#### **INTRODUCTION TO DEVOPS**

What is DevOps? History of DevOps What is Dev and Ops DevOps definition DevOps and Software Development Life Cycle Build and release workflow DevOps main objectives

## GIT (SCM)

What is GIT? **Installing Git for Windows Basic Commands Overview** Diff b/w Git and SVN Git stages **Creating Branches** Git merge and rebase **Backing Out Changes** Renaming and Moving Files & Deleting Files **Git Repository Setup** Git push, pull and fetch

Git Stash

**Git Conflicts** Git fetch Git Tags Git cherry pick

How to use Github and Bitbucket

#### **MAVEN**

Over view of Maven Diff b/w Maven and Ant How to install Maven in Windows and Linux Maven Phases Maven repositories How to create .Jar, .war and .ear files How to add dependency files Sample Maven Projects How to Deploy Executable files in Application Servers

#### **TOMCAT**

What is Tomcat How to install Tomcat in windows How to install Tomcat in Linux How to deploy code in Tomcat Deploying code by using Jenkins

## JENKINS (CI/CD)

What is CI/CD Introduction to Jenkins History of Jenkins/Hudson How to install Jenkins in Windows and Linux

How to create Jobs

Diff types of jobs

Working with Github

Working with Build tools

Build from Github Project

Managing Remote Systems with Jenkins

Parameterised Builds

Securing Jenkins

How to install plugins in Jenkins

**Scheduling Builds** 

Setting up Different Types of Automated Builds

How to configure one job to another job

Configure Global Security Jenkins Administration

How to create maven type job

How to create ant type job

Jenkins pipeline

Jenkins Backup

How to deploy code in servers

Authentication and Authorization

How to create Nodes in diff Servers

Build pipeline view

Most useful 20 plugins

### Sonarqube

What is Sonarqube

How to Install Sonarqube

Analyzing with Sonarqube scanner for Maven

Integrate Sonaqube with Maven

Integrate Sonagube with Jenkins

#### **CHEF and ANSIBLE**

Workflow of Chef

How to install Chef in Linux and Windows

What is Work-station, Chef-Server, Nodes

Servers and Nodes concept

**Chef Configuration Concepts** 

**Workstation Setup** 

Creating Cookbooks and uploading into server

How to use Ruby in Chef

**About Bootstrap** 

Package/service actions

Installing Multiple packages at one time

How to manage Chef-Servers

Create roles

Add Roles to organization

How to Add Run list to Node

Check node Details

How to create Data bags

Add Database to organization

Create a server and add to organization

Check node details using knife

Create organization

**Environments** 

Add yourself and node to organization

Adding nodes to Chef-Server

Most useful cookbooks

What is Puppet

What is diff b/w Puppet and chef?

What is Ansible

What is Ansible & its features

How to setup Ansible

Understanding Ansible architecture & Execution

Ansible documentation

Installing packages by using Ansible

Writing playbook

### **AWS**

Introduction of cloud

Benefits of AWS

EC2, EBS, VPC, ENI, SNS, ELB

Auto scaling Group

IAM

AMI

Snapshots

Elastic ip

S3

Most useful topics

# Virtulization installing centos/ RHEL on VMware installing centos/

RHEL on VirtualBox Docker

Learning the Basics of Docker

Introduction to Docker

Containers vs Virtual Machines

**Docker Architecture** 

Docker Hub

**Docker Installation** 

Creating Our First Image

Working with Multiple Images

Packaging a Customized Container

Running Container Commands with Docker

Managing and Removing Base Images

Pushing to Docker Hub

Creating Shared volume groups

Create own images

**Docker Networking** 

Docker file for user

Volume management

Docker Link

**Docker Compose** 

### **LINUX and Shell Scripting**

All basics of Linux

How to create files, dir, and groups

How to change permissions of files, dir, and groups How to create users

Ssh

Scp

Winscp

Scp

Cron

**Shell scripting** 

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