

# GitHub fundamentals - Administration basics and product features

The training covers essential tools, workflows, and support strategies for efficient collaboration, automation, and governance within GitHub Enterprise environments. Through a practical approach, participants will gain comprehensive knowledge of running GitHub Enterprise at scale - from initial setup to advanced workflow automation and security hardening. The training is authorized by Microsoft.



## Training recipients

- DevOps Engineers looking to streamline support escalation, automate administrative tasks with GitHub APIs, and optimize CI/CD pipelines across enterprise environments
- Developers seeking to build secure, consistent workflows, extend GitHub's capabilities with Marketplace integrations, and enhance team productivity
- Solution Architects interested in scaling collaboration through Enterprise Teams and Apps, improving governance, and designing resilient, automated development infrastructures



## Benefits

- Enterprise-level GitHub management - You'll learn to effectively manage GitHub Enterprise environments at scale
- Security and compliance mastery - You'll gain skills in implementing secure workflows, managing permissions, and ensuring compliance across the enterprise
- Automation expertise - You'll master CI/CD pipeline creation and workflow automation using GitHub Actions
- Support readiness - You'll learn to build support bundles, triage incidents, and make informed

escalation decisions

- Integration capabilities – You'll understand how to extend GitHub functionality through APIs, Marketplace Apps, and custom Actions



## Training program

1. Introduction to GitHub
  - Introduction
  - What is GitHub?
  - Components of the GitHub flow
  - GitHub is a collaborative platform
  - GitHub platform management
  - Exercise – A guided tour of GitHub
2. Introduction to GitHub administration
  - Introduction
  - What is GitHub administration?
  - How does GitHub authentication work?
  - How does GitHub organization and permissions work?
  - Managing enterprise access, permissions, and governance
3. Introduction to GitHub's products
  - Introduction
  - GitHub accounts and plans
  - GitHub Mobile and GitHub Desktop
  - GitHub billing
  - License Usage Stats
  - Metered Usage Reports
4. Maintain a secure repository by using GitHub best practices
  - Introduction
  - How to maintain a secure GitHub repository
  - Automated security
  - Exercise – Add a .gitignore file
5. Manage sensitive data and security policies within GitHub
  - Introduction
  - Setting security policies
  - Create and manage repository rulesets
  - Reporting and logging
  - Exercise – Remove commit history
6. Authenticate and authorize user identities on GitHub
  - Introduction

- User identity and access management
  - User authentication
  - User authorization
  - Team synchronization
7. GitHub administration for enterprise support and adoption
- Introduction
  - GitHub Enterprise features
  - Support for GitHub Enterprise
  - Scale your enterprise deployment
  - GitHub Enterprise Managed Users
8. Manage GitHub Actions in the enterprise
- Introduction
  - Understanding GitHub Enterprise models
  - Manage actions and workflows
  - Control access and usage of actions
  - Managing reusable components
  - Manage runners
  - Configure self-hosted runners
  - Manage encrypted secrets
  - Exercise – Use repository secrets in workflows
9. Leverage GitHub Actions to publish to GitHub Packages
- Introduction
  - What is GitHub Packages?
  - Publish to GitHub Packages and Container Registry
  - Exercise – Publish to GitHub Packages registry
  - GitHub Packages for code packages



## Expected preparation of the participant

- Basic understanding of software development concepts and experience with at least one programming/scripting language
- Familiarity with GitHub, including version control workflows (branching, pull requests)
- General knowledge of enterprise environments and development at scale
- Experience with IDEs and collaborative development tools
- Working knowledge of CI/CD practices



## Training Includes

- manual in electronic form available on the platform: <https://learn.microsoft.com/pl-pl/training/>
- access to Altkom Akademia's student portal

Training method:

- Lecture (90%)
- Interactive Knowledge Checks (10%)



## Language

- Training: English
- Materials: English

## Examination method

On-line exam. Record at <https://home.pearsonvue.com/Clients/Microsoft.aspx>

## Duration

1 days / 8 hours

## Examination description

GitHub Administration

Exam

URL: <https://learn.microsoft.com/en-us/credentials/certifications/github-administration/?practice-assessment-type=certification>