# **COURSES OFFERED**



Learners

## **ABOUT US**

Welcome to our platform, where we provide comprehensive Azure Cloud Engineer and DevOps courses led by industry experts in Hinglish. Our instructor offers extensive handson experience in designing and implementing cutting-edge cloud solutions, with a proven track record in establishing customer cloud infrastructures. Their expertise spans cloud security and seamless migrations, whether from on-premise environments to the cloud or even cloud-to-cloud transitions.

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#### **INTRODUCTION OF DEVOPS**

DevOps is a software development approach that combines "Development" (Dev) and "Operations" (Ops) to streamline and enhance the entire software development lifecycle. It aims to foster collaboration between development and IT operations teams, facilitating rapid and reliable software delivery.

## LINUX FOR DEVOPS

- Setting up Linux via Azure Virtual Machine
- File System Hierarchy
- Basic Linux Commands
- Advanced Linux Commands
- Shell Scripting with a Project

#### **SOURCE CODE MANAGEMENT**

- Difference between CVCS and DVCS and importance of Git
- Git's three-stage architecture
- Detail explanation on repository, commit, tags, snapshots, push-pull mechanism, and branching strategy
- Working with Git Stash and Git Pop

#### CI/CD (JENKINS)

- What is the CI/CD pipeline?
- Jenkins History
- Getting started with Jenkins
- Jenkins installation on the cloud
- Workflow of Jenkins
- Jenkins UI
- User Management in Jenkins

#### **CONTAINERIZATION - DOCKER**

- What is virtualization before deep dive to the CONTAINERIZATION
- 0.S.-level virtualization
- Docker vs. Virtual Machine
- What is Docker and its history?
- Docker Architecture
- Advantages and limitations with Docker
- Components of Docker (Docker Daemon, Docker Client, Docker Host)
- Docker Images
- Docker lifecycle and PS

## CONTAINER ORCHESTRATION - KUBERNETES (K8S)

- What is Monolithic and Microservices Architecture?
- What is Kubernetes?
- Introduction to Kubernetes
- Features of Kubernetes
- Kubernetes History
- Kubernetes architecture in depth
- Node and Pod
- Fundamentals of Pods and Their Life Cycle
- Installing Kubernetes on Azure
- Command with an example (kubectl)
- Role of the Master Node
- Components of the Control Plane and Explanation
- Installing kubectl and Minikube
- Creation and deletion of a pod
- Kubernetes YAML Configuration
- Labels and selectors in K8s
- Replication Auto healing and working with deployment in K8s

- Deploying a microservices app to the K8s cluster
- Kubernetes Networking Services and NodePort
- Volume in Kubernetes
- Persistent Volume and LivenessProbe in K8s
- Namespaces in K8s

### MONITORING

- Setting up Prometheus
- Setting up the Grafana cloud and integrating it with Linux machines and docker
- Live logging and monitoring hands-on

#### **INFRA. AS CODE - TERRAFORM**

- Understand the concept of ( IaC )
- Getting started with Terraform
- Terraform Basics
- Variables, Resources, Attributes and Dependencies
- Terraform State
- Terraform for each and Modules

## CONFIGURATION MANAGEMENT WITH ANSIBLE

- What is configuration management?
- What is Ansible and It's History?
- Ansible Architecture
- Advantages and limitations with Ansible
- Working with YAML
- Working with Ansible Server: Modules, Tasks, Roles, Facts, Inventory, Play, Handler, Notifier, Playbook, and Host
- Working with Ansible Inventory, Host pattern and establish a ssh connection with nodes
- Maintain password-less authentication with the server and node.
- Working with Ad-HOC commands
- Working with Modules and Playbook
- Handler, Variables and Loops in Ansible
- Management of Ansible Vault and Ansible Roles
- What is the conditions in Ansible?

## LIVE PROJECTS

- CICD Pipeline using Jenkins, Azure, Docker, and Kubernetes
- Web App Deployments through Ansible and Terraform
- Serverless Deployment for a 3-tier application (production level)
- Continuous Delivery via K8S cluster in Prod using Azure Kubernetes Services (AKS)
- Migrating GCP compute instance to Azure using Azure Migrate with industry level best practises

## **OPPORTUNITIES**

- DevOps Engineer
- Cloud Engineer
- Cloud Consultant
- Cloud Solution Architect
- Azure Developer
- Azure Security Specialist
- Azure Administrator