

## AZ-2008: DevOps foundations: The core principles and practices

Course Code: AZ-2008

Duration: 1 day

Instructor-led Training (ILT) | Virtual Instructor-led Training (VILT)

### OVERVIEW

Explore DevOps practices using GitHub. Your development and operations teams will experience improved collaboration, agility, continuous integration, continuous delivery, automation, and operational excellence throughout all phases of the application lifecycle.

### SKILLS COVERED

- Discover DevOps
- Plan with DevOps
- Develop with DevOps
- Deliver with DevOps
- Operate with DevOps

### WHO SHOULD ATTEND?

- Beginner
- Administrator
- Developer
- DevOps Engineer
- Security Engineer
- Security Operations Analyst
- Solution Architect
- Student
- Support Engineer

### PREREQUISITES

- An Azure Subscription. You need to bring your own subscription.
- Basic familiarity with IT terms and concepts.

## MODULES

### Module 1: Discover DevOps

Optimize application lifecycle management through DevOps practices such as collaboration, continuous learning, agility, and automation. Your organization benefits from accelerated time to market, stability and reliability in operations, and minimize mean time to recovery.

#### Learning objectives

Upon completion of this module, you'll be able to:

- Describe the DevOps approach.
- Explore best practices for fostering DevOps culture.
- Identify DevOps goals and benefits.
- Understand the DevOps application lifecycle.

#### Prerequisites

- Basic familiarity with IT terms and concepts

### Module 2: Plan with DevOps

Plan your software development projects agilely using GitHub Projects boards. You'll facilitate collaboration, shared responsibility, continuous learning, and optimization through version control, continuous integration and continuous testing, and Infrastructure as Code.

#### Learning objectives

Upon completion of this module, you'll be able to:

- Describe the components of and the path to a DevOps culture.

- Define the frameworks and methods of the Agile methodology.
- Implement DevOps practices.
- Use GitHub to plan a project.

#### Prerequisites

- Basic familiarity with IT terms and concepts

### Module 3: Develop with DevOps

Streamline updates to your software development projects by applying version control with Git and GitHub. Your software lifecycle improves through the implementation of continuous integration, shift-left testing, and shift-left security.

#### Learning objectives

Upon completion of this module, you'll be able to:

- Define source control and version control.
- Describe how to manage source control with Git.
- Describe how to manage source control with GitHub Flow.
- Define the concept of continuous integration.
- Explore DevOps shift-left testing scenarios.
- Explore DevOps shift-left security scenarios.

#### Prerequisites

- Basic familiarity with IT terms and concepts

### Module 4: Deliver with DevOps

Build and run continuous integration and continuous delivery workflows using GitHub Actions. Your workflows will have accelerated release cycles, increased resiliency, improved collaboration and reusability, and infrastructure as code.

#### Learning objectives

Upon completion of this module, you'll be able to:

- Define the concept of continuous delivery.
- Describe the concept and implementation methods of IaC.
- Review the progressive exposure techniques and deployment practices.
- Explore DevOps shift-right testing scenarios.
- Describe how to implement continuous delivery with GitHub Actions.

#### Prerequisites

- Basic familiarity with IT terms and concepts

### Module 5: Operate with DevOps

Achieve operational excellence and enhance developer experience in your organization through DevOps. Your operational and development practices improve by implementing shift-right testing, observability through performance and security monitoring, Site Reliability Engineering and platform engineering.

#### Learning objectives

Upon completion of this module, you'll be able to:

- Explore the concepts of operational excellence.
- Review infrastructure and application monitoring solutions.
- Review infrastructure and application security monitoring solutions.
- Describe the correlation between SRE and DevOps.

#### Prerequisites

- Basic familiarity with IT terms and concepts

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