

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

---

## 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

---

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

---

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

---

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

---

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

---

Discretionary Access Control

Mandatory Access Control

Role Based Access Control

Access Control in .NET or Java

## Event Logging

---

The Importance of Logging Events

About Event Management

Logging Events in .NET or Java

## Data Validation

---

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

---

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

---

HTML Comments

Vendor Patches

System Configuration

Unused Files

Debug Commands

Default Accounts

## The Need for Privacy

---

About Web Browsers and Personal Data

About Shared Web Browsers

Protecting Personal Data

Enhanced Browser Privacy

About Browser History and Related Settings

About Cryptography

---

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