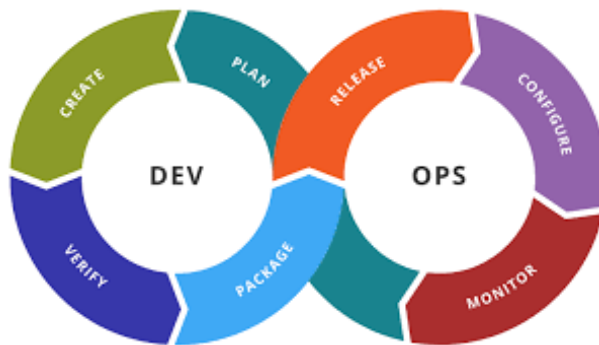


Course Curriculum

Kiran

DevOps with Amazon Web Services



Topics – Hourly Breakup

Concept	Hours
Course Overview, Setup	1
IT Architecture Overview.	1
Networking & DNS	2
AWS Overview	1
AWS IAM	1
AWS – ec2, VPC, Load Balancing	4
Linux	2
Source Control – Git & GitHub	2
Terraform	3
Ansible	3
CI-CD	5
Docker	3
Kubernetes	3
Monitoring & AWS Cloudwatch	2.5
Project - HA Setup	2.5
<u>Total</u>	<u>36</u>

Detailed Content

Day 1

- Introduction to the Course.
- Setup - AWS Account Creation, Software Installation up.
- IT Architecture Overview.
 - DataCenters, Networks & Virtualization.
 - 3 Tier & n-Tier Architecture.
 - High Availability, Load balancing, DNS
- AWS Overview
 - AWS Global Infrastructure.
 - AWS Services, Accounts, Organizations
 - AWS Physical & Networking Layer.
 - Shared Security Responsibility Model.

Day 2

- Identity & Access Management
 - Access Control Management, RBAC.
 - AWS IAM overview.
 - Understanding Permissions and Policies in AWS.
 - Users, Groups and Roles.
- Networking
 - VPC overview.
 - Choosing the right CIDR & Subnetting.
 - Hands-on with VPC
 - Routing, Gateways - Internet, NAT
 - Security Groups & NACL

Day 3

- Compute
 - EC2 Overview - InstanceTypes, Categories, Pricing.
 - EC2 Creation

- Auto Scaling, Load Balancing.

Day 4

- Linux
 - File system, administration.
 - Package, Services and Process Management
 - Scripting

Day5

- Version Control
 - Git installation & Configuration
 - commits, Branches, Merging.
- Github, aws Code commit
- Terraform
 - Installation
 - Configuration
 - Apply, Destroy, upgrade.
 - Remote State

Day 6

- Ansible
 - Installation and configuration
 - Inventory
 - Ad-hoc commands
 - Modules, Tasks,
 - Playbooks

Day 7

- CICD
 - Continuous Integration and Continuous Delivery
 - Integration with Source Code repository
 - Installing Jenkins – Multiple Node setup
 - CI-CD pipeline through UI
 - Declarative Pipeline

Day 8

-
- Containers
 - Overview, Images, containers.
 - Docker – Installation
 - Container Management
 - Image – Creation, tags, reusability.
 - Dockerfile, DockerHub

Day 9

- Container Orchestration - Kubernetes
 - Pods
 - Replicasets
 - Deployments
 - Services, Ingress, Ingress controller
- EKS
 - Creation, Authentication
 - kubectl

Day 10

- Monitoring & Alerting
 - Metrics
 - Logging
 - Major Incident, RCA, MTTR, MTBF
- AWS Cloudwatch
- SNS

Day 11

- AWS - Other key Services
 - Management & Governance Services Overview.
 - Developer Services Overview.
 - Network & Content Delivery Services Overview.
 - Security, Identity & Compliance.
- Well Architected Framework

Day 12

- Mini Project - HA Setup with end-to-end automation
- Course wrap, Next steps