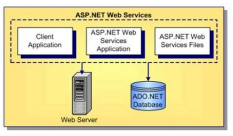
Web Services in .NET

Duration: 4 days **Price: € 2650**

Open Schedule



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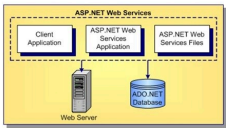

Audience Web Services in .NET Course

This course is intended for developers who want to understand and use .NET WCF Web Services in their applications.

Prerequisites Course Web Services in .NET

To participate in this course knowledge and experience with C# is required and knowledge of ASP.NET is beneficial for a proper understanding.

Realization Training Web Services in .NET

The course has a hands-on nature. The theory is treated on the basis of presentation slides. The theory is interspersed with demos and exercises. The course materials are in English.

Certification Web Services in .NET

Participants receive a certificate Web Services in .NET after successful completion of the course.

Content Course Web Services in .NET

In the course Web Services in .NET participants learn to develop Web Services using Windows Communication Foundation (WCF) and C#. The emphasis is on SOAP services, but attention is also paid to REST Services with the Web API.

WCF Intro

The course Web Services in .NET begins with a discussion of WCF Web Services features. Among other things, the contracts that play a role in this are discussed, such as WCF Contracts, Service Contracts, Data Contracts and Message Contracts.

SOAP and WSDL

Attention is also paid to the fundamentals of the Simple Object Access Protocol (SOAP) and the Web Services Description Language (WSDL) that are essential for creating interoperable Web Services. The SOAP messages from a simple Web Service are intercepted and the WSDL is analyzed.

XML Schema

XML Schema, which defines the content of XML messages in terms of content model and data types, is also discussed. The role of XML Schema in the mapping between XML and C# is covered as well.

Hosting

The various options for hosting WCF Web Services such as self hosting, hosting in Windows services and hosting in IIS are treated.

Contracts

The course Web Services in .NET also covers the techniques for creating and debugging ASP.NET Web services and contracts using Visual Studio .NET and creating Web Services clients using the direct use of the .NET API.

Instance Management

And the possibilities of managing WCF service instances such as per call services, per session services or singleton services are also on the agenda.

Binding

The various protocols over which WCF Web Services can operate, such as HTTP, HTTPS, TCP and UDP, and how to configure them, are treated.

Message Patterns

How WCF Web Services can use various message patterns such as one way, request-reply, callback and sessionfull, is part op the program as well.

Web API REST Services

Finally it is discussed how REST Services, in which JSON Data is sent, are implemented with the Web API.

Modules Course Web Services in .NET

Module 1 : WCF Intro	Module 2 : Web Services Intro	Module 3 : SOAP
WCF versus Web Services	What are Web Services?	What is SOAP?
Endpoints and Addresses	Distributed Applications Evolution	SOAP Protocol Concepts
WS-Addressing	Role of interface	SOAP Messages
WCF Bindings	RPC Example	SOAP Body
Configuring Bindings	Interoperability	SOAP Headers
WCF Contracts	Web Service Types	SOAP Namespaces
Service Contracts	Web Services Stack	SOAP Faults
Data Contracts	SOAP Web Services	SOAP Messages as payload
Message Contracts	REST Web Services	Message Exchange Patterns
Fault Contracts	RPC Style Web Services	SOAP Message Path
Creating Endpoints	Document Style Web Services	SOAP Intermediaries
Hosting WCF Services	Service Oriented Architecture	actor and mustUnderstand attribute
Module 4 : XML-Schema	**Module 5 : WSDL**	**Module 6 : Hosting**
Why XML-Schema?	What is WSDL?	Hosting Types
Well formed and valid documents	Where is WSDL used?	Service Description
What XML-Schema's?	Benefits of WSDL	Self Hosting
Markup Languages	WSDL and Code Generation	Service Host Creation
XML Schema Advantages	WSDL in Web Service stack	App.config Configuration
XML Schema design models	WSDL Namespaces	Programmatic Configuration
Classic Use of Schema's	WSDL Structure	Windows Host
XML Namespaces	WSDL Elements	Managed Window Service
Simple and Complex types	Types and Messages	Hosting in Windows Services
XML Schema Data Types	PortType and Operations	IIS Hosting and .SVC File
User Defined Data Types	WSDL Bindings	Web.config for IIS Host
Derivation by Restriction	Service Element	Windows Activation Service
Derivation by Extension	SOAP Messages Modes	WAS Commands
Module 7 : Contracts	**Module 8 : Instance Management**	**Module 9 : Binding**
Service Contract	Instance Mode Configuration	Bindings and Channel Stacks
Creating Service Contract	Per Call Service	Message Bubbling
Data Contract	Process of Handling Per Call	Basic Binding Types
Service Implementation	Per Session Service	WS Binding Types
Client Side	Singleton Service	NET Binding Types
Message Pattern	Instance Deactivation	Binding Configuration
Message Contract	ReleaseInstanceMode	Administrative Configuration
Message Contract Rules	BeforeCall	Programmatic Configuration
Customizing SOAP	BeforeAndAfterCall	Metadata Exchange
MessageHeaderArray	Explicit Deactivation	Publishing Metadata
ProtectionLevel Property	Defining Durable Services	Metadata Exchange Point
Name and Order Property	Throttling Configuration	MEX Administrative Config
Fault Contract	Programmatic Configuration	MEX Programmatic Config
Module 10 : Message Patterns	**Module 11 : Web API REST Services**	
Message Patterns	What is REST?	
Request-Reply	REST Web Service Principles	
One Way	ID and Links	
One Way Operation	REST Services with Web API	
Sessionful Services	Multiple Representations	
Exceptions	Embedded Path Parameters	
Callback Service	Common REST Patterns	
Callback Contract	Resources URI Access	
Client Callback Setup	JavaScript Object Notation (JSON)	
Service Side Callback Invocation	XML versus JSON	