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Course : .NET, securing your code

Practical course - 3d - 21h - Ref. NZE
Price : 1940 CHF E.T.

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This practical training course lists the resources and services of the .NET platform for securing code: from cryptography and assembly protection to code obfuscation and secure execution. These techniques and tools are presented in practical hands-on exercises.

Teaching objectives

At the end of the training, the participant will be able to:

- Be able to secure assemblies
- How to secure your C# code
- Securing access to code execution
- Managing encryption in .Net applications

Intended audience

Experienced .Net developers.

Prerequisites

Good knowledge of the C# language.

Course schedule

1 .Net application security

- Definition of code security.
- Types of threats when coding .Net.
- Patterns proposed by Microsoft.
- .Net framework security tools.

PARTICIPANTS

Experienced .Net developers.

PREREQUISITES

Good knowledge of the C# language.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they've developed.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

2 Encryption, certificates and signatures

- Cryptography models and engines.
- Hatching, imprint and signature.
- Symmetrical/asymmetrical encryption.
- Windows encryption API.
- Signature and certificate mechanisms.

Hands-on work
Encrypt/decrypt a message by hashing.

3 .Net code execution security

- Secure access to code via roles (RBS).
- Secure code when elevating privileges.
- Secure critical and transparent access to code (CAS of .net 4).
- Isolated storage environments.

Hands-on work
Implement an elevation of privileges and the related security mechanisms.

4 C# code security

- The problem of exceptions.
- Dangers and management of state sharing in multithreading.
- Securing the interoperability code.
- Access to program execution tampering via System.Reflection.

Hands-on work
Secure examples of C# code in relation to the issues presented.

5 Assembly safety

- Protection against source code tampering.
- Encryption of configuration information.
- Protection of assembly contents.
- Code obfuscation and ecosystem tools.
- Deployment to the GAC.

Hands-on work
Implement DLL signing. Use code obfuscation techniques.

Dates and locations

REMOTE CLASS
2026 : 23 Mar., 15 June, 26 Oct.

TERMS AND DEADLINES
Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES
Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.