

Module Title : DevOps Fundamentals (DASA)

Duration : 3 day

What you will learn

DevOps is the future of IT today! This 3-day course provides an introduction to DevOps – the cultural and professional movement that stresses communication, collaboration, integration and, of course, automation in order to improve the flow of work between software developers and IT operations professionals. To maximize the IT value flow to customers, DevOps creates an improved ability to design, develop, deploy and operate software and services faster for the benefit of the business. Higher customer satisfaction, better quality, faster delivery and lower costs are all benefits of DevOps.

Course Approach

This course is designed to provide you with the background knowledge you need to build your DevOps vocabulary and to understand the principles and practices of DevOps. More importantly, this course is designed to inspire you to serve as a change champion who leads and mentors others by sharing and using what you've learned – and continue to learn – about DevOps.

Course Student Material

The slide materials used, including the course notes, will be used as course student material.

Target Audience

Anyone who requires a detailed understanding of DevOps principles, such as project and business managers, all professionals involved in IT quality assurance, testing and service management and anyone involved in the development, operation and delivery of IT services.

Prerequisites

To take the exam, knowledge of IT and familiarity with IT services is recommended.

Certificate

DevOps Fundamentals

About the Exam

The examination takes 60 minutes with non-native speakers of English being permitted an additional 15 minutes. It is a closed-book, web-based exam and consists of 40 multiple-choice questions. The passing grade is 65%. Participants are permitted to use scratch paper. A proctor will be present or the exam will be proctored via a webcam.

Course Objectives

Professionals will increase their value within the organization and on the IT market with this certificate. After successfully completing the course, they will have an understanding of DevOps and be able to:

- Explain the drivers responsible for the emergence of DevOps;
- Define and discuss the key concepts and principles of DevOps;
- List and explain the business benefits of DevOps and continuous delivery;
- Describe the Service Delivery process;
- Explain the concepts of test automation, infrastructure automation, and build and deployment automation;
- Describe how DevOps relates to Lean and Agile methodologies;
- Summarize case studies of IT organizations that are making the transformation to Adaptive IT and DevOps models;
- List the most common and popular DevOps tools;
- Discuss the critical success factors for DevOps implementation.

This course helps professionals understand:

- Why organizations need to adopt DevOps practices from both the business and IT perspectives;
- How to answer the question 'What is DevOps?';
- DevOps values and principles;
- How DevOps interfaces with other frameworks such as Agile, Lean and ITSM;
- The characteristics of a DevOps culture;
- DevOps organizational considerations including DevOps roles, teams and organizational structures;
- Key DevOps practices;
- Common DevOps automation practices and tools categories;
- How to adopt a DevOps culture.

Course Syllabus

- **DevOps Introduction;**
 - Emergence of DevOps;
 - Core Concepts of DevOps;
 - DevOps Agile Skills Association (DASA);
- **Culture;**
 - Introduction to a DevOps Culture;
 - Key Elements of DevOps;
 - Implementation of a DevOps Culture;
- **Organization;**
 - Organizational Models;
 - Autonomous Teams;
 - Architecture Styles;
 - Governance;
- **Processes;**
 - Introduction to Agile, Scrum, and Kanban
 - DevOps in Relation to ITSM
 - Scrum Essentials;
 - Optimization of Processes Using Lean;
 - Business Value Optimization and Business Analysis Using Story Mapping;
 - Software Delivery Lifecycle in a DevOps Organization
- **Automation;**
 - Automation for Delivery of Software;
 - Continuous Delivery Core Concepts;
 - Continuous Delivery Automation Concepts;
 - Continuous Delivery Automation Focus Topics;
 - Emergence of Cloud Technology and Principles;
 - Cloud Service Concepts in a DevOps Organization;
 - Automated Provisioning Concepts;
 - Platform Product Characteristics and Application Maturity;
- **Measure and Improvement;**
 - Importance of Measurement;
 - Identify Right Metrics;
 - Monitoring and Logging;