

OWASP Testing: XSS, SQL Injection & CSRF

5

MODULES

114

TOPICS

LEARNING OBJECTIVES

- Explain the principles and techniques of security testing
- Describe the phases of the OWASP Testing Framework across the SDLC
- Apply information gathering to fingerprint servers and applications
- Assess configuration and deployment for information exposure
- Analyse authentication and session management mechanisms for weaknesses
- Identify input validation flaws such as XSS and SQL injection
- Evaluate business logic and client-side flaws including CSRF
- Interpret error handling and cryptographic weaknesses in applications

5 Modules, 114 Topics

01

Frontispiece

TOPICS

- About the OWASP Testing Guide Project
- About The Open Web Application Security Project

02

Introduction

TOPICS

- The OWASP Testing Project
- Principles of Testing
- Testing Techniques Explained
- Deriving Security Test Requirements
- Security Tests Integrated in Development and Testing Workflows
- Security Test Data Analysis and Reporting

03

The OWASP Testing Framework

TOPICS

- Overview
- **Phase 1:** Before Development Begins
- **Phase 2:** During Definition and Design
- **Phase 3:** During Development
- **Phase 4:** During Deployment
- **Phase 5:** Maintenance and Operations
- A Typical SDLC Testing Workflow

Web Application Security Testing

CHAPTER 1: INTRODUCTION AND OBJECTIVES

- Testing Checklist
- Information Gathering
- Conduct Search Engine Discovery and Reconnaissance for Information Leakage (INFO-001)
- Fingerprint Web Server (OTG-INFO-002)
- Review Webserver Metafiles for Information Leakage (OTG-INFO-003)
- Enumerate Applications on Webserver (OTG-INFO-004)
- Review Webpage Comments and Metadata for Information Leakage (OTG-INFO-005)
- Identify application entry points (OTG-INFO-006)
- Map execution paths through application (OTG-INFO-007)
- Fingerprint Web Application Framework (OTG-INFO-008)
- Fingerprint Web Application (OTG-INFO-009)
- Map Application Architecture (OTG-INFO-010)

CHAPTER 2: CONFIGURATION AND DEPLOYMENT MANAGEMENT TESTING

- Test Network/Infrastructure Configuration (OTG-CONFIG-001)
- Test Application Platform Configuration (OTG-CONFIG-002)
- Test File Extensions Handling for Sensitive Information (OTG-CONFIG-003)
- Review Old, Backup and Unreferenced Files for Sensitive Information (OTG-CONFIG-004)
- Enumerate Infrastructure and Application Admin Interfaces (OTG-CONFIG-005)
- Test HTTP Methods (OTG-CONFIG-006)
- Test HTTP Strict Transport Security (OTG-CONFIG-007)
- Test RIA cross domain policy (OTG-CONFIG-008)

CHAPTER 3: IDENTITY MANAGEMENT TESTING

- Test Role Definitions (OTG-IDENT-001)
- Test User Registration Process (OTG-IDENT-002)
- Test Account Provisioning Process (OTG-IDENT-003)
- Testing for Account Enumeration and Guessable User Account (OTG-IDENT-004)
- Testing for Weak or unenforced username policy (OTG-IDENT-005)

Web Application Security Testing (continued)

CHAPTER 4: AUTHENTICATION TESTING

- Testing for Credentials Transported over an Encrypted Channel (OTG-AUTHN-001)
- Testing for default credentials (OTG-AUTHN-002)
- Testing for Weak lock out mechanism (OTG-AUTHN-003)
- Testing for bypassing authentication schema (OTG-AUTHN-004)
- Test remember password functionality (OTG-AUTHN-005)
- Testing for Browser cache weakness (OTG-AUTHN-006)
- Testing for Weak password policy (OTG-AUTHN-007)
- Testing for Weak security question/answer (OTG-AUTHN-008)
- Testing for weak password change or reset functionalities (OTG-AUTHN-009)
- Testing for Weaker authentication in alternative channel (OTG-AUTHN-010)

CHAPTER 5: AUTHORIZATION TESTING

- Testing Directory traversal/file include (OTG-AUTHZ-001)
- Testing for bypassing authorization schema (OTG-AUTHZ-002)
- Testing for Privilege Escalation (OTG-AUTHZ-003)
- Testing for Insecure Direct Object References (OTG-AUTHZ-004)

CHAPTER 6: SESSION MANAGEMENT TESTING

- Testing for Bypassing Session Management Schema (OTG-SESS-001)
- Testing for Cookies attributes (OTG-SESS-002)
- Testing for Session Fixation (OTG-SESS-003)
- Testing for Exposed Session Variables (OTG-SESS-004)
- Testing for Cross Site Request Forgery (CSRF) (OTG-SESS-005)
- Testing for logout functionality (OTG-SESS-006)
- Test Session Timeout (OTG-SESS-007)
- Testing for Session puzzling (OTG-SESS-008)

Web Application Security Testing (continued)

CHAPTER 7: INPUT VALIDATION TESTING

- Testing for Reflected Cross Site Scripting (OTG-INPVAL-001)
- Testing for Stored Cross Site Scripting (OTG-INPVAL-002)
- Testing for HTTP Verb Tampering (OTG-INPVAL-003)
- Testing for HTTP Parameter pollution (OTG-INPVAL-004)
- Testing for SQL Injection (OTG-INPVAL-005)
- Oracle Testing
- MySQL Testing
- SQL Server Testing
- MS Access Testing
- Testing for NoSQL injection
- Testing for LDAP Injection (OTG-INPVAL-006)
- Testing for ORM Injection (OTG-INPVAL-007)
- Testing for XML Injection (OTG-INPVAL-008)
- Testing for SSI Injection (OTG-INPVAL-009)
- Testing for XPath Injection (OTG-INPVAL-010)
- IMAP/SMTP Injection (OTG-INPVAL-011)
- Testing for Code Injection (OTG-INPVAL-012)
- Testing for Local File Inclusion
- Testing for Remote File Inclusion
- Testing for Command Injection (OTG-INPVAL-013)
- Testing for Buffer overflow (OTG-INPVAL-014)
- Testing for Heap overflow
- Testing for Stack overflow
- Testing for Format string
- Testing for incubated vulnerabilities (OTG-INPVAL-015)
- Testing for HTTP Splitting/Smuggling (OTG-INPVAL-016)

CHAPTER 8: TESTING FOR ERROR HANDLING

- Analysis of Error Codes (OTG-ERR-001)
- Analysis of Stack Traces (OTG-ERR-002)

CHAPTER 9: TESTING FOR WEAK CRYPTOGRAPHY

- Testing for Weak SSL/TLS Ciphers, Insufficient Transport Layer Protection (OTG-CRYPST-001)
- Testing for Padding Oracle (OTG-CRYPST-002)
- Testing for Sensitive information sent via unencrypted channels (OTG-CRYPST-003)

Web Application Security Testing (continued)

CHAPTER 10: BUSINESS LOGIC TESTING

- Test Business Logic Data Validation (OTG-BUSLOGIC-001)
- Test Ability to Forge Requests (OTG-BUSLOGIC-002)
- Test Integrity Checks (OTG-BUSLOGIC-003)
- Test for Process Timing (OTG-BUSLOGIC-004)
- Test Number of Times a Function Can be Used Limits (OTG-BUSLOGIC-005)
- Testing for the Circumvention of Work Flows (OTG-BUSLOGIC-006)
- Test defence Against Application Misuse (OTG-BUSLOGIC-007)
- Test Upload of Unexpected File Types (OTG-BUSLOGIC-008)
- Test Upload of Malicious Files (OTG-BUSLOGIC-009)

CHAPTER 11: CLIENT SIDE TESTING

- Testing for DOM based Cross Site Scripting (OTG-CLIENT-001)
- Testing for JavaScript Execution (OTG-CLIENT-002)
- Testing for HTML Injection (OTG-CLIENT-003)
- Testing for Client Side URL Redirect (OTG-CLIENT-004)
- Testing for CSS Injection (OTG-CLIENT-005)
- Testing for Client Side Resource Manipulation (OTG-CLIENT-006)
- Test Cross Origin Resource Sharing (OTG-CLIENT-007)
- Testing for Cross Site Flashing (OTG-CLIENT-008)
- Testing for Clickjacking (OTG-CLIENT-009)
- Testing Web Sockets (OTG-CLIENT-010)
- Test Web Messaging (OTG-CLIENT-011)
- Test Local Storage (OTG-CLIENT-012)

05

Reporting

WHAT IS INCLUDED

Everything You Need to Succeed

- Koenig course material for every module
- Delivery by certified instructors and subject matter experts
- Hands-on exercises throughout the course
- Course completion certificate from Koenig

ABOUT KOENIG

Who We Are

Established in 1993, Koenig Solutions is a globally recognised training provider with 35+ technology partnerships, 5,000+ training programmes and a network of certified instructors and subject matter experts, supporting individuals and enterprise teams worldwide.

FLEXIBLE DELIVERY

Learn the Way That Suits You

Classroom Training

Live Online Classes (ILO)

Fly-Me-A-Trainer (FMAT)

Flexi (Self-Paced)

1-on-1 Training

Ready to Get Started?

Talk to a learning advisor about schedules, group training and customised delivery.

Visit koenig-solutions.com

✉ info@koenig-solutions.com