

AWS Architecting: VPC, EC2 & CloudFormation

10 Days

DURATION

117

TOPICS

7

HANDS-ON LABS

LEARNING OBJECTIVES

- Explain networking fundamentals including IP addressing and routing
- Describe security threats and mechanisms such as firewalls and encryption
- Apply Linux commands, permissions and package management tasks
- Explain relational and NoSQL database concepts and SQL usage
- Identify AWS global infrastructure, IAM roles and access policies
- Build a VPC with subnets, routing tables and security groups
- Configure EC2 instances, storage options and Lambda functions
- Implement monitoring, auto scaling and CloudFormation stacks

117 Topics

DAY 1 Networking Fundamentals

TOPICS

- Topologies
- OSI Model
- TCP/IP Model
- Introduction Of IP Address Ipv4, Ipv6, Classes Of Ipv4
- Subnetting, Supernetting
- Routing Basics Static/Default/Dynamic Routing
- DNS

DAY 2 Fundamentals Of Security

TOPICS

- Security Awareness Explain Different Types Of Attacks Like (Phishing, Social Engineering, Malware, Physical Security)
- Explain Firewall And Types Of Firewalls
- IPS/IDS
- Standard Web Application Firewall
- Explain Site To Site VPN
- IPsec Protocol
- Encryption
- TCP Handshake
- Explain SSL/TLS Work

DAY 3 Introduction To Linux And Database

TOPICS

- History And Development Of Linux
- Explain Linux Kernel Work
- Shells, Basic Commands For (Eg, Create User, Group, Directory)
- File System Hierarchy, Text Editors (vi And nano)
- Permission eg (chmod)
- Package Management (apt, yum, dnf)
- Introduction Of Database
- Relational Database Concepts (Tables, Rows, Columns, Primary Key And Foreign Key)
- Explain Database Managements Systems (DBMS)
- Structured Query Language (SQL)

TOPICS (CONTINUED)

- NoSql Databases
- Data Warehousing
- Data Security
- Backup And Recovery

DAY 4 Introduction To Amazon Web Services

TOPICS

Lab

- History Of AWS
- Terminology And Concepts Related To AWS Products And Services
- AWS Global Infrastructure Benefits
- Regions And Availability Zones
- Basics Of CloudFront And Edge Locations
- Well Architected Framework
- Shared Responsibility Model
- Key Concepts Of AWS Security And AWS Identity And Access Management (IAM)
- IAM User
- Root User
- Permissions
- Policies
- Principal And Identities
- Cross Account Access

DAY 5 Introduction Of AWS Networking And Compute

TOPICS

Lab

- Amazon Virtual Private Cloud (Amazon VPC)
- Subnets
- Routing Tables
- Network Access Control Lists (Network ACLs)
- Security Groups
- Host-Based Firewalls
- Amazon VPC Flow Logs
- VPC Traffic Security
- AWS Compute Services
- Amazon Elastic Compute Cloud (Amazon Ec2)
- Ec2 Instance Storage
- Ec2 Pricing Options
- AWS Lambda

TOPICS

Lab

- AWS Storage Services
- Amazon Simple Storage Services (Amazon S3)
- Elastic Block Store (EBS)
- Shared File Systems (EFS, FSx)
- Data Migration Tools (AWS Storage Gateway, AWS Data Sync, AWS Transfer Family And Snow Family)
- Database Types
- Data Base Services
- Amazon Relational Database Services (Amazon RDS)
- Amazon DynamoDB
- Amazon Elastic Cache
- AWS DAX
- AWS Database Migration Tool
- AWS Schema Conversion Tool (SCT)

TOPICS

Lab

- What Is Monitoring And Why We Need Monitoring
- Monitoring Service CloudWatch
- Alarms And Events
- AWS Event Bridge
- Auto Scaling
- EC2 Auto Scaling
- Launch Template And Launch Configuration
- Elastic Load Balancing
- Types Of Load Balancer (ALB, NLB, GLB)
- Infrastructure As A Code
- CloudFormation
- Understand Stacks, Change sets, Drift Detection And Nested Stacks
- Elastic Beanstalk
- Cloud Development Kit (CDK)
- Solution Library
- AWS Systems Manager
- Amazon Code Whisperer

TOPICS

Lab

- Micro services
- Containers
- Elastic Container Registry (ECR)
- Elastic Container Service (ECS)
- Elastic Kubernetes Services (EKS)
- Hybrid Networking
- VPC Endpoints
- VPC Peering
- Transit Gateway
- Site To Site VPN
- Direct Connect
- Client VPN

TOPICS

Lab

- What Is Serverless
- Amazon API Gateway
- Types Of API Gateways
- Amazon Simple Queue Service (Amazon SQS)
- Amazon Simple Notification Service (Amazon SNS)
- Amazon Kinesis
- AWS Step Functions
- Edge Fundamentals
- Amazon Route 53
- Route 53 Routing Policies
- Amazon CloudFront
- DDOS Protection
- AWS Shield
- AWS WAF
- AWS Outposts

TOPICS

Lab

Disaster Planning · Disaster Strategy · AWS Backup

HANDS-ON LABS

Practise What You Learn

MODULE	ACTIVITY
Introduction To Amazon Web Services	Lab 1 - Explore and interact with the AWS Management Console and AWS Command Line Interface
Introduction Of AWS Networking And Compute	Lab 2 - Build your Amazon VPC infrastructure
Storage And Database	Lab 3 - Create a database layer in your Amazon VPC infrastructure
Monitoring, Scaling And Automation	Lab 4 - Configure high availability in your Amazon VPC
Containers And Hybrid Networking	Lab 5 - Build a Serverless Architecture
Serverless And Edge Services	Lab 6 - Configure an Amazon CloudFront distribution with an Amazon S3 origin
Backup And Recovery	Lab 7 - Capstone – Build an AWS multi-tier architecture

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

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