

# **.NET Training: Building Secure Applications (SECOWASP, 3 jours)**

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## **Description**

The course Building Secure Applications (.NET Training) teaches you build secure code which is resistant to hacker attacks. As applications become a more and more important part of our professional lives, security vulnerabilities become a key liability. The training includes encryption & message digests, code access security, authentication, session management, authorization and role based security. The course concludes with a study of symmetric % asymmetric encryption together with common hacks and security vulnerabilities such as SQL Injection, XSS scripting & session hijacking to name a few.

## **Tarifs**

- Tarification: \$3,350/person
- Rabais de 10% lorsque vous inscrivez 3 personnes.

## **Plan de cours**

### Introduction and Overview

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What are Web Applications and Web Services?

About the Underlying Technology of Applications and Services

A Few Important Definitions: Risk, Threats and Vulnerabilities

An Overview of Risk Assessment and Management Techniques

About Measuring the Risk

About Dealing with Risk

### Security Guidelines

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Input and Output Validation

About Secure Failure

The Need for Simplicity

Reusing Trusted Components

About Predictive Defence

The Weakest Link Principle

Obscuring Components doesn't make them Secure

About Least Privilege

About Compartmentalization

About the Architecture: Operating System, Infrastructure and Application

Security Architecture of .NET or Java

### Authentication

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Types of Authentication

Overview of Browser Limitations

Certificate Basics: Public Keys, Private Keys and Certificates

Exploring Authentication Types: Basic, Digest, Forms and Certificate Based

Using Cookies for Entity Authentication

Using DNS for Infrastructure Authentication

About Password Based Authentication Systems

Implementing Authentication in .NET or Java

### Managing User Sessions

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All you ever wanted to know about Cookies: Persistence, Security and Usage

All you ever wanted to know about the Session Token

Session Management: Using a Session Timeout

Session Management: Regeneration of Session Token

Session Management: Session Forging or Lockout

Session Management: Re-authentication

Session Management: Session Token Transmission

Session Management: Page Tokens

Session Management: Session Tokens on Logout

Using SSL: The SSL Handshake in Detail

Session Management in .NET or Java

## Access Control

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Discretionary Access Control

Mandatory Access Control

Role Based Access Control

Access Control in .NET or Java

## Event Logging

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The Importance of Logging Events

About Event Management

Logging Events in .NET or Java

## Data Validation

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The Architecture of Data Validation

Why Client Validation should not be relied upon

Validation Techniques: Accept Only Known Valid Data

Validation Techniques: Reject Known Bad Data

Validation Techniques: Sanitize all Data

Overview of Business Tier Validation Techniques in .NET or Java

Overview of Data Tier Validation Techniques in .NET or Java

Implementing a Complete Validation Solution based on Enterprise Technologies

## Preventing Common Problems

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About the Meta Character Problem

About Cross-Site Scripting: Description and Mitigation

Direct SQL Command: Description and Mitigation

Direct OS Command: Description and Mitigation

Path Traversal and Path Disclosure: Description and Mitigation

NULL Bytes: Description and Mitigation

Canonicalization Attacks: Description and Mitigation

URL Encoding: Description and Mitigation

Cookie Manipulation: Description and Mitigation

HTTP Header Manipulation: Description and Mitigation

HTML Form Field Manipulation: Description and Mitigation

URL Manipulation: Description and Mitigation

## Other Problems

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HTML Comments

Vendor Patches

System Configuration

Unused Files

Debug Commands

Default Accounts

## The Need for Privacy

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About Web Browsers and Personal Data

About Shared Web Browsers

Protecting Personal Data

Enhanced Browser Privacy

About Browser History and Related Settings

About Cryptography

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Symmetric versus Asymmetric Cryptography

Public Keys, Private Keys and Certificates

About SSL

About Digital Signatures and Hash Values

Implementing a Complete Cryptographic Solution with .NET or Java