

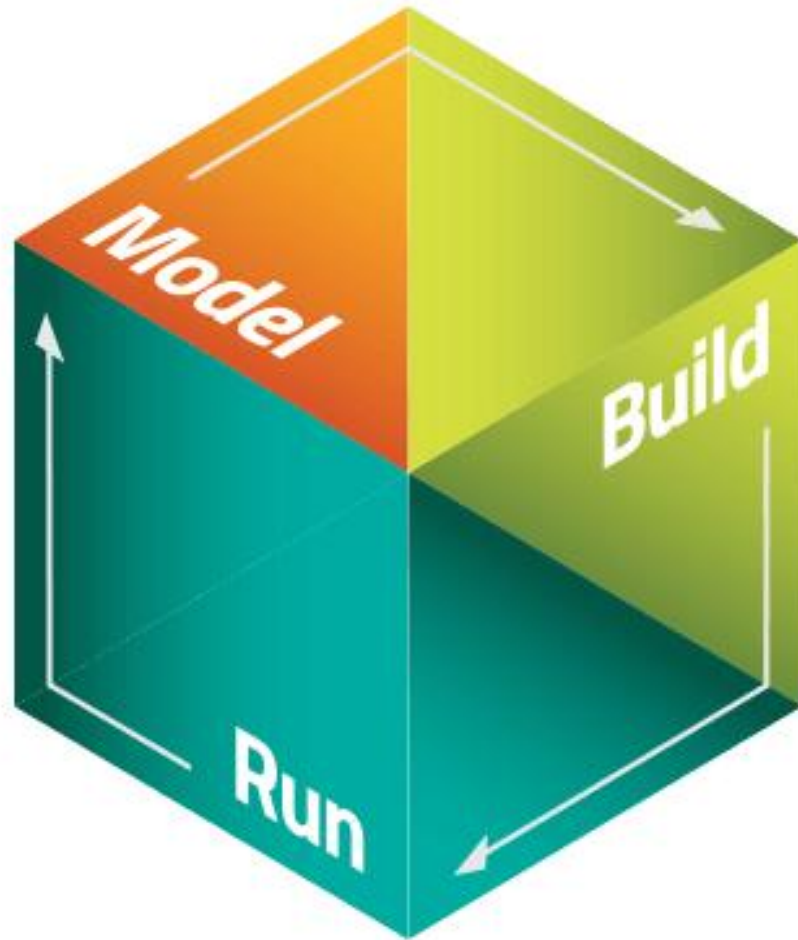


Bizagi and Biztalk

Enn Õunapuu enn.ounapuu@ttu.ee

Millest räägime

- Arhitektuur
- Näited



Model

- Processes are first modeled through standard BPMN (**BPM notation**), and **documented by the process** analysts by using Bizagi Modeler. Then, by means of Bizagi Studio, these Processes' detail is extended for their execution.

Build

After designing the Process, the next step is to build the solution. Bizagi Studio is the construction environment used to automate the processes that were defined with the Bizagi Modeler. An easy-to-use wizard will guide you through each of the steps to create your complete Process model: defining the data model, the user interface, the business rules, the work allocation and the integration with other applications, among other things.

Run

Once the Processes detail is completed, Bizagi offers the possibility to publish these Processes into the Production environment with an assisted wizard. End users are presented with a Work Portal for them to access through a browser, and login in order to carry out their daily activities in these Processes powered by Bizagi Engine.

Bizagi is a model-driven solution. This means that Bizagi Engine directly interprets the BPMN model without performing any transformation.

Bizagi directly executes and controls the workflow in any platform, from the BPMN model defined graphically by the Process analysts, without any intermediate code.

Authoring / Construction



Process owners,
Process analysts
(Collaborating)



Process
Repository

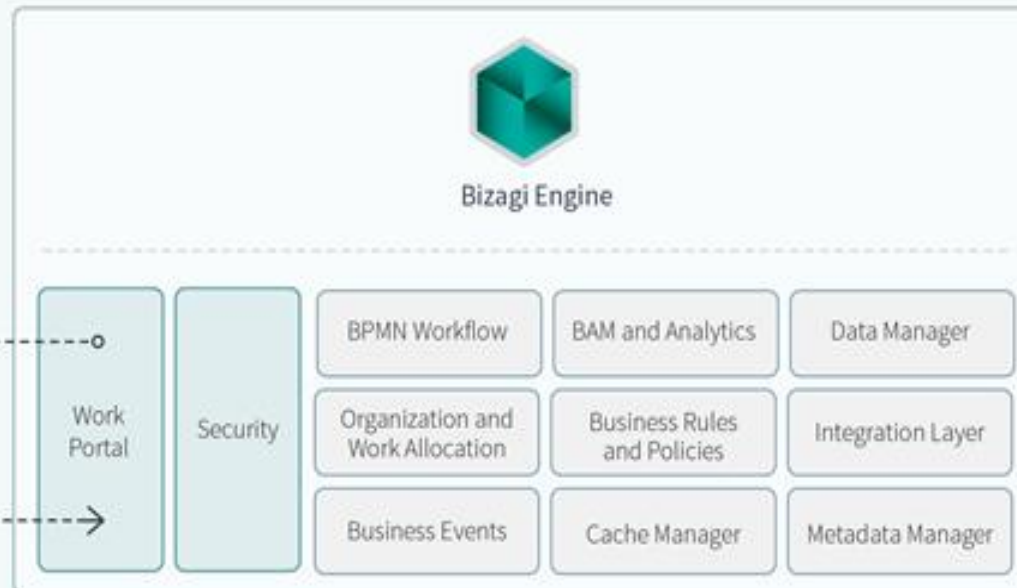
Continuous Improvement

Deployment

Execution



End users
(Through a Browser)



Process
Execution
Database

Bizagi in company

Bizagi adapts to your company set up and infrastructure

Bizagi solution provides process-oriented features and further integration possibilities with any systems in your company (the Enterprise Services Bus, SMTP server, LDAP server, ECM/DMS, etc).



End users

Bizagi BPMS

ESB
(Enterprise Service Bus)

Company Systems

Email Server
(SMTP)

ECM/DMS

Legacy systems

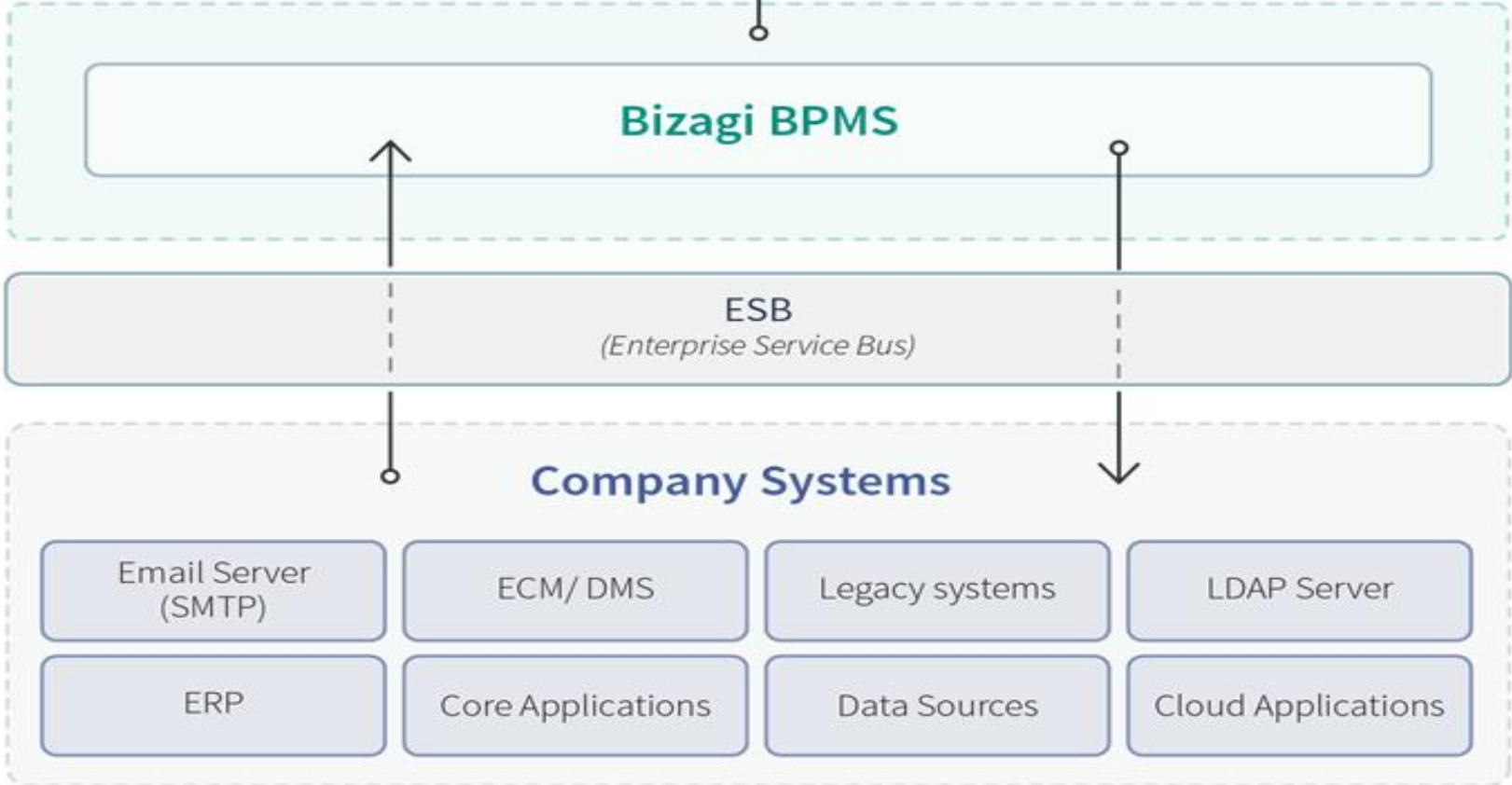
LDAP Server

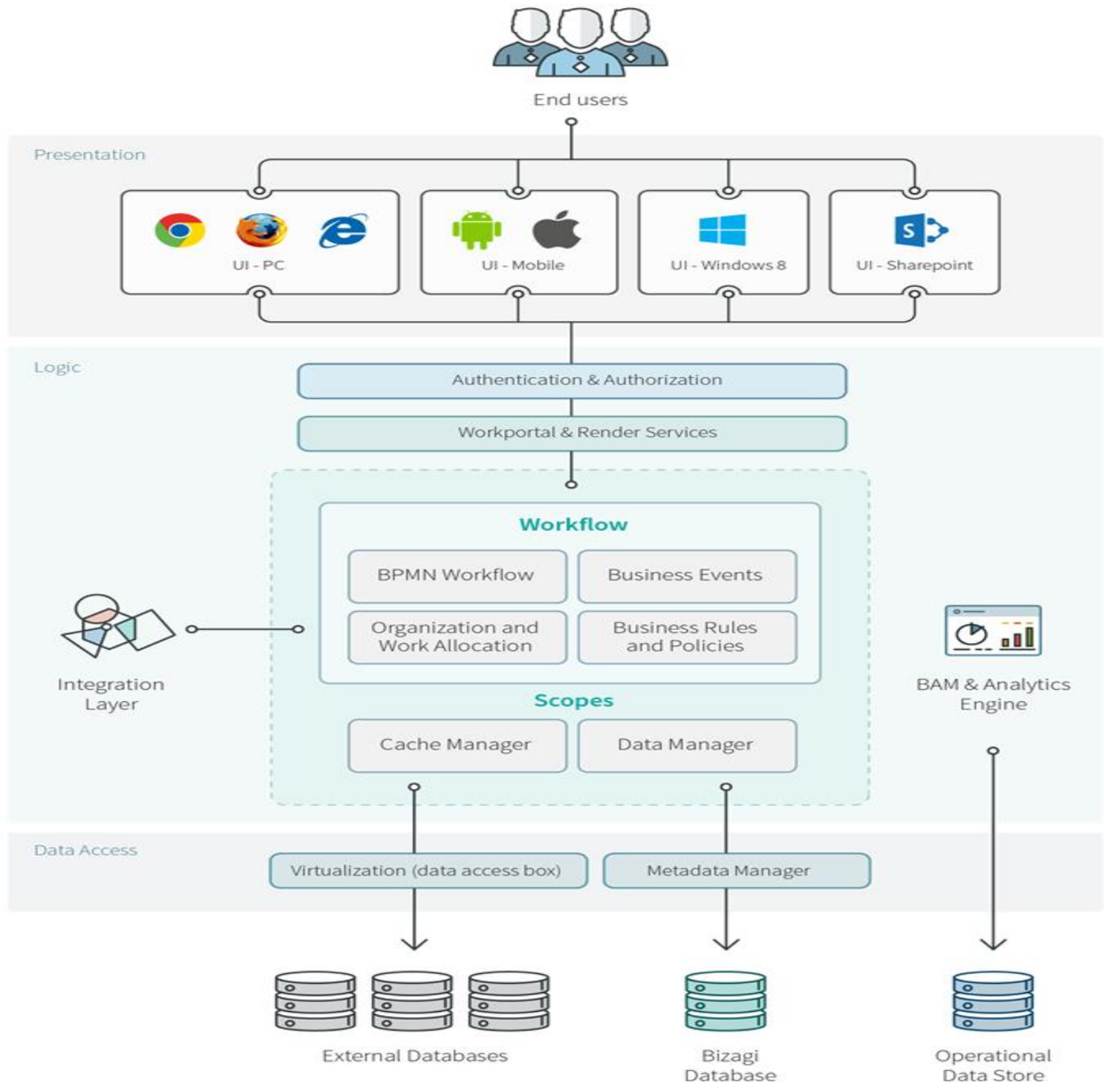
ERP

Core Applications

Data Sources

Cloud Applications





Biztalk server



Microsoft®
BizTalk® Server 2013



Integration

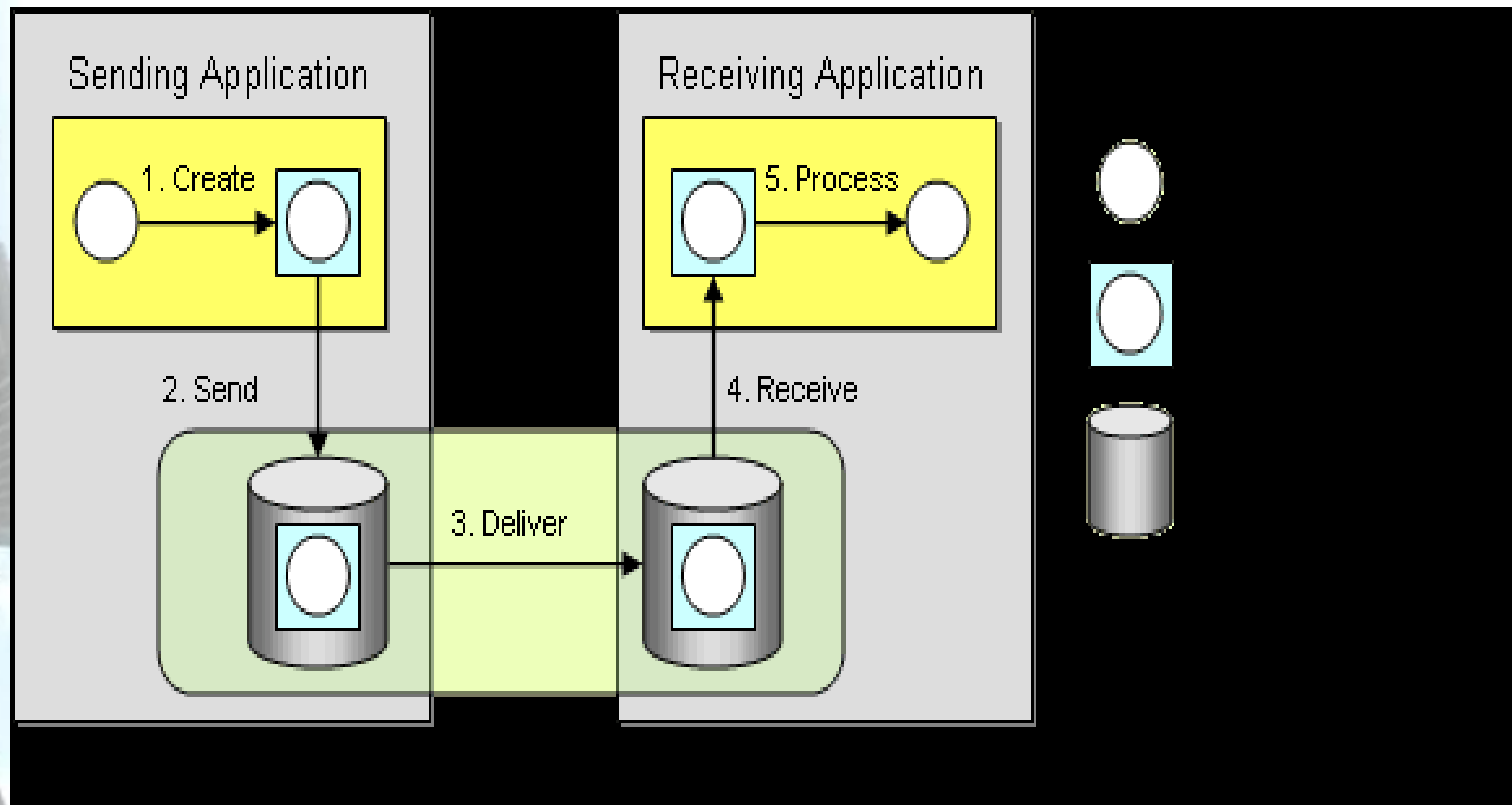
File Transfer — One application writes a file that another later reads. The applications need to agree on the filename and location, the format of the file, the timing of when it will be written and read, and who will delete the file.

Shared Database — Multiple applications share the same database schema, located in a single physical database. Because there is no duplicate data storage, no data has to be transferred from one application to the other.

Remote Procedure Invocation — One application exposes some of its functionality so that it can be accessed remotely by other applications as a remote procedure. The communication occurs real-time and synchronously.

Messaging — One application publishes a message to a common message channel. Other applications can read the message from the channel at a later time. The applications must agree on a channel as well as the format of the message. The communication is asynchronous.

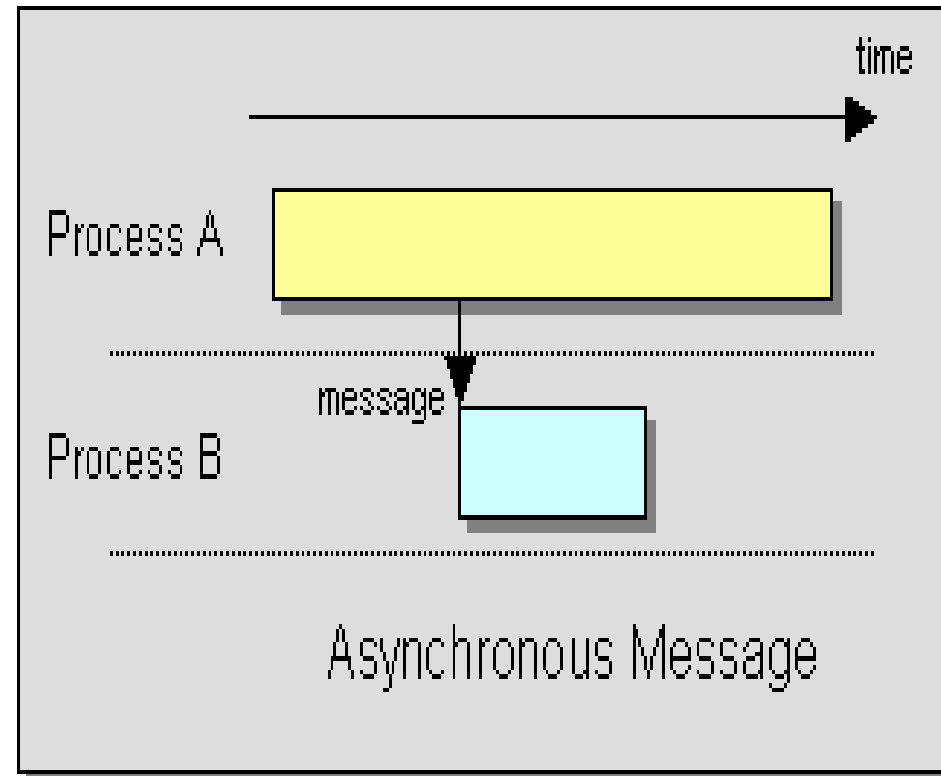
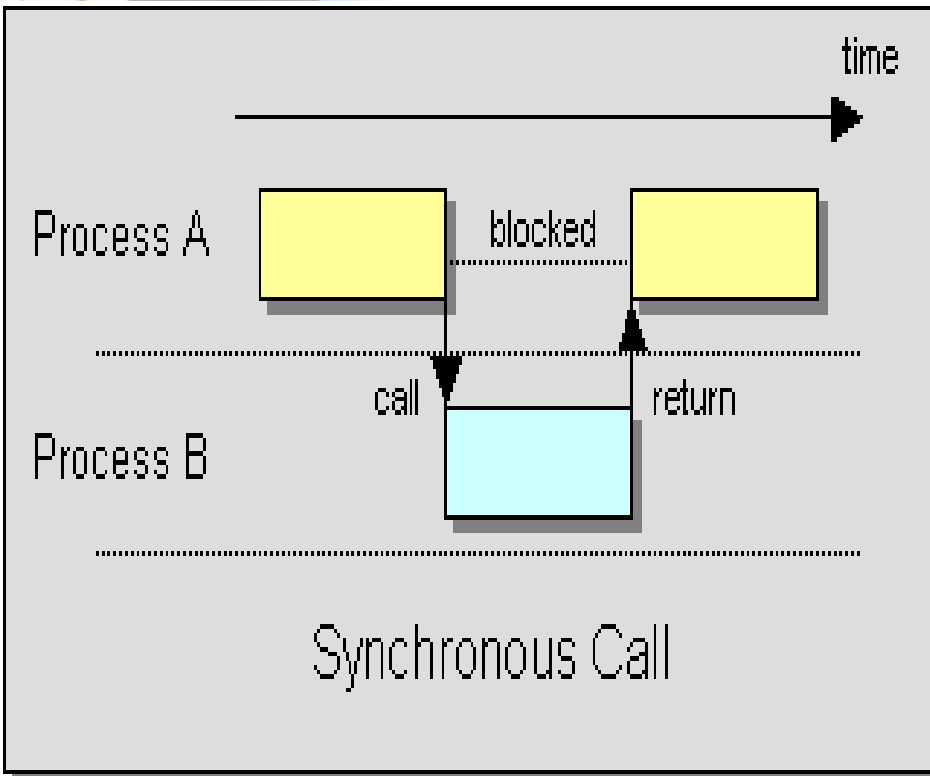
Messaging



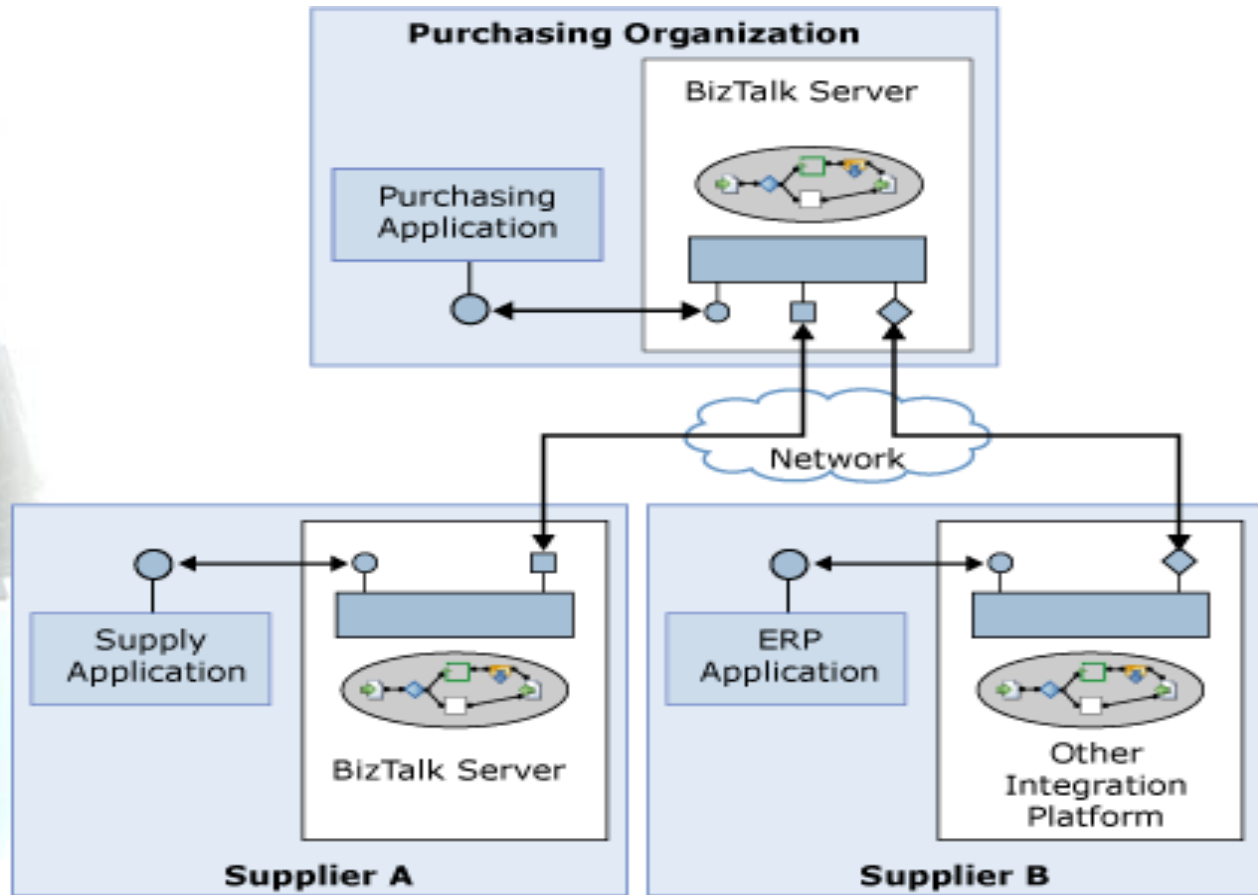
Messaging

1. *Create* — The sender creates the message and populates it with data.
2. *Send* — The sender adds the message to a channel.
3. *Deliver* — The messaging system moves the message from the sender's computer to the receiver's computer, making it available to the receiver.
4. *Receive* — The receiver reads the message from the channel.
5. *Process* — The receiver extracts the data from the message.

Synchronous and Asynchronous Call Semantics

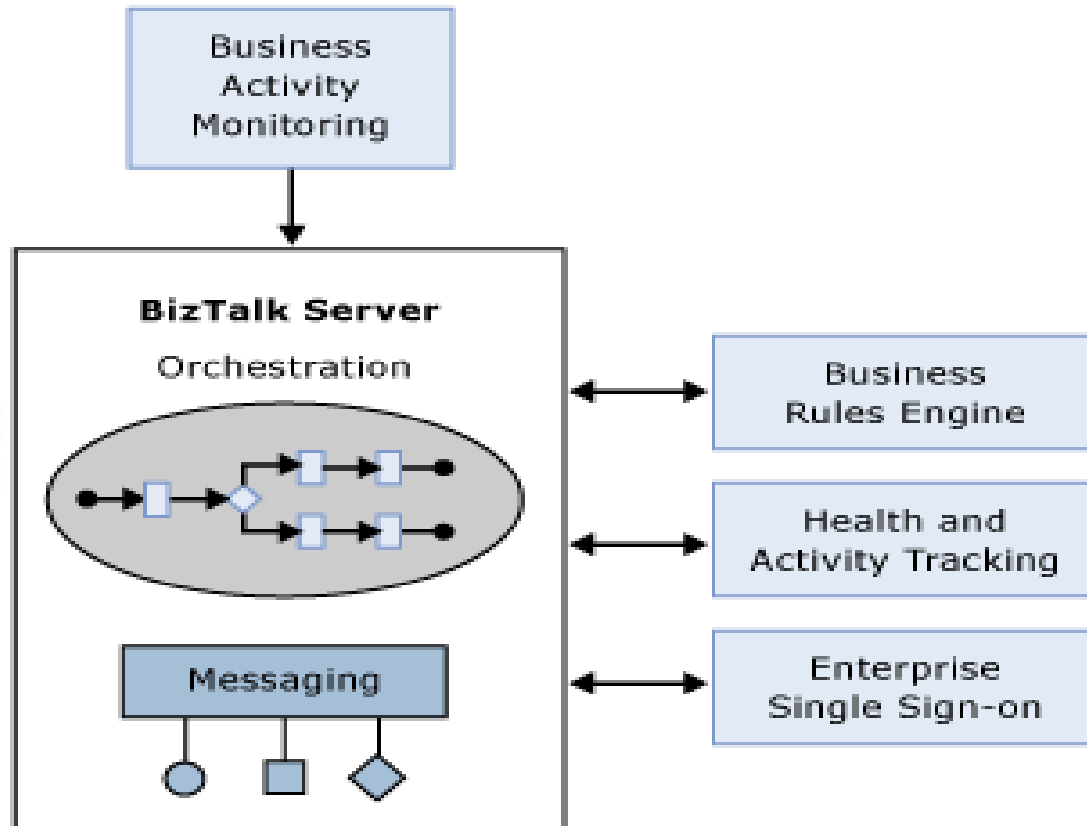


Biztalk

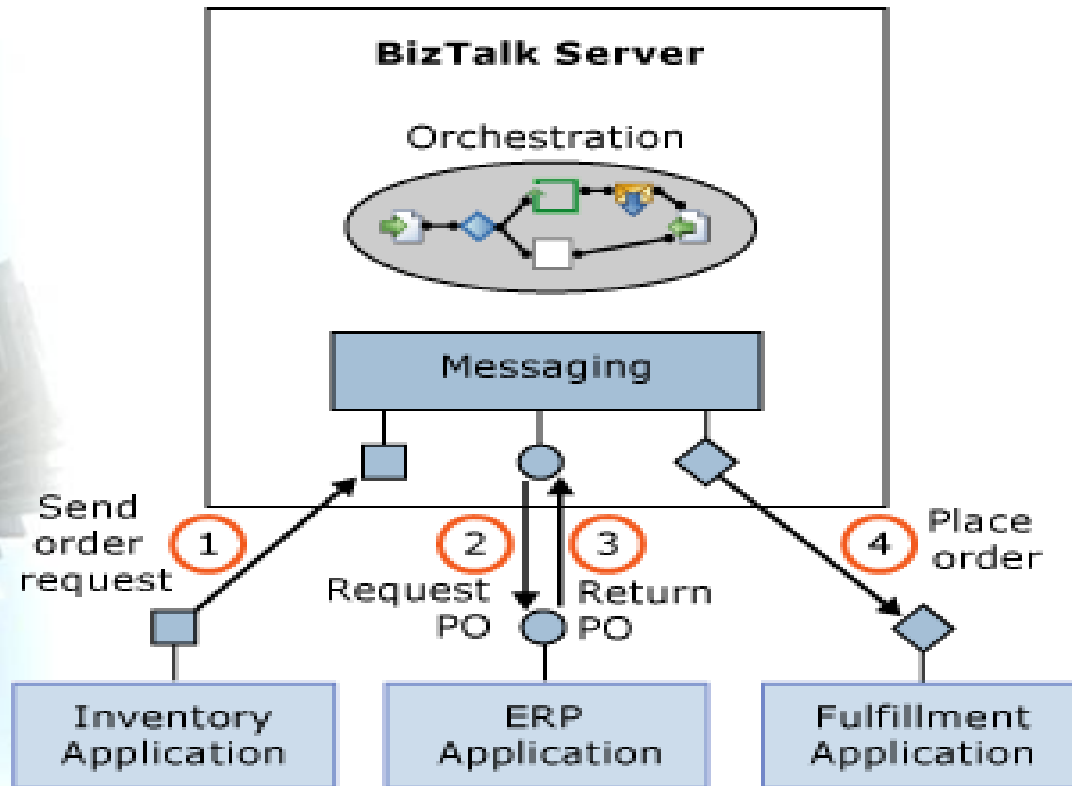


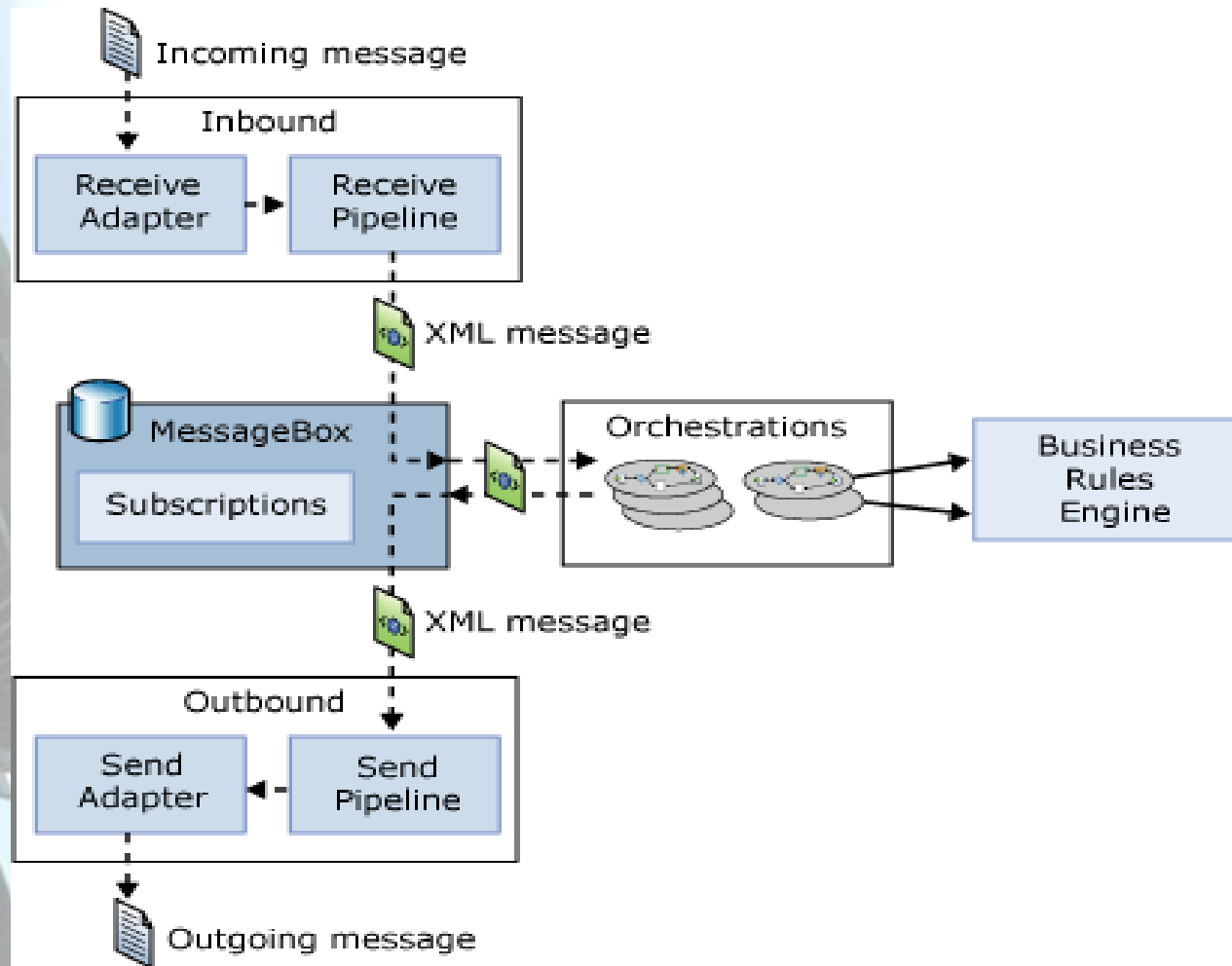
Biztalk architecture

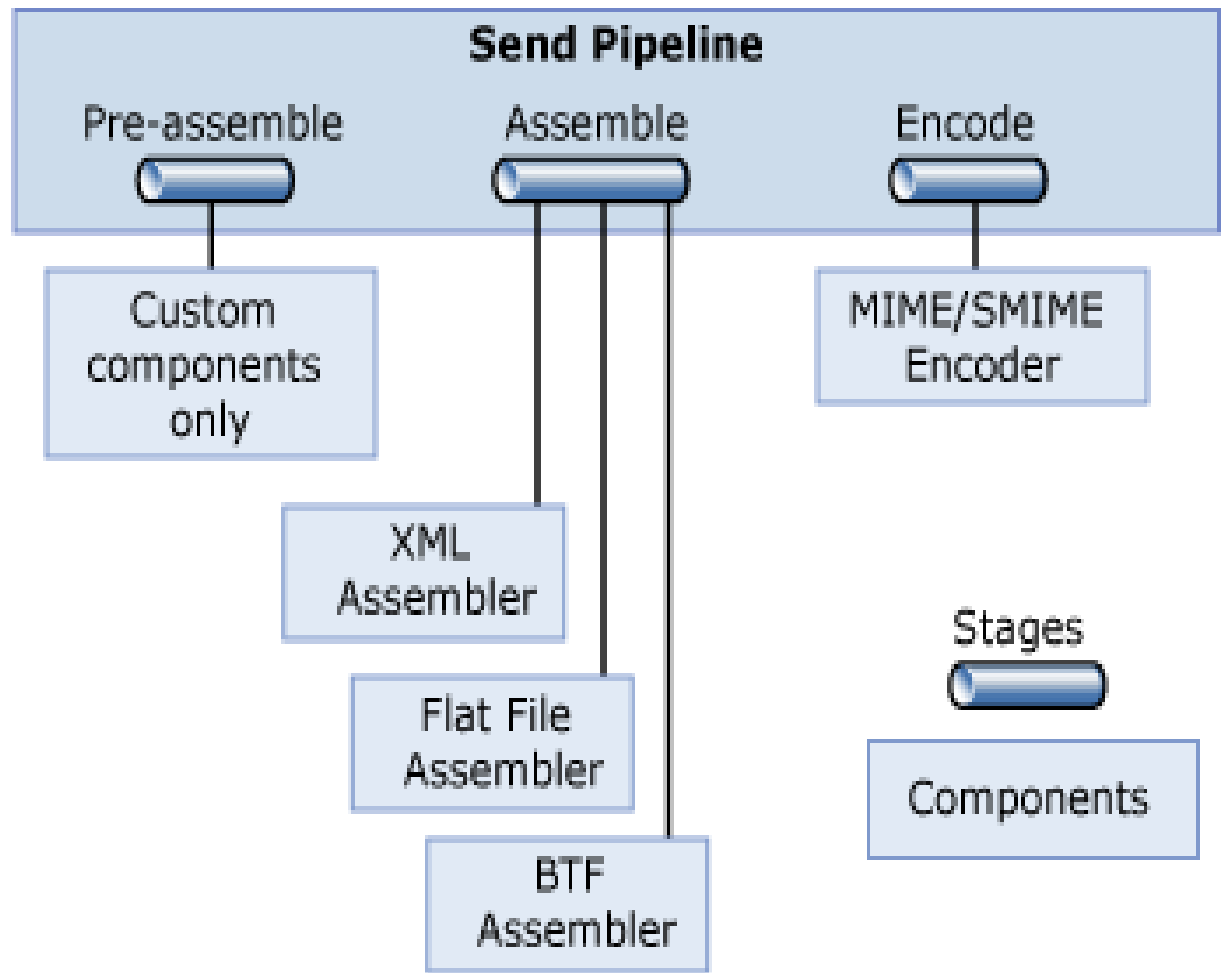
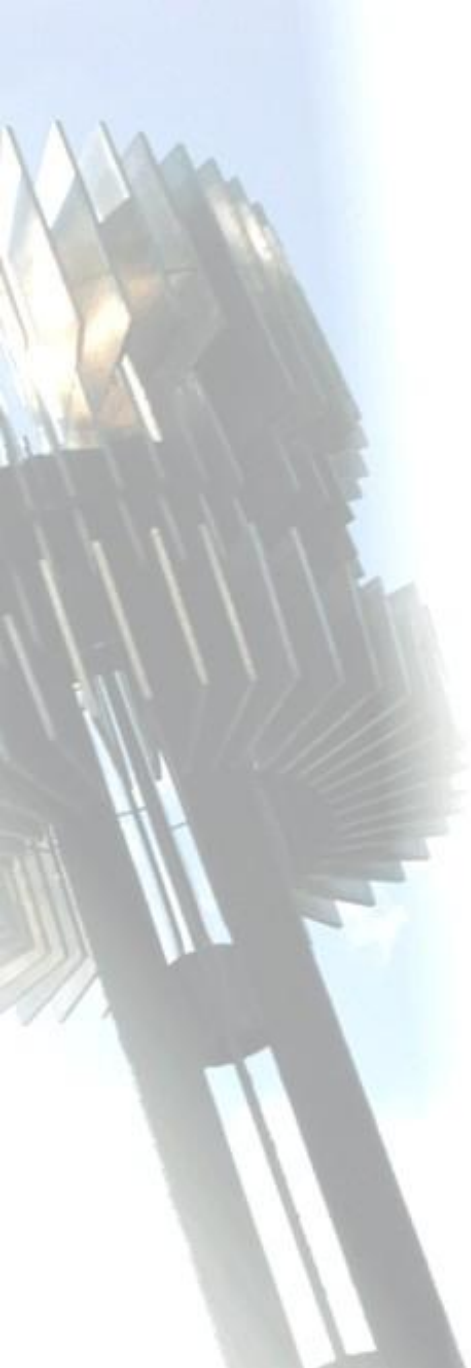
Information Worker Technologies

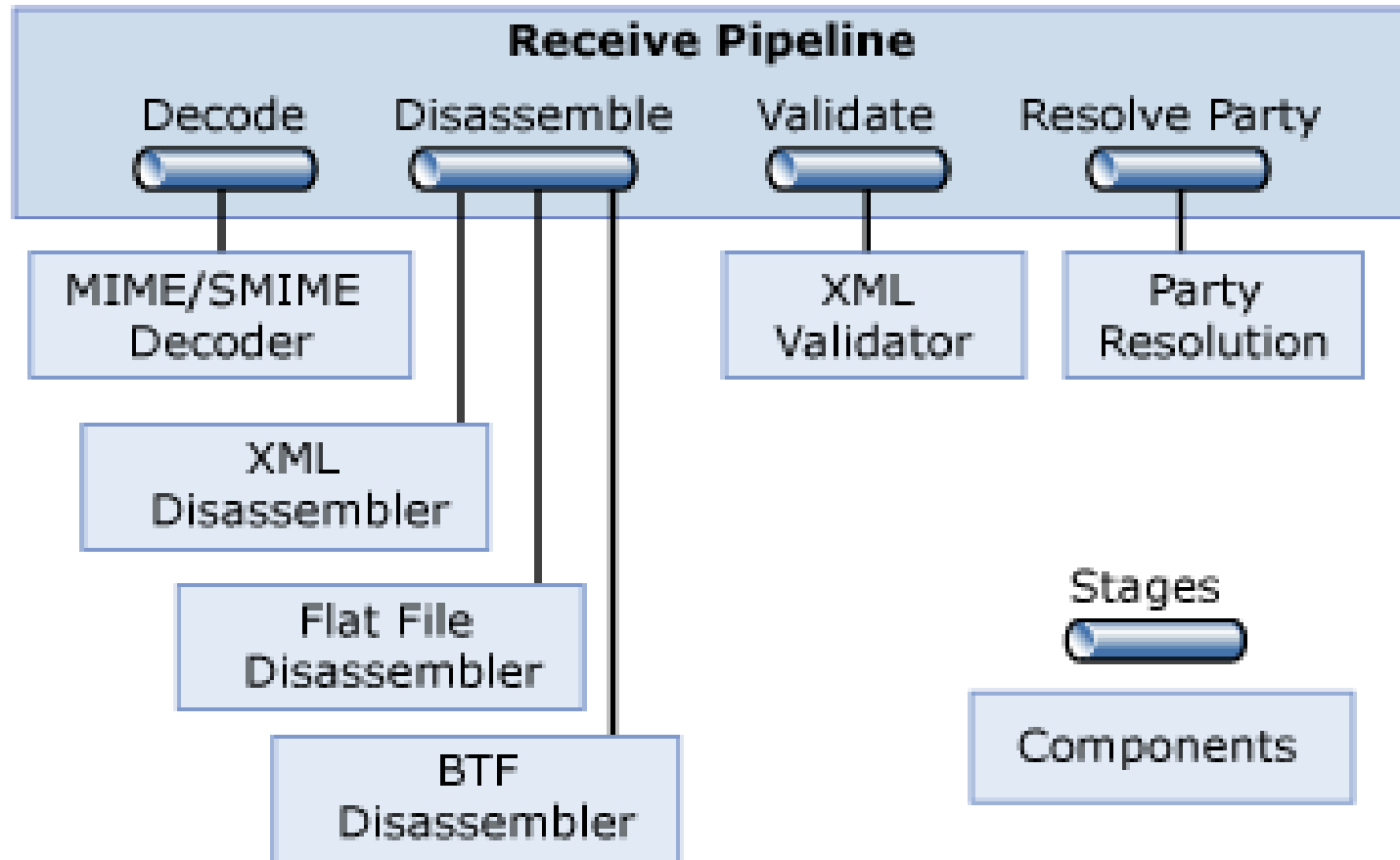


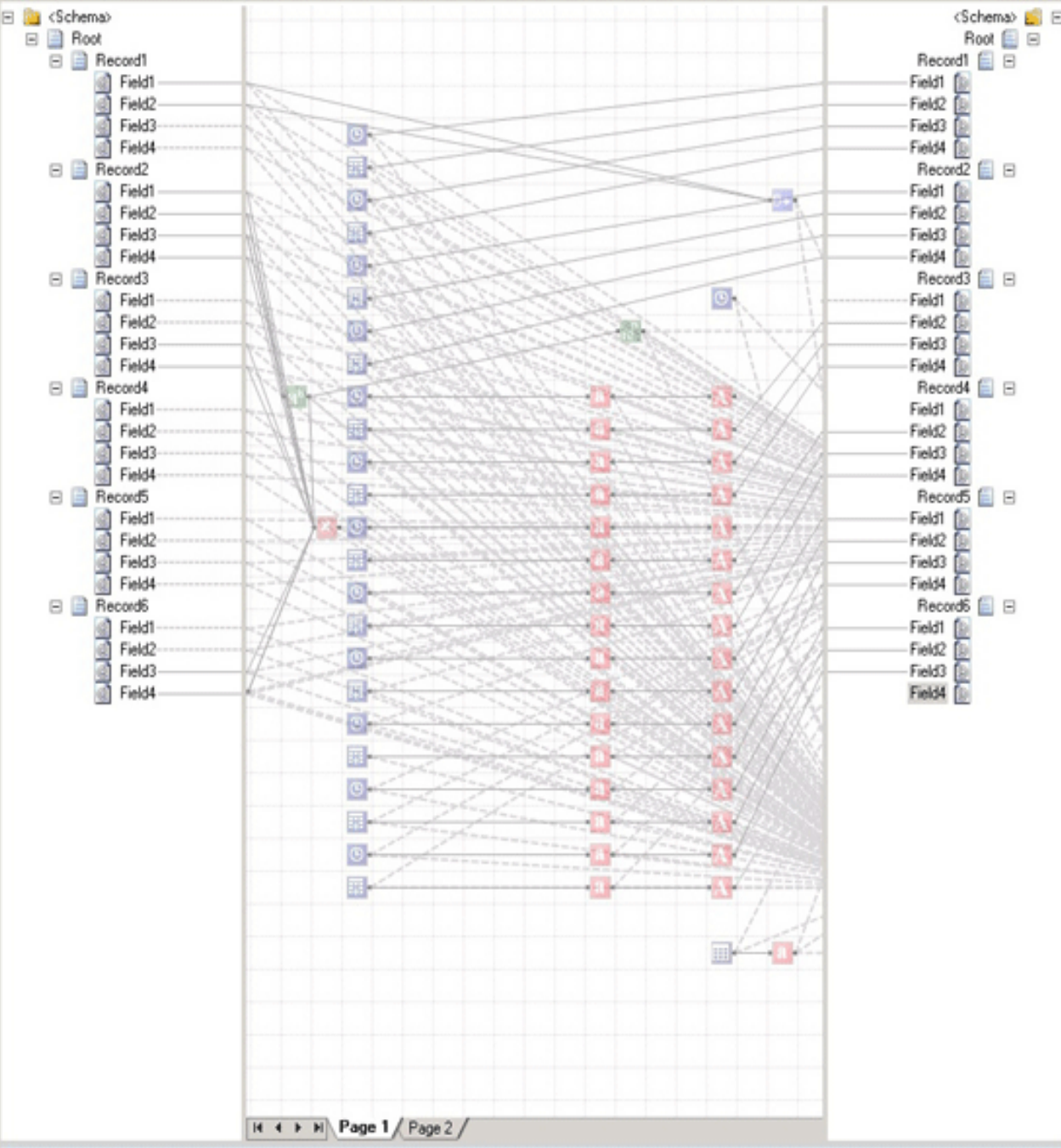
Example

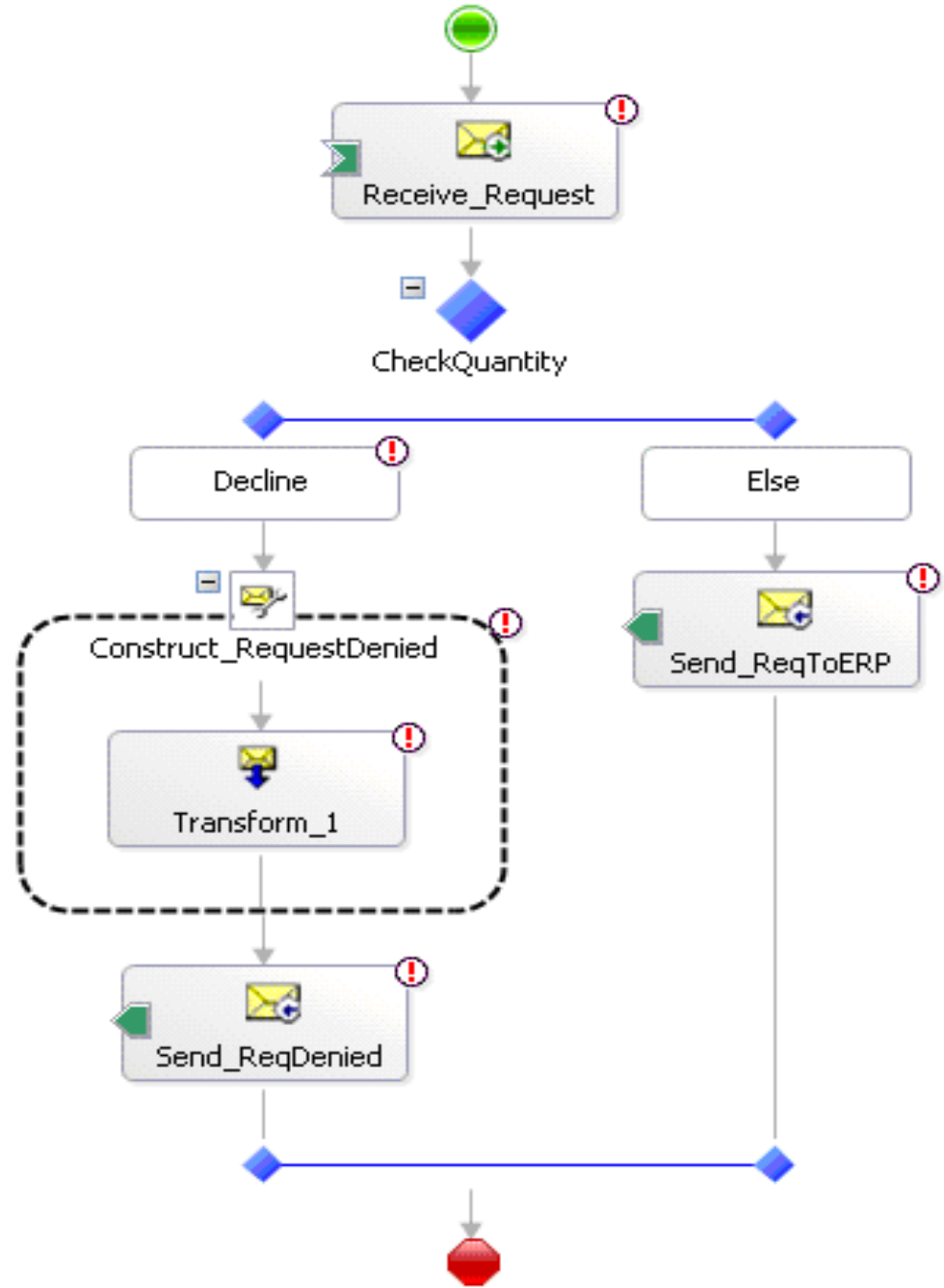
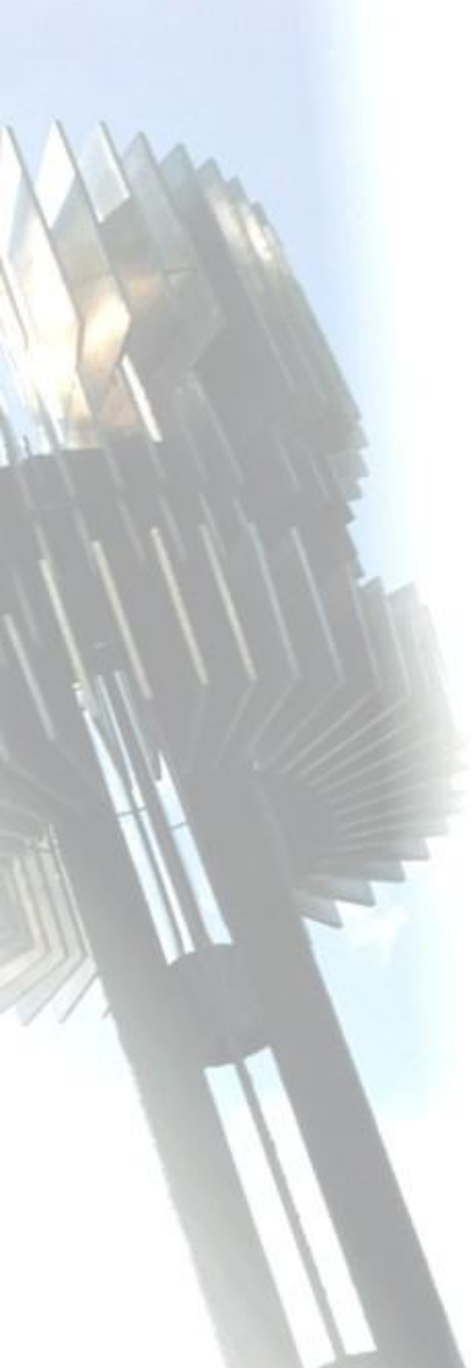


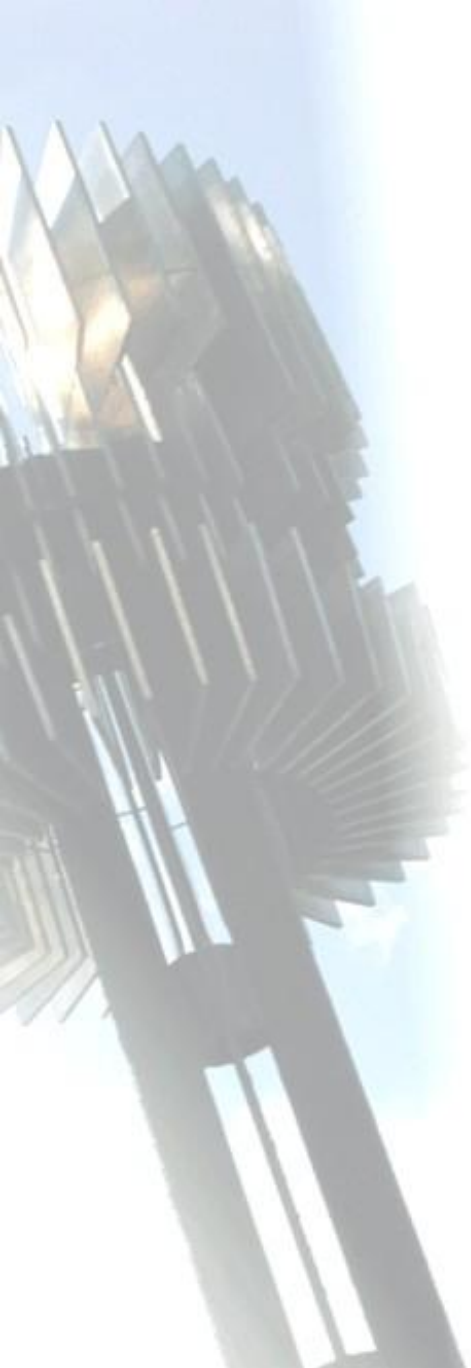












Machine A

Host Instance

Orchestrations

P

Q

Host Instance

Receive
Adapter

Receive
Pipeline

Machine B

Host Instance

Orchestrations

P

Q

Machine C

Host Instance

Send
Adapter 1

Send
Pipeline 1

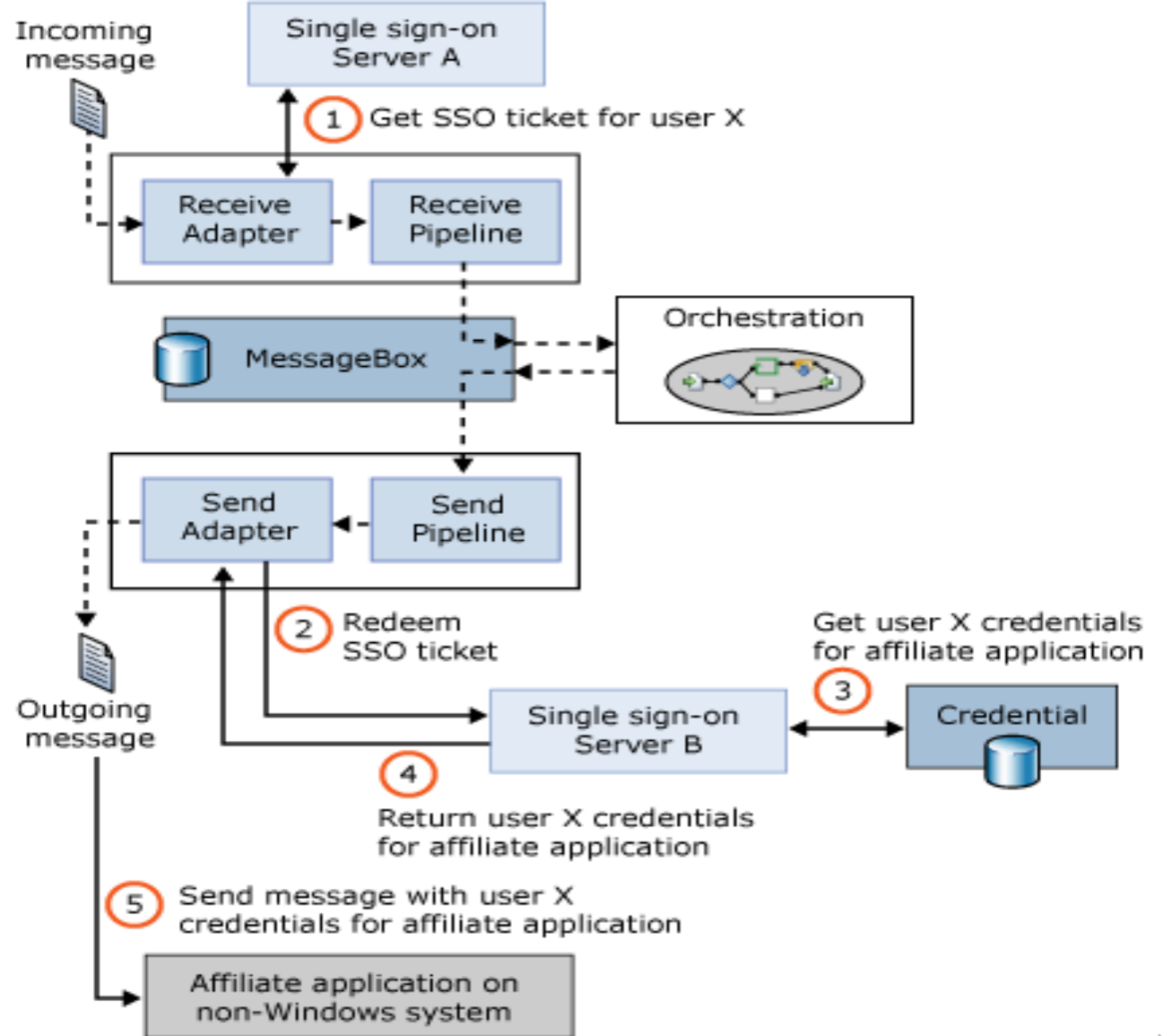
Host Instance

Send
Adapter 2

Send
Pipeline 2

Machine D

MessageBox



Biztalk Server 2010 adapters

[SAP](#)

Supports execution of BAPIs, RFCs, and tRFCs, data exchange using IDOCs, and receiving events from SAP with a generic RFC Server. The SAP adapter has received "[Certified for SAP NetWeaver](#)" status from SAP.

SAP R/3 4.x and R/3 6.20 (Enterprise), SAP ECC 6.0, and SAP 7

[Siebel eBusiness Applications](#)

Provides access to Siebel eBusiness Applications via Business Objects, Business Components, and Business Services.

Version 7.5.3, 7.7, 7.8, 8.0

[Oracle eBusiness Suite](#)

Provides access to Oracle eBusiness Suite applications. Based on ADO.NET.

V: ODP.NET 11.1.0.7, Oracle EBS 11.5.9, 11.5.10 and 12.1

[Oracle Database](#)

Provides access to Oracle Database tables, views, stored procedures, functions, and PL/SQL packages. Timed polling is also provided, allowing applications to periodically look for changes in the database. This adapter is based on ADO.NET.

Oracle 9i (9.2.0.2), 10g (10.1.0.2.0 & 10.2.0.1.0)

[SQL Server](#)

Provides access to SQL Server databases

V: 2005, 2008, and 2008 R2

[WCF LOB Adapter SDK](#)

Provides a simple programming model for developing adapters that are based on Windows Communication Foundation. This is a separate download available to everyone using the .NET Framework 3.0.

V: 2010



Adapters

Microsoft Dynamics CRM 4.0

The Microsoft® BizTalk® Server Adapter for Microsoft Dynamics® CRM 4.0 enables integration between Microsoft Dynamics CRM 4.0 and other business applications.

Note - This adapter is only available as a separate [download](#).

PeopleSoft Enterprise

Enables exchange of Business Function messages between BizTalk Server and a PeopleSoft Enterprise system.

V: PeopleTools Versions 8.17.02, 8.43, 8.45, 8.46, 8.47, 8.48, 8.49 and 9.0

JD Edwards OneWorld XE

Enables exchange of Business Function messages between BizTalk Server and a JD Edwards EnterpriseOne system. V: B7.3.3.3 w/ SP23 and JDE 8.0 (B7.3.3.4)

JD Edwards EnterpriseOne

Enables exchange of Business Function messages between BizTalk Server and a JD Edwards EnterpriseOne system. V: 8.10, 8.11, 8.12 with Tools Release 8.93, 8.94, 8.95, 8.96, 8.97, and 9.0

Adapters

TIBCO Rendezvous

Enables exchange of XML and binary data format messages between BizTalk Server and TIBCO Rendezvous. V: 7.3, 7.4.5, 7.5.4, 8.1.1

TIBCO Enterprise Message Service

Enables exchange of XML and binary data format messages between BizTalk Server and a TIBCO EMS server providing a tightly integrated and reliable application infrastructure. V: 4.2, 4.4.3, 5.0

Host Applications

Enables data exchange between BizTalk Server and IBM mainframe zSeries (CICS and IMS) and midrange iSeries (AS/400) server programs.

V: IBM CICS TS for VSE/ESA V2R3 and V4; IBM CICS TS for z/OS V3.1, V3.2, and V4.1; IBM IMS V10 and V11; IBM OS/400 V5R2, OS/400 V5R3, i5/OS V5R4, i5/OS V6R1

IBM DB2

Enables reading and writing information from and to IBM mainframe DB2 for z/OS, IBM midrange DB2/400, and IBM DB2 Universal Database for open platforms (AIX, Linux, Solaris, and Windows). V: IBM DB2 V7, V8, and V9 for z/OS; IBM OS/400 V5R2, OS/400 V5R3, i5/OS V5R4; IBM DB2 UDB for Windows, Linux, AIX, Solaris V7.2, V8.2, V9, and V9.7

Adapters

Host Files

Enables data exchange between BizTalk Server and IBM mainframe zSeries VSAM datasets and IBM midrange iSeries AS/400 physical files. V: IBM DFM V1R4, V1R5, V1R6, V1R7; IBM OS/400 V5R2, OS/400 V5R3, i5/OS V5R4

WebSphere MQ (Client Based)

Enables exchange of messages between BizTalk Server and IBM WebSphere MQ using the WebSphere MQ Base Client (non-transactional) or WebSphere MQ Transaction Extended Client APIs. V: IBM WebSphere MQ Client 6.0 with Fix Pack 6.0.1.1 or 7.0 with Fix Pack 7.0.0.1

WebSphere MQ

Enables exchange of messages between BizTalk Server and IBM WebSphere MQ.
V: IBM WebSphere MQ Server 6.0 with Fix Pack 6.0.1.1 or 7.0 with Fix Pack 7.0.0.1

MSMQ

Enables sending and receiving messages to and from Microsoft Message Queue (MSMQ). V:2.0 and 3.0

FILE

Enables reading from and writing to files in the Microsoft Windows file system.

FTP

Enables exchange of files between BizTalk Server and FTP servers.

FTPs

Enables secure exchange of files between BizTalk Server and FTP servers, fully supporting RFC4217.

Adapters

HTTP

Enables sending and receiving information by using HTTP. The BizTalk Server engine exposes one or more URLs to enable other applications to send data to it, and it can use this adapter to send data to other URLs.

POP3

Enables receiving messages from a POP3 mailbox into BizTalk Server by using the POP3 protocol.

SMTP

Enables sending messages between BizTalk Server and an SMTP gateway by using Simple Mail Transfer Protocol (SMTP).

SOAP

Enables sending and receiving messages by using SOAP over HTTP enabling BizTalk Server to interact in a Web services world.

Windows Communication Foundation (WCF)

Includes seven adapters and wizards that enable easy communication to and from BizTalk Server and Web services-based applications via the Windows Communication Foundation (WCF).

V: .NET Framework 3.5

SharePoint

Enables the exchange of XML and binary messages between BizTalk Server and SharePoint document libraries.

V: Windows SharePoint Services 3.0, SharePoint Foundation 2010

Additional material

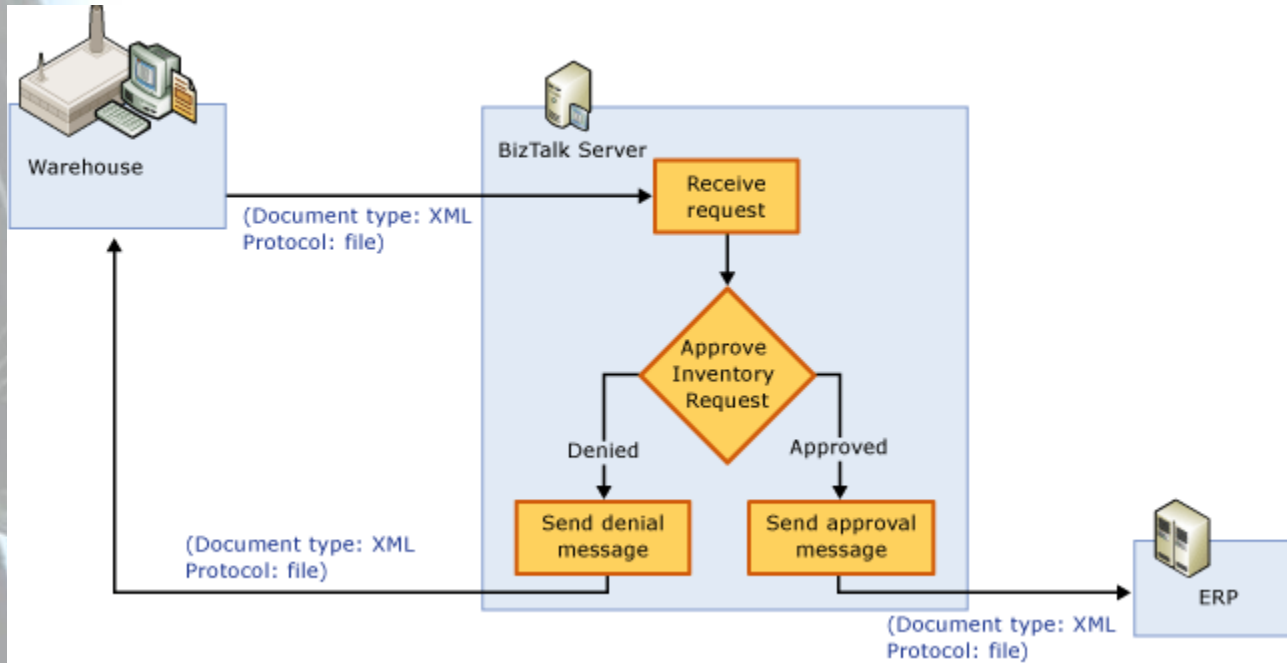
[BizTalk Server 2010 Runtime Architecture
Poster.pdf](#)

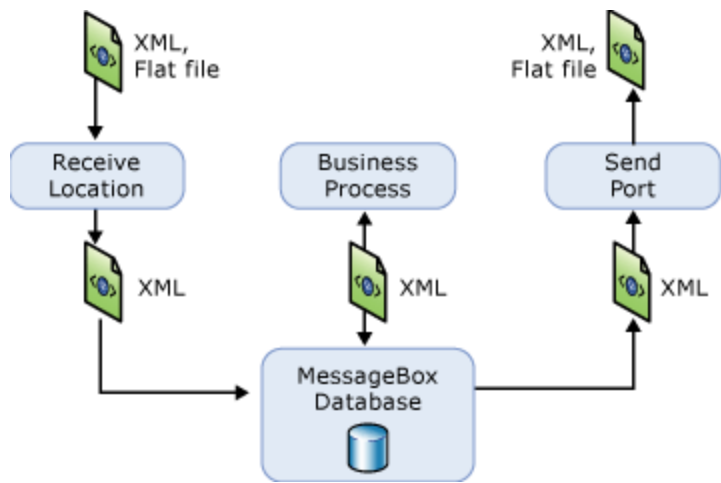
[BizTalk Server 2010 Database Infrastructure
Poster.pdf](#)

[BizTalk Server 2010 CapabilitiesPoster.pdf](#)

[BizTalk Server 2010 BAM Poster.pdf](#)

Usage example



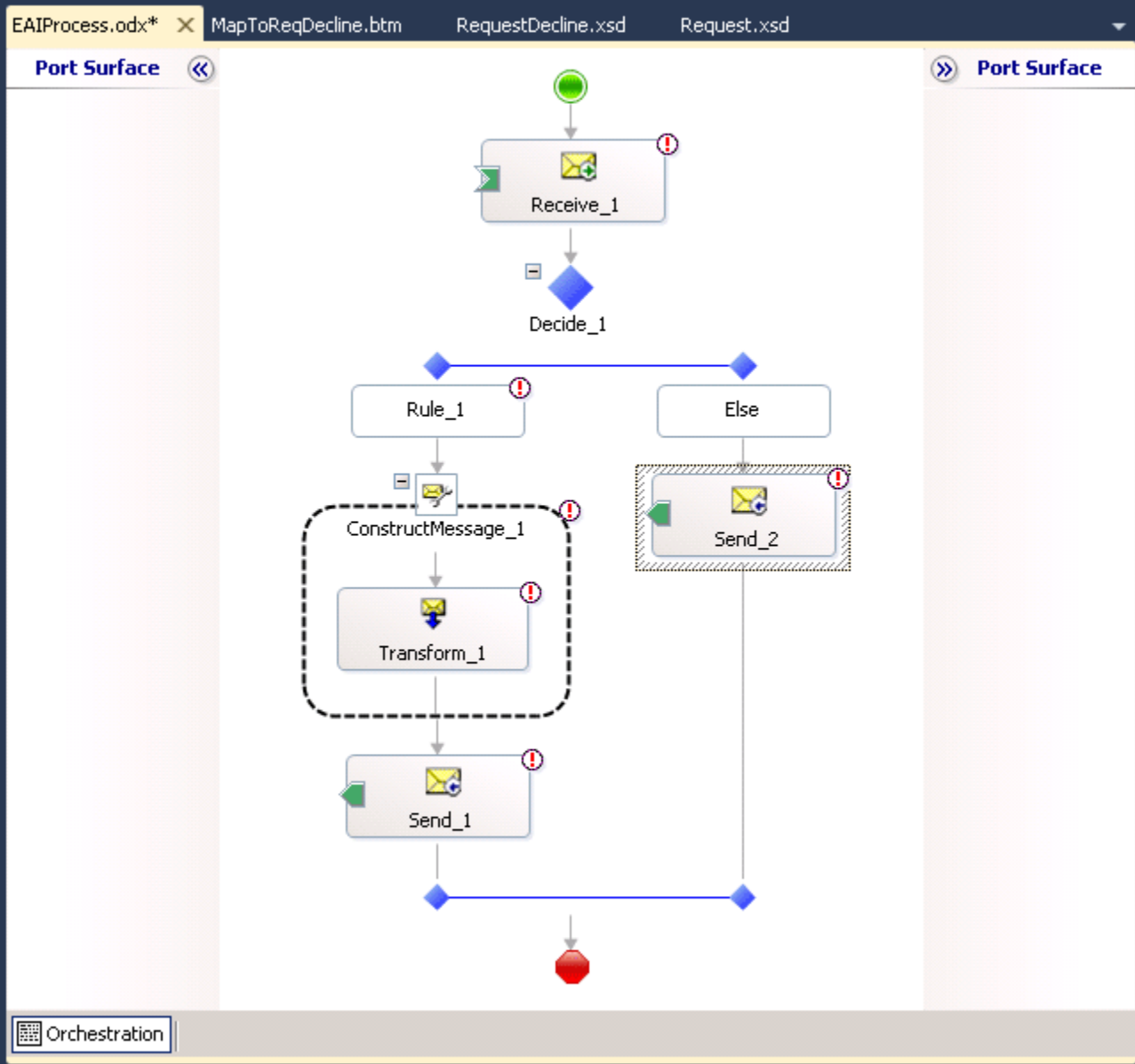


Toolbox

- BizTalk Orchestration...
- Pointer
- Group
- Send
- Receive
- Port
- Role Link
- Transform
- Message As...
- Construct M...
- Call Orchest...
- Start Orche...
- Call Rules
- Expression
- Decide
- Delay
- Listen
- Parallel Acti...
- Loop
- Scope
- Throw Exce...
- Compensate
- Suspend
- Terminate

General

There are no usable controls in this group. Drag an item onto



Solution Explorer

- Solution 'EAI Solution' (2 projects)
- EAIOrchestration
 - Properties
 - References
 - EAIProcess.odx
- EAI Schemas
 - Properties
 - References
 - MapToReqDecline.b...
 - Request.xsd
 - RequestDecline.xsc...

Orche... Solutio...

Properties

Send_2 Send

Description	
Following Correla	
Initializing Correl	
Message	!
Name	Send_2
Object Type	Send
Operation	
Report To Analysis	True

Description
User comments.

Biztalk descriptions example

- 193.40.244.84
 - 1) Tuleb luua rakendus kasutades VS 2010 -
C:\BiztalkExample\EAskeem
 - 2) Startida Biztalk Server Administrations abil
rakenduse teenus
 - 3) Hakata kasutama C:\BTSTutorials



Suured tänud!!!

Jõudu tööle!!!

