

# Details Course Outlines

## Module-01

### Introduction to DevOps

- ✔ What Is Devops & History of Devops
- ✔ Devops definition & Main Objectives
- ✔ DevOps and Software Development Life Cycle (Waterfall Model, Agile Model)
- ✔ Continuous Integration & Deployment (Jenkins)
- ✔ Containers and Virtual Development ( Docker , Vagrant)
- ✔ Configuration Management Tools (Ansible, Puppet, Chef )
- ✔ Fundamentals of IP Telephony and VoIP
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## Module-02

### Cloud Computing

- ✔ What is Cloud & Evolution of Cloud Computing
- ✔ IAAS (Infrastructure as a Service)
- ✔ SAAS (Software as a Service)
- ✔ PAAS (Platform as a Service)
- ✔ Private, Public and Hybrid Cloud
- ✔ Public Clouds : Amazon Web Services
- ✔ Public Clouds : Microsoft Azure
- ✔ Public Clouds : Google Cloud Services

## Module-03

### LINUX Basic and Admin

- ✔ Linux OS Introduction
- ✔ Importance of Linux in DevOps
- ✔ Linux Basic Command Utilities
- ✔ Linux Administration
- ✔ Environment Variables
- ✔ Networking
- ✔ Linux Server Installation
- ✔ RPM and YUM Installation

## Module-04

### Shell Scripting

- ✔ Introduction & Variables
- ✔ Flow Controls
- ✔ Functions
- ✔ Loops
- ✔ Lists & Manipulating Strings
- ✔ Reading and Writing Files
- ✔ Positional Parameters

## Module-05

### Continuous Integration – Jenkins

- ✔ Introduction to Jenkins
- ✔ Continuous Integration with Jenkins
- ✔ Configure Jenkins
- ✔ Jenkins Management
- ✔ Scheduling build Jobs (POLL SCM, Build Periodically)
- ✔ Maven Build Scripts
- ✔ Support for the GIT version control System
- ✔ Different types of Jenkins Jobs
- ✔ Jenkins Build Pipe Line (Parent and Child Builds, Sequential Builds)
- ✔ **Jenkins Master & Slave Node Configuration**
- ✔ Jenkins Workspace Management
- ✔ Securing Jenkins (Authentication ,Authorization ,Confidentiality & Creating Users)
- ✔ Jenkins Plugins (Installing Jenkins Plugins, SCM plugin , Build and test)

## Module-06

### Version Control-GIT

- ✔ GIT Features
- ✔ 3-Tree Architecture
- ✔ GIT – Clone /Commit / Push
- ✔ GIT Hub Projects
- ✔ GIT Hub Management
- ✔ GIT Rebase & Merge
- ✔ GIT Stash, Reset, Checkout
- ✔ GIT Clone, Fetch, Pull

## Module-07

### Build tool- Maven

- ✔ Maven Installation
- ✔ Maven Build requirements
- ✔ Maven POM Builds (pom.xml)
- ✔ Maven Build Life Cycle
- ✔ **Maven Local Repository (.m2)**
- ✔ Maven Global Repository
- ✔ Group ID, Artifact ID, Snapshot
- ✔ Maven Dependencies
- ✔ Maven Plugins

## Module-08

### ANSIBLE

- ✔ Introduction to Ansible
- ✔ Ansible Server Configuration
- ✔ Infrastructure Management
- ✔ SSH Connection in Ansible Master
- ✔ YAML Scripts
- ✔ Host Inventory (Hosts and Groups, Host Variables, Group Variables, Host and Group Specific Data)
- ✔ Ad-hoc Commands
- ✔ Playbooks (Variables, Conditionals, Loops, Blocks, Handlers, Templates )
- ✔ Modules (Core Modules, Extra Modules)
- ✔ Ansible Roles

## Module-09

### Docker

- ✔ How to get Docker Image?
- ✔ **What is Docker Image**
- ✔ Docker Installation
- ✔ Working with Docker Containers : What is Container
- ✔ Working with Docker Containers : Docker Engine
- ✔ Working with Docker Containers : Crating Containers with an Image
- ✔ Working with Docker Containers : Working with Images

## Module-10

### Docker Details

- ✔ Docker Command Line Interphase
- ✔ Docker Compose
- ✔ Docker Hub
- ✔ Docker Trusted Registry
- ✔ Docker swarm
- ✔ Docker attach
- ✔ Docker File & Commands