

DevOps Course Syllabus

Introduction to Devops

What Is Devops

History of Devops

Devops definition

DevOps 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

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

Microsoft Azure

Google Cloud Services

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

Shell Scripting

Introduction

Variables

Flow Controls

Loops

Functions

Lists

Manipulating Strings

Reading and Writing Files

Positional Parameters

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

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

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

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

Docker

How to get Docker Image?

What is Docker Image

Docker Installation

Working with Docker Containers

What is Container

Docker Engine

Crating Containers with an Image

Working with Images

Docker Command Line Interphase

Docker Compose

Docker Hub

Docker Trusted Registry

Docker swarm

Docker attach

Docker File & Commands