

# Install, Configure and Run SAP NetWeaver PI



## Applies to:

SAP NetWeaver Process Integration 7.1

For more information, visit the [Service Bus-based Integration homepage](#).

## Summary

This guide describes how to install a SAP NetWeaver PI system quickly and set up a simple Process Integration scenario. Use this guide to start working with SAP NetWeaver PI, get in touch with the integration tools, and see your first PI scenario running.

The [demo recording](#) accompanying this document shows all installation and configuration steps described here in detail applied on a typical host.

You find the newest version of the demo recording as well as the latest version of this document in SAP Community Network (SDN) at <https://www.sdn.sap.com/irj/sdn/nw-soa> → *Getting Started with SOA Middleware* → *Getting Started Documents*.

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## Introduction

This document intends to show the overall procedure to install SAP NetWeaver PI and set up and run a simple process integration scenario.

**Note:** This document does not replace the SAP NetWeaver PI installation and configuration guides available on SAP Service Marketplace. The additional guides referred to at the end of this document cover all supported combinations of operating systems and databases, as well as typical installation scenarios.

The installation shown in this example is sized for demo purposes and based on the following system prerequisites: Operating system Windows and database SAP MaxDB.

**Note:** SAP does not guarantee that the installation will run in the exact same way as shown in the demo recording if there are differences from the prerequisites mentioned in this document.

## Overview of Tasks and Tools

The following table lists all tasks to be performed when installing a SAP NetWeaver PI and set up the demo scenario. The relevant tools are listed for each task as well as a rough time estimate.

Task	Tools/Resources	Duration (approx.)
Installing SAP NetWeaver PI	SAP Service Marketplace SAP Download Manager SAPinst	2-3 h
Configuring SAP NetWeaver PI	AS ABAP (different transactions) SAP NetWeaver Administrator	30 min
Setting up Demo Scenario	System Landscape Directory Integration Directory	30 min

## Installing SAP NetWeaver PI

### Prerequisites

The hardware requirements depend on the chosen operating system. Typical values for a standard installation are about 60 GB disc space and 5 GB RAM. For detailed information, check the relevant sections at [Installation Guides - SAP NetWeaver PI 7.1](#) or execute the QuickSizer on the SAP Service Marketplace.

A SAP Solution Manager Key is needed during the installation process. To find out the SAP Solution Manager Key, proceed as described in the [corresponding installation guide](#) in section *Generating the SAP Solution Manager Key*.

### Downloading the Installation Software

1. Go to SAP Service Marketplace at <http://service.sap.com/swdc> → *Download* → *Installations and Upgrades* → *Entry by Application Group* → *SAP NetWeaver* → *SAP NETWEAVER* → *SAP NETWEAVER PI 7.1* → *Installation and Upgrade*. Select your operating system and database.
2. Select the required CDs and choose *Add to Download Basket*.
3. At the *Download Basket*, choose *Get Download Manager*.
4. At the section *Installing the Download Manager*, choose your operating system and download the .exe file to your hard disc.
5. Run the setup and install the download manager with the default settings.
6. Using SAP Download Manager (*Start* → *Programs* → *SAP Download Manager*), configure your SAP Service Marketplace access and select the directory where the CDs have to be downloaded to on your hard disc.
7. Let the Download Manager receive your basket content from the SAP Service Marketplace and click the *Download all Objects* button at the top left of the application. Downloading all CDs may take some time depending on your internet connection.

### Running SAPinst

1. Go to the folder of the installation master CD and select the subfolder *DATA\_UNITS*; in the next subfolder start the file *sapinst.exe*.
2. Open *SAP NetWeaver Process Integration 7.1* → *Installation Options* → *SAP Systems with SAP MaxDB* → *Standard System*, and choose *Next* to start the installation.

In this guide we assume that a standard installation is performed. For the other installation options, check the installation guide.

3. Following the instructions of the wizard, provide the necessary setup options.
  - For the *Default Settings*, select *Typical*
  - Select the path to the downloaded installation CDs
  - Specify a master password for all administrative users of the system
  - For the database ID, enter the SAP system ID
4. Enter the SAP Solution Manager Key (see Prerequisites).
5. Run the installation, this task takes approximately 1.5 – 2h.

## Configuring SAP NetWeaver PI

Install SAPGui 7.10. To do this, follow the instructions of the wizard in the directory with the SAPGui CDs, start *SapGuiSetup.exe*.

In the SAP system (AS ABAP) perform the following configuration steps.

### Tasks to Perform in the SAP system (AS ABAP)

The following table lists the tasks and the relevant transactions.

Configuration Task	Transaction	Remarks
Installing License Key	SLICENSE (SAP Service Marketplace)	<ol style="list-style-type: none"> <li>1. On tab <i>Remote Hardware Key</i>, select the row <i>Host Name</i> and choose <i>Determine</i>. The hardware key is displayed; copy it to the clipboard.</li> <li>2. Choose <i>Request License Key</i>. The corresponding page on SAP Service Marketplace is opened.</li> <li>3. Fill out the license key request form (you need the hardware key to finish this task).  The license key is sent to you by e-mail.</li> <li>4. In transaction <i>SLICENSE</i>, choose <i>Edit</i> → <i>Install License</i> and import the text file (attached to the e-mail).</li> </ol>
Setting up Change and Transport System (CTS)	SE06	To initially set up the CTS, choose <i>Perform Post Installation Actions</i> .
	STMS	Maintain a Company Address and run the initial STMS setup; The message "You are logged onto the domain controller" should be displayed afterwards.
Maintaining Profile Parameters of AS ABAP (contains system parameters)	RZ10	<ol style="list-style-type: none"> <li>1. Choose <i>Utilities</i> → <i>Import all Profiles</i> → <i>Of Active Servers</i>, then choose <i>Execute</i>.</li> <li>2. Click the input help icon in the <i>Profile</i> field; double-click <i>Instance Profile</i> and check the system parameters.</li> </ol>
Maintaining logon groups	SMLG	Select <i>Change</i> , enter <i>PUBLIC</i> as logon group and save your settings.
Maintaining Operation Modes	RZ04	<ol style="list-style-type: none"> <li>1. Choose <i>New Operation Mode</i>, enter the required data and save your entries.</li> <li>2. Double-click the operation mode, choose <i>New</i>, and enter the host name of the instance.</li> <li>3. Select the instance profile, choose <i>Save</i>, and then <i>Continue</i>.</li> <li>4. To assign work processes for your operation mode, click the input help in field for <i>Operation Mode</i>; select the standard operation mode previously defined.</li> </ol>

Assigning Standard Background Jobs	SM36	Click <i>Standard Jobs</i> , and then choose <i>Default Scheduling</i> . The list of background jobs is extended by the standard SAP background jobs
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### Additional Steps in Configuration Wizard

Perform the following steps using the Configuration Wizard.

1. Open SAP NetWeaver Administrator (in a browser open the URL *http://<host name>:<port>/nwa*).
2. Logon with the *j2ee\_admin* user and the master password and choose *Configuration Management* → *Scenarios* → *Configuration Wizard* → *Initial Configuration* (dropdown menu) → *NetWeaver Initial Setup*; and choose *Start*.
3. Enter the master password for the displayed users, choose *Next* and follow the instructions of the wizard. When asked for the SLD server, choose *Set Up a New Local SLD Server*.

The configuration wizard performs the necessary steps. This task takes about 20 minutes.

4. Close the browser and restart the system. To do so, go to the SAP Management Console (desktop shortcut) and select the node *SAP Systems* → *<system ID of your system>*.
5. Select *Restart* from the context menu and as *Shutdown Type* select *Soft Shutdown*.
6. To verify the restart enter Windows user password at the *Web Service Authentication* popup.

The status of the system changes while the restart is in progress, afterwards all systems should be green again.

More information: [Wizard-Based Configuration](#)

### Installing Java WebStart

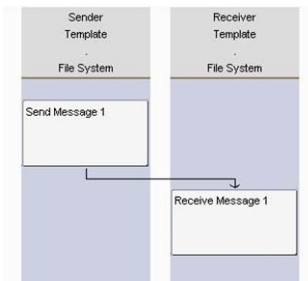
1. From the Sun Homepage (<http://www.sun.com>), download *Java SE Runtime Environment (JRE) 6 Update 10*.  
In case of problems, see [SAP Note 801868 - Java\(TM\) Web Start in XI 3.0: FAQ/Troubleshooting](#).
2. Run the setup file and restart the system.

## Setting up the Demo Scenario

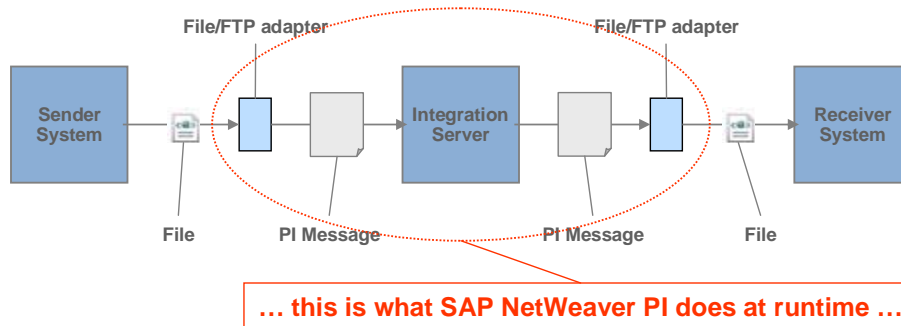
The scenario contains one asynchronous communication step between a sender and a receiver component. An XML file with an example data set is read from an input directory, processed, and then written to an output directory. In this example, PI is used to “copy” the XML file using the file/FTP adapter.

As part of SAP's pre-defined content, the corresponding process integration scenario (shortly referred to as *scenario*) is made available out-of-the-box – allowing communication to be set up quickly.

**Note:** The scenario *XiPatternOneStepScenario* is located in the ES Repository in software component version *SAP BASIS 7.10* and namespace *http://sap.com/xi/XI/System/Patterns*.



The scenario will be configured for a system landscape consisting of two file directories. We specify the following message processing: Using the file/FTP adapter, the source file is transformed to the internal PI message format. The message is then processed on the Integration Server. Afterwards, the message is transformed – again using the file/FTP adapter – to the output file format and written to a target directory on the server (see the figure below).



## Setting up the System Landscape

To access the relevant tools (System Landscape Directory and Integration Directory), use the user PISUPER (created during installation).

1. In the file system of the host on which the Integration Server is installed, create two different directories (naming convention for this example: *XiPattern1* and *XiPattern2*).
2. Copy the file *ZXiPatternSenderFile1.xml* to the directory *XiPattern1*.

This file is provided by SAP. Download it from the SAP Community Network at <https://www.sdn.sap.com/irj/sdn/soa-servicebus> → *Getting Started* → *Getting Started Documents* → *SAP NetWeaver Process Integration – Test Files for Simple Use Cases*.

3. From the SAP NetWeaver PI start page (transaction *SXMB\_IFR* in the SAP system or *http://<host name>:<port>/dir*), log on to SAP System Landscape Directory and create the following entities:

- One new technical system (type: *Standalone*)

As *Technical System Identification* enter: *<SID>\_FileSystem* (where *<SID>* is the system ID of the SAP system on which the Integration Server is installed), as *System Host Name*, enter the host name of the system, for example *pdf2638*.

- Two new business systems (type: *Standalone*) with the following attributes:

- Name of first business system: *<SID>\_FileSystem\_XiPattern1*
- Name of second business system: *<SID>\_FileSystem\_XiPattern2*

For each of these business systems, specify the assigned Integration Server (field *Related Integration Server*).

## Creating Communication Components (Business System)

Log on to the Integration Directory and create and activate two new communication components based on the business systems you have defined in the SLD.

Make sure that the *Create Communication Channels Automatically* checkbox is deselected.

## Configuring the Process Integration Scenario

1. In the Integration Directory menu, call the model configurator (*Tools* → *Apply Model from the ES Repository*).

Select the process integration scenario *XiPatternOneStepScenario* (software component version *SAP BASIS 7.10*, namespace *http://sap.com/xi/XI/System/Patterns*).

2. In the graphical editor that opens up, make sure that component view *File2File\_NoMapping* is selected and perform the following settings.

Click on the corresponding graphical element to open the dialog for the relevant settings.

- For the sender application component, assign the communication component *<SID>\_FileSystem\_XiPattern1*.
- For the receiver application component, assign the communication component *<SID>\_FileSystem\_XiPattern2*.
- For the connection between sender and receiver application component do the following:  
For the sender, create a new communication channel based on a communication channel template. To do this, choose *Create Communication Channel with Template* (button), then select the channel template suggested as default (*XiPatternChannel\_FileSender*).

For the receiver, create a communication channel based on the communication channel template *XiPatternChannel\_FileReceiver* (also suggested as default).

3. Generate the configuration objects based on the settings and save the configuration scenario.



Next, edit the generated communication channels manually.

- For the sender channel *XiPatternChannel\_FileSender* (communication component *<SID>\_FileSystem\_XiPattern1*), under *File Access Parameter* in the *Source Directory* field, enter the path for the file directory *XiPattern1* (example: *C:/<selected path>/XiPattern1*).
- For the receiver channel *XiPatternChannel\_FileReceiver* (communication component *<SID>\_FileSystem\_XiPattern2*), correspondingly enter the path for the file directory *XiPattern2*.

Finally, activate all new configuration objects.

## Running the Scenario

You perform the following steps to check that the demo scenario is executed properly.

1. On the host of the Integration Server, open the file directory *XiPattern1*.
2. Rename the file *ZXiPatternSenderFile1.xml* as follows: *XiPatternSenderFile1.xml*.

The File/FTP adapter is designed to check for a file with the exact name in the source directory *XiPattern1* every 60 seconds. The file is then processed by SAP NetWeaver PI and the output is written to the target directory *XiPattern2*. On the file system you will see that the file gets moved from the source directory to the target directory about 60 seconds after it is renamed.

3. Open the directory *XiPattern2* and check that a new file has been created.

You can also monitor the processed messages. To do this, start the Runtime Workbench from the SAP NetWeaver PI start page and select *Message Monitoring*.

## Related Content

For more information related to the different task areas covered in this document, check the following links.

### Installing and Configuring SAP NetWeaver PI

[Master Guide SAP NetWeaver PI 7.1](#) (SAP Service Marketplace (SMP) login required)

[SAP note 805390: SAP Solution Manager Key required for SAP Software](#) (SMP login required)

[SAP NetWeaver PI Installation Guides](#) (SMP login required)

[SAP NetWeaver PI configuration guide](#)

### Setting Up a Demo Scenario

[Integration Directory](#)

[Tasks in the System Landscape Directory](#)

[Define Business System as Communication Component](#)

[Configuring Process Integration Scenarios](#)

[Message Monitoring](#)

### Demo Examples and Simple Use Cases

[SAP NetWeaver PI Simple Use Cases](#) – Explains the demo scenario used in this document and provides the configuration settings for more sophisticated variants of the scenario (for example, with mapping and routing).

[SAP NetWeaver PI Demo Examples](#) – Explains demo scenarios based on SAP's flight data model and also pre-delivered and available out of the box with SAP NetWeaver PI.

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