

AZ-400: Designing and Implementing Microsoft DevOps Solution



Introduction

- Microsoft DevOps Course Introduction

Get Started on a DevOps Transformation Journey

- Learning Material - Introduction to DevOps
- Introduction to DevOps
- Choose the right project
- Describe team structures
- Choose the DevOps tools
- Plan Agile with GitHub Projects and Azure Boards
- Introduction to source control
- Describe types of source control systems
- Work with Azure Repos and GitHub
- Setting up Lab Environment

Deployment of Enterprise Devops

- Learning Material - Development for enterprise DevOps
- Structure your Git Repo
- Manage Git branches and workflows
- Collaborate with pull requests in Azure Repos
- Explore Git hooks
- Plan foster inner source
- Manage Git repositories
- Identify technical debt

Implement With CI with Azure Pipelines & Github Actions

- Learning Material - Implement CI with Azure Pipelines and GitHub Actions
- Explore Azure Pipelines
- Manage Azure Pipeline agents and pools
- Describe pipelines and concurrency
- Explore Continuous integration
- Implement a pipeline strategy
- Integrate with Azure Pipelines
- Introduction to GitHub Actions
- Learn continuous integration with GitHub Actions
- Design a container build strategy
- Configuring Agent Pools and Understanding Pipeline Styles
- Enabling Continuous Integration with Azure Pipelines
- Implementing GitHub Actions for CICD
- Deploying Docker containers to Azure App Service web apps

Design & Implement a Release Strategy

- Learning Material - Design and implement a release strategy
- Introduction to continuous delivery
- Create a release pipeline
- Explore release strategy recommendations
- Provision and test environments
- Manage and modularize tasks and templates
- Multi-stage YAML
- Automate inspection of health
- Controlling Deployments using Classic Release Gates

Implement a Secure Continuous Deployment Using Azure Pipelines

- 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 AB testing and progressive exposure deployment
- Integrate with identity management systems
- Manage application configuration data
- Configuring Pipelines as Code with YAML
- Setting Up and Running Tests
- Integrating Azure Key Vault with Azure DevOps
- Enable Dynamic Configuration and Feature Flags

Manage Infrastructure as Code Using Azure & DSC

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

Implement Security & Validate Code Basis for Compliance

- Learning Material - Implement security and validate code bases for compliance
- Module 01 Introduction to Secure DevOps
- Module 02 Implement open-source software
- Module 03 Software Composition Analysis
- Static analyzers
- Module 05 OWASP and Dynamic Analyzers
- Module 06 Security Monitoring and Governance
- Implement Security and Compliance in an Azure DevOps pipeline
- Managing technical debt with SonarCloud and Azure DevOps

Design & Implement a Dependency Management Strategies

- Learning Material - Design and implement a dependency management strategy
- Module 01 Explore package dependencies
- Module 02 Understand package management
- Module 03 Migrate, consolidating and secure artifacts
- Module 04 Implement a versioning strategy
- Introduction to GitHub Packages
- Package Management with Azure Artifacts

Implement Continuous Feedback

- Learning Material - 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
- Monitor Application Performance with Azure Load Testing
- Sharing Team Knowledge using Azure Project Wikis

**THANK YOU
CONGRATULATION**