Microsoft

Security Development Lifecycle & Web Application Security

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Workshop*PLUS*

Target Audience:
Security requires a broad and holistic view of a system and often requires in-depth understanding of how individual pieces of a system work. This workshop presents a 300-level security content targeting technical roles involved in building software such as architects, developers, testers, designers, and also people who manage software development teams and software development processes.

Overview

Building secure software must be on the mind of anyone who develops software. Attention to security must be visible and an essential part of the Application Lifecycle Management. Consequences of lack of or insufficient security can be severe from loss of money to tarnished reputation of a company.
The Security Development Lifecycle (SDL) and Web Application Security workshop is a 4-day instructor-led training course that covers practices involved in developing secure software. The course is divided into 2 parts:

- **Security Development Lifecycle (2-days):** covers in detail the software development security assurance process consisting of security practices.
- **Web Application Security (2-days):** goes in detail each of the top 10 OWASP (The Open Web Application Security Project) security threats explaining what the threat is and how to protect against it.

Key Features and Benefits

Participants will learn essential activities and practices to design and develop secure software and test for security. They will also understand top security vulnerabilities and how to protect against them. With the knowledge and awareness gained in this course, the participants should develop and deliver secure software by introducing the Security Development Lifecycle into their processes, understanding the nature of security vulnerabilities, and helping create a security conscious organization.

Technical Highlights

After completing this course, you will be able to:

- Understand the Security Development Lifecycle (SDL)
- Understand secure design, implementation, and testing for security
- Design, develop, and test for security
- Learn Threat Modeling and STRIDE to understand threats
- Learn top 10 security vulnerabilities and how to protect against them
- Use SDL in Application Lifecycle Management with Team Foundation Server

Syllabus

Hardware & Software Requirements:

- *Visual Studio 2010 SP1*
- *C++ Compiler*
- *Visual Studio Team Foundation Server 2010*
- *IIS 7.x*
- *SDL Threat Modeling Tool*
- *Visio 2007 or later*
- *Windows 7 and up*

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Module 1: Introduction to Security Threats and SDL Concepts: This module underlines the importance of security and the consequences of security vulnerabilities. It then proceeds to introduce the Security Development Lifecycle process to explain what it is and how it helps build more secure software.

Module 2: Secure Design Principles: Fundamental principles such as threat modeling, defense in depth, least privilege, and others are covered to make security and privacy an integral and permanent part of the design phase.

Module 3: SDL Threat Modeling Principles: SDL threat modeling process and the threat modelling tool are covered in detail.

Module 4: Secure Implementation Principles: This module lists and goes into detail some of the most common programming practices that lead to security vulnerabilities.

Module 5: Security Verification Principles: In this module, various testing techniques and tools are discussed to uncover threats and vulnerabilities and ensure software meets the security requirements and the measurements put in place works.

Module 6: SDL in Application Lifecycle Management with TFS: Microsoft provided free MSF-Agile + SDL process template for Team Foundation Server incorporates the policy, process, and tools associated with SDL into TFS. This modules introduces the process template and how to manage SDL with TFS.

Module 7: Web Application Security: Each of the top 10 OWASP security threats is explained with demos, hands-on labs and how to protect against.