

Securing .NET Application

Course Description

This advanced class focuses on building secure application in .NET framework. The class will guide you how to implement security in .NET application using security class in .NET framework. .NET provide new technology to run dynamic application that call plug-in that in this class.

Course Level

Advanced

Who should attend?

.NET Developer who want to create the high security application

Pre-requisites

Good understanding of Programming .NET Application and .NET framework

Course Objectives

- Understanding .NET Security Model
- Using Access Control Class
- Encrypt and Decrypt data
- Control Permission on Resources
- Use identity object
- Call COM and API
- Implement Reflection class

Course Durations

18 Hours

Course Outline

1. Implement code access security
CodeAccessPermission class
Modify the Code Access security policy
PermissionSet class
NamedPermissionSet class
PermissionSetCollection class
Standard Security interfaces

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Create Code Access security

2. Implement access control
AccessRule class
AuthorizationRule class
AuditRule class
MutexSecurity class
ObjectSecurity class
SemaphoreSecurity class

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Create Access Control in .NET

3. Implement a custom authentication
Authentication algorithms
SSL protocols

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Create Custom Authentication

4. Encrypt, decrypt, and hash data
DES class
HashAlgorithm class
DSA class
SHA1 class
TripleDES
MD5 class
RSA class
RandomNumberGenerator class
CryptoStream class
CryptoConfig class
RC2 class
AssymmetricAlgorithm class
ProtectedData class
RijndaelManaged
CspParameters class
HMAC

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Encrypt and Decrypt data

5. Control permissions for resources
PrincipalPermission class
FileIOPermission class
StrongNameIdentityPermission class
UIPermission class
UrlIdentityPermission class
PublisherIdentityPermission class
GacIdentityPermission class
FileDialogPermission class
DataProtectionPermission class
EnvironmentPermission class
IUnrestrictedPermission interface
RegistryPermission class

- IsolatedStorageFilePermission class
- KeyContainerPermission class
- ReflectionPermission class
- StorePermission class
- SiteIdentityPermission class
- ZoneIdentityPermission class

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Control Application Permission

6. Control code privileges
ApplicationSecurityInfo class
ApplicationTrust class
Evidence class
CodeGroup class
Condition classes
PolicyLevel class
IApplicationTrustManager interface

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Control Code Privilege

7. Access and modify identity information
GenericIdentity class
WindowsIdentity class
NTAccount class
IIdentity interface and IPrincipal interface
WindowsImpersonationContext class
IdentityReference class

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Access and modify identity

8. Use Certificates in .NET Application
Create and Load Certificates
Use certificates to encrypt and sign data

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Using certificates

Implement Reflection Class

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