HP OO SAP Guide

For the Windows operating system

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SAP Guide

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SAP Integration Introduction

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Purpose of the SAP Integration

This integration enables administrators to create HP Operations Orchestration (OO) flows that are integrated with SAP.

To learn how to create OO flows, see Studio Guide to Authoring Operations Orchestration Flows in the documentation set for the current OO release.

This document explains how this integration has been implemented, and how the integration's operations and flows communicate between HP OO and SAP.

Audience

This guide is intended for system administrators who establish and maintain the implementation of the integration between HP OO and SAP. This guide assumes that you have administrative access to both systems.

Prerequisites

To use this integration successfully, you should have administrator-level knowledge of the SAP, the SAP BAPIs, and the RFCs.

Supported Versions

Content Pack	Operations Orchestration Platform Version	SAP Versions
SAP Content Version 2.0.0	10.x	SAP ECC 6.0

Getting Started with the SAP Integration

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What You Need to Know About SAP Before Using the Integration

SAP helps companies of all sizes and industries run more efficiently. From back office to boardroom, warehouse to storefront, desktop to mobile devices, SAP empowers people and organizations to work together more efficiently in order to stay ahead of the competition. This is accomplished by extending the availability of software across on-premise installations, on-demand deployments, and mobile devices.

SAP Use Cases

The following are the major use cases for the SAP integration, and the operations and flows that you can use to implement them.

Execute a Remote Function Call that invokes any given BAPI:

• Invoke SAP BAPI

Execute a Remote Function Call that invokes a specific BAPI:

• BapiObjectMethod (for example, BapiUserGetlist)

OO – SAP Integration Architecture

The OO SAP Integration uses RFCs (Remote Function Calls) to enable the communication between a SAP system and Operations Orchestration. RFC is the standard SAP interface for communicating with SAP systems by calling a function to be executed on a remote system. The function call is based on synchronous communication, meaning that the SAP system must be available at the time the call is made in order to be executed successfully.

Remote Function Calls can be used to invoke BAPIs (Business Application Programming Interfaces). Stored in the Business Object Repository, BAPIs are methods of SAP business object types that provide access to processes and data in business application systems.

To interact with the SAP system and execute specific BAPIs, the SAP Java Connector is used as a middleware component. In the OO – SAP Integration, the SAP Java Connector supports communication with the SAP Server, as shown in the figure below.



SAP Terminology

The following terms are used in the SAP Integration Guide:

BAPI. BAPIs (Business Application Programming Interfaces) are defined as methods of SAP business object types. The BAPIs are standardized with full stability guarantees for their content and interface, to provide access to processes and data in the SAP System.

BOR. The Business Object Repository is the repository that contains all SAP business object types and SAP interface types as well as their components, such as methods, attributes, and events.

Business Object. A business object is a general category for data (for example, employee, order, purchase requisition, or organizational unit).

Function module. A procedure that is defined in special ABAP programs, that plays an important role in interaction between SAP systems and remote systems through remote communication.

Method. A clearly defined interface that is revealed to the outside so that applications can access the Business Object data. When a method is executed on a Business Object, it can change the object's internal state, that is, the object's data (for example, one method that you can use on the Business Object "Employee" is to "check for the employee's existence").

RFC. RFC (Remote Function Call) is the standard SAP interface for communication between SAP systems. RFC calls a function to be executed on a remote system.

Access the Available BAPIs in the SAP System

To access the BAPIs available in the SAP system:

 In the SAP Easy Access window, browse to SAP menu/Tools/Business Framework/BAPI Explorer

Or

Enter the associated transaction code.

The list of BAPIs is displayed in a hierarchical view.



 Click the Alphabetical tab to view the BAPIs and their associated Business Objects. The list is sorted alphabetically according to the available objects.

BAPI Explore	r
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o. Apr	DOVE
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ABClaim ABClaim ALETEST ALETEST ALETEST ALETEST ALETEST ALETEST	1 72 73 74
ABClaim ABClaim ALETEST ALETEST ALETEST ALETEST ALETEST ALETEST ALETEST	1 72 73 74 75
ABClaim ALETEST	1 72 73 74 75 76
ABClaim ABClaim ALETEST	1 72 73 74 75 76 77
ABClaim ABClaim ALETEST AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1 72 73 74 75 76 77 nt
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ABClaim ALETEST AAAccou AAAccou AAAccou AAAccou	1 72 73 74 75 76 77 nt nt nt nt nt nt nt nt nt nt
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ABClaim ABClaim ALETEST AAAccou AAAAccou AAAAccou AAAAccou AAAAccou AAAAccou AAAAccou AAAAccou AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1 2 3 4 5 6 7 nt nt nt nt nt nt nt nt ctivityAlloc ssetTransfer lling ocument

3. Click the Filter button to view a full or partial list of BAPIs. In the BAPIs to display window, select All to display all BAPIs and only released (the default) to display only the released BAPIs..

葿 BAPI I	Explorer
Explorer E	idit Goto Environment System F
38	
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	ABClaim
	ABClaim ALETEST1 ALETEST2 ALETEST3 ALETEST4 ALETEST5 ALETEST6 ALETEST7 APAccount ARAccount AccAssignmentCategor
	ABClaim
	ABClaim
	ABClaim ALETEST1 ALETEST2 ALETEST3 ALETEST4 ALETEST5 ALETEST6 ALETEST7 APAccount ARAccount AcctngActivityAlloc AcctngAssetTransfer AcctngBilling
	ABClaim

- 4. Expand the required Business Object in the list to view its associated methods.
- 5. Select the required method to view its Function module value in the Detail tab. This is the value of the BAPI parameter used in the OO SAP Integration.

SAP Connector Installation Instructions

After installing the HP SAP Content Pack, the Java Connector (JCo) must be added before attempting to execute the operation. A summary of the installation instructions are also provided in the generic operation's description tab, under the **Notes** section.

Prior to using this operation, follow the steps below:

- Download the SAP Java Connector (JCo) from the SAP Service Marketplace at http://service.sap.com/connectors where you can find all available distribution packages for the various supported platforms and processors.
- 2. Install JCo by unzipping the appropriate distribution package into an arbitrary directory {sapjco3-install-path}:
- 3. Add {sapjco3-install-path} to the PATH environment variable.
- 4. In the HP Third Party Content Pack, add the **sapjco.jar** and **sapjco.dll** in the maven repository. For details on this procedure, check the "Adding JARs and DLLs" section in the Third Party Content Pack Release Notes.

In addition, the corresponding Excluded Third Party Content for HP OO SAP Integration can be found below:

Original Name	New Name	groupId	artifactId	Version
sapjco3.jar	sapjco3-3.0.7.jar	com.sap	sapjco3	3.0.7
sapjco3.dll	sapjco3- 7200.88.18.64609.dll	com.sap	sapjco3	7200.88.18.64609

5. Deploy the HP Third Party Content Pack.

HP SAP Content Pack

You must deploy the HP SAP Content Pack version 2.0.0 on an existing OO platform version of 10.x. The SAP Content Pack (oo10-sap-cp) is dependent on the Base Content Pack (oo10-base-cp).

For details on deploying a content pack, see "Importing Content Packs to a Project" in the *Studio Authoring Guide* and "Deploying a Content Pack" in the *Central User Guide*.

The SAP integration is included in the HP SAP Content Pack, and it contains the generic Invoke SAP BAPI operation and sample flows in the OO Studio **Library/Integrations/SAP**/ folder.



To create customized flows for BAPIs, you must run the SAP Wizard. After running the SAP Wizard and generating customized flows for the requested BAPIs, you must add the created flows to OO Studio by importing the studio project that contains them. The generated flows are placed under the folder that you select when running the wizard. The default location where the flows will be placed is under the **Library/Wizards/SAP**/ folder, but you have the option of selecting a different library location.



Creating SAP Integration Flows with SAP Wizard

This chapter includes:

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Using the SAP Wizard to Create OO Flows for Selected BAPIs

The SAP Wizard creates OO flows based on the BAPIs available in the SAP system, which you specify when you run the wizard. To start the wizard, run the **sap-wizard.bat** file. For details, see "SAP Connector Installation Instructions" on page 12.

To use the SAP Wizard to create an OO flow for a BAPI:

1. Start the SAP Wizard to open the Welcome page.

🔀 SAP Wizard-2.0.0		×
Steps	Welcome to the SAP Wizard 2.0.0	
1. Welcome to the SAP Wizard 2.0.0	This wizard will generate flows for the SAP BAPIs that you select.	
2. Select destination	Before you continue, a SAP system must be available and reachable through the connection parameters.	
3. Select library path	To continue, click Next.	
4. SAP System Logon		
5. Select SAP objects		
6. Select SAP BAPIs		
7. Finish		
	Back Next Can	cel

2. Click **Next** to open the Select Destination page.



Here you need to select the location of an existing studio project, or a folder where the new project will be created.

3. Enter or select a location of a Studio project for the flows you want to create, and then click **Next**.

The library path selection page appears.

🔀 SAP Wizard-2.0.0	× · · · · · · · · · · · · · · · · · · ·
Steps	Select library path
1. Welcome to the SAP Wizard 2.0.0	Select the folder in the library path where the generated flows will be saved.
2. Select destination	The highlighted folders already exist inside the repository. Added folders will only be saved if they are part of the selected path.
 Select library path SAP System Logon Select SAP objects Select SAP BAPIs Finish 	Select folder:
	New folder name: Add
	Library folder: /Library/Wizards/SAP
	Back Next Cancel

After selecting the library location for the generated flows, the logon page opens.

🔀 SAP Wizard-2.0.0		×
Steps	SAP System Logon	
1. Welcome to the SAP Wizard 2.0.0	Enter the data that you	use to logon to your SAP system.
2. Select destination	Host:	
3. Select library path	Username:	
4. SAP System Logon	De en vende	
5. Select SAP objects	Passworu:	
6. Select SAP BAPIs	Client:	
7. Finish	Instance number:	
	System ID:	
	Router String:	
	Back Next	Cancel

4. Enter the inputs and wait for the connection to be established.

SAP Wizard-2.0.0		8
Steps	SAP System Logon	
1. Welcome to the SAP Wizard 2.0.0	Enter the data that yo	ou use to logon to your SAP system.
2. Select destination	Host:	
3. Select library path	Username:	
4. SAP System Logon	Bacquard	
5. Select SAP objects	Fassword.	
6. Select SAP BAPIs	Client:	
7. Finish	Instance number:	
	System ID:	
	Connecting.	
	Connect	ing to
	Back Next	Cancel

If the connection succeeds, the next page lists all the Business Objects in the specified SAP system.

Note: All available objects are included in the available objects list, although some may not have associated BAPIs. The search mechanism enables you to filter the list of objects based on the search term.

SAP Wizard-2.0.0		×
SAP Wizard-2.0.0 Steps 1. Welcome to the SAP Wizard 2.0.0 2. Select destination 3. Select library path 4. SAP System Logon 5. Select SAP objects 6. Select SAP BAPIs 7. Finish	Select SAP objects Select the SAP objects that you wish BAPIs to be loaded for. They will be displayed on the next page. Search objects All available objects ACCDocument AG_RETURN_255 AACCOUNT AAAccount AAAccount AACHIVELINKIMAGE AACHIVELINKIMAGELINK AACHIVELINKIMAGELINK AACHIVELINKITOAVO AbsAttType AbsenceForm AbsenceForm AbsenceForm	
	Back Next Ca	ancel

5. Select the Business Objects that have the BAPIs for which you want to create flows.

teps	Select SAP objects	
1. Welcome to the SAP Wizard 2.0.0	Select the SAP objects that you wish \ensuremath{BAPIs} to be loaded for. They will be	displayed on the next page.
2. Select destination	Search objects:	
Select library path		
 SAP System Logon 	All available objects Selected obj	ects
5. Select SAP objects	ACCDocument	
5. Select SAP BAPIs	ARAccount	
7. Finish	ARCHIVELINKGTWFDB	
	ARCHIVELINKIMAGELINK	
	ARCHIVELINKTOAV0	
	AbsenceForm	
	AbsenceQuotaType AbsenceQuotaTypeSL	

6. Click Next. The BAPIs related to the selected Business Object are retrieved.



After the required BAPIs have been retrieved, the SAP Wizard lists all the BAPIs of the selected Business Objects.

SAP Wizard-2.0.0	
Steps 1. Welcome to the SAP Wizard 2.0.0 2. Select destination 3. Select library path 4. SAP System Logon 5. Select SAP objects 6. Select SAP BAPIs 7. Finish	Select SAP BAPIs There are 6 BAPIs that matched your search on the given SAP system. Please select the ones you would like to import. Search BAPIs: All available BAPIs Selected BAPIs S
	Back Next Cancel

7. Select the BAPIs for which you want to generate customized flows, and then click Next.

SAP Wizard-2.0.0	
 SAP Wizard-2.0.0 Steps Welcome to the SAP Wizard 2.0.0 Select destination Select library path SAP System Logon Select SAP objects Select SAP BAPIs Finish 	Select SAP BAPIs There are 6 BAPIs that matched your search on the given SAP system. Please select the ones you would like to import. Search BAPIs: All available BAPIs BAPI_AP_ACC_GETKEYDATEBALANCE BAPI_AP_ACC_GETOPENITEMS BAPI_AP_ACC_GETOPENITEMS BAPI_AP_ACC_GETOPENITEMS BAPI_AP_ACC_GETSTATEMENT COMPARED TO DEALANCES BAPI_AP_ACC_GETSTATEMENT COMPARED TO DEALANCES COMPARED T
	Back Next Cancel

If in the project you selected at Step 3, there were already generated flows for the selected BAPIs, you can choose to overwrite them.

Note: Generating the flows for the specified BAPIs may take a few moments, depending on the number of selected items.

SAP Wizard-10.10	X
Steps	Select SAP BAPIs
1. Welcome to the SAP Wizard 10.10	There are 12 BAPIs that matched your search on the given SAP system. Please select the ones you would like to import.
2. Select destination	Search BAPIs:
3. Select library path	
4. SAP System Logon	All available BAPIs Selected BAPIs
5. Select SAP objects	BAPI_AR_ACC_GETPERIODBALANCES
6. Select SAP BAPIs	BAPI_AR_ALC_GET NET DATE BAPI_AR_ALC_GET BALANCED TEMS
7. Finish	BAPI_AP_ACC_GETCOPENITEMS BAPI_AR_ACC_GETSTATEMENT BAPI_AR_ACC_GETSTATEMENT BAPI_AP_ACC_GETSTATEMENT BAPI_AP_ACC_GETSTATEMENT BAPI_AP_ACC_GETCURRENTBALANCE BAPI_AP_ACC_GETCURRENTBALANCE BAPI_AP_ACC_GETBALANCEDITE Creating flow: BapiApAccGetperiodbalances
	Back Next Cancel

After the flows that can be generated are created and saved in the repository, the SAP Wizard finishes. Some of the flows may fail to be generated, as they already exist in the repository, at the location specified in the library path selection step. For details, see "Using the SAP Wizard to Create OO Flows for Selected BAPIs" on page 15. You can open the log file for more information on the steps performed by the wizard.

SAP Wizard-2.0.0	
SAP Wizard-2.0.0 Steps 1. Welcome to the SAP Wizard 2.0.0 2. Select destination 3. Select library path 4. SAP System Logon 5. Select SAP objects 6. Select SAP BAPIs 7. Finish	Finish The wizard has completed. New flows were generated for 2 out of the 2 selected BAPIs. Please consider that a flow is generated for each selected BAPI only if it is not already contained under the folder in the specified repository. For additional information go to the log file located in the OO Home folder in Studio/tools/ under the name "SapWizard.log". Plows were generated for the following: BAPI_AP_ACC_GETBALANCEDITEMS BAPI_AP_ACC_GETCURRENTBALANCE Flows were generated for the following: BAPI_AP_ACC_GETCURRENTBALANCE
	Click finish to exit the wizard.
	Einish

Note: Before importing the generated flows in OO Studio, you must:

- Import the oo10-sap-cp.jar file as described in "HP SAP Content Pack" on page 12.
- Import the oo10-thirdparty-cp.jar file as described in "SAP Connector Installation Instructions" on page 12.

If these content packs are not imported, you will see flows underlined in red due to missing dependencies.

Import the Generated Flows into 00 Studio

After this, you can import the project generated by the wizard in OO Studio. See the section "Managing Projects" in the Studio Guide to see how to import a project.

After you have imported the project in studio, you can check the generated flow in the following way:

1. Select one of the generated flows and open the Inputs tab.

All of the common inputs except for username and password are assigned from constant values according to the values of the connection parameters used in the SAP Wizard. The BAPI input is assigned the corresponding value and all the SAP import parameters associated to the BAPI are added as inputs at flow level.

Projects	084	BapiApAccGetbeditems - Flow ×			
+ 3 0 0 X 2		P 🗏 🔁 🏡 👙			
- 🗁 New Project		Name: BapiApAccGetbalanceditems			
🖨 🗁 Library		UUID: 8bcdccb6-589b-45b8-8104-40d37265a19c			
🖻 🧀 Wizards					
🖨 🧁 SAP		Assign Categories:			
APAccount		Inputs Outputs Responses Description Scriptlet			
BapiApAccGetbalanceditems BapiApAccGetourrenthalance		▲ ▼ Inputs Summary			
BapiApAccGetkeydatebalance					
BapiApAccGetopenitems		Inputs			
BapiApAccGetperiodbalances					
BapiApAccGetstatement					Add Inp
ARAccount		Input	Required	Type	From
😟 - 🧰 Test New Folder		beek (incide co	The site Makes	Network and an and
👜 🗀 Web Services Wizard		nost	✓	single value	Value: 10.44.49.114
👜 🗀 Configuration		username	✓	Single Value	Prompt User
		password	V	Single Value 🚽	Prompt User
		systemId	V	Single Value 🚽	Value: MI6
		dient	V	Single Value 🚽	Value: 800
		instanceNumber	✓	Single Value 🖕	Value: 00
		routerString		Single Value 🚽	Value:
		bapi		Single Value 🖕	Value: BAPI_AP_ACC_GETBALANCEDITEMS
		endSequence		Single Value 🚽	Prompt User
		commit		Single Value 🚽	Prompt User
		delimiter		Single Value 🚽	Prompt User
		colDelimiter		Single Value 🚽	Prompt User
		rowDelimiter		Single Value	Prompt User
		COMPANYCODE		Single Value 🖕	Prompt User
		DATE_FROM	V	Single Value 🚽	Prompt User
		DATE_TO	▼	Single Value	Prompt User
		VENDOR		Single Value	Prompt Liser

2. Click the Outputs tab to verify that the table and export parameters of the BAPI are present as results in addition to the returnResult result. All OO flows have the FailureMessage and TimedOut outputs. All generated flows have the returnResult output (which is the generic operation's result), and results corresponding to the table and export parameters of the BAPI.

🖃 🗁 New Project	Name: BapiApAccGetbalanceditems
	UUID: 8bcdcdb6-589b-45b8-8104-40d37265a19c Assign Categories: Inputs Outputs Responses Description Scriptiet A v Outputs Summary Extract Primary Output From Field:
BapiApAccGetpreindbalances BapiApAccGetstatement B	Available Outputs

3. Click the Responses tab.

The success and failure responses of the flows are the same as in the Invoke SAP BAPI operations.



	BapiApAccGetbalanceditems	
UUID:	8bcdccb6-589b-45b8-8104-40d37	265a19c
Ass	ign Categories:	
Inpu	ts Outputs Responses Descrip	tion Scriptlet
* +	Responses Summary	
≜ ▼	Responses Summary	1 · · ·
▲ ▼ Respo	Responses Summary	

4. Click the Description tab.

The description of the flow has been dynamically generated and includes the BAPI specific parameters in the Inputs and Results sections.



5. Select the flow's step that refers to the Invoke SAP BAPI operation.

The specific inputs have been added for the step as well, so their values can be passed to SAP when the BAPI is called.

Import Composition	RESOLVED : success	ERROF	R:						
Step Name: [Invoke SAP BAP! Invoke [Ken/Js] Dapky Description Advanced Scriptet * * [Input: Remove Input: Add Input Remove Input: Input: Single Value: Value: Value: Input: Single Value: Value: Value: Instance/Number If Single Value: Input: Input: Input:	Inspector								- 0
Jage Heles, Januare Jack Heles, Januare Jack Heles, Ja	Stop Nama, Toucko SA	D RADI							
Input [Reads] Description Advanced [Scriptet] Add Input Remove Input Remove Input Remove Input Remove Input Single Value - Valuet Single Value - Valuet	Step Name. Invoke SA	F DAFI							
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bph is strige table is strige table is date:		Add Input	Remove Input		+	Denied	-		
India Indindia India India	Input	Add Input	Remove Input		+	Required	Туре	From	
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The BAPI-specific results have been added as flow output fields, obtained by applying filters to the raw output of the generic operation.

Involt SA RESOLVED : SUCCES	ERROR : failure	· ·		
Inspector				
Step Name: Invoke SAP BA	PI			
Inputs Results Display	V Description Advanced Scriptlet			
A 🔻 Step Results				\leftrightarrow ×
				Add Result Remove Result
Name	From	Assign To	Assignment Action	Filters
return	returnResult	Flow Output Field	OVERWRITE	3 Filters
lineitems	returnResult	Flow Output Field	OVERWRITE	3 Filters 😥
returnResult	returnResult	Flow Output Field	OVERWRITE	No Filters

SAP Content Installation

This chapter includes:

Installing HP Operations Orchestration SAP Content	26
Uninstalling HP Operations Orchestration SAP Content	27

Installing HP Operations Orchestration SAP Content

To install the SAP Content

1. Download the installation file for your relevant operating system and architecture from the HPLN portal, and launch the installer:

Windows 64-bit	sap-installer-win64.exe
Windows 32-bit	sap-installer-win32.exe

Note: Make sure the installation folder to which you download the installation file does not contain a semi-colon in the folder name.

Make sure that the installation path does not include the plus (+) or semicolon (;) characters. Valid characters for the installation path include English letters, digits, spaces, hyphens (-) and underscores (_).

- To start the installation wizard, double-click the installer. The installation package is extracted, and the HP Operations Orchestration SAP Content Installation screen automatically appears.
- 3. Click Next.
- 4. In the License step, select I Agree, and then click Next.
- 5. In the **Location** step, select the location for the installation root directory, and then click **Next**. If the directory does not exist, the directory will be created automatically. You are prompted to confirm the creation of the new location.

Note: The default for Windows is C:\Program Files\Hewlett-Packard\HP Operations Orchestration\studio. If you install SAP Content on a path with special characters (for example, French, Japanese, or Chinese characters), this results in an error.

- In the **Options** step, select the HP Operations Orchestration SAP software that you would like to install and configure. The available options are: SAP Content Pack, SAP Wizard and Documentation. Click **Next**.
- 7. In the **Dependencies** step, select the path to the SAP Connectors: sapjco.jar, sapjco.dll. If you want to correct one of the settings, click **Back**.
- 8. Click **Next**. The installation begins and the wizard displays a check mark next to each successfully installed item on the Progress page.

Note: If there is a problem with one of the installation or configuration items, the installation attempts to continue with the rest of the items regardless of that error. Check the **sap-installer.log** file located in installation folder to check for errors, warnings or information.

Uninstalling HP Operations Orchestration SAP Content

- 1. In the HP OO SAP Content installation directory, for example, C:\Program Files\Hewlett-Packard\HP Operations Orchestration\studio, double-click **sap-uninstall.exe**, and then click **Next**.
- Select the HP Operations Orchestration options that you want to uninstall. The available options are: SAP Content Pack and SAP Wizard. Then click Next. When prompted whether to continue, click Yes.
- 3. 3. Click **Finish**. The HP Operations Orchestration selected options are removed from your computer.

Note: Open the **sap-uninstall.log** file located in the installation folder to check for errors, warnings or information during the uninstall.

Example of Using the Generic Invoke SAP BAPI Operation

In this example, you use the generic Invoke SAP BAPI operation to display the details of a bank by executing the GetDetail method of the Bank Business object. For this, you must uniquely identify the bank from which to list the details by following these tasks:

Step 1 — Locate the BAPI in the SAP GUI	28
Step 2 — Add the BAPI Specific Inputs	33
Step 3 — Add the BAPI Specific Results	34

Step 1 — Locate the BAPI in the SAP GUI

Open BAPI Explorer as described in "Access the Available BAPIs in the SAP System" on page 9 and locate the Bank object.

1. Expand the Bank tree item and then select the GetDetail method to obtain information about the method you want to call.

BAPI Explorer plorer Edit Goto Environment System H	Help	
	C G C I I M M	
0 ¥ 🗉		
PT DE LES	Detai Docum Method (BAPI) Nethod	entation 🕄 Tools 🎾 Project GetDetail
Hierarchical Alphabetical	Business object	Bank
BPContactPersonRel	Short description	Display Details of a Bank
BPGenShareholderRel BPShareholderRel	New in Release	46C
BackgroundJob	Function module	BAFI_BANK_GETDETAIL
→ Sankcoundy → Sankkey ⊕ S Change	ALE message type	Does not exist
Greate GetDetal	Instance-depend	F Dialog
BankAddress BankDetal	Status	
CetList GetList SaveReplica BapiService	Release status	Released

The Function module associated to this method is named BAPI_BANK_GETDETAIL. This is the value that must be passed to the BAPI input of the Invoke SAP BAPI operation in this example. Note that the general naming convention for Function modules is BAPI_ObjectName_MethodName, where ObjectName and MethodName must be in uppercase.

2. Click the Documentation tab to read a description of the method.



- 3. To identify the specific import, export, and table parameters of the BAPI:
 - a. Click the Tools tab.
 - b. Select Function Builder and then click the Display button.

c. Choose the appropriate tab for a list of specific parameters.





a. Open the Function Builder by entering the se37 transaction code (as shown below).



b. Type the name of the Function Module and then click the Display button.

Function Builder: Initial Screen	
Function Module Edit Goto Utilities(M) Environment System Help	
	1
🔏 👖 🚭 🔂 📋 🗊 🔅 Reassign	
Function Module	
🗞 Display 🖉 Change 🗋 Create	

Step 2 — Add the BAPI Specific Inputs

1. To view the import parameters that can be used with the generic **Invoke SAP BAPI** operation to call the BAPI_BANK_GETDETAIL function, select the **Import** tab.

📔 Function Builder: Dis	splay B	API_BANK_GETDE	TAIL					
Function Module Edit Goto	Utilities	(M) Environment Sy	stem Help					
0				80 Q	0	1 2 2 3		
← ⇒ % % ¶ ⊚	60	1 목 수 品 星		Pattern	1	e Briset Breplace Breelete (🔓 Fu	nction Module Documentation
Function module	BAPI_E	SANK_GETDETAIL	Active					
Attributes Import Ex	port	Changing Tables	Exceptions Sou	rce co	de			
XORBE								
Parameter Name	Турі	Associated Type	Default value	Opt	Pas	Short text	Lon	
BANKCOUNTRY	LIKE	BAPI1011_KEY-B.		Г	P	Bank Country Key		
BANKKEY	LIKE	BAPI1011_KEY-B.		Г	R	Bank Key		
				Г	Г			
				Г	Г			
				Г	Г			1
				Г	Г			1
				Г	Г			1
				Г	Г			1
				Г	Г		-	1
				Г	Г			1
				Г	Г			1
				Г	Г			1

The BAPI_BANK_GETDETAIL function has two import parameters named BANKKEY and BANKCOUNTRY that allow you to identify the Bank object on which the method is called.

2. To pass the values for these parameters from OO, you must add BANKKEY and BANKCOUNTRY as inputs in the generic **Invoke SAP BAPI** operation.

Enor: failure		
Inspector		ą.
Step Name: Invoke SAP BAPI		
Transfer Deputer Deputer Advanced Constant		
anputs Results Display Description Advanced Scriptiet		
A Y [Inputs Summary] > BANKCOUNTRY		() X
Add Input Remove Input 👔 🤴		
Assign To Input	Required Type From	
host	Single Value Prompt User	
username	Single Value Prompt User	<u></u>
password	Single Value Prompt User	
systemia	Single Value Prompt User	
client	Single Value Prompt User	
instancenumber	V Single Value V Prompt User	
hani	Single Value Value: BART BANK CETDETAT	
endSequence	Single Value Promot User	
commit	Single Value Prompt User	
delimiter	Single Value Prompt User	
colDelimiter	Single Value Prompt User	
rowDelimiter	Single Value Prompt User	
BANKCOUNTRY	Single Value Value: 01234567	
BANKKEY	Single Value 🔻 Value: DE	le la

3. Follow the same procedure for customizing the generic Invoke SAP BAPI operation to invoke any BAPI for which you wish to pass specific import parameters values.

Step 3 — Add the BAPI Specific Results

The **Invoke SAP BAPI** operation returns the table and export parameters specific to the called BAPI in the returnResult result. When you use the **Invoke SAP BAPI** operation, you can customize this output by applying filters to extract results for each of the desired SAP parameters. For example, when invoking BAPI_BANK_GETDETAIL, the returnResult would appear in the OO Studio Debug screen as shown below.



You can check for the table and export parameters related to the **BAPI_BANK_GETDETAIL** in SAP and see that the BAPI has an export parameter named BANK_ADDRESS.

E Function Builder: I	Display BAPI_I	BANK_GETDETAIL			
Function Module Edit Got	o Utilities(M) E	invironment System Help	14		
		0000	C 60 6	ግ ይ 🛛 🖾 🖉 🔞	
← ⇒ 🌮 🍪 🖻 🤇) 🖓 🖡 🛱		🐑 😨 Patte	em 🎝 📄 Insert 📑 Replace 📑 I	Delete 💕
Function module	BAPI BANK	GETDETAIL	Active		
Attributes Import	Export Chang	ging Tables Exception	ons Source	code	
Parameter Name	Typing	Associated Type	Pass Value	Short text	Long Text
BANK_ADDRESS	LIKE	BAPI1011_ADDRESS	<u> </u>	Bank Address Data	•
BANK_DETAIL	LIKE	BAPI1011_DETAIL	P	Bank Detail Data	
RETURN	LIKE	BAPIRET2		Confirmations	•
			Г		
			Г		
			Г		
			Г		
			Г		
			Г)
					1

葿 Dictionary: Display	Struc	ture				
Structure Edit Goto Util	ities(M)	Extras Environment	System I	Help		
		- 🖩 © 🙆	8	8 B B	000	C 2 🗷 🗷 🖉
⇐ ⇒ ४४ छ ।	6	수 8 월 🗆	Hiera	archy Display	Append	Structure
Structure 1	BAPI1	011_ADDRESS		Active		
Short Description	Transf	er structure object 10	11: Bank a	address		
Attributes Componen	te I I	Entry help/check	urren cy/au	antity fields	i	
Accibaces componen		chay hep/check c	anency/qu	laticity fields	1	
	E	Predefined Ty	pe			1 / 11
Component	RTy.	Component type	Data Type	e Length	Decim_	Short Description
BANK_NAME	Г	BANKA	CHAR	60	0	Name of bank
REGION	Г	REGIO	CHAR	3	0	Region (State, Province, County)
STREET	Г	STRAS_GP	CHAR	35	0	House number and street
CITY	Г	ORT01_GP	CHAR	35	0	City
SWIFT_CODE	Г	SWIFT	CHAR	11	0	SWIFT Code for International Payments
BANK_GROUP	Г	BGRUP	CHAR	2	0	Bank group (bank network)
POBK_CURAC	Г	XPGRO	CHAR	1	0	Post Office Bank Current Account
BANK_NO	Г	BANKL	CHAR	15	0	Bank number
POST_BANK	Г	PSKTO_CH	CHAR	16	0	Post office bank current account number
BANK_BRANCH	Г	BRNCH	CHAR	40	0	Bank Branch
ADDR_NO	Г	AD_ADDRNUM	CHAR	10	0	Address number

This is a structure parameter and its fields are enumerated if we open its Associated Type.

To add the BAPI specific results:

 To obtain the BANK_NAME field of the BANK_ADDRESS parameter, filter the Invoke SAP BAPI operation's primary output. Create a step result named bankName which gets its value from the operation's returnResult.



2. Use a regular expression to extract the BANK_NAME from the **returnResult**.

Inspector		Ф.
Step Name: Invoke SAP BAPI		
Inputs Results Display Description	Advanced Scriptlet	↓ × ×
Add Remove 🔮 🐥	Details for: Regular Expr Filter the input string by e regular expressions.	ession xtracting the parts that match a regular expression. See the help documentation for a detailed description of
	Expression Type: Java	ityle 👻
	Expression Value: BANK	NAME:[^,]*
	Filter Style: () Fil	ter Entire Input
	🗇 Fi	ter Line-by-line
	Ignore Case: 📃	
Test Filter Input		MR.
Test All Filters Test Selected F	ilters	🗎 🔓 🌏 Clear Quick Command
BANK ADDRESS-BANK NAME: bank ANK: ,BANK BRANCH: ,ADDR_NO: BANK DETAIL=CREAT_DAIE: Wed RETURN=TYPE: ,ID: ,NUMBER: 00 OW-O_RIELD: SYSTEM.	Aug 10 00:00:00 EE , MESSAGE:, LOG_NO:,	<pre>I: bankStreet,CITY:bankCity,SWIFT_CODE:,BANK_GROUP:,POEK_CURAC:,BANK_NO:,POST_B ST 2011,CREATOR:ANDPAT,METHOD:,FORMATTING:,BANK_DELETE:,LOG_MSG_NO:000000,MESSAGE_V1:,MESSAGE_V2:,MESSAGE_V3:,MESSAGE_V4:,PARAMETER:,P</pre>
Test Output		anim .
BANK_NAME: bankName		^ ^

3. If you want to eliminate the name of the SAP field, you can use a **Strip** filter to remove BANK_NAME from the result.

Inspector	Ф.
Step Name: Invoke SAP BAPI	
Inputs Results Display Description Advanced Scriptlet	
▲ ▼ Step Results > bankName	$\leftrightarrow x$
Add Remove 👉 🦊 Details for: Strip Remove a matching string from the head or tail of th	e inout
* RegEx: 'BANK_NAME:[^,]*' Strip Method: All Characters Up To And Inclu	ing 🗸
Strip All Characters Up To And Inclue Characters to Strip: :	
Test Filter Input Test All Filters Test Selected Filters	📄 💼 🏀 Clear Quick Command
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When you execute this step again, **bankName** is obtained as a separate result.

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Troubleshooting

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Overview

This section provides troubleshooting procedures and tools that you can use to solve problems you may encounter while using this integration. It also includes a list of the error messages you may receive while using the integration and offers suggestions and possible fixes for the errors.

General Troubleshooting Procedures and Tools

This section describes the troubleshooting procedures and tools you can use to fix problems that you may experience while using this integration.

To use the generic Invoke SAP BAPI operation, the sample flows and the flows created by the SAP Wizards, you must download the SAP Java Connector (JCo) from the SAP Service Marketplace at http://service.sap.com/connectors and install the connector, as stated in the generic operation's description.

Note: You cannot successfully use the SAP Integration if you do not have the correct version of SAP JCo.

Error Messages

This section lists the error codes and messages you may receive while using this integration. Each error message includes possible causes and fixes for the error.

java.lang.NoClassDefFoundError: com/sap/conn/jco/JCoException

This error occurs when you do not have SAP JCo installed, as documented in the Invoke SAP BAPI operation's description.

java.util.concurrent.ExecutionException: java.lang.ExceptionInInitializerError: Error getting the version of the native layer: java.lang. UnsatisfiedLinkError: no sapjco3 in java.library.path This error occurs when the version of the SAP JCo you have installed is not correct. This can also happen on Windows SP2 and Windows Server 2003 R2 Enterprise SP2 when installing Java connector 3.0.4.

If this is the case, install the Microsoft Visual C 2005 Service Pack 1 Redistributable Package (KB973544), that can be downloaded at http://www.microsoft.com/en-us/download/details.aspx?id=14431.