Day 1 - Networking Fundamentals

- Topologies
- OSI Model
- TCP/IP Model
- Introduction Of IP Address Ipv4, Ipc6, Classes Of Ipv4
- Subnetting, Supernetting
- Routing Basics Static/Default/Dynamic Routing
- DNS

Day 2 - Fundamentals Of Security

- 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

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

Day 4 – Introduction To Amazon Web Services

- 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

- **Lab 1 - Explore and interact with the AWS Management Console and AWS Command Line Interface**

Day 5 – Introduction Of AWS Networking And Compute

- 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
- **Lab 2 - Build your Amazon VPC infrastructure**

Day 6 – Storage And Database

- AWS Storage Services
- Amazon Simple Storage Services (Amazon S3)
- Elastic Block Store (EBS)

- Shared File Systems (EFs, Fsx)
- Data Migrration 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)
- **Lab 3 - Create a database layer in your Amazon VPC infrastructure**

Day 7 – Monitoring , Scaling And Automation

- 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 Dedication And Nested Stacks
- Elastic Beanstalk
- Cloud Development Kit (CDK)
- Solution Library
- AWS Systems Manager
- Amazon Code Whisperer
- **Lab 4 - Configure high availability in your Amazon VPC**

Day 8 – Containers And Hybrid Networking

- 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
- **Lab 5 - Build a Serverless Architecture**

Day 9 – Serverless And Edge Services

- 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 Polices
- Amazon ClouFront
- DDOS Protection
- AWS Shield
- AWS WAF
- AWS Outposts
- **Lab 6 - Configure an Amazon CloudFront distribution with an Amazon S3 origin**

Day 10 – Backup And Recovery

- Disaster Planning
- Disaster Strategy
- AWS Backup
- **Lab 7 - Capstone – Build an AWS multi-tier architecture**