DevOps Certification Course Agenda

Lesson 0: Course Introduction

Lesson 1: Introduction to DevOps

- Learning Objectives

- DevOps Overview

- The relationship between Agile and DevOps

- DevOps Toolchain

- DASA DevOps Principles

- Challenges with the Traditional Approach

- Addressing Challenges through DevOps

- DevOps Approach to the challenges

- Overview of DevOps Tools

- Best Practices for DevOps

- Categories of DevOps Tools

- DevSecOps and Its Manifesto

- Workflow of DevOps and DevSecOps

- Key Takeaways

- Knowledge Check

Lesson 2: Version Control Systems

- Learning Objectives

- Overview of Version Control Systems

- Role of Version Control Systems

- Types of Control Systems and Their Supporting Tools

- Overview of Git

- Overview of Source code and Version Control Hosts

- Deploy the Files to GitHub via Git

- Key Takeaways

- Knowledge Check

Lesson 3: Continuous Integration, Continuous Deployment, and Build Tools

- Learning Objectives

- Overview and Importance of Continuous Integration and Continuous Deployment

- Overview and Features of Jenkins

- Set up Jenkins

- 3.05 Overview and the Features of TeamCity

- Set up TeamCity

- Build Tools and Their Uses

- Continuous Integration with Jenkins and Maven

- Key Takeaways

- Knowledge Check

Lesson 4: Software and Automation Testing Frameworks

- Learning Objectives

- Software Testing Overview

- Testing Levels Approaches and Automation Tools

- Test-Driven Development Approaches and JUnit 5

- Test-Driven Development Approach with JUnit 5

- Behavior-Driven Development Principles Cucumber and Its Applications

- Knowledge Check

Lesson 5: Configuration Management Tools

- Learning Objectives

- Overview of Configuration Management Tools

- Managing Infrastructure

- Types of Configuration Management Tools

- Overview of Puppet

- Demonstrate Puppet Configuration

- Overview of Chef

- Demonstrate Chef Configuration

- Overview of Ansible

- Set Up Apache Web Server Using Ansible

- Overview of SaltStack

- Comparison of Ansible Puppet Chef and SaltStack

- Key Takeaways

- Knowledge Check

Lesson 6: Containerization with Docker

- Learning Objectives

- Overview of Docker

- Overview of Virtualization

- Docker Installation on Multiple OS

- MySQL Database in Docker Container

- Docker Installation on Multiple OS

- Using Docker Compose to Manage a Container

- Docker Registry

- Run Docker Registry with Centos

- Docker Networking

- Demonstrate Docker Networking with Two SSHs

- Key Takeaways

- Knowledge Check

Lesson 7: Continuous Monitoring

- Learning Objectives

- Overview of Continuous Monitoring

- Types of Monitoring Systems

- Demonstrate Nagios

- Working with Nagios Monitoring Tool

- 7.06 Overview of Grafana

- 7.07 ELK Stack

- 7.08 Key Takeaways

- Knowledge Check

Lesson 8: Need of Cloud in DevOps

- Learning Objectives

- Overview of Cloud Computing

- Cloud Services and Models

- Using AWS in DevOps

- Kubernetes

- Add a Linux Node to the Kubernetes Cluster

- Key Takeaways

- Knowledge Check