

# **WCF Training Course Content**

#### Web Services

- What is Distributed Application
- o High Level Architecture on how RMI/CORBA/DCOM works
- Introduction to Web Service and SOAP
- o To build an Web Service application and client
- Pass by value and reference behavior
- Working with Soap Header Attribute
- Asynchronous Call to the Web Method
- Security in Web Service

#### **Introduction to WCF**

- Evolution of WCF
- Evolution of Service Oriented Architecture (SOA)
- Four Tenets of SOA
- What is WCF
- o Where does WCF Services fit in?

# **Developing WCF Service Application and Client**

- Hosting WCF Service in IIS/ASP.NET Development Server
- Using a Service in the client application
- Understand Contracts in the service
- Understand Instancing behavior in the service
- Building WCF Library based Host and Client application.

# **Endpoints in configuration file**

- End points in Configuration File.
- ABC Address, Binding and Contract of the service in Configuration File.
- Understanding importance of base address.
- Importance of IMetadataExchange Contract / Endpoint.
- Configuring service behavior in configuration file
- WCF Service Configuration Editor
- Creating Endpoints through Code

#### **Channel Stacks and Bindings in WCF**

- Understanding Channel Stack
- Introduction to Binding
- Types of Bindings
- o Binding Comparison
- o Thumb rules in choosing endpoint binding
- o Configuring a Service and Client for Multiple Bindings
- Binding Class Properties.

#### **Understanding Service and Data Contracts**

- About Service Contract
- Data Contract and Data Member
- Versioning using Interface IExtensibleDataObject
- Version Tolerance
- Implications of Modifying Service Operations
- o Implications of Modifying Data Contracts
- Working with Known Types

### **Handling WCF Exceptions/Faults**

- Overview
- Producing Faults
- SOAP fault with FaultCode and FaultReason
- Culture specific SOAP fault
- Strongly Typed SOAP fault
- Consuming Faults
- Proxy State for Managed Exceptions Vs SOAP Fault

## **Message Exchange Patterns**

- o Request Reply Pattern
- One way Operations
- Duplex Pattern
- Duplex Publisher Subscriber Example

#### **Transactions**

- What is Transaction and ACID
- How to enable Transaction in WCF Service
- o TransactionScope in to begin a transaction.
- Transaction Isolation
- Transactions and Sessions

## **MSMQ**

- o Introduction
- Advantages of using MSMQ
- o Transactional Queues
- Steps to follow to Build a MSMQ application

## **WCF Security**

- o Concepts.
- o Security Mechanisms.
- o Default Security Settings.
- o Demonstrate how Messages are encrypted.
- Authentication
- Authorization



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