BizTalk Server 2006 R2: Receiving EDI messages

Objectives

EDI in R2

EDI Party Resolution

EDI Interchange processing
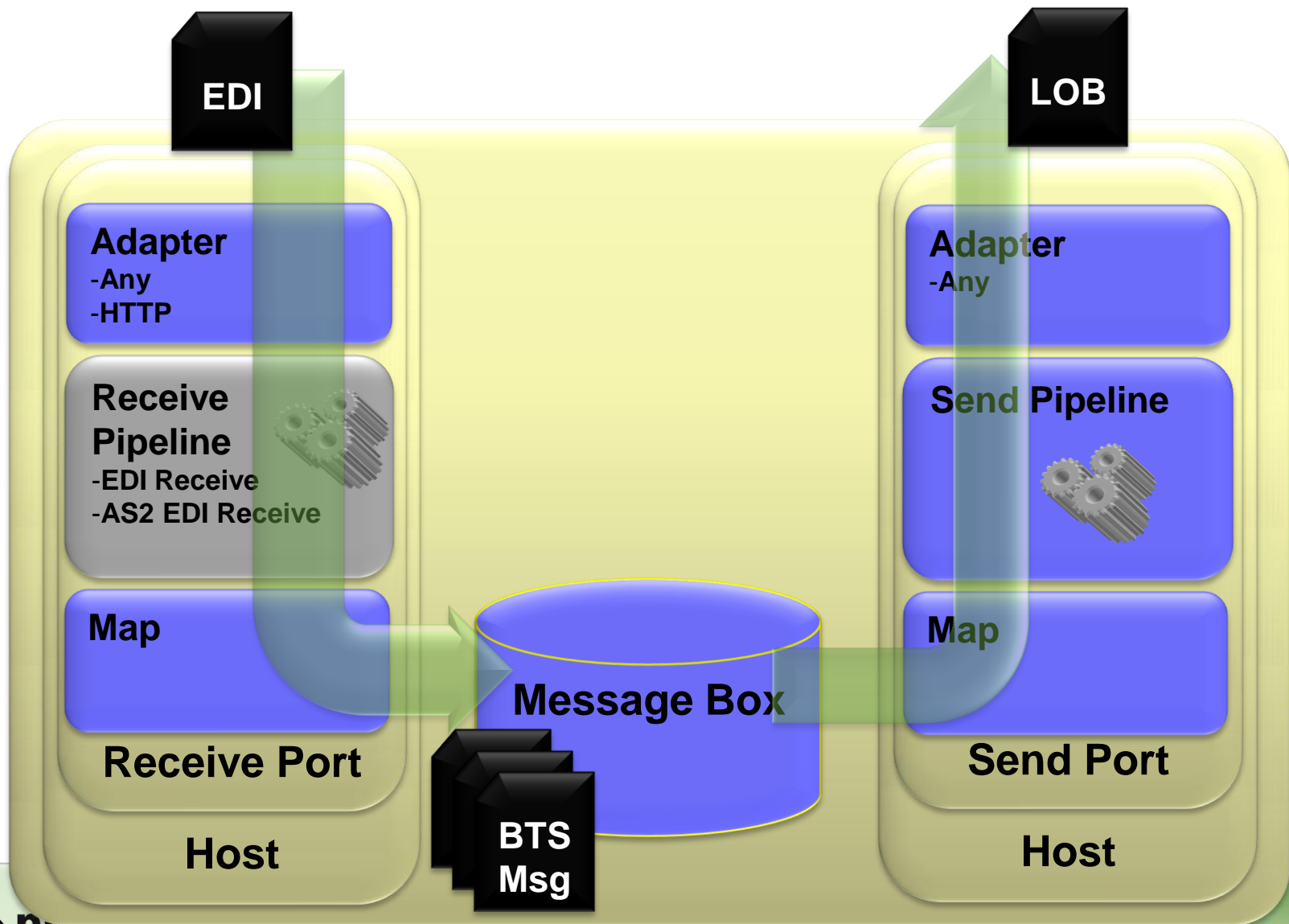
Ack processing

EDI Reporting

pluralsight
see what you can learn

EDI Solution Highlights

- **Comprehensive solution targeting the needs of general industry**
  - Robust support for X12 and EDIFACT
  - Parity with HIPAA Accelerator 3.3
  - Schemas for other variants (e.g. EANCOM)
- **Drummond Group certified AS/2 solution**
- **Upgrade utilities**
  - BizTalk 2004 and 2006 Base EDI adapters
  - BizTalk HIPAA Accelerator 3.0 and 3.3
- **Based on pipeline components – not an adapter**
  - Use with any adapter

![pluralsight logo - see what you can learn]

Receive Side Architecture
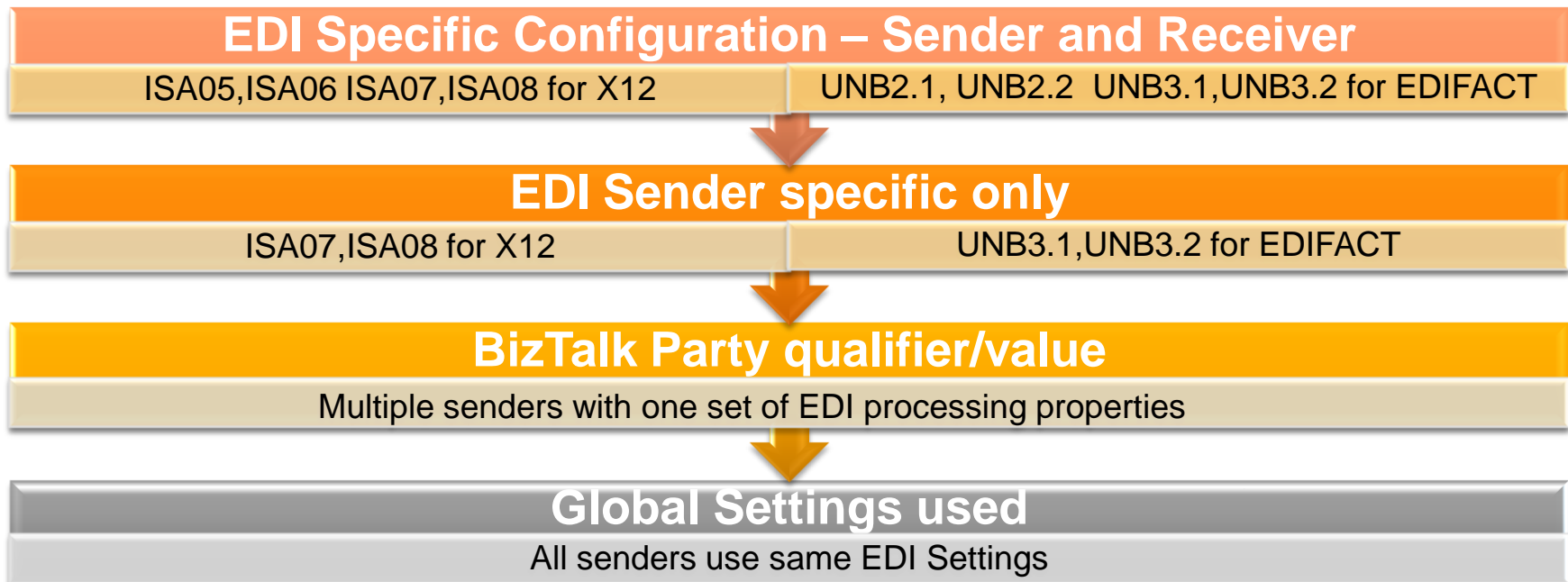
The role of Party

- **EDI in R2 relies heavily on the concept of Party**
- **EDI/AS2 settings are set on a per party basis**
- **Components are pre-programmed to pull information from messages and message context to match an incoming message to a Party**

EDI Global Settings

- **X12 and EDIFACT settings can be done globally**
- **Fall back settings if per-party settings aren't set**
- **If simple EDI application global settings might be the only settings needed**

EDI Party Resolution

- **Party qualifier and value are fallback settings with EDI and R2**
  - □ EDI specific sender/receiver settings can be used instead
- **Four part Party resolution algorithm**
  - □ Enables complex to simple scenarios

EDI Specific Configuration – Sender and Receiver	
ISA05,ISA06 ISA07,ISA08 for X12	UNB2.1, UNB2.2 UNB3.1,UNB3.2 for EDIFACT

EDI Sender specific only	
ISA07,ISA08 for X12	UNB3.1,UNB3.2 for EDIFACT

BizTalk Party qualifier/value
Multiple senders with one set of EDI processing properties

Global Settings used
All senders use same EDI Settings

EDI/X12 configuration

- **Right-click on the party in the MMC**
- **Properties segregated between EDIFACT and X12**
  - Settings are almost exactly parallel
- **Parties can be created and managed programmatically**

General tab

Party ID

Reporting

Copy EDI settings from

Agreement information

Contacts

- **Contacts tab allows per-party contact information**
  - Multiple contacts allowed

Party as Sender of messages

- **When you receive a message from this party on a Receive Location**
- **Configure duplicate control number settings**
  - Interchange
  - Group
  - TransactionSet
- **Default namespace**
- **Custom transaction set definition**

How R2 looks up a schema for EDI messages

- **Group and transaction set values are parsed & concatenated**

- **Concatenates with Namespace URI**
  - Namespace URI found in configuration for the party (or global settings if no party is found)

- **Does normal BizTalk schema lookup**

http://schemas.microsoft.com/BizTalk/EDI/EDIFACT/2006#EFACT_D96A_INVOIC_EAN008

http://schemas.microsoft.com/BizTalk/EDI/X12/2006#X12_00401_850

Schemas

- **Over 8,000 Schemas**
  - EDIFACT – D93A to D05B
  - X12 – 2040 to 5030
- **C:\Program Files\Microsoft BizTalk Server 2006\XSD_Schema\EDI**
  - MicrosoftEdiXSDTemplates.exe
  - Expanded size over 4GB

Deploying an EDI schema

- **Run MicrosoftEdiXSDTemplates.exe to unzip schemas**
- **Create BizTalk project**
- **Add schema file to project (Add – Existing Item)**
- **Schemas are large – may need to split into multiple projects**
  - 75 MB Assembly size limit in .NET can be reached with ~5 schemas
- **Deploy assembly into your application**
  - Your application must reference BizTalk EDI Application

Customizing schema

- **Schema elements can be modified according to partner need**
  - Extra validation
  - Data types
- **Changing the namespace URI for different partners**
  - Allows per partner modifications
  - Configure namespace in EDI interchange properties

Schema tools

- **EDI Schema Editor Extension**
  - Added by default to all R2 EDI XSDs
  - You can add manually if you need to create a custom EDI schema
- **Tools added into BizTalk Project System**
- **Validate Instance**
  - If set to Native – will validate EDI message (not with interchange)
- **Generate Instance**
  - If set to Native – will generate EDI message (no interchange)
- **EDI Tab displays EDI specific context information**

Pipeline components

- **EDI Disassembler**
  - Does EDI to XML conversion
- **BatchMarker**
  - Does property promotion based on batch filter criteria
- **EDI Assembler**
  - XML to EDI
  - Interchange generation

EDI Dissasembler

- **Performs the majority of EDI processing**
- **Sits in the disassembler stage of the EDIReceive and AS2EDIReceive pipelines**
- **Some typical disassembler functionality**
  - Document conversion/debatching
  - Property promotion
- **Some atypical functionality**
  - EDI specific acknowledgements (new messages)

EDI Promoted properties

X12
ISA06
ISA08
ISA15
GS01
GS02
GS03
GS08
ST01

EDIFACT
UNB2.1
UNB2.3
UNB3.1
UNB11
UNG1
UNG2.1
UNG3.1
UNH2.1
UNH2.2

Acknowledgements

- **Disassembler will generate acknowledgements based on message data**
  - TA if ISA14 is 1
  - 997 if ISA14 is 2
  - Technical CONTRL Ack for EDIFACT if UNB9 is 2
  - Functional CONTRL Ack if UNB9 is 1
- **Acks are sent to MessageBox for OneWay Receive Ports**
  - Send Port or Orchestration needs to subscribe
- **Acks are routed to Send Pipeline on Request-Response Receive Ports**
  - Can turn off in Ack Settings – Acks would then go to the MessageBox

Pipelines

- **EDIReceive**
  - EDI to XML
  - EDI debatching
- **EDISend**
  - XML to EDI
  - EDI Interchange generation
- **BatchControlMessageRcvPipeline**
  - Causes batch orchestration to release batch
  - Configured with XML Disassembler

Extended validation

- **EDI Type validation**
  - field length, optionality, and repeat count
- **Extended validation**
  - XSD based validation
- **Allow leading and trailing zeros and spaces**
- **Allow trailing separators**
  - Create empty XML tags

Document validation properties ─────────────────────────
- ☑ EDI type
  - ☐ Extended validation
  - ☐ Allow leading and trailing zeroes and spaces
- ☐ Allow trailing separators
  - ☑ Create empty XML tags for trailing separators

EDI Debatching

- **EDI Disassembler will split EDI documents**
  - At ST/SE level for X12
  - At UNH/UNT level for EDIFACT
- **Settings based on per-Party EDI Settings**
  - "Split Interchange as Transaction Set" (default)
  - "Preserve Interchange - suspend Interchange on Error"
  - "Preserve Interchange - suspend Transaction Sets on Error" - Interchange will continue - invalid transaction sets will be dropped and reported as errors

EDI SubDocument Splitting

- **For HIPPA scenarios**
- **Set in the HIPPA schema**
- **subdocument_break = "yes" at the Schema level**
- **subdocument_creation_break = "yes" at the appropriate record level**

EDI Reporting

- **Integrated into the MMC**
  - Bottom of group hub page
- **BAM related**
  - Multiple activities
  - Can query database views
  - Create BAM views as well

Summary

- **BizTalk Server 2006 R2 provides rich support for EDI processing**
- **Both X12 and EDIFACT standards**
- **Rich party based execution model**
- **Extensible schema system**