training code: GH-500 / ENG DL 1d / EN

GitHub Advanced Security

The training provides a comprehensive overview of GitHub Advanced Security (GHAS), focusing on its integral features such as secret scanning, code scanning, and Dependabot. It covers key aspects of implementing and managing security measures within organizations, emphasizing the role of GHAS in identifying and mitigating security vulnerabilities early in the software development lifecycle. The course is authorized by Microsoft

Training recipients

- Security professionals responsible for implementing and managing security measures within their organization
- Developers looking to deepen their knowledge of advanced security features in GitHub
- IT specialists who want to effectively use GitHub Advanced Security to enhance codebase and development workflow security

Benefits

- Comprehensive security knowledge – You'll gain deep understanding of GitHub Advanced Security features and their practical implementation
- Enhanced vulnerability detection – You'll learn how to effectively use secret scanning, code scanning and Dependabot to identify security issues early
- Practical security implementation – Through hands-on exercises you'll gain experience in configuring and managing security features
- Real-world application – You'll learn best practices and workflows that can be immediately applied to improve your organization's security posture

Training program

1. Introduction to GitHub Advanced Security
   - Introduction
   - Define GHAS and the importance of its integral features
   - How to utilize GHAS to get the most impact
   - Understand GHAS and its role in the security ecosystem
2. Configure Dependabot security updates on your GitHub repo
   - Introduction
   - Manage your dependencies on GitHub
   - Dependabot alerts
   - Dependabot security updates
   - Manage Dependabot notifications and reports
   - Dependency review
   - Exercise – Configure Dependabot security updates
3. Configure and use secret scanning in your GitHub repository
   - Introduction
   - What is secret scanning?
   - Configure secret scanning
   - Use secret scanning
   - Exercise – Introduction to secret scanning
4. Configure code scanning on GitHub
   - Introduction
   - What is code scanning?
   - Enable code scanning with third party tools
   - Configure code scanning
   - Exercise – Configure code scanning
5. Identify security vulnerabilities in your codebase by using CodeQL
   - Introduction
   - Prepare a database for CodeQL
   - Run CodeQL in a database
   - Understand CodeQL results
   - Troubleshoot CodeQL results
6. Code scanning with GitHub CodeQL
   - Introduction
   - What is CodeQL?
   - How does CodeQL analyze code?
   - What is QL?
   - Code scanning and CodeQL
   - Customize your code scanning workflow with CodeQL – Part 1

- Exercise – Reference a CodeQL query
- Customize your code scanning workflow with CodeQL – Part 2
- Use the CodeQL CLI
- Customize languages and builds for code scanning
- Exercise – Configure a CodeQL language matrix

7. GitHub administration for GitHub Advanced Security
   - Introduction
   - What is GitHub Advanced Security?
   - Enable GitHub Advanced Security
   - Manage access to GitHub Advanced Security
   - Manage the GitHub Advanced Security features and alerts
8. Manage sensitive data and security policies within GitHub
   - Introduction
   - Setting security policies
   - Create and manage repository rulesets
   - Reporting and logging
   - Exercise – Removing a commit from the git history

Expected preparation of the participant

- The participant must have a GitHub account.
- Experience in using and administering GitHub repositories
- Experience working with Microsoft Azure services
- Technical skills in code scanning, dependency management, and secret scanning
- Familiarity with tools like CodeQL and Dependabot
- Intermediate knowledge of Git and GitHub functions and features

To increase the comfort of work and training's effectiveness we suggest using an additional monitor. The lack of additional monitor does not exclude participation in the training, however, it significantly influences the comfort of work during classes.
You can find information and requirements of participation in Distance Learning trainings at:
https://www.altkomakademia.pl/en/how-it-works/about-courses/

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 (70%)
- Exercises (30%)

Language

- Training: English
- Materials: English

Examination method

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

Duration

1 days / 7 hours

Examination description

GitHub Advanced Security
Exam
URL:https://learn.microsoft.com/en-us/credentials/certifications/github-advanced-security/?practice-assessment-type=certification