WCF 2012, Part 1 of 3: Fundamentals

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Meet the expert: Joe Mayo is an author, independent consultant, and instructor specializing in Microsoft .NET and Windows 8 technology. He has several years of software development experience and has worked with .NET since July 2000. Joe has written books and contributes to magazines such as CODE Magazine. He has been an active contributor to the .NET community for years, operating the C# Station Web site, authoring the LINQ to Twitter open source project, and speaking regularly at user groups and code camps. For his community contributions, Microsoft has honored Joe with several Most Valuable Professional (MVP) Awards through the years.

Prerequisites: This course assumes that students have a strong programming background. This course assumes intermediate knowledge of using C# in Visual Studio 2012 and building libraries (DLLs) and Console applications.

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Course description: In this course, you will learn the fundamentals of Windows Communication Foundation (WCF) Services, how to create and consume Web Services and REST services, and how to use the Service Model Metadata Utility (SvcUtil.exe). You will learn what Web Services are and why you would want to use them. Then you will learn how to create a Web Service. This includes writing types with classes and interfaces and decorating those types with declarative information so that WCF can expose them as a Web Service. When building REST Services, you will also learn how to return data in different formats, such as XML and JSON. You will also learn how to build clients that consume both Web Services and REST Services. You will also learn about the Service Model Metadata Utility (SvcUtil.exe).

Course outline:

Fundamentals
- Introduction
- Web Service Fundamentals
- Demo: OASIS
- Web Service Building Blocks
- Demo: WSDL
- Demo: WSDL Types
- Demo: WSDL Messages
- Demo: WSDL Port Type
- Demo: WSDL Binding
- Demo: WSDL Service
- Summary

Web Services
- Introduction
- Creating a Web Service
- Demo: Building a Service
- Demo: Testing the Service
- Consuming a Web Service
- Demo: Consuming a Service
- Working With Complex Types
- Demo: Complex Types
- Demo: Implementing the Interface
- Demo: Consuming Complex Types
- Demo: Configuring a Service
- Summary

REST Services
- Introduction
- Creating REST Services
- HTTP Verbs
- Demo: Creating a REST Service
- Demo: REST Implementation
- Consuming REST Services
- Demo: Consume a REST Service
- Demo: JSON Data
- Summary

Contract-First Web Services
- Introduction
- The SvcUtil.exe Utility
- Contract-First Web Services
- Demo: SvcUtil
- Demo: Using the Contract
- Demo: Creating a Client
- Demo: Contract-First Consumer
- Summary