

DevOPs QA Automation Engineer



Training Methodology

- Digital point is a global classroom. All classes are featured online (No recorded version). Students around world can join this online live class
- Each class is instructor oriented live class and will be recorded, and students will get access to watch video for practice.
- Real-world scenario labs.
- VPN access to digital Point's Lab that is accessible from anywhere 24/7
- Class Notes and Labs for each class

Contact Us

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DevOps Engineer Market Scope:

DevOps engineering jobs are on a healthy growth track, with an estimated 100,000 new positions set to be created through 2022. That's higher growth than is anticipated for several other skilled technology jobs, according to the Bureau of Labor Statistics. More and more, QA/DevOps engineers are a necessary part of any company's tech team. These positions are an integral part to any software development platform.

Benefit of DevOps QA Engineer Course:

- >> **Better Job Opportunities:** If you are looking for a new job, completion of this course, you can apply as a QA automation/DevOps Engineer
- >> **Improved Skills & Knowledge:** If you are already a QA/IT professional, completion of this course will improve your skills to latest technologies.
- >> **Increased Salary:** DevOps professionals are the highest paid in the IT industry.
- >> **Increased Productivity & Effectiveness:** Benefit Your Organization through Visibility to Build, Run and Secure Modern Applications

Prerequisites:

1. A bachelor degree in any background
2. You must have good presentation skills

Course Duration (4 months)

Class Schedule:

SAT & SUN 9:00 AM - 1:00 PM EST

Tue & Thu 7:00 PM - 10:00 PM EST

Mon & Wed 7:00 PM - 10:00 PM EST

Training Methodology:

- Real-world scenario labs.
- One dedicated Server for each student that is accessible from anywhere 24/7
- Class Notes and Labs for each class
- Each class is instructor oriented live class and will be recorded, and students will get access to watch video for practice.

Why choose us?

- Digital point is a global classroom. All classes are featured online (No recorded version). Students around world can join this online live class.
- The course is very interactive and has lots of lab practice with it. A remote server will be provided to each student for lab practice.
- We help you with Resume preparation, Interview preparation, before and after job support
- Student can repeat the same program two times with no extra cost.

Course Curriculum

Phase 1: Foundation Training

- Module 1** Overview of enterprise applications and N-Tier Infrastructure
- Module 2** Operating System –Windows Server 2012/2016, UNIX
- Module 3** Networking, Active Directory and DNS
- Module 4** Power Shell Scripting, Batch Scripting
- Module 5** Incident, Problem and Change Management process

- Module 6** Infrastructure setup
 - Installation of Virtual Machine on Physical Server
 - Installation of Virtual Machine on Cloud
 - Configure VPN
 - Connect Remote Windows Servers
 - Connect Remote Unix Server

Phase 2: SDLC

Module 7 Manual Testing

- Types of Testing, Agile Methodology and Live Project Overview
- SDLC and Test Scenarios
- Test Plan Complete Walkthrough
- Test case writing process, Test Data
- Test Execution, Traceability matrix, reviews, Status reporting
- Manual Testing on real-world projects

Module 8 Test Strategy and Defect Management

- Defect management

- Quality tools
- Change management
- Version control

Module 9 Test Management Tool

- JIRA
- Gits
- Git Hub

Hands-On:

- Project Management with JIRA
- GIT Installation, Version Control, Working with remote repository

Module 10 Backend Testing

- Database overview and SQL
- Database schema tests
- Stored Procedure tests
- Integration tests of procedures
- Trigger tests
- Integration tests of SQL server
- Checking data integrity and consistency
- Test back end via front end

Hands-On:

- Query on Oracle Database
- Connect remote database using TOAD / Oracle SQL Developer client
- Query techniques

Module 11 Database tools

- TOAD
- Oracle SQL Developer

Phase 3: Automation Testing

Module 12 Java Basics

- Overview of Object Oriented Concepts
- Classes, Objects, Constructors and methods
- Method Overloading
- Inheritance
- Method Overriding

- Access Modifiers
- Arrays
- Looping and Conditions

Module 13 Test Automation with Selenium

- Introduction of Selenium and its Components
- TestNG Framework
- Maven with Selenium
- Integration with CI/CD pipeline (Jenkins)
- Data Driven Framework
- Behavior driven framework with Cucumber
- Keyword driven framework
- Hybrid framework
- Selenium Grid

Module 14 Performance Testing Tool – JMeter

- JMeter Architecture
- Loading Testing using JMeter
- Regular expressions and data driving
- Handling dynamic responses
- Bean shell scripting basics for JMeter
- Integration of Selenium with JMeter
- REST API Load Testing using JMeter
- Database Testing using JMeter
- Blazemeter plugin and JMeter Template
- Monitoring Server Performance

Module 15 API Testing

- Functionality testing
- Reliability testing
- Load testing
- Creativity testing
- Security testing and access controls.
- Proficiency testing

Module 16 Security Testing

- Fundamentals of Security Testing
- Web application coding security
- Web application security testing
- Ethical hacking of applications
- Web portal security testing

Phase 4: DevOps Tool

Module 17: Continuous Deployment: Containerization with Docker

- Shipping Transportation Challenges
- Introducing Docker
- Understanding images and containers
- Running Hello World in Docker
- Introduction to Container
- Container Life Cycle
- Sharing and Copying
- Base Image
- Docker File
- Working with containers
- Publishing Image on Docker Hub

Hands-On:

- Create and Implement Docker images and containers

Module 18 Containerization with Docker: Ecosystem and Networking

- Docker Compose
- Docker Swarm
- Managing Containers
- Running Containers
- Introduction to Docker Networking
- Network Types
- Docker Container Networking
- Introduction to Docker Ecosystem

Hands-On:

- Use Docker Compose to create a WordPress site
- Start Containers on a Cluster with Docker Swarm
- Deploy a multi-tier application over a cluster
- Scale an application

Module 19 Continuous Deployment: Configuration Management with Puppet

- Introduction to Puppet
- Puppet Master and Agent Setup
- Puppet Module
- Node Classification
- Puppet Environment
- Puppet Classes
- Automation & Reporting
- Puppet Installation and Puppet Configuration

Hands-On:

- Install and configure Puppet
- Configure and implement servers using Puppet

Module 20 Configuration Management with Ansible

- Introduction to Ansible
- Ansible Installation
- Configuring Ansible Roles
- Write Playbooks
- Executing ad-hoc command

Hands-On:

- Installing Ansible
- Configuring Ansible Role
- Write Playbooks
- Execute ad-hoc commands

Module 21 Containerization using Kubernetes

- Revisiting Kubernetes Cluster Architecture
- Spinning up a Kubernetes Cluster on Ubuntu VMs
- Exploring your Cluster
- Understanding YAML
- Creating a Deployment in Kubernetes using YAML
- Creating a Service in Kubernetes
- Installing Kubernetes Dashboard
- Deploying an App using Dashboard
- Using Rolling Updates in Kubernetes
- Containers and Container Orchestration
- Introduction to Kubernetes

Hands-On:

- Setting up the Kubernetes Cluster
- Accessing your application through service
- Deploying an app through Kubernetes Dashboard
- Rolling updates in Kubernetes

Module 22 Continuous Monitoring with Nagios

- Introduction to Continuous Monitoring
- Introduction to Nagios
- Installing Nagios
- Nagios Plugins(NRPE) and Objects
- Nagios Commands and Notification

Hands-On:

- Installing Nagios
- Monitoring of different servers using Nagios

Module 23 Introduction to DevOps on Cloud

- Why Cloud?
- Introduction to Cloud Computing
- Why DevOps on Cloud?
- Introduction to AWS
- Various AWS services
- DevOps using AWS

Phase 5: Real-World Project**Module 24 Boot Camp**

- Boot Camp with real-world project - Each student will be required to complete a real-time project lab that covers the entire course curriculum.

Phase 6: Job Marketing**Module 25 Real-world Job Interview Preparation**

- Professional real-world Resume Writing
- Project Analysis
- Interview Preparation
- Mock Interview