

Implementing DevOps Development Processes (AZ-400.1)

Modality: On Demand

Duration: 8 Hours

This course prepares you for the AZ-400 Exam leading to AZ-400 Certification. This course does not include the Official Exam Voucher, however, you can request to purchase the **Official Exam Voucher** separately.

About this course:

This course provides the knowledge and skills to implement DevOps processes. Students will learn how to use source control, scale Git for an enterprise, and implement and manage build infrastructure.

Course Objective:

- How to implement source control strategies and repositories
- How to scale Git for Enterprise DevOps
- How to implement and manage a build infrastructure
- How to manage application configuration and secrets
- How to implement a mobile DevOps Strategy

Audience:

- Agile Developer
- DevOps

Prerequisite:

- Students should have fundamental knowledge about Azure, version control, Agile software development, and core software development principles. It would be helpful to have experience in an organization that delivers software.
- It is recommended that you have experience working in an IDE, as well as some knowledge of the Azure portal. However, students who may not have a technical background in these technologies, but who are curious about DevOps practices as a culture shift, should be able to follow the procedural and expository explanations of continuous integration regardless.

Course Outline:

Getting Started with Source Control

- What is Source Control
- Benefits of Source Control
- Types of Source Control Systems

- Introduction Azure Repos
- Migrating from TFVC Git
- Authenticating Your Git Repos
- Module 1 Review Questions

Scaling Git for Enterprise DevOps

- How Structure Your Git Repo
- Git Branching Workflows
- Collaborating with Pull Requests
- Why Care About GitHooks
- Fostering Internal Open Source
- Git Version
- Public Projects
- Files in Git
- Module 2 Review Questions

Implement & Manage Build Infrastructure

- The Concept of Pipelines in DevOps
- Azure Pipelines
- Evaluate Use of Hosted vs Private Agents
- Agent Pools
- Pipelines & Concurrency
- Azure DevOps and Open Source Projects
- Azure Pipelines YAML vs Visual Designer
- Setup Private Agents
- Integrate Jenkins with Azure Pipelines
- Integration External Source Control with Azure Pipelines
- Analyze & Integrate Docker Multi-stage Builds
- Module 3 Review Questions

Managing Application Config and Secrets

- Introduction Security
- Implement Secure & Compliant Development Processes
- Rethinking Application Config Data
- Manage Secrets, Tokens & Certificates
- Implement Tools for Managing Security and Compliance
- Module 4 Review Questions

Implement a Mobile DevOps Strategy

- Introduction Mobile DevOps
- Introduction 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
- Module 5 Review Questions

Course Completion

- Final Exam