

Developing Web Services in .NET

Duration:	3 days
Type:	advanced

Description

This course enables delegates to build Web Services in .NET using Windows Communication Foundation (WCF) in Visual Studio 2008 and above.

Prerequisites

Delegates must have several years C# and XML experience, preferably gained developing ASP .NET Web Applications.

List of Modules

Introduction to Web Services

- Limitations of conventional Web Applications
- Advantages of automating web based services
- Web Services verses distributed method calls
- Using Web Services to interoperate with legacy systems
- Web Services and Service Oriented Architectures

Core Web Service Technologies

- Strengths and weaknesses of messaging over HTTP
- Using SOAP to deliver XML messages and handle faults
- Choosing between RPC and Document based encoding
- Creating WSDL documents to advertise services
- The WS-I and advantages of WS-I Basic Profile
- Deciding if you want to make use of UDDI

Web Services Description Language (WSDL) in Depth

- Defining complex data types using XML Schema
- Using types to define messages and operations
- Combining operations to create port types
- Binding operations and defining services

Core Concepts of Windows Communication Foundation

- Review of existing distributed technologies
- How older technologies are unified in WCF
- The Address / Binding / Contract design of WCF
- Defining service contracts using WSDL
- Bindings which come preconfigured with WCF

Building Basic WCF Applications

- Hosting a service in a console application
- Defining the contracts for the service
- Specifying configuration in code and config files
- Configuring exception handling behavior
- Using the service from .NET and Java clients
- Customizing your service with behaviors

Building Practical WCF Applications

- Hosting WCF services as Windows Services and within IIS
- Choosing between Per Call, Session and Singleton lifecycles
- Taking advantage of one-way and duplex message exchange patterns
- Controlling how data is serialized into XML documents

Advanced WCF Topics

- Hosting multiple endpoints within the same service
- Hosting multiple services within the same process
- Adding security and versioning to your services
- Building WCF Services using the REST Architecture
- Serializing data as JSON for use by AJAX based clients

Developing Interoperable Web Services

- Considerations when developing .NET services for Java clients
- Considerations when developing Java services for C# clients
- Exchanging binary data via attachments to SOAP messages
- Authenticating users and establishing levels of trust