





# How To... Move Integration Scenarios (ESR/ID Objects) from PI 7.0 to PI 7.1

**Applicable Releases:** 

**SAP NetWeaver PI 7.1** 

**SAP NetWeaver PI 7.0** 

SAP NetWeaver XI 3.0

Topic Area: SOA Middleware Capability: Service Bus

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### **Document History**

Document Version	Description
1.00	First official release of this guide

### Typographic Conventions Icons

Type Style	Description
Example Text	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options.
	Cross-references to other documentation
Example text	Emphasized words or phrases in body text, graphic titles, and table titles
Example text	File and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example text	User entry texts. These are words or characters that you enter in the system exactly as they appear in the documentation.
<example text&gt;</example 	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

lcon	Description
⚠	Caution
•	Note or Important
~ <b>?</b> •	Example
1	Recommendation or Tip

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### 1. Business Scenario

SAP NetWeaver Process Integration 7.1 (PI 7.1) introduced many feature and performance enhancements, which provide PI developers with greater flexibility, options and increased design/configuration speed, in addition to increased runtime performance. This document provides the reader with a comprehensive overview of the steps required to upgrade the Integration Repository and Integration Directory objects from SAP NetWeaver Exchange Infrastructure 3.0 (XI 3.0) or SAP NetWeaver Process Integration 7.0 (PI 7.0) to PI 7.1.

### 2. Background Information

The target audiences for this how-to guide are administrators, project leads and PI developers.

Although the how-to guide discusses the complete upgrade process, it focuses, in detail, the moving of Integration Repository (IR) objects in XI 3.0 or PI 7.0 to Enterprise Service Repository (ESR) in PI 7.1, and the moving of Integration Directory (ID) objects from XI 3.0 or PI 7.1 to PI 7.1.

When moving the objects, it is assumed that a separate new PI 7.1 system is available. If the XI 3.0 or PI 7.0 system is to be upgraded in-place to PI 7.1, the IR and ID objects will continue to be available after the upgrade, therefore, no move is necessary.

### 3. Prerequisites

This how-to guide is not considered as a replacement for the official update or upgrade documentation. Therefore it is very important that you make yourself familiar with the update or upgrade process by reading the official documentation.

There are two options for the upgrade process:

- 1. Upgrade XI 3.0 or PI 7.0, in-place, to PI 7.1.
- 2. Install a new PI 7.1 system. Then, move the IR and ID objects from XI 3.0 or PI 7.0 to PI 7.1.

#### Important

SAP NetWeaver 7.1 can only be installed on a 64-bit OS. If the current XI 3.0 or PI 7.0 is on a 32-bit OS, then you must install a new 64-bit system and move the IR and ID objects.

This how-to document focuses on option 2 above.

### 3.1 Upgrade Overview Steps

Which option to select depends on many criteria, from both business and technology perspectives. Below contains the recommended steps when the option has been decided.







### 3.2 PI 7.1 Upgrade Reference Documents

Below contains some of the relevant documentations which might be useful during the upgrade process:

- 1. Check PI 7.1 PAM / Sizing for hardware requirements:
  - a. SDN: <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/80800e7d-da0e-2b10-9e8c-b85181ad8fac</u>
  - b. SAP Service Marketplace: http://service.sap.com/pam
- 2. Evaluate HA setup for your landscape:
  - a. High Availability for SAP Applications based on SAP NetWeaver:
    - i. <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/media/uuid/e0fd0398-</u> 2a6d-2a10-2899-b2855fc7d397
  - b. Process Integration 7.1 High Availability SAP Note Number: 1052984
    - i. <u>https://www.sdn.sap.com/irj/servlet/prt/portal/prtroot/com.sap.km.cm.docs/oss</u> <u>notes/sdn\_oss\_bc\_xi/~form/handler{5f4150503d3030323030363832353030</u> <u>303030303031393732265f4556454e543d444953504c4159265f4e4e554d3d3</u> <u>1303532393834}</u>
  - c. High Availability: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/72/cd1e4261ea5433e1000000a155</u> <u>106/frameset.htm</u>
- 3. Check important requirements and SAP Notes for upgrade:
  - a. Solution Manager needs to be on latest SP level (e.g. minimum version 7.0 SP16)
  - b. Please consider following SAP Notes for additional information and limitations:
    - i. SAP Note 1135704: SAP NetWeaver PI 7.1 Composite Note
    - ii. SAP Note 1004107: Release Restrictions for SAP NetWeaver PI 7.1
    - iii. SAP Note 1061649: Upgrade to SAP NetWeaver Process Integration 7.1
    - iv. SAP Note 1154961: Checks to be executed before ESR/PI Upgrade to 7.1
    - v. SAP Note 1138877: PI 7.1 : How to Deploy External Drivers JDBC/JMS Adapters
- 4. Install PI 7.1 development system:
  - a. Decision-making Factors when moving to SAP NetWeaver Process Integration 7.1 -Upgrade or New Installation with Phase out:
    - i. <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/40328fc8-4844-2b10-b7a2-8930c16df2ba</u>
  - b. How to Plan, Strategize, and Upgrade to SAP NetWeaver PI 7.1 SOA Middleware:
    - i. <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/media/uuid/6011d10a-0875-2b10-6ab8-d57ec4138011</u>



- c. SAP NetWeaver PI 7.1 Composite Note SAP Note Number: 1135704
  - i. <u>https://www.sdn.sap.com/irj/servlet/prt/portal/prtroot/com.sap.km.cm.docs/oss</u> <u>notes/sdn\_oss\_bc\_xi/~form/handler{5f4150503d3030323030363832353030</u> <u>303030303031393732265f4556454e543d444953504c4159265f4e4e554d3d3</u> <u>1313335373034}</u>
- d. SMP PI 7.1: <u>https://websmp103.sap-ag.de/instguidesNW</u>
- 5. Create/Transfer communication users from application systems to PI 7.1:
  - a. Service Users for Internal Communication:
    - i. <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/9f/d12940cbf2195de100000</u> 00a1550b0/frameset.htm
  - b. Transporting Authorization Components
    - i. <u>http://help.sap.com/erp2005\_ehp\_04/helpdata/EN/52/6716d2439b11d1896f0</u> 000e8322d00/frameset.htm
- 6. Consider and configure CTS:
  - a. Enhanced CTS for PI Use Case: <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/c04b3127-c1f6-</u> <u>2910-c39c-c439b2169747</u>
  - How To ... Configure Enhanced CTS for SAP NetWeaver Process Integration 7.1 SP06: <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/20ccd0ec-2839-2b10-0097-828fcd8ed809</u>
- 7. Optional: Setup new SLD 7.1 on PI 7.1 system:
  - a. SAP NetWeaver PI 7.1 and SLD Upgrade Strategy:
    - i. <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/300e3ca7-31cd-2a10-a6ba-87c7447d5fd7</u>
  - b. User Manual System Landscape Directory NW 7.1: <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/b09fe69e-46be-</u> <u>2a10-9fb0-9c11aeaa3557</u>
- 8. Transport selected SLD content from XI 3.0/PI 7.0 to PI 7.1 SLD:
  - a. Tasks in the System Landscape Directory: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/fe/39ae3d47afd652e10000000a1140</u> <u>84/frameset.htm</u>
  - b. Administrating the SLD: http://help.sap.com/saphelp\_nwpi71/helpdata/en/45/ac18ce74372733e1000000a155 369/frameset.htm
  - c. Performing Regular Administrative Tasks: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/42/3a420910af11d6999400508b6b8</u> <u>b11/frameset.htm</u>
  - d. Exporting and Backing Up Your SLD Information: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/a2/706851b7e62a4b9e697bce3ede9</u> <u>67a/frameset.htm</u>



- 9. Transport selected Integration Repository content from XI 3.0/PI 7.0 to PI 7.1 ESR
  - a. Software Logistics for XI Objects (7.0): <u>http://help.sap.com/saphelp\_nw70/helpdata/en/94/c461bd75be534c89b5646b6ddc0af</u> <u>f/frameset.htm</u>
  - b. Transporting XI Objects (7.0): http://help.sap.com/saphelp\_nw70/helpdata/en/93/a3a74046033913e10000000a1551 06/frameset.htm

🚺 Note

XI 3.0/PI 7.0 metadata needs to be available in IR as well.

- c. Organization of ESR Content (7.1): http://help.sap.com/saphelp\_nwpi71/helpdata/en/80/41d6fab68dca439063d16e7a187 5dc/frameset.htm
- d. Transferring Design Objects: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/e8/e8573ba5f13048be50532fc3fcea</u> 9c/frameset.htm
- 10. Transport selected Integration Directory content from XI 3.0 to PI 7.1 Integration Directory (Option: Create Integration Directory objects manually):
  - a. Software Logistics for XI Objects (7.0): http://help.sap.com/saphelp\_nw70/helpdata/en/94/c461bd75be534c89b5646b6ddc0af f/frameset.htm
  - b. Transporting XI Objects (7.0): http://help.sap.com/saphelp\_nw70/helpdata/en/93/a3a74046033913e10000000a1551 06/frameset.htm

🚺 Note

XI 3.0/PI 7.0 metadata needs to be available in IR as well

- 11. Transport selected basic and operations relevant configuration (for example Alert configuration, interface archiving settings, ABAP transports, etc):
  - a. Transporting Alert Categories: http://help.sap.com/erp2005\_ehp\_04/helpdata/DE/7f/e5d37530e049c2aa82b3546ec4 c523/frameset.htm
- 12. Deploy JEE5 compliant JDBC/JMS drivers (if used):
  - a. PI 7.1 : How to Deploy External Drivers JDBC/JMS Adapters. SAP Note Number: 1138877 <u>https://www.sdn.sap.com/irj/servlet/prt/portal/prtroot/com.sap.km.cm.docs/oss\_notes/s</u> <u>dn\_oss\_bc\_xi/~form/handler{5f4150503d3030323030363832353030303030303030313</u> <u>93732265f4556454e543d444953504c4159265f4e4e554d3d31313338383737}</u>
- 13. Re-deploy certified 3rd-party adapters and 3rd-party content (if used):
  - a. SAP NetWeaver SOA Middleware –Adapters and Adapter Modules for SAP NWPI 7.1: <u>https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/e0205c42-5e86-2b10-b183-afc655b07f3f</u>
  - b. Partner Information Center: Search http://www.sap.com/ecosystem/customers/directories/SearchSolution.epx



- 14. Adjust and re-deploy adapter modules and Java Proxies (if used):
  - a. Adjust your PI 7.0 Adapter Modules for PI 7.1 in 15 minutes: https://www.sdn.sap.com/irj/scn/weblogs?blog=/pub/wlg/11835
- 15. After upgrade, the following activities are recommended:
- 16. Execute functional testing of redirected interfaces in Dev system
- 17. Repeat installation for Test and Production system.
- 18. Transport ESR/Directory content to PI Test and Production System (PI 7.1).

#### 🚺 Note

After first Integration Directory transport to Test or Production system communication channels have to be changed manually

19. Testing the business scenarios in Test system.



## 4. Step-by-Step Procedure

This chapter contains the step-by-step guide of moving the IR and ID objects from XI 3.0 or PI 7.0 to PI 7.1.

The PI 7.0 system is XR9. The PI 7.1 system is XLI. The same steps should also apply when moving from an XI 3.0 system.

The following scenario is used as our exercise of moving the objects:





The scenario contains the following features:

- Synchronous and asynchronous interfaces
- ccBPM and non-ccBPM interfaces
- Dynamic receiver determination based on message payload value
- Imported archive of java library to be used in mapping

Basic message processing steps:

- 1. RFC executed in ABAP to send a message to PI
- 2. In PI, the payload of the message is examined:
  - a. In the message, if the key is "A", then the message will be sent to a database to select a value from a table based on the key. The value will be returned to the RFC in ABAP.
  - b. In the message, if the key is "B", then the message will be sent to a ccBPM:
    - i. Via a synchronous message interface to ccBPM, the received message will be sent to an asynchronous-synchronous gateway to a database to retrieve a value from a table based on the key.
    - ii. The response message containing the value will be written to a file.
    - iii. The response message containing the value will be returned to the RFC in ABAP.

### 4.1 Importing Objects into the System Landscape Directory (SLD)

The Integration Repository (IR) and the Integration Directory (ID) have dependencies on the contents of the SLD. Specifically, the IR objects must be contained in SWCVs and the ID's communication channels may be dependent on business systems in the SLD. Therefore, both SWCV and Business Systems must already exist in PI 7.1's SLD before we can start to move the objects from PI 7.0 to PI 7.1.

### 

The SWCVs must be exported and imported from PI 7.0 to PI 7.1. We <u>must not</u> create the SWCVs manually on PI 7.1, even though the same names are used. The SWCV GUIDs used by the SLD to point to the names are different; therefore, using the same SWCV names does not mean the objects will be imported properly.

Below contains the procedures to export and import the SLD objects between PI 7.0 and PI 7.1:

1. Transport Business System

Note that exports typically contain associations to objects not being exported themselves (called "external references"). For example, a business system export does not include the underlying technical system. Thus external references cannot be imported if referenced objects are missing in the target system. You may repair this loss of data by transporting or creating missing objects and repeating the import. In the example below, you have to import the technical system first if it does not exist in the target SLD yet.



a. To export the business system, go to your source SLD, choose 'Business Systems', select the respective Business System that you want to transport and choose 'Export'. Download the file.

SAP NetWea System Landsca	aver" apo Directory	
Home Administration Loa.Off Hele a View and Configure Dusiness Syste Business Systems Group: (All T Piter:	SAP NetWeaver* System Landscape Directory	Narrespace: galactive
Titlered by X30*;3 of 21 flem(e)           Terre Dusrees System           Allower           XM3           XM3           XM3           XM3           XM3           XM3           XM3           XM4           XM4           Row 1 or 3           XM9 200 Detaile	Convertines Systems	
Ceneral Integration Tran. Save Name: XR1_200 Description:		

b. To import the Business System to your target SLD, choose 'Administration', 'Content /Upload and download CIM models and data'. Import (either from Browser or Server) the Business System zip-file that you exported and saved in the previous step.

SAP NetWeaver"			
Home Administration Los.Off Help	SAP NetWeaver" System Landscape Directory		
Administrate and configure the server	Home Administration Los Off Help	s	lysten: XLI Namespace: <u>skillactive</u>
Server  Very terver tog and set logging and toxing paramite Cathili Very terver tog and set logging and toxing paramite Cathili Very and change serve paramiters Catholic Cath	Target Reader or Call and Target Mander or Call and SAP Model Version: 15.27 SAP CR Content Version: SAP_CR 3.0 (produced 2007-04-27) SAF tract between Face: Second Safet Safet Barget No import suggestions for this nanespace. Import.		

c. Assign Business System to target Integration Server (Group) You have to manually change the 'Related Integration Server/Group' to the respective 'Related Integration Sever/Group' of your target landscape.

### 

This is a very important step in the overall upgrade; if you skip it, the transport of Integration Directory objects will not work because the Business Systems would not be recognized as local systems during the import into the target Integration Directory.



usiness System	IS		(
roup: All (11)	Filter:	Go	
New Business Sy	stem Remove Export Refres	n .	
🛃 🔺 Name	Technical System	Client	
SYS2	XLI on nspah227	003 of XLI	
WC1_800	VVC1 on nvpal196	800 of WC1.SystemNumber.0020106486.SystemHome.nvpal196	
X8A_105	X8A on pwdf2655	105 of X8A.SystemNumber.0120021077.SystemHome.pwdf2655	
XLI_Java	XLI on nspah227		
XR9_200	XR9 on nspad391	200 of XR9.SystemNumber.0020106486.SystemHome.nspad391	
R9_200 Details			
R9_200 Details General Int Save	egration Transport Insta	lied Software	
R9_200 Details General Int Save Role: Related Integration	Application System	Ied Software	
R9_200 Details General Int Save Role: Related Integration Group:	Application Transport Insta Application System V Server: INTEORATION_SERVER	Ied Software	
R9_200 Details General Int Save Role: Related Integration Group: Technical System:	egration Transport Insta Application System V Server: INTEORATION_SERVER IPI71 XR0 on nsped391	Ied Software  TegRAtion Server XLI Change	
R9_200 Details General Int Save Role: Related Integration Group: Technical System: Client:	egration Transport Insta Application System Application System Fi74 XFB on nspad391 200 of XFB SystemNumber	Ied Software	
R9_200 Details General Int Save Role: Related Integration Group: Technical System: Client: Logical System Na	egration Transport Insta Application System V REGRATION_SERVER_ P71 <u>XF9 on nspad391</u> 200 of XF9 SystemNumber me:	Ied Software  I  I  I  I  I  I  I  I  I  I  I  I  I	

### 🚹 Тір

Please keep in mind transaction: TA: LCRSERVADDR.

2. Transport SWC definition

Note that manually creating the same software component or the same XI business system in another SLD will create a different GUID. As a result, these objects are not identical even though their names are the same.

#### 🚹 Tip

SAP Online Help - Exporting and Backing Up Your SLD Information: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/a2/706851b7e62a4b9e697bce3ede</u> <u>967a/frameset.htm</u>

a. To export the SWC definition (here: DEMO1), go to your source SLD, choose 'Software Components', select the respective SWC that you want to transport and choose 'Export'. Note that the SWC export includes transport of the associated product as well.

SAP NetWeaver* System Landscape Directory	- F			
Home Administration Log Off Help About			Namespace: ski/active	
Software Catalog				
Software Type: Software Components (5481) V Filter: demot	Go			
New Software Component Version   Remove   Export   Refresh	)			
Software Component	Version	N	/endor	
DEMO1 of demo	DEMO1 , 1.0 of demo	d	iemo	
-	SAP NetWeaver"			
	trunie Administration Los Ott trate About			Nanespace: philoches
Row 1 of 1 Y Y Y	Download Toronom	File Download	×	
DEMO1 , 1.8 of demo	Dack to Software Selects	Do you want to open or save this file?		
Vender: dero Name: DEMOI Version 1.0 Production State: released Type:		Name: report, 2007/12, 1778-149, 179           Yerkin 22: excise           Form: report211 pair-point           Core:	Cancel	



- b. Save the SWC zip-file.
- c. To import the SWC definition, go to your target SLD, choose 'Administration', 'Content /Upload and download CIM models and data'. Import the SWC zip-file that you exported and saved in the previous step.

SAP NetWo System Lands	eaver <sup>®</sup> icape Directory				
Home Administration Log Off He	142		System 🛄 Namespace	K <u>skilective</u>	
Administrate and configure the	server				
CO SLD Running Stop SLD					
Server		Content			
Log View server log and set loggin	g and tracing parameters	Insert / Expert Upload and download CM models at	nd data		
View detailed information ab Settings View and change server par	SAP NetWeaver System Landscape Directory	,			
Data Suspliers Configure data supplier targe System Message	Home Administration Los.Off Hele			System XII Nanespace ga	Stactive
Lenne a system message in	Target Namespace sldiactive SAP Model Version: 1.5.27 SAP CR Content Version: SAP_CR 3.0 (produced 2001	SAP NetWeaver* Bystem Landscape Direct	Dry A		
	· From Browser	Harne Administration Los Off the			System (1) Namespace (10)(1/1)
	File: prt_20090125 175948 zip Browse	Software Catalon			17
	No inport suggestions for this namespace.	Software Type: Software Components (4486)	Piter: Senot1 00		SAP_CR 3.0 (produced 2007-04-27)
	Import	Filtered by demoth: 1 of 4886 Rem(s)			
		Software Component	Verson	Vendor	
		CENOT of dente	DEMOT , 1 0 of demo	sena	2.4
		DEMO1 , 1.0 of demo Osceral Products Dependencies Vendoz deno	1 Dupport Packages / Release Compatibility 1	Release Hotory	44
		Name DEMOT Version: 1.0 Production State: released Type:			



### 4.2 Move Integration Repository (IR) Objects

In the Integration Repository, we have the following objects in XR9's SWCV Demo1:

⊽ (	Ø	DEMO	)1 of	demo
	$\bigtriangledown$		EMO	1 , 1.0 of demo
		▽ 🗑	) http	o://demo.com/demo1
			Inte	egration Scenarios & Integration Processes
				Integration Scenarios
				🖀 Actions
			$\bigtriangledown$	E Integration Processes
				TableLookup_process
			Inte	erface Objects
			$\bigtriangledown$	🗐 Message Interfaces
				GetDemoReq_abs
				GetDemoResp_abs
				GetDemoSync_abs
				LookuplableReq_abs
				LuukupTableResp_aps
				TableLookup Sync abs
				tableLookup Sync In
			$\bigtriangledown$	🔁 Message Types
				tableLookup_MT
				tableLookup_MT_response
				🚳 Fault Message Types
			$\bigtriangledown$	🌐 Data Types
				demoRec_DT
				ExchangeFaultData
				ExchangeLogData
				tableSelect_D1
				Data Type Enhancements
				Context Objects
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- 1. Transport SWC from source-IR to target-ESR:
  - After all SLD transports are completed, you can transport the SWC from the source-IR (PI 7.0) to your target-ESR (PI 7.1). Go to the Integration Repository, choose 'Tools/Export Design Objects' and export the respective SWC (here: DEMO1) note that you can also export by right-mouse click on your SWC and choosing 'Export' from the menu.

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- b. The Software Component is exported to the respective export directory of your source system (...\sapmnt\XR9\SYS\global\xi\repository\_server\export). You need to move this file (here: XI3\_0\_DEMO1\_1.0\_of\_demo.tpz) to the import directory of your target system (...\sapmnt\XLI\SYS\global\xi\repository\_server\import).
- c. Now you can import the SWC to your target-ESR. Go to the ESR (Enterprise Services Repository/ES Builder), choose 'Tools/Import Design Objects' and import the respective SWC (here: DEMO1).

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- d. The ES Builder provides the file system as a simple tool for the transport of ESR content. You can choose between two alternatives (as of PI 7.1) when importing and exporting:
  - i. Server the export file is saved in a server directory and the import file is loaded from a server directory.
  - ii. Client the export file is saved in a directory on your local PC and the import file is loaded from a directory on your local PC.

### 🚹 Tip

SAP Online Help - Transporting ESR Content using the File System: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/a8/5e56006c17e748a68bb3843ed5aab</u> <u>8/frameset.htm</u>

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The SWC 'DEMO1' has been successfully imported into the target-ESR.

Let's compare IR-content (left side) and ESR-content (right side). You still need to maintain some information on the 'Definition' tab of your SWC such as an 'Original Language' and the 'Connection Data for the Import from SAP System' for Interface Imports.

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As mentioned above, if you had manually created the same SWC definition in the target-SLD again, you would have created a different GUID. Since you transported the SWC, both GUID are the same.

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Notice that ESR objects such as Data Types and Interfaces look slightly different from their IR counterparts, for example ESR Data Types are classified as 'Free-style'.

#### 🚹 Tip

SAP Online Help - Developing Data Types: http://help.sap.com/saphelp\_nwpi71/helpdata/en/45/607415b5b33bdbe10000000a1553f 7/frameset.htm

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IR-Message Interfaces are replaced by ESR-Service Interfaces with the Interface Pattern for Stateless Communication (XI 3.0-Compatible). With this Interface Pattern, you can continue to use all existing protocols (up to SAP NetWeaver 2004s) in the back end that were developed on the basis of Message Interfaces. Message Interfaces from the IR are migrated to Service Interfaces in the ESR and are assigned this Interface Pattern.

### 🚹 Tip

SAP Online Help - Developing Service Interfaces:

http://help.sap.com/saphelp\_nwpi71/helpdata/en/3f/01623c4f69b712e10000000a114084 /frameset.htm



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### 🚹 Тір

You can find more details and useful information about Interface Patterns in the following document available on SDN:

https://www.sdn.sap.com/irj/scn/go/portal/prtroot/docs/library/uuid/409ecd00-6171-2b10-3d99-a9efa9c3c6a9

#### Recommendation

It is possible that during the export/import processes, if the number of objects in the Software Component Version is large, there is a possibility that the export or import may produce errors. When this occurs, the objects can be divided into groups to reduce the number of objects to be exported or imported, thereby reducing the possibility of errors.

2. Adapter Metadata

After the installation of PI 7.1, Adapter Metadata is available for PI 7.1 only. You can see the Adapter Metadata in ESR-Software Component 'SAP BASIS', version 'SAP BASIS 7.10'.



Adapter Metadata/SWC versions for previous releases 'SAP BASIS 7.00' and older are available as well - you need PI 7.0 Adapter Metadata to successfully import and activate Integration Directory objects such as Communication Channels into PI 7.1 – see next chapter. You can either export/import the respective SWC from your PI 7.0 system, or download it from



SAP Service Marketplace (use alias 'swdc' to go to the Software Distribution Center). Search for all categories with the term 'XI content SAP BASIS' and select 'XI Content SAP BASIS 7.00'.

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SAP Software Distribution Center	SAP Installations &	Upgrades SAP S	upport Packages	Business Object	s Downloads	Database Patches	Download Basket	Additional Download Info
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Content     Content for Business Suite 2005     Database Patches (from other vendors)     SAP Cryptographic Software	Al Will ON	ll corrective softwar ILY be available via S Th Results 1 - 10 c	e packages, for SA SAP Solution Manaç of total 20 (Othe	P NetWeaver 7.0 ger's Maintenance r Results are Po	and SAP Busine Optimizer, Find ossible)	ss Suite 2005 and be more details <u>here</u> .	eyond that are delive	ered after April 2nd, 2007
SAP Connectors	00000	1 XI COM	TENT SAP BASI	5 7.11				
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		Mainten	ance Software Cor	nponent (Current	View)			
	00000	5 XI COM	TENT SAP BASI	5 7.00				
		Mainten	ance Software Cor	nponent (Current	View)			
	00000	6 XI COM	TENT SAP BASI	5 7.01				
		Mainten	ance Software Cor	nponent (Current	View)			
	000003	7 <u>XI COM</u>	TENT SAP BASI	5 7.10				
		Mainten	ance Software Cor	nponent (Current	View)			
	00000	8 <u>XI COM</u>	TENT SAP BASI	5 7.11				
		Mainten	ance Software Cor	nponent (Current	View)			

Once uploaded to ESR, all Adapter Metadata versions are visible in Integration Directory Communication Channels and can be selected.

### 4.3 Move Integration Directory (ID) Objects

To facilitate and simplify the process, it is best to create a Configuration Scenario on the PI 7.0's ID. Then, include all the objects related to the scenario into the Configuration Scenario. This way, we will only need to export the configuration scenario instead of selecting the individual objects. In our case, we created a Configuration Scenario named Demo1.

#### Important

After importing the objects into the SLD, it is important to clear the cache in the ID. By clearing the cache, the ID will be forced to retrieve the new objects from the SLD. Without doing so, it is possible that the import process some Business Systems may not be found and cause the import to fail.

### 🚹 Tip

SAP Online Help – Transporting Configuration Objects of the Integration Directory: <u>http://help.sap.com/saphelp\_nwpi71/helpdata/en/44/2c38d8afdf4674ae1adc1364f4d454/f</u> <u>rameset.htm</u>

#### 🚹 Тір

This section does not include the transport of Value Mappings. For moving of Value Mappings from PI 7.0 to PI 7.1, please reference the following Section 4.4.

In the Integration Directory, we will be moving the objects in XR9's configuration scenario Demo1:

Scenarios Objects Change Lists
IIIII
✓ Demo1
🔐 Party
🗢 👦 Service Without Party
🗢 📋 Business System
🗢 🚱 Business Service
✓ Demo_Service
🗢 🍇 Communication Channel
File_Demo_receiver
XR9_MSSQLServer_receiver
V 20 Integration Process
TableLookup_process
Tablel ookun process I GetDemoResn abs
TableLookup process TableLookup Sync abs
R3B_400 ZGET_DEMO_TABLE  Demo_Service
R3B_400 ZGET_DEMO_TABLE  TableLookup_process
TableLookup_process   GetDemoResp_abs     Demo_Service
TableLookup_process   TableLookup_Sync_abs     Demo_Service
V 2 Sender Agreement
K3B_400 Z0E1_DEMO_TABLE    ∑ B Paceiver Agreement
I R2P 4001 L Domo Somico I tobiol colum Sync In
TableLookun process LiDemo Service LiookunTableResn Asvnc in
TableLookup_process   Demo_Service   tableLookup_Sync_In

- 1. Export the scenario: Demo1
  - a. Right-click on scenario Demo1 and select "Export" in the menu:





b. Click on "Continue". It is easiest to use the file system for the transport. This way we can avoid the configuration of CMS or CTS+.

Export Configuration	n Objects X
1. Select Mode	Select Mode
2. Select Objects	Mode
3. Select Transport Request	Iransport Using File System
Back Continue	Finish Cancel

c. Click on "Finish". There is no change the default settings.

Export Configuration	n Objects
1. Select Mode	Select Objects
2. Select Objects	Object Set All Objects of a Scenario
3. Select Transport Request	Business Scenario * Demo1
Back Continue	Finish

d. After export, you will get the following screen:

Export Configuration	n Objects	×
1. Select Mode	🖌 Export successful	
2. Select Objects		
3. Select Transport Request	Export Path: D:\usr\sap\XR9\SYS\global\xi\directory_server\export File: XI3_0_Demo1.tpz	
		Close

### 🚺 Note

The location of the exported file: **Export Path**: D:\usr\sap\XR9\SYS\global\xi\directory\_server\export **File**: XI3\_0\_Demo1.tpz

- 2. Retrieve the exported file.
- 3. The export path of the file is on the PI 7.0 server. Therefore, access to the OS file system will be required. If OS file system access is not available, then the system administrator will have to be contacted to send you the file.
  - a. The following steps are for a Windows system. The equivalent file system access will be required for Unix systems.
  - b. In the "Run..." command text box, enter the PI 7.0 server name and click "OK":

Run	? ×
	Type the name of a program, folder, document, or Internet resource, and Windows will open it for you.
Open:	\\nspad391
	OK Cancel Browse

c. Traverse to the directory as indicated in the "Export Path" above, and copy the file to your local file system:

눧 \\nspad391\sapmnt\XR9\S\	S\global\xi\directory_server	\export
File Edit View Favorites Too	ls Help	A.
🛛 😋 Back 🔻 🕥 👻 🏂 🔎 Se	arch 🦻 Folders 🛛 🎹 🕇 📋	🔓 🔏 🗙 🐨 💣
🛛 Address 🛅 \\nspad391\sapmnt\XR	9\SYS\global\xi\directory_server	export 🗾 🔁 Go
	▲ Name ▲	Size Type
File and Folder Tasks *	XI3_0_Biorad_Custom	. 8 KB TPZ File
Denema this file	XI3_0_Biorad_SalesOrd.	14 KB TPZ File
Rename this file	🔳 XI3_0_Demo1.tpz	10 KB TPZ File
Move this file	XI3_0_directory-selecti.	6 KB TPZ File
Copy this file		
Publish this file to the		
Web		
🛱 E-mail this file	<b>▼   4  </b>	
1 objects selected	9.44 KB	🧐 Local intranet 🥢

d. The file is copied to the local computer's file system:

C:\XR9_Exports	<u>_ 🗆 ×</u>
File Edit View Favorites Tools Help	A 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997
Back - C - Back - C - C - C - C - C - C - C - C - C -	
Address 🗀 C:\XR9_Exports	💌 🄁 Go
Folders × Name A	Size Type
XR9_Exports	10 KB TPZ File
E Set Local Disk (D:)	
🗄 🧝 sap on 'CHI-Americas WXP Image-CHIN00413560A (Chin0	
🕀 🛫 51035979 on 'mediaserver2.wdf.sap.corp' (Z:)	
🗄 📴 Control Panel	
🗄 🖳 My Network Places 🔹	
Type: TPZ File Date Modified: 1/26/2009 8:55 AM Size: 9.44 KB 9.44 KB	刻 My Computer 🛛 🖊

- 4. Import the file into the PI 7.1 system:
  - a. With PI 7.1, we have a choice of importing the objects from the server or local file system. Since we copied the exported file to our local file system in the above step, we will use the local file system for our import.
  - b. On the top menu bar, click on: Tools ⇒ Import Configuration Objects...

<b>Configuration:</b>	Integration Builder (nspah227_XLI_27)
<u>O</u> bject <u>N</u> avigation	Tools Environment Help
	System Messages
Objects Chang	🥦 Configuration Wizard
Find	\ominus Apply Model from ES Repository
▶ ⊕0 Party	🖽 Test Configuration
<ul> <li>Recommunication</li> </ul>	🖓 Value Mapping
▶ ∯→ Process Compo	Create Communication Channels Automatically
🕨 🖉 Receiver Deterr	Display WSDL
🕨 🔐 Interface Detern	Import Configuration Objects
🕨 🖞 Sender Agreem	Export Configuration Objects
Receiver Agreer	💕 Open CTS Transport Organizer
Direct Connection Of Connec	异 <u>F</u> ind Transports
<ul> <li>Configuration S</li> <li>Integrated Confi</li> </ul>	🚰 Co <u>n</u> sistency check
Value Mapping	😼 <u>P</u> ersonal Settings
	User Roles

c. Select "Client" to use the local file system:

💽 Se	ect Import Source
8	Do you want to import a file from the file system of the server or the client?
Clier	nt Server Cancel

d. Navigate to the directory and select the exported file and click "Open":

🛐 Open		×
Look <u>i</u> n: 🗎	XR9_Exports	
XI3_0_De	mo1.tpz	
File <u>n</u> ame:	XI3_0_Demo1.tpz	
Files of type:	*.tpz	1
		Open Cancel

e. Click "Import" to proceed:

#### 

If you have another Configuration Scenario of the same name, then the contents will be added and/or written over.

💽 In	nport Configuration Objects 🛛 🗙	
•	Operation can overwrite objects in system. Import the import file <b>XI3_0_Demo1.tpz</b> ?	
Impo	Cancel	

f. The following will confirm the import:

통 Imp	oort Configuration Objects	×
1	Source XI3_0_Demo_Service.tpz imported successfully	
	Change list <b>XI 3.0 Import</b> created Activate change list manually	
Clos	Be Details	

### Important

In order for the transport to execute successfully, the Business Systems must exist and they <u>must</u> be assigned to the Integration Server group.

After import, we will see something like the following:

Objects Change Lists	<u>C</u> onfiguration Scenario E <u>d</u> it <u>V</u> ie	w  🖳 🗀 i 🖪 🕂 🖤 i 🚨 🖽 🛃 i 🕘						
	Disular: Configuration Cooperin	Chathan In Drawn						
▶ 🔐 Party	Uispray Coningui autori Scenario Status in Proce							
🕨 👦 Communication Component Wii	Configuration Scenario Demo1							
▶ 黃→ Process Component	Description							
🕨 🖉 Receiver Determination								
▶ ≦ Interface Determination								
🕨 🗐 Sender Agreement	ES Repository Model Objects	Configuration Overview						
🕨 🗊 Receiver Agreement		Search 6						
Birect Connection		Object						
🝷 🥅 Configuration Scenario	Rucinose System							
Demo1	Business Oystern	I Demo Service						
▶ 🌮 Integrated Configurations	1 Dusiness Component	Tablel ookun process						
🕨 🔊 Value Mapping Group	Communication Channel	I Demo Service I File Demo receiver						
	Communication Channel	Demo_Service   XR9_MSS_receiver						
	🗞 Communication Channel	Demo_Service   XR9_MSSQLServer_receiver						
	🗞 Communication Channel	R3B_400 RFC_R3B_Sender						
	🖉 Receiver Determination	R3B_400 ZGET_DEMO_TABLE						
N	🖉 Receiver Determination	TableLookup_process   GetDemoResp_abs						
6	🖉 Receiver Determination	TableLookup_process   TableLookup_Sync_a						
	🔒 Interface Determination	R3B_400 ZGET_DEMO_TABLE  Demo_Ser						
	A Interface Determination	R3B_400 ZGET_DEMO_TABLE  TableLook						
	A Interface Determination	TableLookup_process GetDemoResp_abs						
	🕯 🛓 Interface Determination	TableLookup_process   TableLookup_Sync_a						
	🚈 Sender Agreement	R3B_400 ZGET_DEMO_TABLE						
	Receiver Agreement	R3B_400  Demo_Service tableLookup_Syn						
	Receiver Agreement	TableLookup_process  Demo_Service Loo						
	🔯 Receiver Agreement	TableLookup_process  Demo_Service tabl						



### Note

If you notice, we no longer have a "Scenarios" tab as in PI 7.0. With PI 7.1 EhP1, we will get another optional view, which will be similar to that of PI 7.0.

- 5. Adjust communication channel configurations:
  - a. After the transport, communication channel configurations are re-set to the default (or initial) values. We will need to configure them before proceeding.
  - b. Communication Cannel: File\_Demo\_receiver

Communication Cl	nannel	E <u>d</u> it ⊻iew	7	<b>1</b>   <b>1</b>	🤿 🐙 I 🚨 (	3		
🍇 Edit Communicatio	n Chan	nel						
Communication Chann	nel	File_Demo	File_Demo_receiver					
Party								
Communication Comp	onent	Demo_Sen	/ice					
Description								
Parameters Ide	ntifiers	Module						
Adapter Type *	File			http://sa	o.com/xi/XI/Syste	em		
O Sender	🖲 Red	eiver:						
Transport Protocol *	File Sy	stem (NFS)						
Message Protocol *	File							
Adapter Engine *	Centra	l Adapter En	gine					
Target Process	ing .	Advanced						
File Access Parame	eters							
Target Directory * //data/demo								
🗹 Create Target (	Create Target Directory							
File Name Schem	e * 🛛 tal	oleResp.xml						

c. Communication Channel: XR9\_MSSQLServer\_receiver

<u>C</u> ommunication (	Channel	E <u>d</u> it ⊻iew	9 🛛 🖓	ן 🛃 🄶 💯 ו 🖉					
Relation Channel Status In Process									
Communication Channel XR9_MSSQLServer_receiver									
Party									
Communication Com	nponent	Demo_Serv	ice						
Description									
Parameters Io	dentifiers	Module							
Adapter Type *	JDBC			http://sap.com/xi/XI/S	System	SA	AP BASIS 7.00		
O Sender	🖲 Rec	eiver							
Transport Protocol *	JDBC 2	2.0							
Message Protocol *	XML SC	ହL Format							
Adapter Engine *	Centra	l Adapter Eng	line						
Connection	rocessing	g Advance	d						
Database Connec	tion								
JDBC Driver *	com.microsoft.jdbc.sqlserver.SQLServerDriver								
Connection *	jdbc:microsoft:sqlserver://nspad391.pal.sap.corp:1433;DatabaseName=xirig								
User Name	sapuser								
Password •	******				<b></b>				



d. Communication Channel: RFC\_R3B\_Sender

Communication Ch	annel	E <u>d</u> it ⊻i	ew	98		1 🗘 💱   🚇	II <b>S</b>	
🗞 Edit Communicatio	n Chanr	nel						Status
Communication Chanr	nel	RFC_R3	B_S	ender				
Party								
Communication Comp	onent	R3B_40	0					
Description								
Parameters Ide	ntifiers	Modul	le					
Adapter Type *	RFC				http:	://sap.com/xi/XI/Sys	tem	SA
Sender	O Rec	eiver						
Transport Protocol *	RFC							
Message Protocol *	RFC (R	FC XML)						
Adapter Engine *	Central	Adapter	Engi	ne				
Source Advance	ed							
RFC Server Parame	ter							
Application Server	(Gatewa	ay) *		cdphl233.	phl.	sap.corp		
Application Server	Service	(Gatewa	y) *	sapgw00				
Program ID *				XI_R3B2×	(LI			
SNC								
🗹 Unicode								
Initial Connections				1				
Maximum Connect	tions			1				
Advanced Mode	Э							
RFC Metadata Repo	sitory P	aramete	r					
Load Balancing	- 1							
Application Server	*	cdphl2	la.EE	nl.sap.com	)			
System Number *		00						
Authentication Mod	le *	Use Lo	gon	Data for S/	AP S	System		
Logon User*		liwi	_					
Logon Password *		******					=	
Logon Language *		EN						
Logon Client*		400						
<b>—</b>								

### Important

Do not forget to create another RFC destination on R3B for the Program ID! In our case, we created another RFC destination, XI\_R3BXLI.



- 6. Check the "adapter-specific identifier" of the Business System, R3B\_400:
  - a. Double-click to open the business system:

Objects Change Lists	🖸 🕐 💷 Communication Component 🛛 E <u>d</u> it View 🦻 🖳 🖬 🕇 🖬 🖓 💷 🛛
• ∰ Party	Display Communication Component Status In Proce
🝷 👼 Communication Component Without Party	Communication Component R3B_400
Business System	Party
→ (2 R3B_400) → XR9_200	Description
Business Component	Business System
Strategration Process	Receiver Sender Assigned Lisers IDoc Partner Other Attributes
I ▶ ∯→ Process Component	Receiver Bender Adolghed Coeld Ibber dialer Caler Alabaded
🕨 🖉 Receiver Determination	Inbound Interfaces
▶	Name Same Namespace
🕨 🞢 Sender Agreement	asyn http://sap.com/xi/BASIS S
🕨 🔂 Receiver Agreement	BookingOrderConfirmation_In http://sap.com/xi/XI/Demo/Agency S/
🕨 🐾 Direct Connection	BusinessComponentIn http://sap.com/xi/BASIS S
<ul> <li>Configuration Scenario</li> </ul>	BusinessPartnerByIDQueryResponseIhttp://sap.com/xi/NWDemo Sa
Gemo1	BusinessSystemIn http://sap.com/xi/BASIS S/
Source Configurations	ChangeListIn http://sap.com/xi/BASIS S/
Value Manning Group	CommunicationChannelIn http://sap.com/xi/BASIS Sa
	CommunicationPartyIn http://sap.com/xi/BASIS S
	Communication Channels
	Name /

 b. Toggle to "Change" mode and on the top menu bar, click on: Communication Component ⇒ Adapter-Specific Identifiers

	Communication Component	E <u>d</u> it ⊻iew	🦻 🖪 🖻 I 🖪	🔶 👷   🚇	. 💷 🖻	3	🛓 🖂	
	✔ 🎾 <u>D</u> isplay/Edit	Ctrl+E		Status In Pr	ocess	Display Language	English (OL) 🖥	
	📕 <u>S</u> ave	Ctrl+S						
	💼 <u>C</u> opy Object							
Ра	🛅 D <u>e</u> lete	Ctrl+D						
De	áa C <u>h</u> eck	F7						
BI	🕼 <u>A</u> ctivate							
	🚺 P <u>r</u> operties		IDoc Partner	Other Attribut	tes L	.ogon Data		
	H <u>i</u> story							
	Di <u>s</u> play Cache Status				0.4			
	🔄 <u>F</u> ind Transports		Icon combi/BACIC CAR BACIC 7.10		are Component versi Agig 7.10			
	 ➡ Where-Used List		Isan com/xi/Xi/Demo/Agency SAP BASIS 7.10					
		Object	ap.com/xi/BASIS SAP B		ASIS 7.10			
	Adapter-Specific Identifi	ers N	(sap.com/xi/NWDemo SA		SAP B/	SAP BASIS 7.10		
	Assign Configuration Co	enarios	( <mark>s</mark> ap.com/xi/BASIS SA			SAP BASIS 7.10		
	Move to Folder		(sap.com/xi/BASIS		SAP BASIS 7.10			
			/sap.com/xi/BASIS		SAP BASIS 7.10			
L		Utri+F4	(sap.com/xi/BASIS		SAP B/	ASIS 7.10		
	Communication Channels							
	Name 🔺							

The "Edit Adapter-Specific Identifiers" text box will appear:

The contents are empty. It will have to be sync'd up with the SLD. This is required when using RFC and IDoc adapters.



c. Click on: Compare with System Landscape Directory

lit Adapter-Specific Identifiers	×
IDoc Adapter Logical System	
IDoc Adapter and RFC Adapter R/3 System ID	
Marketplace Adapter DDID	
Apply Cancel Compare with System Landscape Directory	

The following information from the SLD will transferred:

d. Click on: Apply

Edit Adapter-S	dit Adapter-Specific Identifiers 🗙 🗙	
IDoc Adapter Logical System IDoc Adapter ar	R3B400	
RX3 System ID	R3B	
Client	400	
Marketplace Ad	lapter	
DDID		
Apply	Cancel	

e. Save the Business System object when done.

7. Activate the change list:

Objects Change Lists
<ul> <li>Change Lists of "liwi"</li> </ul>
XI 3.0 Import [2009-02-10-08:13]
IR3B_400   ZGET_DEM Open Ctrl+O
🖉   TableLookup_process <u>A</u> ctivate
タートー Apple Lookup_process Reject Changes  く abs
R3B_400   ZGET_DEMO_TABLE     Demo_Service
🔒   R3B_400   ZGET_DEMO_TABLE     TableLookup_process
🔒   TableLookup_process   GetDemoResp_abs     Demo_Service
🔓   TableLookup_process   TableLookup_Sync_abs     Demo_Service
💯   Demo_Service
🍇   Demo_Service   File_Demo_receiver
🗞   Demo_Service   XR9_MSSQLServer_receiver
🗭   R3B_400
🔀   R3B_400     Demo_Service   tableLookup_Sync_In
🍇   R3B_400   RFC_R3B_Sender
🗐   R3B_400   ZGET_DEMO_TABLE
🕫   TableLookup_process
📴   TableLookup_process     Demo_Service   LookupTableResp_Async_In
📴   TableLookup_process     Demo_Service   tableLookup_Sync_In
Demo1

- 8. Perform full-refresh of the PI caches on both ABAP and Java:
  - a. ABAP cache refresh:

On the PI server, enter tx:SXI\_CACHE

On the top menu bar, click on: Runtime Cache a Start Complete Cache Refresh

Runtime Cache Edit Goto System	<u>H</u> elp
Refresh Display	F5 👌   🗋 🛗 🛗   🏝 🖽 🖧 🎗
Start Delta Cache Refresh	F6
Start Complete Cache Refrest	Shift+F6
Display Refresh Error	Ctrl+F6
	Shift+F3
A Party	Status of Runtime Cache
🕫 Service	Cache content is up-to-date
↓ 译 Process Component	
Receiver Determination	
Interface Determination	
👂 🖞 Sender Agreement	
Receiver Agreement	
👂 🔌 Communication Channel	
🕒 Mapping	
🕒 Split Mapping	
G Software Component	
* Integration Process	
Alert Category	

b. Java cache refresh:

From the Integration Tools menu, click on the link: Administration



c. After the required logon, the following screen will be started:

Click on the link: Data Cache Overview

SAP NetWeaver* Process Integration 7.1	HIDOO
Tools	
Tools	
	Integration Server: XLI Host: nspah227 System Number: 27
Repository Directory	Software Build Information
System Information	Software Build Information
Software Build Information	Make Release NW07_06_REL
General Information	SPS Number 06
User Management Engine Assignment	JDK Version jdk15
Properties Administration	Latest Change 30172
All Properties	Synchronization Time 2008/08/30 16:09:11
Exchange Profile	Build Time 2008-08-30 18:55
Lock and Cache Administration	
Lock Overview	
Virtual Machine Cache Overview	
Data Cache Overview	
Java Web Start	
Java Web Start Administration	
Personalization	
Documentation Bases	
Manage Documentation Basis-URL	
CMS Settings	
CMS Transport Settings	

d. The following screen will appear:

Click on: Full Refresh for the "af" (adapter framework) cache

SAP NetWeaver" Process Integration 7.1	M		3
Tools			
Tools			
	Integration Server: XLI Hos	st: nspah227 System Nun	nber: 27
Repository Directory	Data Caches		[
System Information	Cache	Partial Refresh Full R	efresh
Software Build Information	af.xli.nspah227	Refresh Refres	sh.
General Information	Integration Server (ABAP)	Refresh Refres	sh
User Management Engine Assignment	Mapping Runtime (Java)	Refresh Refres	<u>sh</u>
Properties Administration	SYS1	Refresh Refres	<u>sh</u>
All Properties	SYS2	Refresh Refres	<u>sh</u>
Exchange Profile			
Lock and Cache Administration			
Lock Overview			
Virtual Machine Cache Overview			
Data Cache Overview			
Java Web Start			
Java Web Start Administration			
Personalization			

### 🚺 Note

To perform the refresh, logon using the PIDIRUSER is require. Userids with the same roles as that of PIDIRUSER can also be used.

### 4.4 Move Value Mappings between PI 7.0 and PI 7.1

The transporting of Value Mappings is through the use of Value Mapping groups.

### 4.4.1 Export Value Mapping Group from PI 7.0

1 In the PI 7.0's Integration Directory, use the Export Tool wizard:

Configuration:	Integration Builder (nspad391_XR9_20)
<u>O</u> bject <u>N</u> avigation	Tools Environment Help
	😨 <u>S</u> end System Message
Scenarios Obj	🔄 <u>D</u> isplay System Messages
o n R R R V	🧏 Configuration Wizard
	\ominus Transfer Integration Scenario from Integration Repository
User liwi	🕮 T <u>e</u> st Configuration
Change Lists	🖓 Value Mapping
ØDpen □CI	Create Communication Channels Automatically
Sort By Nam	Define Web Service
	😢 Import configuration objects
Display Displ	🛃 Export Configuration Objects 💦
	🖶 Fi <u>n</u> d Transports
<ul> <li>Change Lists of "live</li> <li>Change Lists of "live</li> </ul>	💕 <u>O</u> pen Transport Organizer
🐴 Standard Ch	📴 <u>P</u> ersonal Settings
-	User Roles



2 Select the transport mode:

Export Configuration Objects		
1. Select Mode	Select Mode	
2. Select Objects	Mode	-
3. Select Transport Request	Transport Using File System	8
Back Continue	Finish	Cancel

3 Select "Individual Objects":

Export Configuration	n Objects 🛛 🗙
1. Select Mode	Select Objects
2. Select Objects	Object Set All Objects of a Party
3. Select Transport Request	All Objects of a Service Party * All Objects of a Scenario Individual Objects
Back     Continue	Finish

4 Click: Add Single Objects

Export Configuration	n Objects	×
1. Select Mode	Select Objects	
2. Select Objects	Object Set Individual Objects	
3. Select Transport Request	Select Single Objects	
	Add Single Object	
Back Continue	Finish	el :

5 Select the type: Value Mapping Group

🕟 Add S	Single Object	×
Type * S P: C S C S In R V	elect a Type elect a Type arty ervice ommunication Channel onfiguration Scenario ender Agreement terface Determination eceiver Agreement eceiver Determination alue Mapping Group Count	0
ОКС	ancel	

6 Select the Value Mapping Group to transport:

<b>N</b>	dd Single Object	×
Туре	* Value Mapping Group 📲	
	Value Mapping Group	
1	c41856d0-6b40-11db-b3c5-001279416978	
	test	
	valMapTest	
	Count	3
ок	Cancel	

7 Click "Finish" to start the export:

📕 Export Configuratio	n Objects	×
1. Select Mode	Select Objects	
2. Select Objects	Object Set Individual Objects	Ē
3. Select Transport Request	Select Single Objects  Description  Select Single Objects  Description  Select Single Objects  Description  Select Single Objects  Select Single Object  Select	
Back Continue	Finish	Cancel



8 When done, please note the file name created. Copy the file to the local computer.



### 4.4.2 Import Value Mapping Group into PI 7.1

- Configuration: Integration Builder (nspah227\_XLI\_27) Object Navigation Tools Environment Help Þ System Messages 🧏 Configuration Wizard Objects Chang Apply Model from ES Repository... 🛐 🕂 | 🍞 🗗 | 🕂 Find 🖳 Test Configuration 🕨 🏭 Party 🔊 Value Mapping Representation Technology (1998) Create Communication Channels Automatically ▶ ∯→ Process Comp Display WSDL... 🕨 🖉 Receiver Deterr A Interface Detern Manual Import Configuration Objects... 🕨 🞢 Sender Agreem Export Configuration Objects... Receiver Agreen 💕 Open CTS Transport Organizer 🕨 🐾 Direct Connecti 🖶 Find Transports... Configuration S Ga Consistency check 🕨 🌮 Integrated Confi 🕨 🚮 Value Mapping ( 📴 <u>P</u>ersonal Settings <u>U</u>ser Roles 🐏 Default Setting for Authorizations... 静 Display Edited Authorizations...
- 1 In the PI 7.1's Integration Directory, use the Import Tool wizard:

2 Select the import source. In this case, we have the file on our local computer, which is the "Client".

💽 Se	ect Import Source
0	Do you want to import a file from the file system of the server or the client?
	L
Clier	nt Server Cancel

3 Select the local file and click on "Open":

💽 Open		×
Look <u>i</u> n: 힡	Desktop	i 🖬 💼 🔡 🗄
	🚞 ProxyDemo	🚞 XML-Chip
	🚞 Sample Adapter	🚞 ZFile
	🚞 SampleAdapter	🚞 Zipped Files
	🚞 SAPHelp	XI3_0_directory-selection_1.tpz
	🚞 stefan	
	🚞 WSDL	
	🚞 WSDL & XSD	
	🚞 XI Roadmap	
		• •
File <u>n</u> ame:	XI3_0_directory-selection_1.tpz	
Files of <u>t</u> ype:	*.tpz	1
		Open

4 Click: Import

📕 In	Import Configuration Objects						
•	Operation can overwrite objects in system. Import the import file <b>XI3_0_directory-selection_1.tpz</b> ?						
	·						
Impo	nt Cancel						

5 The following message will be displayed when complete:

통 Impo	ort Configuration Objects	×
6	Source XI3_0_directory-selection_1.tpz imported successfully	
	Change list <b>XI 3.0 Import</b> created Activate change list manually	
Close	Details	
Sour	ce XI3_0_directory-selection_1.tpz imported successfully	
Char Activ:	nge list <b>XI 3.0 Import</b> created ate change list manually	
1 obj	ject(s) imported	



6 Activate the object:





### 5. Testing

Below is a summary of everything we did:

- 1. Export/imported the SWCVs, Technical and Business Systems from PI 7.0's SLD to PI 7.1's SLD.
- 2. Adjusted the business systems as necessary, e.g. assign them to the Integration Server group.
- 3. Imported the PI 7.0 adapter metadata into the PI 7.1 system's ESR.
- 4. Export/Imported the ESR and ID objects.
- 5. Adjust the business system's Adapter Specific Attributes for RFC and IDoc adapters.
- 6. Adjust all the communication channels.
- 7. Fully refreshed the caches in ABAP and Java.

For our scenario, a message is sent from R3B client 400's RFC.

- If the message contains an "A", then the message is sent to a synchronous JDBC interface with a response coming back to the RFC.
- If the message contains a "B", then the message is sent to a synchronous ccBPM process. Within the ccBPM process, an asynchronous-synchronous bridge is used with a JDBC synchronous interface. The response from the JDBC will be written to a file and also returned back to the requesting RFC call.
- For testing, we will execute the scenario going through the PI 7.0 system. Then, we will repeat the testing going through the PI 7.1 system.

#### Testing going through PI 7.0 (XR9)

- 1. An RFC Destination going to XR9 is used: XI\_R3B2XR9
- 2. The RFC Destination is used in the RFC call.

#### No ccBPM:

		⊡ <u>F</u> unction modules	<u>E</u> dit <u>G</u> oto	Utilities S <u>v</u> stem
	(	Ø	1	4 📙   😋 🙆 🔇
		Test Functio	n Modul	e: Result Scr
		2		
Eunction modules Edit Goto Utilities St	vstem To G C Fi	est for function unction module pper/lower case	group	ZTEST ZGET_DEMO_TABLE
Test Function Module: Initial	Scre R	untime: 1.	788.876 Mi	croseconds
🕒 🕒 Debugging 💽 Test data directory	R	FC target sys:		XI_R3B2XR9
Test for function group ZTEST Function module ZGET_DEMO_ Upper/lower case	TABLE	Import parameter	`S	Value
RFC target sys: XI_R3B2XR9	, L	TABLE_KEY		A
		Export parameter	`S	Value
Import parameters         Value           TABLE_KEY         A		DEMO_KEY DEMO_VALUE		AAA 111_JDBC

<u>With ccBPM</u> :				
		臣 Eunction modu	iles <u>E</u> dit <u>G</u> ot	to Utilities S <u>v</u> stem
		<b>Ø</b>	Ē	a 🛛 🛛 🛛 🚱 🚱 🔇
		Test Func	tion Mod	ule: Result Scr
它 Function modules Edit Goto Utilit	ies S <u>y</u> stem <u>I</u>	Test for funct Function modul	ion group e	ZTEST ZGET_DEMO_TABLE
	3 0 0 0	Upper/lower case		
Test Function Module: Ir	Runtime: 6.020.525 Microseconds			
i ootii anotoii modaloi n	iluar scre	Runchile.	0.020.0201	nicroseconds
Debugging 🕄 Test data dire	ectory	RFC target sys	:	XI_R3B2XR9
Test for function group ZTES Function module ZGET	rt _DEMO_TABLE	RFC target sys	eters	XI_R3B2XR9
Image: Contract of the case       Test data direction         Test for function group       ZTES         Function module       ZGET         Upper/lower case       Image: Contract of the case	rctory T _DEMO_TABLE	RFC target sys	eters	XI_R3B2XR9 Value B
Image: Construction of the second difference of the second differ	T _DEMO_TABLE 3B2XR9	RFC target sys Import param TABLE_KEY	eters	XI_R3B2XR9 Value B
Import parameters	T _DEMO_TABLE 3B2XR9	RFC target sys Import param TABLE_KEY Export param	eters	XI_R3B2XR9 Value B Value

#### 3. SXI\_MONITOR log:

¢	lessage	eList <u>E</u> dit	<u>G</u> oto S <u>y</u> sten	n <u>H</u> elp				-	SAP	
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Μ	Monitor for Processed XML Messages									
	Displa	y 🕼 Erro	r Information	Referent	icing Mess	ages   🛐 💤   🕒	Restart	💋 陆 Expand	😽 Expand All Mess	ages 💈
<u> -</u>					-					
		s 7 Ø			20 C 🖽					
	XML	. Messa	ges							
	Status	Ack. Status	Executed From	StartTime	EndTime	Sender Service	Sender Na	mespace	Sender Interface	R
	12		02/10/2009	11:01:41	<u>11:01:46</u>	R3B_400	urn:sap-co	m:document:sap:rf	ZGET_DEMO_TABL	.E T
	12		02/10/2009	11:01:43	<u>11:01:43</u>	Demo_Service				
			02/10/2009	11:01:43	<u>11:01:43</u>	TableLookup_process	http://demo	.com/demo1	TableLookup_Sync	_abs D
	12		02/10/2009	11:01:44	<u>11:01:45</u>	TableLookup_process	http://demo	.com/demo1	GetDemoResp_abs	s D
	12		02/10/2009	11:01:46	<u>11:01:46</u>	TableLookup_process	http://demo	.com/demo1	GetDemoSync_abs	R
								👂 XR9 (1) 100 🕨	nspad391 INS	

SAP

#### Testing going through PI 7.1 (XLI)

- 1. An RFC Destination going to XLI is used: XI\_R3B2XLI
- 2. The RFC Destination is used in the RFC call.

No ccBPM:

<u>Eunction modules</u> Edit Goto Utiliti	es S <u>y</u> stem
S 1	]   😋 🔂 🄇
Test Function Module: R	esult Scr
3	
Test for function group ZTES	
Upper/lower case	_DEMO_TABLE
Runtime: 1.440.152 Microsed	conds
RFC target sys: XI_R	3B2XLI
Import parameters	Value
TABLE_KEY	A
Export parameters	Value
DEMO_KEY DEMO_VALUE	AAA 111_JDBC
	Eunction modules       Edit       Goto       Utiliti         Image: Constraint of the second

With ccBPM:

		G Function modules Edit Goto Utiliti	es System
		Ø I 4 E	] 😋 名 😡
		Test Function Module: R	esult Sci
Er <u>F</u> unction modules <u>E</u> dit <u>G</u> oto Utiliti <u>E</u>	ies S <u>v</u> stem	Test for function group ZTES Function module ZGET Upper/lower case	T _DEMO_TABLE
Test Function Module: In	nitial Scre	Runtime: 4.444.061 Microsed	conds
🕒 🕒 Debugging 🕄 Test data dire	ectory	RFC target sys: XI_R	3B2XLI
Test for function group ZTES Function module ZGET Upper/lower case	T _DEMO_TABLE	Import parameters	Value
RFC target sys: XI_R	3B2XLI	TABLE_KEY	В
Import parameters	Value	Export parameters	Value
TABLE_KEY	B	DEMO_KEY DEMO_VALUE	BBB 222_JDBC



#### 3. SXI\_MONITOR log:

년 Message List <u>E</u> dit <u>G</u> oto System	n <u>H</u> elp			SAP	
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Monitor for Processed	XML Me	essage	s		
👬 Display 🖉 Error Information	Referenci	ing Messa	ges   🛐 🖧   🕀 R	testart 🂅 🔚 Expand 😽 Expan	d All N
図 各マ間談下 XML Messages		<u>] 1</u> 41 1	]		
Status Ack. Status Executed From	StartTime 1	EndTime	Sender Component	Sender Namespace	S
10.02.2009	18:11:10	<u>18:11:13</u>	R3B_400	urn:sap-com:document:sap:rfc:function	s Z
	18:11:11	<u>18:11:11</u>	TableLookup_process	http://demo.com/demo1	Т
		<u>18:11:11</u>	Demo_Service		
	18:11:12	<u>18:11:13</u>	TableLookup_process	http://demo.com/demo1	G
	18:11:13	<u>18:11:13</u>	TableLookup_process	http://demo.com/demo1	G
				XI L (1) 001 🔀 nenab227 _ INS	Þ

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