



## DEVOPS INTRODUCTION

- What is DevOps?
- History of DevOps
- What is Dev and Ops
- DevOps definitions
- DevOps and its Life Cycle
- DevOps main objectives
- Prerequisites for DevOps
  - Cloud introduction
  - SaaS Overview
  - PaaS Overview
  - IaaS Overview
- Cloud usage in DevOps
- Introduction to Linux
  - Unix and Linux operating system basics
  - Linux system administration commands
- Web Servers
  - Apache
  - ProxyPass
  - Mod\_jk
  - SSL
- App Servers
  - Tomcat
  - Deployment
- Continuous Integration and Continuous Deployment
- Continuous Release and Deployment

## VIRTUALIZATION

- Cloud service models
- IaaS, PaaS and SaaS
- Virtualization
- Virtual Machines
- Introduction to AWS



## DEVOPS IMPLEMENTATION

Traditional methodologies and practices

- Devops implementation
- Devops tools
- DevOps in the Organization
- Implement ITILwith DevOps
- Select DevOps Techniques and Practices

## DEVOPS TOOLS

- SaaS for DevOps
- IaaS for DevOps
- PaaS for DevOps
- Continuous Integration (CI)& Continuous Delivery(CD) Systems
- Select DevOps Tools

## DEVOPS TOOLS: CHEF

- Overview of Chef
  - Chef introduction
  - Chef Client-server architecture
  - Chef-solo introduction
  - Chef recipes, cookbooks, chef-role, environments, runlist and databags.
- Chef Server and workstation setup
  - Chef server and workstation and knife configuration
  - Chef solo setup and its implementation with examples
- Creating and configuring the organization.
  - Create the organization, environment, role, bags.
  - Adding node to organization.
  - Creating Environments
  - Creating Roles
  - Creating Databags
  - What is Chef-server
  - What is Chef-Repo
  - What is Chef-client
  - What is chef-solo
  - Adding node to organization



- o Mapping environment, Roles and Databags to Organization

➤ Advanced Chef

- o What is food critic and TestKichen
- o Improve and expand on the existing recipes

**DEVOPS TOOLS: PUPPET**

- Introduction to Puppet
- Installation and Configuration of Master server and agents
- Installation of puppet single node setup
- Creating manifests and loading modules from puppet forge
- Managing Manifests
- Creating and Managing modules
- Version control with Puppet

**CONTINUOUS INTEGRATION: JENKINS**

Introduction of continuous integration o Available CI tools in the market

- Introduction of the CI system
- Introduction of the CD system
- Introduction of Jenkins
- Installation and configuration of Jenkins
- Jenkins Administration
- Jenkins-creating jobs
- Jenkins-configuring the jobs

**DEVOPS TOOLS: DOCKER**

- Introduction
  - o What is Docker
  - o Uses of Docker in an environment
  - o Taking the images from the online.
  - o Docker usage and its setup
  - o Docker Engine, Hub, Machine, Swarm, Compose
  - o Using the Docker for real time examples



## DEVOPS: SOURCE CODE MANAGEMENT

- GIT
  - What is a distributed version control system?
- GitHub
  - What is GitHub
  - What is difference between Git and GitHub
- Difference between various configuration management tools
- Build tools
  - Introduction of build tools
  - Introduction of Ant
  - Introduction of maven
  - What is a version control system?
  - Nagios installation and configuration
  - How to check events; CPU, Memory and other events in the Nagios

## CONFIGURATION MANAGEMENT

- Configuration Management as a discipline
- Configuration Control artifacts
- Incident Management
- Change Management

## ANSIBLE

- Introduction and Usage
- Installation and Configuration

## MISCELLANEOUS

- Other Tools used DevOps (NewRelic, Splunk, RabbitMQ)

## PROGRAM HIGHLIGHTS

- Resume Building
- Interview Questions
- Use case Scenario
- Practicals on AWS Environment