

Programming with .NET 3.5 Windows Workflow Foundation

Workflow
Foundation

UWWF3

3 days

Visual Studio 2008

Learning Goals

In this course you will learn about Workflow Foundation, an extensible library specifically targeted for building workflow into applications. Whether you want to build a simple workflow, or a highly complex persistent and transactional workflow, you will find what you need in Workflow Foundation.

Target Audience

This in-depth course is meant for experienced developers who want to learn how to build workflows with Microsoft Workflow Foundation.

Prerequisites

Solid understanding of the .NET platform and programming experience in C# either VB.NET.

Course Outline

Introduction to Workflow Foundation

Workflows, Activities and Services; Building a

host for running your Workflows; Using Code and XAML to Build Workflows.

Building Sequential Workflows

Looking at the Built-in Activities; How to Handle Faults in your Workflow; What is Workflow Cancellation? Using Condition And Looping Activities; Understanding Rule Conditions and how to apply them.

Communication with the Host

Workflows Need to Talk to the Outside World; Using the CallExternalMethod Activity to Send Output; Using the HandleExternalEvent to Wait for Input; Using Correlation.

Custom Activities

What is an Activity; Building a Composite Activity; Building a Custom Activity; Building Activity Validation; Building an Activity Designer; Adding Activity Properties; Using Dependency Properties to Connect Activities with DataBinding.

State Machine Workflows

Using State Machine Workflows to Model Complex Behaviour; Creating and Running State Machine Workflows.

Using Transactions

Updating Data with Atomic Transactions; What is

Required for Atomic Transactions; Using Long Running Transactions and Compensation; Persistence points; TransactionScope Activity.

Web Services, WCF Services and Workflows

Calling a Web Service from a Workflow; Hosting and exposing a Workflow as a Web Service; Calling a WCF Service from a Workflow; Hosting and exposing a Workflow as a WCF Service.

Policies and Rule Sets

Workflow Rules and Policies; Using the RuleSet Editor; Forward Chaining, and How to Tweak it. Tracing Rules!

Updating Workflows Dynamically

Modifying Running Workflows for Better Business Agility; Adding and Removing Activities; Modifying Rule Conditions Dynamically.

Runtime Services

Why Runtime Services. Using Persistence Services to Persist and Restore Workflow Instances; Optimizing Load using Scheduling Services; Tracking Services; Using Transaction Services; Creating a Custom Runtime Service.

Embedding the Workflow Designer

Embedding the Designer to Expose it to End-Users; Embedding the RuleSet Editor.

Developing Workflows for SharePoint 2007 Solutions

Developing
Workflows for
SharePoint 2007

USP7W-2

2 days

Visual Studio 2008

Learning Goals

Almost every SharePoint application has some workflow requirements. Previously SharePoint developers would build their own workflow using control-flow statements or their own custom built workflow engine. In this 2 day course, experienced WF developers will study how to implement .NET 3.5 Workflow Foundation in SharePoint 2007.

Target Audience

This in-depth course is meant for experienced SharePoint developers who are already familiar with .NET 3.5 Workflow Foundation and who want to learn how to create complex workflows in SharePoint 2007.

Prerequisites

Participants of this course need to have a solid

understanding of the NET 3.5 Workflow Foundation. This is not an introduction course on Workflow Foundation. The trainer assumes you master the topics covered in the U2U course UO12W course "Developing Microsoft SharePoint 2007 Solutions - Part1: Essentials" and course UWWF3 "Programming with .NET 3.5 Windows Workflow Foundation". Experience with the advanced topics covered in our USP7D course "Developing Microsoft SharePoint 2007 Solutions - Part2: Advanced" is helpful but not required.

Course Outline

Introduction to workflows in SharePoint 2007

Introduction to workflow architecture in SharePoint: SharePoint as a workflow host. Link between a workflow and an SPList. Reviewing of Out of the Box workflows: List of different Out of the Box MOSS and WSS workflows. Description of these workflows.

Creating SharePoint Workflows with Visual Studio 2008

Writing WSS3 workflows with Visual Studio 2008 (ASPX forms): Writing ASPX association, initiation, modification and task forms. Exchanging data between the form and the workflow. Writing MOSS2007 workflows with Visual Studio 2008

(InfoPath forms): Writing InfoPath association, initiation, modification and task forms. Exchanging data between the form and the workflow. Deploying workflows. Managing workflows versioning. Inside workflow association and initialization: Coding the workflow association to a list. Coding the workflow initiation. Creating custom activities. Invoking/managing SharePoint workflow from a remote application. Invoking/managing SharePoint workflow from SharePoint code (web part, event handlers,...). Externalizing business rules in SharePoint with the Workflow Foundation Rules Engine. Managing Security in SharePoint workflows. Logging and Workflows. SharePoint workflows tips & tricks

SharePoint Designer Workflows

Writing SharePoint workflows with SharePoint Designer. Creating complex workflows with SharePoint Designer. Understanding and using SharePoint Designer Workflow forms. Creating workflow activities for SharePoint Designer. Reusing and debugging in Visual Studio 2008 a workflow generated by Sharepoint Designer. Choosing between SharePoint Designer and Visual Studio 2008.