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

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Examination description

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