DevOps Certification Training

simplilearn

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Program **Overview:**

Prepare for a career in the fast-growing field of DevOps, bridging the gap between software developers and operations, with this DevOps Certification Training course. You'll become an expert in the principles of continuous development and deployment, automation of configuration management, inter-team collaboration, and IT service agility using modern DevOps tools such as Git, Docker, Jenkins, Cucumber, Ansible, TeamCity, and Nagios.

Program **Features:**

- 56 hours of blended learning
- 20 hours of Online self-paced learning
- 36 hours of instructor-led training
- Over 10 industry-based course-end projects with integrated labs
- 24 live demos of popular DevOps tools
- 24/7 support with dedicated mentoring sessions

Delivery **Mode:**

Blended - Online self-paced learning and live virtual classroom

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

Course **Curriculum:**

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
- 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

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

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

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.

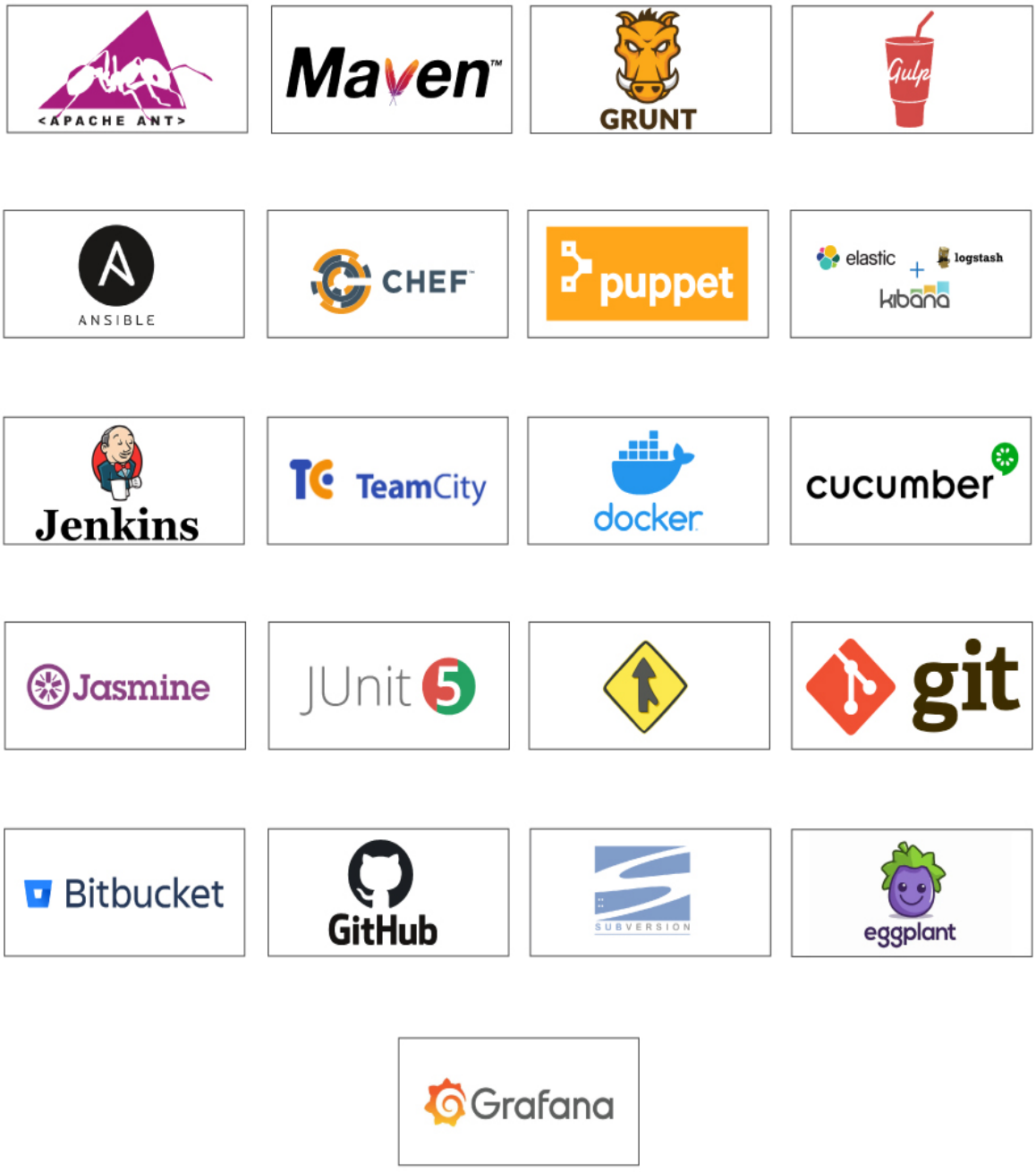
Project 3: Deploy Angular Application in Docker Container

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.

Tools **Covered:**



Customer **Reviews:**

Sachin Sheri
CSM, Prince2 Practitioner, DevOps Practitioner

DevOps is a vast field with many tools. I attended the virtual classroom course on DevOps Practitioner. The course content and coverage has been very helpful to me as I begin my DevOps journey. The Course gives me the right pointers and resources to enhance my knowledge and enable my pursuit of a career in DevOps.

Bhupinder Saini
Senior Software Engineer at Gemalto

The content was very interesting and helpful. The trainer shared a lot of real examples with us, which helped us have a better learning experience. Thank you Simplilearn.

Manisundaram Balakrishnan
Team Lead (Customer Experience) at Mindtree Ltd

The trainer's in-depth knowledge on the subject helped me understand DevOps better. The course content is very informative and the trainer's expertise helped me learn about the challenges involved with implementing DevOps.

Minal Deshmukh
Senior System Software Specialist at HPE

The training was very well conducted. The course content is very informative and the trainer gives sufficient time to explore on the lab, which is really helpful. The trainer explained the concepts with clarity and provided in-depth details

About **Us:**

Simplilearn is a leader in digital skills training, focused on the emerging technologies that are transforming our world. Our Blended Learning approach drives learner engagement and is backed by the industry's highest completion rates. Partnering with professionals and companies, we identify their unique needs and provide outcome-centric solutions to help them achieve their professional goals.

For more information, please visit our website:
https://www.simplilearn.com/cloud-computing/devops-practitioner-certification-training

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Founded in 2009, Simplilearn is one of the world's leading providers of online training for Digital Marketing, Cloud Computing, Project Management, Data Science, IT Service Management, Software Development and many other emerging technologies. Based in Bangalore, India, San Francisco, California, and Raleigh, North Carolina, Simplilearn partners with companies and individuals to address their unique needs, providing training and coaching to help working professionals meet their career goals. Simplilearn has enabled over 1 million professionals and companies across 150+ countries train, certify and upskill their employees.

Simplilearn's 400+ training courses are designed and updated by world-class industry experts. Their blended learning approach combines e-learning classes, instructor-led live virtual classrooms, applied learning projects, and 24/7 teaching assistance. More than 40 global training organizations have recognized Simplilearn as an official provider of certification training. The company has been named the 8th most influential education brand in the world by LinkedIn.

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