

# DevOps Certified Foundation Course

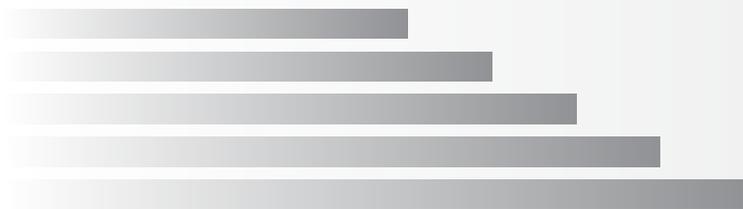


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## About the Course

Certified DevOps Foundation is a perfectly tailored course designed by the best to familiarize you with the fundamentals of DevOps philosophy. This course helps you grasp the key terms and concepts and ensures you become well-versed with the “DevOps Language” to help you communicate effectively within teams and projects. Beginners get the chance to step into the cultural shift brought with DevOps and become aware of its demands.

DevOps terminologies, DevOps principles and practices including Continuous Integration, Continuous Delivery, testing, automation and much more will seem like second nature to you after taking this course.

The certification also covers how DevOps can help organizations in cost reduction and still be able to increase agility, adopt lean processes, maintain superior quality and high customer satisfaction.

## Key Features

-  15 hours of practical oriented training cum workshop
-  Certificate Guidance
-  Flexible Schedule
-  Project Support
-  Placement Assistance
-  Each session followed with exercise and Project Work
-  Industry specific project implementation
-  Doubt Clearing and Technical Support
-  Job Posting
-  CV Building
-  Mock Interview and Tips

## Skills and Tools

- ✓ DevOps essentials
- ✓ Cloud Computing
- ✓ Continuous Integration
- ✓ Various DevOps toolsets
- ✓ Continuous Monitoring
- ✓ Continuous Delivery
- ✓ Continuous Deployment



# Program Outcome

- ✓ Fluent in the terminologies of DevOps
- ✓ DevOps principles and practices including Continuous Integration, Continuous Delivery, testing, security and the Three Ways
- ✓ Lean philosophy and IT service management
- ✓ Easily know and understand the principles and practices of CI/CD, testing etc
- ✓ Introduction to Agile in DevOps
- ✓ Benefits of DevOps
- ✓ Philosophy of DevOps
- ✓ Learn to implement DevOps at organization level
- ✓ Automation practices for deployment pipelines and toolchains

## Who should enroll in the program?

- ✓ Software Developers
- ✓ Business Analysts and Consultants
- ✓ Managers, Leaders, Directors
- ✓ Business Stakeholders
- ✓ Automation Architects
- ✓ IT Operations
- ✓ Release Engineers
- ✓ Software Testers/QA
- ✓ System Administrators

# Learning

## STEP 1

Get familiar with terminologies and “jargon” of DevOps structure

### Course completion objectives

After completing this phase, you will be

- ✓ Understand the basics of the DevOps cycle
- ✓ Become familiar with the terms and concepts of DevOps
- ✓ Comprehend the beginning of the DevOps cycle
- ✓ Know how to use DevOps at organization level
- ✓ Understand how DevOps can help organization reduce costs and increase efficiency in every area

## STEP 2

Learn DevOps principles and practices including Continuous Integration, Continuous Delivery, testing, security and the Three Ways

### Course completion objectives

After completing this phase, you will be

- ✓ Easily understand the concepts of CI/CD
- ✓ Know the basics of testing and security

## STEP 3

Understand Continuous Integration

### Course completion objectives

After completing this phase, you will be having hands on experience on

- ✓ Git
- ✓ Maven
- ✓ Jenkins

## STEP 4

Learn Containerization and Orchestration

### Course completion objectives

After completing this phase, you will be having hands on experience on

- ✓ Docker
- ✓ Kubernetes

## STEP 5

Learn Configuration Management and its tool

### Course completion objectives

After completing this phase, you will be having hands on experience on

- ✓ Ansible
- ✓ Ansible v/s Puppet

## STEP 6

Learn Continuous Monitoring and Continuous Feedback

### Course completion objectives

After completing this phase, you will be having hands on experience on

- ✓ Splunk – Log Monitoring Tool
- ✓ Nagios – Infrastructure Monitoring Tool
- ✓ Grafana
- ✓ Prometheus

## STEP 7

Learn Continuous Delivery and Deployment

### Course completion objectives

After completing this phase, you will be having hands on experience on CICD Pipeline

## STEP 8

Study real-life case studies and results

# Program Curriculum

## Introduction to DevOps

### 1. What is DevOps?

- ✓ IT Evolution
- ✓ History of DevOps
- ✓ Different Teams Involved
- ✓ DevOps definitions

### 2. DevOps and Software Development Life Cycle

- ✓ Waterfall Model
- ✓ Agile Model

### 3. DevOps main objectives

### 4. Prerequisites for DevOps

### 5. Continuous Testing and Integration

### 6. Continuous Release and Deployment

### 7. Continuous Application Monitoring

### 8. Configuration Management

### 9. DevSecOps & DevChatOps

### 10. Containerization and Orchestration

### 11. What is Cloud?

- ✓ History and evolution of cloud
- ✓ Cloud Computing Concepts
- ✓ Public, Private, Hybrid Clouds
- ✓ IAAS, SAAS, PAAS Cloud Models

### 12. AWS Cloud setup

### 13. DevOps Toolset

# GIT

- ✓ Version Control System
- ✓ Centralized & Distributed Version Control System
- ✓ GIT Features
- ✓ Git Commands
- ✓ GIT Remote
- ✓ Advantages of Git

# Build Tools – Maven

- ✓ Maven Life Cycle
- ✓ Maven Installation
- ✓ Maven POM XML File

# Jenkins

## Getting started with Jenkins

- ✓ Overview
- ✓ About Continuous Integration
- ✓ Introduction to Jenkins and the History of Jenkins
- ✓ Configuring Jenkins
- ✓ Create Our First Jenkins Job
- ✓ Run our First Jenkins Job
- ✓ Continuous Integration (CI) with Jenkins
- ✓ Continuous Delivery with Jenkins

# Containers – Docker

- ✓ Introduction to containers
- ✓ Docker Setup
- ✓ Docker Images
- ✓ Docker commands

## Kubernetes

- ✓ What and why is Kubernetes
- ✓ Comparison with Docker Swarm
- ✓ Pods
- ✓ Replications
- ✓ Services
- ✓ Deployment

## Configuration Management – Ansible

- ✓ Introduction to Configuration Management
- ✓ Popular Configuration Management Tools
  - ✓ Ansible
  - ✓ Puppet
- ✓ Ansible commands
- ✓ Ansible Playbooks

## Logging – Splunk

- ✓ What Is Splunk?
- ✓ About Machine Data
- ✓ What does Splunk Do?
- ✓ Why Splunk?
- ✓ Understanding Splunk Architecture & its Components
- ✓ Installation of Splunk and Forwarder
- ✓ Splunk Search
- ✓ Use cases and Examples

## Infrastructure Monitoring – Nagios, Prometheus & Grafana

- ✓ Introduction to Infrastructure Monitoring
- ✓ Various tools
  - ✓ Nagios
  - ✓ Prometheus
  - ✓ Grafana
- ✓ Container monitoring with Prometheus and Grafana

# Certificate

## CERTIFIED DEVOPS FOUNDATION

BY DEVOPS UNIVERSE

# John smith

Has successfully completed the DevOps Universe's DevOps Certification requirements and is recognized as a Certified DevOps Engineer - Professional

Certificate Id : 0123456789

Validation at : [devopsuniverse.org/validate](https://devopsuniverse.org/validate)



Sachin Kumar  
Global Head - Training & Certification



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Issue Date

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## About DevOps Universe

DevOps Universe is an autonomous organization which promotes DevOps by bringing all communities together to share their knowledge at a single platform.

DevOps Universe provides DevOps Courses through its accredited partners and grants valuable DevOps Certifications to IT professionals and prospects, who want to excel or build their career in the emerging world of DevOps. These certifications not only assess your deep knowledge on DevOps but are available with a minimal cost.

We partner with individuals, IT prospects, organizations and provide customized trainings, workshops and consultancy as per their training & business needs.

DevOpsUniverse.org provides DevOps technical trainings through their accredited partners only, who believes in their philosophy. These trainings are concluded with a Certification from DevOps University.

DevOps Universe's portfolio of DevOps Certifications are well structured by keeping the need of an emerging DevOps market and to empower you and your organization to address dynamic need of customers. Certified DevOps Leader for executives and senior leaders, Certified DevOps Engineer for development team and Certified DevOps Architect for DevOps engineers are widely accepted certifications across IT industry.



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