



Quick answers to common problems

BizTalk Server 2010 Cookbook

Over 50 recipes for developers and administrators looking to deliver well-built BizTalk solutions and environments

Steef-Jan Wiggers

[PACKT] enterprise 
PUBLISHING professional expertise distilled

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BIRMINGHAM - MUMBAI

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I started this endeavor at the beginning of the year 2011, when I was approached by Dhwani Devater, who is an Acquisition Editor at Packt Publishing. During the MVP Summit, I spoke to Richard Seroter about his experience with writing and talked it through with Randal van Splunteren. I then decided to go for it and asked Randal to help me as a Technical Reviewer. Through the whole process, Randal has provided me with a lot of valuable feedback and guidance. A few months later, he was joined by two other MVPs, Sandro Pereira and Abdul Rafay, together with my former colleague René Brauwers, who then started reviewing this book. They have put so much effort and time to increase the quality of the book. Thanks guys.

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About the Reviewers

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He was awarded the Microsoft Most Valuable Professional (MVP) in BizTalk, thrice, and likes to share his knowledge and technical expertise on his blog, MSDN, and other forums.

Other than integration projects and BizTalk, Abdul has previously worked as a web developer with technologies such as ASP, ASP.NET, Sharepoint, and open source web applications.

I would like to thank my fantastic wife, Hira, for making this project, and my life successful. Thanks for your understanding, patience, and support, which lead me to success. I would like to thank God Almighty for giving me all what I have. I would like to thank all my friends who were there when I needed them and specially my in-laws. Thanks to all those who have contributed to my success and were part of my life.

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I would like to thank Steef-Jan Wiggers for writing this great book and for giving me the opportunity to review it.

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One has to live one's life to the fullest extent possible; for me this includes sharing my life with the most wonderful woman in the world, Miranda. Thanks for being part of my life, being my friend, my soul mate, and my girlfriend. I can't wait to spend the rest of my life together with you.

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*This book is dedicated to my wife Lian, and
my children Stan, Ellis, and Cato*

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Preface

In your day-to-day job as a BizTalk developer, administrator, or consultant, you will face challenges when it comes to deploying a BizTalk Server environment, advising clients on integration with BizTalk, developing BizTalk solutions, working with its components such as Business Rules, or a feature such as AppFabric Connect. As an administrator, you will be responsible for keeping BizTalk healthy. The practical recipes in this book can strengthen your skills and knowledge. A developer can face challenges during implementation of functionality in an orchestration or while testing the solution. Having recipes in this book on how to deal with these challenges can be of tremendous value. Some of the recipes in this book will show you how to use other BizTalk-related tooling from Microsoft, the community, and third parties which can greatly improve your productivity as a developer or administrator. This book will provide you with guidance on using out of the box BizTalk capabilities combined with the capabilities offered by BizTalk tools found on CodePlex, and the Microsoft Download Center. BizTalk Server 2010 Cookbook is a practical guide for developers and administrators, which they can use as reference guide for their day-to-day job, making their lives easier.

What this book covers

Chapter 1, Setting up a BizTalk Server Environment, will provide the reader with guidance on setting up a robust and healthy BizTalk environment, from its inception to its deployment. Recipes in this chapter will show the reader how to use some of the community and Microsoft tools to validate, test, and tune the BizTalk environment and how to set up and configure critical components, such as MSDTC and SSO.

Chapter 2, BizTalk Server Automation: Patterns, gives an idea about patterns that can be applied to orchestrations. Recipes discussed in this chapter will show how to implement some of the common integration patterns with BizTalk Server 2010.

Chapter 3, BizTalk Server Instrumentation, Error Handling, and Deployment, introduces the reader to the concepts of instrumentation, error handling, and deployment of BizTalk solutions. Recipes discussed in this chapter will show how to implement instrumentation to BizTalk solutions, using logging and tracing, how to implement error handling, and how to deploy BizTalk solutions, using out of the box BizTalk features or the BizTalk deployment framework.

Chapter 4, Securing your Message Exchange, explains about security in BizTalk messaging context. It will show how to provide message security by using encryption and decryption, or signing and verifying. It will also touch transport security using SSL.

Chapter 5, WCF Services with BizTalk, introduces the concept of communicating with WCF Services through BizTalk Server. Recipes discussed in this chapter will show how to consume a WCF Service, expose schemas as a WCF Service, and other related possibilities.

Chapter 6, BizTalk AppFabric Connect, explains about the new BizTalk Server 2010, which shifts the boundaries of BizTalk to Windows Azure. Recipes discussed in this chapter will demonstrate how to expose orchestrations, and LOB systems through Window Azure Service Bus.

Chapter 7, Monitoring and Maintenance, will provide the reader with practical recipes on keeping BizTalk Server healthy and what monitoring solutions are best suitable in a given scenario. This chapter will demonstrate the capabilities found in community tooling, SCOM, and alternative monitoring product BizTalk360.

Chapter 8, Applying Rules, introduces the concepts of BizTalk Business Rules Engine. It will demonstrate how to use BRE with and without using the BizTalk Server runtime.

Chapter 9, Testing BizTalk Artifacts, will provide the reader with a couple of recipes to enable testing of the different BizTalk artifacts, such as schemas, pipelines, maps, and orchestrations. Testing can be done using the test capabilities of Visual Studio in conjunction with community test tooling.

What you need for this book

You need to install the following software:

- ▶ Windows 2008 (R2) Standard Edition
- ▶ Visual Studio 2010
- ▶ BizTalk Server 2010 Developer Edition
- ▶ SQL Server 2008 (R2) Standard Edition
- ▶ VMware Workstation or Player
- ▶ Windows Hyper-V

Who this book is for

This book is intended for BizTalk developers and administrators. It is provided with practical recipes that will help them enhance and strengthen their knowledge of BizTalk Server, its architecture, components, and infrastructure. The technical focus will make the book less applicable to managers unless they have a fairly deep technical background, but it will be useful to them in ensuring that their team stays on track with developing robust BizTalk solutions and to keeping BizTalk healthy.

This book expects a basic background knowledge of BizTalk Server, Visual Studio, and SQL Server. It is targeted towards the beginner or intermediate BizTalk developer and administrator, who has previous experience in developing on the Microsoft Platform in .NET or Visual Studio, or has administration experience with the Windows operating system and SQL Server. With lack of this experience, it will be challenging to work with BizTalk as a developer or administrator, or to provide advice as a consultant. Therefore, I recommend working with C# or Visual Studio a little on your own, ahead of time, to familiarize yourself with the IDE as a developer. An administrator will need to start working with the Windows operating system or with SQL Server to get to know the platform and the product.

The more seasoned, advanced BizTalk developers, administrators, consultants, or architects might learn some new tricks or can enhance their already extensive knowledge. They can gain some insight on how implementations can be carried out or use the recipes to enhance or compare with their own recipes. Finally, they can use this book as a reference guide for their day-to-day jobs.

Conventions

In this book, you will find a number of styles of text that distinguish between different kinds of information. Here are some examples of these styles, and an explanation of their meaning.

Code words in text are shown as follows: "During configuration of these BizTalk features, databases such as BizTalk MessageBox (BizTalkMsgBoxDb), BizTalk Management (BizTalkMgmtDb), BizTalk Tracking (BizTalkDTADb), BizTalk Rule Engine (BizTalkRuleEngineDb), BAM Primary Import (BAMPrimaryImport), and others (BAMStarSchema) are created on the database server."

A block of code is set as follows:

```
<sso>
  <globalInfo>
    <ssoAdminAccount>YourDomain\Accountname</ssoAdminAccount>
    <ssoAffiliateAdminAccount> YourDomain
    \Accountname</ssoAffiliateAdminAccount>
    <secretServer>ServerName</secretServer>
    <auditDeletedApps>1000</auditDeletedApps>
    <auditDeletedMappings>1000</auditDeletedMappings>
    <auditCredentialLookups>1000</auditCredentialLookups>
```