







E-Learning COURSE OUTLINE

DevOps Certification Training

-  High quality Content
-  Study Guides
-  Learning Videos
-  Practice Tests
-  Learning Support
-  Learn on any device





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Lesson 00 - Course Introduction

- Introduction

Lesson 01 - 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 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
- 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
- Lesson-end Project: Continuous Integration with Jenkins, Git, and Maven



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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: Behaviour-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

- 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



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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



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Course End Projects:

The course includes four real-world, industry-based projects. Successful evaluation of one of the following projects is a part of the certification eligibility criteria:

Project 1: Dockerizing Jenkins Pipeline

Demonstrate the continuous integration and delivery by Dockerizing Jenkins Pipeline.

Project 2: Manage and Monitor the Docker Containers with Dry Tool

Install Dry, demonstrate its interaction with Docker containers and images, and monitor it.

Project 3: Deploy Angular Application in Docker Container

Deploy the Angular application in Docker, which should be built with the Angular CLI along with Docker Compose for development and production.

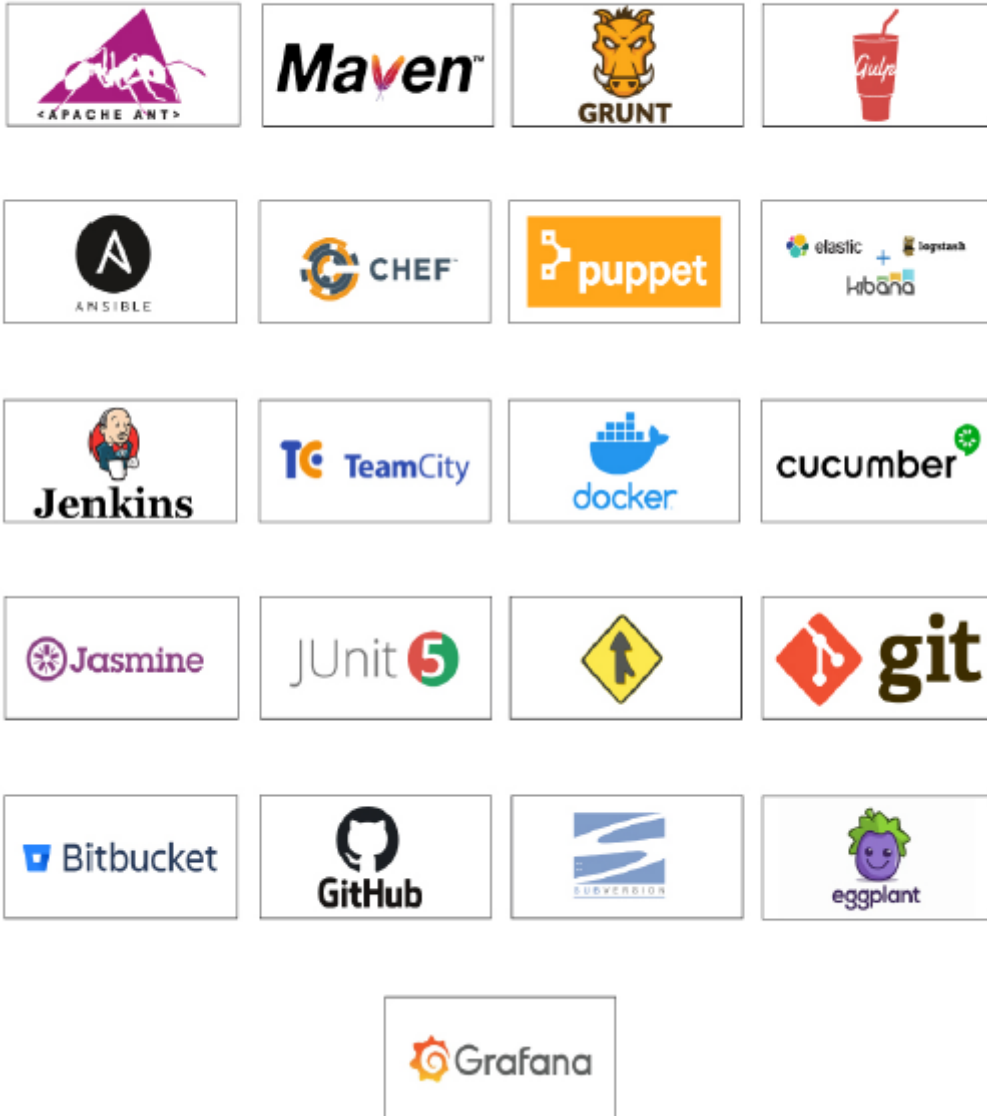
Project 4: Automated Delivery of WordPress Application on Kubernetes

Deploy the WordPress application to the Kubernetes cluster, automate the delivery with Jenkins, and manage the source code versions on GitHub.



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Tools Covered:



About SwissKnowledge

SwissKnowledge is a brand of Swiss Expert Consulting GmbH, designed to deliver training and consulting services to individuals and corporate customers

MAKE SMATER AND BETTER INVESTMENT



People Development

COURSES PORTFOLIO

SCRUM & AGILE

- Scrum Developer Certified (SDC)
- Scrum Master Certified (SMC)
- Scrum Product Owner Certified (SPOC)
- Agile Master Certified (SAMC)
- Agile Scrum Master (ASM)

PROJECT MANAGEMENT

- Project Management Professional
- PMI Risk Management Professional
- PRINCE2 Foundation & Practitioner
- MSP Foundation & Practitioner
- CBAP

QUALITY MANAGEMENT

- Six Sigma Green Belt (SSGB)
- Six Sigma Black Belt (SSBB)
- Lean Six Sigma Green Belt (LSSGB)
- Lean Six Sigma Black Belt (LSSBB)

IT SERVICE MANAGEMENT

- ITIL Foundation
- ITIL 4 Foundation

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