DEVOPS ENGINNER JOB ASSURANCE PROGRAMME

2023 COURSE

Make your dream come true with us!

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Learn
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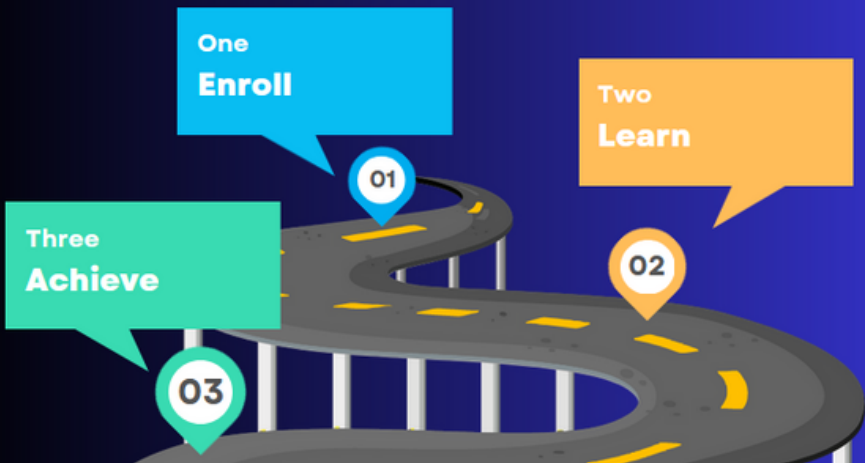
Uskill

DevOps Certification Training Uskill's DevOps practitioner course is designed to prepare you for future successful software development projects. This training has been designed to follow best practices for software development and to make the most efficient use of software tools. The course follows the whole software development lifecycle from requirements analysis through coding to production support.

What is DevOps?
DevOps is a software development and IT operations process that helps to improve the collaboration between developers and operators by automating the Deployment, configuration, monitoring, and management of applications.

By the end of this training you will be able to:
- Integrate and deploy tools like Jenkins, TeamCity, and Maven
- Configure management tools Puppet, Chef, Ansible, and Saltstack
- Understand DevOps tools on the cloud
- Build and deploy containerization using Docker
- Perform tuning and monitoring using Nagios

Introduction to DevOps

• DevOps Principles in detail
• DevOps Engineer Skills in the market
• Knowing DevOps Delivery Pipeline
• Market trend of DevOps
• DevOps Technical Challenges
• Tools we use in DevOps

DevOps on Cloud

• Essentials of Cloud computing?
• Cloud and virtualization architecture
• Cloud deployment architecture
• Cloud providers – An overview
• Why we need DevOps on Cloud?
• Introducing to Amazon web services

GIT – A Version controlling tool

• Knowing about Version control
• Git – A CLI
• Essentials of GIT in industry
• How to setup GIT
o Installing Git
o First-Time Git Setup
o Getting a Git Repository
• Working with various commands in GIT
• Recording Changes to the Repository
o How to check the Status of Your Files
o How to track New Files
o Staging our modified files
o Ignoring Files from GIT
o Viewing Your Unstaged and Staged Changes
o How to commit Your Changes
o Skipping the Staging Area and commit

Removing Files from GIT

- Viewing the Commit History
- Limiting Log Output
- Using a GUI to Visualize History Undoing Things
- Changing Your Last Commit
- Unstaging a Staged File
- Unmodifying a Modified File
- Working with Remotes
- Showing Your Remotes
- Adding Remote Repositories
- Fetching and Pulling from Your Remotes
- Pushing to Your Remotes
- Inspecting a Remote
- Removing and Renaming Remotes
- Branching and Merging in Git
- What a Branch Is
- Basic in Branching and Merging
- Branch Management in GIT
- Branching Workflows and its usage
- Remote Branches – create and delete
- Rebasing
- Git workflows
- Git cheat sheet

Jenkins

- Essentials of Continuous Integration
- An example scenario where CI is used
- Know about Jenkins and its architecture in detail
- Jenkins tool Management in detail
- Know about User management in Jenkins
- Authentication
- Jenkins own database user creation

Options to enable integration with LDAP

Authorization

- Matrix based authorization
- Project based authorization

Overview of Maven

- Maven project structure
- Maven plugins
- Project Object Model (POM) – fundamental unit of work in Maven project
- Maven build lifecycle
- Adding external dependencies to maven pom.xml
- Maven build and test project
- Creating jobs and automatic build settings

What is Jenkins Pipeline?

- Why Pipeline?
- Integration with GIT
- How to enable project based authorization for a job
- Source code management while creating jobs
- Triggering automated build
- Maven job setup

- build, publishing reports, etc.
- Adding a slave node to Jenkins
- Building Delivery Pipeline
- Notification settings in Jenkins
- Plugin management in Jenkins

Docker
- Introduction
- Real-world Shipping Transportation Challenges
- Introducing Docker and its technology
- Understanding of Docker images and containers
- Working with container
- How to Share and copy a container

Container Life Cycle
- How to use Base Image and customize
- Creation of Docker File
- How to Publish Image on Docker Hub
- Introduction to Docker Networking
- Network Types in docker technology
- Docker Container Networking
- Docker Compose – An introduction
- Docker Swarm – An introduction
- Use Docker Compose to create php, wordpress, mysql
- How to Start Containers on a Cluster with Docker Swarm
- Creating and Scaling an application in Docker swarm

Kubernetes

Introduction to Kubernetes
- Kubernetes Cluster Architecture — An overview
- Understanding concepts of Pods, Replica sets, deployments and namespaces
- Understanding the concepts of services and networking
- Persistent volumes and persistent volume claims —an overview Design of Pods
- Understanding labels, selectors, jobs, and schedulers

Ansible

- Introducing Ansible – A configuration management tool
- Basics / What Will Be Installed
- Understanding Ansible architecture
- Control Machine Requirements
- Managed Node Requirements
- Inventory
- Hosts and Groups
- Host Variables
- Group Variables
- Learn various ansible Modules
- How to use adhoc commands
- Parallelism and Shell Commands
- File Transfer
- Managing Packages
- Users and Groups
- Deploying From Source Control
- Managing Services

Introduction to YAML script

- Playbook
- About Playbooks
- Playbook Language Example – YAML
- How to Write Playbooks
- Tasks in Playbooks
- Understanding about various tasks in playbook
- Introduction to Handlers and variables
- Learn about using handlers, variables in the playbook (Privilege Escalation)

Roles

- Role Directory Structure
- Using Roles
- Role Duplication and Execution
- Role Default Variables
- Role Dependencies
- Role Search Path

Ansible Galaxy

- Including and Importing
- Includes vs. Imports
- Importing Playbooks
- Including and Importing Task Files
- Including and Importing Roles

PROGRAM REQUIREMENTS

- *Any Degree Passed Out or Experienced Candidates looking to switch their career in Cloud Computing or Final Year Students are eligible for the program.*

- *Pre-requisites - None (No Technical Knowledge Required.*

- *Laptop/Desktop with Internet Connection.*

- *Willingness to learn.*

- *Basic Understanding of English*

PROGRAM ROADMAP

Uskill

Enrollment

Course Activation

Internship & Capstone Project.

Mentorship Sessions

Gig Works

Placement

Certificates

CERTIFICATE

OF ACHIEVEMENT

DEVOPS ENGINNER

This Certificate is Presented To :

SAMIR KUMAR

THIS IS TO CERTIFY THAT

Has successfully graduated from the Devops Program having completed all mandated course requirements and industry projects with distinction

ALOK JHA
DIRECTOR

AJAY PRAKASH
CEO

HIRING/INTERNSHIP PARTNERS

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