

# DEVOPS

## CERTIFICATION/JOB ORIENTED

### COURSE CONTENT

Best learning platform with top end courses. Taught by experts to help you acquire new skills and lead your career.

**Address:** 83a, HMT Hills Rd, near Bharat Gas Dealer, Addagutta Society, Jal Vayu Vihar, Kukatpally, Hyderabad, Telangana 500085

 **9561214818**

 **[www.edupoly.in](http://www.edupoly.in)**

Click here for more info



**[www.edupoly.in](http://www.edupoly.in)**



# MODULE

- 01** Introduction to DevOps
- 02** Linux basics
- 03** Managing source code - GIT
- 04** Understanding and using build tools - Maven
- 05** Continuous Integration using JENKINS
- 06** Containerization basics using Docker
- 07** Kubernetes
- 08** Configuration Management using Ansible
- 09** Infrastructure provisioning using Terraform
- 10** Continuous monitoring using Prometheus/Grafana
- 11** Scripting – Python/Shell
- 12** DevOps Project-1
- 13** DevOps Project-2
- 14** DevOps Project-3



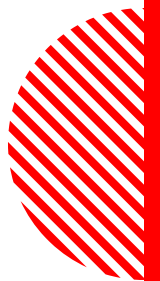
**Introduction to Devops** **01**

**Linux basics** **02**

**Networking basics**

**Managing source code - GIT** **03**

- Git Introduction
- Local and remote repositories
- Install GIT
- Initialise a GIT Repository
- GIT Log
- GIT Branches
- GIT Merging Branches
- Initialize Remote Repositories
- Pushing to remote repositories
- Cloning remote repositories
- Pull Requests
- Fetching and Pulling
- GIT - Merge Conflicts
- Fork



# JENKINS Introduction

## 04

- Pre-requisites:
- What is CICD
- Why Jenkins?
- Jenkins Getting Started
- Installing Jenkins
- Install Jenkins on a VM
- Install Jenkins on a VM
- Jenkins CLI
- Using Jenkins CLI
- Jenkins CLI
- Jenkins Plugins and integration
- What are plugins
- Installing a Plugin
- Restarting Jenkins For Plugins That Require Restarts
- Administering Jenkins
- Backup and restoring Jenkins
- Backup Jenkins
- Restore Jenkins
- PipeLines
- What is a Jenkinsfile
- Build a Jenkins file
- Run a sample pipeline
- Build a multistage pipeline
- Build a CI pipeline
- Building a CD pipeline
- Full pipeline deployment
- Building a CD pipeline


## Maven

05

- Overview of various build tools
- What is Maven
- Maven Plugins
- Maven Archetypes
- Project Object Model
- Source control Integration

## Docker

06

- Introduction
  - Docker Overview
  - Getting started with Docker
  - Demo - Setup and Install Docker
  - Resources
  - Basic Docker Commands
  - Docker Run
  - Advanced Docker Run Features
  - Docker Images
  - Creating a new Docker Image
  - Environment Variables
  - Command vs Entrypoint
  - Docker Compose
  - Pre-Requisite - YAML
  - Demo - Example Voting Application
  - Demo - Example Voting Application with Docker Compose
  - Docker Registry
  - Docker Engine
  - Docker PID
  - Docker Storage
  - Docker Networking
  - Container Orchestration
  - Docker Swarm
- 


## **Kubernetes**

**07**

- Course-Introduction
- Core-Concepts
- Scheduling
- Logging-and-Monitoring
- Application-Lifecycle-Management
- Cluster-Maintenance
- Security
- Storage
- Networking
- Design-and-Install-Kubernetes-Cluster
- Troubleshooting
- Other-Topics

## **Ansible**

**08**

- Ansible Introduction
  - Configuration and basic concepts
  - Ansible Inventory
  - Ansible variables
  - Ansible play books
  - Ansible modules
  - Ansible handlers, roles and collections
  - Advanced topics
- 

## **Terraform**

09

- Terraform Introduction
- Introduction to infrastructure as a code
- Getting started with terraform
- Terraform Basics
- Terraform State
- Working with terraform
- Terraform with AWS
- Remote State
- Terraform provisioners
- Terraform import, tainting resources
- Terraform modules
- Terraform functions

## **Prometheus and Grafana**

10

## **Python Introduction**

11

- Python basics
  - Python Making decisions
  - Python loops
  - Python Logic and Bit operations
  - Python Lists
  - Python Functions
  - Python Tuples & Dictionaries
  - Labsetup
- 