

DevOps

Introduction

- What is DevOps?
- What is SDLC?
- Why DevOps?
- DevOps principles.
- Waterfall vs Agile vs DevOps
- Infrastructure As A Code
- DevOps Tools
- Pre-Requisites for DevOps
- Configuration Management
- Continuous Integration and Deployment

AWS Cloud

- History of Cloud Computing
- AWS Account Creation
- EC2 Service
- Launching Instances in Cloud (Linux Servers)
- Load Balancing

Linux Essentials

- Introduction to BASH
- Basic Commands(ls,cd,cat,touch,mkdir)
- Changing permissions and ownership
- Text Editor(vi)
- Package Management(yum)
- Installing and Removing Software
- Volume management
- Start and Stop services
- Creating File System and Mounting

Apache Tomcat

- Introduction to Webservers
- Installing and Configuring Apache
- Application Management
- App Deployment Methods

GIT

- Introduction to version control systems
- Centralized vs Distributed
- GIT advantages
- Installing GIT
- Creating repository
- Adding code and creating commits
- Creating GitHub account
- Push code to GitHub
- Cloning repo from GitHub
- Forking GitHub repo and working on it.

Maven(Build Management)

- Build Management
- Advantages of Build tool
- Build tools
- Architecture of Maven
- Maven build life-cycle
- Maven directory structure
- Maven repositories
- pom.xml
- Multi module project

Configure Management Systems

- Introduction
- What is Idempotency
- Abstract layers
- Ansible vs Chef vs Puppet
- Push or Pull modes

Ansible

- Installing Ansible using RPM or Python PIP
- Inventory
- Ansible Modules
- Running ansible ad-hoc commands
- Creating ansible playbooks
 - Variables
 - Loops
 - Conditional execution
- Using ansible facts for customization
- Creating ansible roles
- What is Ansible Galaxy
- How to download ansible roles from Ansible galaxy

Jenkins

- Overview
- Installation
- Setting up authentication
- Manage plugins from console
- Installing GitHub plugin from repository
- Adding Ant/Maven support
- Configuring email notifications
- Continuous deployments using Jenkins
- Explore Jenkins system configuration
- Analyzing system logs

Docker

- What is Docker
- Containers Vs Virtual Machines
- Docker platform overview and Terminology
- Docker engine
- Images
- Containers
- Registry
- Repositories
- Docker hub
- Docker orchestration tools

Kubernetes

- What is kubernetes
- Installation of kubernetes
- Features of kubernetes
- Architecture of kubernetes
- Kubernetes Master
- Kubernetes Nodes
- Kubernetes Components
- Kube-api server
- etcd(cluster store)
- kube-scheduler
- kube-proxy
- kubelet
- pods
- multicontainer pod
- pod limitations
- replica sets
- Deployments

Nagios

- Introduction
- Nagios Architecture
- Installing and Configuring Nagios
- How to Add Services to Nagios
- Monitoring with Nagios
- Using the Default Plugins
- How to configure Plugins on Remote Nodes