

Programming with XML in the Microsoft .NET Framework

- **Course Number:** 2663
- **Length:** 3 Day(s)

Certification Exam

This course will help you prepare for the following Microsoft Certified Professional exams:

- **MCSD Exam 70–310:** Developing XML Web Services and Server Components with Microsoft Visual Basic .NET and the Microsoft .NET Framework
- **MCSD Exam 70–320:** Developing XML Web Services and Server Components with Microsoft Visual C# and the Microsoft .NET Framework

Course Overview

This three-day course teaches developers how to program with XML in the Microsoft .NET Framework in order to build Microsoft Windows or Web-based integrated applications that are easier to build, scalable, and flexible.

Prerequisites

Before attending this course, students must have:

- Experience with programming languages such as Visual Basic .NET or Microsoft Visual C#.
- Experience using the Microsoft Visual Studio .NET developer environment.
- Experience building applications using the Extensible Stylesheet Language for Transformation (XSLT), XML Path Language (XPath), and XML schemas.

Audience

This course is intended for:

- Programmers who build Web-based or Windows applications that access data
- Programmers who build Web services
- Programmers who build applications that access data stored as XML

This course is not recommended for developers who:

- Want to learn a programming language, such as Microsoft Visual Basic .NET or Microsoft Visual C#
- Want an introduction to XML and related technologies
- Want advanced-level information on developing XML-based applications
- Want to learn how to program by using Microsoft XML Core Services (MSXML), or how to program with XML in Microsoft Internet Explorer 6.0

Course Outline

Level 1

Need for XML Web Services

- 1.1 Distributed Applications Evolution
- 1.2 Distributed Applications Problems
- 1.3 RPC Architectures
- 1.4 Message-Based Architectures
- 1.5 Web Standards

- 1.6 Web Services
- 1.7 Web Technology Stack & .NET
- 1.8 .NET Alternatives to Web Services
- 1.9 Common Web Service Scenarios
- Lab - Skills Measured by Exams
- XML Web Service Architectures
- 2.1 Service - Oriented Architecture
- 2.2 Web Services Architecture
- 2.3 Demonstration
- 2.4 Roles in Web Services Architecture
- 2.5 Web Services Programming Model
- Lab - Electronic Funds Transfer
- Level 2
- Underlying Technologies of XML
- 1.1 HTTP Fundamentals
- 1.2 HTTP Requests & Responses
- 1.3 Using HTTP with .NET Framework
- 1.4 XML Essentials
- 1.5 XSD & XML Documents
- 1.6 XML Serialization in .NET Framework
- 1.7 SOAP Fundamentals
- 1.8 Using SOAP with .net Framework
- 1.9 Lab - HTTP & SOAP in .Net Framework
- Lab - The SOAP Message Format
- Level 3
- Consuming XML Web Services
- 1.1 WSDL Documents
- 1.2 Web Service Discovery
- 1.3 Demonstration - Using Disco.exe
- 1.4 Web Service Proxies
- 1.5 Demonstration - Clients
- 1.6 Demonstration -Web Forms Client
- 1.7 Synchronous & Asynchronous Clients
- 1.8 Lab - XML Consumer via .NET
- Lab - Implementing a Console Client
- Level 4
- Simple XML Web Service
- 1.1 Demonstration - ASP.NET Web Service
- 1.2 Web Service Project Parts
- 1.3 Web Service Methods
- 1.4 Web Service Data Types
- 1.5 Demonstration - Type Data Set
- 1.6 Managing State - ASP.NET Service
- 1.7 Application State
- 1.8 Session State
- 1.9 Debugging Web Services
- 1.10 SOAP Extension Tracing
- 1.11 Demonstration - SOAP Tracing
- 1.12 Web Application Debugging Tools
- 1.13 Lab - XML Web Service
- Lab - Creating a Web Service Project
- Publishing XML Web Services
- 2.1 Deploying Web Services
- 2.2 Demonstration -Web Setup Project
- 2.3 Overview of UDDI
- 2.4 Using UDDI
- Lab - Creating a Web Setup Project
- Level 5
- Securing XML Web Services
- 1.1 Security Overview
- 1.2 Built-In Authentication
- 1.3 Authentication - SOAP Headers
- 1.4 Authorization - Role-Based Security
- 1.5 Authorization - Code Access Security
- 1.6 Encryption
- 1.7 Lab - Building Secure XML Web Service
- Lab - Using IIS Authentication
- Level 6
- Designing XML Web Services

- 1.1 Data Type Constraints
- 1.2 Performance
- 1.3 Reliability
- 1.4 Versioning
- 1.5 Aggregating Web Service
- 1.6 Lab - Aggregate Web Services
- Lab - Output Caching in Web Services
- Global XML Web Services
- 2.1 Web Services Limitations
- 2.2 Introduction to GXA
- 2.3 Routing & Referral
- 2.4 Security & Licensing
- 2.5 Summary