B2B Collaboration with SAP NetWeaver Process Orchestration

SAP Partner Edge Webinar, July 27th 2012
Katrin von Ahsen, Solution Management Technology, SAP AG
Disclaimer

This presentation outlines our general product direction and should not be relied on in making a purchase decision. This presentation is not subject to your license agreement or any other agreement with SAP. SAP has no obligation to pursue any course of business outlined in this presentation or to develop or release any functionality mentioned in this presentation. This presentation and SAP's strategy and possible future developments are subject to change and may be changed by SAP at any time for any reason without notice. This document is provided without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement. SAP assumes no responsibility for errors or omissions in this document, except if such damages were caused by SAP intentionally or grossly negligent.
SAP NetWeaver Process Orchestration - Overview

Objective of this session

Get to know how to leverage SAP NetWeaver Process Orchestration for collaborating with business partners:

- Overview of B2B with SAP NetWeaver Process Orchestration
- Solution details B2B Add On
- Planned innovations for B2B
- Hybrid integration approach together with SAP Information Interchange OnDemand

Target audience:

- Services Partner
- Channel Partner
- Authorized Reseller
- Customers
- …
B2B with SAP NetWeaver Process Orchestration

- Business Background
- Solution Overview
- External View
B2B with SAP NetWeaver Process Orchestration
Exploit the benefits of using a comprehensive integration solution

73% rate a single suite to handle B2B, EAI, SOA, and BPM as (extremely) important.

Key areas for improvements of current B2B integration approach according an independent research reveals priorities and strategies of B2B Leaders, Forrester Consulting, August 2010.
Multienterprise Business Process Management
Business processes beyond company’s boundaries

1 Collaboratively model B2B processes with your business partners

Process modeling using SAP StreamWork

- Enables tight collaboration with business partners for business differentiation
- Ensures end-to-end business process visibility allowing to gain business insights

2 Extend internal business processes to integrate your partners

Process implementation in SAP NetWeaver Process Orchestration
Interactive process collaboration with partners
Include unstructured process execution for more business flexibility

3 Collaborate with external business users through tasks

• Moving from structured to unstructured process execution for specific business user tasks
• Simple and ad-hoc integration of additional process participants

Task instance collaboration with SAP StreamWork
Automate business decisions
Business Rules Management use cases for B2B

Decision Rules

Validation Rules

Recommendation Rules

Calculation Rules

Alert Rules
How customers run B2B with SAP NetWeaver Process Orchestration
Widely adopted and proven solution for B2B collaboration

Current adoption and usage

- More than 5,000 productive customers* of process orchestration
- Type of integration scenarios: A2A (SAP/Non SAP), SOA, B2B
- ~60% of customers process EDI messages**
- ~45% have connections with EDI hubs**

SAP NetWeaver PRO as integration hub: B2B gateway, EAI and SOA middleware

SAP NetWeaver PRO for mission critical A2A and B2B replacing IBM Websphere & SAP Business Connector

SAP NetWeaver PRO replacing multiple integration technologies for A2A (SAP and non-SAP) and B2B integration of providers and customers.

SAP NetWeaver PRO used for electronic banking integration with clients' ERP applications

SAP NetWeaver PRO introduced as central ESB with B2B use cases for integrating providers (incidents, orders etc.)

* PI, CE (incl. BPM) and PRO customers
** Source: Customer survey amongst SAP User Groups
EDI and B2B Standards Support
NEW: Add-Ons* for SAP NetWeaver Process Orchestration
Comprehensive solution for EDI based and secure communication

SAP NetWeaver Process Orchestration

B2B Add-On

B2B Infrastructure Services
- Security
- EDI splitting
- Numbering
- Acknowledgements
- Archiving
- Mapping functions
- Mapping templates

B2B Technical Adapters
- AS2
- X.400
- OFTP

Converter Modules
- ANSI X.12
- EDIFACT
- TRADACOM
- Odette
- VDA
- Plain Text

Secure Connectivity Add-On

Technical Adapter
- SFTP
- Adapter Module
- PGP

* Available for SAP NetWeaver PI/PRO release 7.11 (SP8), 7.3 (SP5), 7.31 (SP3)
Run B2B processes fully automated
Tightly integrated with internal processes by using the same solution

- Tightly integrated in Process Orchestration stack
- Reuse of design and configuration tools
- Leverage known implementation approach
- Incorporated in standard operations & lifecycle management
B2B Add On - Connectivity options

Overview

SAP NetWeaver Process Orchestration

B2B Add-On

AS2

OFTP

X.400

Converter Modules*

HTTP(S) Proxy* HTTP

OFTP2 Gateway* TCP

BINTEC Router ISDN

OFTP2 direct TCP

Socks Proxy* P7

* Can be used together with any Java based adapter.

*optional
B2B Add-On - document type options

Overview

* Can be used together with any Java based adapter.
Features of Converter Modules
Delivered as part of the B2B Add-On

Scope of Converter Modules

- Support of all common EDI standards: ANSI X.12, EDIFACT, Odette, Tradacoms, VDA, plain text messages
- Pre-packaged with conversion rules for common EDI standards for converting those into XML messages (and vice versa)
- Configured as adapter modules within a communication channel (inbound and outbound)
- Can be used in conjunction with any java based adapter
- Automatic detection and syntax check of inbound EDI messages

Supporting features

- Maintenance GUI allowing to modify or create custom conversion rules
- Maintenance of number ranges for automatically inserting continuous counters into outgoing EDI messages
- Test features for validating EDI messages and generating sample EDI messages
- Mapping function libraries for specific EDI uses cases
How the EDI Separator Works
Splitting of Electronic Data Interchanges into single messages

1. Electronic Data Interchange comprising of multiple B2B messages received from partner
2. Outbound EDI Separator Adapter splitting EDI into single B2B messages
3. Single B2B messages received by inbound EDI Separator and mapped to internal message format and sent to receiving application
4. Optionally: Acknowledgement generated and sent to business partner
Low scale archiving of EDI messages
Using the archiver module of the B2B add-on

Example: Outbound EDI

- Purpose: Correlate IDoc with EDI message, preferably indexed by IDoc number
- Realized via archiver module and two mappings
- Enables low-scale archiving to the file system
- Detection of IDoc number possible
- For inbound and outbound EDI messages
B2B Industry Standard Support
Prepackaged Integration Solutions

SAP Business Package for CIDX
• Chemical industry standard for the order-to-invoice process
• Integration content such as mapping templates, preconfigured integration scenarios
• CIDX adapter based on the RNIF 1.1 standard

SAP Business Package for RosettaNet
• High Tech industry standard for the order-to-invoice process
• Integration content such as mapping templates, preconfigured integration scenarios
• RNIF 2.0 adapter

SAP Business Package for SWIFT
• Cross industry solution enabling company-bank communication via SWIFTNet
• Integration content such as mapping templates, preconfigured integration scenarios

HL7
• Healthcare industry standard for exchanging patient information
• Enterprise services, integration content
• HL7 adapter
Coming soon*: Rapid Deployment Solution for EDI Integration
Cost efficient approach for migrating from legacy B2B solutions

**Fast Time-To-Value**
- Deployment of B2B Add On and predefined mappings
- Configuration of B2B integration scenarios
- Go live support

**Cost Effective**
- SAP NetWeaver Process Orchestration, B2B Add-On
- Predefined mappings for the order-to-cash and procure-to-pay processes
- Supporting ANSI X.12 and EDIFACT standard

**Quick & Lean**
- Knowledge transfer workshop
- Documentation

*RTC scheduled for August 13th 2012
Integration Visibility
For IT & Application Support and Business Power Users

Message Flow Monitor in SAP Solution Manager

- **Monitoring along the B2B message flow** including SAP backend systems
- **Show relevant payload data** in monitoring overview (EDI & order number, amount etc.)
- Provide a summarized information for most common B2B related issues
- **Measure SLAs**, such as processing times, error ratio, volumes etc.
- **Integration** with other functionality of SAP Solution Manager such as alerting, incident and notification management.

PLANNED INNOVATIONS

This is the current state of planning and may be changed by SAP at any time.
Flow Status Overview and KPIs
Integration Visibility

PLANNED INNOVATIONS
This is the current state of planning and may be changed by SAP at any time.
SLA Status
Integration Visibility

PLANNED INNOVATIONS
This is the current state of planning and may be changed by SAP at any time.
Tight integration of EDI capabilities
Unified tooling, design and configuration approach

Modeling
- Process Composer
- Integration Flow Editor
  - B2B design & configuration

Execution
- SAP NetWeaver BPM Process Server
- SAP NetWeaver PI Advanced Adapter Engine
  - B2B Add-On

Monitoring
- SAP NetWeaver NWA Process Analytics
- SAP NetWeaver NWA Message Monitoring incl. B2B*

SAP Solution Manager
- Integration Visibility*

SAP Solution Manager Business Process Blueprinting
- Process modeling for core and custom processes

SAP Business Suite
- Process automation of core processes

Process Observer

*Roadmap topic, name is subject to change.
Hybrid B2B together with SAP Information Interchange OnDemand
B2B Integration Solutions from SAP
SAP NetWeaver Process Orchestration: B2B for business differentiation

On Premise B2B Integration
SAP NetWeaver Process Orchestration

Enabling business agility
B2B Integration Solutions from SAP
SAP Information Interchange OnDemand: Connect once to your network

On Demand B2B Integration
SAP Information Interchange OnDemand

Reducing complexity

Your Enterprise

Your Business Network

SAP NetWeaver Process Orchestration

Customer

Customer

Non-SAP

SAP Information Interchange OnDemand
B2B Integration Solutions from SAP
Combine the best of both solutions: Hybrid B2B integration

On Premise B2B Integration
SAP NetWeaver Process Orchestration

On Demand B2B Integration
SAP Information Interchange OnDemand

Hybrid B2B Integration
= Business agility at reduced complexity

Your Enterprise
Your Business Network
How to get there?
2 RDS for Process Orchestration enabling hybrid B2B

Your Enterprise
Your Business Network

*For the B2B related parts of the order-to-cash and procure-to-pay process
Summary
B2B Collaboration with SAP NetWeaver Process Orchestration

Key takeaways

- Process Orchestration enables new ways of interacting with business partners
  - Enabling multienterprise BPM & collaborative B2B (BPM, StreamWork)
  - Automating business decisions (BRM)
- Comprehensive solutions for B2B
  - New B2B Add-On for EDI
  - Packaged offerings for Industry Standards
- Coming soon …
  - RDS for kickstarting migration from legacy B2B gateway solutions
  - Integration Visibility for B2B
- Option for hybrid B2B together with SAP Information Interchange OnDemand
How to get started?
Options for evaluating SAP NetWeaver Process Orchestration*

1. Planned*: SAP NetWeaver Process Orchestration (incl. B2B add on) in the Amazon Cloud

2. SAP NetWeaver Process Integration 7.3 in the cloud by Cirrus Cloud Computing

3. For customers:
   Trial license from SAP Account Management contact

4. For partners:
   B2B add-on is included in many test and demo packages

Information about B2B with SAP NetWeaver Process Orchestration at SCN:

http://scn.sap.com/community/b2b-integration

*Non productive use only, some options for temporary use only, additional costs may apply

**Subject to change. Availability scheduled for Q3 2012.
Q & A
Thank you

Contact information:

Katrin von Ahsen
Solution Management Technology – Business Integration
katrin.von.ahsen@sap.com
B2B Demo Scenario
Capabilities: AS2 adapter, EDI Separator, ANSI X.12 Converter
AS2 Adapter Overview
Delivered as part of the B2B Add-On

AS2 Adapter Features

- **Protocols**: HTTP and HTTPS for transport, support of proxies
- **Quality of service**: Exactly once, exactly once in order, best effort
- **Signature**: SHA1
- **Encryption**: 3DES, AES/128, AES/192, AES/256, RC2/128, RC2/40, RC2/64, RC5, ARCFOUR
- **Authentication/mapping of partners**: Via AS2 sender, AS2 recipient, message subject and message ID
- **Acknowledgements**: Message disposition notifications (none, synchronous, asynchronous)
- Charset re-encoding for messages
- Archiving of original inbound message on the file system
- Use of dynamic attributes
OFTP Adapter Overview
Delivered as part of the B2B Add-On

OFTP Adapter Features

- Certified by ODETTE
- **Supported versions**: OFTP1.x and OFTP2
- Protocols: TCP/IP, ISDN (X.25) for transport via RCAPI & Funkwerk ISDN Routers
- **Quality of service**: Exactly once, exactly once in order, best effort
- **Authentication**: Via cryptographic handshake or against the Odette trusted services list
- **Encryption**: SSL encryption of the transport layer with client authentication. CMS encryption, signing and compression of the messages.
- **Acknowledgements**: End to end responses (optionally signed)
- Archiving of messages (original inbound, final outbound) on the file system
- Easy EBCDIC & ASCII codepage conversion
- Automatic exchange of certificates with partners
- Support of dynamic attributes
X.400 Adapter Overview
Delivered as part of the B2B Add-On

X.400 Adapter Features

- **Protocols**: X.400 P7 for communication, TCP/IP for transport, use of socks 5 proxy
- **Quality of service**: Exactly once, exactly once in order, best effort
- **Encryption**: SSL for TCP/IP
- **Authentication**: Content-based sender determination (multiple partner & message types in one mailbox)
- **Document content**: IA5 text, binary and bilaterally defined bodyparts, general text extended body parts
- **Acknowledgements**: Delivery, non delivery report, submission reports
- **Message split per bodypart**
- **Archiving of original X.400 messages** (inbound before decoding, outbound after encoding) on the file system
- **Configurable poll schedule**
- **Character set re-encoding of messages**
- **Support of dynamic attributes**
Plain Converter Module
For custom message formats

- The plain converter is a generic converter
- Tables can be filled by user for own message formats
- Can handle messages with fixed length fields or character separated
- Determines message type with help of header data and/or regular expression on message
- Conversion rules are maintained in database tables
  - Charset information, new line characters, prefix and suffix for converted message
  - Set type information (fixed field length, character separated)
  - Sequence of fields per message and set (name, length, fill characters …)

<table>
<thead>
<tr>
<th>MESSAGETYPE</th>
<th>SET_NAME</th>
<th>FIELD_NAME</th>
<th>FIELD_INDEX</th>
<th>FIELD_LENGTH</th>
<th>FILL_CHAR</th>
<th>ORIENTATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>Bordernr</td>
<td>2</td>
<td>16</td>
<td>#20</td>
<td>L</td>
</tr>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>BordernummerTTNMJU</td>
<td>3</td>
<td>6</td>
<td>#20</td>
<td>R</td>
</tr>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>FirmaMohrName</td>
<td>7</td>
<td>16</td>
<td>#20</td>
<td>L</td>
</tr>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>FirmaMohrOrt</td>
<td>8</td>
<td>12</td>
<td>#20</td>
<td>L</td>
</tr>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>FirmaMohr_PLZ</td>
<td>6</td>
<td>8</td>
<td>#20</td>
<td>L</td>
</tr>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>Konzulente</td>
<td>1</td>
<td>3</td>
<td>#20</td>
<td>R</td>
</tr>
<tr>
<td>FORTRAS_V002</td>
<td>A</td>
<td>Ladeanhnehmer_Nr_TWegnum.</td>
<td>10</td>
<td>16</td>
<td>#20</td>
<td>L</td>
</tr>
</tbody>
</table>
SFTP Adapter Overview
Delivered as part of SAP NetWeaver Process Orchestration

SFTP Adapter Features

- **Protocols**: SFTP versions 0, 1, 2, 3 by means of SSH2, SCP; SOCKS 4,5 or HTTP proxy (SFTP) proxies
- **Quality of service**: Exactly once, exactly once in order, best effort
- **Authentication**: Fingerprint check, certificate and password authentication
- Archiving of original inbound message on the file system
- Support of dynamic attributes
- Other functionality is almost identical to the one of the standard file/ftp adapter
PGP Adapter Module Overview
Delivered as part of SAP NetWeaver Process Orchestration

PGP Adapter Module Features

- Used for signing and encrypting, decrypting, signature verification of message content
- Can be used in conjunction with any technical adapter of SAP NetWeaver Process Orchestration.
- For inbound and outbound communication
- **Encryption algorithms (key length):** AES (128), AES (192), AES (256), BLOWFISH, CAST5, DES, IDEA, SAFER, 3DES, TWOFISH
- **Signing algorithms:** MD5, DOUBLE SHA, HAVAL 5 (160), MD2, RIPEMD (160), SHA1, SHA (224), SHA (256), SHA (384), SHA (512), TIGER (192)
- **Compression formats:** ZIP, ZLIB, BZIP2, none
- **Message formats:** binary, text (ASCII/none ASCII)