



# Developing XML Web Services Using Microsoft ASP.NET

M2524

3 day

## Overview :

This three-day instructor led course provides delegates with the knowledge and skills that are required to develop XML Web services-based solutions to solve common problems in the distributed application domain. The course focuses on using Microsoft® Visual Studio® .NET, Microsoft ASP.NET, and Universal Description, Discovery, and Integration (UDDI) to enable students to build, deploy, locate, and consume Extensible Markup Language (XML) Web services.

## Target Audience :

This course is intended for experienced software developers who have previously built component-based applications.

## At the end of the course, delegates will be able to:

- Explain how XML Web services emerged as a solution to the problems with traditional approaches to designing distributed applications.
- Describe the architecture of an XML Web services-based solution.
- Describe the underlying technologies of XML Web services and explain how to use the Microsoft .NET Framework to implement XML Web services by using these technologies.
- Implement an XML Web service consumer by using Microsoft Visual Studio .NET.
- Implement a simple XML Web service by using Visual Studio .NET.
- Publish and deploy an XML Web service.
- Secure an XML Web service.
- Implement caching in an XML Web service.
- Evaluate the trade-offs and issues that are involved in designing a real-world XML Web service.
- Implement nonstandard XML Web services such as Hypertext Markup Language (HTML) screen scraping and aggregating XML Web services.

## Course Content :

### The Need for XML Web Services

- Describing the evolution of distributed applications.
- Identifying the problems with traditional distributed application architectures and technologies.
- Describing Web services and briefly explaining how they address the design problems in traditional distributed applications.

### XML Web Service Architectures

- Identifying how Web service architectures are a type of service-oriented architecture.
- Describing the elements of a Web service architecture and explaining their roles.
- Describing the Web service programming model.

### The Underlying Technologies of XML Web Services

- Describing the structures of an HTTP request and response.
- Issuing HTTP POST and GET requests and processing the responses by using the .NET Framework.
- Issuing a SOAP request and processing the response by using the .NET Framework.

### Consuming XML Web Services

- Explaining the structure of a WSDL.
- Explaining the Web services discovery process.
- Locating service contracts by using Disco.exe.
- Generating Web service proxies by using Wsdl.exe.

### Implementing a Simple XML Web Service

- Creating a Web service project.
- Implementing Web service methods.
- Managing state in an ASP.NET-based Web service.
- Debugging Web services.

### Publishing and Deploying XML Web Services

- Explaining the role of UDDI in Web services.
- Searching a UDDI registry to locate Web services by using the UDDI SDK.
- Explaining the various options for publishing a Web service on an intranet.
- Explaining some of the options for modifying the default configuration of a Web service.

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### Securing XML Web Services

- Identifying the differences between authentication and authorization.
- Using SOAP headers for authentication in a Web service.
- Using role-based security and code access security for authorization in a Web service.
- Encrypting the communication between a Web service consumer and a Web service.

### Designing XML Web Services

- Identifying the restrictions that are imposed on data types by the various Web services protocols.
- Explaining how the use of Application and Session state can affect the performance and scaling of Web services.
- Identifying the components of a Web service that can be versioned.
- Explaining how to implement a virtual Web service by using screen scraping.

### Global XML Web Services Architecture

- Describe limitations inherent to the specifications with which today's Web services are built.
- Describe the design principles and specifications of Global XML Web services Architecture (GXA).
- Design Web services that anticipate and can leverage the features that GXA will offer when released

## Course Prerequisites :

Delegates are required to meet the following prerequisites:

- An understanding of how to read and write XML documents.
- Experimented with simple C# applications.
- Developed distributed applications by using Microsoft Visual Basic®, Java, or C++.

## Testing and Certification :

This course will assist delegates preparing for the following exams:

- Developing XML Web Services and Server Components with Microsoft Visual Basic .NET and the Microsoft .NET Framework (Test No: 70-310)
- Developing XML Web Services and Server Components with Microsoft Visual C# and Microsoft and the Microsoft .NET Framework (Test No: 70-320)

## Follow on Courses :

## Further Information :

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