

## AZ-400T01-A: Implementing DevOps Development Processes

### OBJECTIVE

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 TOPICS

#### Module 1: Getting started with Source Control

##### Lessons

- What is Source Control?
- Benefits of Source Control
- Types of Source Control systems
- Introduction to Azure Repos
- Migrating from Team Foundation Version Control (TFVC) to Git
- Authenticating to your Git Repos

After completing this module, students will be able to:

- Describe the benefits of using Source Control
- Migrate from TFVC to Git

#### Module 2: Scaling git for enterprise DevOps

##### Lessons

- How to 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

After completing this module, students will be able to:

- Scale Git for Enterprise DevOps

#### Module 3: Implement & Manage Build Infrastructure

##### Lessons

- 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

- Azure Pipelines YAML vs Visual Designer
- Setup private agents
- Integrate Jenkins with Azure Pipelines
- Integration external source control with Azure Pipelines
- Analyze and integrate Docker multi-stage builds

After completing this module, students will be able to:

- Implement and manage build infrastructure

#### **Module 4: Managing application config & secrets**

##### **Lessons**

- 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

After completing this module, students will be able to:

- Manage application config and secrets

#### **Module 5: Implement a mobile DevOps strategy**

##### **Lessons**

- 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

After completing this module, students will be able to:

- Implement a mobile DevOps strategy

### **PREREQUISITES**

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.

### **TRAINING APPROACH**

This course includes lectures, course notes, exercises and hands-on practice.

### **COURSE DURATION**

Bundle course in 4 days

Time: 9:00am to 6:00pm

Lunch Time: 1:00pm to 2:00pm

### **CERTIFICATION COMPLETION**

A certificate of completion is provided for all trainees attending the course.