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Sign up

Azure DevOps CI/CD training
3 days (21 hours)

Presentation

Azure DevOps Server is a Microsoft product that covers the entire application lifecycle and enables DevOps functionality. Azure DevOps can be used as a back-end for many integrated development environments.

Continuous integration, continuous delivery and DevOps have taken the software development world by storm. Today, most companies are implementing continuous integration (CI) and continuous delivery (CD) practices, which are bringing them considerable benefits, such as increased revenues and faster time-to-market.

Azure DevOps CI/CD training aims to teach the CI/CD process for accelerating software creation using the DevOps methodology. It enables you to learn DevOps and its various tools, such as continuous integration and continuous delivery, as well as the principles of automated construction, testing and deployment.

Implementing continuous integration, delivery and deployment helps you support CI/CD pipelines, and modernize your software development lifecycle.

Continuous integration enables you to detect bugs at an early stage and improve the quality of your software products. This, in turn, reduces the overall cost of software development in startups and enterprises alike.

Our training course will teach you the basics of architecture and design pipelinesof continuous integration (CI) and continuous deployment (CD) . You will learn how to use the tools and services of the Microsoft Azure platform in a DevOps-oriented way. Thanks to this training, you'll be able to implement a sound CI/CD strategy.

Our Azure DevOps CI/CD training course will teach you how to modernize architectures and adopt the CI/CD method to publish better software and accelerate your company's development. We'll introduce you to the latest version of Azure DevOps Server, Azure DevOps

Objectives

- Understanding the DevOps philosophy and stakeholders
- Mastering Azure DevOps tools
- Industrialize application deployment through CI/CD pipelines

Target audience

- Developer
- Director
- Cloud professionals and solution architects
- Project and technical managers

Prerequisites

- Knowledge of GIT
- Knowledge of visual studio code
- Knowledge of bash, powershell, terraform, azure
- Knowledge of agility
- Knowledge of docker

Technical requirements

- Have an Azure account
- Install Visual Studio Code
- Installing Git
- Install Terraform
- Installing Docker

Our Azure DevOps CI/CD training program

INTRODUCTION TO AZURE DEVOPS

- What is DevOps?
- Explore the DevOps path
- Identify transformation teams
- Defining the organizational structure for agile practices
- Explore shared objectives and define timelines
- What is Azure DevOps?
- Explaining the DevOps lifecycle
- Overview of Azure DevOps possibilities

PLANNING AND COMMUNICATION

- Understanding Azure board
- Creating a team
- Project configuration and management
- Permission management

SOURCE CODE MANAGER

- Description of a source code manager
- Knowing what git is
- Publish code from your local environment
- Linking a commit and an Azure board ticket
- Create branches and perform pull requests
- Choose a branch strategy (gitflow)
- Clean history
- Policies and Branch Safety

BUILD PIPELINE

- Continuous integration explained
- Azure pipeline overview
- Understanding key Azure Pipelines terms
- Agents (Microsoft and self hosted)
- Understanding how the agent works with the work directory

YAML Pipeline

- Create a pipeline
- Launch a pipeline
- Adding tests
- Using environment variables
- Managing secrets
- Launching pipelines in parallel
- Use and difference of the graphic designer

RELEASE PIPELINE

- Continuous deployment explained
- Introducing Azure Release
- Use of several courses
- Deploying an Azure PAAS service
- Deploying a Docker container on Azure web app
- Deployment on an Azure vm (IAAS)

CREATING AN INFRASTRUCTURE WITH IAC

- Infrastructure-as-code presentation
- Overview of EPC technologies on the market
- Introducing Terraform
- Deploy a complete development environment with Terraform and Azure pipeline

DEPLOYMENT AND TESTING

- Overview of deployment strategies
- Implementing blue-green deployment
- Implementing canary deployment

SECURITY AND STATIC CODE ANALYSIS

- Introducing DevSecOps
- Introducing sonarcloud
- Introducing Snyk
- Integrate snyk and sonarcloud in a pipeline
- Report security alerts to development teams

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives with regard to the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire is used to check correct acquisition.

skills.

Sanction

A certificate will be issued to each trainee who completes the course.