

# Pro Sync Framework



Rituraj Singh and Joydip Kanjilal

## **Pro Sync Framework**

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*I would like to dedicate this book to two special ladies in my life, my mom (Radhika Singh) and my wife (Priya Singh). Thanks for all your support and patience over the years and the years to come. Writing a book requires lot of time and thanks for allowing me to steal a large part of your time to write my first book. Thank you for all your sacrifices.*

*—Rituraj Singh*

*Dedicated to my parents and family.*

*—Joydip Kanjilal*



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# Foreword

The emergence of the Microsoft Sync Framework could not have come at a better time. Today's applications and (more importantly) the applications of the future are evolving in a manner that forces us to pay more close attention to offline data access, peer-to-peer collaboration, and other sharing scenarios. At the forefront of the revolution is the Microsoft Sync Framework—a flexible, ambitious, and amazingly powerful development kit that empowers developers to easily synchronize data.

Data synchronization plays a pivotal role in today's world. It also is an essential component in the transition of tomorrow's applications to a managed cloud environment. In short, understanding the Sync Framework and grasping its capabilities and potential will strongly position you for the next wave of applications and services.

That's why this book is so valuable. With a tremendous importance placed on practical, real-world code in a concise and easy-to-understand format, *Pro Sync Framework* will serve as a vital resource for those developers looking to comprehend and unlock the hidden gems of the framework. Rituraj and Joydip have demonstrated their ability to take complex topics and break them into smaller fragments that can be easily understood and applied.

With resources like this book, the Microsoft Sync Framework is sure to continue to develop and succeed. As you read this important manuscript, you will be preparing yourself to take advantage of the many new innovations in the years to come. Enjoy!

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been selected at [www.asp.net](http://www.asp.net), which Microsoft's official site on ASP.NET. He was also a community credit winner at [www.community-credit.com](http://www.community-credit.com) a number of times.

Joydip has authored two other books: *ASP.NET Data Presentation Controls Essentials* (Packt) and *Sams Teach Yourself ASP.NET Ajax in 24 Hours* (Sams).

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Rituraj Singh

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Joydip Kanjilal



# Introduction

It's been almost a year since we first started playing with the first test build of Microsoft Sync Framework. It was an absolute pleasure writing this book since then and we hope that you will have fun reading it, too. However, we must admit that it was a little tough writing a book on a cutting-edge technology that was still undergoing changes. Thankfully, after a lot of hard work and many sleepless nights we are proud to share the knowledge that we have gained during last year.

As with any Microsoft technology, you will find lots of information about Sync Framework on the MSDN website. There are some really cool videos, blogs, online documentation, and forums. However, we believe that the greatest strength of this book is that it provides you a step by step guide to quickly get started with Sync Framework and slowly start increasing the complexity level of the project. Almost every chapter is equipped with a code sample, and we have focused more on code than theory. Code examples are a great way for any developer to start learning a new technology. Most of the code can be used as the building blocks of any sync application.

Each chapter introduces a concept, discusses why it is important to learn that concept, and then explains how to put that concept in use with the help of code examples.

## Overview

Welcome to *Pro Sync Framework*! To help with the discussion, this book is divided into four content areas.

The first part of the book, consisting of Chapter 1 and Chapter 2, helps you understand the basics of the Microsoft Sync Framework. Chapter 1 explains the need for synchronization and how the Sync Framework eliminates some of the common problems. You will also get detailed information about the architecture and components of the Sync Framework. Chapter 2 dives into the details of the Sync Framework metadata model. The Sync Framework enables you to synchronize any type of data between any devices over any network topology and protocol, and it agrees on a common metadata model.

The second content area, consisting of Chapters 3, 4, and 5, helps you understand how to create custom sync providers. Chapter 3 discusses the need for custom sync providers and provides in-depth information about the classes available in the Sync Framework APIs for creating them. It also includes a code sample to create a custom provider. Chapter 4 explores the different options available in Sync Framework for creating custom sync providers

to suit your synchronization needs. It contains a code sample to demonstrate how to create different sync providers for different synchronization scenarios. Chapter 5 explains how to create unmanaged sync providers using C++. It also provides in-depth information about built-in file sync providers.

The third part of this book, made up of Chapters 6 and 7, helps you understand Sync Services for metadata storage and RSS and Atom feeds.

The fourth content area, consisting of Chapters 8 and 9, contains information about Sync Services for ADO.NET 2.0 offline and peer-to-peer collaboration.

## Source Code for This Book

The entire code sample found in *Pro Sync Framework* is written using Visual Studio 2008 and C#. The code is available online at [www.apress.com/book/sourcecode](http://www.apress.com/book/sourcecode).

The source code can also be run using Visual Studio 2005. The code is tested on Windows Server 2K and Windows XP.

The database for the code is compatible with SQL Server 2005 as well as SQL Server 2008. You'll find that the code has been organized in chapter format for easy location and execution.