# DevOps Certification Training

DevOps Certification Training course is comprehensively structured to enable you to become as a qualified DevOps practitioner upon successful completion. The different DevOps tools that are taught as part of the curriculum will make you proficient in usage, particularly automation of software development lifecycle. You will also gain hand-on experience on the widely used DevOps tools like as Git, Docker, Jenkins Puppet and Nagios. This course will walk you through the configuration management; continuous integration deployment, delivery and monitoring using DevOps. You will also learn about Docker, which is a technology used to deploy in cloud and considered as critical in the cloud pace.

# Key Features

➢ Exam Simulators

➢ Hand book course Material

➢ 24x7 assistance and support

➢ Peoplecert approved course content

➢ Course completion certificate

➢ Money Back Guarantee*

# Modes of Engagement

AR Learners

## Instructor-Led Classroom Training

4-Day DevOps Certification exam prep classroom training workshops conducted worldwide.

## Instructor-Led Live Online Training

Provided to your company's employees across global locations through Citrix GoToMeeting or Cisco WebEx.

## Self-Placed E-Learning

Anywhere, anytime access to E-Learning through a Learning Management System for employees across the globe.

## Enterprise Training

In-House instructor-led 4-day AWS Developer certification training in your office across global locations. We can also provide 2-day AWS Developer Fundamentals training for your team to precede the AWS Developer certification training.

# Course Agenda

**Lesson 0: Course Introduction**

➢ Introduction

**Lesson 1: Introduction to DevOps**

➢ Learning Objectives

➢ DevOps Overview

➢ The Relationship Between Agile and DevOps

➢ DevOps Tool chain

➢ 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

# Course Agenda

## Lesson 02 - 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-end Project: Deploy the Files to Bitbucket via Git

## Lesson 03 - 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

➢ Overview and the Features of TeamCity

➢ Set up TeamCity

➢ Build Tools and Their Uses

➢ Continuous Integration with Jenkins and Maven

➢ Key Takeaways

➢ Knowledge Check

# Course Agenda

➤ Lesson-end Project: Continuous Integration with Jenkins, Git, and Maven

## Lesson 04 - Software and Automation Testing Frameworks

➤ Learning Objectives

➤ Software Testing Overview

➤ Testing Levels Approaches and Automation Tools

➤ Test-Driven Development Approach with JUnit 5

➤ Behavior-Driven Development Principles: Cucumber and Its Applications

Behavior-Driven Development Approach with Cucumber

➤ Knowledge Check

➤ Lesson-end Project: Behavior-driven Development Approach

## Lesson 05 - 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

# Course Agenda

➤ Knowledge Check

➤ Lesson-end Project: Set Up MySQL database using Ansible

**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-end Project: Build a Docker Image and Deploy to the Docker

# Course Agenda

## Lesson 07 - Continuous Monitoring

➢  Learning Objectives

➢  Overview of Continuous Monitoring

➢  Types of Monitoring Systems

➢  Demonstrate Nagios

➢  Working with Nagios Monitoring Tool

➢  Overview of Grafana

➢  ELK Stack

➢  Key Takeaways

➢  Knowledge Check

➢  Lesson-end Project: Add a Node in Nagios Monitoring Tool

## Lesson 08 - 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

➢  Lesson-end Project: Host Docker on a Kubernetes Cluster

# Prerequisites:

Learners taking the DevOps online training must have a technical background with an understanding of Linux, web development, and Java fundamentals

# Target Audience

Software developers

Technical project managers

Architects

Operations support

Deployment engineers

IT managers

Development managers

# Key Learning Outcomes

➢ After completing the DevOps training course you will achieve hands-on expertise in various aspects of the DevOps delivery model. By the end of this course, you will be able to acquire the following skills:

➢ Describe DevOps and DevSecOps methodologies and their key concepts

➢ Explain the types of version control systems, continuous integration tools, continuous monitoring tools, and cloud models

➢ Work in Git with GitHub and Git with Bitbucket

➢ Configure your private Jenkins and TeamCity tools, Jenkins with Java, Git, and Maven

➢ Set up a test-driven development framework with Junit 5 and a behavior-driven development framework with Cucumber

➢ Work on the creation of Docker containers, Registry, Docker Compose, Docker Hub, and Docker Networking; describe the importance of Grafana and ELK Stack; perform demonstration on Nagios

➢ Describe the importance of cloud in DevOps, use of AWS in DevOps, and deploy your private Kubernetes cluster

➢ Set up your complete private infrastructure using version control systems and CI/CD tools

➢ Certification Details and Criteria:

➢ 85 percent completion of online self-paced learning or attendance of one live virtual classroom

➢ Successful evaluation in at least one project

# About AR Learners

➢ AR Learners is a leading training provider, helping professionals across industries and sectors develop new expertise and bridge their skill gap for recognition and growth in the global corporate world. Developed with the intention of delivering high value training through innovative and practical approaches, AR Learners offers a wide range of services in training, learning and development in the fields of technology and management.

➢ The founders of the company are zealous young entrepreneurs, who were motivated by the need to fill a niche in the IT Training industry for professionals and they are aided in their goal by industry experts who conduct the workshops; igniting minds and motivating professionals to face on-the-job challenges

➢ AR Learners is an professional certification training provider catering its services globally across countries including USA , UK, CANADA, Australia, ,India, Middle East, Netherlands, Germany, France etc.

➢ With over 150 consultants and trainers, we have one of the largest pool of in-house experts in the industry. The training content, course material, and training methodology are developed by in-house subject matter experts and accredited by global certifying authorities to ensure the quality training experience.

## AR Learners

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