

Industrial Strength SOA with .NET 3.0

Service Oriented Architecture, workflow based processes and user interfaces of the next generation are a few of the hottest and most hyped industry buzzwords. Even if there is a lot of hot air and inflated expectations as with any new technology set, there is indeed a tremendous amount of value in the underlying principles of Service Orientation and appropriate distributed systems architecture - including the presentation layer.

Enterprises are increasingly adopting these principles for their own in-house development to overcome one of their most pressing issues: Application integration cost and effort. Of course, an enterprise's commitment to Service Orientation directly impacts their software procurement requirements and mandates that software acquired from ISVs easily fit into the overall picture. Many Enterprises have realized that closed application silos without a rich set of flexible communication endpoints using open communication protocols are hindering their software integration efforts and imposing significant cost.

Microsoft faces these industrial challenges with a brand new set of technologies shipped with the **Microsoft .NET Framework 3.0**: Windows Presentation Foundation (WPF), Windows Communication Foundation (WCF), Windows Workflow Foundation (WF) and Windows Card Spaces.

In this workshop, we will discuss Service Orientation, principles and implementation guidance for the Microsoft .NET Framework 3.0 from an ISV angle and will focus specifically on how software products can be written to fit into integrated environments. We will explore how application silos can be (virtually) broken up into layered sets of open services, respecting that ISVs have large existing code-bases that are not easily ripped apart and rewritten.

Day One

Overview

- Landscape of Microsoft .NET Framework 3.0 Technologies
 - Connected systems – Challenges of today's business world (WCF)
 - Workflows – Building Business Processes (WF)
 - Front-end – Service Oriented User Interfaces (WPF)
 - Security – Managing Identity across organizational boundaries (Card Spaces)

Architecture

- The four tenets of service oriented applications
 - Policies
 - Explicitness of boundaries
 - Autonomy
 - Contract and Schema Exchange
- The stack of a service oriented application
 - Edges and Agents
 - Hosting strategies

- Exceptions – Local and Distributed Error Management
- Transactions - Distributed Fault Management
- Security
 - Threat Modeling
 - Crossing trust boundaries
 - Federated Identity and Claims
- Workflow – Orchestrating Application-Logic
 - Sequential and Stateful Workflows
- Monitoring – Operations Management
- Presentation Layer – Intelligent User Interfaces
 - Succeeding in online, offline and mixed environments
- All together: A real Scenario from the field

Day Two

Development

- Contract-based Development and Message-oriented Programming
 - Defining Contracts and working with Messages
- Using Transactions
 - Lightweight Transactions and Compensation
- Persisting workflows and data
- Building and Integrating Workflow Activities
- User Interface Experiences in a Service Oriented World
- Hosting UI Components, Workflows and Services
 - Windows Activation Services (WAS) and Internet Information Services (IIS)
 - NT-Services and Enterprise Services
- Security
 - Boundaries, Internals and Resources
 - Managing Federated Identities
- Diagnostics
- Software Factories – Today and Tomorrow

Deployment

- Rolling out Applications
 - Build- and Setup Management (Windows Installer and MSBuild)
 - Managed Installation Framework
- Security
 - Configuring execution context with Policies
 - Securing OS Resources
 - Auditing
- Monitoring