



Installation Guide

SAP Customer Relationship Management 7.0 Including Enhancement Package 2 Java and ABAP

For:

- ABAP
- Java

Target Audience

- System Administrators
- Technology Consultants

PUBLIC

Document version: 1.0 – 2011-11-08

Document History



CAUTION

Before you start the implementation, make sure you have the latest version of this document.
You can find the latest version at the following location: <http://service.sap.com/instguides>.

The following table provides an overview of the most important document changes.

Version	Date	Description
1.0	2011-11-08	First version

Table of Contents

Chapter 1	Getting Started	5
1.1	Essential Information: Process and Documentation Overview	5
1.2	Installation Information	6
1.3	Prerequisites for the Business Packages for SAP CRM	7
1.4	Installing the Business Packages for SAP Customer Relationship Management Using Java Support Package Manager (Optional)	8
1.5	Important SAP Notes	9
1.6	Naming Conventions	9
Chapter 2	Process	11
2.1	Note About the Process	11
Chapter 3	Follow-Up Activities	13
3.1	Web Application Settings	13
3.1.1	Extended Configuration Management (XCM)	13
3.1.2	Checking the Availability of Back-End Systems for SAP CRM JAVA Components	21
3.1.3	Creating a Backend User	22
3.1.4	Checking the Connection to the ABAP System	23
3.1.5	Configuring and Checking the TREX Service	25
3.1.6	Checking the Selling via eBay Processes	26
3.1.7	Post-Installation Steps for Workforce Deployment Application and Calculation Services	26
3.1.8	Implementing WFMCORE 200 Using Transaction SAINT	27
3.1.9	Configuring the XCM Administration Tool for WDF Application and Calculation Services	27
3.1.10	Checking Workforce Deployment Calculation Services	29
3.1.11	Checking the Installation of WFD Application Services and WFD Calculation Services	30
3.1.12	Activating the WebClient UI	31
3.2	Business Package Settings	31

3.2.1	Post-Installation Steps for the Business Package for SAP CRM	<u>32</u>
3.2.2	Creating Roles for the SAP CRM Business Package	<u>32</u>
3.2.3	Installation of the Info Center for the SAP CRM Business Package	<u>32</u>
3.2.4	Importing the SAP CRM Info Center Configurations and Directory Structure	<u>33</u>
3.2.5	Activating Manual Ordering of Folders for the sapcrm Repository	<u>35</u>
3.2.6	Creating Indexes and Taxonomies for the sapcrmnews Repository	<u>35</u>
3.2.7	Creating the Index for the sapcrm Repository	<u>37</u>
3.2.8	Configuring the Personal Search	<u>38</u>
3.2.9	Increasing the Number of JCo Connections	<u>38</u>
3.2.10	Troubleshooting for the Business Package for SAP CRM	<u>39</u>
3.2.11	Activating Business Intelligence Templates Manually	<u>39</u>
3.2.12	Troubleshooting when Importing PAR Files	<u>40</u>
3.2.13	Troubleshooting in SSO with SAP Logon Tickets	<u>40</u>
3.2.14	Dragging the Search onto the Portal Desktop	<u>43</u>

Only valid for: ABAP,Java |

1 Getting Started

Only valid for: ABAP,Java |

This section of the guide contains important information that you need to read before starting your installation process.

End of: ABAP,Java |

1.1 Essential Information: Process and Documentation Overview

Only valid for: ABAP,Java |

You are currently reading the *Installation Guide for SAP Customer Relationship Management 7.0 Enhancement Package 2 ABAP and Java*. This guide only contains information specific to SAP CRM, but you need additional information provided by the *Master Guide – SAP Customer Relationship Management 7.0 Including SAP Enhancement Package 2* to enable you to perform your installation correctly.

End of: ABAP,Java |

Only valid for: ABAP,Java |



NOTE

Specifically, you need to use the SAP NetWeaver server installation guides (ABAP or Java versions) in parallel to the *Installation Guide for SAP Customer Relationship Management 7.0 Enhancement Package 2 ABAP and Java*:

- *Installation Guide - SAP Systems Based on the Application Server ABAP of SAP NetWeaver 7.0 Including EHP 3 on <OS>: <DB>*
- *Installation Guide - SAP Systems Based on the Application Server Java of SAP NetWeaver 7.3 on <OS>: <DB>*

You have to use the SAP NetWeaver server installation guides in parallel with this application-specific guide, because the two types of guides complement each other — the SAP NetWeaver server guide contains the overall process, tool, operating system- and database-specific information while this guide contains the application-specific information.

You find the SAP NetWeaver server installation guides on the SAP Service Marketplace at the same location as the *Master Guide – SAP Customer Relationship Management 7.0 Including SAP Enhancement Package 2*, see path below.

End of: ABAP,Java |

The *Master Guide – SAP Customer Relationship Management 7.0 Including SAP Enhancement Package 2* contains a section *Main Implementation Processes and Related Documentation* with the following subsections containing vital information:

- *Planning for Installation, Update, and Upgrade Processes*

Contains a list of topics (including documentation references) you need to consider when you are planning your implementation project.

- *Implementation of the Installation Process*

Provides a step-by-step overview of the installation process (new installation of an SAP system including an enhancement package), with reference to the required tools and associated documentation.

- *Implementation of the Update Process*

Provides a step-by-step overview of the update process (installation of an enhancement package on an existing SAP system), with reference to the required tools and associated documentation.

- *Implementation of the Upgrade Process*

Provides a step-by-step overview of the upgrade process (upgrade to an SAP system including an enhancement package), with reference to the required tools and associated documentation.

**NOTE**

Make sure that you collect all the information provided in this overview before starting your installation, upgrade or update project.

Make sure that you have downloaded the latest version of the *Master Guide – SAP Customer Relationship Management 7.0 Including SAP Enhancement Package 2* from the SAP Service Marketplace: ► <http://service.sap.com/instguides> → *Installation & Upgrade Guides* → *SAP Business Suite Applications* → *SAP CRM* → *SAP enhancement package 2 for SAP CRM 7.0* ◀.

Only valid for: ABAP;Java |

1.2 Installation Information

For the installation you need to consider the following information specific to SAP Customer Relationship Management:

- **Media list**

The media list contains the list of relevant installation media which you need to have available when you start the installation.

You can find the media list at: ► <http://service.sap.com/instguides> → *SAP Business Suite Applications* → *SAP CRM* → *SAP enhancement package 2 for SAP CRM 7.0* → *Install* → *Media List SAP enhancement package 2 for SAP CRM 7.0* ◀

- **SAP CRM Server ABAP installation**

You select the option SAP Application Server ABAP for SAP CRM 7.02 when you are asked to choose the installation option. All relevant ABAP components are then installed by the installation tool.

1.3 Prerequisites for the Business Packages for SAP CRM

**NOTE**

You need to use the *Installation Guide - SAP Systems Based on the Application Server ABAP of SAP NetWeaver 7.0 Including EHP 3 on <OS>: <DB>* in parallel with this guide.

You can find the SAP NetWeaver server installation guide at: ► <http://service.sap.com/instguides> → *Installation & Upgrade Guides* → *SAP Business Suite Applications* → *SAP CRM* → *SAP enhancement package 2 for SAP CRM 7.0* ◀.

■ **SAP CRM Server Java installation****NOTE**

You need to use the *Installation Guide - SAP Systems Based on the Application Server ABAP of SAP NetWeaver 7.0 Including EHP 3 on <OS>: <DB>* in parallel with this guide.

You can find the SAP NetWeaver server installation guide at: ► <http://service.sap.com/instguides> → *Installation & Upgrade Guides* → *SAP Business Suite Applications* → *SAP CRM* → *SAP enhancement package 2 for SAP CRM 7.0* ◀.

- SAP Note [1642797](#) describes where to find the correct kernel for a new Java installation on SAP NetWeaver 7.3.
- If you deploy SAP CRM on the SAP NW Portal, you need to install the CRM Business Packages together with the SAP NetWeaver Portal components. You select the relevant components in the installation tool.
- The following table shows the selection you need to do in the installation tool, depending on your requirements:

CRM Software Units	Description	Dependent On
BP-CRM	CRM Business Packages	AS Java SAP NW EP BP-CRM-FND SAP NW EP Core
BP-CRM-FND	CRM Business Packages Foundation	SAP NW EP Core AS JAVA

■ **Installation of SAP CRM Business Packages**

For more information on the installation of SAP CRM Business Packages, see:

- SAP Help Portal: ► <http://help.sap.com/crm> → *<Choose a Release>* → *Application Help English* → *SAP Customer Relationship Management* → *Business Package for SAP CRM* ◀.
- *Prerequisites for the Business Packages for SAP CRM* [page 7]
- *Installing the Business Packages for SAP Customer Relationship Management Using Java Support Package Manager (Optional)* [page 8]

End of: ABAP;Java |

Only valid for: ABAP;Java |

1.3 Prerequisites for the Business Packages for SAP CRM

You can install the Business Packages for SAP CRM in one of the following ways:

1.4 Installing the Business Packages for SAP Customer Relationship Management Using Java Support Package Manager (Optional)

- Automatically by using SAPInst
- Manually by downloading them from SAP Service Marketplace and installing them using Java Support Package Manager (JSPM). For more information, see *Installing the Business Packages for SAP Customer Relationship Management Using Java Support Package Manager (Optional)* [page 8].

Prerequisites

The Business Packages for CRM require at least the following SAP NetWeaver usage types and the following CRM software units:

- SAP NetWeaver Application Server Java (AS Java)
- SAP NetWeaver Enterprise Portal (EP)
- SAP CRM Business Packages Foundation (BP-CRM-FND)
- SAP NetWeaver Application Server ABAP (AS ABAP) and SAP CRM Application Set (CRM APP)
To use the CRM functionality of the Business Packages for SAP CRM, you need an SAP CRM ABAP back-end system, consisting of AS ABAP and SAP CRM APP.
- SAP Retrieval and Classification Engine (TREX)
To use the search functions you need TREX.

Integration

Check the support for these usage types and software components using the Product Availability Matrix (PAM) at:

<http://service.sap.com/pam>

More Information

For more information about how to size the Enterprise Portal (EP), see:

► <http://service.sap.com/sizing> → Hardware Sizing → Sizing Guidelines → Solutions & Platform ◀ .

End of: ABAP;Java |

Only valid for: ABAP;Java |

1.4 Installing the Business Packages for SAP Customer Relationship Management Using Java Support Package Manager (Optional)

You can install the Business Packages for SAP Customer Relationship Management (SAP CRM) using the Java Support Package Manager (JSPM).

Prerequisites

You have to do the following before you install the Business Packages for SAP CRM:

- You have checked hardware and software requirements.
- You have checked the prerequisites for the Business Packages for SAP CRM.
For more information, see *Prerequisites for the Business Packages for SAP CRM* [page 7].

Integration

To install the Business Packages for SAP CRM, you have to do the following:

1. Download version 7.02 of the files `sap.com_BPCRMAPP`, `sap.com_BPCRMFND`, `sap.com_CRMAPP`, and `sap.com_CRMFND` as follows:
 1. Go to ► <http://service.sap.com/swdc> → *Download* → *Support Packages and Patches* → *Search for Support Packages and Patches* ◀.
 2. Enter the following search terms:
 - BP CRM Application Coding 7.02
 - BP CRM Application Content 7.02
 - BP CRM Foundation Coding 7.02
 - BP CRM Foundation Content 7.02
2. Add the deployment variable `com.sap.cm.share` as described in SAP Note [965948](#).
3. Install the Business Packages for SAP CRM with JSPM.
4. Perform the required Post-Installation Steps for the Business Packages for SAP CRM.
For more information about configuring the Business Packages for SAP CRM, see *SAP Solution Manager*.

End of: ABAP;Java |

1.5 Important SAP Notes

Only valid for: ABAP;Java |

SAP Note Number	Description
837413	Support Package levels for SAP CRM installations and upgrades
1497032	SAP CRM 7.0 EHP 2 SPS 01 - Release & Information Note

End of: ABAP;Java |

Only valid for: ABAP;Java |

1.6 Naming Conventions

Only valid for: SAP CRM | ABAP |

SAP CRM Server System and SAP System

In this document, the term “SAP system” is the same as “SAP CRM Server system”. SAP is also used as a synonym for “SAP CRM Server” in terms such as “SAP start profile” or “SAP system language”.

End of: SAP CRM | ABAP |

Only valid for: SAP CRM |

Usage of Release Names

Unless otherwise specified, the term “release” is used in this document to refer to the release of the SAP CRM system.

The following table explains which release of SAP Web Application Server and SAP NetWeaver Application Server corresponds to which release of SAP CRM Server:

SAP Web Application Server / SAP NetWeaver Application Server	SAP CRM Server
SAP Web Application Server 6.20	SAP CRM 4.0
SAP NetWeaver 7.0 Application Server	SAP CRM 5.0, SAP CRM 5.2, SAP CRM 2007
SAP NetWeaver 7.0 Application Server including enhancement package 1	SAP CRM 7.0
SAP NetWeaver 7.0 Application Server including enhancement package 2	SAP CRM 7.0 including SAP enhancement package 1
SAP NetWeaver 7.0 Application Server including enhancement package 3	SAP CRM 7.0 including SAP enhancement package 2

End of: SAP CRM

End of: ABAP,Java

End of: ABAP,Java

Only valid for: ABAP;Java |

2 Process

This section of the guide contains information about process-related application-specific tasks – if there are any (in some cases, there are no application-specific tasks).

2.1 Note About the Process

Only valid for: ABAP;Java |



NOTE

The installation processes are described in detail in the SAP NetWeaver server installation guides (ABAP or Java):

- *Installation Guide - SAP Systems Based on the Application Server ABAP of SAP NetWeaver 7.0 Including EHP 3 on <OS>: <DB>*
- *Installation Guide - SAP Systems Based on the Application Server Java of SAP NetWeaver 7.3 on <OS>: <DB>*

You have to use the SAP NetWeaver server guide in parallel with this application-specific guide, because the two types of guide complement each other — the SAP NetWeaver server guide contains the overall process, tool, operating system- and database-specific information while this guide contains the application-specific information.

SAP Enhancement Package 2 for Customer Relationship Management 7.0 actually requires no application-specific steps in the *Process* section – there are only generic steps documented in the SAP NetWeaver server guides.

You find the SAP NetWeaver server installation guides on the SAP Service Marketplace at

► <http://service.sap.com/instguides> → *Installation & Upgrade Guides* → *SAP Business Suite Applications* → *SAP CRM* → *SAP enhancement package 2 for SAP CRM 7.0* ◀.

End of: ABAP;Java |

End of: ABAP;Java |

**This page is left blank for documents
that are printed on both sides.**

Only valid for: ABAP;Java |

3 Follow-Up Activities

Only valid for: ABAP;Java |

This section of the guide describes application-specific steps that have to be done after the installation process is complete.

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.1 Web Application Settings

Only valid for: ABAP;Java |

This section of the guide contains the information about the Web application settings you have to make after the installation process is complete.

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.1.1 Extended Configuration Management (XCM)

You use Extended Configuration Management (XCM) to configure Web applications, once you have installed the Web components. You use it to make configuration settings needed at runtime.

The SAP CRM Web applications are used in the following scenarios:

- CRM Web Channel
- ERP E-Commerce
- Web Auctions: Selling via eBay in CRM and ERP
- Web Auctions: Auctioning via Web Shop
- Partner Channel Management
- Interaction Center WebClient
- Interaction Center Workforce Management
- Internet Customer Self-Service
- Software Agent Framework

You only have to set up XCM configuration settings for those Web applications that are relevant to the scenarios and processes you are using.

The XCM user interface is used for Java-side configuration of the Web application. You have to maintain two setting types in XCM:

- General settings

3.1 Web Application Settings

Once set, these settings are valid for the entire Web application. You make these settings in the XCM tool under ► *Start* → *General Application Settings* → *Customer* ⚡.

■ Additional Web application configuration settings

Web applications can have multiple configurations with different settings. Depending on the configuration used, the application behaves differently at runtime. You can define a default configuration or select the configuration to be used at runtime.



CAUTION

Not all applications support multiple application configurations. Some only support general settings.

Some Web applications can run different configurations in different client sessions simultaneously. Each Web application provides one or more configurations predefined by SAP, which you can find under ► *Start* → *Application Configurations* → *SAP* ⚡.

You can create a new customer configuration based on these predefined configurations and adjust it to your requirements. You then find your customer configuration under ► *Start* → *Application Configurations* → *Customer* ⚡. Each customer configuration contains:

- A name for the configuration
- Base configurations (from SAP on which you base your configuration)
- A number of configuration parameters with associated values, which you adjust

The combination of these two setting types makes up the final Web application configuration.

Integration

The following steps explain how to configure a Web application in XCM, assuming you have installed the application.

Starting XCM

1. You access the XCM tool at: <http://<host>:<port>/<web app name>/admin/xcm/init.do>.



NOTE

You can also start XCM in accessibility mode (according to Section 508 of the Rehabilitation Act) at the following URL: <http://<host>:<port>/<web app name>/admin/xcm/init.do?sap-accessibility=x>.

2. Enter a user and password. If you are logging on for the first time, use the administrator user and password that you defined during the installation of SAP NetWeaver.



RECOMMENDATION

For the administration of Web applications, we recommend that you create new users with an authorization level lower than the administrator. For more information, see the SAP CRM Security Guide.

3. When the application opens, a closed UI element tree is displayed on the left of the screen. A screen containing help information is displayed on the right side.

In XCM, you can use edit mode (change settings) or display mode (view settings). You use the button in the top right corner of the screen to switch between modes. When you switch to edit mode, a database lock is set, meaning that only that user can edit the settings at that time. The lock is released when the user switches back to display mode or after session timeout (default timeout is 30 minutes).

**NOTE**

If the lock is not released after session timeout, you can release it manually.

1. Go to the SAP NetWeaver Administrator using the following URL: http://hostname_of_Java_EE_Engine_Server>:5Instance_Number>00/nwa
2. Log on to the SAP NetWeaver Administrator with administrator rights.
3. Go to the *Troubleshooting* tab.
4. Choose *Java*.
5. Choose *Locks*.
6. Select the correct system lock entry.
7. Choose *Remove lock*.

Changing the language

This section describes how to change the language of your application.

You can change the language of your application either by using the XCM UI configuration or by adjusting the `web.xml` file.

XCM UI configuration

1. Start the *Extended Configuration Management (XCM) Administration* page.
2. Select *Application Configuration*.
3. Open *Advanced Settings*.
4. Choose *ui* and then select the language you want to use.
5. Restart the application.

Adjusting the web.xml File

1. Navigate to the directory where the application has been deployed.
2. Open the `web.xml` file.
3. Check if the `language.isa.sap.com` parameter is available. If this parameter is available, the application uses the language specified there.
4. If you want to change the language, you have to define the new language in the `language.isa.sap.com` parameter and restart the application.

Printable Help

There is a printable help function for the configuration of the application and components. You access it by selecting *Help* in the header area of the main *XCM Administration* window. Within the documentation, hyperlinks provide links to more detailed information. The documentation discusses the general settings separately.

General Settings

When you set the general settings, they are valid for the entire Web application. Proceed as follows:

1. Switch to edit mode and choose ► *Start* → *General Application Settings* → *Customer* ◀.
The system displays the available nodes categorizing the general settings. Depending on the application, you will have one or more nodes. For more information about the possible settings, see the printable help.
2. Expand a configuration node and select the configuration node on the right to see possible configuration parameters in the window on the right.
3. Select a parameter and enter the values that meet your requirements. Each parameter contains a help description with information about what you need to enter.
Some parameters have default values set. When you change the values of these default parameters, the system displays them in orange. You can revert back to the original default entries by selecting *R (revert)*.
4. Choose *Save Configuration*.

If your Web application does not support multiple configurations, you are now finished with the general settings section. To activate your changes, you can return to display mode and restart the Web application.

If your application supports multiple configurations, see section “Multiple Application Configurations”, below.

Multiple Application Configurations

Once you have set the general settings, you can configure the various configurations that you need.

Standard SAP Configuration

You need to find out which SAP application configurations are standard. In more complex applications, such as CRM Web Channel, there are several pre-configured applications. In simpler applications, such as the user management application, there are normally fewer application configurations; possibly only one. You display the list of pre-configured scenarios under ► *Start* → *Application Configurations* → *SAP* ◀ in the UI element tree. Look through the configurations and choose the one that most suits your requirements.

Creating a Customer Application Configuration

Once you have selected the configuration that suits your needs, go to *Edit* mode.

1. Enter a configuration *Name* and choose *Create*.
2. Configure the application configuration by associating configuration data with the configuration parameters. There is a description for the scenario of each configuration parameter in the last column of the parameter table.

**NOTE**

During installation, only those parameters that are needed to get the application running must (necessarily) be displayed. Optional parameters can be viewed and edited by choosing ► *Display* → *Advanced Settings* ◀.

Configuring a Customer Application Configuration

Once you have created the application configuration, you need to configure it by changing the parameter values.

1. Select *Configuration Documentation* to see a list of the parameters to be configured.
2. Select a parameter and use the dropdown list box to assign a value. You can display a description of possible values by selecting the ? help button next to the dropdown list box. If there are other detailed descriptions for a parameter, an additional ? button is displayed.
3. There are two value types:
 - **Static values**
Values that can be selected from a dropdown list box.
These values do not have a button in the *Component Configuration* column.
 - **Values based on component configuration**
You must first configure a component, such as a connection to your SAP CRM system, before you can assign the configured value to the parameter. These parameters have a button in the *Component Configuration* column. For example, there is a *jco* button for configuring connection parameters to the SAP system.
If no value is assigned to these parameters, you have to create a new component configuration. For more information, see section “Creating a New Component Configuration”.
If a value is assigned, it is likely that you will not have to make any changes during the installation.

Creating a New Component Configuration

A component is an independently configurable part of the application (for example, the *jco* component which enables connections between the SAP system and the Web application). A component can have several configurations, for example for different systems and clients. You assign one of the component configurations to the parameter in the application configuration. We recommend that you create the component configuration at the same time as you set up the application configuration.

1. Select an empty entry in the dropdown list box for the parameter or choose *** Select to create component configuration ***. The system switches to the *component creation* screen. The correct component, for example *jco*, is selected automatically and the system displays a description of the use of the component.
2. Enter a name for the component configuration (for example, Q5C_505 for the Q5C system in client 505) and choose *Create*. The application switches to the *component configuration details* screen.
3. Select a base configuration from the *Base Configuration* dropdown list box. You can see a description by choosing the ? button.

3.1 Web Application Settings

4. Enter values for the component configuration parameters and choose *Save Configuration*. Test your values in the *Configuration Test* area.

Testing a Component Configuration

Once you have created the component configuration, save it and test it as follows:

1. Select the test for the configuration from the *Select Test* dropdown list box. You can see a description by choosing the ? button.
2. Choose *Run Test*.
3. The system displays the test results in a new window. A red traffic light indicates the test failed and you must redo the configuration. A green traffic light indicates the test was successful.
4. Return to the application configuration by selecting *Back to Application Configuration*, select the newly created configuration from the dropdown list box, and assign it to the scenario parameter.

Defining a Default Application Configuration

You normally do this step after you have assigned values to all configuration parameters. If you have only one application configuration, the system will use it automatically when you start the application. If you have more than one application configuration, you must select the *Default Configuration* checkbox for one of the configurations, so that the system will run this one as the default when you start the application.

**NOTE**

A green icon in the UI element tree indicates the default configuration.

Saving the Application Configuration

Once you have assigned values to all your application configuration parameters, you must save the configuration.

1. Choose *Save Configuration*.
2. Select the *Active Configuration* checkbox to enable the configuration. If you do not select this checkbox, the configuration will be disabled and will not run when you start the application.

**NOTE**

A red icon indicates that the configuration is disabled.

3. The system saves the new application configuration to the SAP NetWeaver Application Server 7.0 (or the AS Java 7.3) and it can then be displayed in the *customers* part of the UI element tree in XCM.

Activating the Application Configuration for SAP NetWeaver Application Server 7.0

Before a new application configuration can become active, you have to either stop and restart the Web application or restart the SAP NetWeaver Application Server 7.0 server.

1. Start the Java Enterprise Edition Visual Administrator.
2. Connect to the SAP NetWeaver Application Server 7.0 server.
3. Choose ► *Server node* → *open services node* → *Select deploy service* → *application* ◀ and stop and then restart the Web application.

For more information, see the SAP NetWeaver Application Server 7.0 configuration documentation in *SAP Solution Manager*.

Activating the Application Configuration for SAP NetWeaver Application Server 7.3

Before a new application configuration can become active, you have to either stop and restart the Web application or restart the SAP NetWeaver Application Server 7.3 server.

1. Go to the SAP NetWeaver Administrator using the following URL: http://hostname_of_Java_EE_Engine_Server>:5Instance_Number>00/nwa
2. Go to the *Operations* tab.
3. Choose *Start & Stop*.
 - To start and stop Java applications, go to the *Java Applications* tab.
 - To start and stop Java application server instances, go to the *Java Instances* tab.

For more information, see the AS Java 7.3 configuration documentation in *SAP Solution Manager*.

Running the Web Application

When you run the Web application, if there is more than one application configuration, you must specify which one should be used. You can set this up in the following ways:

- Use the default configuration. Simply start the application and the configuration you set as the default will be used. If you have just one configuration, it will automatically be the default. For example, if you want to call up the default configuration for the B2B Web shop, the corresponding URL is: <http://<host>:<port>/b2b/b2b/init.do>.
- Specify the application configuration name as a request parameter. In this case, you run the application using a different application configuration than the default. You pass the name of the application configuration using the request parameter `configuration.xcm` when you call the application. The scenario name is case sensitive. For example, if you want to call up the application configuration *B2BCRM*, the corresponding URL is: <http://<host>:<port>/b2b/b2b/init.do?configuration.xm=B2BCRM>.
- Display a home page that contains links to all active configurations and starts the specific application configuration by using the appropriate link.



CAUTION

The home page is disabled after installation. You enable it using the following XCM parameters: ► *Start* → *General Settings* → < *Web application name* > → *show.start.jsp* ⚡.

Uploading and Downloading XCM Settings

You can upload and download application configurations. In XCM, choose ► *Start* → *XCM Settings* ⚡ and you can view the upload and download sections. Each section refers to two objects:

- Component configuration data
- Application configuration data

These two objects make up the application configuration of a Web application.

Downloading XCM Configurations

This enables you to download an XCM configuration from the SAP NetWeaver Application Server 7.0 (or AS Java 7.3) database to XML files. Proceed as follows:

1. Select the *download* button for the component configuration data file. The system generates a file named `config-data.xml`, containing all component configuration data saved for the Web application.
2. Select the *download* button for the application configuration data file. The system generates a file named `scenario-config.xml`, containing all application configuration data saved for the Web application.

Uploading XCM Configurations

This function enables you to upload XCM configuration data from XML files to the SAP NetWeaver Application Server 7.0 (or AS Java 7.3) server. Proceed as follows:

1. Choose *Edit*.
2. The system displays two file input fields in the *Upload* section.
3. Specify the `config-data.xml` (component configuration) and `scenario-config.xml` (application configuration) files, with complete file system paths for both files, and choose *Upload*.



NOTE

For the B2B and B2C Web applications in SAP Web Channel, the XCM administration tool provides a switch to a separate maintenance view for the IPC-specific part of the application (see “IPC Switch for XCM Configuration of SAP E-Commerce”, below). When switching to IPC, you can upload and download the IPC application configuration and component configuration. The IPC application configuration file is `ipcscenario-config.xml`; the component configuration file is `ipconfig-data.xml`.



CAUTION

If you intend to transport XCM when doing a system copy within SAP CRM 7.0, see section *Data Storage Security* in the SAP CRM Security Guide for E-Commerce. In addition to the XCM data, you must also transport encryption keys used in secure storage of the SAP NetWeaver Application Server 7.0 (or AS Java 7.3 engine).



CAUTION

Web applications based on SAP CRM 4.0 do not save XCM settings in a database and they do not support the upload and download functions described in this section. In SAP CRM 4.0, the XCM settings are saved as XML files (`config-data.xml` for component configuration and `scenario-config.xml` for application configurations) in a dedicated directory of the Java Enterprise Edition server's file system. You can find the location of the files in XCM administration under ► *Start* → *Options* ◀. You can upload these configuration files from SAP CRM 4.0 to SAP CRM 5.0 during an upgrade.

After migrating XCM settings from an older to a newer Web application version, you must check whether any of the customer-side XCM settings are obsolete (see **Indication of**

Obsolete XCM Settings below). The new version may require you to change XCM settings or give you the option of maintaining additional XCM settings. You add these settings manually, as described in section “Configure a Customer Application Configuration”, above.

4. Assign passwords to the individual files.

After you have uploaded the `config-data.xml` file, you have to enter the XCM passwords anew. For example, you have to re-enter the password for the service user in component `jco`. Otherwise you cannot perform the test successfully.

Indication of Obsolete XCM Settings

After migrating XCM settings from an older version to a newer Web application version, some settings may no longer be supported in the new version. If these settings were made by the customer, meaning they have been changed from their SAP delivered default values, the system will mark them as obsolete by highlighting them in yellow. The following parameters can be specified as obsolete:

- Application configurations (marked with an exclamation mark on yellow background)
- Application configuration parameters (highlighted in yellow)
- Components (marked with an exclamation mark on a yellow background)
- Component configurations (marked with an exclamation mark on a yellow background)
- Component parameters (highlighted in yellow)

IPC Switch for XCM Configuration of SAP E-Commerce

The SAPE-Commerce B2B and B2C Web applications each support two application configurations that must be maintained separately:

- The *E-Commerce* application configuration, which allows the configuration of the overall application
- The *IPC* application configuration, which allows additional configuration of the IPC-specific part of the application

When you start the XCM administration tool for B2B or B2C, a dropdown list box is displayed in the upper left corner of the screen. This dropdown list box enables you to switch between the maintenance views for the *E-Commerce* and *IPC* application configurations. All features of the XCM administration tool, that is, the maintenance, upload, and download of application configurations, can be used separately for both the *E-Commerce* and *IPC* application configurations.

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.1.2 Checking the Availability of Back-End Systems for SAP CRM JAVA Components

Procedure

After the installation, you have to check the availability of back-end systems as follows:

1. To test the connection to the ABAP back-end system, you *create a backend user* [page 22].

3.1 Web Application Settings

2. Depending on various business processes, you check the following back-end systems:

- *ABAP system* [page 23]
- *TREX Server* [page 25]

End of: ABAP,Java |

Only valid for: ABAP,Java |

3.1.3 Creating a Backend User

You need service users to provide the anonymous remote function call (RFC) stateless connection between your back-end system and your Web-based applications.

Prerequisites

You have installed and configured CRM Web Channel Web-based applications.

Procedure

You create a service user in your back-end SAP CRM system and assign it to the Web-based application as follows:

1. In your ABAP back-end system on the *SAP Easy Access* screen, choose ► *Tools* → *Administration* → *User Maintenance* → *Users* ⚡ (transaction SU01).
2. Create a user of the type *Service User* and enter all required data.
3. Assign the appropriate service user authorization role to the user on the *Roles* tab. For a list of service user roles for the various Web-based applications, see the following table:

Application	Authorization Role for Service User
E-Selling B2B	SAP_CRM_ECO_ISA_TU_B2B
E-Selling B2C	SAP_CRM_ECO_ISA_TU_B2C
E-Selling EASYB2B	SAP_CRM_ECO_ISA_TU_EASYB2B
E-Selling CVIEWS	SAP_CRM_ECO_ISA_TU_CVIEWS
E-Selling SHOPADMIN	SAP_CRM_ECO_ISA_TU_SHOPADM
E-Selling USERADMIN	SAP_CRM_ECO_ISA_TU_USERADM
E-Selling Auctioning via Web shop (AVW)	SAP_CRM_ECO_TU_AVW
E-Selling via eBay (SVE)	SAP_CRM_ECO_TU_SVE
E-Service Internet Customer Self Service (ICSS)	SAP_CRM_ECO_ISE_TU_B2B (Authorizations for ICSS B2B) SAP_CRM_ECO_ISE_TU_B2C (Authorizations for ICSS B2C)
E-Service Complaints and Returns	SAP_CRM_ECO_ISE_TU_CR
E-Service Remanufacturer inspection	SAP_CRM_ECO_ISE_TU_INSP
Channel Management (CHM) Shared Catalog	SAP_CRM_ECO_CHM_TU_SHRDCAT
Channel Management (CHM) BOB	SAP_CRM_ECO_ISA_TU_BOB
Channel Management (CHM) HOM	SAP_CRM_ECO_ISA_TU_HOM

3.1 Web Application Settings

Application	Authorization Role for Service User
Channel Management (CHM) CSR	SAP_CRM_ECO_ISA_TU_CSR

4. Save your entries.

More Information

For more information about service users see the documentation ► *<your project> → Basic Settings for CRM E-Commerce → General Settings for CRM E-Commerce → User Management* ◀ in the SAP Solution Manager.

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.1.4 Checking the Connection to the ABAP System

This section tells you how to check the connection to the ABAP system.

Prerequisites

To be able to test the connection to the ABAP system, you need to *create a user* [page 22] on this system.

Procedure

SAP NetWeaver Application Server Java 7.03

1. Start the Visual Administrator:
 1. On your central instance host, change to the **admin** directory as follows:


```
/usr/sap/<SAPSID>/<instance_name>/j2ee/admin
```
 2. Run **go.sh**. (Only valid for IBM i5/OS UNIX)
 3. Double-click **go.bat**. (Only valid for Windows)

For more information about the Visual Administrator, see the SAP Library at:

► <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver Library* → *SAP NetWeaver by Key Capability* → *Application Platform by Key Capability* → *Java Technology* → *Administration Manual* → *J2EE Engine* → *J2EE Engine Administration Tools* ◀

2. Log on to the Visual Administrator with administrator rights.



NOTE

If you chose configuration *Use ABAP* in the User Management Engine (UME) and you selected SAP CRM ABAP as your ABAP back end with UME during the installation, a successful logon to the Visual Administrator means that the SAP CRM ABAP back-end system is available.

You have now finished this procedure.

Otherwise, continue with the next step.

3. Start an application that uses the SAP CRM ABAP system if it is stopped:
 1. In the left pane of the Visual Administrator, open **cluster/server/services** and choose *Deploy service*.
 2. Select the application:

3.1 Web Application Settings

Application	Context Root
crm~b2b	b2b
crm~icss_b2b	icss_b2b
crm~sve	sve

3. To start the selected application, choose *Start*.
4. Open the user interface for the Extended Configuration Management (XCM) Administrator as follows:
 1. Open a Web browser and enter the following URL:
`http://<J2EE_host>:<J2EE_port>/<context root>/admin/xcm/init.do`
 where `<context root>` is the context root of the application started in the previous step.
 To find information about the components that can be configured, choose *help*.
 2. Choose ► *Start* → *Component* ◀.
 You can find information about configuration of components on the right hand side of the screen.
 3. To create a jco Component, follow the instructions provided in the *Example of component configuration field*.
 If the “run test” operation described in the component configuration section of a jco setting was successful, the ABAP system can be reached from the Java system.

SAP NetWeaver Application Server Java 7.3

1. Go to the SAP NetWeaver Administrator using the following URL: http://hostname_of_Java_EE_Engine_Server>:5Instance_Number>00/nwa
 For more information about the SAP NetWeaver Administrator, see the SAP Library at: ► <http://help.sap.com/nw73> → *SAP NetWeaver 7.3 Library English* → *SAP NetWeaver Library* → *SAP NetWeaver Library: Function-Oriented View* → *Application Server* → *Application Server Java* → *Administering Application Server Java* → *Administration* → *Administration Tools* → *SAP NetWeaver Administrator* ◀
2. Log on to the SAP NetWeaver Administrator with administrator rights.
3. Start an application that uses the SAP CRM ABAP system if it is stopped:
 1. Go to the *Operations* tab.
 2. Choose *Start & Stop*.
 3. Go to the *Java Applications* tab.
 4. Select the application from the *Application List*, for example:

Application	Context Root
crm~b2b	b2b
crm~icss_b2b	icss_b2b
crm~sve	sve

5. To start the selected application, choose *Start*.
4. Open the user interface for the Extended Configuration Management (XCM) Administrator as follows:

3.1 Web Application Settings

1. Open a Web browser and enter the following URL:
`http://<J2EE_host>:<J2EE_port>/<context root>/admin/xcm/init.do`
 where <context root> is the context root of the application started in the previous step.
 To find information about the components that can be configured, choose *help*.
2. Choose ► *Start* → *Component* ◀.
 You can find information about configuration of components on the right hand side of the screen.
3. To create a jco Component, follow the instructions provided in the *Example of component configuration field*.
 If the “run test” operation described in the component configuration section of a jco setting was successful, the ABAP system can be reached from the Java system.

More Information

For more information about using Extended Configuration Management (XCM) to configure your application, see *Extended Configuration Management (XCM)* [page 13].

End of: ABAP,Java |

Only valid for: ABAP,Java |

3.1.5 Configuring and Checking the TREX Service

You need to configure and check the Search and Classification (TREX) service.

Procedure**Configuring the TREX Service**

To configure the TREX service, you have to do the following:

1. Start the Visual Administrator.
2. Connect to the ASJava.
3. Choose ► *Server node* → *Open Services Node* → *Select TREX Service* ◀.
4. Maintain the values for `nameserver.address` and `nameserver.backupserverlist`.

For more information, see *Specifying the Address of the TREX Name Server* in *Installation Guide – SAP NetWeaver 7.3 Standalone Engine Search and Classification (TREX) Single Host* at:

► <http://service.sap.com/instguides> → *SAP NetWeaver* → *Installation* → *Installation - Standalone Engines* → *SAP NetWeaver Search and Classification TREX* → *Installing and Updating TREX 7.1 Single Host* ◀.

Checking the TREX Service

1. Start the application `sap.com/crm~b2b` as described in step 3 of *Checking the Connection to the ABAP System* [page 23].
2. Open a Web browser and enter the following URL:
`http://<J2EE_host>:<J2EE_port>/b2b/admin/trex/trex_700.jsp`

Result

If the connection was established successfully, the message **TREX Server is available** appears.

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.1.6 Checking the Selling via eBay Processes

To use the selling via eBay (SVE) processes, the Java system requires an http connection to:

<http://www.ebay.com>.

To test the connection, you need to create an XCM component `ebayCommunicator` for the `sap.com/crm~sve` application.

Procedure

To create the Extended Configuration Management (XCM) component `ebayCommunicator` using application `sap.com/crm~sve`, proceed as described in *Checking the Connection to the ABAP System* [page 23].



NOTE

Make sure that you replace `jco` component with `ebayCommunicator` component when following the procedure in *Checking the Connection to the ABAP System* [page 23].

More Information

For more information about using Extended Configuration Management (XCM) to configure your application, see *Extended Configuration Management* [page 13].

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.1.7 Post-Installation Steps for Workforce Deployment Application and Calculation Services

You have to perform the following steps to check and configure Workforce Deployment Application and Calculation Services (WDF AS/CS):

- You *implement WFMCORE 200 using transaction SAINT* [page 27].
- You *configure the XCM administration tool for WFD Application Services and WFD Calculation Services* [page 27].
- You *check WFD calculation services* [page 29].
- You *check the installation of WFD Application Services and WFD Calculation Services* [page 30].

End of: ABAP;Java |

Only valid for: ABAP,Java |

3.1.8 Implementing WFMCORE 200 Using Transaction SAINT

Before you can check and configure the Java part of Workforce Deployment Application and Calculation Services (WFD AS/CS), you need to implement WFMCORE 200.

The WFMCORE 200 component contains all necessary ABAP classes and libraries required for the various Workforce Deployment scenarios and processes, including *Service Resource Planning in CRM* and *Retail Multisite Workforce Deployment*.

Procedure

1. Log on to your ABAP system.
2. Install WFMCORE 200 using transaction SAINT as described in [SAP Note 830595](#).
3. If you are implementing the *Service Resource Planning in CRM* process variant, run the report WFDBP_UPDATE_BLUEPRINT to update tables that define the settings required to properly display and maintain *Service Arrangements* in the *People-Centric User Interface*.

End of: ABAP,Java |

Only valid for: ABAP,Java |

3.1.9 Configuring the XCM Administration Tool for WDF Application and Calculation Services

Workforce Deployment Application Services (WFD AS) sends calculation and forecasting requests to a CRM ABAP back-end system. WFD Calculation Services (WFD CS) picks up the requests from this CRM ABAP back-end system. You define the connection to the CRM ABAP back-end system through Extended Configuration Management (XCM) Admin.

For more information about using Extended Configuration Management (XCM) to configure your application, see *Extended Configuration Management (XCM)* [page 13].

The `cs.jco.xxxx` XCM parameters define the JCO connection to the SAP CRM ABAP system where the WFD CS maintains forecast and calculation requests. You can connect to the CRM ABAP system using one of the following:

- A message or dispatching server by specifying `cs.jco.mshost`, `cs.jco.group`, and `cs.jco.r3name`
- An application server by specifying `cs.jco.ahost` and `cs.jco.sysnr`

In either case, you must also specify `cs.jco.client`, `cs.jco.user`, and `cs.jco.password`.

XCM Parameter Name	Example Value	Description
<code>cs.jco.ahost</code>	<code>us0091.wdf.sap.corp</code>	Application server host name of the SAP CRM Calculation Service
<code>cs.jco.sysnr</code>	91	System number of the R/3 Calculation Service (for example, 09)
<code>cs.jco.mshost</code>	<code>us0091.wdf.sap.corp</code>	Message server host name of the SAP CRM Calculation Service

3.1 Web Application Settings

XCM Parameter Name	Example Value	Description
cs.jco.group	PUBLIC	Group of the SAP CRM Calculation Service (case sensitive; for example, PUBLIC)
cs.jco.r3name	Q5C	System ID of the SAP CRM Calculation Service (for example, IDES)
cs.jco.client	505	Client of the SAP CRM Calculation Service
cs.jco.user		Back end user for JCO connection to the SAP CRM Calculation Service
cs.jco.password		Password for the back-end user

You need to configure these `cs.jco.xxxx` XCM parameter values in each instance of WFD AS and WFD CS. Make sure that the values are the same in all instances.

Procedure

Configuring the XCM Administration Tool for WFD Calculation Services

This business scenario is relevant for defining the WFD CS. You must perform this XCM configuration for the WFD CS to run.

1. Start the XCM administration tool using the following URL:
http://<J2EE_host>:<J2EE_port>/wfdcs/admin/xcm/init.do.
2. Access the configuration using the following path: ► *General Application Settings* → *Customer* → *sisopt* → *sisoptconfig* ⏏.

Process	Description	Web Application	XCM Application Configurations
Calculations Service	Workforce scheduling application	wfdcs	sisoptconfig

3. In addition to the `cs.jco.xxxx` XCM parameters, you need to define the http port of the J2EE instance where WFD CS is running:

XCM Parameter Name	Example Value	Description
cs.http.port	51000	The http port of the webserver where the WFD Calculation Services application is running (for example, 50000).

4. Restart the application after saving the XCM configuration.

Configuring the XCM Administration Tool for WFD Application Services

This business scenario is relevant for connecting the WFD AS to the WFD CS.

1. Start the XCM Administration Tool using the following URL:
http://<J2EE_host>:<J2EE_port>/wfd/admin/xcm/init.do
2. Access the configuration using the following path: ► *General Application Settings* → *Customer* → *sis* → *sisconfig* ⏏.

3.1 Web Application Settings

Process	Description	Web Application	XCM Application Configurations
Application Services	Web-based scheduling application	wfd	sisconfig

- Restart the application after saving the XCM configuration.

End of: ABAP,Java |

Only valid for: Java |

3.1.10 Checking Workforce Deployment Calculation Services

After configuring Workforce Deployment Calculation Services (WFD CS) with Extended Configuration Management (XCM) and restarting the application, you need to go to the WFD CS configuration page to check that it is running.

Prerequisites

- You have completed the installation of WFD Application Service (AS) and CS as described in this documentation.
- You have downloaded the *Business Package for Retail (Release 1.0)* from ► sdn.sap.com → SAP NetWeaver Capabilities → User Productivity → Portal and Collaboration → Portal Content Portfolio ◀.
- For more information about the portal content versions for your release, see the corresponding Master Guide for SAP CRM 7.0 including SAP enhancement package 2 at <http://service.sap.com/crm-inst>.
- You must have access to the *Portal Admin* role in SAP CRM through the Enterprise Portal to complete this part of the WFD AS/CS installation.
For more information, see *Configuring the CRM Business Package* on the SAP Service Marketplace at ► <http://service.sap.com/crm-inst> → SAP CRM <release> → CRM Business Packages and PC UI ◀. Section *CRM Portal Administrator* contains specific instructions on configuring the portal for access to WFD AS and CS. Apply the instructions to the *Portal Admin* role
- You have configured your portal users based on the required settings as described in the configuration documentation for your IT scenario.

Procedure

- Access the WFD CS configuration page through the Enterprise Portal using the role Portal Administrator.
- Choose ► *WFD Calculation Services* → *Configuration* ◀.
The *Configuration* tab looks as follows:

Tab	To Complete Installation.	For ongoing Configuration Management
<i>Calculation Servers</i>	Required for at least one calculation server	Required for each additional calculation server

3.1 Web Application Settings

Tab	To Complete Installation.	For ongoing Configuration Management
<i>Logging Localization</i>	No	Required to add or change logging once fully operational

End of: Java |

Only valid for: Java |

3.1.11 Checking the Installation of WFD Application Services and WFD Calculation Services

This section tells you how to check that you have correctly installed the Java components for Workforce Deployment Application Services (WFD AS) and WFD Calculation Services (WFD CS). This section does **not** tell you how to check the connection between the WFD AS and the WFD CS.

The procedure below shows you how to create a simple calculation request and verify that the Calculation Server has received the request. This helps you check that you have correctly installed all WFD AS or CS components and that they are communicating with each other.

Prerequisites

- You have completed all the installation steps described in this documentation.
- You have connected WFD AS or CS components with the Enterprise Portal.
- You have installed the required business packages according to *Checking Workforce Deployment Calculation Services* [page 29].

Procedure

1. To check that WFD AS is working and listening for HTTP requests, enter the following URL:


http://<J2EE_host>:<J2EE_port>/wfd/login.do.

The following error confirms that the application is working:

Your session has expired. Please renew your session by clicking a section link in the Portal menu.

2. Access the WFD CS from the Enterprise Portal through the Portal Admin role and check that the WFD CS page comes up with no errors.

If the page does not come up, possible errors are:

Error Message	Cause
Missing value for XCM configuration parameter cs.http.port	The XCM parameter cs.http.port was not filled.
The request could not be completed due to the following errors:<followed by details of the particular error, usually related to the JCO connection>	 EXAMPLE One of the XCM parameters cs.jco.xxxxx might be incorrect. The user or password are incorrect.

3. Test the submission of a calculation request to see if the WFD CS can process the request.

You can simulate a calculation request submission by executing the RFC

TEST_WFDCS_CALCREQ_SUBMIT from the CRM back-end system, defined in the `cs.jco.xxxxx` XCM parameters of WFD CS.

**EXAMPLE**

For example, when you installed WFD CS, you configured the `cs.jco.xxxxx` XCM parameters to point to system ID Q5C, client 505. You now need to log in to Q5C client 505 and execute TEST_WFDCS_CALCREQ_SUBMIT with transaction SE37 using the default import parameters.

4. Check the **Requests** tab of the WFD CS page to check the status of entries with the location name **SMOKETEST** has the status **FAILED**.
 - Status **FAILED** indicates a successful smoke test. It means that the Request Manager successfully sent the request to the Solver, which successfully processed it.
 - Status **QUEUED** probably means that the XCM parameter `cs.http.port` was incorrect.

End of: Java |

Only valid for: Java |

3.1.12 Activating the WebClient UI

The Web Client UI is part of the ICF Services that is automatically installed as part of SAP NetWeaver Application Server.

Procedure

To activate the Web Client UI after the installation, see the SAP Library at:

► <http://help.sap.com/nw70> → SAP NetWeaver 7.0 Library (including Enhancement Package 2) English → SAP NetWeaver Library → SAP NetWeaver by Key Capability → Application Platform by Key Capability → Platform-Wide Services → Connectivity → Components of SAP Communication Technology → Communication Between ABAP and Non-ABAP Technology → Internet Communication Framework → Development → Server-Side Development → Creating and Configuring an ICF Service → Activating and Deactivating the ICF Services ◀

End of: Java |

End of: ABAP;Java |

Only valid for: ABAP;Java |

3.2 Business Package Settings

Only valid for: ABAP;Java |

This section of the guide contains the information about the business package settings you have to make after the installation process is complete.

End of: ABAP;Java |

Only valid for: ABAP,Java |

3.2.1 Post-Installation Steps for the Business Package for SAP CRM

The following sections provide information about the steps that you have to perform after importing the Business Package for SAP CRM.

End of: ABAP,Java |

Only valid for: ABAP,Java |

3.2.2 Creating Roles for the SAP CRM Business Package

Procedure

If you create your own roles from the SAP CRM Business Packages, also add the *Every User Role* (`eu_core_role`) to your role. The *Every User Role* contains the personalization functionality for the SAP NetWeaver Portal.

For more information about the *Every User Role*, see the SAP Help Portal at:

- For SAP NetWeaver Application Server Java 7.03:
▶ <http://help.sap.com/nw70> → SAP NetWeaver 7.0 Library (including Enhancement Package 2) English
→ SAP NetWeaver → SAP NetWeaver by Key Capability → People Integration by Key Capability → Portal → Portal Administration Guide → Super Administration → Pre-configured Roles → Every User Role. ⬅
- For SAP NetWeaver Application Server Java 7.3:
▶ <http://help.sap.com/nw73> → SAP NetWeaver 7.3 Library English → SAP NetWeaver Library: Function-Oriented View → Enterprise Portal → Portal → Configuring the Portal for Initial Use → Understanding Preconfigured Portal Roles → Every User Roles. ⬅

End of: ABAP,Java |

Only valid for: ABAP,Java |

3.2.3 Installation of the Info Center for the SAP CRM Business Package

This section describes how to install the Info Center.

Prerequisites

You have done the following:

- You have installed the Business Package for SAP CRM.
- You have administrator rights.

Integration

The process flow is as follows:

1. You import the SAP CRM info center configurations and directory structure. For more information, see *Importing the SAP CRM Info Center Configurations and Directory Structure* [page 33].
2. You activate manual ordering of folders for the sapcrm repository. For more information, see *Activating Manual Ordering of Folders for the sapcrm Repository* [page 35].
3. You create indexes and taxonomies for the sapcrmnews repository. For more information, see *Creating Indexes and Taxonomies for the sapcrmnews Repository* [page 35].
4. You create the index for the sapcrm repository. For more information, see *Creating the Index for the sapcrm Repository* [page 37].
5. You configure the personal search. For more information, see *Configuring the Personal Search* [page 38].
6. If required, you increase the number of JCo connections. For more information, see *Increasing the Number of JCo Connections* [page 38].

End of: ABAP;Java
Only valid for: Java

3.2.4 Importing the SAP CRM Info Center Configurations and Directory Structure

The directory structure of the info center has been made available in one content package and you can import it using the Information and Content Exchange (ICE) Repository.

For more information about ICE, see SAP Help Portal at:

- For SAP NetWeaver Application Server Java 7.03: ► <http://help.sap.com/nw70> → SAP NetWeaver 7.0 Library (including Enhancement Package 2) English → SAP NetWeaver → SAP NetWeaver by Key Capability → Information Integration by Key Capability → Knowledge Management → Content Managers' Guide → Additional Tasks for Content Managers → Content Exchange → Distributing Content (Offline) ◀
- SAP NetWeaver Application Server Java 7.3: ► <http://help.sap.com/nw73> → SAP NetWeaver 7.3 Library English → SAP NetWeaver Library: Function-Oriented View → Enterprise Portal → Knowledge Management → Managing Content → Additional Tasks for Content Managers → Content Exchange → Distributing Content (Offline) ◀

Procedure

Importing the Directory Structure

1. Log on to the portal as content manager.
2. Choose ► Content Management → Content Exchange → Upload ◀.
3. Select the following depending on your setup:
 - For Microsoft Windows: Select file `fullupdate_infocenter.zip` from directory `<servlet_engine>\irj\root\WEB-INF\portal\portalapps\ep.crm.chm.kmexp\ice\` and confirm the upload.

3.2 Business Package Settings

- For IBM i5/OS; Unix: Select file `fullupdate_infocenter.zip` from directory `<servlet_engine>/irj/root/WEB-INF/portal/portalapps/ep.crm.chm.kmexp/ice/` and confirm the upload.

The zip file is now imported using the ICE protocol.

If you cannot see the ICE repository, this might be due to one of the following reasons:

- The ICE repository was hidden in the virtual root repository.
In this case, do the following:
 1. Log on to the portal as system administrator.
 2. In the SAP NetWeaver Portal, choose ► *System Administration* → *System Configuration* → *Knowledge Management* → *Content Management* → *Repository Managers* → *Virtual Root Repository* ⚡.
 3. Check whether the ICE Repository has been entered under *Repositories to Exclude*.
 4. Remove it from the list.
 5. Save your changes.
 6. Restart the Servlet Engine.
- The repository has been “switched” to invisible:
 1. Log on to the portal as system administrator.
 2. In the SAP NetWeaver Portal, choose ► *System Administration* → *System Configuration* → *Knowledge Management* → *Content Management* → *Repository Managers* → *Content Exchange Repository* ⚡.
 3. If the property `hide_in_root_folder` is active, deselect it.
 4. Restart the Servlet Engine.

**NOTE**

After the import, check whether the directory structure was created by choosing ► *Content Administration* → *KM Content* ⚡ in the SAP NetWeaver Portal. The list of folders should contain the folders `sapcrm` and `sapcrmnews`.

Checking Whether the Directory Structure Has Been Imported Successfully

You can only import the structure if there is a repository with the same name. For example, if a zip file is exported from the repository `sapcrm`, there must also be a repository with the name `sapcrm` in the target system.

The `sapcrm` and `sapcrmnews` repositories as well as the CRM-Namespace filter are created during the import of the SAP CRM KM extension configuration archive. To check whether this configuration archive has been imported successfully, proceed as follows:

1. Log on to the portal as system administrator.
2. In the SAP NetWeaver Portal, choose ► *System Administration* → *Monitoring* → *Knowledge Management* → *Deployment Monitor* → *Config Archives* ⚡.
3. Check whether the archive `com.sap.pct.crm.app.kmext.prjconfig` is installed in the system.
If the archive `com.sap.pct.crm.app.kmext.prjconfig` is not installed in the system, import it manually as follows:

1. Log on to the portal as system administrator.
2. In the SAP NetWeaver Portal, choose ► *System Administration* → *Monitoring* → *Knowledge Management* → *Deployment Monitor* → *Config Archives* → *Actions* → *Import* ⚡.
3. Select the following depending on your setup:
 - For Microsoft Windows: Select the archive `com.sap.pct.crm.app.kmext.prjconfig.configarchive` from directory `\<SAPSID>\JC<instance_number>\j2ee\cluster\apps\sap.com\ep~crm~chm\servlet_jsp\ep.crm.chm.kmexp\root\WEB-INF\config` and confirm the import.
 - For IBM i5/OS; Unix: Select the archive `com.sap.pct.crm.app.kmext.prjconfig.configarchive` from directory `/<SAPSID>/JC<instance_number>/j2ee/cluster/apps/sap.com/ep~crm~chm/servlet_jsp/ep.crm.chm.kmexp/root/WEB-INF/config` and confirm the import.

After the import, the directory structure has no restrictions on rights. Make sure that you modify the rights of the various folders to meet your company's requirements.

End of: Java |

Only valid for: Java |

3.2.5 Activating Manual Ordering of Folders for the sapcrm Repository

The sapcrm repository folders are ordered in a specific sequence.

Procedure

To display this sequence, activate manual ordering for each directory.

For more information, see the SAP Library at:

- For SAP NetWeaver Application Server Java 7.03: ► <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Information Integration by Key Capability* → *Knowledge Management* → *Content Managers' Guide* → *Providing Shared Access to Departmental Documents* → *Sorting Documents in a Folder Manually* ⚡
- For SAP NetWeaver Application Server Java 7.3: ► <http://help.sap.com/nw73> → *SAP NetWeaver 7.3 Library English* → *SAP NetWeaver Library: Function-Oriented View* → *Enterprise Portal* → *Knowledge Management* → *Managing Content* → *Providing Shared Access to Departmental Documents* → *Sorting Documents in a Folder Manually*. ⚡

End of: Java |

Only valid for: Java |

3.2.6 Creating Indexes and Taxonomies for the sapcrmnews Repository

To make news available for indexing and searching, create two new indexes.

Prerequisites

You have administrator rights for knowledge management on the server.

For more information, see the SAP Library at:

- SAP NetWeaver Application Server Java 7.03: ► <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Information Integration by Key Capability* → *Knowledge Management* ◀
- SAP NetWeaver Application Server Java 7.3: ► <http://help.sap.com/nw73> → *SAP NetWeaver 7.3 Library English* → *SAP NetWeaver Library: Function-Oriented View* → *Enterprise Portal* → *Knowledge Management*. ◀

Procedure

Creating Indexes and Taxonomies for the sapcrmnews Repository

The Business Package contains an iView — `ep.bp_crm.chm-pm.iviews.news_flash` — that combines all news with the `istopnews=yes` attribute in a virtual folder. To guarantee the function of this iView, create two indexes in knowledge management.

1. In the SAP NetWeaver Enterprise Portal, choose ► *System Administration* → *System Configuration* → *Knowledge Management* → *Index Administration* ◀.
2. Create an index of the **Search** and **Classification** type, with a suitably configured taxonomy.
3. Choose `sapcrmpartnernews` as the index ID. Otherwise the path to the folder specified in the iView is incorrect.

If you choose another index ID, you must also modify accordingly the folder properties in the iView for one of the following:

- **Folders path to content and path to root**
- **FoldersPath to Initially Displayed Folder and Path to Root Folder for Navigation**

If you want to link two portal servers with a TREX server, you must modify the index name and iView properties on one of the portal servers.

4. Assign folder `sapcrmpartner/Partnernews` as a data source.
This moves all news with the (virtual) *Top* flag from this folder to the *Newsflash* iView.
5. Create a “query-based” taxonomy with the name `PartnerNewsFlash`, choosing *Automatic Classification* before you save the taxonomy.



NOTE

The standard delivery includes only the iView above for virtually combining news. If you also want to use this functionality for other news channels (for example, internal news), use your own index and taxonomy for each channel.

For more information, see the SAP Library at:

- For SAP NetWeaver Application Server Java 7.03: ► <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver* → *SAP NetWeaver by Key Capability*

→ *Information Integration by Key Capability* → *Knowledge Management* → *Administration Guide* → *System Administration* → *System Configuration* → 'Index Administration' iView ↩

- For SAP NetWeaver Application Server Java 7.3: ▶ <http://help.sap.com/nw73> → *SAP NetWeaver 7.3 Library English* → *SAP NetWeaver Library: Function-Oriented View* → *Enterprise Portal* → *Knowledge Management* → *Administering the Knowledge Management System* → *System Administration* → *System Configuration* → *Administering Indexes* ↩

Creating Queries for the Taxonomies of sapcrmnews Repository

1. Log on to the portal as content manager.
2. Choose ▶ *Content Management* → *Classification* → *Taxonomy Query Builder* ↩.
3. Add a search query to check the `istopnews` property for the value `Yes`.
4. Enter `PartnerNewsFlash` as the name for the taxonomy.

Here too, a property of the iView links to a taxonomy with this name. So, if you want to choose another name, you must modify the path to the content folder property of the iView.

For more information, see the SAP Library at:

- For SAP NetWeaver Application Server Java 7.03: ▶ <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver* → *SAP NetWeaver by Key Capability* → *Information Integration by Key Capability* → *Knowledge Management* → *Administration Guide* → *System Administration* → *System Configuration* → *Taxonomies and Classification* ↩
- For SAP NetWeaver Application Server Java 7.3: ▶ <http://help.sap.com/nw73> → *SAP NetWeaver 7.3 Library English* → *SAP NetWeaver Library: Function-Oriented View* → *Enterprise Portal* → *Knowledge Management* → *Administering the Knowledge Management System* → *System Administration* → *System Configuration* → *Administering Indexes* ↩

End of: Java |

Only valid for: Java |

3.2.7 Creating the Index for the sapcrm Repository

To make info center documents available for indexing and searching, create a new index with sapcrm as a data source.

Prerequisites

You have administrator rights for knowledge management on the server.

Procedure

Choose a name of your own, `Search` as a service parameter, and `standard` as a crawler parameter.

For more information, see the SAP Library at:

- SAP NetWeaver Application Server Java 7.03: ► <http://help.sap.com/nw70> → SAP NetWeaver 7.0 Library (including Enhancement Package 2) English → SAP NetWeaver → SAP NetWeaver by Key Capability → Information Integration by Key Capability → Knowledge Management ◀
- For SAP NetWeaver Application Server Java 7.3: ► <http://help.sap.com/nw73> → SAP NetWeaver 7.3 Library English → SAP NetWeaver Library: Function-Oriented View → Enterprise Portal → Knowledge Management. → Administering the Knowledge Management System → System Administration → System Configuration → Administering Indexes ◀

End of: Java |

Only valid for: Java |

3.2.8 Configuring the Personal Search

Prerequisites

You have administrator rights for knowledge management on the server.

Procedure

1. Create an index for the `userhome` repository.
To make personal folder documents available for the search, create a new index with root / `userhome` as the data source.
2. Create a `search option set` for personal search.
To assign the search index and a start folder to the search for personal documents, create a `search option set` with the name `CRMPersonalFolderSearch`. As an index, enter the index for the `userhome` repository created above and `/~alias~/userhome/user.id/Personal Documents` as the root folder for the search.

For more information, see the SAP Library at:

- For SAP NetWeaver Application Server Java 7.03: ► <http://help.sap.com/nw70> → SAP NetWeaver 7.0 Library (including Enhancement Package 2) English → SAP NetWeaver → SAP NetWeaver by Key Capability → Information Integration by Key Capability → Knowledge Management ◀.
- For SAP NetWeaver Application Server Java 7.3: ► <http://help.sap.com/nw73> → SAP NetWeaver 7.3 Library English → SAP NetWeaver Library: Function-Oriented View → Enterprise Portal → Knowledge Management. → Administering the Knowledge Management System → System Administration → System Configuration → Administering Indexes ◀

End of: Java |

Only valid for: Java |

3.2.9 Increasing the Number of JCo Connections

This section tells you how to increase the number of concurrent Java Connector (JCo) connections. By default, the maximum number of concurrent JCo connections is 100. The value depends on the number and behavior of the users in the portal. For more information, see **SAP Note** [316877](#).

You can specify this value when you plan the installation of your SAP NetWeaver Enterprise Portal. Make sure that you first analyze the number and behavior of the users.

Procedure

To increase the maximum number of concurrent JCo connections, increase the value of the environment variable CPIC_MAX_CONV.



EXAMPLE

Initial default value: CPIC_MAX_CONV=100

Increased value: CPIC_MAX_CONV=1000

End of: Java |

Only valid for: ABAP,Java |

3.2.10 Troubleshooting for the Business Package for SAP CRM

Procedure

The following sections describe the steps you have to perform if you have problems after the installation of the Business Package::

- *Activating BI Templates Manually* [[page 39](#)]
- *Troubleshooting when Importing PAR Files* [[page 40](#)]
- *Troubleshooting in SSO with SAP Logon Tickets* [[page 40](#)]
- *Dragging the Search onto the Portal Desktop* [[page 43](#)]

End of: ABAP,Java |

Only valid for: ABAP,Java |

3.2.11 Activating Business Intelligence Templates Manually

If you have installed the Business Package, you might see error messages when loading the Business Intelligence (BI) templates. This procedure describes how you can activate the templates afterwards.

Procedure

1. Note the technical name of all templates in your portal interface that are not working.
2. Log on to your BI system.
3. On the *SAP Easy Access* screen, choose ► *Modeling* → *Administrator Workbench: Modeling* ◄ (transaction RSA1 or RSOR).
4. Choose ► *Business Content* → *Object Types* → *Web Template Name* → *Select Objects* ◄.
A new window containing a list of BW objects and templates opens.
5. Find your missing templates, for example, 0TPL_0CRM_Cnn_Qnnn_Vnnn_M, and select the entries.
6. Choose *Transfer Selection*.

The template now appears on the right-hand side of the screen. The *Transfer* checkbox has been selected and cannot be changed. Nevertheless, we recommend that you repeat the following procedure so that your templates can be displayed.

7. Select the template.
8. Choose ► *Transfer* → *Transfer* ◀.

Result

You have successfully activated your missing templates and no error messages appear in the portal.

End of: ABAP;Java |

Only valid for: Java |

3.2.12 Troubleshooting when Importing PAR Files

This section tells you how to check whether the import succeeded.

Prerequisites

You have imported the Business Package.

Procedure

1. Log on to the AS Java with a user who has been granted write access in the file system. The J2EE service must be installed on this server.
2. Go to the following directory:
`<servlet engine>\irj\root\WEB-INF\deployment.`
 This directory contains all the imported PAR files. All files have the extension `.BAK` to indicate that they have been imported successfully.
3. Go to the following directory:
`<servlet engine>\irj\root\WEB-INF\deployment\PCD.`
 This directory contains all the imported PAR files that are available in the Portal Content Directory. All files have the extension `.BAK` to indicate that they have been imported successfully. If any of the `com.sap.pct.crm` files have the extension `.ERR`, the import procedure has failed.
4. Check your J2EE log file to establish the reason for the import procedure.
5. Correct the problem.
6. Remove the `.ERR` suffix.
7. Restart the J2EE service.

End of: Java |

Only valid for: ABAP;Java |

3.2.13 Troubleshooting in SSO with SAP Logon Tickets

This section tells you how to troubleshoot Single Sign-On (SSO) with SAP Logon Tickets.

SSO gives Enterprise Portal users access to many systems and applications, without requiring them to log on separately to each system. With SSO, users only have to identify themselves once and can then log on to all systems that are part of the Single Sign-On environment.

Depending on your security requirements and the supported external applications, the SSO mechanism used in the Enterprise Portal is one of the following:

- SSO with SAP Logon Tickets – discussed in this section
- SSO with user ID and password – not discussed in this section

The SAP Logon Ticket contains all logon data for a registered user. After the user has logged on successfully for the first time, the portal server issues the user with a logon ticket. The logon ticket is saved as a cookie on the client and identifies the portal user to all external applications that the user logs on to.

For more information, see ► <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver Library* → *Administrator's Guide* → *SAP NetWeaver Security Guide* → *User Administration and Authentication* → *User Authentication and Single Sign-On* ◀.

Prerequisites

- The user must have the same user ID in all SAP systems that are part of the SSO environment and that are accessed by means of a logon ticket.
- An Enterprise Portal certificate must be installed in the SAP system.

Procedure

If your logon to the Enterprise Portal fails, you can try to find the logon ticket in the following ways:

Finding the Logon Ticket in the Browser Cookie

To ensure that the SAP system has received the logon ticket, check whether the logon ticket is saved as a cookie on your client as follows:

1. Start your browser, in this case, Microsoft Internet Explorer.
2. Choose ► *Tools* → *Internet Options* → *Security* ◀.
3. Choose *Local intranet*.
4. Choose *Custom Level*.
5. Scroll down to *Cookies* in the *Security Settings* dialog box.
6. Set the *Prompt* flag in the *Allow per-session cookies (not stored)* screen area:
 - If the cookie was created correctly, a dialog box with the cookie information appears the next time you log on to the Enterprise Portal. The name of the cookie must be `MYSAPSS02` and the name of the domain must correspond to the name of your portal instance. This name should only contain the domain and not the full host name, for example, `wdf.sap-ag.de`.
 - If an ITS (Internet Transaction Server) is involved, make sure that `~mysapcomusesso2cookie = 1`.

For more information, see ► <http://help.sap.com/nw70> → *SAP NetWeaver 7.0 Library (including Enhancement Package 2) English* → *SAP NetWeaver Library* → *Administrator's Guide* → *SAP NetWeaver Security Guide* → *User Administration and Authentication* → *User Authentication and Single Sign-On* ◀.

Finding the Logon Ticket in the SAP System

If the cookie has been saved on the client but you still cannot log on, look for the logon ticket in the SAP system as follows:

1. Log on to the required SAP system server.
2. Start transaction SM50.
3. Ensure that the load on the system is not too high.
4. Select the first few processes at the top of the list, for example, the first five.
5. Choose ► *Process* → *Trace* → *Active Components* ◀.
6. Set the *Security* flag and deselect all other flags.
7. In the *Trace Level* field, enter the value **2**.
8. Save your data.
9. Check the log file for each process that you selected:
 1. Position the cursor on the required process.
 2. Choose ► *Process* → *Trace* → *Display File* ◀.
 3. Scroll down to the bottom of the text.
 4. Find the name of the logged-on user.

The entry in the log file should look like this:

```
dy_signi_ext: valid ticket with RFC ticket
dy_signi_ext: ab_RfcValidateSSOInfo() rc=0
DyISigni: client=050, user=MYUSER, lang=E, access=F, auth=T
usrexist: effective authentication method: mySAP.com logon ticket
DyISignR: return code=0
```

10. Analyze the entries in the log file:
 - If the user name is missing from the log file, a connection to the server cannot be established. This means that you either selected the wrong server instance to troubleshoot, or one of the files `systems.xml` or `jcoDestinations.xml` contains an error.
 - If the return code is **not 0**, see SAP Note [320991](#).

Result

After you have successfully completed the troubleshooting and error correction procedure, the user only has to log on to the Enterprise Portal once and does not have to repeat the logon for each SAP system.

End of: ABAP,Java |

Only valid for: ABAP;Java |

3.2.14 Dragging the Search onto the Portal Desktop

Procedure

The Business Package for SAP CRM 7.0 including SAP enhancement package 2 contains an iView for the central search in CRM. This iView is in the package on the page *Today* in the workset *Home* of the CRM user. You can drag this iView onto the portal desktop under the tool area.

End of: ABAP;Java |

End of: ABAP;Java |

End of: ABAP;Java |

Typographic Conventions

Example	Description
<Example>	Angle brackets indicate that you replace these words or characters with appropriate entries to make entries in the system, for example, "Enter your <User Name>".
► Example → Example ◀	Arrows separating the parts of a navigation path, for example, menu options
Example	Emphasized words or expressions
Example	Words or characters that you enter in the system exactly as they appear in the documentation
http://www.sap.com	Textual cross-references to an internet address
/example	Quicklinks added to the internet address of a homepage to enable quick access to specific content on the Web
123456	Hyperlink to an SAP Note, for example, SAP Note 123456
Example	<ul style="list-style-type: none"> Words or characters quoted from the screen. These include field labels, screen titles, pushbutton labels, menu names, and menu options. Cross-references to other documentation or published works
Example	<ul style="list-style-type: none"> Output on the screen following a user action, for example, messages Source code or syntax quoted directly from a program File and directory names and their paths, names of variables and parameters, and names of installation, upgrade, and database tools
EXAMPLE	Technical names of system objects. These include report names, program names, transaction codes, database table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE
EXAMPLE	Keys on the keyboard

© Copyright 2011 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Excel, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, System i, System i5, System p, System p5, System x, System z, System z10, System z9, z10, z9, iSeries, pSeries, xSeries, zSeries, eServer, z/VM, z/OS, i5/OS, S/390, OS/390, OS/400, AS/400, S/390 Parallel Enterprise Server, PowerVM, Power Architecture, POWER6+, POWER6, POWER5+, POWER5, POWER, OpenPower, PowerPC, BatchPipes, BladeCenter, System Storage, GPFS, HACMP, RETAIN, DB2 Connect, RACF, Redbooks, OS/2, Parallel Sysplex, MVS/ESA, AIX, Intelligent Miner, WebSphere, Netfinity, Tivoli and Informix are trademarks or registered trademarks of IBM Corporation. Linux is the registered trademark of Linus Torvalds in the U.S. and other countries.

Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Oracle and Java are registered trademarks of Oracle.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

SAP, R/3, SAP NetWeaver, Duet, PartnerEdge, ByDesign, SAP BusinessObjects Explorer, StreamWork, SAP HANA, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and other countries.

Business Objects and the Business Objects logo, BusinessObjects, Crystal Reports, Crystal Decisions, WebIntelligence, Xcelsius, and other Business Objects products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Business Objects Software Ltd. Business Objects is an SAP company.

Sybase and Adaptive Server, iAnywhere, Sybase 365, SQL Anywhere, and other Sybase products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of Sybase, Inc. Sybase is an SAP company.

All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

Disclaimer

Some components of this product are based on Java™. Any code change in these components may cause unpredictable and severe malfunctions and is therefore expressly prohibited, as is any decompilation of these components.

Any Java™ Source Code delivered with this product is only to be used by SAP's Support Services and may not be modified or altered in any way.

Documentation in the SAP Service Marketplace

You can find this document at the following address: <http://service.sap.com/instguides>

SAP AG

Dietmar-Hopp-Allee 16
69190 Walldorf
Germany
T +49/18 05/34 34 34
F +49/18 05/34 34 20
www.sap.com