# Design and Implement Microsoft DevOps solutions (AZ-400)

**Duration: 4 Days** **Course Code: M-AZ400** **Delivery Method: Virtual Learning**

## Overview:

**This course provides the knowledge and skills to design and implement DevOps processes and practices.**
Students will learn how to plan for DevOps, use source control, scale Git for an enterprise, consolidate artifacts, design a dependency management strategy, manage secrets, implement continuous integration, implement a container build strategy, design a release strategy, set up a release management workflow, implement a deployment pattern, and optimize feedback mechanisms.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

## Target Audience:

Students in this course are interested in designing and implementing DevOps processes or in passing the Microsoft Azure DevOps Solutions certification exam.

## Objectives:

- After completing this course, students will learn :
- AZ-400: Development for enterprise DevOps
- AZ-400: Implement CI with Azure Pipelines and GitHub Actions
- AZ-400: Design and implement a release strategy
- AZ-400: Implement a secure continuous deployment using Azure Pipelines
- AZ-400: Manage infrastructure as code using Azure and DSC
- AZ-400: Implement security and validate code bases for compliance
- AZ-400: Design and implement a dependency management strategy
- AZ-400: Implement continuous feedback

## Testing and Certification

- Microsoft Certified: DevOps Engineer Expert

## Content:

AZ-400: Development for enterprise DevOps

- Introduction to DevOps
- Plan Agile with GitHub Projects and Azure Boards
- Design and implement branch strategies and workflows
- Collaborate with pull requests in Azure Repos
- Explore Git hooks
- Plan foster inner source
- Manage and configure repositories
- Identify technical debt

AZ-400: Implement CI with Azure Pipelines and GitHub Actions

- Explore Azure Pipelines
- Manage Azure Pipeline agents and pools
- Describe pipelines and concurrency
- Design and implement a pipeline strategy
- Integrate with Azure Pipelines
- Introduction to GitHub Actions
- Learn continuous integration with GitHub Actions
- Design a container build strategy

AZ-400: Design and implement a release strategy

- Create a release pipeline
- Explore release strategy recommendations
- Configure and Provision Environments
- Manage and modularize tasks and templates
- Automate inspection of health

AZ-400: Implement a secure continuous deployment using Azure Pipelines

- Introduction to deployment patterns
- Implement blue-green deployment and feature toggles
- Implement canary releases and dark launching
- Implement A/B testing and progressive exposure deployment
- Integrate with identity management systems
- Manage application configuration data

AZ-400: Manage infrastructure as code using Azure and DSC

- Explore infrastructure as code and configuration management
- Create Azure resources using Azure Resource Manager templates
- Create Azure resources by using Azure CLI
- Explore Azure Automation with DevOps
- Implement Desired State Configuration (DSC)
- Implement Bicep

AZ-400: Implement security and validate code bases for compliance

- Introduction to Secure DevOps
- Implement open-source software
- Software Composition Analysis
- Security Monitoring and Governance

AZ-400: Design and implement a dependency management strategy

- Explore package dependencies
- Understand package management
- Migrate consolidate and secure artifacts
- Implement a versioning strategy
- Introduction to GitHub Packages

AZ-400: Implement continuous feedback

- Implement tools to track usage and flow
- Develop monitor and status dashboards
- Share knowledge within teams
- Design processes to automate application analytics
- Manage alerts, blameless retrospectives and a just culture

## Further Information:

For More information, or to book your course, please call us on 00 971 4 446 4987

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