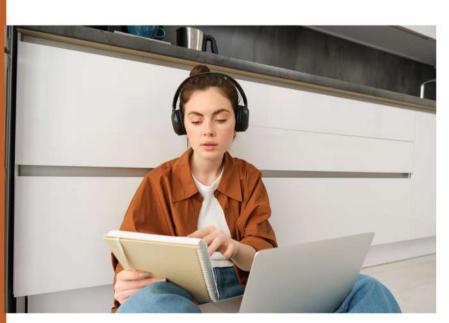
DevOps Course



e-Learning Course

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COURSE MODULES

Introduction to DevOps

- What is DevOps?
- History of Devops
- Devops definition
- DevOps Main Objectives
- DevOps and Software Development Life Cycle oWaterfall Model
 oAgile Model
- Continuous Integration & Deployment oJenkins
- Containers and Virtual Development oDocker
 oVagrant
- Configuration Management Tools
 oAnsible
 oPuppet
 oChef

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

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 oPOLL SCM oBuild Periodically
- Maven Build Scripts
- Support for the GIT version control System
- Different types of Jenkins Jobs
- Jenkins Build Pipe Line
 oParent and Child Builds
 oSequential Builds
- Jenkins Master & Slave Node Configuration
- Jenkins Workspace Management
- Securing Jenkins

 Authentication
 Authorization
 Confidentiality
 - oCreating Users
- Jenkins Plugins
 olnstalling Jenkins Plugins
 oSCM plugin
 oBuild 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
 oHosts and Groups
 oHost Variables
 oGroup Variables
 oHost and Group Specific Data
- Ad-hoc Commands
- Playbooks
 oVariables
 oConditionals
 oLoops
 oBlocks
 oHandlers

oTemplates

- Modules
 oCore Modules
 oExtra Modules
- Ansible Roles

Docker

- How to get Docker Image?
- What is Docker Image
- Docker Installation
- Working with Docker Containers
 oWhat is Container
 oDocker Engine
 oCrating Containers with an Image
 oWorking with Images
- Docker Command Line Interphase
- Docker Compose
- Docker Hub
- Docker Trusted Registry
- Docker swarm
- Docker attach
- Docker File & Commands

