"Devops Course Content"

Stream - 1

Introduction to Devops (Duration: 02:00:00 hrs.)

- Define Devops
- What is Devops
- SDLC models, Lean, Agile
- Why Devops?
- History of Devops
- Devops Stakeholders
- Devops Goals
- Important terminology
- Devops perspective
- Devops and Agile
- Devops Tools
- Configuration management
- Continuous Integration, Continuous Deployment and Continuous Delivery

GIT: Version Control (Duration: 02:00:00hrs)

Introduction

- Version control systems

Installing Git

- Installing on Linux
- Installing on Windows
- Initial setup

Git Essentials

- Creating repository
- Cloning, check-in and committing
- Branching
- Tag
- Connect with Remote by using push and pull
- Connect with GitHub and AWS Code Commit

Jenkins – CI & CD (Duration: 16:00:00 hrs)

- Introduction to Jenkins
- Install Java
- Install Jenkins
- Jenkins Architecture and Terms of Jenkins
- Overview Jenkins UI
- Create first job
- Run First job
- Install Git and Jenkins GitHub Plugin
- Install Maven on Local Box
- Configure Jenkins to work with Java, Git and Maven
- Create first Maven based Jenkins project
- Run Maven based Jenkins project
- Source Control Polling in Jenkins
- Other Build Triggers of Jenkins
- Code Quality and Code Coverage Metrics Report
- Archive Build Artifacts
- Install Tomcat as the staging environment
- Configure Tomcat as the staging environment
- Deploy to Staging environment
- The latest Deploy to Container Plugin
- Jenkins Build Pipeline
- Parallel Jenkins Build
- Deploy to Production
- Overview of Pipeline as a code
- Automate Jenkins Pipeline
- Fully automate Jenkins Pipeline
- Introduction to Distributed Jenkins Build
- Install Jenkins Master Node in the Cloud
- Install Jenkins Slave Agent in the Cloud
- Concurrent Jenkins Build and Label Jenkins Build

Ansible (Duration: 8:00:00 hrs)

- Introduction to Ansible
- Ansible Agentless Architecture
- Installation
- Ansible Inventories
- Ansible Modules
- Ansible Playbooks

Docker – Containers (Duration: 03:00:00 hrs)

Introduction

- What is a Docker
- Use case of Docker
- Platforms for Docker
- Dockers vs Virtualization

Architecture

- Docker Architecture.
- Important Docker components
- Understanding the Docker components

Installation

- Installing Docker on Linux.
- Understanding Installation of Docker on Windows.
- Some Docker commands.

Provisioning

- Docker Hub.
- Downloading Docker images.
- Running Docker images
- Running commands in container.
- Running multiple containers.

Custom images

- Creating a custom image.
- Running a container from the custom image.
- Publishing the custom image.

Docker Networking

- Accessing container
- Linking containers
- Exposing container ports
- Container Routing

Kubernetes (Duration: 03:00:00 hrs)

- Introduction to container orchestration
- Overview of Kubernetes
- Deploying Kubernetes
- Minikube setup
- Minikube setup commands
- Your first Kubernetes application
- Your first Kubernetes application commands
- Basic Kubectl
- Basic Kubectl commands

Puppet (Duration: 03:00:00 hrs)

- Introduction to Puppet
- Puppet Client / Server Architecture
- Installation
- Puppet Manifests
- Manifest for Standalone Machine

SonarQube (Duration: 03:00:00 hrs)

- Introduction to SonarQube
- Installation on SonarQube and Sonar Scanner
- Sonar Scanner Configurations
- Run Java Program
- Working with SonarQube Dashboard

Maven (Duration: 03:00:00 hrs)

- Introduction to Maven
- Introduction to Build Life Cycle
- Install Maven and Eclipse
- Build and run template with Command Line
- Build and run template with Eclipse

During this course, you can learn the following AWS services

EC2

VPC and Security Group

IAM

Code Commit

Stream – 2

AWS = Devops Services (Duration: 04:00:00 hrs)

AWS Code Pipe Line

AWS Code Star

Interview Preparation and Review Session (Duration: 03:00:00 hrs)

Core concepts discussion

Interview Preparation

Mock Interviews