

## **Windows Communication Foundation (WCF)**

24 שעות, מק"ט 1507

Windows Communication Foundation (previously codenamed "Indigo") is Microsoft's unified framework for building distributed applications.

With WCF, you can build secure, reliable, transacted Web services applications that interoperate with apps built on other platforms and integrate with the applications you're building on today's .NET technologies. And WCF is designed to be the next logical version of today's .NET distributed technologies, so if you're using ASMX, COM+, MSMQ, .NET Remoting, or WSE, you'll love WCF.

WCF is part of WinFX, Microsoft's next-generation Windows framework. WinFX is an extension of the .NET Framework 2.0, and will be available as part of the Windows Vista operating system, as well as for Windows Server 2003 and Windows XP.

### **Module 1: Why WCF?**

- Introduction to the Web Services
- The Core Principles of Web Services
- Service Orientation vs. Object Orientation
- The Four Tenets of Service Orientation
- The Benefits of Service Orientation
- Why Indigo?

### **Module 2: Fundamental Concepts**

- Messaging Patterns
- Channel Stacks
- Services from the Outside
- Address, Binding, & Contract
- Services at Runtime
- Levels of Programming



## **Module 3: Addresses**

- Multiple Endpoints
- Logical vs. Physical Addresses
- ListenUriMode property
- IIS & Addressing
- WS – Addressing
- Endpoint – Reference
- Address Header

## **Module 4: Bindings**

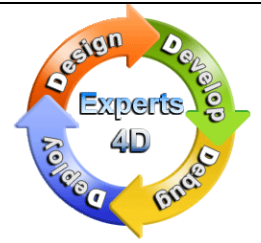
- Addresses
- Binding Features
- Binding Elements
- Tailoring a Standard Binding
- Creating a Custom Binding

## **Module 6: Contracts**

- Understanding Contracts
- Service Contracts
- Data Contracts
- Message Contracts

## **Module 6: Services**

- Service Program Structure
- Service Behaviors
  - Instance Context Mode
  - Concurrency
  - Throttling
  - Lifetime
  - Security
  - Transactions
- Runtime Information



## **Module 7: Management**

- End-to-end tracing
- Messaging logging
- Windows Management Instrumentation (WMI)
- Windows Performance Counters
- Tools
  - SvcTraceViewer
  - SvcConfigEditor

### ***WCF Internals & Extensibility***

WCF היא תשתית תקשורת שמביאה לנו המון חידושים ומאפשרת לנו להרחיב אותה בהמון דרכים. בקורס זה נלמד מה קורה משלב הפעלת ה-Proxy ועד הפעלת ה-Service והחזרת התשובה ל-Proxy. תוך כדי ההבנה על איך עובד ה-WCF נלמד על כל המקומות שאפשר להרחיב ולהתאים את WCF לצרכינו.

## **Module 8: Messaging Fundamentals**

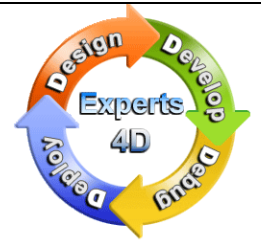
- The Message Class
- Message Headers and Properties
- Mapping Messages to Methods
- Message Versions
- Message Lifetime
- Read & Write Message
- Message Encoders

## **Module 9: Channels**

- Channel Stack
- Inside Binding
- ICommunicationObject
- Channel Shapes
- Custom Channel
- Channel Listeners & Channel Factories

# **EXPERTS 4D**

**DESIGN DEVELOP DEBUG DEPLOY**



- Custom Protocol Channels
- Message Encoders
- XmlDictionary Writer / Reader
- Serializing & Encoding
- Custom Transport Channels
- Custom Binding

## **Module 10: ServiceHost**

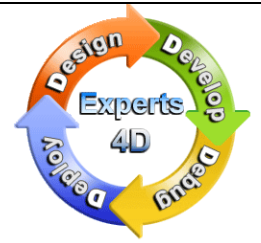
- Service Description
- Behaviors
- ServiceHost Factories

## **Module 11: Dispatchers**

- Service Model Flow
- Channel Dispatcher
  - Error Handlers
  - Service Throttle
- Endpoint Dispatcher
  - Building Custom Message Filter
- DispatchRuntime
  - Message Inspectors
  - Operation Selector
  - InstanceProvider
  - InstanceContext
- DispatchOperation
  - Invoker
  - Formatter
  - Parameter Inspectors

## **Module 12: WCF Extensibility**

- Extending Scenarios
- Extending Points
- Extensible Objects



## **Module 13: WCF Extensibility**

- Extending Points
- Service Description
- Custom Behaviors
- Message Inspectors
- Parameter Filter
- Extensible Objects