

Introduction To DevOps

Nature of the course: Theory + Practical

Total hours per day: 2 hours

Course duration: 6 weeks

Course Summary

This course covers all the fundamentals about Docker software and teaches you everything you need to know about deploying modern applications with Docker software.

In the end of this course, you will gain in-depth knowledge about CI/CD and Infrastructure as a Code.

Completion Criteria

After fulfilling all of the following criteria, the student will be deemed to have finished the Module:

1. Has attended 90% of all classes held
2. Has received an average grade of 80% on all assignments
3. Has received an average of 60% in assessments
4. The tutor believes the student has grasped all of the concepts and is ready to go on to the second module.

Required Textbooks

1. The DevOps Handbook
2. Effective DevOps
3. Continuous Delivery

Course Details

WEEK 1

Linux

- Basic Commands
- Server management
 - Apache
 - Nginx
- Web Hosting
- Scripting
- Cronjobs

Virtualization

- Introduction

- Setup Virtual machines

WEEK 2

Vagrant

- Introduction
- Writing a Vagrantfile

Docker

- Introduction to Docker
- Docker Installation
- Docker Components
- Handling Docker Images
- Playing with Docker Containers
- Writing a Dockerfile

WEEK 3 and 4

Git

- Introduction to Version Control
- Using Git Locally
- Working with Remotes

Jenkins

- Introduction to Jenkins
- Jenkins Installation
- Basic CI/CD using Jenkins
- Writing a Jenkinsfile
- Jenkins Triggers

WEEK 5 and 6

Cloud Platform(AWS)

- What is IAM?
- Setting up EC2
- Introduction to Cloud Watch
- Introduction to Lambda

Terraform

- Introduction to Terraform
- Deploying Your First Terraform Configuration
- Configuring Resources After Creation

- Using Modules for Common Configurations

Learning Outcomes

- Learn how to use Docker and containers
- Creating a pipeline for Continuous Integration and Continuous Deployment
- Basic Knowledge of Cloud Computing and its use
- Able to set up virtual machines using vagrant
- General idea of Infrastructure as a Code