

BizTalk Server 2009 Platform and Developer Features

Improving platform support and developer productivity



Overview

- Platform support
- Visual Studio 2008 Integration
- MSBuild integration
- Mapper improvements
- Unit testing BizTalk Components
- Team System / Team Build Integration

Platform support

Windows
Server 2008 &
Hyper-V

SQL Server
2008

Visual Studio
2008

.NET
Framework 3.5
Service Pack 1

Windows Server 2008

- BizTalk Server instances and ESSO
- Hyper-V instances also supported
- Support for Server 2008 Clustering
 - Cluster nodes can be in separate IP subnets

SQL Server 2008

- **Primary BizTalk databases**
- **New SQL Adapter supports SQL 2008**
 - Supports new data types in SQL 2005 / 2008
- **Notification Services requires download**
 - Feature pack for SQL 2005
- **BAM uses SQL 2008 Analysis Services**
 - Unified Dimensional Models
 - Scalable Real-time aggregations
 - Enhances support for Performance Point Server 2007

Visual Studio 2008

- New BizTalk project type for Visual Studio
- MS Build project file format
- Integrated debugging of maps
- Unit testing support with VS 2008 tools
 - Other testing frameworks also possible

BizTalk project

- **Derived from the C# project type**
 - Can include C# code items (helper classes)
- **Builds using two MS Build target files**
- **Project properties now integrated**
 - Strong name signing works like C# projects
- **Build configurations = Debug and Release**
 - No more Development and Deployment!
- **Item properties integrated in property grid**
 - No separate dialog for item-specific properties

Project upgrade

- **Visual Studio upgrade support**
 - Just open BTS 06 project in VS 2008
- **Command line support for upgrade**
 - devenv.exe <solution | project > /upgrade

MS Build integration

- **Projects can be built without Visual Studio**
- **Build server supported with no VS**
 - Limited BTS install (more later)
- **Projects use a two phase build process**
 - First phase builds maps, schemas, pipelines
 - Second phase builds orchestrations

BizTalk build process

First Pass

Before Build

Resolve
References

Compile
Schema

Compile
Maps

Compile
Pipelines

Core Compile

After Build

Create CLR Types Assembly

Start Second Pass

Second Pass

Before Build

Resolve
References

Include Schema, Map,
Pipelines

Compile
Orchestrations

Core Compile

After Build

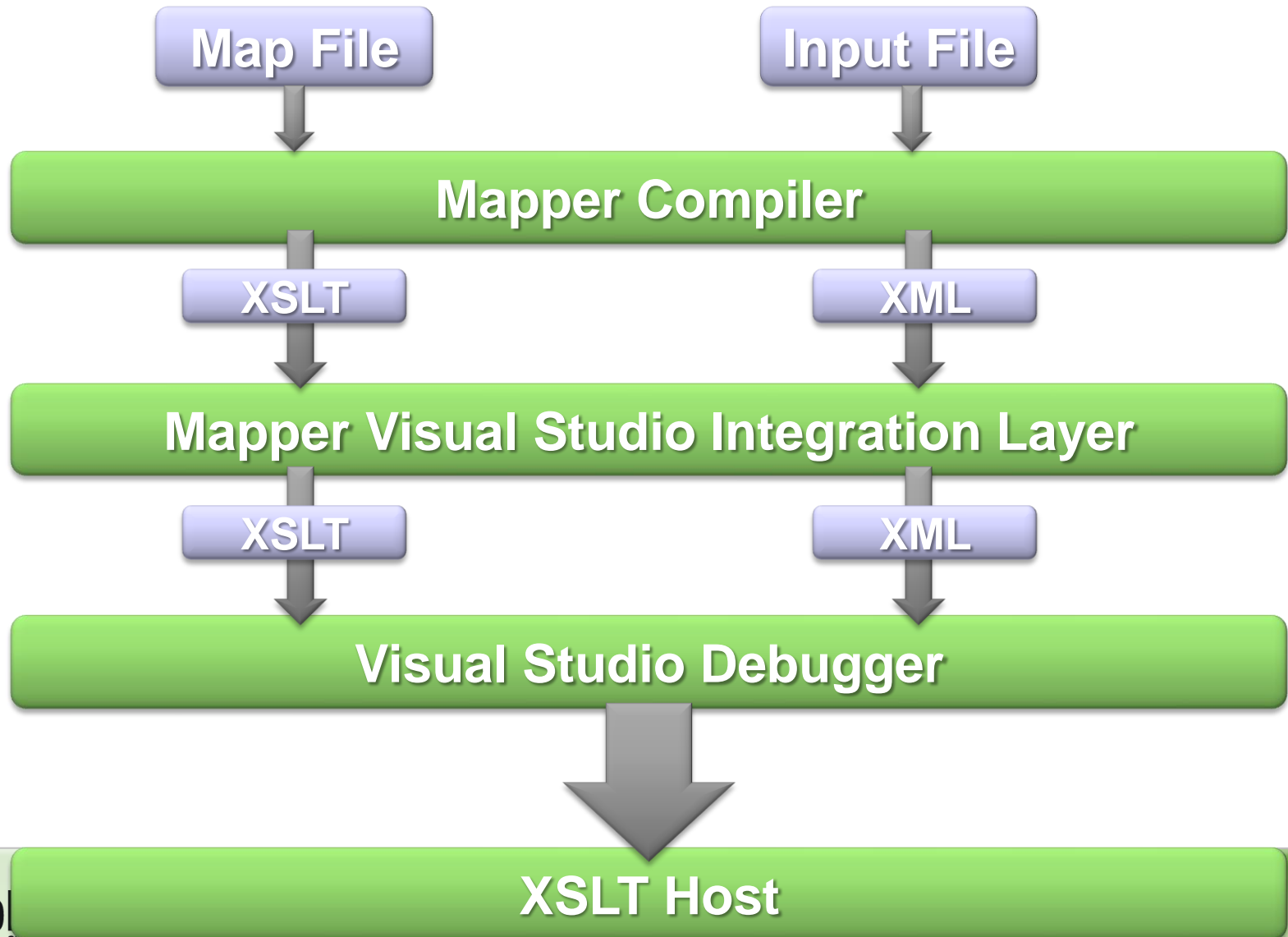
Mark Build Done



BizTalk map debugging

- Leverages Visual Studio XSLT debugging
- Debug using configured input and output
- Map compiled first to generate XSLT
- Set breakpoints in XML input document
- No support for extension objects
 - Limitation of the VS XSLT debugging support

BizTalk map debugging



Unit testing for BizTalk

- **Testable maps, pipelines and schemas**
- **Base classes to invoke components**
 - You test the outcome
- **Enable unit testing on project properties**
- **Maps**
 - Test using configured input and output
 - Optional validation of input and/or output
- **Pipelines**
 - Test using sample input document
- **Schemas**
 - Test schemas using a configured instance

Unit testing in Visual Studio

- **Add references to the test project**
 - Microsoft.BizTalk.TestTools.dll
 - Microsoft.XLANGs.BaseTypes.dll
 - Your project
- **Create instances of your components typed as testable counterpart**
 - E.g. Create instance of your map declared as an instance of TestableMap

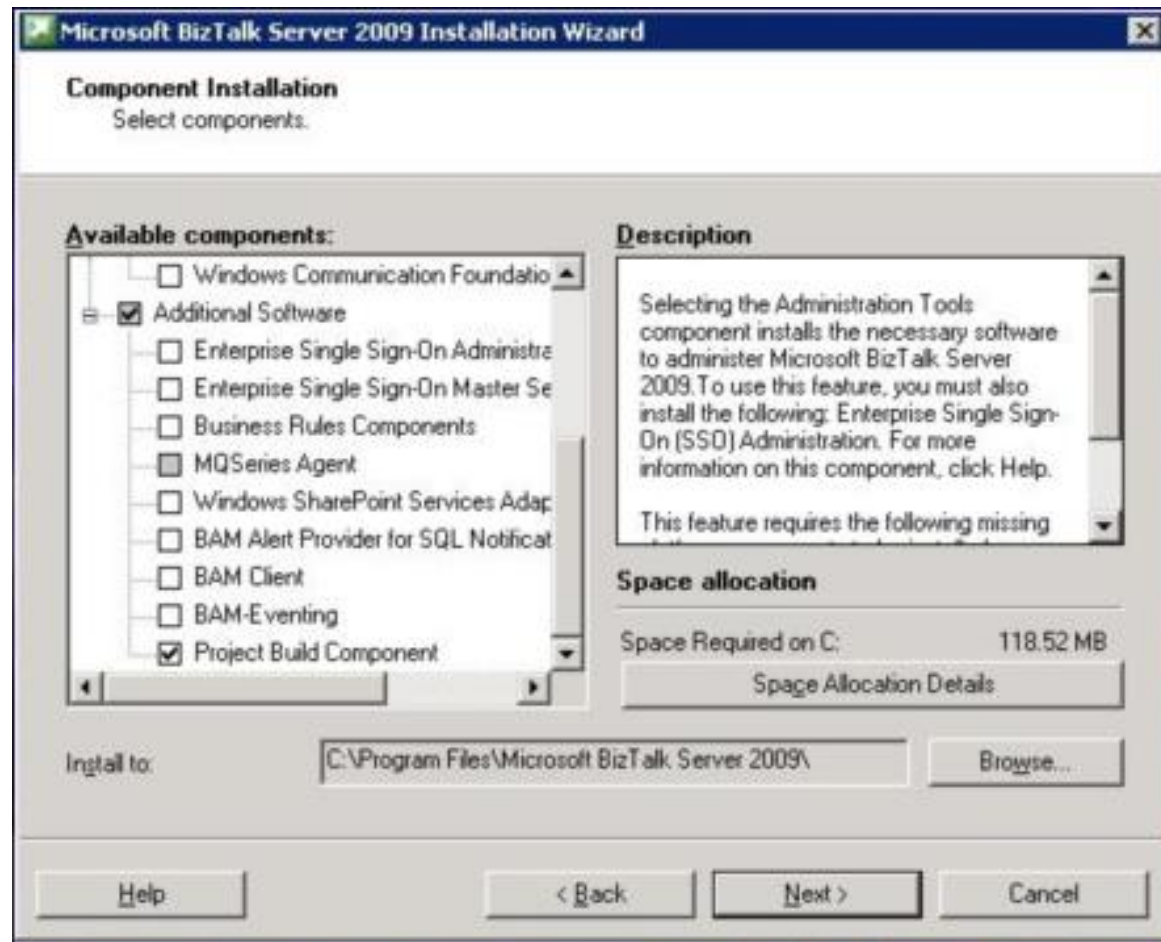
Unit testing issues

- **Paths for input files must resolve at test time**
 - Paths are relative to the Test results folder
- **Validation of schema – no specific errors**
 - Use standard .NET XML APIs to test

Team System integration

- **MS Build supported by Team Build Server**
- **Unit tests can be run as part of builds**
- **Installation option for build server**
 - Does not require full BTS installation or VS

Enabling build support



Summary

- **BTS 2009 supports the latest platforms**
- **Developer productivity improvements abound in Visual Studio**
- **Project system changes improve BTS involvement in ALM**