

## **Developing E-Business Solutions Using Microsoft BizTalk Server 2006**

### **Prerequisites**

Before attending this course, students must have:

- At least two years of experience developing distributed applications (Microsoft Visual Basic, C, Java, ...)
- Familiarity with systems integration and Web services terminology and concepts
- Familiarity with Microsoft Visual Studio .NET
- Working knowledge of XML
- **Experience with prior versions of BizTalk Server is not required**

### **Software Requirements**

The minimum software requirements for a complete installation of BizTalk Server 2006 on a single computer include:

- Windows Server 2003 with SP 1
- Microsoft Office Excel 2003 and InfoPath 2003 with Service Pack 2
- Microsoft Visual Studio 2005 with Microsoft Visual C# .NET
- Microsoft SQL Server 2005 or Microsoft SQL Server 2000 with Service Pack 4
- Microsoft SQL Server 2005 Analysis Services or Microsoft SQL Server 2000 Analysis Services with SP4
- Microsoft Windows SharePoint Services 2.0 with Service Pack 2

The following operating systems can also be used with BizTalk Server 2006:

- Windows XP Professional with Service Pack 2
- Windows 2000 Server with Service Pack 4 or above
- Windows Server 2003 R2

## **Course Outline**

### **Module 1: Introduction to BizTalk Server 2006**

This module explains how BizTalk provides a development and execution environment that makes it easier to orchestrate dynamic business processes within and between organizations.

#### Lessons

- What Is BizTalk Server 2006?
- BizTalk Server Services and Tools
- What is New in BizTalk Server 2006?
- Introduction to EAI and B2B
- BizTalk Framework Architecture

After completing this module, students will be able to:

- Identify the core features of BizTalk Server and how it fits into the overall suite of Microsoft e-business solutions products.
- Describe the functions of the BizTalk messaging and orchestration services.

### **Module 2: Creating and Configuring BizTalk Schemas**

This module explains how BizTalk relies on the use of structured documents for every part of its implementation.

#### Lessons

- Introduction to BizTalk Schemas
- Creating BizTalk Schemas

#### Lab 2A: Creating BizTalk Schemas

- Creating a New BizTalk Project
- Creating an XML Schema Using the BizTalk Editor
- Promoting Schema Properties

- Creating a Flat File Schema Using the BizTalk Editor
- Validating Schemas and Generating Instance Messages
- Assigning a Strong Name to the Assemblies
- Building the Schema Project

After completing this module, students will be able to:

- Explain the purpose and use of a BizTalk schema.
- Create BizTalk schemas by using the BizTalk Editor.

### **Module 3: Creating a Schema Map**

This module explains how to use BizTalk Mapper to create and work with BizTalk maps. You will learn how to add functoids to a map, and then how to compile and test a map.

Lessons

- Introduction to BizTalk Maps
- Creating BizTalk Maps

Lab 3A Creating a Schema Map

- Creating a Schema Map using BizTalk Mapper
- Adding Functoids to a Map
- Validating and Testing the Map
- Building the Schema Map Project

After completing this module, students will be able to:

- Describe the purpose and use of BizTalk maps.
- Create a map by using BizTalk Mapper.

#### **Module 4: Configuring BizTalk Messaging**

This module explains how BizTalk messaging provides a number of ways to route, process, and send messages between business processes.

##### Lessons

- Introduction to Messaging
- Enabling Message Routing
- Creating Receive and Send Pipelines

##### Lab 4A: Enabling Message Routing

- Create a Receive Port and a Receive Location
- Create Send Ports and Define Message Filters
- Start the Send Ports and Test the Configuration

After completing this module, students will be able to:

- Enable message routing to forward incoming messages directly to appropriate send ports, based on each message's content.

#### **Module 5: Creating a BizTalk Orchestration**

This module explains how to orchestrate dynamic business processes both within and between organizations.

##### Lessons

- Introduction to BizTalk Orchestration
- Creating an Orchestration
- Working with Orchestration Shapes

##### Lab 5A: Creating and Debugging an Orchestration

- Adding Schemas and Maps to the Messaging Project
- Creating an Orchestration
- Building and Deploying the Orchestration Project

- Starting and Testing the Orchestration

After completing this module, students will be able to:

- Describe how BizTalk orchestration works.

### **Module 6: Deploying and Testing a BizTalk Solution**

This module explains how to install the assemblies (such as maps, schemas, orchestrations, and pipelines) that you create for a BizTalk application on the BizTalk Server computers that will host the application.

Lessons

- Preparing to Deploy a BizTalk Solution
- Using BizTalk Deployment Tools

Lab 6A: Creating a Deployment Package

- Create a Deployment Project
- Install the Deployment Package and Test the Solution

After completing this module, students will be able to:

- Identify the tasks that you must perform before deploying a solution.
- Use BizTalk deployment tools to deploy a solution.

### **Module 7: Tracking BizTalk Message Activity**

This module explains how the Health and Activity Tracking (HAT) tool provides a means of tracking business activity even for those users who have no deep technical knowledge of BizTalk Server, while at the same time making it possible for more technically informed users to access the details necessary for problem solving and for the optimization of business processes.

Lessons

- What is Health and Activity Tracking

Lab 7A: Tracking Messages Using HAT

- Tracking a Message

After completing this module, students will be able to:

- Define message tracking concepts.
- Identify job roles that can use HAT.
- Explain the features and capabilities of HAT.
- Identify the types of events and data that can be tracked.
- Track and view message activity.
- Use the Orchestration Debugger to track workflow.

### **Module 8: Working with Orchestration Shapes**

This module explains how to use orchestration shapes to create an automated business process using flow shapes, nested shapes, exception-handling shapes, as well as how to create expressions and orchestration variables and types.

Lessons

- Working with Orchestration Shapes

Lab 8A: Working with Orchestration Shapes

- Adding Schemas and Maps to the Messaging Project
- Building an Orchestration
- Building and Deploying the Orchestration Project
- Starting and Testing the Orchestration

After completing this module, students will be able to:

- Work with orchestration shapes.
- Configure orchestration messages.
- Configure message correlation.
- Configure orchestrations to use expressions.

## **Module 9: Consuming and Publishing Web Services**

This module explains how Web services provide a standardized mechanism for flexibly conducting e-business by communicating across disparate back-end systems.

### Lessons

- Consuming a Web Service
- Publishing Web Services

### Lab 9A: Consuming a Web Service

- Adding a Web Reference to a Project
- Creating a Map
- Modifying the Orchestration
- Building and Deploying the Orchestration Project
- Starting and Testing the Orchestration

### Lab 9B: Publishing a Web Service

- Configuring Orchestration Properties
- Creating the Orchestration to be Published
- Building and Deploying the Project
- Running the BizTalk Web Services Publishing Wizard
- Starting and Testing the Orchestration

After completing this module, students will be able to:

- Call a Web service from within an orchestration.
- Publish an orchestration or a schema as a Web service.

## **Module 10: Integrating Business Rules**

This module explains how the BizTalk Server 2006 Business Rule Engine allows business users to create policies containing rule sets which they can use to process documents.

### Lessons

- Introduction to Business Rules
- Developing a Rules-based Application

### Lab 10A: Integrating Business Rules

- Defining Business Rules
- Calling Business Rules from within an Orchestration
- Building and Deploying the Business Rules Project
- Starting and Testing the Business Rules

After completing this module, students will be able to:

- Define the terminology and functions for business rules.
- Develop an orchestration that calls the Business Rule Engine.

## **Module 11: Adapters**

This module explains about various adapters provided by BizTalk Server 2006.

### Lessons

- Introduction to Adapter
- Configuration for FILE, SQL, SMTP, etc.

### Lab 11A: Introduction to Adapters

- Using FILE adapter
- Using SQL adapter
- Using SMTP adapter
- Custom Adapters

After completing this module, students will be able to:

- Define the terminology and functions for various adapters provided by BizTalk Server 2006.

## **Module 12: Pipelines**

This module explains about pipelines of BizTalk Server 2006.

Lessons

- Introduction to Pipeline
- Creating receive and send pipelines

Lab 12A: Creating a Custom Pipeline

- Configuring BizTalk Host and Group Security Settings
- Creating a Custom Send Pipeline
- Building and Deploying the Pipeline Project
- Modify Send and Receive Ports
- Testing the Send Pipeline Solution
- Creating a Custom Receive Pipeline
- Building and Deploying the Receive Pipeline Project
- Testing the Receive Pipeline Solution

After completing this module, students will be able to:

- Create both receive pipelines and send pipelines to process messages.

### **Module 13: Installing and configuring BizTalk Server 2006**

This module explains how to install and configure BizTalk Server environment.

#### Lessons

- Installing BizTalk Server 2006
- Configuring BizTalk Server 2006

#### Lab 13A: Installing and configuring BizTalk Environment

- Configuring BizTalk Server