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# AZ-400 Certification Training

ALL-IN-ONE: EXAMINATION INCLUDED IN PRICE

3 days (21 hours)

## Presentation

With our AZ-400 certification training, deepen your knowledge and skills in implementing DevOps solutions with the Microsoft Azure platform.

AZ-400 certification is designed for DevOps professionals wishing to develop advanced DevOps concepts on the Microsoft Azure platform. This training course prepares you effectively for the ["Designing and Implementing Microsoft DevOps Solutions"](#) certification exam.

The exam covers topics such as designing and implementing processes and communications, implementing build and pipelines, developing a safety plan, and implementing an instrumentation strategy. A wide range of topics will be covered to ensure thorough and comprehensive preparation.

As with all our training courses, this one will introduce you to the latest version of [Azure DevOps Server 2022](#).

## Objectives

- Mastering the integration process
- Mastering the GitHub integration process with Azure DevOps
- Understand how to create and manage secrets, certificates, keys and their storage
- Configuring and using popular frameworks
- Configuring GitHub workflows for continuous integration and deployment
- Container deployment with Azure Kubernetes Service
- Effective preparation for the Microsoft AZ-400 exam

## Target audience

- Azure Administrator
- DevOps Engineer
- Developers
- Safety engineers

## Prerequisites

- It is recommended that you are a DevOps professional and have some knowledge of DevOps concepts.
- Knowledge of Microsoft Azure.

## AZ-400 Certification training program

### INTRODUCTION TO AZURE DEVOPS AND AZ-400

- Introduction to Azure DevOps and its main components
- Overview of DevOps and modern practices.
- Overview of AZ-400 course and certification objectives
- Agile planning with Azure Boards.
- Learning resources and official documentation

### SOURCE CODE MANAGEMENT AND AUTOMATION

- GitHub integration with Azure DevOps
- using Git and branch strategy
- Configuration and management of continuous integration pipelines
- Automating builds with YAML
- Implementation of pipelines for Azure App Services and Kubernetes.
- Multi-stage and environment management.

### SECURITY AND SECRET MANAGEMENT

- Integrating Azure Key Vault into pipelines
- Implementing DevSecOps
- Creation and management of secrets, certificates, keys and their storage
- Best practices for securing sensitive information in Azure DevOps
- Securing variables and secrets

### TESTING AND QUALITY ASSURANCE

- Use of popular frameworks
  - NUnit
  - JUnit
  - PyTest
- Configuration of unit tests, integration into Azure Pipelines
- Documentation and bug tracking
- Load testing with Apache JMeter or Azure Load Testing

## INTEGRATION WITH THIRD-PARTY TOOLS

- Configuring GitHub workflows for continuous integration and deployment
- Using GitHub secrets to secure workflows
- Connect Jenkins to Azure DevOps to drive existing pipelines
- Importing Jenkins artifacts into Azure Pipelines
- Advanced analysis with SonarQube or SonarCloud

## ARTIFACT AND DEPENDENCY MANAGEMENT

- In Azure Artifacts, create and manage NuGet and npm package flows...
- Configure retention rules to optimize storage space
- best practices for protecting sensitive packages
- Automate the publication of artifacts in pipelines

## CONTAINERS AND KUBERNETES

- Container deployment with Azure Kubernetes Service
- Configuring Kubernetes clusters
- Pipeline configuration for Docker containers
- Using Prometheus and Grafana for monitoring

## WORKFLOW AUTOMATION WITH POWERSHELL

- Pipeline and configuration management via scripts
- Deployment automation

## REVISION AND PREPARATION FOR THE AZ-400 EXAM

- Review of key concepts and best practices
- Examination tips and effective study methods
- Examination simulation and discussion of answers
- Additional resources for self-study
- Q&A to resolve any remaining doubts

## Companies concerned

This training 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 which enables 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 for 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, brainstorming sessions and group work.

## Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

## Sanction

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