AZ-400T00: Designing and Implementing Microsoft DevOps solutions

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

Objectives

- Plan for the transformation with shared goals and timelines

- Select a project and identify project metrics and Key Performance Indicators (KPI's)

- Create a team and agile organizational structure

- Design a tool integration strategy

- Design a license management strategy (e.g., Azure DevOps and GitHub users)

- Design a strategy for end-to-end traceability from work items to working software

- Design an authentication and access strategy

- Design a strategy for integrating on-premises and cloud resources

- Describe the benefits of using Source Control

- Describe Azure Repos and GitHub

- Migrate from TFVC to Git

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

- Build organizational knowledge on code quality

- Explain how to structure Git repos

- Describe Git branching workflows

- Leverage pull requests for collaboration and code reviews

- Leverage Git hooks for automation

- Use Git to foster inner source across the organization

- Explain the role of Azure Pipelines and its components

- Configure Agents for use in Azure Pipelines

- Explain why continuous integration matters

- Implement continuous integration using Azure Pipelines

- Design processes to measure end-user satisfaction and analyze user feedback

- Design processes to automate application analytics

- Manage alerts and reduce meaningless and non-actionable alerts

- Carry out blameless retrospectives and create a just culture

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

- Implement compliance and security in your application infrastructure

- Describe the potential challenges with integrating open-source software

- Inspect open-source software packages for security and license compliance

- Manage organizational security and compliance policies

- Integrate license and vulnerability scans into build and deployment pipelines

- Configure build pipelines to access package security and license ratings

Audience

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

Topics

- Planning for DevOps

- Getting started with Source Control

- Scaling Git for enterprise DevOps

- Consolidating Artifacts & Designing a Dependency Management Strategy

- Implementing Continuous Integration with Azure Pipelines

- Managing Application Config and Secrets

- Managing Code Quality and Security Policies

- Implementing a Container Build Strategy

- Manage Artifact versioning, security & compliance

- Design a Release Strategy

- Set up a Release Management Workflow

- Implement an appropriate deployment pattern