





# Table of content

1	Preface	3
1.1 1.2 1.3 1.4	Preface and scope Author Disclaimer Scope	3 3 3 3
2	System Prerequisites	4
<ul> <li>2.1</li> <li>2.2</li> <li>2.3</li> <li>2.4</li> <li>2.5</li> <li>3</li> </ul>	WebSphere Process Server 6.0.2	4 4 4 4 5
4	Configure the Process Server	8
4.1 4.2	JCo placement J2C authentication data	8 8
5	BAPI	9
5.1	Outbound 5.1.1 Step by Step	9 9



# 1 Preface

### 1.1 Preface and scope

This document is intended for IBM personnel only, to be a technical description and design document primarily targeted for use of technical people.

### 1.2 Author

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### 1.3 Disclaimer

This document is subject to change without notification and will not comprehensively cover the issues encountered in any customer situation. It should only be used in conjunction with the product literature accompanying the J2EE products from IBM and SAP.

The information contained in this document has not been submitted to any formal IBM test and is distributed AS IS.

### 1.4 Scope

This document shows a simple example how to configure and test the IBM WebSphere SAP Adapter. These scenarios can then be adapted to the current real time solution.



# 2 System prerequisites

### 2.1 WebSphere Process Server 6.0.2

Based on service-oriented architecture (SOA) and as a single, simplified programming model, WebSphere Process Server, Version 6.0, is the next-generation business process server that delivers and supports all styles of integration based on open standards to automate business processes that span people, workflows, applications, systems, platforms, and architectures.

### 2.2 WebSphere Integration Developer 6.0.2

The WebSphere Integration Developer is a Rational Application Developer based tool for developing business integration projects. WebSphere Integration Developer is the answer to the integration challenges organization's face on a daily basis. It has been designed as a complete integration development environment for those building integrated applications. To simplify and accelerate the development of integrated applications, this environment provides a layer of abstraction that separates the visually-presented components you work with from the underlying implementation.

### 2.3 WebSphere Resource Adapters

IBM WebSphere Adapters help you with business integration by connecting application and information assets to the Enterprise Service Bus (ESB). They accelerate business integration projects with rapidly deployable, enterpriseready connections based on best practices. The WebSphere Adapter portfolio provides a comprehensive set of capabilities to service-enable these assets, including packaged, custom, and legacy applications, technology protocols, and databases

### 2.4 SAP/R3

You must be able to access a SAP/R3 system, moreover be sure that you have the appropriated rights to access the BAPI/iDoc you want to call.

### 2.5 SAP JCo 2.1.8

The SAP Java Connector is provided by the SAP to connect from a JAVA environment to SAP.



# 3 Create the adapter project

After you opened a new Workspace close the welcome screen to enter the WebSphere Integration Developer design perspective.



The new Workspace will open in the "Business Integration" perspective. You will need this perspective later, but first switch to the J2EE perspective.

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If the perspective does not appear in the menu, just select the "show all" box.

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Then you right click on the connector Projects folder and import a rar file.

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The rar file could be found in your Resource Adapter install folder.

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You do not need an EAR project because the adapter is used directly.

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After that you need to configure additional properties, so open the properties of the created project.



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In the Java build path select the libraries tab and add a external jar file.

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	E      Perfault output folder:     CWYAP SAPAdate/connectorModule	Browse.			

Add the sapjco.jar file which could be found in your sapjco install folder. Or in the lib path of the WebSphere Process Server you will use, because it is needed there also (if it is not there, copy it to that path).

Info	Java Build Path			
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So the SAP connector is installed in the WebSphere Integration Developer environment and can be used.



# 4 Configure the Process Server

#### 4.1 JCo placement

Just copy the sapjco.jar into the "lib" directory of the WebSphere Process Server.

### 4.2 J2C authentication data

In the "Global security" open the "JAAS Configuration" section and enter the "J2C Authentication data"



#### There create a new entry.



Enter the data for the alias, user ID and password

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General Pro	perties			
* Alias				
HandsOr				
* User ID				
handson				
* Password				
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Descriptio				
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Save the master configuration and check if the new entry is in the list.

and Queues
widNode/HandsOn handson



# 5 BAPI

### 5.1 Outbound

The BAPI Outbound SAP connection is used if the Process request information from the SAP system using the BAPI interface.

### 5.1.1 Step by step

Create a new Enterprise Service Discovery Project and select the SAP Adapter project that was created in the beginning.

🚯 Enterprise Service Discovery		×
Select an Enterprise Service Resource Adapter		
Select a resource adapter to use to discover a service.		Ø,
BM WebSphere Adapter for SAP Software (version	n 6.0.0) from the 'CWYAP_SAPAda	pter' Connector Project
IBM WebSphere Adapter for SAP Software		Import Resource Adapter
	<back next=""></back>	Finish Cancel

Fill in the fields for User, Password, Client, System Number, Host and select BAPI as Module.



onfigure Settings for Discovery Agen	t	
pecify the properties to initialize the reso	irce adapter and the enterprise service discovery agent.	6
Connection Configuration		
UserName:	* handsOn	
Password:	* ***	
SAP Host Credentials		
Client:	* 800	
Language:	* E	
SystemNumber:	* 00	
ApplicationServerHost:	* wccpc11.pgh.ibm.com	
RFCTraceOn		
Metadata Properties		
Select the Module:	BAPI	
Maximum number of hits for the di	scovery: 100	
BiDi Properties		
BiDi Transformation		
BiDi OrderingSchema:	Implicit	
	LTR	
🔽 BiDi SymmetricSwapping		
BiDi Shaping:	Nominal	
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5how Advanced >>		
	<back next=""> Finish</back>	Cancel

Run the Query. If you receive an error the connection to the SAP system cannot be established.

So check if there is a firewall between you and the server or if the logon credentials are correct.

Discovery		X
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Objects to be imported:		
	<< R	emove
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Before opening the "discover by name" tree click on the "filter" button.



Enterprise Service Discovery		
Find and Discover Enterprise Services		
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Run Query		
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E-0 RFC E-0 Discover By Name		>> Add
E - D BOR		Filter
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Objects to be imported:		<< Remove
	< Back Next >	Finish Cancel

### Filter for "BAPI\_COMPANY\_GET\*"

Jse "Edit Query" system.	to create a query and press "Run Query" to discover matching objects on the enterprise	EIS
Query:		Edit Query
Objects discover	Enterprise Service Discovery      Ither Properties for Discover By Name Set the filter properties, then press OK to apply the filter.	>> Add
H SO BOR	Enter Discovery Griteria:** BAPI_COMPANY*	Filter
	OK Cancel	
Objects to be imp	oorted:	
		< <remove< td=""></remove<>
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Then select the BAPI to retrieve Company Details in this example.



Enterprise Service Discovery	
nd and Discover Enterprise Services Ise "Edit Query" to create a query and press "Run Query" to discover matching objects on t ystem.	ne enterprise
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Run Query	Edit Query.
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Discover By Name (filtered)     BAPI_COMPANY_GETDETAIL     BAPI_COMPANY_GETDETAIL	The second
	Clear Filter
bjects to be imported:	
	<< Remove

Use the Field Names to generate the attributes.



Enter the Object Locations (your choice) and the name of the business object (your choice)

Ålso add the retrieve operation.



onfigure Objects Specify the properties for th	e objects that will be imported by the discovery agent.	
Object Location(Enter relativ	Path):* SAPBOS	_
lameSpace: inter the name the Business	* http://www.bm.com/xmins/prod/websphere/j2ca/sap Object:* Company_	
	Value: Value: Create Delete Retrieve Updatewithdelete	Add Remov
	OK Cancel	

Then you have to create a new Module for the Project.

	C New Module	
roperties for Int Module: Namespace:	Module Create a new business integration module. A module is a project that is used for development, version management, organizing resources, and deploying to the runkine environment.	
Folder: Name: Description:	Module Name   HandsOn_BAPI_Out  Module Location ↓ Use default Directory: [C\\development\WID\SAP_Adapter_SBS\\HandsOn_EBrowse ]	
Deploy conne pecify the conn Use conn Use disco 2C Authentication NDI Lookup Nam		10:
	Finish Cancel	

Enter the parameter for the J2C entry. The username + password are not needed and it is not suggested to enter it here. Because the password will be accessible in readable form from the editor – see the "hints" part of this document.

12/6/2007



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Password: Sensitive value	s, such as passwords, should not be saved.		8
operties for Interface			
Module:	HandsOn_BAPI_Out	▼ New	
Namespace:	http://HandsOn_BAPI_Out/SAPOutboundInterface	_	
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Folder:		Browse	
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After that make sure the server is started and click in the assembly editor on the import. Select "test component"

This will publish the project to the server and start the test client.

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				Let In	

In the testclient fill "001000" as company ID to have a valid test value in an IDES System.



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Just click the "Continue" button to run the test and you will see the result with values in the table.

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