

BizTalk 2016 Developer Deep Dive (5 Days)

Course Description

As a BizTalk Server developer, you know that learning BizTalk Server can be difficult. You've seen the power of BizTalk Server and know that there's more waiting for you to tap into.

This course is designed specifically for experienced BizTalk Server developers and focuses on best practices & pattern-based design while pulling back the curtain on some of BizTalk Server's eccentricities. This course gives the deepest coverage of the BizTalk Server development topics that you need to know. We guarantee to challenge the way you think about BizTalk Server application design and development.

In this 5-day course, you will learn how to apply best practices and design patterns to build smarter BizTalk Server applications. Furthermore, this course provides extensive coverage of BizTalk Server's extensibility, including such topics as: custom functoids, custom pipeline components, and invoking external .NET methods.

This is an advanced-level course. Attendees are expected to have working experience as BizTalk Server application developers. The lectures and labs in this course assume that attendees have been through the typical lifecycle of a BizTalk Server application at least once.

At the completion of this course, attendees will be able to:

- Create and implement custom simple and complex types in schemas
- Call external assemblies using the Scripting Functoid
- Create custom functoids
- Test BizTalk Server code artifacts using Visual Studio tests
- Create messaging solutions that de-batch flat-file & XML interchanges
- Build processes that subscribe to failed messages
- Create custom pipeline components
- Publish and host RESTful APIs using the WCF-WebHttp adapter
- Integrate with SQL Server databases using the WCF-SQL adapter
- Create loosely coupled orchestrations using direct-bound ports
- Properly utilize the Call Orchestration and Start Orchestration shapes
- Develop applications that utilize dynamic send ports
- Implement complex orchestration patterns, including: external code invocation, convoys, transactions and compensation, and exception handling
- Aggregate message instances using an orchestration & send pipeline
- Create a role- and party-based integration solution
- Create business-rule vocabularies and polices
- Create EDI-based solutions to receive, send, and batch messages
- Create custom tracking solutions using Business Activity Monitoring
- Extend visibility to custom .NET application using the BAM API

Audience

Experienced BizTalk Server Developers who have at least one year of hands-on experience developing BizTalk Server applications.

Prerequisites

Students should have experience with core BizTalk Server development concepts and skills. The course assumes that attendees already know how to create schemas, maps, pipelines, and orchestrations, and are looking to enrich their understanding of these components, applying patterns and best practices to build smarter applications.

Course Outline

Module 1: Review of BizTalk Server Fundamentals

- The BizTalk Server Architecture

Module 2: Inner Workings of the Messaging Engine

- Messaging Engine Deep Dive
- Two-way Messaging Without Orchestrations

Module 3: Designing and Testing Schemas

- Schema Design
- Enabling Unit Testing for BizTalk Projects

Module 4: Data Translation and Transformation

- Custom Data Transformation
- Creating Custom Pipeline Components

Module 5: Working with Message Interchanges

- Debatching Message Interchanges

Module 6: Advanced Concepts of WCF Adapters

- Connecting to External Systems
- Using WCF LOB Adapters in BizTalk Server

Module 7: Publishing and Consuming WCF and RESTful Services

- Overview of Service Integration Using WCF
- Implementing WCF Services
- Preprocessing Messages with IIS Modules
- Consuming Services

Module 8: Advanced Orchestration Communication Patterns

- Orchestration Engine Deep Dive
- Splitting and Aggregating Messages using Orchestrations
- Orchestration Communication

Module 9: Bridging the Synchronous/Asynchronous Gap Across Multiple Channels

- Correlating Messages in Orchestration Instances
- Building Convoy Orchestrations

Module 10: Handling Orchestration Faults and Exceptions

- Exception Handling in Orchestrations

Module 11: Implementing Transactions and Compensation

- Creating Transactional Processes

Module 12: Designing Custom Tracking Models for BizTalk Applications

- Introduction to Business Activity Monitoring
- Enabling Business Activity Monitoring
- Extending BAM Beyond BizTalk

Module 13: Building Declarative Logic Using the Business Rules Engine

- Concepts of Declarative Logic
- Fundamentals of BizTalk BRE
- Integrating Policies with BizTalk

Module 14: Advanced Concepts of the Business Rules Engine

- Advanced Business Rule Concepts
- Working with Advanced Facts

Module 15: Integrating Across Business Boundaries Using Parties, Roles, and EDI

- Port Binding Option Review
- Role-Based Integration
- What is EDI?
- Enabling EDI-Based Messaging