DevOps with AWS

Course Content

Level – 01
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DevOps Introduction
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01) What is DevOps?
02) History of DevOps
03) Why DevOps?
04) What is Dev and Ops
05) DevOps definition
06) What is Build & Release?
07) Software Development Life Cycle (SDLC)
08) Pre-Requisites to get into DevOps
09) Future of DevOps
10) Tools in DevOps
11) DevOps main objectives

Level – 02
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UNIX/LINUX (OS)
****

01) Introduction to Linux/Unix
02) Overview about Client and Server OS
03) Installation Red Hat Enterprise Linux
04) File system Hierarchy
05) Terminal Overview
06) Basic Commands
07) VIM Editor
08) Files (hard & soft)
09) File Permissions
10) User and Group Administration
11) Package/Soft Management
12) Job Automation(crontab)Gradient Tool

Level – 03
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GIT (SCM/VCS)
****

01) What is GIT?
02) Installing Git for Windows
03) Installing Git for Linux
04) Basic Commands Overview
05) Diff b/w Git and SVN
06) Git global configurations
07) .gitignore concept
08) Git Diff
09) Log management
10) Git stages
11) Creating Branches
12) Git merge
13) Git Rebase
14) Backing Out Changes
15) Git HEAD
16) Undo's from working, staging & commit areas
17) Renaming and Moving Files & Deleting Files
18) Git Repository Setup
19) Rewriting The commit messages
20) Git push, pull and fetch
21) Git Stash
22) Git Conflicts
23) Git fetch
24) Git Tags
25) Git cherry pick
26) Bisect

Level – 04
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GITHUB (ORS)
****

01) What is GitHub/Bitbucket/Gitlab
02) Overview of GitHub
03) Installation of ORS tools
04) Creating repositories
05) Pushing repositories to remotely
06) Cloning repositories from remote to local
07) Managing tags remotely
08) Fetch and pull differences
09) Pull request
10) Deleting Repos
11) Forking Repos

Level – 05
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ANT/MAVEN (Build Tool)
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01) Over view of Maven
02) Diff b/w Maven and Ant
03) Diff b/w Maven and Other build tools
04) How to install Maven in Windows
05) How to install Maven in Linux
06) Maven Architecture
07) Maven Phases/Goals
08) Default Life Cycle
09) Standard Directory Layout
10) GAV
11) Maven local and remote repositories
12) Packages and their types
13) Sample Maven Projects
14) One by one goals executions
15) Build in and custom plugins
16) POM File
17) Maven SNAPSHORT
18) Maven profiles
19) Maven dependency
20) How Install phaseworks
21) How to Deploy Executable files in Application Servers

Level – 06
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JENKINS (CI/CD)
****

01) What is CI/CD
02) Introduction to Jenkins
03) History of Jenkins/Hudson
04) How to install Jenkins in Windows and Linux
05) How to create Jobs
06) Diff types of jobs
07) Integrating with GitHub
08) Integrating with Build tools
09) Build from GitHub Project

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10) Managing Remote Systems with Jenkins
11) Parameterized Builds
12) Securing Jenkins
13) How to install plugins in Jenkins
14) Scheduling Builds
15) Setting up Different Types of Automated Builds
16) How to configure one job to another job
17) Configure Global Security Jenkins Admin
18) How to create maven type job
19) How to create ant type job
20) Jenkins pipeline
21) Jenkins Backup
22) How to deploy code in servers
23) Authentication and Authorization
24) How to create Nodes in diff Servers
25) Build pipeline view
26) Most useful 20 plugins

Level – 07
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SONARQUBE (Code Quality Testing)
****

01) What is SonarQube
02) How to Install SonarQube
03) Analyzing with SonarQube scanner for Maven
04) Integrate SonarQube with Maven
05) Integrate SonarQube with Jenkins
06) Generating final report in sonar dashboard

Level – 08
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TOMCAT (Application Servers)
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01) Introduction to Apache Tomcat server
02) How to install Tomcat in windows
03) How to install Tomcat in Linux
04) Manual Deployment
05) Continuous Deployment using Jenkins jobs
06) Deploying sample web application (test.War)

Level – 09
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JFROG/NEXUS (Artifactory Storage)
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01) Introduction to Artifacts
02) Installation and configuration
03) Integrating with Jenkins
04) Generating final report in Jfrog dashboard

Level – 10
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ANSIBLE (Configuration Management)
****

01) Introduction to CM
02) How to setup Ansible
03) Understand Ansible architecture & Execution
04) Ansible documentation
05) Installing packages by using Ansible
06) Writing playbook
07) Workflow of Chef
08) Workflow of Ansible
09) What is diff b/w Ansible and Chef?
10) How to install Ansible in Linux and Windows
11) What is Work-station, Chef-Server, Nodes
12) Servers and Nodes concept
13) Chef Configuration Concepts
14) Workstation Setup
15) Creating Cookbooks and uploading into server
16) How to use Ruby in Chef
17) About Bootstrap
18) Package/service actions
19) Installing Multiple packages at one time
20) How to manage Chef-Servers
21) Create roles
22) Add Roles to organization
23) How to Add Run list to Node
24) Check node Details
25) How to create Data bags
26) Add Database to organization
27) Create a server and add to organization
28) Check node details using knife
29) Create organization
30) Environments
31) Add yourself and node to organization
32) Adding nodes to Chef-Server
33) Most useful Playbooks
34) What is Ansible & its features

Level – 11
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Virtualization
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01) Introduction to virtual machines
02) Creating multiple VM's
03) Gest and host operating systems
04) Hypervisors
05) VM Ware
06) Virtual Box
07) Diff b/w containers and virtual machines

Level – 12
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Docker
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01) Learning the Basics of Docker
02) Introduction to Docker
03) Containers vs Virtual Machines
04) Docker Architecture
05) Docker Hub
06) Docker Installation
07) Creating Our First Image
08) Working with Multiple Images
09) Packaging a Customized Container
10) Running Container Commands with Docker
11) Managing and Removing Base Images
12) Pushing to Docker Hub
13) Creating Shared volume groups
14) Create own images
15) Docker Networking
16) Docker file for user
17) Volume management
18) Docker Link
19) Docker Compose

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Level – 13
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Kubernetes
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01) Introduction
02) Why and what Kubernetes
03) Installation
04) Kubernetes Objects
05) Kubernetes Architecture
06) Pods
07) Service
08) Volume
09) Namespace
10) Replica Set
11) Deployment
12) Stateful Set
13) Daemon set
14) Job
15) Create a Cluster using Kubeadm ,Minikube
16) Using kubectl to Create a Deployment
17) Using a Service to Expose Your App
18) Scale Your App
19) KUBEADM ON AWS
20) Using kubeadm to Create a Cluster
21) Pod deletes

Level – 14
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AWS (CLOUD)
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01) Traditional Infrastructure Scalling
02) Cloud Computing
03) Cloud Computing Providers(Vendors)
04) Cloud Service Models
05) Introduction to AWS
06) Why AWS?
07) AWS Global infra
08) Free Tier account creation
09) Putty
10) MobaExterm
11) Multi-factor authentication (MFA)
12) EC2
13) EBS
14) VPC
15) ELB
16) Auto scaling Group
17) IAM
18) AMI
19) Snapshots
20) Elastic Ip
21) S3

Live PROJECTS

Key Points
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- **Training Mode : ONLINE Only**
- **Batch 10 to 15 Students Only**
- **Training Hours: 1 to 2 Hours Per Day**
- **Working Days: Monday to Saturday**
- **Laptop is Mandatory**
- **Materials for Every Tool**
- **Interview Questions**
- **Real Time Scenarios**
- **Live Projects**
- **Daily Assignments**
- **Mock Interviews**
- **Resume Preparation**
- **100% Job Placement**
- **Job Support**