Designing and Implementing Microsoft DevOps solutions

Course code: MOC AZ-400

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.

Affiliate	Duration	Course price	ITB
Praha	4	29 200 Kč	40
Brno	4	29 200 Kč	40
Bratislava	4	1 216 €	40

The prices are without VAT.

Course terms

Date	Duration	Course price	Type	Course language	Location
23.02.2026	4	29 200 Kč	Online	CZ/SK	Online
23.02.2026	4	1 216 €	Online	CZ/SK	Online
02.03.2026	4	29 200 Kč	Presence	CZ/SK	GOPAS Praha
25.05.2026	4	29 200 Kč	Presence	CZ/SK	GOPAS Praha
29.06.2026	4	1 216 €	Presence	CZ/SK	GOPAS Bratislava

The prices are without VAT.

At course completion students will be able

Plan for the transformation with shared goals and timelines

Select a project and identify project metrics and KPIs

Create a team and agile organization structure

Describe the benefits of using Source Control

Migrate from TFVC to Git

Scale Git for Enterprise DevOps

Recommend artifact management tools and practices

Abstract common packages to enable sharing and reuse

Migrate and consolidate artifacts

Migrate and integrate source control measures

Manage application config and secrets

Develop a project quality strategy

Plan for secure development practices and compliance rules

Implement and manage build infrastructure

Explain why continuous integration matters

Implement continuous integration using Azure DevOps

Manage code quality including: technical debt, SonarCloud, and other tooling solutions

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Manage security policies with open source, OWASP, and WhiteSource Bolt

Implement a container strategy including how containers are different from virtual machines and how microservices use containers

Implement containers using Docker

Inspect open source software packages for security and license compliance to align with corporate standards

Configure build pipeline to access package security and license rating

Configure secure access to package feeds

Inspect codebase to identify code dependencies that can be converted to packages

Identify and recommend standardized package types and versions across the solution

Refactor existing build pipelines to implement version strategy that publishes packages

Manage security and compliance

Differentiate between a release and a deployment

Define the components of a release pipeline

Explain things to consider when designing your release strategy

Classify a release versus a release process and outline how to control the quality of both

Describe the principle of release gates and how to deal with release notes and documentation

Explain deployment patterns, both in the traditional sense and in the modern sense

Choose a release management tool

Explain the terminology used in Azure DevOps and other Release Management Tooling

Describe what a Build and Release task is, what it can do, and some available deployment tasks

Classify an Agent, Agent Queue, and Agent Pool

Explain why you sometimes need multiple release jobs in one release pipeline

Differentiate between multi-agent and multi-configuration release job

Use release variables and stage variables in your release pipeline

Deploy to an environment securely using a service connection

Embed testing in the pipeline

List the different ways to inspect the health of your pipeline and release by using alerts, service hooks, and reports

Create a release gate

Describe deployment patterns

Implement Blue Green Deployment

Implement Canary Release

Implement Progressive Exposure Deployment

Configure crash report integration for client applications

Develop monitoring and status dashboards

Implement routing for client application crash report data

Implement tools to track system usage, feature usage, and flow

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Integrate and configure ticketing systems with development team's work management

Implement a mobile DevOps strategy

Apply infrastructure and configuration as code principles.

Deploy and manage infrastructure using Microsoft automation technologies such as ARM templates, PowerShell, and Azure CLI

Describe deployment models and services that are available with Azure

Deploy and configure a Managed Kubernetes cluster

Deploy and configure infrastructure using 3rd party tools and services with Azure, such as Chef, Puppet, Ansible, SaltStack, and Terraform

Define an infrastructure and configuration strategy and appropriate toolset for a release pipeline and application infrastructure

Implement compliance and security in your application infrastructure

Design practices to measure end-user satisfaction

Design processes to capture and analyze user feedback from external sources

Design routing for client application crash report data

Recommend monitoring tools and technologies

Recommend system and feature usage tracking tools

Analyze alerts to establish a baseline

Analyze telemetry to establish a baseline

Perform live site reviews and capture feedback for system outages

Perform ongoing tuning to reduce meaningless or non-actionable alerts

Prerequisities

Knowledge in extent of the courses which are listed in the bellow sections Previous Courses and Related Courses

Good understanding of TCP/IP and DNS technologies

Course outline

Transformation Planning

Project Selection

Team Structures

Migrating to Azure DevOps

What is Source Control

Benefits of Source Control

Types of Source Control Systems

Introduction to Azure Repos

Introduction to GitHub

Migrating from Team Foundation Version Control (TFVC) to Git in Azure Repos

Authenticating to Git in Azure Repos

How to Structure your Git Repo

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Git Branching Workflows

Collaborating with Pull Requests in Azure Repos

Why care about GitHooks

Fostering Inner Source

Packaging Dependencies

Package Management

Migrating and Consolidating Artifacts

The concept of pipelines in DevOps

Azure Pipelines

Evaluate use of Hosted vs Private Agents

Agent Pools

Pipelines and Concurrency

Azure DevOps and Open Source Projects (Public Projects)

Azure Pipelines YAML vs Visual Designer

Continuous Integration Overview

Implementing a Build Strategy

Integration with Azure Pipelines

Integrate External Source Control with Azure Pipelines

Set Up Private Agents

Analyze and Integrate Docker Multi-Stage Builds

Introduction to Security

Implement secure and compliant development process

Rethinking application config data

Manage secrets, tokens, and certificates

Implement tools for managing security and compliance in a pipeline

Managing Code Quality

Managing Security Policies

Implementing a Container Build Strategy

Package security

Open source software

Integrating license and vulnerability scans

Implement a versioning strategy (git version)

Introduction to Continuous Delivery

Release strategy recommendations

Building a High-Quality Release pipeline

Choosing a deployment pattern

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Choosing the right release management tool

Create a Release Pipeline

Provision and Configure Environments

Manage and Modularize Tasks and Templates

Integrate Secrets with the release pipeline

Configure Automated Integration and Functional Test Automation

Automate Inspection of Health

Introduction to Deployment Patterns

Implement Blue Green Deployment

Feature Toggles

Canary Releases

Dark Launching

AB Testing

Progressive Exposure Deployment

Implement Tools to Track System Usage, Feature Usage, and Flow

Implement Routing for Mobile Application Crash Report Data

Develop Monitoring and Status Dashboards

Integrate and Configure Ticketing Systems

Introduction to Mobile DevOps

Introduction to Visual Studio App Center

Manage mobile target device sets and distribution groups

Manage target UI test device sets

Provision tester devices for deployment

Create public and private distribution groups

Infrastructure as Code and Configuration Management

Create Azure Resources using ARM Templates

Create Azure Resources using Azure CLI

Create Azure Resources by using Azure PowerShell

Desired State Configuration (DSC)

Azure Automation with DevOps

Additional Automation Tools

Deployment Modules and Options

Azure Infrastructure-as-a-Service (IaaS) Services

Azure Platform-as-a-Service (PaaS) services

Serverless and HPC Computer Services

Azure Service Fabric

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Azure Kubernetes Service

Chef

Puppet

Ansible

Terraform

Security and Compliance Principles with DevOps

Azure security Center

The inner loop

Continuous Experimentation mindset

Design practices to measure end-user satisfaction

Design processes to capture and analyze user feedback

Design process to automate application analytics

Site Reliability Engineering

Analyze telemetry to establish a baseline

Perform ongoing tuning to reduce meaningless or non-actionable alerts

Analyze alerts to establish a baseline

Blameless Retrospectives and a Just Culture

Preparation for Microsoft certification

Most Microsoft certification exams do not require students to attend an official MOC course in order to pass the exam.

This applies to all certifications except for MCM

Official Microsoft MOC courses as well as our own GOC courses are good ways of preparation for Microsoft certifications such as MCP, MTA, MCSA, MCSE or MCM

This does not mean that official MOC courses would serve as the only necessary praparation. The primary goal of an MOC course is to provide for sufficient theoretical knowledge and practical experience to effectively work with the related product

MOC courses usually cover most of the topics required by their respective certification exams, but often do not give every topic the same amount of time and emphassis as may be required to completelly pass the exam.

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