Agenda

- Business-to-Business (B2B) Integration
- Why is B2B Integration Hard?
- B2B Integration Requires A2A Integration
- Seamless A2A and B2B Integration
- Integration Concepts
- Integration Technologies
- Advanced Integration Architecture
Business-to-Business (B2B) Integration

Application \(\leftrightarrow\) (B2B) Integration Engine \(\leftrightarrow\) (B2B) Integration Engine \(\leftrightarrow\) Application

Trading Partner 1 \(\leftrightarrow\) Trading Partner 2
Business-to-Business (B2B) Integration

Application \hspace{2cm} \text{(B2B) Integration Engine} \hspace{2cm} \text{(B2B) Integration Engine} \hspace{2cm} \text{Application}

Trading Partner 1 \hspace{4cm} \text{i} \hspace{4cm} \text{Trading Partner 2}

PO \hspace{1cm} PO' \hspace{1cm} PO'' \hspace{1cm} POA \hspace{1cm} POA' \hspace{1cm} POA''
Business-to-Business (B2B) Integration

Application

(B2B) Integration Engine

Network Transport

B2B Protocol

Security

PO

PO'

POA

POA'

Audit

Tracking

Transformation

Trading Partner Management

Audit Tracking
Why is B2B Integration Hard?

- **Semantic and technical heterogeneity**
  - B2B protocol
    - EDI, Swift, RosettaNet, OASIS, fPML
  - Network transport
    - SOAP, ebxml, beep, HTTP/S, S/MIME, ftp, EDIINT
  - Audit and tracking
    - All communication: within and outside company
  - Security
    - Certificates, non-repudiation, authorization, authentication
    - X.509, xkml, s2ml
  - Trading partner management and agreement
    - For every pair of active trading partners
  - Transformation
    - Syntactic and semantic transformation
B2B Integration Requires A2A Integration

- “Gigantic” mapping problem
  - From incoming messages to sequence of application invocations and vice versa
B2B Integration Requires A2A Integration

- Business process / workflow management
  - Business rules
  - Pass-through
- Hundreds of applications and application interfaces
  - Application adaptation (Screen, queue, application programming interface, file system, database)
- Transformation

![Diagram of B2B integration processes]

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Seamless A2A and B2B Integration

- Seamless A2A and B2B integration
  - One set of integration concepts
  - One integration architecture
Integration Concepts

- **B2B protocol**
  - Internet and networks as interface

- **Application adaptation**
  - Application as interface

- **Business document type**
  - Business concept like purchase order

- **Business event type**
  - Active elements with intent of action
  - “create purchase order”

- **Information sharing**
  - Publish/subscribe to interesting information

- **Trading partner**
  - “My” community

- **Trading partner agreement**
  - Rules of engagement

- **Translation**
  - Syntax

- **Transformation**
  - Semantics

- **Business process**
  - Routing and business rules

- **Verification**
  - Consistent and valid business events

- **Audit and Tracking**
  - Status and non-repudiation
Integration Technologies

- Queueing
- Propagation
- Application adapter
- Service management
- Database
- Transaction management
- Workflow management
- Security
- History management
- Business intelligence
- Transformation / Translation
- Repository
Advanced Integration Architecture

Integration Infrastructure

- Trading partner mgt.
- B2B protocol engine
- Verification
- History
- Application adapter
- Business intelligence
- Trading partner agreement
- Service mgt.
- Business events
- Business document mgt.
- Status monitoring

Integrated Platform

- Workflow mgt.
- Publish/subscribe
- Audit and tracking
- Transformation
- Database
- Queuing
- Translation
- Data types
- Transaction mgt.
- Security
- Propagation

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Summary

- B2B Integration and A2A Integration are “the same”
  - Concepts
  - Technologies
- The integrated platform has many advantages
  - One integrated platform for all integration work
  - Already integrated integration technologies
  - Service levels apply without limitation: transactions, reliability, recovery, scalability, security
- Advanced Integration Architecture
  - Supports A2A as well as B2B integration seamlessly and completely
Contact

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