

Continuous Integration and Continuous Deployment

Modality: On Demand

Duration: 16 Hours

ABOUT THIS COURSE:

The basic purpose of this course is to enable the candidates enrolled, to grasp the knowledge of integrating the techniques used in DevOps environment for the utilization of services such as Continuous Integration & Continuous Deployment with the services provided by Microsoft Azure and Visual Studio Team services.

After successful completion of this course, candidates will be equipped with the skills to perform tasks like automated testing and continuous delivery as well as have the understanding of continuous integration and continuous deployment to build and test. And this expertise will be achieved by comprehending the functions of these operations in DevOps environment.

VSTS is also capable of integrating with OSS as well as third party tools. The course syllabus will also cover these topics.

If you are a professional employed in IT division of an organization, and are planning to shift your prevailing working environment into the DevOps environment then you are the ideal candidate of this course and achieve your goal after its completion.

Besides this, the developers who are keen to fill the gap in proficiency related to their development techniques by gaining of knowledge of Agile methodology and want to learn rapid delivery methods and acquire familiarity on the subjects are also encouraged to apply for this course.

This course is designed in such a way that even the students who may not have experience over services such as Azure or VSTS, but are aware of the DevOps methods and fundamental knowledge, will be able to understand the key concepts like continuous integration and continuous delivery without any difficulty.

Course Objective:

- Configuring TFVC version control features for Continuous Integration.
- Learning the execution of task for undertaking Technical Debt Management and determining and learning its impact.
- Creating continuous integration built with VSTS and learning its mechanism.
- Learning various features of the Package Management Integration such as GitVersion, SemVer, and NuGet.
- Learning agents, pipelines and the process of releasing pipelines.
- Understanding the strategies of Delivery and Release Management.
- Learning the process of releasing pipelines by running automated tests with the help of Microsoft Test Manager, Coded UI Testing and Selenium.
- Learning about a number of performance and availability test.

- Learning how to plan provisioning, de-provisioning of databases and infrastructures by automation.
- Deploying feature flags, groups and automation recovery.
- Deploying database in release pipelines.
- Using Jenkins and VSTS for continuous deployment.

Prerequisites:

- Previous working experience or association in developing and running a software delivery process.
- Knowledge of the solutions used for clouds.
- Previous working experience of Microsoft Azure.

Course Outline:

Continuous Integration

- Module 1 Learning Objectives
- Continuous Integration
- Pipelines and Agents
- Technical Debt
- Labs
- Module Review Questions

Package Management

- Module 2 Learning Objectives
- Package Management
- Module Review Questions

Continuous Delivery

- Module 3 Learning Objectives
- Release Pipelines
- Environments and Tasks
- Test Automation
- Advanced Delivery
- Module Review Questions

Continuous Deployment

- Module 4 Learning Objectives
- Continuous Deployment
- Advanced Continuous Deployment
- Labs
- Module Review Questions

Continuous Delivery with Octopus

- Module 5 Learning Objectives
- What is Octopus
- Octopus Architecture
- Installing Octopus
- Configuring Octopus
- Packages
- Deployments
- Labs

Final Exam

- Graded Final Exam?