network Interface

## Module-3: Improve Network Performance

- Enhanced Networking
- Elastic Fabric Adaptor
- AWS Placements groups to increase Performance

## Module-4: NAT in AWS

- NAT instances in AWS
- NAT Gateway in AWS
- NAT Gateway Rules and limitations

## Module-5: Connecting Multiple VPC's

- Introduction to VPC Peering
- VPC peering Design and use cases
- AWS VPC peering and Overlapping CIDR Ranges

## Module-6: VPC Security and Monitoring

- VPC Security Groups
- Network ACLs
- Virtual Private Gateways
- VPC Endpoints
- Gateway vs Interface Endpoints
- AWS Private links

- AWS WAF
- VPC Flow logs
- Analyzing Firewall rules using VPC Flow Logs
- AWS URL Restriction with Squid Proxy
- Deep Packet Inspection in an AWS VPC

#### Module -7: Elastic Load Balancers

- AWS Elastic Load Balancer (ELB) Introduction
- AWS Elastic Load Balancer (ELB) Listeners and Encryption
- AWS Application Load Balancer (ALB) Target Groups
- AWS ELB Host and Path Conditions
- AWS ELB Connection Draining
- AWS ELB and X-Forwarded
- VPC Ingress Routing
- Gateway Load Balancer
- Network Load balancers

#### Module-8: DNS in AWS

- AWS Route 53
- AWS Route 53 Domain Name Registration, Alias Record, and ELB Integration
- AWS Route 53 Routing Policies
- Working with Hosted Zones
- Private Hosted Zones
- Public Hosted Zones
- DNS Forwarding and Hybrid Architecture with AWS Route 53
- Using an AWS Route 53 Alias Record with CloudFront

#### Module-9: Content Delivery with CloudFront

- Introduction to AWS CloudFront
- Configure a CloudFront Distribution
- Securing CloudFront Traffic Using Encryption

#### Module-10: Hybrid Networking

- AWS Hybrid Cloud Computing Use Cases
- AWS Software VPN Introduction
- AWS Managed Hardware VPN Introduction
- AWS Managed Hardware Static VPN
- Introduction to BGP Concepts for AWS
- AWS Managed Hardware Dynamic BGP VPN
- BGP Routing over an AWS Managed VPN
- AWS Cloud Hub for Multi-Site VPN Connectivity
- Using Transit VPCs to Connect Many AWS VPCs

- AWS Direct Connect Introduction
- Designing AWS Direct Connect for High Availability
- AWS Direct Connect Installation and Architecture
- AWS Direct Connect Private Virtual Interfaces (Private VIF)
- AWS Direct Connect Public Virtual Interfaces
- AWS Direct Connect Partner Hosted Connections

#### Module-11: Disaster Recovery Solutions in AWS

- RPO and RTO
- AWS Backup and Recover Disaster Recovery (DR)
- AWS Pilot light Disaster Recovery (DR)
- AWS Warm Standby Disaster Recovery (DR)
- AWS Active/Active Disaster Recovery (DR)