

Security in ASP.NET Applications

Course code: GOC3314

Who is the course for The course is designed for developers, administrators and architects of web applications on ASP.NET platform

Required skills Experience with .NET Framework platform

Basic experience with object orientated programming in C# or VB.NET language

Basic experience with development of web application on ASP.NET platform

Teaching methods Instructor-led classroom training with a lot of hands-on labs.

Teaching materials Hands-on lab hand out, printed materials

Course outline Four basic principles of security

Four basic principles of security

A bit of theory on the beginning

Consideration of types of security threats

Revealing of connected problems

Consideration of seriousness of security threats

Ensuring of server platform

Minimization of attack surface

Security Configuration Wizard

Fight against inner enemy

Defence into the depth

Encoding the configuration sections

Ensuring the channel of net communication

How does HTTP protocol work and why is not secure

How does SSL/TLS/HTTPS work

How to apply for web server certificate and how to install it

Quick creation of certificate using the utilities from SDK Platform

Operation of certification authority using Windows Certificate Services

Operation of certification authority using OpenSSL (on the Windows platform and not just there)

Ensuring the application

Identification, authentication, authorization

Security architectures of web application

Accessible mechanism in IIS

How to write your own authentication modul and why not to do it

Forms Authentication in ASPNET

Authentication tickets and their validity

The time of ticket validity versus the lenght of session

Cookie and Cookieless authentication

Login Controls

Static credentials in web.config

Single sign-on within one domain

Saving of passwords

Encoding, hashing, HMAC

E-mail address verification

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Security in ASP.NET Applications

Solving of forgotten password
ASP.NET Membership
Membership providers in ASP.NET
Initial setting
ASP.NET Universal Providers
Use of provider of the third party
Creation of your own membership provider

ASP.NET Roles

Roles of providers in ASP.NET
Creation of your own role of provider

Ensuring the data by encoding

Secrets, ciphers and paranoia in the course of time
Symetric and asymeric encoding, combinations
Handling with keys
Practical implementation of encrypted saving of data in .NET using RSA and AES algorithm and corresponding architectures

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