

Course : WCF, developing Web Services in .NET

create distributed Windows applications

Practical course - 4d - 28h00 - Ref. WBS

Price : 2520 CHF E.T.

WCF is Microsoft's infrastructure for building service-oriented applications. You will master Web Service architectures based on SOAP and REST. You'll implement Web services on IIS, WAS, App Fabric and Azure platforms, and secure exchanges using various authentication methods.

Teaching objectives

At the end of the training, the participant will be able to:

- ✓ Evaluate the main Web Services architectures based on SOAP and REST
- ✓ Creating SOAP clients and Web services
- ✓ Creating REST clients and Web services
- ✓ Developing distributed Windows applications

Intended audience

Developers and project managers wishing to master SOAP and REST Web Services.

Prerequisites

Good knowledge of C# or very good knowledge of Java or C++. Good knowledge of Object Oriented Programming.

Course schedule

1 Windows Communication Framework fundamentals

- ABC endpoint: Address, Binding...
- Host a service with IIS, WAS, App Fabric...
- ChannelFactory and proxy clients generated by WS.
- Service version management.
- Service lifecycle, competition and session management.
- Display of WS metadata.
- Data serialization with DataContract, DataMember.

Hands-on work

Creation of a WCF service and its client. Comparison of ChannelFactory and Proxy clients.

PARTICIPANTS

Developers and project managers wishing to master SOAP and REST Web Services.

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TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant's academic progress throughout the training using multiple choice, scenarios, hands-on work and more.

Participants also complete a placement test before and after the course to measure the skills they've developed.

2 Advanced SOAP Web Services

- Local and distributed transactions. Callbacks.
- Service behavior. Reliability.
- WS testing, tracing and debugging.
- Exception transmission with FaultContract.
- Automatic discovery of service addresses on the local network with ServiceDiscovery and ServiceAnnouncement.
- Queued services with NetMSMQBindin link.

Hands-on work

Creation of a distributed transaction for consistent data.

3 WCF security

- Message and Transport Security.
- Identity transport and authorizations.
- Available authentication modes.
- Role management with MemberShipProvider.
- Windows authentication management. Impersonification.

Hands-on work

Creation of Internet security.

4 REST Web API services

- Introduction to REST architectures.
- Controllers, attributes. URL routes.
- Content negotiation. Self-hosting with Owin.

Hands-on work

Creating an API Web service.

5 WCF Data Service for data-driven REST services

- URL OData and LINQ for URL queries.
- IIS hosting and self-hosting.
- Securing WCF Data Services. Volume and pagination.
- Query-based fine-grained security with QueryInterceptor.

Hands-on work

Development of a WCF Data server with Entity Framework.

6 The Windows Azure Service Bus

- Azure Service Bus relay to make firewalls more flexible.
- Hybrid mode for performance.
- One-way messages and request/response.
- BrokeredMessages files to persist messages in the consumer's absence.
- Topics and subscriptions. Filters.

Demonstration

Demonstration of the service bus relay and queues.

TEACHING AIDS AND TECHNICAL RESOURCES

- The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
- At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
- A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

