SAP BusinessObjects Business Intelligence Suite
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SAP BusinessObjects BI Customization Guide

Table of Contents

1 Document History. 5

2 Getting Started. 6

2.1 About this guide. 6

2.1.1 Terminology. 6

2.2 Before you begin. 8

2.2.1 Customizing SAP BusinessObjects Business Intelligence platform 8

2.2.2 Customizing SAP Crystal Reports. 11

2.2.3 Customizing SAP Crystal Reports for Enterprise. 13

3 Business Intelligence Platform Installer Customization. 14

3.1 Introduction. 14

3.2 Quick start for the Business Intelligence platform (Windows). 14

3.3 Quick start for the Business Intelligence platform (Unix or Linux). 15

3.4 To download the server installation program. 16

3.5 Planning the customization process 17

3.5.1 Best practices. 17

3.6 Creating the configuration file. 18

3.6.1 Configuration file overview. 19

3.6.2 Renaming the product. 20

3.6.3 Customizing user input. 27

3.6.4 Removing installation screens. 28

3.6.5 Embedding a keycode. 29

3.6.6 Removing features. 29

3.6.7 Preventing prerequisite checks. 30

3.6.8 Installing on unsupported Red Hat Linux platforms. 30

3.6.9 Removing language packs. 32

3.6.10 Preventing the WDeploy tool from running. 32

3.6.11 Removing the default database. 32

3.6.12 Changing resources 33

3.6.13 Removing items from the Collaterals folder. 36

3.7 Running the tool. 37

3.7.1 Command line parameters. 38

3.8 Customizing update installation programs. 39

3.8.1 Frequently asked questions about update installation programs. 40

3.8.2 Quick start for update installation programs. 41

3.8.3 How to customize update installation programs. 42

3.9 IDs and codes for BI Platform customization. 44

3.9.1 Feature IDs. 44

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3.9.2 Shortcut deployment unit IDs (Windows only). . . . 47
3.9.3 String IDs. . . . 48
3.9.4 Language codes. . . . 49
3.9.5 Installation screen and property IDs. . . . 50

4 Web Application Customization. . . . 58
4.1 Introduction. . . . 58
4.1.1 Key concepts . . . 58
4.1.2 Testing your customizations. . . . 60
4.2 Quick start. . . . 60
4.3 Customizing BI launch pad. . . . 61
4.3.1 To customize the favicon image. . . . 62
4.3.2 To customize logos. . . . 62
4.3.4 Working with BI workspaces and compound modules. . . . 62
4.3.5 To change the name of BI launch pad. . . . 64
4.4 Customizing OpenDocument. . . . 65
4.5 Customizing the Crystal Reports JavaScript viewer. . . . 66
4.5.1 Customizing the viewer. . . . 66

5 SAP Crystal Reports 2011 Customization. . . . 68
5.1 Introduction. . . . 68
5.2 Quick start for Crystal Reports. . . . 68
5.3 To download the installation program. . . . 69
5.4 Planning the customization process. . . . 69
5.4.1 Best practices. . . . 70
5.5 Creating the configuration file. . . . 71
5.5.1 Configuration file overview. . . . 72
5.5.2 Renaming the product. . . . 73
5.5.3 Customizing default user input. . . . 80
5.5.4 Removing installation screens. . . . 81
5.5.5 Embedding a keycode. . . . 82
5.5.6 Removing features. . . . 82
5.5.7 Preventing prerequisite checks. . . . 83
5.5.8 Removing language packs. . . . 83
5.5.9 Changing resources. . . . 83
5.5.10 Removing items from the Collaterals folder. . . . 86
5.6 Customizing the report designer. . . . 87
5.6.1 Customizing the splash screen. . . . 88
5.6.2 Customizing the start page. . . . 88
5.6.3 Customizing menu strings. . . . 89
5.6.4 Deploying the OEM customization file. . . . 90
5.7 Running the tool. . . . 91

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5.7.1 Command line parameters. . . . 92
5.8 Customizing update installation programs. . . . 93
5.8.1 Frequently asked questions about update installation programs . . . 94
5.8.2 Quick start for update installation programs . . . 95
5.8.3 How to customize update installation programs. . . . 96
5.9 IDs and codes for Crystal Reports customization. . . . 98
5.9.1 Feature IDs. . . . 98
5.9.2 Shortcut deployment unit IDs. . . . 101
5.9.3 String IDs. . . . 101
5.9.4 Language codes. . . . 102
5.9.5 Installation screen and property IDs. . . . 103

6 SAP Crystal Reports for Enterprise Customization. . . . 105
6.1 Introduction. . . . 105
6.2 Quick start for Crystal Reports for Enterprise. . . . 105
6.3 To download the installation program. . . . 107
6.4 Planning the customization process. . . . 107
6.4.1 Best practices. . . . 108
6.5 Creating the configuration file. . . . 109
6.5.1 Configuration file overview. . . . 109
6.5.2 Renaming the product. . . . 110
6.5.3 Customizing the default user input. . . . 114
6.5.4 Removing installation screens. . . . 114
6.5.5 Preventing prerequisite checks. . . . 114
6.5.6 Removing language packs. . . . 115
6.5.7 Changing resources. . . . 115
6.5.8 Removing items from the Collaterals folder. . . . 118
6.6 Customizing the report designer. . . . 118
6.6.1 Customizing the splash screen. . . . 119
6.6.2 Hiding parts of the start page. . . . 120
6.6.3 Customizing the strings in the program. . . . 122
6.6.4 Customizing the Help menu. . . . 123
6.6.5 Changing the images in the About dialog box. . . . 125
6.6.6 Deploying the OEM customization file. . . . 126
6.6.7 Attributes for .properties files. . . . 127
6.7 Running the tool. . . . 129
6.7.1 Command line parameters. . . . 129
6.8 IDs and codes for Crystal Reports for Enterprise customization. . . . 131
6.8.1 String IDs. . . . 131
6.8.2 Language codes. . . . 131
6.8.3 Installation screen and property IDs. . . . 133

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1 Document History

The following table provides an overview of the enhancements made to this document.

Version	Date	Description
SAP BusinessObjects Business Intelligence Suite 4.1	May, 2013	First release of this document.
SAP BusinessObjects Business Intelligence Suite 4.1 Support Package 1	August, 2013	• Added section *Installing on unsupported Red Hat Linux platforms* [page 30]. • Updated section *Customizing the installation folder* [page 27]. The default installation directory must be a subfolder of `Program Files (x86)`.
SAP BusinessObjects Business Intelligence Suite 4.1 Support Package 2	November 2013	• SAP System Landscape Directory (SLD) is now a hidden feature and automatically installed, so all reference to the feature code PlatformServers.SystemLandscape Supplier has been removed.

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2 Getting Started

2.1 About this guide

The SAP BusinessObjects Business Intelligence Suite provides a set of tools and templates that allow you to customize the SAP BusinessObjects Business Intelligence platform, the SAP Crystal Reports Designer, and SAP Crystal Reports for Enterprise. This guide shows you how to use these tools and templates to create your desired customizations.

Depending on the needs of your customers, you can remove features and language packs to reduce the size of the installation program and the installed product. And if you want to differentiate your system and apply your own unique corporate branding, you can personalize the appearance of your products, including product name, logos, colors, and other elements of the user interface. Your customization can be as simple as a logo change, or as detailed as a complete re-skinning.

The best thing is that your customizations are supported throughout the life cycle of the products. It is easy to maintain your changes during future upgrades and updates.

This guide is meant for anyone customizing SAP BusinessObjects Business Intelligence Suite products. You won't need to read the entire document; the *Before you begin* [page 8] section describes the relevant workflows for each major area of product customization and tells you where to find the information you need.

Guide conventions

The following variables are used throughout this guide.

Variable	Description
`<INSTALLDIR>`	The file path where the BI platform is installed. On a Windows machine, the default file path is `C:\Program Files (x86)\SAP BusinessObjects\`.

2.1.1 Terminology

The following terms are used throughout the BI platform documentation:

Term	Definition
add-on products	Products that work with the BI platform but have their own installation program, such as SAP BusinessObjects Explorer
Auditing Data Store (ADS)	The database used to store auditing data

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Term	Definition
BI platform	An abbreviation for the SAP BusinessObjects Business Intelligence platform
bundled database; bundled web application server	The database or web application server shipped with the BI platform
cluster (noun)	Two or more Central Management Servers (CMSs) working together and using a single CMS database
cluster (verb)	To create a cluster For example, to create a cluster: 1. Install a CMS and CMS database on machine. 2. Install a CMS on machine B. 3. Point the CMS on machine B to the CMS database on machine A.
cluster key	Used to decrypt the keys in the CMS database You can change the cluster key in the CCM, but you cannot reset the key like a password. It contains encrypted content and is important not to lose.
CMS	An abbreviation for the Central Management Server
CMS database	The database used by the CMS to store information about the BI platform
deployment	The BI platform software installed, configured, and running on one or more machines
installation	An instance of BI platform files created by the installation program on a machine
machine	The computer on which the BI platform software is installed
major release	A full release of the software, such as 4.0
migration	The process of transferring BI content from a previous major release (for example, from XI 3.1), using the upgrade management tool. This term does not apply to deployments with the same major release. See *promotion*.
minor release	A release of some components of the software, such as 4.1

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Term	Definition
node	A group of BI platform servers that run on the same machine and are managed by the same Server Intelligence Agent (SIA)
patch	A small update for a specific Support Package version
promotion	The process of transferring BI content between deployments with the same major release (for example, 4.0 to 4.0), using the promotion management application
server	A BI platform process. A server hosts one or more services.
Server Intelligence Agent (SIA)	A process that manages a group of servers, including stopping, starting, and restarting servers
support package	A software update for a minor or major release
web application server	A server that processes dynamic content. For example, the bundled web application server for 4.1 is Tomcat 7.
upgrade	The planning, preparation, migration, and post-processes required to complete a migration process

2.2 Before you begin

This guide covers the different types of customization for the different products in the SAP BusinessObjects Business Intelligence suite. You need to read only those sections that cover the products you are planning to customize.

2.2.1 Customizing SAP BusinessObjects Business Intelligence platform

You can customize many aspects of the Business Intelligence platform deployment:

- Customize the installation program.
  You can remove features, language packs, and resources to reduce the size of the installed product, rename the product, change images, hide unwanted installation screens, embed a keycode, and pre-populate user input.
  See the *Introduction* [page 14] for "Business Intelligence Platform Installer Customization" in this document.
- Customize BI launch pad and OpenDocument web applications.

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You can change the titles and the URLs that are used to access web applications. You can change the appearance and branding of these applications using custom images and Cascading Style Sheets (CSS). See the *Introduction* [page 58] for "Web Application Customization" in this document.

- Customize the Crystal Reports JavaScript API report viewer.
  You can change the logo and customize the visual style of the viewer using custom images and Cascading Style Sheets (CSS). You can add your own event and action listeners to the existing JavaScript API, or add your own external JavaScript files.
  See *Customizing the Crystal Reports JavaScript viewer* [page 66] in this document.

You can customize the web applications, the installation program, or both. The following diagram illustrates the workflow where all types of customizations are performed:

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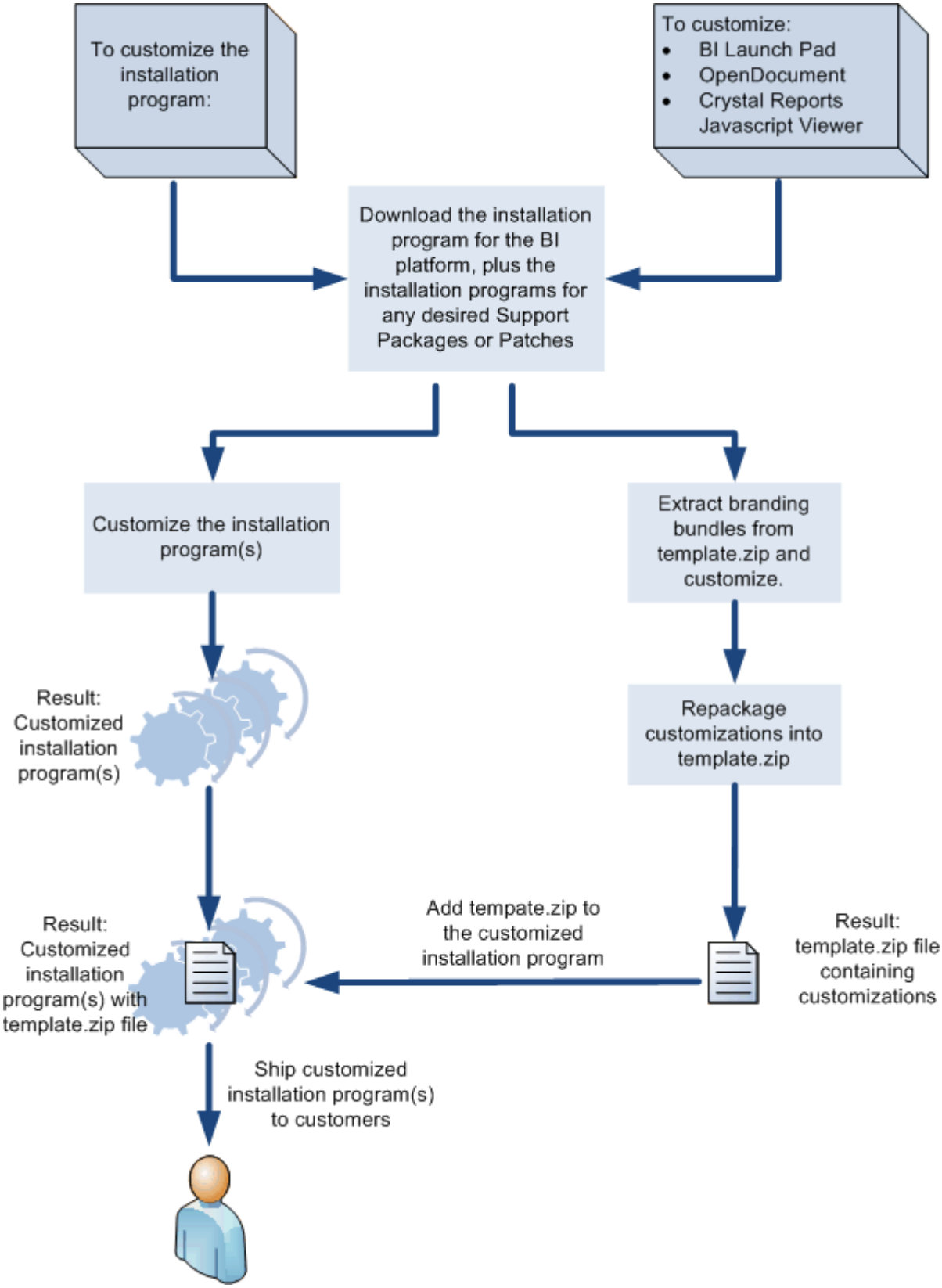

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2.2.2 Customizing SAP Crystal Reports

There are many customizations you can perform to enhance and personalize the design and customer experience for your SAP Crystal Reports users:

- Install and run the SAP BusinessObjects customization tool. For details, see *Quick start for Crystal Reports* [page 68].
- If you want to customize the SAP Crystal Reports installation program, you can change its appearance, hide unwanted screens from users in the wizard, and remove unused features to reduce the installed product size on client machines.
  See the *Introduction* [page 68] for "SAP Crystal Reports 2011 Customization" in this document.
- If you want to customize the report designer, you can change the default splash screen or start page. You can also customize the product name, menus, and other assets of the report designer.
  See *Customizing the report designer* [page 87] in this document.

The following diagram illustrates the workflow where all types of customizations are performed:

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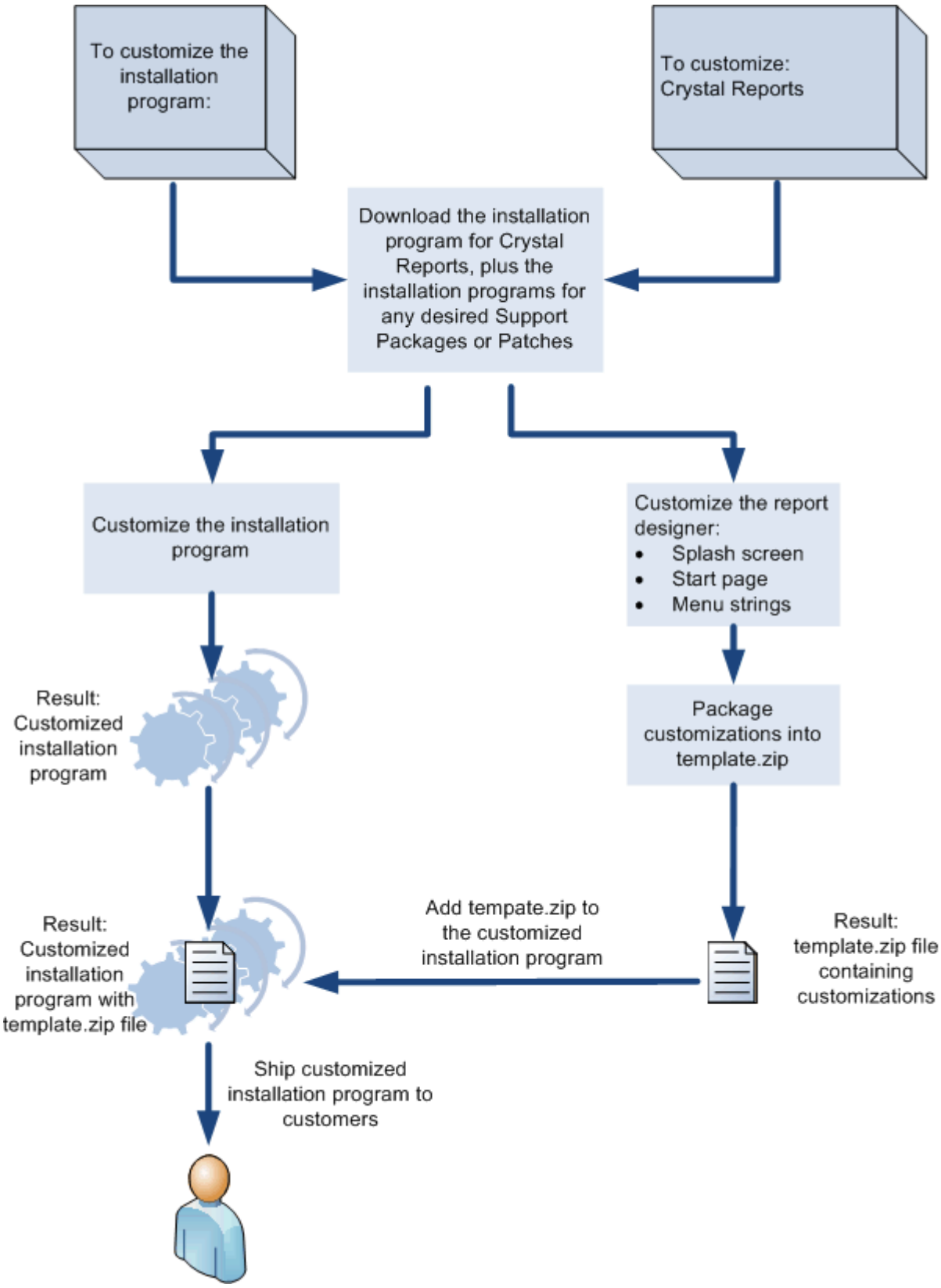

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2.2.3 Customizing SAP Crystal Reports for Enterprise

You can make a variety of customizations to SAP Crystal Reports for Enterprise in order to personalize the design of the program and enhance the customer experience for your users:

- Customize the installation program by changing its appearance, hiding unwanted screens, and removing unused files to reduce the installed product size on client machines.
  For more information, see the *Introduction* [page 105] for the "SAP Crystal Reports for Enterprise Customization" section in this document.
- Customize the report designer by changing the default splash screen or start page. You can also customize the product name, menus, and other assets of the report designer.
  For more information, see *Customizing the report designer* [page 118] in the "SAP Crystal Reports for Enterprise Customization" section of this document.

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3 Business Intelligence Platform Installer Customization

3.1 Introduction

The SAP BusinessObjects Business Intelligence platform can be repackaged and sold by partners. You can customize the installed product and the installation program in order to target a specific customer base, or to resell it as part of your own product. The SAP BusinessObjects customization tool customizes the SAP BusinessObjects Business Intelligence platform and its installation program with changes such as the following:

- Reducing the product size
- Renaming the product
- Changing default properties in the installation program
- Hiding screens in the installation program

To make customizations, you write a configuration file to specify the changes then run the SAP BusinessObjects customization tool to create a customized installation program. Customers can use this installation program to install a customized version of the product.

The customization tool is available for Windows and Unix. It can be used to customize a full installation program, a Support Package installation program, and a Patch installation program.

> **Note**
>
> This tool does not perform customizations on the SAP BusinessObjects Business Intelligence platform Client Tools.

3.2 Quick start for the Business Intelligence platform (Windows)

This section shows you how to run the customization tool to create a customized installation program for the SAP BusinessObjects Business Intelligence platform (BI Platform). It uses the sample configuration file that is provided with this tool. When you are finished this tutorial, you can run your customized installation package and install a customized version of the BI Platform.

The customizations include changing the default installation type, removing features, hard-coding the product keycode, changing the default installation folder, renaming the product, and changing the Windows **Start** menu shortcut for the Central Configuration Manager feature. They are described in more detail in the configuration file.

1. Set up the customization tool.
   a) Create a working folder on your development machine, for example `C:\SAPCustomTool\packages`.
   b) Copy the contents of the BI Platform installation package to `C:\SAPCustomTool\packages`.

      The installation package contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries. See *To download the server installation program* [page 16] for instructions.

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c) (Optional). Add your keycode to the sample configuration file.

In an XML editor, open the file `C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool\example_customization_win_boe.xml` and replace the phrase `PutYourKeyCodehere` with your BI Platform keycode. If you do not enter your keycode into the configuration file, you can use the Central Management Console to enter it after installing the customized BI Platform.

d) Create the folder `C:\SAPCustomTool\output`.

This folder must be empty.

e) Run the following command from the command prompt: `cd C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool`

The folder `CustomizationTool` contains the executable `customizationtool.exe` and the sample configuration file `example_customization_win_boe.xml`.

2. Run the following command from the command prompt:

```
customizationtool.exe xml=example_customization_win_boe.xml packageDir=C:\SAPCustomTool\packages outputDir=C:\SAPCustomTool\output logDetail=error > C:\oemlog.log
```

Verify that the customized installation program was created at `C:\SAPCustomTool\output`. Ensure no errors were reported in the log file `oemlog.log`.

> **Note**
>
> The customization tool may take several minutes to complete. You can check its progress by viewing the log file.

3. Use `C:\SAPCustomTool\output\setup.exe` to run the customized SAP BusinessObjects Business Intelligence platform installation program.

The BI Platform is installed with the customizations described in the configuration file.

3.3 Quick start for the Business Intelligence platform (Unix or Linux)

This section shows you how to run the customization tool to create a customized installation program for the SAP BusinessObjects Business Intelligence platform (BI Platform). It uses the sample configuration file that is provided with this tool. When you are finished this tutorial, you can run your customized installation package and install a customized version of the BI Platform.

The customizations include changing the default installation type, removing features, hard-coding the product keycode, changing the default installation folder, and renaming the product. They are described in more detail in the configuration file.

1. Set up the customization tool.

a) Create a working folder on your development machine, for example `/usr/jdoe/bip/package`.

b) Copy the contents of the BI Platform installation package to `/usr/jdoe/bip/package`.

The installation package contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries. See *To download the server installation program* [page 16] for instructions.

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c) (Optional). Add your keycode to the sample configuration file.

In an XML editor, open the file `/usr/jdoe/bip/package/Collaterals/Tools/CustomizationTool/example_customization_linux_boe.xml` and replace the phrase `PutYourKeyCodehere` with your BI Platform keycode. If you do not enter your keycode into the configuration file, you can use the Central Management Console to enter it after installing the customized BI Platform.

d) Create the folder `/usr/jdoe/bip/output`. This folder must be empty.

e) Change to the folder `/usr/jdoe/bip/package/Collaterals/Tools/CustomizationTool`.

This folder contains the executable `customizationtool.sh` and the sample configuration file `example_customization_linux_boe.xml`.

2. Run the following command from the command prompt:

```
./customizationtool.sh xml=example_customization_linux_boe.xml packageDir=/usr/jdoe/bip/package outputDir=/usr/jdoe/bip/output logDetail=error &> custombip.log
```

The customizations that you see in the installation program and in the installed product are described in the configuration file `/usr/jdoe/bip/package/Collaterals/Tools/CustomizationTool/example_customization_linux_boe.xml`.

Verify that the customized installation program was created at `/usr/jdoe/bip/output`. Ensure no errors were reported in the log file `custombip.log`.

> **Note**
>
> The customization tool may take several minutes to complete. You can check its progress by viewing the log file.

3. From the commmand prompt, use `/usr/jdoe/bip/output/setup.sh` to run the customized BI Platform installation program.

The BI Platform is installed with the customizations described in the configuration file.

3.4 To download the server installation program

1. Go to *https://service.sap.com/support* > **Software Downloads**.
2. On the *Find your software* tab, under the *A–Z Index*, click **Installations and Upgrades**.
3. Select **B** > **SBOP BI platform (former SBOP Enterprise)** > **SBOP BI PLATFORM (ENTERPRISE)** > **SBOP BI PLATFORM 4.1**.
4. Select **Installation and Upgrade** and then select your platform.
5. Select all of the packages titled *SBOP BI PLATFORM <version> SERVER* plus any additional add-on products you require, then follow the instructions on the website to download and extract the packages.

The software may take a long time to download, and you may need to contact the system administrator to ensure your company's firewall will not terminate the download process.

Support Packages and Patches are installation programs that contain updates to BI platform software. You can download them from *https://service.sap.com/support* > **Software Downloads**. On the *Find your software* tab,

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under the *A–Z Index*, click **Support Packages and Patches**. For more information on installing Support Packages and Patches, see the SAP BusinessObjects BI Suite Update Guides.

3.5 Planning the customization process

To use the SAP BusinessObjects customization tool:

1. Download the installation program. See *To download the server installation program* [page 16].
2. Decide what customizations are required. See *Creating the configuration file* [page 18].
3. Write the configuration file to specify the customizations.
4. Run the customization tool to create a customized installation program.
5. Run the customized installation program to install a customized version of SAP BusinessObjects Business Intelligence platform.

3.5.1 Best practices

This section provides recommendations for creating a customized installation program.

Validate the configuration file

You may want to validate the configuration file before running the tool. Use the *validate* command-line parameter.

Reduce product size

Customers prefer a smaller installation program and a smaller installed product. To keep the product as small as possible:

- Remove any language packs that are not required.
- Remove any features that are not required.
- Remove any items from the `Collaterals` folder that are not required.
- Remove the default database if it is not required.

Apply customized names consistently

The product name and version number appear in several places in the installation program and in the installed product. Ensure you verify customizations in the following locations:

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- Product name, product version, and product major version
- Windows **Start** menu entry and all feature shortcuts
- Windows *Add Remove Program* utility
- Default installation folder

Consider name change in all languages

It is good practice to consider how the customized name appears in all supported languages.

Modify patch installation programs to be consistent with the main installation program

You must apply the same customizations to Support Packages and Patches as you applied to the main release. If you release a customized main installation program, then try to release a Support Package or Patch installation program with different customizations, you might see unpredictable results which might not be repairable using standard rollback procedures.

Test rollback, modify, and repair installations for Support Packages and Patches

Rollback, modify, and repair are supported for customized Support Packages and Patches, provided they have been customized in a manner consistent with the main installation package. It is recommended to test these scenarios.

Related Information

Command line parameters [page 38]

3.6 Creating the configuration file

The following section describes the customizations you can make to the installation program by editing the configuration file:

- Renaming the product
  - Customizing the product name and version number

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- Customizing the Windows **Start** menu shortcuts
- Customizing the Windows *Add Remove Program* utility
- Customizing the installation folder

- Customizing user input
- Removing installation screens
- Embedding a keycode
- Removing features
- Preventing prerequisite checks
- Removing language packs
- Preventing the WDeploy tool from running
- Removing the default database
- Changing resources
  - Changing the images in the installation program
  - Changing the license agreement
- Removing items from the Collaterals folder

3.6.1 Configuration file overview

The SAP BusinessObjects customization tool uses information in the configuration file to perform the customizations. The configuration file is an XML document, and you use XML elements to describe your customizations. The sample configuration file is contained in this folder in the installation program:

Platform	Location of sample configuration file
Windows	`Collaterals\Tools\CustomizationTool\example_customization_win_boe.xml`
Unix or Linux	`Collaterals/Tools/CustomizationTool/example_customiza-tion_linux_boe.xml`

The file must have this format:

```
<oem name="<Any name>">
  <cloneProduct sourceId="product.businessobjects64-4.0-core-32">
  ...
  ...
  </cloneProduct>
</oem>
```

The configuration file for the full installation program can have any name, for example, `oem.xml`.

The configuration file for the Support Package installation program is described in the section *How to customize update installation programs* [page 42].

> **Note**
>
> The configuration file must be written in correct XML syntax. Use an XML editor to create and edit the file, and verify the format is correct before running the tool.

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Example

This example file specifies these customizations:

- Change the product long name to *Custom Company Server* for all languages.
- Change the product short name to *Custom CS* for all languages.
- Remove the installation screen titled *Choose Installation Type* and set the installation type to *Custom*.
- Specify that the only language packs included in the installation package are English, French, German, Italian, and Chinese.

```
<oem name="CustomCompanyServer">
  <cloneProduct sourceId="product.businessobjects64-4.0-core-32">

          <replaceString id="product.boe64_name" value="Custom Company Server"
lang="all"/>
    <replaceString id="product.boe64_shortname" value="Custom CS" lang="all"/>

    <replaceProperty id="InstallType" defaultValue="custom"/>
    <removeDialog id="ChooseInstallType.dialog"/>

    <languageIncludeList value="en;fr;de;it;zh_CN"/>

   </cloneProduct>
</oem>
```

3.6.2 Renaming the product

You can rename the product in the following ways:

- Customize the product name and version number.
- Customize the Windows *Add or Remove Programs* entry. (Windows only)
- Customize the *Start* menu entry for feature shortcuts. (Windows only)
- Customize the default installation folder.

The following sections explains these steps.

3.6.2.1 Customizing the product name and version number

You can customize the product name and version number. Use the `replaceString` element with the desired string ID:

```
<replaceString id="<string id>" value="<new value>" lang="<language list>"/>
```

There are four strings that represent the product name and version number: the product long name, the product short name, the product version number, and the product major version number. The full product name is composed of the product long name and the version number. The product short name and product major version are used in the Windows shortcut menu.

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Table 1: Product name and version number

String description	String ID	Default value
Product long name	`product.boe64_name`	SAP BusinessObjects BI platform
Product short name	`product.boe64_shortname`	BI platform server
Product version	`product_version`	4.1
Product major version	`product_majorversion`	4

Note

You should customize the product version and product major version together. For example, if you change product version to 1.0 you should also customize product major version to 1. Otherwise the version number in the menus will not match the version number in the product.

You can specify a new name for each language.

Example

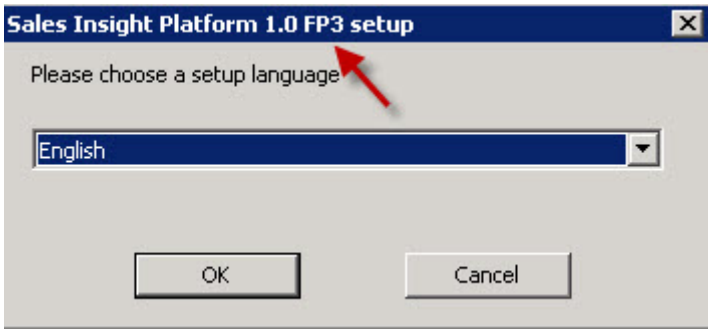
Change the product long name to *Sales Insight Platform* and the product short name to *Sales Platform* for English. Change the product long name to *Sales Insight Platform (French)* and the product short name to *Sales Platform (French)* for French. Change the product version to *1.0* and the product major version to *1* for both French and English. The product name and version number in languages other than English and French will remain as the default value.

```
<replaceString id="product.boe64_name" value="Sales Insight Platform" lang="en"/>
<replaceString id="product.boe64_shortname" value="Sales Platform" lang="en"/>

<replaceString id="product.boe64_name" value="Sales Insight Platform (French)"
lang="fr"/>
<replaceString id="product.boe64_shortname" value="Sales Platform (French)"
lang="fr"/>

<replaceString id="product_version" value="1.0" lang="en;fr"/>
<replaceString id="product_majorversion" value="1" lang="en;fr"/>
```

The customization appears below. Notice the version number “FP3” is not removed:



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To remove instances of “FP3” from the installation program

When you run the installation program, you may see instances of “FP3” in the product name. To remove “FP3”, modify the lines in the following files:

File name	Original line	Modified line
dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\uitext\BusinessObjects64\product.lang_<language code>.uitext.xml	<string id="product-name_patch" value=" FP3"/>	<string id="product-name_patch" value=""/>
dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\uitext\framework\setup.ui.framework.lang_<language code>.uitext.xml	<string id="product_patch" value="FP3"/>	<string id="product_patch" value=""/>
Same as above	<string id="product_patch_prespace" value=" FP3"/>	<string id="product_patch_prespace" value=""/>

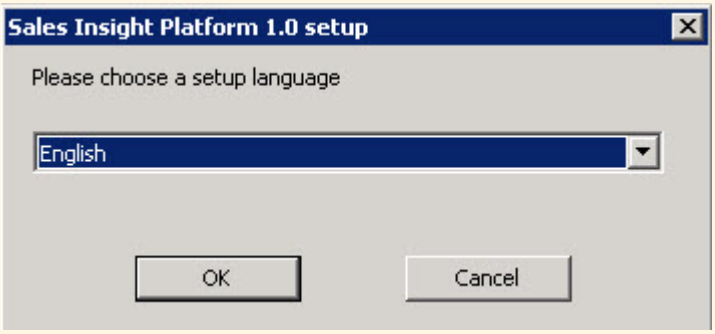
You must modify one file for every language that the installation program supports. For a list of language codes, see *Language codes* [page 49]. When you run the customization tool and then run the installation program, all instances of “FP3” will be removed. This process will be simplified in a future release.

Example

To remove “FP3” from the English installation program, modify the following files:

- `product.lang_en.uitext.xml`
- `setup.ui.framework.lang_en.uitext.xml`

The customization appears below:



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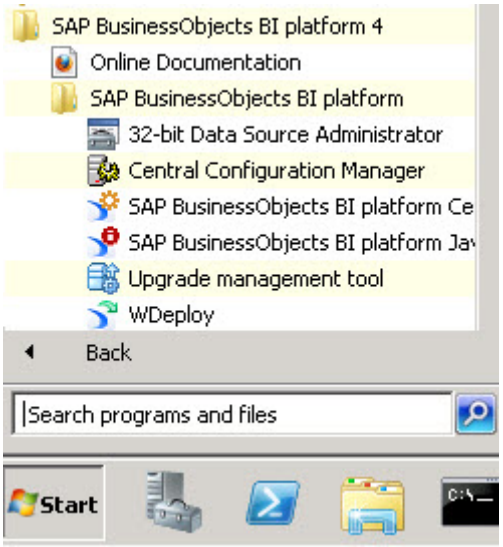
3.6.2.2 Customizing the Windows Start menu shortcuts (Windows only)

The Windows **Start** menu contains shortcuts for features such as the Central Management Console and BI launch pad. You can customize the name, location, and tooltip for each shortcut. Any shortcut that you do not customize will be grouped under the default **Start** menu, *SAP BusinessObjects BI platform 4*.

The default **Start** menu in English installations looks like this:



Use the `shortcut` element to customize the location, shortcut name, and tooltip for each feature:

```
<shortcut duSourceId="<shortcut deployment unit ID>">
  <arg id="linkFullPath" value="<full path to shortcut link>" lang="<language
list>"/>
  <arg id="description" value="<tooltip string>" lang="<language list>"/>
</shortcut>
```

Attribute	Value
`duSourceId`	The shortcut deployment unit ID that you want to modify. Typical values include: • `product.businessobjects64.shortcut.ccm-4.0-core` Central Configuration Manager • `product.businessobjects64.shortcut.infoview-4.0-core` BI launch pad • `product.businessobjects64.shortcut.cmc-4.0-core` Central Management Console For a complete list of `sourceId` values, see *Shortcut deployment unit IDs (Windows only)* [page 47].
`linkFullPath`	The full path to the shortcut link. Be sure to add .lnk to shortcut link or the link will not be created. You can put the shortcut link on the **Start** menu or you can put it on the desktop. The SAP BusinessObjects customization tool will create the links correctly.

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Attribute	Value
	You can specify one link for each language. For a list of language codes, see *Language codes* [page 49].
`description`	The tooltip string to display when the user hovers the mouse over the shortcut. You can specify one tooltip for each language.

Note

You can customize the link, but not the tooltip, for the following shortcuts:

- BI Launchpad (formerly InfoView)
- Online documentation
- WACs stored in InfoView
- Web Application Container Server

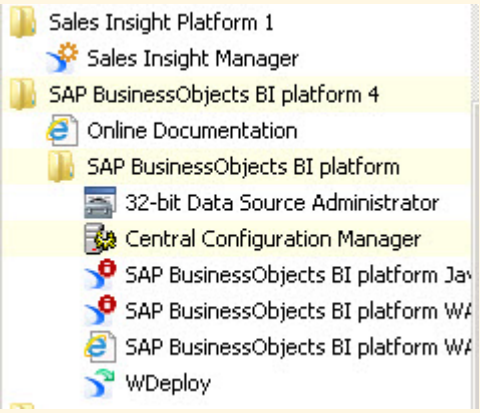
This will be resolved in a future release.

Example

This example customizes the name of the *Central Management Console* shortcut to *Sales Insight Manager* for English and *Sales Insight Manager (French)* for French, and places the shortcuts under the **Start** menu entry called *Sales Insight Platform 1*. It also customizes the tooltip to *Launch Sales Manager* for English and *Launch Sales Manager (French)* for French. The shortcut name and tooltip will remain unchanged for all other languages.

```
<shortcut duSourceId="product.businessobjects64.shortcut.cmc-4.0-
core">
            <arg id="linkFullPath" value="[programmenufolder]\Sales Insight
Platform 1\Sales Insight Manager.lnk" lang="en"/>
   <arg id="linkFullPath" value="[programmenufolder]\Sales Insight Platform 1
(French)\Sales Insight Manager (French).lnk" lang="fr"/>
            <arg id="description" value="Launch Sales Manager" lang="en"/>
            <arg id="description" value="Launch Sales Manager (French)"
lang="fr" />
</shortcut>
```

The customization appears below:



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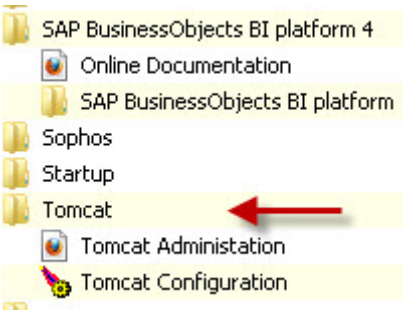
Modifying the tomcat shortcut

There are two links for the Tomcat shortcut: *Tomcat Administration* and *Tomcat Configuration*, shown below:



You must take extra steps to customize this shortcut. Use this `shortcut` element to customize the *Tomcat Administration* link. Note the `pathToTarget` element.

```
<shortcut duSourceId="product.businessobjects64.shortcut.tomcat-4.0-core"
pathToTarget="http://localhost:[TomcatConnectionPort]/manager/html">
  <arg id="linkFullPath" value="<full path to shortcut link>" lang="<language
list>"/>
  <arg id="description" value="<tooltip string>" lang="<language list>"/>
</shortcut>
```

Use this `shortcut` element to customize the *Tomcat Configuration* link. Note the `pathToTarget` element.

```
<shortcut duSourceId="product.businessobjects64.shortcut.tomcat-4.0-core"
pathToTarget="[INSTALLDIR]tomcat\bin\tomcat7w.exe">
  <arg id="linkFullPath" value="<full path to shortcut link>" lang="<language
list>"/>
  <arg id="description" value="<tooltip string>" lang="<language list>"/>
</shortcut>
```

Example

This example customizes the name of the *Tomcat Administration* shortcut to *tomcat(english and french) shortcut1* for English and French installations, and *tomcat (German) shortcut1* for German installations. It places the shortcuts in the **Start** menu entry called *Company Programs* . It customizes the tooltip to *tomcat(english and french) shortcut1* for English and French, *tomcat (all others) shortcut1* for all other languages.

```
<shortcut duSourceId="product.businessobjects64.shortcut.tomcat-4.0-core"
pathToTarget="http://localhost:[TomcatConnectionPort]/manager/html">
  <arg id="linkFullPath" value="[programmenufolder]\Company Programs
\tomcat(english and french) shortcut1.lnk" lang="en;fr"/>
  <arg id="linkFullPath" value="[programmenufolder]\Company Programs\tomcat
(German) shortcut1.lnk" lang="de"/>
     <arg id="linkFullPath" value="[programmenufolder]\Company Programs\tomcat
(all others) shortcut1.lnk" lang="it;zh_cn"/>
     <arg id="description" value="tomcat(english and french) shortcut1"
lang="en;fr"/>
  <arg id="description" value="tomcat (German) shortcut1" lang="de" />
     <arg id="description" value="tomcat (all others) shortcut1"
lang="it;zh_cn" />
</shortcut>
```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```
<shortcut duSourceId="product.businessobjects64.shortcut.tomcat-4.0-core"
pathToTarget="[INSTALLDIR]tomcat\bin\tomcat7w.exe">
  <arg id="linkFullPath" value="[programmenufolder]\Company Programs
\tomcat(english and french) shortcut2.lnk" lang="en;fr"/>
  <arg id="linkFullPath" value="[programmenufolder]\Company Programs\tomcat
(German) shortcut2.lnk" lang="de"/>
     <arg id="linkFullPath" value="[programmenufolder]\Company Programs\tomcat
(all others) shortcut2.lnk" lang="it;zh_cn"/>
    <arg id="description" value="tomcat(english and french) shortcut2"
lang="en;fr"/>
  <arg id="description" value="tomcat (German) shortcut2" lang="de" />
     <arg id="description" value="tomcat (all others) shortcut2"
lang="it;zh_cn" />
</shortcut>
```

3.6.2.3 Customizing the Windows Add Remove Program utility (Windows only)

You can customize the display name, the publisher, and the icon in the Windows *Add Remove Program* (ARP) utility. You cannot customize the version number. Use the following element:

```
<arp duSourceId="product.businessobjects64.arp-4.0-core">
  <arg id="publisher" value="<publisher name>"/>
  <arg id="display_name" value="<product name>"  lang="<language list>"/>
  <arg id="display_icon" value="<full path to icon>"/>
</arp>
```

Icons displayed in the Windows *Add Remove Program* utility are typically 16x16. Refer to Windows documentation for complete information on creating the icon.

Example

Change the product name in the Windows ARP utility to *Sales Insight Platform*. This change will only affect English installations. Change the publisher to *Data Excellence Corp*. Replace the display icon with the icon located at `C:\SAPCustomTool\DEC_logo.ico`.

Note

To use this example you must put an icon called `DEC_logo.ico` in the location `C:\SAPCustomTool`.

```
<arp duSourceId="product.businessobjects64.arp-4.0-core">
  <arg id="publisher" value="Data Excellence Corp"/>
  <arg id="display_name" value="Sales Insight Platform" lang="en"/>
  <arg id="display_icon" value="C:\SAPCustomTool\DEC_logo.ico"/>
</arp>
```

The customization appears below:

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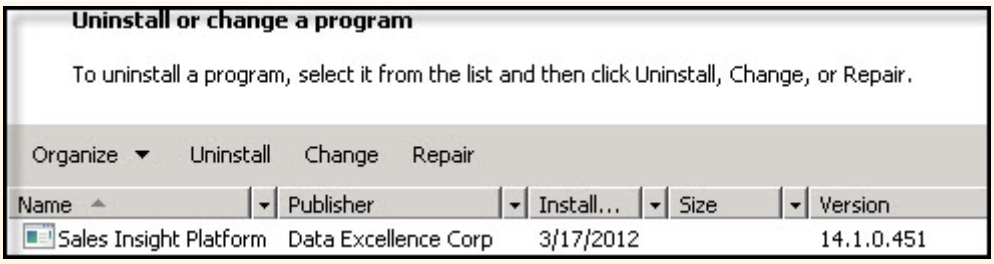

3.6.2.4 Customizing the installation folder

You can customize the default installation folder. Use the `replaceProperty` element with `id="InstallDir"`:

```
<replaceProperty id="InstallDir" defaultValue="<default installation folder>"/>
```

Use this element for both Windows and Unix installations.

Note

On Windows installations, the default installation folder must be a subfolder of `C:\Program Files (x86)`. It cannot be a subfolder of `C:\Program Files (x64)`.

Example

Change the default installation folder to `C:\Program Files (x86)\SalesDataInsight`.

```
<replaceProperty id="InstallDir" defaultValue="C:\Program Files
(x86)\SalesDataInsight"/>
```

3.6.3 Customizing user input

You can customize the default value of the user input that is collected by the installation program. Use the `replaceProperty` element with `id="<property id>"` and the new default value:

```
<replaceProperty id="<property id>" defaultValue="<value to use as default value>"/>
```

For a list of property IDs, see *Installation screen and property IDs* [page 50].

The Windows installation program collects user input using dialog boxes, radio buttons, and other user interface elements. The Unix and Linux installation program collects user input using the console entry. Both installation programs are customized in the same way.

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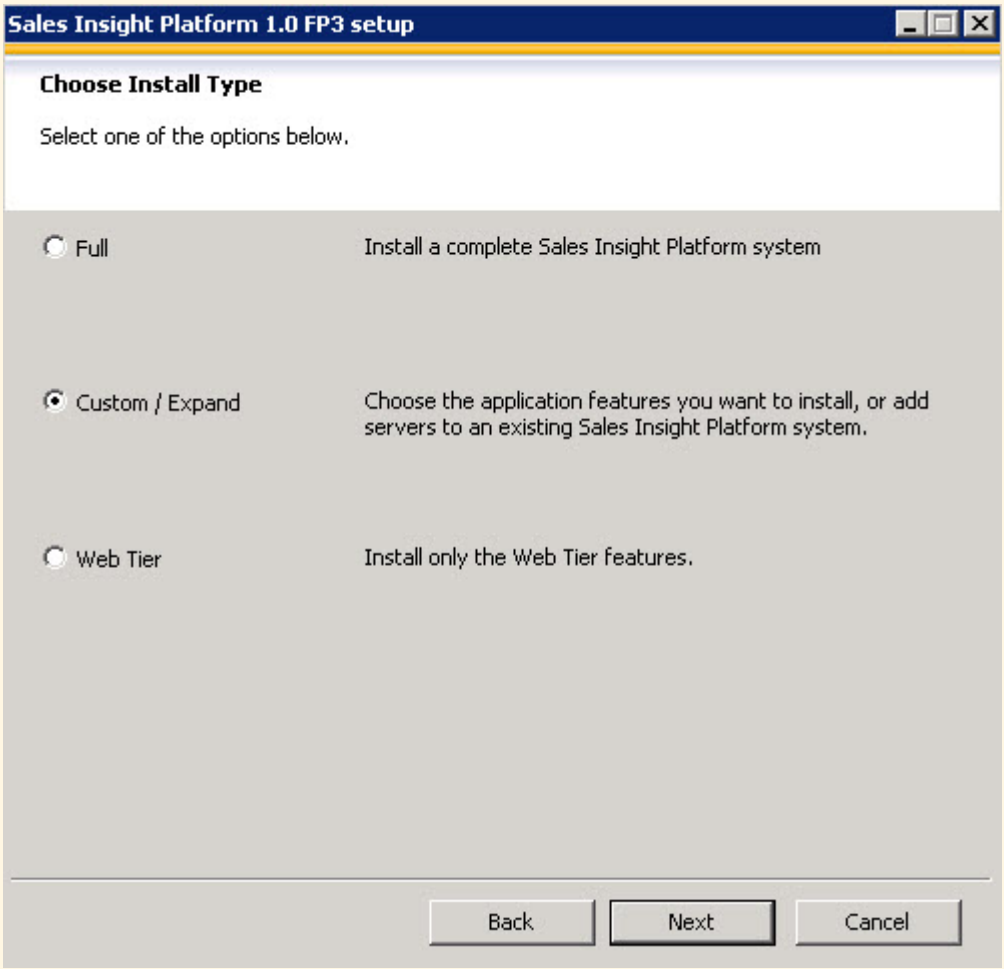
Example

On the installation screen called *Choose Install Type*, the default install type is *Full*. This example changes the default install type to *Custom/Expand*.

```
<replaceProperty id="InstallType" defaultValue="custom"/>
```

The customization appears below:



3.6.4 Removing installation screens

You can remove installation screens from the installation program. Use the `removeDialog` element with the installation screen ID:

```
<removeDialog id="<installation screen ID>"/>
```

For a list of installation screen IDs, see *Installation screen and property IDs* [page 50].

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Example

This example shows how to remove the installation screen titled *Select Java Web Application Server*.

```
<removeDialog id="ChooseWebAppServer.dialog"/>
```

3.6.5 Embedding a keycode

You can embed a keycode in the installation program so the customer does not need to enter one. This task involves:

- Providing a default value for the keycode
- Removing the installation screen in which the user enters a keycode

Example

Use the `replaceProperty` element with `id="ProductKey"` to provide a default keycode. Keycodes must have the format `XXXXX-XXXXXXX-XXXXXXX-XXXXXXX-XX`.

Use the `removeDialog` element with `id="EnterProductKey.dialog"` to remove the installation screen for the license key.

```
<replaceProperty id="ProductKey" defaultValue="XXXXX-XXXXXXX-XXXXXXX-XXXXXXX-XX"/>
<removeDialog id="EnterProductKey.dialog"/>
```

Related Information

Installation screen and property IDs [page 50]
Customizing user input [page 27]
Removing installation screens [page 28]

3.6.6 Removing features

SAP BusinessObjects Business Intelligence platform is composed of many optional features. You can remove a feature from the installation program. Use the `removeFeature` element with `id="<feature id>"`:

```
<removeFeature id="<Feature ID>"/>
```

For a list of feature IDs, see *Feature IDs* [page 44].

When you specify that a feature will be removed, the SAP BusinessObjects customization tool removes all executables, installation screens, and other files that belong to that feature. Removing unnecessary features is a good way to reduce the size of the customized product.

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> **Note**
>
> Do not remove every database access component. You must leave at least one database access component in order for the connection server to start and function correctly.

> **Example**
>
> Remove the Crystal Reports feature. This removes all Crystal Reports servers, files, and resources.
>
> ```
> <removeFeature id="CrystalReportsServers"/>
> ```

Related Information

Feature IDs [page 44]

3.6.7 Preventing prerequisite checks

Prerequisites are conditions that must exist on the host machine in order for the installation program to succeed. The installation program verifies the existence of these prerequisites before starting, and displays the results in the *Prerequisite check* screen. Removing the *Prerequisite check* screen prevents prerequisite checks from being performed. Use the `removeDialog` element with `id="CheckPreRequisites.dialog"`.

> **Note**
>
> It is recommended that you remove this installation screen only if you are performing the prerequisite checks by some other means. If the prerequisites are not met, the installation program will fail.

> **Example**
>
> This example removes the *Prerequisite check* screen and prevents prerequisite checks from being performed.
>
> ```
> <removeDialog id="CheckPreRequisites.dialog"/>
> ```

3.6.8 Installing on unsupported Red Hat Linux platforms

The BI platform installation program will prevent you from installing on unsupported platforms. However some platforms, such as Red Hat clones, are not supported but can successfully host a BI platform installation. You can remove the prerequisite checks to enable the BI platform installation to run on unsupported platforms using the following tasks:

1. Remove resource checks from `setup.sh`.

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2. Remove prerequisite check from `product.seed.xml`.
3. Manually verify prerequisites are met for your chosen platform.

1. Remove the following section from the file `setup.sh`. This section verifies the availability of resources in the directory `/etc/redhat-release` and must be removed.

```
# Verify that the system has the libraries required to run the setupengine.
# Because the setup engine is 32bit, it requires 32bit libraries, however
# some linux distrobutions do not ship 32bit binaries by default, therefore
# we need to check for glibc-2.12-1.7.el6.i686 or higher on RedHat and libstdc+
+33-32bi
# on SuSE
osname=`uname -s`
if [ "$osname" = "Linux" ]; then
    if [ -f "/etc/redhat-release" ]; then
        version="`cat /etc/redhat-release | sed 's/.* \([0-9,.]*\) .*/\1/'`"
        if [ "$version" = "6.0" ]; then
            glibc="`rpm -qa | grep glibc.*i686 | awk -F- '{ if (NF == 3)
split($2,a,"."); if (((a[1] == 2) && (a[2] >= 12)) || ( a[1] > 2)) glibcFound =
"true"} END { print glibcFound }'`"
            if [ "$glibc" = "" ]; then
                requiredLibs=$requiredLibs" glibc-2.12-1.7.el6.i686 or higher."
            fi
        fi
    fi
    if [ -f "/etc/SuSE-release" ]; then
        version="`cat /etc/SuSE-release | grep "VERSION = 11"`"
        if [ "$version" != "" ]; then
            libstd="`rpm -q -a | grep libstdc++33-32bit`"
            if [ "$libstd" = "" ]; then
                requiredLibs="$requiredLibs libstdc++33-32bit"
            fi
        fi
    fi
    if [ "$requiredLibs" != "" ]; then
        echo "Installation aborted. The following libraries are required to run
the installer:$requiredLibs"
        exit 0
    fi
fi
```

2. Remove the following section from the file `dunit/product.businessobjects64-4.0-core-32/product.seed.xml`. This section uses the `/etc/redhat-release` file to check installed patches and must be removed.

```
<prerequisite id="CheckPatchLevel"
description="#prerequisite.CheckPatchLevel.description#"
reason="[CheckPatchLevelFailReason]" type="warn">
    <condition property="IsFailedPatchLevelCheck" value="0"/>
  </prerequisite>
```

3. Ensure that the operating system on which you will run the customized installation program meets all prerequisites and has all required libraries installed. Look at the sections you removed from the `setup.sh` and the `product.seed.xml`. Also look at the following documentation:
   - Product Availability Matrix (Supported Platforms/PAR), available on the SAP BusinessObjects section of the SAP Support Portal at: *https://service.sap.com/bosap-support*
   - *Additional requirements for Red Hat Linux* in the *Business Intelligence Platform Installation Guide for Unix*.

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3.6.9 Removing language packs

The installation program allows the user to select which language packs to install. A language pack contains translated versions of all the strings that are used by the installed product. By default, all possible language packs are included in the installation program. You can specify which language packs to include. Use the `languageIncludeList` element with a list of language codes:

```
<languageIncludeList value="<list of language codes>"/>
```

For a list of language codes, see *Language codes* [page 49].

> **Note**
>
> Language packs can be large. The installation program will be smaller if fewer language packs are included.

> **Example**
>
> Include English, French, and German language packs in the installation program. The user can select from this list during installation.
>
> ```
> <languageIncludeList value="en;fr;de"/>
> ```

3.6.10 Preventing the WDeploy tool from running

If the user installs a web application server other than the default one, the WDeploy tool will run when the installation is finished. On Windows platforms, WDeploy is a GUI tool while on Unix and Linux platforms, it is a script.

You can turn this feature off. Use with the `replaceProperty` element with `defaultValue="0"`

> **Example**
>
> ```
> <replaceProperty id="LaunchWDeploy" defaultValue="0"/>
> ```

3.6.11 Removing the default database

The default database is included with the installation program, and customers can choose to use it as the system database. The default database is Sybase SQL Anywhere.

If the default database is not required you can remove it and force customers to choose another. Removing the default database is a good way to reduce the size of the installation program.

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To remove the default database

Use the `<removeFeature>` element with `id="PlatformServers.IntegratedDB.SQLAnywhere"`. You may also want to remove the installation screen titled *Select Default or Existing Database* and set the user input property to **Use an existing database**.

Example

This example removes the default database. It also removes the installation screen titled *Select Default or Existing Database*, and sets the user input property to **Use an existing database**.

```
<removeFeature id="PlatformServers.IntegratedDB.SQLAnywhere"/>
<removeDialog id="SelectDataSource.dialog"/>
<replaceProperty id="SelectIntegratedDatabase" defaultValue="0"/>
```

3.6.12 Changing resources

The installation program stores image and text files as resources in this folder:

`\dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\resources`

You can customize the resources in this folder. Resources that are commonly customized include:

- Images in the installation program
- License agreement in the installation program

To customize a resource:

1. Create a custom resources folder, for example (on Windows)`C:\SAPCustomTool\MyResources`. The file can have any name, but will be visible to customers. Use the same folder for all resources that you customize.
2. Create a new resource with the same name and filepath as the original resource, and place it into the custom resources folder. See the related topics section for specific examples.
3. Add the `<resources>` element to the configuration file to specify the location of the custom resources folder, for example:
   `<resources cleanTarget="no" sourcePath="C:\SAPCustomTool\MyResources"/>`

cleanTarget

If you set the attribute `cleanTarget='yes'`, the customization tool will delete the original `resources` folder and use only those resources included in the custom resources folder. This option is *not* recommended.

Related Information

Customizing the images in the installation program [page 34]

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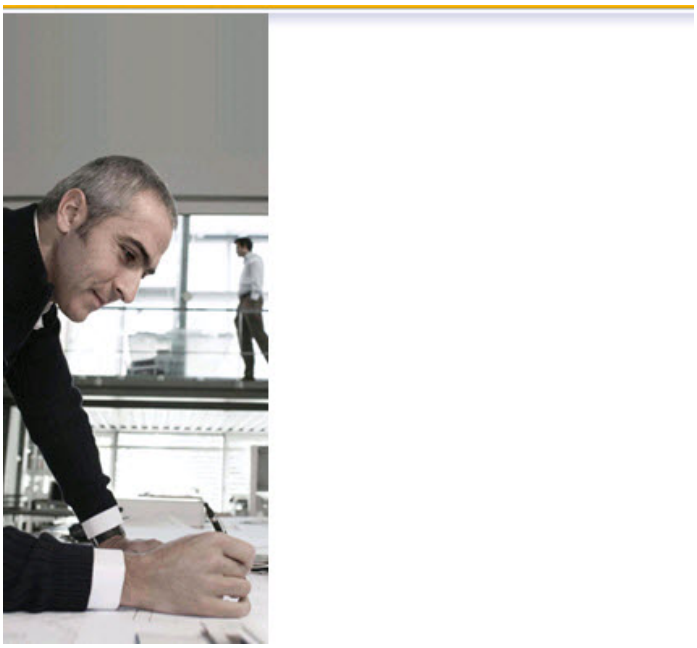
Customizing the license agreement [page 35]

3.6.12.1 Customizing the images in the installation program

You can customize the images in the installation program including the welcome screen, the top image for all screens, and the billboard for the progress dialog. Images are stored as files in the resources folder:

`dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\resources`

Table 2: Image files in the `resources` folder

Image name	File name	Size (W x H)	Default image
Welcome screen	dialog-Full.bmp	500 x 400 px	
Top image for all screens	dialog-Top.bmp	500 x 83 px	
Billboard for progress dialog	billboard.bmp	500 x 193 px	

You customize an image by creating a new image file, putting the file in the custom resources folder, and adding the `resources` element to the configuration file.

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Example

Customizing the image in the welcome screen on Windows platforms

1. Create a folder called `MyResources` in the location `C:\SAPCustomTool`
2. Create a new image file called `dialogFull.bmp` and place it in the `C:\SAPCustomTool\MyResources` folder
3. Ensure the `resources` element exists in the configuration file as follows:
   `<resources cleanTarget="no" sourcePath="C:\SAPCustomTool\MyResources"/>`

Related Information

Changing resources [page 33]

3.6.12.2 Customizing the license agreement

You can customize the license agreement that is presented to the user during installation. License agreements are stored as text files in the resources folder:

`dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\resources\<language code>`

For example, on Windows platforms, the English license agreement is located here:

`dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\resources\en\license_en.rft`

On Unix and Linux platforms, the English license agreement is located here:

`dunit/product.businessobjects64-4.0-core-32/setup.ui.framework/resources/en/license_en.txt`

For a list of language codes, see *Language codes* [page 49].

You customize the license agreement by creating a new license file, putting the file in the custom resources folder, and adding the `resources` element to the configuration file.

Example

Customize the Japanese license agreement on Windows platforms

The Japanese license agreement is stored here:

`dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\resources\ja\license_ja.rtf`

To customize the Japanese license agreement:

1. Create a folder called `ja` in the location `C:\SAPCustomTool\MyResources`.
2. Create a new license agreement file called `license_ja.rtf` and place it in the `C:\SAPCustomTool\MyResources\ja` folder.

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3. Ensure the `resources` element exists in the configuration file as follows:
```
<resources cleanTarget="no" sourcePath="C:\SAPCustomTool\MyResources"/>
```

Related Information

Changing resources [page 33]

3.6.13 Removing items from the Collaterals folder

The SAP BusinessObjects Business Intelligence platform installation program stores tools, samples, and documentation in the `Collaterals` folder of the installation program. By default, a customized installation program will contain the default `Collaterals` folder with the default contents. You can remove unnecessary items from the `Collaterals` folder in order to reduce the size of your customized installation program. Use the `collaterals` element with `cleanTarget="yes"` and `sourcePath="<full path to custom Collaterals folder>"`:

```
<collaterals cleanTarget="yes" sourcePath="<full path to custom Collaterals
folder>"/>
```

> **Note**
>
> You must set the `cleanTarget` attribute to `yes` so the customization tool will replace the original folder with the new folder.

To remove items from the Collaterals folder

1. Copy the contents of the existing `Collaterals` folder to a new location, for example (on Windows) `C:\SAPCustomTool\Utilities`.
2. Remove any items from `C:\SAPCustomTool\Utilities` that are not required by your customized installation program. See below for more information.
3. Add the `<collaterals>` element to the configuration file to specify the location of the custom collaterals folder, for example:

```
<collaterals cleanTarget="yes" sourcePath="C:\SAPCustomTool\Utilities"/>
```

Table 3: Description of items in the `Collaterals` folder

Folder	Description	When to remove
`Collaterals > Add-Ons > SAP`	Provides connectivity to SAP systems.	Remove if there is no need to connect to SAP systems.

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Folder	Description	When to remove
`Collaterals > Add-Ons > Subversion`	Subversion is the default version control system that is used by Lifecycle Management (LCM).	Remove if the LCM feature is removed.
`Collaterals > Add-Ons > Tivoli Agent`	The server monitoring feature can integrate with IBM Tivoli, and this item provides the connectivity.	Remove if integration with IBM Tivoli is not required.
`Collaterals > Customization Template`	Required template files.	Do not remove this folder.
`Collaterals > DiagnosticsAgent7.3`	SAP Solution Manager Diagnostics (SMD) agent. SMD is used by SAP Support tools to troubleshoot installed product.	Remove if the SMD feature is removed.
`Collaterals > Docs`	Documentation in every language that SAP BusinessObjects Business Intelligence platform supports.	Remove any languages that are not included in the customized installation program. For a list of language codes, see *Language codes* [page 49].
`Collaterals > Tools > CustomizationTool`	The SAP BusinessObjects customization tool.	Remove this folder if the customers do not need to customize their own installation programs.
`Collaterals > Tools > LCM command line tool`	Command-line utility for Lifecycle Management (LCM).	Remove if the LCM feature is removed.
`Collaterals > Tools > wdeploy`	WDeploy is used to deploy web applications to web application servers other than Tomcat.	Not recommended to remove. Remove only if customers will use Tomcat exclusively.

3.7 Running the tool

The SAP BusinessObjects customization tool is included with the SAP BusinessObjects Business Intelligence platform installation package in this location:

`Collaterals\Tools\CustomizationTool`

On Windows platforms, the tool is named *customizationtool.exe*. On Unix and Linux platforms, the tool is named *customizationtool.sh*

This section explains the command line parameters.

> **Note**
>
> The customization tool may take several minutes to complete. You can check its progress by viewing the log file.

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Example

This example runs the customization tool on a Windows platform. To use this example you must:

- Create a configuration file called `oem.xml` in the location `C:\SAPCustomTool`.
- Download the SAP BusinessObjects Business Intelligence platform installation package to the folder `C:\SAPCustomTool\packages`. See *To download the server installation program* [page 16].
- Create a folder called `output` in the location `C:\SAPCustomTool`.

```
C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool
\customizationtool.exe
xml=C:\SAPCustomTool\oem.xml packageDir=C:\SAPCustomTool\packages outputDir=C:
\SAPCustomTool\output
logDetail=error > C:\oemlog.log
```

3.7.1 Command line parameters

Table 4: Required parameters

Parameter	Description	Example (Windows)
xml	Full path to the configuration file.	`xml=example_customiza-tion_win_boe.xml`
packageDir	Full path to the folder that contains the installation program you are modifying. The installation program is downloaded from SAP Service Marketplace in order to start the installation of SAP BusinessObjects Business Intelligence platform. It contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries.	`packageDir=C:\SAPCustomTool\packages`
outputDir	Full path to the folder where the customized installation program will be created. Must be empty before running the tool.	`outputDir=C:\SAPCustomTool\out-put`

Table 5: Optional parameters

Parameter	Description	Example (Windows)
baselinePath	Full path to a root folder containing the original, non-customized versions of all previous full and update installation programs you have customized. Use a semicolon (`;` - Windows) or colon (`:` - Unix) to separate multiple root folders.	Assume you want to customize SAP BusinessObjects Business Intelligence platform 4.0 Support Package 5 and you customized the previous programs: `4.0 SP2 (Full install), 4.0 SP4`. Customize 4.0 Support Package 5, and provide the root folder path to the non-customized packages for the 4.0 SP2 full installation and SP4 update installation. For ex-

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Parameter	Description	Example (Windows)

		ample, if the non-customized packages are contained in the following directory structure:
		`C:\productUpdates\4.0\`
		`\SP2 Full\`
		`\SP4\`
		set the value to `baselinePath=C:\productUpdates\4.0\`
		See *Customizing update installation programs* [page 39] for more information and examples of the *baselinePath* parameter.

logDetail	The level of logging detail. Default value is **`info`**. Accepted values: • `error` • `warn` • `info` • `debug` • `trace`	`logDetail=warn`
action	The tool mode. Accepted values are: • `generate` (default value) The tool performs the specified customizations. • `validate` The tool validates the configuration file but does not perform any customizations.	`action=validate`

Related Information

Quick start for the Business Intelligence platform (Windows) [page 14]
Quick start for the Business Intelligence platform (Unix or Linux) [page 15]

3.8 Customizing update installation programs

Update installation programs are minor releases, Support Packages or Patches that contain updates to your existing BI platform software. Support Packages contain more updates than Patches but are released less

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frequently. You can use the SAP BusinessObjects customization tool to customize these update installation programs, but some modifications to the command line and configuration file are required.

3.8.1 Frequently asked questions about update installation programs

Where do I find Support Packages and Patches?

1. Go to *https://service.sap.com/bosap-support* > **Software Downloads**.
2. On the *Find your software* tab, under the *A–Z Index*, click **Support Packages and Patches**.
3. Select **B** > **SBOP BI platform (former SBOP Enterprise)** > **SBOP BI PLATFORM (ENTERPRISE)** > **SBOP BI PLATFORM 4.1** > **Comprised Software Component Versions** > **SBOP BI PLATFORM SERVERS 4.1** > `<platform>`.
4. Select your Support Package or Patch, then follow the instructions on the website to download and extract the objects.

What parts of update installation programs can I customize?

You can customize the same aspects of update installation programs as you did in the main installation program. Because minor release, Support Package and Patch updates contain fewer installation screens, not all of the customization steps apply. It is recommended to run the minor release, Support Package or Patch before customizing it to determine what customizations you require.

How do I customize update installation programs?

Update installation programs use the same architecture as a main installation program for the BI platform (full installation), so you can use the customization tool as described in*Creating the configuration file* [page 18] and *Running the tool* [page 37], with some modifications to the command line and the configuration file. See *How to customize update installation programs* [page 42] in this section.

Is it necessary to customize and install all minor release, Support Package and Patch updates?

No. As with non-customized versions of the BI platform, you only need to install the updates that you want. This may be a minor release, Support Package, a Patch, or any valid combination of the three updates.

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Can I install a non-customized update on a customized BI platform installation?

Yes. Both customized and non-customized updates may be applied to your customized installation. However, non-customized minor release, Support Package, or Patch installation programs will not display your branding or installation customizations (such as removed features or shortcut changes) you created for the main installation program.

I have delivered a customized version of BI platform to customers but I want to modify the customizations in an update installation program. Is this possible?

This scenario is not supported. The customizations that you make to update installation programs must be consistent with the original customizations.

3.8.2 Quick start for update installation programs

Ensure you have customized and installed the main installation program, such as SAP BusinessObjects Business Intelligence platform Support Package 4 (full installation) using the instructions in *Quick start for the Business Intelligence platform (Windows)* [page 14], and that the non-customized installation program is located in `C:\SAPCustomTool\packages`.

This section shows you how to run the SAP BusinessObjects customization tool to customize the installation program for a Support Package (update installation). It uses the sample configuration file provided with the customization tool. Notice that the sample configuration file contains the `<cloneProduct>` element for the main installation program as well as the `<clonePatchProduct>` element for a Support Package update installation program.

> **Note**
>
> You can run this example only when a Support Package is available on *https://service.sap.com/bosap-support*.

1. Download the installation program for the BI Platform 4.0 Support Package to the folder `C:\SAPCustomTool\SupportPackage`.
2. Ensure the `product_version` for the `<clonePatchProduct>` element in the configuration file matches the version number of the Support Package that you downloaded. See *Customizing the product name and version number* [page 20].
3. Customize the BI Platform 4.0 Support Package and place the customized installation program in `C:\SAPCustomTool\output\SupportPackage`. Use the following command:

   ```
   customizationtool.exe xml=example_customization_win_boe.xml packageDir=C:\SAPCustomTool\SupportPackage baselinePath=C:\SAPCustomTool\packages outputDir=C:\SAPCustomTool\output\SupportPackage logDetail=error > C:\oemlog_SP04.log
   ```


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4. Use `C:\SAPCustomTool\output\SupportPackage\setup.exe` to run the customized installation program for the BI Platform 4.0 Support Package.

3.8.3 How to customize update installation programs

Use the configuration tool as described in *Creating the configuration file* [page 18] and *Running the tool* [page 37] to customize update installation programs for minor releases, Support Packages, and Patches, with the following differences:

- The configuration file must use the `clonePatchProduct` element (with the correct product ID), instead of the `cloneProduct` element.
- The configuration file must contain the complete, original `<cloneProduct>` element used when customizing the main installation package that you are updating, with no modifications. Do not add or remove features in the `<cloneProduct>` element as it may cause unpredictable results, especially when customizations involve removing features.
- The configuration file cannot contain more than one `clonePatchProduct`. If you are customizing both a Support Package and a Patch for example, you must create two configuration files: one file containing `cloneProduct` and `clonePatchProduct` for the Support Package, and the other file containing `cloneProduct` and `clonePatchProduct` for the Patch.
- Refer to all prerequisite installation programs using the *baselinePackages* command.

All configuration file elements and command-line parameters can be used to customize update installation programs, but not all of them are applicable to every minor release, Support Package, or Patch. Run the installation program for the update first to determine what you need to customize, then use the information in *Creating the configuration file* [page 18] and *IDs and codes for BI Platform customization* [page 44] to create the customization file.

To specify the product version in the configuration file

The configuration file for Support Packages and Patches must contain the `product version` in the `clonePatchProduct` element as shown below:

```
<oem name="<any name>">
  <clonePatchProduct sourceId="<product version>">
  ...
  </clonePatchProduct>
</oem>
```

The `product version` in the configuration file must match the version number of the installation program that you are customizing. To find the version number, look in the `dunit` folder for a folder with a name in this format:

`product.boe64.patch-4.x.x.x-core-32`

Use the name of this folder as the `product version`.

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Example

This example configuration file customizes the SAP BusinessObjects Business Intelligence platform 4.1 Patch 1, which has the product version `product.boe64.patch-4.1.0.1-core-32`. The configuration file customizes the product long name to *Custom Company Server* and the product short name to *Custom CS*.

```
<oem name="Custom Patch Tool">
 <clonePatchProduct sourceId="product.boe64.patch-4.1.0.1-core-32">
        ...
    </clonePatchProduct>
</oem>
```

To use the baselinePath parameter

Use the command line parameter *baselinePath* to refer to a root folder containing the original, non-customized versions of all previous full or update installation programs you have customized. This means you must keep the original installation packages.

Note

This parameter replaces the *baselinePackages* parameter introduced in 4.0 Feature Pack 3.

To simplify the *baselinePath* parameter value, reference a single root folder - the customization tool will ignore unneeded files and folders. Otherwise, use a semicolon (`;` - Windows) or colon (`;` - Unix) in the *baselinePath* value to specify multiple root folders. Consider the following examples on Windows.

Example

Customizing 4.0 SP5 Patch 2

Assume you are customizing BI platform 4.0 Support Package 5 Patch 2 and you customized the previous programs: `4.0 SP2 (Full install), 4.0 SP4, 4.0 SP5, 4.0 SP5 Patch 1`. Assume the non-customized installation programs are located in the following directory structure:

```
C:\productUpdates\4.0\
  \SP2 Full\
  \SP4\
  \SP5\
  \SP5 Patch 1\
```

Set the *baselinePath* parameter to the root folder:

```
baselinePath=C:\productUpdates\4.0\
```


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Example

Customizing 4.1 SP 1

Assume you are customizing BI platform 4.1 Support Package 1 and you customized the previous programs: `4.0 SP2 (Full install), 4.0 SP4, 4.0 SP5, 4.1`. Assume the non-customized installation programs are located in the following directory structure:

```
C:\productUpdates\
  \4.0\
    \SP2 Full\
    \SP4\
    \SP5\
  \4.1\
    \Full\
```

Set the *baselinePath* parameter to the root folder:

`baselinePath=C:\productUpdates\`

3.9 IDs and codes for BI Platform customization

The following section contains a list of all the IDs and codes you can use to customize the installation program:

- Feature IDs
- Shortcut deployment unit IDs (Windows only)
- String IDs
- Language codes
- Installation screen and property IDs

3.9.1 Feature IDs

Use these IDs in the `removeFeature` element to remove features and their components from the installation program and the installed product.

For example, this ID will remove all the web tier components, including `JavaWebApps1` and `IntegratedTomcat`:

```
<removeFeature id="WebTier"/>
```

- - `root`: (remove all features)
    - `WebTier`: (remove all web tier components listed below)
      - `JavaWebApps1` Java Web Applications
      - `IntegratedTomcat` (install bundled Tomcat web application server)

Note

If you remove the web tier feature, the web tier components will be removed from the installation program. However, the **`WebTier`** radio button will still be visible from the *Choose*

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Install Type screen. That is, the user will still see the three radio buttons: **`Full`**, **`Custom/Expand`**, and **`WebTier`**. This is a known issue and will be fixed.

- `Servers`: (remove all server components listed below)
  - `PlatformServers`: (remove all platform servers listed below)
    - `CMS` (Central Management Server)
    - `FRS` (File Repository Servers)
    - `PlatformServers.IntegratedDB.SQLAnywhere` (removes bundled Sybase SQL Anywhere database server)
    - `PlatformServers.EventServer`
    - `PlatformServers.WebAppContainerService` (WACS)
    - `AdaptiveProcessingServer` (platform processing)
    - `AdaptiveJobServer` (scheduling)
    - `Platform.RestWebService`
    - `Platform.Action.Framework.backend` (Insight to Action framework)
    - `Subversion` (Subversion version control system)
  - `ConnectionServices`: (removes all connectivity components listed below)
    - `ConnectionProcService`
  - `DataFederatorServices`: (remove all data federation components listed below)
    - `DataFederatorQueryService`
  - `AdvancedAnalysisServices`: *removes all Analysis components listed below)
    - `MultidimensionalAnalysisServices` (MDAS)
    - `BExWebApplicationsService`
  - `CrystalReportsServers`: (removes all SAP Crystal Reports components listed below)
    - `CrystalReportsProcServices` (SAP Crystal Reports Processing)
    - `CrystalReportSchedulingServices`
    - `CrystalReport2011ProcServices` (SAP Crystal Reports 2011 Processing)
    - `CrystalReport2011SchedulingServices` (SAP Crystal Reports 2011 Scheduling)
  - `WebIServers`: (removes all Web Intelligence components listed below)
    - `WebIProcServer` (Web Intelligence Processing)
    - `WebISchedulingServices` (Web Intelligence Scheduling)
  - `XcelsiusServers` (Dashboards)
  - `MobileServices`
    - `MobileServers`
    - `MobileAddon` (CMS plugin for Mobile)
  - `IntegrationServers`: (removes all integration components listed below)
    - `BWPublisherServer` (SAP BW authentication and SAP BW Publisher support)
- `MultitenancyManager`
- `AdministratorTools`: (removes all administrator tools listed below)
  - `UpgradeManager` (Upgrade management tool)
- `DeveloperTools`: (removes all developer tool components listed below)

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- `BOE64bitNETSDK` (64-bit SAP BusinessObjects Business Intelligence platform .NET SDK)

- `DataAccess` (removes all database access components listed below)

> **Note**
>
> Do not remove every database access component. You must leave at least one database access component in order for the connection server to start and function correctly.

  - `DataAccess.DataFederator`
  - `DataAccess.HPNeoView`
  - `DataAccess.MySQL`
  - `DataAccess.GenericJDBC`
  - `DataAccess.GenericODBC`
  - `DataAccess.GenericOLEDB`
  - `DataAccess.OptionalDataDirectODBC`
  - `DataAccess.MaxDB`
  - `DataAccess.SAPHANA`
  - `DataAccess.Salesforce` (Salesforce.com)
  - `DataAccess.Netezza`
  - `DataAccess.Microsoft_AnalyticalServices`
  - `DataAccess.MicrosoftExchange`
  - `DataAccess.MicrosoftOutlook`
  - `DataAccess.Microsoft_SQLServer`
  - `DataAccess.Microsoft_Access`
  - `DataAccess.Ingres`
  - `DataAccess.Greenplum`
  - `DataAccess.IBMDB2`
  - `DataAccess.Informix`
  - `DataAccess.ProgressOpenEdge`
  - `DataAccess.Oracle`
  - `DataAccess.Sybase`
  - `DataAccess.Teradata`
  - `DataAccess.SAPBW`
  - `DataAccess.SAPERP`
  - `DataAccess.XMLWebServices`
  - `DataAccess.OData`
  - `DataAccess.Excel`
  - `DataAccess.SAP` (security and data access for SAP BW and R/3 systems)
  - `DataAccess.PersonalFiles`
  - `DataAccess.JavaBean`
  - `DataAccess.OpenConnectivity`
  - `DataAccess.HSQLDB`
  - `DataAccess.Derby`
  - `DataAccess.HadoopHive`

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- `DataAccess.Essbase`
- `DataAccess.Peoplesoft` (PeopleSoft Enterprise)
- `DataAccess.JDEdwards` (JD Edwards EnterpriseOne)
- `DataAccess.Siebel` (Siebel Enterprise Server)
- `DataAccess.OracleEBS` (Oracle E-Business Suite)
- `DataAccess.Universe` (SAP BusinessObjects Universe)
- `DataAccess.MyCube` (OLAP Cube)
- `DataAccess.XML`
- `DataAccess.ADO.NET`
- `DataAccess.COMData`
- `DataAccess.DataSet` (Dataset Consumer)
- `DataAccess.SymantecACT`
- `DataAccess.BDE` (IDAPI Database DLL)
- `DataAccess.CDO` (Crystal Data Objects)
- `DataAccess.FieldDefinitions`
- `DataAccess.FileSystem`
- `DataAccess.NTEventLog`
- `DataAccess.WebActivityLog`
- `DataAccess.Btrieve` (Pervasive Database Driver)
- `DataAccess.dBase`
- `DataAccess.UWSC` (Universal Web Services Connector (UWSC))

- `Samples`: (remove sample reports and data sources)

Related Information

Removing features [page 29]

3.9.2 Shortcut deployment unit IDs (Windows only)

Use the deployment unit IDs in the `shortcut` element to change the location and name of the program shortcuts in the Windows **Start** menu.

Table 6: Shortcut deployment unit IDs

Shortcut deployment unit ID	Shortcut target
`product.businessobjects64.shortcut.wde-ploy-4.0-core`	WDeploy
`product.businessobjects64.shortcut.ccm-4.0-core`	Central Configuration Manager
`product.businessobjects64.shortcut.cmc-4.0-core`	Central Management Console

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Shortcut deployment unit ID	Shortcut target
`product.businessobjects64.shortcut.info-view-4.0-core`	BI launch pad (InfoView)
`product.businessobjects64.shortcut.odbc-4.0-core`	32-bit Data Source Administrator
`product.businessobjects64.shortcut.online-doc-4.0-core`	Online documentation
`product.businessobjects64.shortcut.tom-cat-4.0-core`	Apache Tomcat.
`product.businessobjects64.shortcut.up-grade-4.0-core`	Upgrade management tool
`product.businessobjects64.shortcut.wacs.in-foview-4.0-core`	WACs stored in InfoView
`product.businessobjects64.shortcut.wacs-4.0-core`	Web Application Container Server

Related Information

Customizing the Windows Start menu shortcuts (Windows only) [page 23]

3.9.3 String IDs

You can change the value of all strings in the installation program. You can replace a string for all languages or for a specific language. Use the `replaceString` element, for example:

```
<replaceString id="productname" value="Sales Data Insight lang="all"/>
```

Table 7: Commonly changed strings

String ID	Description
`product.boe64_name`	Product long name
`product.boe64_shortname`	Product short name
`product_version`	Product version
`product_majorversion`	Product major version

Related Information

Customizing the product name and version number [page 20]

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3.9.4 Language codes

The SAP BusinessObjects customization tool uses these language codes to represent supported languages:

language	Code
English	EN
Czech	CS
Danish	DA
Dutch	NL
Finnish	FI
French	FR
German	DE
Hungarian	HU
Italian	IT
Japanese	JA
Korean	KO
Norwegian Bokmal	NB
Polish	PL
Portuguese	PT
Romanian	RO
Russian	RU
Simplified Chinese	zh_CN
Slovak	SK
Spanish	ES
Swedish	SV
Thai	TH
Traditional Chinese	zh_TW
Turkish	TR

Related Information

Customizing the product name and version number [page 20]
Customizing the Windows Start menu shortcuts (Windows only) [page 23]
Customizing the Windows Add Remove Program utility (Windows only) [page 26]
Removing language packs [page 32]

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Customizing the license agreement [page 35]

3.9.5 Installation screen and property IDs

Use the installation screen IDs in the `removeDialog` element to remove screens from the installation program. For example, use this element to remove the *User Information* screen:

```
<removeDialog id="EnterProductKey.dialog"/>
```

Use the properties and the property values to prepopulate user input. For example, use this element to set the default installation type to *custom*:

```
<replaceProperty id="InstallType" defaultValue="custom"/>
```

> **Note**
>
> Property values are case-sensitive.

Table 8: Installation screen IDs and associated properties

Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
Check Prerequisites	`CheckPreRequisites.dialog`	Not applicable	Not applicable
Select Installer Language	`SelectUILanguage.dialog`	`SortedAvailableSetupLanguages`	Set of language codes that the installation program can be run in, for example `"en;ja"`
		`SetupUILanguage`	Single language code describing the language that the installation program will be run in, for example `"en"`
Welcome to the installation wizard	`ShowWelcomeScreen.dialog`	Not applicable	Not applicable
License Agreement	`ShowLicenseAgreement.dialog`	Not applicable	Not applicable
Configure Product Registration	`EnterProductKey.dialog`	`RegisteredUser`	*Username*
		`RegisteredCompany`	*Company name*
		`ProductKey`	*Product keycode*
Select Language Packages	`SelectLanguagePack.dialog`	`SelectedLanguagePacks`	The set of language packs to be installed, for example `"en;ja"` For a list of language codes, see *Language codes* [page 49].
Select Install Type	`ChooseInstallType.dialog`	`InstallType`	• `default` (Full) • `custom` • `webtier`

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
Configure Destination Folder	`ChooseInstallDir.dialog`	`InstallDir`	Installation folder
Select Default or Existing Database	`SelectDataSource.dialog`	`SelectIntegratedDatabase`	• `0` (Use an existing database) • `1` (Install and use the default database)
Expand Installation	`ExpandInstallMessage.dialog`	Not applicable	Not applicable
Select Java Web Application Server	`ChooseWebAppServer.dialog`	`WebAppServerType`	• `tomcat` • `manual` • `wacs`
Select Features	`SelectFeatures.dialog`	Not applicable	Not applicable
Select Version Management	`SelectLCM.dialog`	`NewOrExistingLCM`	• `existing` • `new`
Select New or Expand Installation	`ChooseExpandInstall.dialog`	`NewOrExpandInstall`	• `new` • `expand`
Configure Subversion	`SetLCMConfig.dialog`	`LCMName`	Repository name
		`LCMPort`	Repository port
		`LCMUserName`	Repository user
		`LCMPassword`	Repository password
		`LCMPasswordConfirm`	Confirm password
Configure Server Intelligence Agent (SIA)	`GetSIAInfo.dialog`	`SIAPort`	SIA port
		`SIAName`	Node name
Configure Central Management Server (CMS)	`GetCMSInfo.dialog`	`CMSPort`	Any valid port number
Configure CMS Account	`GetCMSPassword.dialog`	`CMSPassword`	The CMS password
		`CMSPasswordConfirm`	The CMS password
		`ClusterKey`	The CMS cluster key
		`ClusterKeyConfirm`	The CMS cluster key
Configure Sybase SQL Anywhere	`GetSQLAnywhereInfo.dialog`	`SQLAnywhereServerName`	The SQL Anywhere server name (Unix and Linux only)
		`SQLAnywherePort`	The SQL Anywhere port

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
		`SQLAnywhereAdminPassword`	The SQL Anywhere administrator password (username is `dba`)
Select Automatic Server Start	`ChooseToEnableServers.dialog`	`EnableServers`	• `0` (Stop servers upon installation) • `1` (Start servers upon installation)
Configure Tomcat	• `ShowTomcatInfo.dialog` • `GetTomcatInfo.dialog` Both dialog IDs must be included in the configuration file in order to remove the *Configure Tomcat* screen. That is, you must include two `removeDialog` elements in your configuration file.	`TomcatConnectionPort`	Connection port
		`TomcatShutdownPort`	Shutdown port
		`TomcatRedirectPort`	Redirect port
Select Connectivity for Solution Manager Diagnostics (SMD) Agent	`SelectSMDIntegrate.dialog`	`ChooseSMDIntegration`	• `nointegrate` (Do not integrate) • `integrate` (Integrate)
Configure Connectivity to SMD Agent	`ConfigureSMDAgent.dialog`	`SMDAgent_HOST`	SMD agent host
		`SMDAgent_PORT`	SMD agent port
Select Connectivity to Introscope Enterprise Manager	`SelectIntroscopeIntegrate.dialog`	`ChooseIntroscopeIntegration`	• `nointegrate` (do not integrate) • `integrate` (integrate)
		`Introscope_ENT_HOST`	Introscope host name
		`Introscope_ENT_PORT`	Introscope port number
Configure Connectivity to Introscope Enterprise Manager	`ConfigureIntroscope.dialog`	`Introscope_ENT_HOST`	Enterprise manager host
		`Introscope_ENT_PORT`	Enterprise manager port
		`Introscope_ENT_INSTRUMENTATION`	Set to `true` to indicate that you configured this installation screen
Configure HTTP Listening port	`GetWACSPort.dialog`	`WACSPort`	Port number for the web application container service
Select Existing Auditing Database Type	`SelectAuditDatabase.dialog`	`UsingAuditDBType`	• `sybase` • `db2`

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
			• oracle • mysql • mssql • maxdb • none
Select Existing CMS Database Type	SelectCMSDatabase.dialog	UsingCMSDBType	• sybase • db2 • oracle • mysql • mssql • maxdb
Existing CMS Deployment Information	SetRemoteCMSInfo.dialog	RemoteCMSName	Name of the existing CMS
		RemoteCMSPort	Port number for the existing CMS
		RemoteCMSAdminName	Administrator's username
		RemoteCMSAdminPassword	Administrator's password
SAP BusinessObjects BI platform has been successfully installed	ShowInstallCompleteLaunchWDeploy.dialog	LaunchWDeploy	• 0 (Do not launch WDeploy tool after install) • 1 (Automatically launch WDeploy tool after install)
Configure Auditing Database - DB2	ExistingAuditDB2.dialog	ExistingAuditingDBServer	DB2 alias name
		ExistingAuditingDBUser	Username
		ExistingAuditingDBPassword	Password
Configure CMS Repository Database - SQL Anywhere (ODBC)	ExistingCMSSQLAnywhere.dialog	ExistingCMSDBDSN	Data source name
		ExistingCMSDBUser	Username for existing database
		ExistingCMSDBPassword	Users's password
Configure Auditing Database - SQL Anywhere (ODBC)	ExistingAuditSQLAnywhere.dialog	ExistingAuditingDBDatabase	Name of existing auditing database
		ExistingAuditingDBUser	Username for existing database
		ExistingAuditingDBPassword	User's password

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
Configure Auditing Database - MaxDB	`ExistingAuditMaxDB.dialog`	`ExistingAuditingDBDatabase`	Name of existing auditing database
		`ExistingAuditingDBUser`	Username for existing database
		`ExistingAuditingDBPassword`	User's password
		`ExistingAuditingDBPort`	Port number for existing database
		`ExistingAuditingDBServer`	MaxDB server name
Configure Auditing Database - SQL Server (ODBC)	`ExistingAuditMSSQL.dialog`	`ExistingAuditingDBDatabase`	SQL database name
		`ExistingAuditingDBServer`	SQL server name
		`ExistingAuditingDBUser`	Username
		`ExistingAuditingDBPassword`	Password
		`ExistingAuditingDBUseTrustedConnection`	Use trusted connection
		`ExistingAuditingDBDSN`	Data source name
		`ExistingAuditingDBShowSysDB`	Show system database
Configure Auditing Database - MySQL	`ExistingAuditMySQL.dialog`	`ExistingAuditingDBDatabase`	Auditing database name
		`ExistingAuditingDBUser`	Username
		`ExistingAuditingDBPassword`	Password
		`ExistingAuditingDBPort`	MySQL Port
		`ExistingAuditingDBServer`	MySQL Server
Configure Auditing Database - Oracle	`ExistingAuditOracle.dialog`	`ExistingAuditingDBUser`	Username
		`ExistingAuditingDBPassword`	Password

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
		`ExistingAuditingDBServer`	Oracle TNSNAME
Configure Auditing Database - Sybase	`ExistingAuditSybase.dialog`	`ExistingAuditingDBUser`	Username
		`ExistingAuditingDBPassword`	Password
		`ExistingAuditingDBServer`	Sybase service name
Configure CMS Repository Database - DB2	`ExistingCMSDB2.dialog`	`ExistingCMSDBServer`	DB2 Alias Name
		`ExistingCMSDBUser`	Username
		`ExistingCMSDBPassword`	Password
		`ExistingCMSDBReset`	• `0` (Do not reset existing database) • `1` (Reset existing database)
Configure CMS Repository Database - MaxDB	`ExistingCMSMaxDB.dialog`	`ExistingCMSDBServer`	CMS Database Name
		`ExistingCMSDBUser`	Username
		`ExistingCMSDBPassword`	Password
		`ExistingCMSDBReset`	• `0` (Do not reset existing database) • `1` (Reset existing database)
		`ExistingCMSDBDatabase`	MaxDB Server
		`ExistingCMSDBPort`	MaxDB Port
Configure CMS Repository Database - SQL Server	`ExistingCMSMSSQL.dialog`	`ExistingCMSDBServer`	Existing server name
		`ExistingCMSDBUser`	Username
		`ExistingCMSDBPassword`	Password
		`ExistingCMSDBReset`	• `0` (Do not reset existing database) • `1` (Reset existing database)
		`ExistingCMSDBDatabase`	CMS Database Name
		`ExistingCMSDBUseTrustedConnection`	Use trusted connection

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
		`ExistingCMSDBDSN`	Data source name
		`ExistingCMSDBShowSysDB`	Show system database
Configure CMS Repository Database - MySQL	`ExistingCMSMySQL.dialog`	`ExistingCMSDBServer`	MySQL Server
		`ExistingCMSDBUser`	Username
		`ExistingCMSDBPassword`	Password
		`ExistingCMSDBReset`	• `0` (Do not reset existing database) • `1` (Reset existing database)
		`ExistingCMSDBDatabase`	CMS Database Name
		`ExistingCMSDBPort`	MySQL Port
Configure CMS Repository Database - Oracle	`ExistingCMSOracle.dialog`	`ExistingCMSDBServer`	Oracle TNSNAME
		`ExistingCMSDBUser`	Username
		`ExistingCMSDBPassword`	Password
		`ExistingCMSDBReset`	• `0` (Do not reset existing database) • `1` (Reset existing database)
Configure CMS Repository Database - Sybase	`ExistingCMSSybase.dialog`	`ExistingCMSDBServer`	Sybase service name
		`ExistingCMSDBUser`	Username
		`ExistingCMSDBPassword`	Password
		`ExistingCMSDBReset`	Reset existing database
Configure Subversion	`SetLCMConfig.dialog`	`LCMName`	Repository Name
		`LCMPort`	Repository Port
		`LCMUserName`	Repository User
		`LCMPassword`	Password
		`LCMPasswordConfirm`	Confirm password
SAP BusinessObjects BI platform has been successfully installed	`ShowInstallComplete.dialog`	Not applicable	Not applicable

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Title of installation screen	Installation screen ID	Property ID(s)	Allowed property value(s)
SAP BusinessObjects BI platform has been successfully installed	`ShowInstallCompleteMultiCheckbox.dialog`	`LaunchWDeploy`	• `0` (Do not launch WDeploy tool after install) • `1` (Automatically launch WDeploy tool after install)
		`LaunchSSW`	• `0` (Do not launch System Setup Wizard after install) • `1` (Automatically launch System Setup Wizard after install)
		`ViewLogButton`	• `0` (Do not view log file after install) • `1` (Automatically view log file after install)
Start Installation	`ShowInstallSummary.dialog`	Not applicable	Not applicable
Post Installation Steps	`ShowPostInstall.dialog`	Not applicable	Not applicable
Uninstall Confirmation	`VerifyToRemove.dialog`	Not applicable	Not applicable
SAP BusinessObjects BI platform has been successfully uninstalled	`ShowUninstallComplete.dialog`	Not applicable	Not applicable

Related Information

Customizing user input [page 27]
Removing installation screens [page 28]

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4 Web Application Customization

4.1 Introduction

You can apply your own branding (or "skinning") to the BI launch pad, OpenDocument, and Crystal Reports JavaScript viewer web applications. For example, you can customize your BI platform systems by applying your own corporate identity elements.

You can customize the following web and graphic elements:

- Favicon (the icon displayed in the browser URL bar)
- Logos
- Certain background patterns and colors
- Certain animated gifs (for example, the progress indicator)
- Certain CSS styles (borders, padding, margins, and so on)
- JavaScript files for the Crystal Reports JavaScript viewer

You can customize many aspects of the BI platform web applications, and you may choose to customize only a subset of these options.

Who should use this information?

This section is intended for web application designers, developers, and system administrators who are customizing BI platform web applications. Familiarity with the basics of CSS design and Java web application archives is required. If you are deploying customizations, then you should also be familiar with the methods to install and deploy BI platform web applications to an application server.

For information on installing the SAP BusinessObjects Business Intelligence platform, see the *Business Intelligence Platform Installation Guide*.

For information on deploying BI platform web applications using the WDeploy tool, see the *Business Intelligence Platform Web Application Deployment Guide*.

4.1.1 Key concepts

To make and deploy your customizations, you should understand the following concepts:

Installation package

The installation package is the set of binaries that are downloaded from SAP Service Marketplace in order to start the installation of SAP BusinessObjects Business Intelligence platform. It contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries.

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Customization template

The `template.zip` file is located in the `Collaterals\CustomizationTemplate` folder of your installation package, and contains the branding bundles (JAR files) to customize before installing SAP BusinessObjects Business Intelligence platform. This file is the starting point for customizing your web applications.

BOE WAR file

`BOE.war` is the primary web application archive for the BI platform. BI launch pad, OpenDocument, the Crystal Reports JavaScript viewer, and the changes you make in `template.zip` to their respective branding bundles are included by the installation program in `BOE.war`. To deploy your customizations and make these applications available to your customers, you must deploy `BOE.war` to your Java application server either during or after the installation process.

Branding bundles

A branding bundle is a JAR file that contains the custom resources (CSS, icons, images, JavaScripts) that you include in the installation program within `template.zip`. The following branding bundles are included:

- `com.businessobjects.webpath.InfoViewBranding.jar` (BI launch pad)
  This branding bundle consists of two main folders: a `css` folder containing a custom CSS file, and an `images` folder containing a favicon and theme subfolder with custom logos, images, and animated GIFs.

  ```
  \com.businessobjects.webpath.InfoViewBranding\web
    \css
      customize.css
    \images
      favicon.ico
      \theme
        *.png, *.gif
  ```

- `com.businessobjects.webpath.OpenDocumentBranding.jar` (OpenDocument)
  This branding bundle consists of two main folders: a `css` folder containing a custom CSS file, and an `images` folder containing a `theme` subfolder with custom logos and images.

  ```
  \com.businessobjects.webpath.InfoViewBranding\web
    \service
      \css
        customize.css
      \images
        \theme
          *.png
  ```

- `com.businessobjects.webpath.CrystalReports_oem.jar` (Crystal Reports JavaScript viewer)
  This branding bundle consists of two main resources: a JavaScript file with custom listeners where you can define new behavior for certain viewer events, and a JSON properties file to reference any custom JavaScript files or images you choose to use for the viewer.

  ```
  \com.businessobjects.webpath.CrystalReports_oem\web
    CustomListener.js
  ```


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```
  \WEB-INF\classes
    JSAPI-properties.json
  \images
    *.png
```

Web application deployment

The SAP BusinessObjects Business Intelligence platform installation program can deploy `BOE.war` only to the bundled Tomcat web application server. Other supported web application servers require that you deploy the web applications after the installation is complete. It is recommended that you use the WDeploy tool.

4.1.2 Testing your customizations

Before performing customizations on your production systems, it is good practice to test your customizations first on a test installation. In a default installation that uses the bundled Tomcat server, you can instantly see the effects of your changes by making temporary modifications to the `webpath.InfoViewBranding`, `webpath.OpenDocumentBranding`, and `webpath.CrystalReports_oem` folders in the Tomcat `work` directory: `\SAP BusinessObjects\tomcat\work\Catalina\localhost\BOE\eclipse\plugins\webpath.OpenDocumentBranding\web\service`. These folders have the same structure as the branding resources contained in `template.zip`.

> **Note**
>
> The Tomcat `work` directory is not permanent and your temporary changes are deleted after a Tomcat restart.

4.2 Quick start

Before you start, back up `\Collaterals\Tools\CustomizationTemplate\template.zip` from your installation package.

This section shows you the basic steps required to customize and deploy one of the BI platform web applications: BI launch pad. The steps shown are also applicable to OpenDocument and the Crystal Reports JavaScript viewer.

> **Note**
>
> This quick start describes the end-to-end customization, including performing a full installation of SAP BusinessObjects Business Intelligence platform and the deployment of `BOE.war` to an application server. These steps may take considerable time.

1. Locate `template.zip` in your SAP BusinessObjects Business Intelligence platform installation package at: `\Collaterals\Tools\CustomizationTemplate`.
2. Extract the contents of `template.zip` to a working folder.

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`template.zip` contains the branding bundles, for example, `\SAP BusinessObjects Enterprise XI 4.0\warfiles\webapps\BOE\WEB-INF\eclipse\plugins \com.businessobjects.webpath.InfoViewBranding.jar`

3. Unpackage the BI launch pad branding bundle `com.businessobjects.webpath.InfoViewBranding.jar`.

```
jar xf com.businessobjects.webpath.InfoViewBranding.jar
```

4. Customize the default favicon that is displayed in the browser URL bar for BI launch pad.

   The BI launch pad branding bundle contains a sample favicon. Copy `\web\sample\images\favicon.ico` up one level to `\web\images\favicon.ico`.

5. Repackage `com.businessobjects.webpath.InfoViewBranding.jar` containing your new favicon, and include it in `template.zip`.

   To repackage the `web` and `META-INF` folder contents back into `com.businessobjects.webpath.InfoViewBranding.jar`:

```
jar cf com.businessobjects.webpath.InfoViewBranding.jar web META-INF
```

6. Create a subfolder called `\OEMZips` at: `\dunit\product.businessobjects64.oemzips-4.0-core-nu`
7. Add `template.zip` to the `\OEMZips` folder.

   Your customized zip file is now at: `\dunit\product.businessobjects64.oemzips-4.0-core-nu \OEMZips\template.zip`

8. Install and deploy `BOE.war` to your Java application server using one of the following options:

Option	Description
Use the bundled Tomcat server	Selected during the installation process.
Use your own supported Java application server	Performed after the installation program completes. Use the WDeploy tool.

   Use `setup.exe` (Windows) or `setup.sh` (Unix) to start the installation process.

9. After successful installation and deployment, test your changes by accessing BI launch pad: `http://<web server name>:<port>/BOE/BI`

   You can see the new favicon in your browser URL bar:

4.3 Customizing BI launch pad

For BI launch pad, you can customize the favicon, logo, backgrounds, styles, and more. Most of these customizations involve changing the CSS rules in the `customize.css` file. All customizations must be made available in the `web` folder of `com.businessobjects.webpath.InfoViewBranding.jar` to take effect, as follows:

```
\web
  \css
    customize.css
  \images
    favicon.ico
```


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```
    \theme
      *.png, *.gif
```

> **Note**
>
> Sample customizations are provided in the JAR file. For example, when you open `com.businessobjects.webpath.InfoViewBranding.jar`, there is a `web\sample` folder which includes a sample CSS file, sample images, and a README file.

4.3.1 To customize the favicon image

The favicon is the small icon displayed in a browser's address bar when viewing the BI launch pad.

Replace the `favicon.ico` file stored in the `web\images` folder with your own `favicon.ico` image.

4.3.2 To customize logos

Logos used in the BI launch pad can be customized by editing the CSS rules in the `web\css\customize.css` file. If you are using custom images and referring to them in the `customize.css` file, make sure you place them in the `web\images\theme` folder.

4.3.4 Working with BI workspaces and compound modules

You can also use a BI workspace or a compound module as your BI launch pad home page. You can customize the workspace or compound module to match the style of your BI launch pad.

> **Note**
>
> The customized style is reflected only on the home page. If the same workspace or compound module is opened outside of the home page (in regular view), the standard style will be used.

The following diagrams show the elements customized in the sample branding bundle, for reference purposes. The numbers in the balloons refer to sections in the bundle's `customize.css` file.

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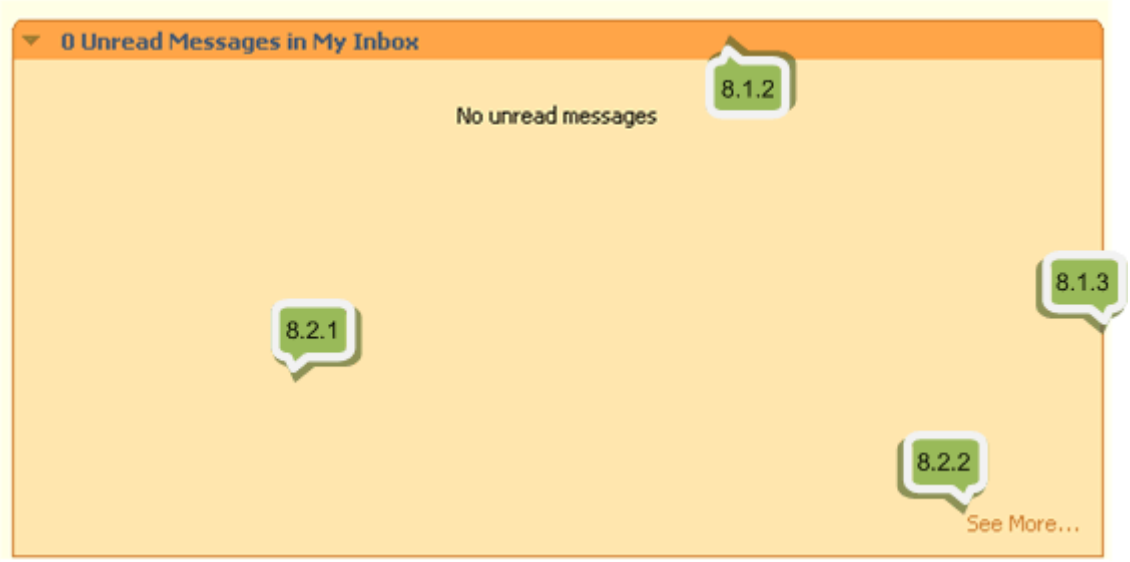
For the default home page or module

The following settings can be used to customize the default home page, or any BI workspace or compound module that has been set as the home page.



1. (8.1.2) module title background
2. (8.1.3) module border
3. (8.2.1) background of BI launch pad module
4. (8.2.2) color of **See More** text

For the regular view of a BI workspace

The following settings can be used to customize the appearance of a BI workspace in regular view.

1. (8.3.1) customized top tab container
2. (8.3.2) customized subtab container
3. (8.3.4) active top tab
4. (8.3.5) inactive top tab
5. (8.3.6) subtab

4.3.4.1 To match the style of a BI workspace to the style of BI launch pad

1. Open the BI workspace for editing.
2. From the first tab of the workspace, click **Properties**.
   The *Properties* dialog box appears.
3. Select the icon of the option immediately before the (last) **Default style** option.

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4. Click **OK**.

4.3.4.2 To match the style of a compound module to the style of BI launch pad

1. On the BI launch pad home page, click **Preferences**.

   The *Preferences – Administrator* dialog box appears.
2. Select **BI workspaces** from the **Preferences** list.
3. From the list in the main pane, select **BI Launch Pad**.

4.3.5 To change the name of BI launch pad

You may want to change the name of BI launch pad so that the application blends in with an existing set of applications that your company uses.

> **Note**
>
> You do not need to change the branding bundles in order to change the name of BI launch pad, but you may want to also change related images, which will require changes in the branding bundles.

1. Copy the `BIlaunchpad.properties` file from

   ```
   <INSTALLDIR>\SAP BusinessObjects Enterprise XI 4.0\warfiles\webapps\BOE\WEB-INF
   \config\default
   ```

   to

   ```
   <INSTALLDIR>\SAP BusinessObjects Enterprise XI 4.0\warfiles\webapps\BOE\WEB-INF
   \config\custom
   ```

   > **Note**
   >
   > Do not change files in the `default` folder. You should always make your changes to copies of the files stored in the `custom` folder.

2. Modify the following properties:

   ```
   app.name=BI launch pad
   app.name.greeting=BusinessObjects
   app.name.short=BI launch pad
   app.url.name=/BI
   ```

3. Re-deploy `BOE.war` to your Java application server.

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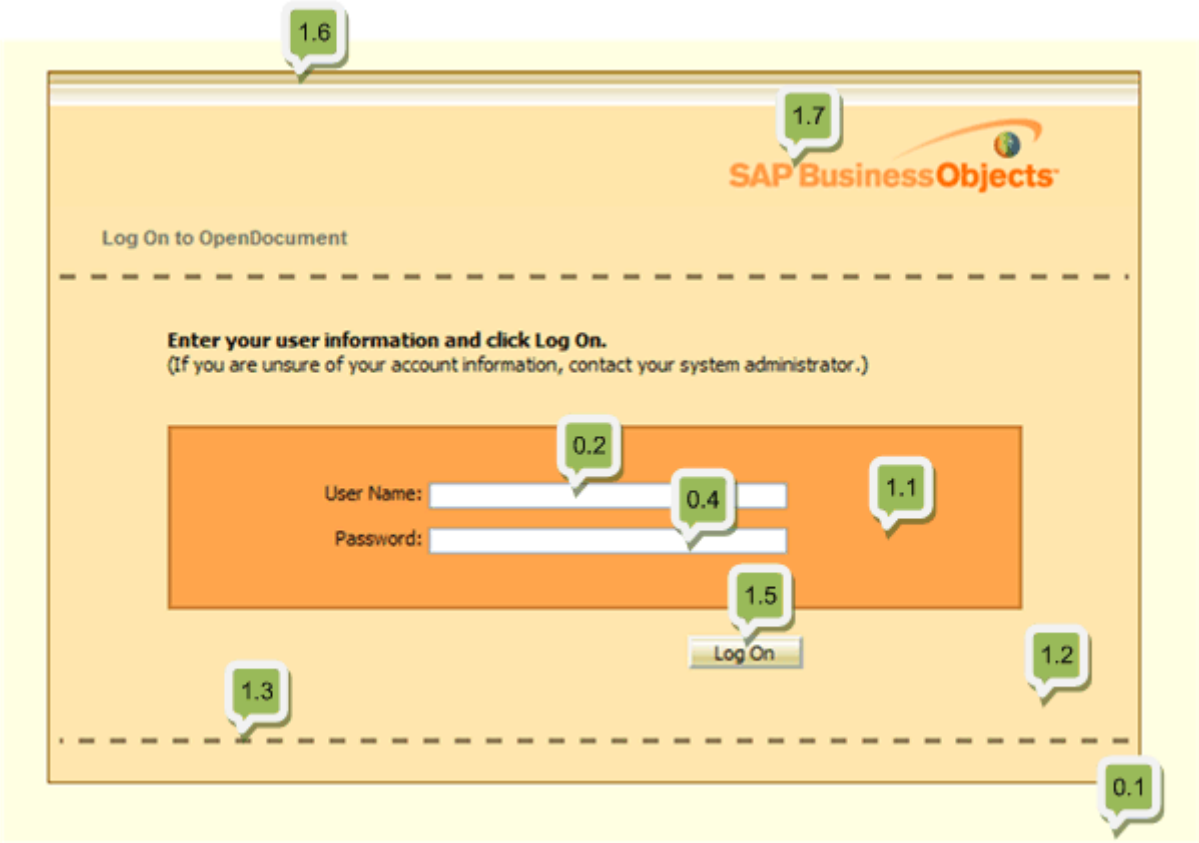
4.4 Customizing OpenDocument

For OpenDocument, you can customize the logo, backgrounds, and styles of the logon page. Most of these customizations involve changing the CSS rules in the `customize.css` file. All customizations must be made available in the `web\service` folder of `com.businessobjects.webpath.OpenDocumentBranding` to take effect, as follows:

```
\web
  \service
    \css
      customize.css
    \images
      \theme
        *.png
```

> **Note**
>
> Sample customizations are provided in the JAR file. For example, when you open `com.businessobjects.webpath.OpenDocumentBranding`, there is a `web\sample` folder which includes a sample CSS file, sample images, and a README file.

The following diagram shows the elements customized in the sample branding bundle, for reference purposes. The numbers in the balloons refer to sections in the bundle's `customize.css` file.



1. (0.1) customize the background of pages and sub-pages (inside frames)

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2. (0.2) input text field
3. (0.3) password field
4. (1.1) authentication fields container
5. (1.2) container of everything
6. (1.3) horizontal rules
7. (1.5) "Log On" button
8. (1.6) banner background pattern
9. (1.7) logo

4.5 Customizing the Crystal Reports JavaScript viewer

This section shows how to customize the report viewer included in your BI platform deployment.

The viewer can be customized by adding the following:

- A custom logo
- SAP Crystal Reports JavaScript API event and action listeners
- CSS files
- External JavaScript files or libraries

4.5.1 Customizing the viewer

You can repackage the `template.zip` file with the files you are using to customize the report viewer.

The workflow is as follows:

1. Extract the contents of the `template.zip` file.
2. Modify the `com.businessobjects.webpath.CrystalReports_oem.jar` file.
3. Enable custom viewer behavior, by setting the `crystal_enable_jsapi` property to `true` in the `SAP BusinessObjectsEnterprise XI 4.0\warfiles\webapps\config\custom\CrystalReports.properties` file.
4. Recreate the `template.zip` file.

> **Note**
>
> It is recommended to make a backup copy of the `template.zip` file before modifying its contents.

Within the `template.zip` file, the following file must be modified:

template.zip	Modify
`SAP BusinessObjectsEnterprise XI 4.0\warfiles\webapps\BOE\WEB_INF\eclipse\plugins`	Unzip and modify.

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template.zip	Modify
\com.businessobjects.webpath.CrystalReports_oem.jar	

Within the com.businessobjects.webpath.CrystalReports_oem.jar file, the following may be modified:

CrystalReports_oem.jar	Modify
\web	Add custom or external JavaScript and CSS files to this folder.
\web\CustomListener.js	Add SAP Crystal Reports JavaScript API event listeners to the OnViewerInit and OnViewerFail functions in the CustomListener.js file. For more information, see the *SAP Crystal Reports JavaScript API Guide*.
\WEB-INF\classes\JSAPI-properties.json	Add a relative path to all images, JavaScript files, and CSS files added to the \web folder. You can also change the logo that will be displayed by the viewer. In the following example, a logo, a JavaScript file, a folder and its JavaScript contents, and a CSS file are added: `{ "logo" : { "img" : "images/logo.gif", "tooltip" : "SAP Crystal Reports", "url" : "http://www.businessobjects.com/ipl/default.asp?destination=ViewerLogoLink&product=crystalreports&version=14%2E0" }, "scripts" : [ CustomListener.js \CustomFiles\*.js ], "styles" : [ \CustomStyle.css ] }` **Note** All files referenced in the JSAPI-properties.json file must be included in the \web folder.

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5 SAP Crystal Reports 2011 Customization

5.1 Introduction

SAP Crystal Reports 2011 can be repackaged and sold by partners. You can customize the installed product and the installation program to create a seamless experience for customers. The SAP BusinessObjects customization tool customizes SAP Crystal Reports and its installation program with changes such as the following:

- Reducing the product size
- Renaming the product
- Changing default properties in the installation program
- Hiding screens in the installation program

To make customizations, you write a configuration file to specify the customizations then run the SAP BusinessObjects customization tool to create a customized installation program. Customers can then use this installation program to install a customized version of the product.

The customization tool can be used to customize a full installation program, a Support Package installation program, and a Patch installation program.

5.2 Quick start for Crystal Reports

This section shows you how to run the customization tool to create a customized installation program for SAP Crystal Reports. It uses the sample configuration file that is provided with this tool. When you finish this tutorial, you can run your customized installation package and install a customized version of Crystal Reports.

The customizations include changing the default installation type, removing features, hard-coding the product keycode, changing the default installation folder, renaming the product, and changing the Windows **Start** menu shortcut. These customizations are described in more detail in the configuration file.

1. Set up the SAP BusinessObjects customization tool.
   a) Create a working folder on your development machine, for example: `C:\SAPCustomTool\packages`.
   b) Copy the contents of the Crystal Reports installation package to `C:\SAPCustomTool\packages`.

      The installation package contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries. See *To download the installation program* [page 69] for instructions.
   c) (Optional) Add your keycode to the sample configuration file.

      In an XML editor, open the file `C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool\example_customization_win_cr.xml` and replace the phrase `PLEASE SET` in `<replaceProperty id="ProductKey" defaultValue="PLEASE SET" />` with your Crystal Reports keycode.
   d) Create the folder `C:\SAPCustomTool\output`.

      > **Note**
      >
      > This folder must be empty.

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e) Run the following command from the command prompt: `cd C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool`

The folder `CustomizationTool` contains the executable `customizationtool.exe` and the sample configuration file `example_customization_win_cr.xml`.

2. Run the following command from the command prompt:

```
customizationtool.exe xml=example_customization_win_cr.xml packageDir=C:\SAPCustomTool\packages outputDir=C:\SAPCustomTool\output logDetail=error > C:\oemlog.log
```

Verify that the customized installation package was created at `C:\SAPCustomTool\output`. Ensure no errors were reported in the log file `C:\oemlog.log`.

> **Note**
>
> The customization tool may take several minutes to complete. You can check its progress by viewing the log file.

3. Use `C:\SAPCustomTool\output\setup.exe` to run the customized Crystal Reports installation program.

Crystal Reports is installed with the customizations described in the configuration file `C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool\example_customization_win_cr.xml`.

5.3 To download the installation program

1. Go to *https://service.sap.com/bosap-support* > **Software Downloads**.
2. On the *Find your software* tab, under the *A–Z Index*, select **Installations and Upgrades**.
3. Select **C** > **CRYSTAL REPORTS** > **CRYSTAL REPORTS 2011**.
4. Select **Installation and Upgrade** > **WINDOWS**.
5. Select the object titled *SAP Crystal Reports 2011 <version> Windows (32B)*, and then follow the instructions on the website to download and extract the objects.

The software may take a long time to download, and you may need to contact the system administrator to ensure that your company's firewall will not terminate the download process.

Support Packages and Patches are installation programs that contain updates to SAP Crystal Reports. You can download them from *https://service.sap.com/bosap-support*. On the *Find your software* tab, under the *A–Z Index*, click **Support Packages and Patches**. For more information on installing Support Packages and Patches, see *Customizing update installation programs* [page 93].

5.4 Planning the customization process

To use the SAP BusinessObjects customization tool:

1. Download the installation program. See *To download the installation program* [page 69].

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2. Decide what customizations are required. See *Creating the configuration file* [page 71].
3. Write the configuration file to specify the customizations.
4. Run the customization tool to create a customized installation program.
5. Run the customized installation program to install a customized version of SAP Crystal Reports.

5.4.1 Best practices

This section provides recommendations for creating a customized installation program.

Validate the configuration file

You may want to validate the configuration file before running the tool. Use the *validate* command-line parameter.

Reduce product size

Customers prefer a smaller installation program and a smaller installed product. To keep the product as small as possible:

- Remove any language packs that are not required.
- Remove any features that are not required.
- Remove any items from the `Collaterals` folder that are not required.

Apply customized names consistently

The product name and version number appear in several places in the installation program and in the installed product. Ensure you verify customizations in the following locations:

- Product name, product version, and product major version
- Windows **Start** menu entry and all feature shortcuts
- Windows *Add Remove Program* utility
- Default installation folder

Consider name changes in all languages

It is good practice to consider how the customized name appears in all supported languages.

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Modify patch installation programs to be consistent with the main installation program

You must apply the same customizations to Support Packages and Patches that you applied to the main release. If you release a customized main installation program and then try to release a Support Package or Patch installation program with different customizations, you might see unpredictable results which might not be repairable using standard rollback procedures.

Test rollback, modify, and repair installations for Support Packages and Patches

Rollback, modify, and repair installations are supported for customized Support Packages and Patches, provided they have been customized in a manner consistent with the main installation package. It is recommended to test these scenarios.

Related Information

Command line parameters [page 92]

5.5 Creating the configuration file

The following section describes the customizations you can make to the installation program by editing the configuration file:

- Renaming the product
  - Customizing the product name and version number
  - Customizing the Windows **Start** menu shortcuts
  - Customizing the Windows *Add Remove Program* utility
  - Customizing the installation folder
- Customizing default user input
- Removing installation screens
- Embedding a keycode
- Removing features
- Preventing prerequisite checks
- Removing language packs
- Changing resources
  - Customizing the images in the installation program
  - Customizing the license agreement

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- Removing items from the Collaterals folder

5.5.1 Configuration file overview

The SAP BusinessObjects customization tool uses information in the configuration file to perform the customizations. The configuration file is an XML document, and you use XML elements to describe your customizations. The sample configuration file is contained in this folder in the installation program:

`Collaterals\Tools\CustomizationTool\example_customization_win_cr.xml`

The file must have this format:

```
<oem name="<Any name>">
  <cloneProduct sourceId="product.crystalreports-4.0-core-32">
        ...
     ...
  </cloneProduct>
</oem>
```

The configuration file for the full installation program can have any name, for example, `oem.xml`.

The configuration file for the Support Package installation program is described in the section *How to customize update installation programs* [page 96].

Note

The configuration file must be written in correct XML syntax. Use an XML editor to create and edit the file, and verify that the format is correct before running the tool.

Example

This example specifies the following customizations:

- Change the product's long name to “Custom Company Crystal Reports” for all languages.
- Change the product's short name to “Custom CR” for all languages.
- Change the publisher and product name for the *Windows Add Remove Program* entry.
- Remove the installation screen titled *Choose Installation Type* and set the installation type to *Custom*.
- Specify that the only language packs that are included in the installation package are English, French, German, Italian, and Chinese.

```
<oem name="CustomCompanyCrystalReports">
  <cloneProduct sourceId="product.crystalreports-4.0-core-32">

          <replaceString id="product.cr_name" value="Custom Company Crystal
Reports" lang="all"/>
    <replaceString id="product.cr_shortname" value="Custom CR" lang="all"/>

    <arp duSourceId="product.crystalreports.arp-4.0-core">
      <arg id="publisher" value="Custom Company"/>
      <arg id="display_name" value="Custom Company Crystal Reports"/>
    </arp>

    <replaceProperty id="InstallType" defaultValue="custom"/>
    <removeDialog id="ChooseInstallType2.dialog"/>
```


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```
    <languageIncludeList value="en;fr;de;it;zh_CN"/>

   </cloneProduct>
</oem>
```

5.5.2 Renaming the product

You can rename the product by customizing the following:

- The product name and version number
- The Windows *Add or Remove Programs* entry
- The *Start* menu entry for feature shortcuts
- The default installation folder

The following sections explain these customizations.

5.5.2.1 Customizing the product name and version number

You can customize the product name and version number. Use the `replaceString` element with the desired string ID:

```
<replaceString id="<string id>" value="<new value>" lang="<language list>"/>
```

There are four strings that represent the product name and version number: the product long name, the product short name, the product version number, and the product major version number. The full product name is composed of the product long name and the version number. The product short name and product major version are used in the Windows shortcut menu.

Table 9: Product name and version number

String description	String ID	Default value
Product long name	`product.cr_name`	Crystal Reports
Product short name	`product.cr_shortname`	Crystal Reports
Product version	`product_cr_version`	2011
Product major version	`product_cr_majorversion`	2011

Note

You should customize the product version and product major version together. For example, if you change product version to “1.0” you should also customize product major version to “1”. Otherwise the version number in the menus will not match the version number in the product.

You can specify a new name for each language. For a list of language codes, see *Language codes* [page 102].

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Example

This example makes the following customizations:

- Change the product long name to “Custom Company Crystal Reports” and the product short name to “Custom CR” for English.
- Change the product long name to “Custom Company Crystal Reports (French)” and the product short name to “Custom CR (French)” for French.
- Change the product version to “1.0” and the product major version to “1” for all languages.

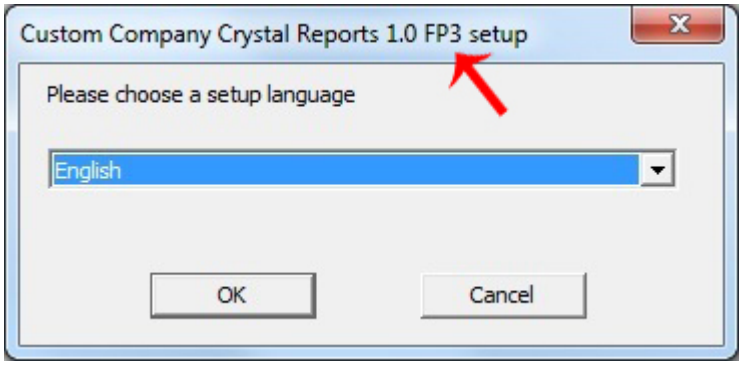
The product name in languages other than English and French will remain as the default value, but the product version and major version will be changed for all languages.

```
<replaceString id="product.cr_name" value="Custom Company Crystal Reports"
lang="en"/>
<replaceString id="product.cr_shortname" value="Custom CR" lang="en"/>

<replaceString id="product.cr_name" value="Custom Company Crystal Reports
(French)" lang="fr"/>
<replaceString id="product.cr_shortname" value="Custom CR (French)" lang="fr"/>

<replaceString id="product_cr_version" value="1.0" lang="all"/>
<replaceString id="product_cr_majorversion" value="1" lang="all"/>
```

The result of the customization appears below. Notice the version number “FP3” is not removed:



To remove instances of “FP3” from the installation program

When you run the installation program, you may see instances of “FP3” in the product name. To remove “FP3”, modify the lines in the following files:

File name	Original line	Modified line
dunit\product.crystalre-ports-4.0-core-32\setup.ui.framework\uitext\CrystalReports\product.lang_<language code>.uitext.xml	<string id="productname_patch" value=" FP3"/>	<string id="product-name_patch" value=""/>

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File name	Original line	Modified line
dunit\product.crystalre-ports-4.0-core-32\setup.ui.framework\uitext\framework\setup.ui.frame-work.lang_<language code>.uitext.xml	<string id="product_patch" value="FP3"/>	<string id="prod-uct_patch" value=""/>
Same as above	<string id="product_patch_pre-space" value=" FP3"/>	<string id="prod-uct_patch_prespace" value=""/>

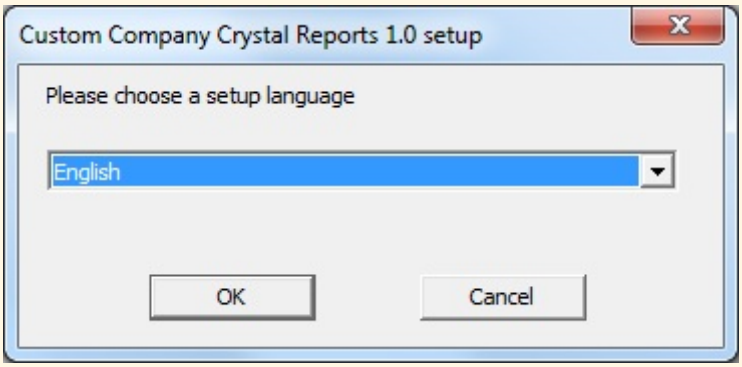
You must modify one file for every language that the installation program supports. For a list of language codes, see *Language codes* [page 102]. When you run the customization tool, and then run the installation program, all instances of "FP3" will be removed. This process will be simplified in a future release.

Example

To remove "FP3" from the English installation program, modify the following files:

- `product.lang_en.uitext.xml`
- `setup.ui.framework.lang_en.uitext`

The result of the customization appears below:



5.5.2.2 Customizing the Windows Start menu shortcuts

The Windows **Start** menu contains shortcuts for features such as the ODBC Data Source Administrator. You can customize the name, location, and tooltip for each shortcut. Any shortcut that you do not customize will be grouped under the default **Start** menu entry, *Crystal Reports 2011*.

The default **Start** menu in English installations looks like this:

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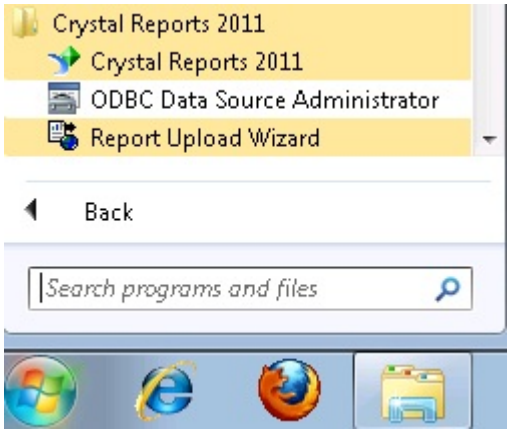

Use the `shortcut` element to customize the location, shortcut name, and tooltip for each feature:

```
<shortcut duSourceId="<shortcut deployment unit ID>">
  <arg id="linkFullPath" value="<full path to shortcut link>" lang="<language
list>"/>
  <arg id="description" value="<tooltip string>" lang="<language list>"/>
</shortcut>
```

Attribute	Value
`duSourceId`	The shortcut deployment unit ID that you want to modify. Typical values include: • `product.crystalreports.shortcut.crw-4.0-core` Crystal Reports 2011 • `product.crystalreports.shortcut.odbc-4.0-core` ODBC Data Source Administrator • `product.crystalreports.shortcut.rptpubwiz-4.0-core` Report Upload Wizard For a complete list of `duSourceId` values, see *Shortcut deployment unit IDs* [page 101].
`linkFullPath`	The full path to the shortcut link. Be sure to add .lnk to the shortcut link or the link will not be created. You can put the link in the **Start** menu or you can put it on the desktop. The SAP BusinessObjects customization tool will create the links correctly. You can specify one link for each language. For a list of language codes, see *Language codes* [page 102].
`description`	The tooltip string to display when the user hovers the mouse over the shortcut. You can specify one tooltip for each language.

Example

This example makes the following customizations:

- Change the name of the Crystal Reports 2011 shortcut to “Custom Company CR” for English.
- Customize the Crystal Reports 2011 tooltip to “Launch Custom Company CR” for English.
- Change the name of the “ODBC Data Source Administrator” shortcut to “Custom ODBC” for English.
- Customize the “ODBC Data Source Administrator” tooltip to “Custom ODBC” for English.

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- Place the “Custom Company CR” and “Custom ODBC” shortcuts under the **Start** menu entry called “Company Programs”.
- Change the name of the “Report Upload Wizard” shortcut to “Custom Wizard” for English.
- Place the “Custom Wizard” shortcut under the **Start** menu entry called “Custom Wizard”.
- Customize the “Custom Wizard” tooltip to “Launch Custom Wizard” for English.

The shortcut name and tooltip will remain unchanged for all other languages.

Note

To use this example you must create the following links and folders:

- `Custom Company CR.lnk`
- `Custom ODBC.lnk`
- `Custom Wizard.lnk`
- `Company Programs`
- `Custom Wizard`

Place `Custom Company CR.lnk` and `Custom ODBC.lnk` in the folder `Company Programs` and place `Custom Wizard.lnk` in the folder `Custom Wizard`. Place these folders in the same location you plan to redirect the installation folder to.

In this example, the installation folder has been redirected to the `C:\` drive. See *Customizing the installation folder* [page 80] for more information.

```
<shortcut duSourceId="product.crystalreports.shortcut.crw-4.0-
core">
  <arg id="linkFullPath" value="[programmenufolder]\Company Programs\Custom
Company CR.lnk" lang="en"/>
     <arg id="description" value="Launch Custom Company CR" lang="en"/>
</shortcut>

<shortcut duSourceId="product.crystalreports.shortcut.odbc-4.0-
core">
  <arg id="linkFullPath" value="[programmenufolder]\Company Programs\Custom
ODBC.lnk" lang="en"/>
        <arg id="description" value="Custom ODBC" lang="en"/>
</shortcut>


<shortcut duSourceId="product.crystalreports.shortcut.rptpubwiz-4.0-
core">
  <arg id="linkFullPath" value="[programmenufolder]\Custom Wizard\Custom
Wizard.lnk" lang="en"/>
  <arg id="description" value="Launch Custom Wizard" lang="en"/>
</shortcut>
```

The result of the customization appears below:

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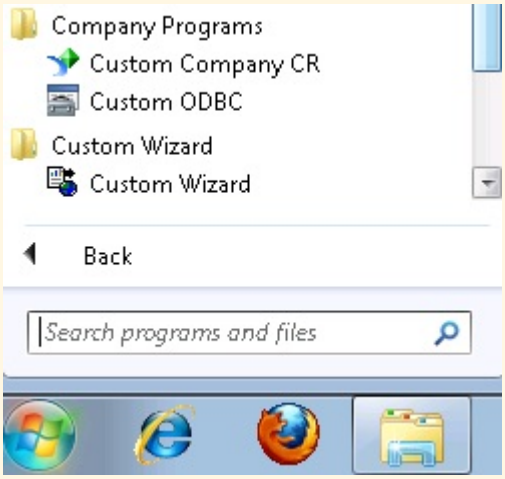

Example

This example keeps the default name of the “Report Upload Wizard” feature shortcut, but places it under the **Start** menu entry called “Custom Wizard” for all languages. It also changes the “Custom Wizard” tooltip to “Launch Custom Wizard” for all languages.

Note

To use this example you must place the `Report Upload Wizard.lnk` in the folder `Custom Wizard`. Place this folder in the same location as the installation folder.

In this example, the installation folder has been redirected to the `C:\` drive.

```
<shortcut duSourceId="product.crystalreports.shortcut.rptpubwiz-4.0-
core">
  <arg id="linkFullPath" value="[programmenufolder]\Custom Wizard\Report Upload
Wizard.lnk" lang="all"/>
  <arg id="description" value="Launch Custom Wizard" lang="all"/>
</shortcut>
```

5.5.2.3 Customizing the Windows Add Remove Program utility

You can customize the display name, the publisher, and the icon in the Windows *Add Remove Program* (ARP) utility. Use the following element:

```
<arp duSourceId="product.crystalreports.arp-4.0-core">
  <arg id="publisher" value="<publisher name>"/>
  <arg id="display_name" value="<product name>" lang="<language list>"/>
  <arg id="display_icon" value="<full path to icon>"/>
</arp>
```


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Note

The display name must have a `lang` tag to specify a different display name for each language. Multiple languages using the same display name must be separated by a semi-colon. Any unspecified languages will use the default value.

For a list of language codes, see *Language codes* [page 102].

Note

You must take additional steps in order for the customized value of the publisher to display correctly in the ARP. Follow these steps:

1. Open the file `dunit\product.crystalreports.arp-4.0-core-32\seed.xml`.
2. Find the element `<action id="AddARPEntry">`. You will see multiple nested `<arg>` elements.
3. Add the following line under `<arg name="DISPLAY_NAME" value="[ARP.DISPLAYNAME]" />`:
   `<arg name="PUBLISHER" value="SAP" />`
4. Save the file.

After you customize the publisher name in the configuration file, run the customization tool, and then install the customized product, your customized value for the publisher displays in the ARP. This process will be simplified in a future release.

Icons displayed in the Windows ARP utility are typically 16x16. Refer to Windows documentation for complete information on creating the icon.

Example

This example makes the following customizations in the Windows ARP utility:

- Change the product name to “Custom Company Crystal Reports Patch 1” for English and French.
- Change the product name to “Custom Company Crystal Reports (German)” for German.
- Change the publisher to “Custom Company”.
- Replace the display icon with the icon `C:\SAPCustomTool\CC_logo.ico`.

Note

To use this example you must put an icon called `CC_logo.ico` in the location `C:\SAPCustomTool`.

```
<arp duSourceId="product.crystalreports.arp-4.0-core">
        <arg id="publisher" value="Custom Company"/>
  <arg id="display_name" value="Custom Company Crystal Reports Patch 1"
lang="en;fr"/>
     <arg id="display_name" value="Custom Company Crystal Reports (German)"
lang="de"/>
  <arg id="display_icon" value="C:\SAPCustomTool\CC_logo.ico"/>
</arp>
```

The result of the customization appears below:

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5.5.2.4 Customizing the installation folder

You can customize the location of the default installation folder. Use the `replaceProperty` element with `id="<installation folder file path>"`:

```
<replaceProperty id="InstallDir" defaultValue="<default installation folder>"/>
```

Example

Change the default install folder to `C:\MyInstallDIR\CustomCompanyCrystalReports`.

```
<replaceProperty id="InstallDir" defaultValue="C:\MyInstallDIR
\CustomCompanyCrystalReports"/>
```

5.5.3 Customizing default user input

You can customize the default value of the user input that is collected by the installation program. Use the `replaceProperty` element with `id="<property id>"` and the new default value:

```
<replaceProperty id="<property id>" defaultValue="<value to use as default value>"/>
```

For a list of property IDs, see *Installation screen and property IDs* [page 103].

The Windows installation program collects user input using dialog boxes, radio buttons, and other user interface elements.

Example

On the installation screen called *Choose Install Type*, the default install type is *Typical*. This example changes the default install type to *Custom*.

```
<replaceProperty id="InstallType" defaultValue="custom"/>
```

The result of the customization appears below:

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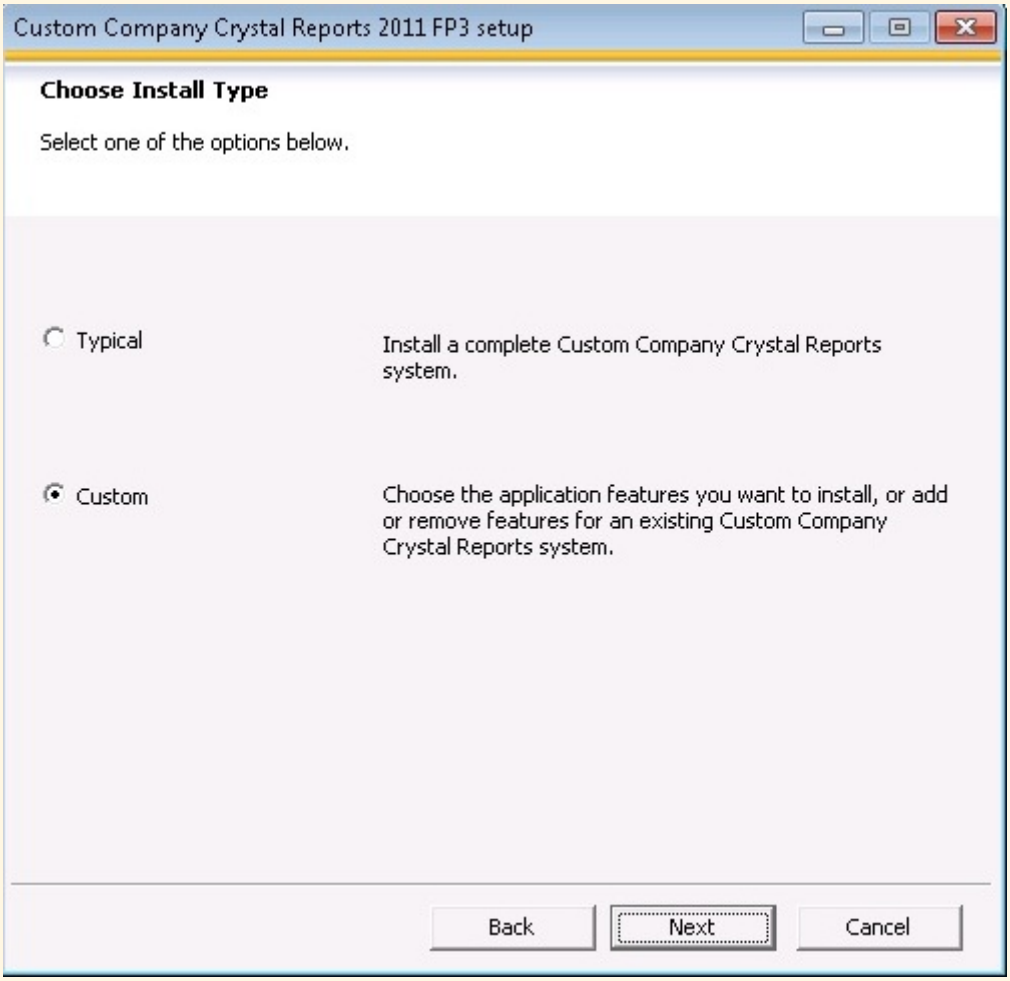

5.5.4 Removing installation screens

You can remove installation screens from the installation program. Use the `removeDialog` element with the installation screen ID:

```
<removeDialog id="<installation screen ID>"/>
```

For a list of installation screen IDs, see *Installation screen and property IDs* [page 103].

Example

This example shows how to remove the installation screen titled *Select Features*.

```
<removeDialog id="SelectFeatures.dialog"/>
```


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5.5.5 Embedding a keycode

You can embed a keycode in the installation program so the customer does not need to enter one. This task involves:

- Providing a default value for the keycode
- Removing the installation screen in which the user enters a keycode

Example

Use the `replaceProperty` element with `id="ProductKey"` to provide a default keycode. Keycodes must have the format `XXXXX-XXXXXXX-XXXXXXX-XXXXXXX-XX`.

Use the `removeDialog` element with `id="CREnterProductKey.dialog"` to remove the installation screen for the license key.

```
<replaceProperty id="ProductKey" defaultValue="XXXXX-XXXXXXX-XXXXXXX-XXXXXXX-XX"/>
<removeDialog id="CREnterProductKey.dialog"/>
```

Related Information

Installation screen and property IDs [page 103]
Customizing default user input [page 80]
Removing installation screens [page 81]

5.5.6 Removing features

SAP Crystal Reports includes many optional features. You can remove a feature from the installation program. Use the `removeFeature` element with `id="<feature id>"`:

```
<removeFeature id="<Feature ID>"/>
```

For a list of feature IDs, see *Feature IDs* [page 98].

When you specify a feature to be removed, the SAP BusinessObjects customization tool removes all executables, installation screens, and other files that belong to that feature. Removing unnecessary features is a good way to reduce the size of the customized product.

Example

Remove the geographic mapping feature. This ID will remove the program's ability to display relationships between data and geographic regions:

```
<removeFeature id="Mapping"/>
```


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5.5.7 Preventing prerequisite checks

Prerequisites are conditions that must exist on the host machine in order for the installation program to succeed. The installation program verifies the existence of these prerequisites before starting, and displays the results in the *Prerequisite check* screen. Removing the *Prerequisite check* screen prevents prerequisite checks from being performed. Use the `removeDialog` element with `id="CheckPreRequisites.dialog"`

> **Note**
>
> It is recommended that you remove this installation screen only if you are performing the prerequisite checks by some other means. If the prerequisites are not met, the installation program will fail.

> **Example**
>
> This example removes the *Prerequisite check* screen and prevents prerequisite checks from being performed.
>
> ```
> <removeDialog id="CheckPreRequisites.dialog"/>
> ```

5.5.8 Removing language packs

The installation program allows the user to select which language packs to install. A language pack contains translated versions of all the strings that are used by the installed product. By default, all possible language packs are included in the installation program. You can specify which language packs to include. Use the `languageIncludeList` element with a list of language codes:

```
<languageIncludeList value="<list of language codes>"/>
```

For a list of language codes, see *Language codes* [page 102].

> **Note**
>
> Language packs can be large. The installation program will be smaller if fewer language packs are included.

> **Example**
>
> Include English, French, and German language packs in the installation program. The user can select from this list during installation.
>
> ```
> <languageIncludeList value="en;fr;de"/>
> ```

5.5.9 Changing resources

The installation program stores image and text files as resources in this folder:

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```
dunit\product.crystalreports-4.0-core-32\setup.ui.framework\resources
```

You can customize the resources in this folder. Resources that are commonly customized include:

- Images in the installation program
- License agreement in the installation program

To customize a resource:

1. Create a custom resources folder, for example `C:\MyResources`. The folder can have any name, but note that it will be visible to customers. Use the same folder for all resources that you customize.
2. Create a new resource with the same name and filepath as the original resource, and place it into the custom resources folder. See the related topics section for specific examples.
3. Add the `<resources>` element to the configuration file to specify the location of the custom resources folder, for example:
   ```
   <resources cleanTarget="no" sourcePath="C:\MyResources"/>
   ```

`cleanTarget` attribute

If you set `cleanTarget='yes'`, the customization tool will delete the original `resources` folder and use only those resources in the custom resources folder. This option is not recommended.

Related Information

Customizing the images in the installation program [page 84]
Customizing the license agreement [page 86]

5.5.9.1 Customizing the images in the installation program

You can customize the images in the installation program including the welcome screen, the top image for all screens, and the billboard for the progress dialog. Images are stored as files in the resources folder:

```
dunit\product.crystalreports-4.0-core-32\setup.ui.framework\resources
```


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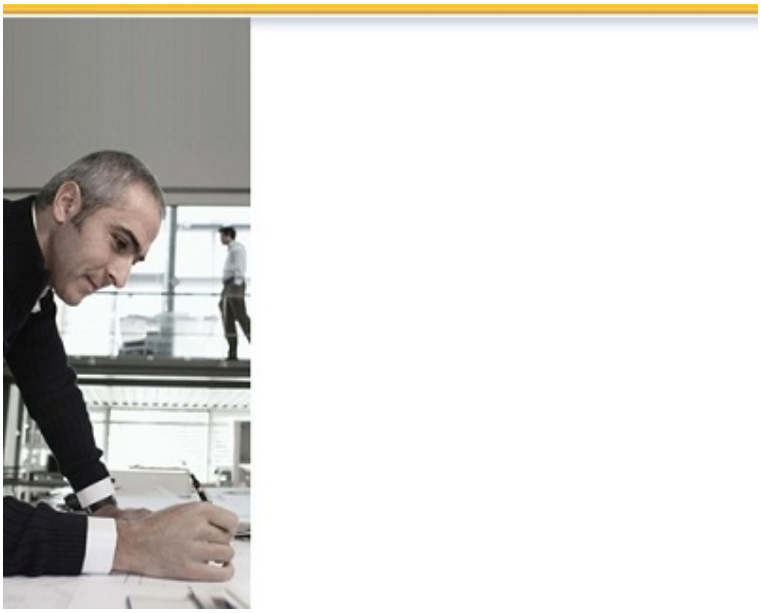
Table 10: Image files in the `resources` folder

Image name	File name	Default image
Welcome screen	`dialogFull.bmp`	
Top image for all screens	`dialogTop.bmp`	
Billboard for progress dialog	`billboard.bmp`	

You customize an image by creating a new image file, putting the file in the custom resources folder, and adding the `resources` element to the configuration file.

Example

Customizing the image in the welcome screen

1. Create a folder called `MyResources` in the `C:\` drive.
2. Create a new image file called `dialogFull.bmp` and place it in the `C:\MyResources` folder.
3. Ensure that the `resources` element exists in the configuration file as follows:
   ```
   <resources cleanTarget="no" sourcePath="C:\MyResources"/>
   ```

Related Information

Changing resources [page 83]

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5.5.9.2 Customizing the license agreement

You can customize the license agreement that is presented to the user during installation. License agreements are stored as text files in the resources folder:

```
dunit\product.crystalreports-4.0-core-32\setup.ui.framework\resources\<language code>
```

For example, the English license agreement is located here:

```
dunit\product.crystalreports-4.0-core-32\setup.ui.framework\resources\en
\license_en.rft
```

For a list of language codes, see *Language codes* [page 102].

You customize the license agreement by creating a new license file, putting the file in the custom resources folder, and then adding the `resources` element to the configuration file.

Example

Customize the English license agreement

The English license agreement is stored here:

```
dunit\product.crystalreports-4.0-core-32\setup.ui.framework\resources\en
\license_en.rtf
```

To customize the English license agreement:

1. Create a folder called `MyResources` in the `C:\` drive.
2. Create a folder called `en` and place it in the `C:\MyResources` folder.
3. Create a new license agreement file called `license_en.rtf` and place it in the `C:\MyResources\en` folder.
4. Ensure that the `resources` element exists in the configuration file as follows:
   `<resources cleanTarget="no" sourcePath="C:\MyResources"/>`

Related Information

Changing resources [page 83]

5.5.10 Removing items from the Collaterals folder

The SAP Crystal Reports installation program stores tools, samples, and documentation in the `Collaterals` folder of the installation program. By default, a customized installation program that is delivered to customers will also contain the `Collaterals` folder with the same contents. You can remove unwanted items from the `Collaterals` folder in order to reduce the size of your customized installation program. Use the `collaterals` element with `cleanTarget="yes"` and `sourcePath="<full path to custom Collaterals folder>"`:

```
<collaterals cleanTarget="yes" sourcePath="<full path to custom Collaterals
folder>"/>
```


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> **Note**
>
> You must set the `cleanTarget` attribute to `yes` so that the customization tool will replace the original folder with the new folder.

To remove items from the Collaterals folder

1. Copy the contents of the existing `Collaterals` folder to a new location, for example `C:\MyCollaterals`.
2. Remove any items from `C:\SAPCustomTool\Collaterals` that are not required by your customized installation program.
3. Add the `<collaterals>` element to the configuration file to specify the location of the custom collaterals folder, for example:

```
<collaterals cleanTarget="yes" sourcePath="C:\MyCollaterals"/>
```

Table 11: Description of items in the `Collaterals` folder

Folder	Description	When to remove
`Collaterals > AddOns > SAP`	Provides connectivity to SAP systems.	Remove this folder if there is no need to connect to SAP systems.
`Collaterals > CustomizationTemplate`	Contains the sample `template.zip` file for customizations to the report designer.	Remove this folder if the customers do not need to provide a sample `template.zip` file.
`Collaterals > Docs`	Documentation in every language that Crystal Reports supports.	Remove any languages that are not included in the customized installation program. For a list of language codes, see *Language codes* [page 102].
`Collaterals > Tools > CustomizationTool`	The SAP BusinessObjects customization tool.	Remove this folder if the customers do not need to customize their own installation programs.

5.6 Customizing the report designer

You can customize the following properties of the report designer:

- Splash screen
- Start page
- String values on the menu

You can make these customizations after installing the program. You can also deploy your customizations to your customized installation package, so that the customizations are applied when users install the program.

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5.6.1 Customizing the splash screen

When Crystal Reports is run, a splash screen loads. You can replace this splash screen with your own bitmap.

> **Note**
>
> The following steps assume you already installed Crystal Reports. If you want to deploy the splash screen into your customized installation program, rename the bitmap you want to use for the splash screen to `splash.bmp` and follow the instructions in *Deploying the OEM customization file* [page 90].

1. Rename the bitmap you want to use for the splash screen to `splash.bmp`.

   > **Note**
   >
   > The bitmap must be a valid `.bmp` file and can be of any size.

2. Place `splash.bmp` in the same folder as `crw32.exe`.

   By default, `crw32.exe` is found in the following location:

   ```
   C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI
   4.0\win32_x86
   ```

When Crystal Reports is run, `splash.bmp` should load. If it does not load, then the default splash screen loads instead.

5.6.2 Customizing the start page

You can modify the content of the start page with your own HTML file. Most of your customizations will affect the top part of the start page. You can also remove the bottom part, which contains links to SAP Crystal Reports web pages.

> **Note**
>
> The following steps assume you already installed Crystal Reports. If you want to deploy the start page into your customized installation program, rename the HTML file you want to use for the start page to `start.html` and follow the instructions in *Deploying the OEM customization file* [page 90].

1. Rename the HTML file you want to use for the start page to `start.html`.
2. Place `start.html` in the `Start Page\<language code>` sub-folders, depending on the languages you want to support.

   > **Note**
   >
   > By default, the file path of the sub-folder is:
   >
   > ```
   > C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI
   > 4.0\win32_x86\Start Page\<language code>
   > ```
   >
   > For a list of all language codes, see *Language codes* [page 102].

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> **Tip**
>
> If `start.html` uses images, place them in the following location:
>
> `C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\win32_x86\Start Page\image`
>
> Your HTML file should use relative paths to point to this folder.

When Crystal Reports is run, the start page will display the customizations you made in `start.html`.

5.6.3 Customizing menu strings

You can modify string values on the menu that contain the product name SAP Crystal Reports. Such values are:

Property name	Description	Location	Default value
`ProductName`	Product name	Window title	SAP Crystal Reports
`CrystalReportHelp`	Product help	**Help** menu	SAP Crystal Reports Help
`AboutCrystalReport`	About product help	**Help** menu	About SAP Crystal Reports

To customize these strings, an XML file is required. The XML file name must have the following format:

`crw_oem_res_<language code>.xml`

For example, the English XML file name is:

`crw_oem_res_en.xml`

For a list of language codes, see *Language codes* [page 102].

> **Note**
>
> If you have already installed Crystal Reports, then the XML file should be placed in the same folder as `crw32.exe`. By default, this is found in:
>
> `C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\win32_x86`

When Crystal Reports is run in a specific language, the corresponding language XML file is loaded.

> **Note**
>
> If you want to deploy the customized strings into your customized installation program, follow the instructions in *Deploying the OEM customization file* [page 90].

> **Example**
>
> This example makes the following customizations:

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- Change the `ProductName` value to `Custom CR`
- Change the `CrystalReportHelp` value to `Custom CR help`
- Change the `AboutCrystalReport` value to `About Custom CR`

```
<Root>
    <ProductName>Custom CR</ProductName>
    <MainFrameMenu>
    <Help>
    <CrystalReportHelp>Custom CR help</CrystalReportHelp>
    <AboutCrystalReport>About Custom CR</AboutCrystalReport>
    </Help>
    </MainFrameMenu>
</Root>
```

Note

- To support multiple languages, the attribution encoding should be UTF-8: `<?xml version="1.0" encoding="UTF-8"?>`. In addition, when the XML file is saved with a text editor, select **UTF-8** from the **Encoding** menu.
- Keep the property name and value in the same line. For example the following is acceptable:

  ```
  <ProductName>Custom CR</ProductName>
  ```

  The following is not acceptable. There will be unrecognizable characters in the modified strings when Crystal Reports is run:

  ```
  <ProductName>
  Custom CR
  </ProductName>
  ```

5.6.4 Deploying the OEM customization file

After you prepare your customized files (splash images, start page, and menu strings), you can deploy your customizations into the installation package. Place the customized files in a zip file.

1. Create a zip file named `template.zip`.
2. Place the customized files into the zip file.

Note

The folder structure within the zip file must match the structure of the folder where you want the files placed, relative to the installation folder. Files must be placed in the following location in `template.zip`: `SAP BusinessObjects Enterprise XI 4.0\win32_x86`.

For example, the following customized files are placed in these locations in `template.zip`:

Customized file	Location in `template.zip`
`splash.bmp`	`SAP BusinessObjects Enterprise XI 4.0\win32_x86`

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Customized file	Location in `template.zip`
`start.html` (for English)	`SAP BusinessObjects Enterprise XI 4.0\win32_x86\Start Page\en`
`crw_oem_res_en.xml`	`SAP BusinessObjects Enterprise XI 4.0\win32_x86`

3. Copy the zip file to the following location:
   `dunit\product.crystalreports.oemzips-4.0-core-nu\OEMZips`

   Note

   The OEMZips folder may need to be created manually.

4. Run the installer.

The contents of `template.zip` will be unzipped to the installation folder.

Note

In the install package of SAP Crystal Reports, there is a sample zip file located in:

`Collaterals\CustomizationTemplate\template.zip`

5.7 Running the tool

The SAP BusinessObjects customization tool `customizationtool.exe` is included with the SAP Crystal Reports installation package in this location:

`Collaterals\Tools\CustomizationTool`

This section explains the command line parameters used for the tool.

Note

The SAP BusinessObjects customization tool may take several minutes to complete. You can check its progress by viewing the log file.

Example

This example runs the customization tool and creates a log file located in the `C:\` drive. To use this example, you must do the following:

- Create a configuration file called `oem.xml` in the location `C:\SAPCustomTool`.
- Download the Crystal Reports installation package to the location `C:\SAPCustomTool\packages`. See *To download the installation program* [page 69].
- Create a folder called `output` in the location `C:\SAPCustomTool`.

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- Run the following command from the command prompt: `cd C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool`

```
customizationtool.exe xml=C:\SAPCustomTool\oem.xml packageDir=C:\SAPCustomTool
\packages
outputDir=C:\SAPCustomTool\output logDetail=error > C:\oemlog.log
```

For more information on how to run the SAP BusinessObjects customization tool, see *Quick start for Crystal Reports* [page 68].

5.7.1 Command line parameters

Table 12: Required parameters

Parameter	Description	Example
xml	Full path to the configuration file. The configuration file for the full installation program can have any name.	`xml=C:\SAPCustomTool\oem.xml`
packageDir	Full path to the folder that contains the installation program you are modifying. The installation program is downloaded from SAP Service Marketplace in order to start the installation of SAP Crystal Reports. It contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries.	`packageDir=C:\SAPCustomTool\packages`
outputDir	Full path to the folder where the customized installation program will be created. Must be empty before running the tool.	`outputDir=C:\SAPCustomTool\output`

Table 13: Optional parameters

Parameter	Description	Example
baselinePath	Full path to a root folder containing the original, non-customized versions of all previous full and update installation programs you have customized. Use a semicolon (`;`) to separate root folders.	Assume you want to customize SAP Crystal Reports 2011 Support Package 5 and you customized the previous programs: `2011 (Full install), 2011 SP4`. Customize 2011 Support Package 5, and provide the root folder path to the non-customized packages for the major 2011 release and Support Package 4 release. For example, if the non-customized pack-

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Parameter	Description	Example

		ages are contained in the following directory structure:
		`C:\productUpdates\2011\`
		`\2011 Full\`
		`\SP4\`
		set the value to `baselinePath=C:\productUpdates\2011\`
		See *Customizing update installation programs* [page 93] for more information and examples of the *baselinePath* parameter.

logDetail	The level of detail tracked in the log file. The default value is `info`. The following are the accepted values: • `error` • `warn` • `info` • `debut` • `trace`	`logDetail=warn`
action	The tool mode. The following are the accepted values: • `generate` (default value) The tool performs the specified customizations. • `validate` The tool validates the configuration file but does not perform any customizations.	`action=validate`

Related Information

Quick start for Crystal Reports [page 68]

5.8 Customizing update installation programs

Update installation programs are Support Packages or Patches that contain updates to your existing SAP Crystal Reports software. Support Packages contain more updates than Patches but are released less frequently. You

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can use the SAP BusinessObjects customization tool to customize these installation programs, but some modifications to the command line and configuration file are required.

5.8.1 Frequently asked questions about update installation programs

Where do I find Support Packages and Patches?

1. Go to *https://service.sap.com/bosap-support* > **Software Downloads**.
2. On the *Find your software* tab, under the *A–Z Index*, click **Support Packages and Patches**.
3. Select **C** > **CRYSTAL REPORTS** > **CRYSTAL REPORTS 2011** > **Comprised Software Component Versions** > **CRYSTAL REPORTS 2011** > **Windows Server on IA32 32bit**.
4. Select your Support Package or Patch, then follow the instructions on the website to download and extract the objects.

What parts of update installation programs can I customize?

You can customize the same aspects of update installation programs as you did in the main installation program. Because Support Package and Patch updates contain fewer installation screens, not all of the customization steps apply. It is recommended to run the Support Package or Patch before customizing it to determine what customizations you require.

How do I customize update installation programs?

Update installation programs use the same architecture as a main installation program for Crystal Reports (full installation), so you can use the customization tool as described in *Creating the configuration file* [page 71] and *Running the tool* [page 91], with some modifications to the command line and the configuration file. For more information, see *How to customize update installation programs* [page 96] in this section.

Is it necessary to customize and install all Support Package and Patch updates?

No. As with non-customized versions of Crystal Reports, you only need to install the updates that you want. This may be a Support Package, a Patch, or both.

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Can I install a non-customized update on a customized Crystal Reports installation?

Yes. Both customized and non-customized Support Packages or Patches may be applied to your customized installation. However, non-customized Support Package or Patch installation programs will not display your branding or installation customizations you created for the main installation program.

I have delivered a customized version of Crystal Reports to customers but I want to modify the customizations in an update installation program. Is this possible?

This scenario is not supported. The customizations that you make to Support Packages and Patches must be consistent with the original customizations.

5.8.2 Quick start for update installation programs

Ensure that you have customized and installed the main (full) installation program (SAP Crystal Reports) using the instructions in *Quick start for Crystal Reports* [page 68], and that the non-customized installation package is located in `C:\SAPCustomTool\packages`.

This section shows you how to run the SAP BusinessObjects customization tool to customize the installation program for a Support Package. It uses the sample configuration file provided with the customization tool. Notice that the sample configuration file contains the `<cloneProduct>` element for the main installation program as well as the `<clonePatchProduct>` element for a Support Package installation program.

> **Note**
>
> You can run this example only when a Support Package is available on *https://service.sap.com/bosap-support*.

1. Download the installation program for the Crystal Reports Support Package to the folder `C:\SAPCustomTool\SupportPackage`.
2. Ensure the `product_cr_version` for the `<clonePatchProduct>` element in the configuration file matches the version number of the Support Package that you downloaded. See *Customizing the product name and version number* [page 73].
3. Run the following command from the command prompt: `cd C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool`
4. Customize the Crystal Reports Support Package and place the customized installation program in `C:\SAPCustomTool\output\SupportPackage` by using the following command:

   ```
   customizationtool.exe xml=example_customization_win_cr.xml packageDir=C:\SAPCustomTool\SupportPackage baselinePath=C:\SAPCustomTool\packages outputDir=C:\SAPCustomTool\output\SupportPackage logDetail=error > C:\oemlog_SP02.log
   ```


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5. Use `C:\SAPCustomTool\output\SupportPackage\setup.exe` to run the customized installation program for the Crystal Reports Support Package.

5.8.3 How to customize update installation programs

Use the configuration tool as described in *Creating the configuration file* [page 71] and *Running the tool* [page 91] to customize update installation programs for Support Packages and Patches, with the following differences:

- The configuration file must use the `clonePatchProduct` element (with the correct product ID), instead of the `cloneProduct` element.
- The configuration file must contain the complete `<cloneProduct>` element for the main installation package that you are updating. If it does not, it may cause unpredictable results, especially when customizations involve removing features.
- The configuration file cannot contain more than one `clonePatchProduct`. If you are customizing both a Support Package and a Patch, you must create two configuration files: one file containing `cloneProduct` and `clonePatchProduct` for the Support Package, and the other file containing `cloneProduct` and `clonePatchProduct` for the Patch.
- Refer to all prerequisite installation programs using the *baselinePath* command.

All configuration file elements and command-line parameters can be used to customize update installation programs, but not all of them are applicable to every Support Package or Patch. Run the installation program for the Support Package or Patch first to determine what you need to customize, then use the information in *Creating the configuration file* [page 71] and *IDs and codes for Crystal Reports customization* [page 98] to create the customization file.

To specify the product version in the configuration file

The configuration file for update installation programs must contain the `product version` in the `clonePatchProduct` element as shown below:

```
<oem name="<any name>">
  <clonePatchProduct sourceId="<product version>">
  ...
  </clonePatchProduct>
</oem>
```

The `product version` in the configuration file must match the version number of the installation program that you are customizing. To find the version number, look in the `dunit` folder for a folder with a name in this format:

`product.cr.patch-4.x.x.x-core-32`

You can use the name of this folder as the `product version`.

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Example

This example configuration file customizes SAP Crystal Reports 2011 Patch 1, which has the product version `product.cr.patch-4.1.0.1-core-32`. The configuration file customizes the product long name to *Custom Company Crystal Reports* and the product short name to *Custom CR*.

```
<oem name="Custom Patch Tool">
 <clonePatchProduct sourceId="product.cr.patch-4.1.0.1-core-32">
        ...
    </clonePatchProduct>
</oem>
```

To use the baselinePath parameter

Use the command line parameter *baselinePath* to refer to a root folder containing the original, non-customized versions of all previous full or update installation programs you have customized. This means you must keep the original installation packages.

Note

This parameter replaces the *baselinePackages* parameter introduced in 2011 Feature Pack 3.

To simplify the *baselinePath* parameter value, reference a single root folder - the customization tool will ignore unneeded files and folders. Otherwise, use a semicolon (`;`) in the *baselinePath* value to specify multiple root folders. Consider the following examples.

Example

Customizing Crystal Reports 2011 SP5

Assume you are customizing Crystal Reports 2011 Support Package 5 and you customized the previous programs: `2011 (Full install), 2011 SP4`. Assume the non-customized installation programs are located in the following directory structure:

```
C:\productUpdates\2011\
  \2011 Full\
  \SP4\
```

Set the *baselinePath* parameter to:

```
baselinePath=C:\productUpdates\2011\
```

Example

Customizing Crystal Reports 2011 SP5 Patch 2

Assume you are customizing Crystal Reports 2011 Support Package 5 Patch 2 and you customized the previous programs: `2011 (Full install), 2011 SP4, 2011 SP5, 2011 SP5 Patch 1`. Assume the non-customized installation programs are located in the following directory structure:

```
C:\productUpdates\2011\
  \2011 Full\
```


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```
   \SP4\
   \SP5\
   \SP5 Patch 1\
```

Set the *baselinePath* parameter to:

```
baselinePath=C:\productUpdates\2011\
```

Related Information

Command line parameters [page 92]

5.9 IDs and codes for Crystal Reports customization

The following section contains a list of all the IDs and codes you can use to customize the installation program:

- Feature IDs
- Shortcut deployment unit IDs
- String IDs
- Language codes
- Installation screen and property IDs

5.9.1 Feature IDs

Use feature IDs in the `removeFeature` element to remove features and their components from the installation program and the installed product.

For example, this ID will remove support for displaying relationships between data and geographic regions:
`<removeFeature id="Mapping"/>`

You can remove features for the following components:

- Data access
- Enterprise system integration
- Export support
- Other

Table 14: Data access

Feature ID	Description
`DataAccess`	Data access
`Access`	Microsoft Access
`ADO.NET`	ADO.NET

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Feature ID	Description
BDE	IDAPI Database DLL
Btrieve	Pervasive Database Driver (Betrieve)
COMData	COM Data Provider
Comm_Rep	Command in repository
DB2	IBM DB2
dBase	dBase
Exchange	Microsoft Exchange
FieldDefinitions	Field Definitions
FileSystem	File System
HPNeoview	HP Neoview
Informix	Informix
JavaData	Java Data Provider
JDBC	JDBC (JNDI) Data Driver
MicrosoftOutlook	Microsoft Outlook
MyCube	OLAP Cube
MYSQL_DataAccess	MySQL
NCRTeradata	NCRTeradata
NETEZZA	NETEZZA
NTEventLog	NT Event Log
OLE_DB_Data	OLE DB Data
OptionalDataDirectODBC	DataDirect ODBC
Oracle	Oracle
Progress.OpenEdge	Progress OpenEdge
RDO	ODBC RDO
SFORCE	Salesforce.com Driver
SIEBEL	Siebel
Sybase	Sybase
SymantecACT	ACT!
Universe	BusinessObjects Universe
UWSC	Universal Web Services Connector
WebActivityLog	Web Activity Log
XML	XML Driver

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Table 15: Enterprise system integration

Feature ID	Description
IntegrationOptions	Integration options
EBS	Oracle E-Business Suite
JDE	JD Edwards EnterpriseOne
PSFT	Peoplesoft Enterprise
SAP	SAP Solutions
SIEBEL	Siebel

Table 16: Export support

Feature ID	Description
Application	Export to an application
CharacterSeparated	Character Separated format
CrystalReports	Crystal Reports format
DiskFile	Export to a file
Excel	Microsoft Excel 97-2003 format
ExchangeFolders	Exchange Folder
HTML	HTML 3.2 and HTML 4.0 (DHTML) formats
LegacyXMLExport	Legacy XML format
LotusNotes	Lotus Notes document
LotusNotesMail	Lotus Domino
ODBC	Export to any of your installed ODBC formats
PDF	PDF format
Record	Record Style format
ReportDefinition	Report Definition format
RichTextFormat	Rich Text Format
Text	Text formats
WordforWindows	Microsoft Word 97-2003 format
XMLExport	XML document

Table 17: Other

Feature ID	Description
CrystalReportsRoot	Crystal Reports 2011
crw	Crystal Reports Designer
Mapping	Geographic mapping

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Feature ID	Description
`MicrosoftMail`	Microsoft Mail Destination
`PGEditor`	Custom charting
`UploadWizard`	Report Upload Wizard

Related Information

Removing features [page 82]

5.9.2 Shortcut deployment unit IDs

Use the deployment unit IDs in the `shortcut` element to change the location and name of the program shortcuts in the Windows **Start** menu.

Table 18: Shortcut deployment unit IDs

Shortcut deployment unit ID	Shortcut target
`product.crystalreports.shortcut.crw-4.0-core`	Crystal Reports 2011
`product.crystalreports.shortcut.odbc-4.0-core`	ODBC Data Source Administrator
`product.crystalreports.shortcut.rptpub-wiz-4.0-core`	Report Upload Wizard

Related Information

Customizing the Windows Start menu shortcuts [page 75]

5.9.3 String IDs

You can change the value of all strings in the installation program. You can replace a string for all languages or for a specific language. Use the `replaceString` element, for example:

```
<replaceString id="product.cr_name" value="Custom Company Crystal Reports lang="all"/>
```

Table 19: Commonly changed strings

String ID	Description
`product.cr_name`	Product long name

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String ID	Description
product.cr_shortname	Product short name
product_cr_version	Product version
product_cr_majorversion	Product major version

Related Information

Customizing the product name and version number [page 73]

5.9.4 Language codes

The SAP BusinessObjects customization tool uses these language codes to represent supported languages:

Language	Code
English	EN
Czech	CS
Danish	DA
Dutch	NL
Finnish	FI
French	FR
German	DE
Hungarian	HU
Italian	IT
Japanese	JA
Korean	KO
Norwegian Bokmal	NB
Polish	PL
Portuguese	PT
Romanian	RO
Russian	RU
Simplified Chinese	zh_CN
Slovak	SK
Spanish	ES

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Language	Code
Swedish	SV
Thai	TH
Traditional Chinese	zh_TW
Turkish	TR

Related Information

Customizing the product name and version number [page 73]
Customizing the Windows Start menu shortcuts [page 75]
Customizing the Windows Add Remove Program utility [page 78]
Removing language packs [page 83]
Customizing the license agreement [page 86]
Customizing menu strings [page 89]

5.9.5 Installation screen and property IDs

Use the installation screen IDs in the `removeDialog` element to remove screens from the installation program. For example, use this element to remove the *Select Features* screen:

```
<removeDialog id="SelectFeatures.dialog"/>
```

Use the property IDs and the property values to prepopulate user input. For example, use this element to set the default installation type to *custom*:

```
<replaceProperty id="InstallType" defaultValue="custom"/>
```

Table 20: Screen IDs

Title of installation screen	Installation screen ID	Property IDs in installation screen	Property values
Please choose a setup language	`SelectUILanguage.dialog`	`SortedAvailableSetupLanguages`	Set of language codes representing supported setup languages
		`SetupUILanguage`	Single language code representing the setup language
Install cannot proceed	`SharedAlwaysFailure.dialog`	Not applicable	Not applicable

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Title of installation screen	Installation screen ID	Property IDs in installation screen	Property values
Choose Install Type	`ChooseInstallType2.dialog`	`InstallType`	• `default` (Typical) • `custom`
Prerequisite check	`CheckPreRequisites.dialog`	Not applicable	Not applicable
Welcome to the installation wizard....	`ShowWelcomeScreen.dialog`	Not applicable	Not applicable
License Agreement	`ShowLicenseAgreement.dialog`	Not applicable	Not applicable
User Information	`CREnterProductKey.dialog`	`RegisteredUser`	Your *Username*
		`RegisteredCompany`	Your *Company name*
		`ProductKey`	Your *Product key-code*
Specify the Destination Folder	`ChooseInstallDir.dialog`	`InstallDir`	Filepath of the installation folder
Choose Language Packs	`SelectLanguagePack.dialog`	`SelectedLanguagePacks`	Array of language codes
Select Features	`SelectFeatures.dialog`	Not applicable	Not applicable
SAP Crystal Reports 2011 has been successfully installed	`ShowInstallComplete.dialog`	Not applicable	Not applicable
SAP Crystal Reports 2011 has been successfully installed	`ShowInstallComplete_PatchUpdate.dialog`	Not applicable	Not applicable
Start Installation	`ShowInstallSummary.dialog`	Not applicable	Not applicable
Uninstall Confirmation	`VerifyToRemove.dialog`	Not applicable	Not applicable
Web Update Service Option	`ShowPrivacyStatement.dialog`	`DisableWebUpdateService`	• `0` (Enable Web Update Service) • `1` (Disable Web Update Service)
SAP Crystal Reports 2011 has been successfully uninstalled	`ShowUninstallComplete.dialog`	Not applicable	Not applicable

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6 SAP Crystal Reports for Enterprise Customization

6.1 Introduction

SAP Crystal Reports for Enterprise can be repackaged and sold by partners. You can customize the installed product and the installation program in order to target a specific customer base, or to resell it as part of your own product. The SAP BusinessObjects customization tool customizes SAP Crystal Reports for Enterprise and its installation program with changes such as the following:

- Reducing the product size.
- Renaming the product.
- Changing default properties in the installation program.
- Hiding screens in the installation program.

To make customizations, you write a configuration file to specify the customizations, then run the SAP BusinessObjects customization tool to create a customized installation program. Customers can then use this installation program to install a customized version of the product.

6.2 Quick start for Crystal Reports for Enterprise

This section shows you how to run the customization tool to create a customized installation program for SAP Crystal Reports for Enterprise. The customizations include changing the default installation type, removing one of the installation screens, and renaming the product. When you finish this tutorial, you can run your customized installation package and install a customized version of Crystal Reports for Enterprise.

1. Set up the SAP BusinessObjects customization tool.
   a) Create the following working folder on your development machine: `C:\SAPCustomTool\packages`
   b) Copy the contents of the Crystal Reports for Enterprise installation package to `C:\SAPCustomTool\packages`

      The installation program contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries. For instructions on downloading the installation program, see *To download the installation program* [page 107].
   c) From the BI platform installation package, copy the `Collaterals\Tools` folder and paste it into `C:\SAPCustomTool\packages\Collaterals`

      The `Tools` folder contains the SAP BusinessObjects customization tool that you will use to customize Crystal Reports for Enterprise. For information about downloading the BI platform installation package, see *To download the server installation program* [page 16].
   d) Create the following folder: `C:\SAPCustomTool\output`

      > **Note**
      >
      > This folder must be empty in order for the customization tool to run.

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2. Create the configuration file.
   a) Copy and paste the following code into a text editor:

```
<oem name="CustomCompanyCrystalReports">
    <cloneProduct sourceId="product.crystalreportsjava-4.0-core-32">

        <!-- Remove the ProductKey dialog and set the default product key -->
        <removeDialog id="CREnterProductKey.dialog"/>
        <replaceProperty id="ProductKey" defaultValue="PLEASE SET"/>

        <!-- Set the default installation type to "Custom" -->
        <replaceProperty id="InstallType" defaultValue="custom"/>

        <!-- Specify the languages to keep in the OEM package. All other
language packs will be removed -->
        <languageIncludeList value="en;fr;de"/>

        <!-- Update the product name in each language. Rebrands the UI dialog
title. -->
        <!-- The value for the lang attribute can be a single language code,
"all", or a CSV "en;fr;ja" -->
        <replaceString id="product.crjava_name" value="Custom Company Crystal
Reports" lang="all"/>

        <!-- Create a custom Windows Add/Remove Programs entry with a new
display name and publisher -->
        <arp duSourceId="product.crystalreportsjava.arp-4.0-core">
            <arg id="publisher" value="Custom Company"/>
            <arg id="display_name" value="Custom Company Crystal Reports for
Enterprise" lang="all"/>
        </arp>

        <!-- Create a new Crystal Reports shortcut in the Start menu by
specifying where you want it with the fullLinkPath argument. Set its tooltip
description with the description argument -->
        <shortcut duSourceId="product.crystalreportsjava.shortcut-4.0-
core">
            <arg id="linkFullPath" value="[programmenufolder]\Custom Company
\Custom CR for Enterprise.lnk" lang="en"/>
            <arg id="description" value="Launch Custom CR for Enterprise"
lang="en"/>
        </shortcut>

    </cloneProduct>
</oem>
```

   b) Save the file as `C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool\example_customization_win_cre.xml`

3. Run the following command from the command prompt:

```
cd C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool
```

The `CustomizationTool` folder contains an executable called `customizationtool.exe` and the configuration file that you created in the previous step (`example_customization_win_cre.xml`).

4. Run the following command from the command prompt:

```
customizationtool.exe xml=example_customization_win_cre.xml packageDir=C:
\SAPCustomTool\packages outputDir=C:\SAPCustomTool\output logDetail=error > C:
\oemlog.log
```


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> **Note**
>
> The customization tool may take several minutes to complete. You can check its progress by viewing the log file (`C:\oemlog.log`).

Verify that the customized installation package was created in the `C:\SAPCustomTool\output` folder. Ensure that no errors were reported in the log file.

5. Use `C:\SAPCustomTool\output\setup.exe` to run the customized Crystal Reports for Enterprise installation program.

After you run the installation program, Crystal Reports for Enterprise is installed with the customizations described in the configuration file located at `C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool\example_customization_win_cre.xml`.

6.3 To download the installation program

1. Go to *https://service.sap.com/bosap-support* and select **Software Downloads**.
2. On the *Find your software* tab, under the *A–Z Index*, select **Installations and Upgrades**.
3. Select **B** > **SBOP BI platform (former SBOP Enterprise)** > **SBOP BI PLATFORM (ENTERPRISE)**.
4. Select **SBOP BI Platform 4.1**.
5. Select **Installation and Upgrade** > **WINDOWS**.
6. Select the object titled **SAP Crystal Reports for Enterprise 4.1 `<version>` Windows (32B)**, and then follow the instructions on the website to download and extract the objects.

> **Note**
>
> The software may take a long time to download, and you may need to contact the system administrator to ensure that your company's firewall will not terminate the download process.

6.4 Planning the customization process

To use the SAP BusinessObjects customization tool, do the following:

1. Download the SAP Crystal Reports for Enterprise installation program.
   For more information, see *To download the installation program* [page 107].
2. Set up the SAP BusinessObjects customization tool by copying the `Collaterals\Tools` folder from the BI platform installation program to the `Collaterals` subfolder in your working folder.
   For more information about downloading the BI platform installation program, see *To download the server installation program* [page 16].
3. Decide what customizations are required.
4. Write the configuration file to specify the customizations.

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For more information, see *Creating the configuration file* [page 109].

5. Run the customization tool to create a customized installation program.
6. Run the customized installation program to install a customized version of SAP Crystal Reports for Enterprise.

6.4.1 Best practices

This section provides recommendations for creating a customized installation program.

Validate the configuration file

You may want to validate the configuration file before running the tool. Use the *validate* command line parameter.

Reduce product size

Customers prefer a smaller installation program and a smaller installed product. To keep the product as small as possible, do the following:

- Remove any language packs that are not required.
- Remove any items from the `Collaterals` folder that are not required.

Apply customized names consistently

The product name and version number appear in several places in the installation program and in the installed product. Ensure that you verify customizations in the following locations:

- Product name and product version in the installation program and the product.
- Windows **Start** menu entry.
- Windows *Add Remove Program* utility.

Consider name changes in all languages

It is good practice to consider how the customized name appears in all supported languages.

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Related Information

Command line parameters [page 129]

6.5 Creating the configuration file

The following section describes the customizations that you can make to the installation program by editing the configuration file:

- Renaming the product, which involves doing the following:
  - Customizing the product name and version number.
  - Customizing the Windows **Start** menu shortcuts.
  - Customizing the Windows *Add Remove Program* utility.
- Customizing default user input.
- Removing installation screens.
- Preventing prerequisite checks.
- Removing language packs.
- Changing resources, which involves doing the following:
  - Changing the images in the installation program.
  - Changing the license agreement.
- Removing items from the Collaterals folder.

6.5.1 Configuration file overview

The SAP BusinessObjects customization tool uses the information in the configuration file to perform the customizations. The configuration file is an XML document, and you use XML elements to describe your customizations.

The file must have this format:

```
<oem name="<Any name>">
  <cloneProduct sourceId="product.crystalreportsjava-4.0-core-32">
        ...
     ...
  </cloneProduct>
</oem>
```

The configuration file for the full installation program can have any name. For example, it can be named `oem.xml`.

> **Note**
>
> The configuration file must be written in correct XML syntax. Use an XML editor to create and edit the file, and verify that the format is correct before running the tool.

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Example

This example makes the following customizations:

- Change the product long name to *Custom Company Crystal Reports for Enterprise* for all languages.
- Change the publisher and product name for the *Windows Add Remove Program* entry.
- Remove the installation screen titled *Choose Installation Type* and set the installation type to *Custom*.
- Specify that the only language packs that are included in the installation package are English, French, and German.

```
<oem name="CustomCompanyCrystalReportsforEnterprise">
    <cloneProduct sourceId="product.crystalreportsjava-4.0-core-32">

        <replaceString id="product.crjava_name" value="Custom Company Crystal
Reports for Enterprise" lang="all"/>

        <arp duSourceId="product.crystalreportsjava.arp-4.0-core">
            <arg id="publisher" value="Custom Company"/>
            <arg id="display_name" value="Custom Company Crystal Reports for
Enterprise" lang="all"/>
        </arp>

        <replaceProperty id="InstallType" defaultValue="custom"/>

        <removeDialog id="ChooseInstallType2.dialog"/>

        <languageIncludeList value="en;fr;de"/>

    </cloneProduct>
</oem>
```

6.5.2 Renaming the product

You can rename the product by customizing the following:

- The product name and version number.
- The *Start* menu entry and shortcut.
- The Windows *Add or Remove Programs* entry.

The following sections explain these customizations.

6.5.2.1 Customizing the product name and version number

You can customize the product name and version number. Use the `replaceString` element with the desired string ID:

```
<replaceString id="<string id>" value="<new value>" lang="<language list>"/>
```

The full product name is composed of the product long name and the version number.

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Table 21: Product name and version number

String description	String ID	Default value
Product long name	`product.crjava_name`	Crystal Reports for Enterprise
Product version	`product_version`	4.1

You can specify a different name and version number for each language. For a list of language codes, see *Language codes* [page 131].

Example

This example makes the following customizations:

- Change the product long name to "Custom Company Crystal Reports for Enterprise" for English.
- Change the product long name to "Custom Company Crystal Reports for Enterprise (French)" for French.
- Change the product version to *1.0* for both French and English.

The product name and version number in languages other than English and French will remain as the default value.

```
<replaceString id="product.crjava_name" value="Custom Company Crystal Reports for
Enterprise" lang="en"/>

<replaceString id="product.crjava_name" value="Custom Company Crystal Reports for
Enterprise (French)" lang="fr"/>

<replaceString id="product_version" value="1.0" lang="en;fr"/>
```

To remove instances of "SP3" from the installation program

When you run the installation program, you may see instances of "SP3" in the product name. To remove "SP3", modify the lines in the following files:

File name	Original line	Modified line
`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\uitext\CrystalReportsJava\product.lang_<language code>.uitext.xml`	`<string id="productname_patch" value="#product_patch#"/>`	`<string id="productname_patch" value=""/>`
`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\uitext\framework\setup.ui.framework.lang_<language code>.uitext.xml`	`<string id="product_patch" value=" SP3"/>`	`<string id="product_patch" value=""/>`

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File name	Original line	Modified line
Same as above	`<string id="product_patch_pre-space" value=" SP3"/>`	`<string id="prod-uct_patch_prespace" value=""/>`

You must modify one file for every language that the installation program supports. For a list of language codes, see *Language codes* [page 131]. When you run the customization tool and then run the installation program, all instances of "SP3" will be removed.

Example

To remove "SP3" from the English installation program, modify the following files:

- `product.lang_en.uitext.xml`
- `setup.ui.framework.lang_en.uitext`

6.5.2.2 Customizing the Windows Start menu shortcut

The Windows **Start** menu contains a shortcut for SAP Crystal Reports for Enterprise. The shortcut is located under a **Start** menu entry with the name **SAP Crystal Reports for Enterprise 4**. For each language, you can customize the name, location, and tooltip of the shortcut.

Use the `shortcut` element to customize the name, location, and tooltip of the shortcut:

```
<shortcut duSourceId="<shortcut deployment unit ID>">
  <arg id="linkFullPath" value="<full path to shortcut link>" lang="<language
list>"/>
  <arg id="description" value="<tooltip string>" lang="<language list>"/>
</shortcut>
```

Attribute	Value
`duSourceId`	The shortcut deployment unit ID to modify: `product.crystalreportsjava.shortcut-4.0`
`linkFullPath`	The full path to the shortcut link. Be sure to add .lnk to the shortcut link or the link will not be created. You can put the link in the **Start** menu or you can put it on the desktop. The SAP BusinessObjects customization tool will create the link correctly. You can specify one link for each language. For a list of language codes, see *Language codes* [page 131].
`description`	The tooltip string to display when the user hovers the mouse over the shortcut. You can specify one tooltip for each language. For a list of language codes, see *Language codes* [page 131].

Example

This example makes the following customizations:

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- Change the name of the shortcut to “Custom CR for Enterprise” for English.
- Customize the “Custom CR for Enterprise” tooltip to display “Launch CR for Enterprise” for English.
- Place the “Custom CR for Enterprise” shortcut under the **Start** menu entry called “Custom Company”.

The shortcut name and tooltip will remain unchanged for all other languages.

```
<shortcut duSourceId="product.crystalreportsjava.shortcut-4.0-
core">
  <arg id="linkFullPath" value="[programmenufolder]\Custom Company\Custom CR for
Enterprise.lnk" lang="en"/>
  <arg id="description" value="Launch Custom CR for Enterprise" lang="en"/>
</shortcut>
```

6.5.2.3 Customizing the Windows Add or Remove Programs utility

You can customize the display name, the publisher, and the icon in the Windows *Add or Remove Programs* (ARP) utility. Use the following element:

```
<arp duSourceId="product.crystalreportsjava.arp-4.0-core">
  <arg id="publisher" value="<publisher name>"/>
  <arg id="display_name" value="<product name>" lang="<language list>"/>
  <arg id="display_icon" value="<full path to icon>"/>
</arp>
```

Note

For a list of language codes, see *Language codes* [page 131].

The size of the icons displayed in the Windows ARP utility is 16 pixels by 16 pixels. Refer to Windows documentation for complete information on creating the icon.

Example

This example makes the following customizations in the Windows ARP utility:

- Change the product name in the Windows ARP utility to “Custom Company Crystal Reports for Enterprise”.
- Change the publisher to “Custom Company”.
- Replace the display icon with the icon located at `C:\SAPCustomTool\CC_logo.ico`

Note

To use this example you must put an icon called `CC_logo.ico` in this location: `C:\SAPCustomTool`

```
<arp duSourceId="product.crystalreportsjava.arp-4.0-core">
  <arg id="display_name" value="Custom Company Crystal Reports for Enterprise"
lang="all"/>
  <arg id="publisher" value="Custom Company"/>
  <arg id="display_icon" value="C:\SAPCustomTool\CC_logo.ico"/>
</arp>
```


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6.5.3 Customizing the default user input

The installation program collects user input using dialog boxes, radio buttons, and other user interface elements. You can customize the default value of the user input. Use the `replaceProperty` element with the property ID and the new default value:

```
<replaceProperty id="<property id>" defaultValue="<value to use as default value>"/>
```

For a list of property IDs, see *Installation screen and property IDs* [page 133].

Example

On the installation screen called *Select Install Type*, the default install type is *Typical*. This example changes the default install type to *Custom*.

```
<replaceProperty id="InstallType" defaultValue="custom"/>
```

6.5.4 Removing installation screens

You can remove installation screens from the installation program. Use the `removeDialog` element with the installation screen ID:

```
<removeDialog id="<installation screen ID>"/>
```

For a list of installation screen IDs, see *Installation screen and property IDs* [page 133].

Example

This example removes the installation screen titled *Select Features*.

```
<removeDialog id="SelectFeatures.dialog"/>
```

6.5.5 Preventing prerequisite checks

Prerequisites are conditions that must exist on the host machine in order for the installation program to succeed. The installation program verifies the existence of these prerequisites before starting, and displays the results in the *Check Prerequisites* screen. Removing the *Check Prerequisites* screen prevents prerequisite checks from being performed. To remove the screen, use the `removeDialog` element with `id="CheckPreRequisites.dialog"`

Note

It is recommended that you remove this installation screen only if you are performing the prerequisite checks by some other means. If the prerequisites are not met, the installation program will fail.

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Example

This example removes the *Check Prerequisites* screen and prevents prerequisite checks from being performed.

```
<removeDialog id="CheckPreRequisites.dialog"/>
```

6.5.6 Removing language packs

The installation program allows the user to select which language packs to install. A language pack contains translated versions of all the strings that are used by the installed product. By default, all possible language packs are included in the installation program. You can specify which language packs to include. Use the `languageIncludeList` element with a list of language codes:

```
<languageIncludeList value="<list of language codes>"/>
```

For a list of language codes, see *Language codes* [page 131].

Note

Language packs can be large. You can reduce the size of the installation program by including fewer language packs.

Example

This example includes the English, French, and German language packs in the installation program. The user can select from this list during installation.

```
<languageIncludeList value="en;fr;de"/>
```

6.5.7 Changing resources

The installation program stores image and text files as resources in this folder:

`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\resources`

You can customize the resources in this folder. Resources that are commonly customized include:

- The images in the installation program.
- The license agreement.

To customize a resource, do the following:

1. Create a custom resources folder.
   For example: `C:\MyResources`
   The folder can have any name, but note that it will be visible to customers. Use the same folder for all resources that you customize.

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2. Create a new resource with the same name and filepath as the original resource, and place it into the custom resources folder.
   For specific examples of this step, see the "Related Information" section.
3. Add the `<resources>` element to the configuration file to specify the location of the custom resources folder.
   For example: `<resources cleanTarget="no" sourcePath="C:\MyResources"/>`

> **Note**
>
> If you set `cleanTarget="yes"`, the customization tool will delete the original `resources` folder and use only those resources in the custom resources folder. This option is not recommended.

Related Information

Customizing the images in the installation program [page 116]
Customizing the license agreement [page 117]

6.5.7.1 Customizing the images in the installation program

You can customize the images in the installation program including the welcome screen, the top image for all screens, and the billboard for the progress dialog box. Images are stored as files in the resources folder, which is found in the following location:

`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\resources`

Table 22: Image files in the resources folder

Image	File name	Resolution
Welcome screen	`dialogFull.bmp`	500 pixels by 400 pixels
Top image for all screens	`dialogTop.bmp`	500 pixels by 83 pixels
Billboard for progress dialog	`billboard.bmp`	500 pixels by 193 pixels

You change an image by creating a new image file, putting the file in the custom resources folder, and adding the `resources` element to the configuration file.

> **Example**
>
> **Change the image in the welcome screen**
>
> 1. Create the following folder: `C:\MyResources`.
> 2. Create a new image file called `dialogFull.bmp` and place it in the `C:\MyResources` folder.
> 3. Ensure that the `resources` element exists in the configuration file as follows:
>
> ```
> <resources cleanTarget="no" sourcePath="C:\MyResources"/>
> ```


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Related Information

Changing resources [page 115]

6.5.7.2 Customizing the license agreement

You can change the license agreement that is presented to the user in the installation program. License agreements are stored as text files in the resources folder, in the following location:

`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\resources\<language code>`

For example, the English license agreement is located here:

`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\resources\en\license_en.rft`

For a list of language codes, see *Language codes* [page 131].

You change the license agreement by creating a new license file, putting the file in the custom resources folder, and adding the `resources` element to the configuration file.

Example

Change the English license agreement

The English license agreement is stored here:

`dunit\product.crystalreportsjava-4.0-core-32\setup.ui.framework\resources\en\license_en.rtf`

To change the English license agreement:

1. Create the following folder: `C:\MyResources`.
2. Create a folder called `en` and place it in the `C:\MyResources` folder.
3. Create a new license agreement file called `license_en.rtf` and place it in the `C:\MyResources\en` folder.
4. Ensure that the `resources` element exists in the configuration file as follows:

```
<resources cleanTarget="no" sourcePath="C:\SAPCustomTool\MyResources"/>
```

Related Information

Changing resources [page 115]

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6.5.8 Removing items from the Collaterals folder

The SAP Crystal Reports for Enterprise installation program stores tools, samples, and documentation in the `Collaterals` folder of the installation program. By default, a customized installation program that is delivered to customers will also contain the `Collaterals` folder with the same contents. You can remove unwanted items from the `Collaterals` folder in order to reduce the size of your customized installation program. Use the `collaterals` element with `cleanTarget="yes"` and the full path to the custom `Collaterals` folder:

```
<collaterals cleanTarget="yes" sourcePath="<full path to custom Collaterals
folder>"/>
```

> **Note**
>
> You must set the `cleanTarget` attribute to `yes` so that the customization tool will replace the original folder with the custom folder.

To remove items from the Collaterals folder

1. Copy the contents of the existing `Collaterals` folder to a new location.
   For example, copy the contents to `C:\MyCollaterals`.
2. Remove any items from `C:\MyCollaterals` that are not required by your customized installation program.
3. Add the `<collaterals>` element to the configuration file to specify the location of the custom collaterals folder.
   For example:

   ```
   <collaterals cleanTarget="yes" sourcePath="C:\MyCollaterals"/>
   ```

Table 23: Description of items in the Collaterals folder

Folder	Description	When to remove
`Collaterals > Docs`	Documentation in every language that Crystal Reports for Enterprise supports.	Remove any languages that are not included in the customized installation program. For a list of language codes, see *Language codes* [page 131].
`Collaterals > Tools > CustomizationTool`	The SAP BusinessObjects customization tool.	Remove this folder if the customers do not need to customize their own installation programs.

6.6 Customizing the report designer

You can customize the following parts of the Crystal Reports for Enterprise report designer:

- Splash screen.

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- Start page.
- Menu, including the following parts:
  - Menu strings containing the product name “Crystal Reports for Enterprise”.
  - **Register** menu item.
  - Item links in the **Help** menu.

You can make these customizations after installing the program. You can also deploy your customizations to your customized installation package, so that the customizations are applied when users install the program.

6.6.1 Customizing the splash screen

When Crystal Reports for Enterprise is run, a splash screen loads. You can replace this splash screen with your own bitmap. Replacing the splash screen will also remove the default text (the version number and the copyright statement) that appears with the default splash screen.

> **Note**
>
> The following steps assume you already installed Crystal Reports for Enterprise. If you want to deploy the splash screen into your customized installation program, rename the bitmap you want to use for the splash screen to `splash.bmp` and follow the instructions in *Deploying the OEM customization file* [page 126].

1. Rename your bitmap to `splash.bmp`

   The bitmap must be a valid `.bmp` file and can be of any size. The recommended size of the bitmap is 410 pixels by 253 pixels.
2. Place `splash.bmp` in the same folder as `CrystalReports.exe`

   By default, `CrystalReports.exe` is found in:

   ```
   C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0
   ```

When Crystal Reports for Enterprise is run, `splash.bmp` should load and the default text should not be displayed. If your bitmap does not load, then the default splash screen loads instead and the default text is displayed.

6.6.1.1 Removing the progress bar on the splash screen

When you customize your splash screen, you can also remove the progress bar from the splash screen. You do this by specifying the `show_splash_progressbar` attribute in a `.properties` file. The name of this file must be `cr_oem_config.properties`, and it must be placed in the `configuration` folder.

> **Note**
>
> The following steps assume you already installed Crystal Reports for Enterprise. If you want to deploy this customization into your customized installation program, specify `show_splash_progressbar=no` in a file named `cr_oem_config.properties` and then follow the instructions in *Deploying the OEM customization file* [page 126].

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1. (Optional) If you do not already have the `cr_oem_config.properties` file, create it and save it in the `configuration` folder.

   > **Note**
   > - By default, the `configuration` folder file path is: `C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0\configuration`
   > - This `.properties` file is used for customizations that do not require localized strings, so the file name does not contain a language code.
   > - The file must use UTF-8 encoding to support multiple languages.

2. Open the `cr_oem_config.properties` file in a text editor and add the following attribute:

   ```
   show_splash_progressbar=no
   ```

3. Save the file.

When Crystal Reports for Enterprise is run, the progress bar does not display on the splash screen.

Related Information

Attributes for .properties files [page 127]

6.6.2 Hiding parts of the start page

You can choose to hide the top or bottom part of the start page, or both.

You make these customizations by specifying attributes in a `.properties` file. The name of this file must be `cr_oem_config.properties`, and it must be placed in the `configuration` folder.

> **Note**
> - By default, the `configuration` folder file path is: `C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0\configuration`
> - This `.properties` file is used for customizations that do not require localized strings, so the file name does not contain a language code.
> - The file must use UTF-8 encoding to support multiple languages.

To hide or display the file history that appears at the top of the start page, use the `show_startpage_history` attribute:

```
show_startpage_history=<yes or no>
```


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To hide or display the online feed that appears at the bottom of the start page, use the `show_startpage_onlinefeed` attribute:

```
show_startpage_onlinefeed=<yes or no>
```

If you modify the content of the start page by using your own HTML file, then your HTML file replaces the online feed even if you specify `show_startpage_onlinefeed=yes` in the `.properties` file. For more information about this customization, see *Customizing the start page* [page 121].

Example

This example hides both the top and bottom parts of the start page.

If you have modified the content of the start page by using your own HTML file, then the contents of the HTML file will appear at the top of the page; otherwise, the start page will be blank.

```
show_startpage_history=no
show_startpage_onlinefeed=no
```

Note

If you want to deploy these customizations into your customized installation program, add the attributes to a file named `cr_oem_config.properties` and then follow the instructions in *Deploying the OEM customization file* [page 126].

Related Information

Attributes for .properties files [page 127]

6.6.2.1 Customizing the start page

You can modify the content of the start page by using your own HTML file.

Note

The following steps assume you already installed Crystal Reports for Enterprise. If you want to deploy the start page into your customized installation program, rename the HTML file you want to use for the start page to `startpage_<language code>.html`, depending on the language you want the start page to appear for, and then follow the instructions in *Deploying the OEM customization file* [page 126].

1. Rename your HTML file to `startpage_<language code>.html`

   For example, the HTML file for the English start page would be `startpage_en.html`

   ### Note

   For a list of language codes, see *Language codes* [page 131].

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2. Place `startpage_<language code>.html` in the `configuration` folder.

   By default, the `configuration` folder file path is:

   ```
   C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0\configuration
   ```

When Crystal Reports for Enterprise is run, the start page will display the customizations you made in `startpage_<language code>.html`. This custom content replaces the online feed that appears at the bottom of the start page by default.

If the top part of the start page is hidden, then the contents of `startpage_<language code>.html` will appear at the top of the start page. For more information about this customization, see *Hiding parts of the start page* [page 120].

6.6.3 Customizing the strings in the program

You can modify the following strings in the program, which contain the product name "SAP Crystal Reports for Enterprise" by default:

Property name	Description	Location	Default value
`product_name`	The product name.	Window title	SAP Crystal Reports for Enterprise
`help_help_menutitle`	The product help menu item.	**Help** menu	SAP Crystal Reports for Enterprise Help
`help_about_menutitle`	The **About** `<product name>` menu item.	**Help** menu	About SAP Crystal Reports for Enterprise

You customize these strings by specifying attributes in a language-specific `.properties` file. The file must be named `cr_oem_config_<language code>.properties`, and it must be placed in the `configuration` folder.

Note

- By default, the `configuration` folder file path is:
  `C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0\configuration`
- For a list of language codes, see *Language codes* [page 131].

Example

This example makes the following customizations:

- Change the product name in the window title to "Custom CR for Enterprise".
- Change the text of the product help menu item to "Custom CR for Enterprise help".

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- Change the text of the **About** `<product name>` menu item to “About Custom CR for Enterprise”.

```
product_name=Custom CR for Enterprise
help_help_menutitle=Custom CR for Enterprise help
help_about_menutitle=About Custom CR for Enterprise
```

> **Note**
>
> If you want to deploy these customizations into your customized installation program, add the attributes to a file named `cr_oem_config.properties` and then follow the instructions in *Deploying the OEM customization file* [page 126].

Related Information

Attributes for .properties files [page 127]

6.6.4 Customizing the Help menu

You can make the following modifications to the **Help** menu:

- Hide the **Register** menu item.
- Redirect the following item links:
  - **Help** > **Contact Us**
  - **Help** > **Documentation**

6.6.4.1 Hiding the Register menu item

You can hide the **Help** > **Register** menu item if you do not require your customers to register the product. You make this customization by specifying the `show_help_register_menu` attribute in a `.properties` file:

```
show_help_register_menu=<yes or no>
```

The name of the `.properties` file must be `cr_oem_config.properties`, and it must be placed in the `configuration` folder.

> **Note**
>
> - By default, the `configuration` folder file path is: `C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0\configuration`
> - This `.properties` file is used for customizations that do not require localized strings, so the file name does not contain a language code.

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- The file must use UTF-8 encoding to support multiple languages.

Example

This example hides the **Help** > **Register** menu item.

```
show_help_register_menu=no
```

Note

If you want to deploy this customization into your customized installation program, add the attribute to a file named `cr_oem_config.properties` and then follow the instructions in *Deploying the OEM customization file* [page 126].

Related Information

Attributes for .properties files [page 127]

6.6.4.2 Redirecting item links in the Help menu

By default, the **Contact Us** and **Documentation** items in the **Help** menu link to SAP content. You can redirect these items so that they link to your content.

Both items can link to either a URL or a file path. There are no restrictions to the file type that you can use; however, you cannot provide a relative file path.

You make these customizations by specifying attributes in a `.properties` file. The file must be named `cr_oem_config.properties`, and it must be placed in the `configuration` folder.

Note

- By default, the `configuration` folder file path is: `C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0\configuration`
- This `.properties` file is used for customizations that do not require localized strings, so the file name does not contain a language code.
- The file must use UTF-8 encoding to support multiple languages.

To redirect the link for the **Contact Us** menu item, use the `help_contactus_location` attribute:

```
help_contactus_location=<URL or file path>
```

To redirect the link for the **Documentation** menu item, use the `help_documentation_location` attribute:

```
help_documentation_location=<URL or file path>
```


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Example

This example makes the following customizations:

- Redirect the **Contact Us** menu item to link to the SAP home page.
- Redirect the **Documentation** menu item to link to `C:\example.txt`

To use this example, you must create a text file named `example.txt` and place it in the `C:\` drive.

```
help_contactus_location=http://www.sap.com/index.html
help_documentation_location=C:\example.txt
```

Note

If you want to deploy these customizations into your customized installation program, add the attributes to a file named `cr_oem_config.properties` and then follow the instructions in *Deploying the OEM customization file* [page 126].

Related Information

Attributes for .properties files [page 127]

6.6.5 Changing the images in the About dialog box

The **About** dialog box appears when you click **Help** > **About** `<product name>`. It contains two SAP-branded images: at the top is a banner with the words "SAP Crystal Reports for Enterprise" and at the bottom is the SAP logo.

You can replace these two images with your own bitmaps.

Note

The following steps assume you already installed Crystal Reports for Enterprise. If you want to deploy the banner and logo to your customized installation program, rename the bitmaps that you want to use to `about_banner.bmp` and `about_logo.bmp`, and then follow the instructions in *Deploying the OEM customization file* [page 126].

1. Rename the replacement banner to `about_banner.bmp`

   The bitmap must be a valid `.bmp` file and can be of any size. The recommended size of the banner is 500 pixels by 90 pixels. If the bitmap is not this size, it will be resized to these dimensions.
2. Rename the replacement logo to `about_logo.bmp`

   The bitmap must be a valid `.bmp` file and can be of any size. The recommended size of the logo is 100 pixels by 100 pixels. If the bitmap is not this size, it will be resized to these dimensions.
3. Place both bitmaps in the same folder as `CrystalReports.exe`

   By default, `CrystalReports.exe` is found in:

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```
C:\Program Files (x86)\SAP BusinessObjects\Crystal Reports for Enterprise XI 4.0
```

When you click **Help** > **About** `<product name>` in Crystal Reports for Enterprise, the **About** dialog box appears and your bitmaps should load. If they do not load, then the default banner and logo will load instead.

6.6.6 Deploying the OEM customization file

After you prepare your customized files (such as the splash image, start page, and `.properties` files), you can deploy your customizations into the installation package.

1. Create a `.zip` file named `template.zip`
2. Place the customized files into the `.zip` file.

> **Note**
>
> The folder structure in the `.zip` file must match the structure of the folder where you want to place the files, relative to the installation folder. The files must be placed in a `Crystal Reports for Enterprise XI 4.0` folder inside `template.zip`.
>
> For example, the following customized files must be placed in these locations in `template.zip`:

Customized file	Location in `template.zip`
`splash.bmp`	`Crystal Reports for Enterprise XI 4.0`
`about_banner.bmp`	`Crystal Reports for Enterprise XI 4.0`
`about_logo.bmp`	`Crystal Reports for Enterprise XI 4.0`
`startpage_en.html`	`Crystal Reports for Enterprise XI 4.0\configuration`
`cr_oem_config.properties`	`Crystal Reports for Enterprise XI 4.0\configuration`
`cr_oem_config_en.properties`	`Crystal Reports for Enterprise XI 4.0\configuration`

3. Copy the `.zip` file to the following location in your customized installation package:
   `dunit\product.crystalreportsjava.oemzips-4.0-core-nu\OEMZips`

> **Note**
>
> You may need to create the `OEMZips` folder manually.

4. Run the installer.

The contents of `template.zip` are unzipped to the installation folder.

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6.6.7 Attributes for .properties files

You can modify different attributes of the report designer in Crystal Reports for Enterprise. Attributes that do not require localized strings are specified in a different `.properties` file than attributes that require localized strings.

Attributes that do not require localized strings

You can use these attributes to make modifications such as hiding parts of the report designer. For example, you can hide the file history that appears at the top of the start page with `show_startpage_history=no` and hide the online feed at the bottom of the start page with `show_startpage_onlinefeed=no`.

Attributes that do not require localized strings are specified in the `cr_oem_config.properties` file. The file must use UTF-8 encoding to support multiple languages.

Table 24: Attributes that do not require localized strings

Attribute	Possible values	Description
`show_splash_progressbar`	`=yes`	Displays the progress bar on the splash screen.
	`=no`	Hides the progress bar on the splash screen.
`show_startpage_history`	`=yes`	Displays the top section of the start page.
	`=no`	Hides the top section of the start page.
`show_startpage_onlinefeed`	`=yes`	Displays the bottom section of the start page.
	`=no`	Hides the bottom section of the start page.
`show_help_register_menu`	`=yes`	Displays the **Help** > **Register** menu item.
	`=no`	Hides the **Help** > **Register** menu item.
`help_contactus_location`	`=<URL or file path>`	Redirects the **Help** > **Contact Us** menu item to a custom URL or a file path. **Note** • There are no restrictions to the file type that you can use. • Relative file paths are not supported.

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Attribute	Possible values	Description
help_documentation_location	=<URL or file path>	Redirects the **Help** > **Documentation** menu item to a custom URL or a file path. **Note** • There are no restrictions to the file type that you can use. • Relative file paths are not supported.

Attributes that require localized strings

You can use these attributes to modify strings in Crystal Reports for Enterprise. For example, you can modify the product name that appears in the window title with `product_name=Custom CR for Enterprise`.

Attributes that require localized strings are specified in a language-specific `.properties` file. The file must be named `cr_oem_config_<language code>.properties`.

Note

For a list of language codes, see *Language codes* [page 131].

Table 25: Attributes that require localized strings

Attribute	Possible values	Description
product_name	=<Product Name>	Replaces *SAP Crystal Reports for Enterprise* in the Window title with <Product Name>.
help_help_menutitle	=<Product Name Help>	Replaces **SAP Crystal Reports for Enterprise help** in the **Help** menu with <Product Name Help>.
help_about_menutitle	=About <Product Name>	Replaces **About SAP Crystal Reports for Enterprise** in the **Help** menu with About <Product Name>.

Related Information

Removing the progress bar on the splash screen [page 119]
Customizing the start page [page 121]
Customizing the strings in the program [page 122]

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Hiding the Register menu item [page 123]
Redirecting item links in the Help menu [page 124]

6.7 Running the tool

The SAP BusinessObjects customization tool (`customizationtool.exe`) is included with the SAP Crystal Reports for Enterprise installation package in this location:

`Collaterals\Tools\CustomizationTool`

Example

This example runs the customization tool and creates a log file located in the `C:\` drive. To use this example, you must do the following:

- Create a configuration file called `oem.xml` and place it in `C:\SAPCustomTool`
- Download the Crystal Reports for Enterprise installation package to `C:\SAPCustomTool\packages`
  For more information, see *To download the installation program* [page 107].
- In `C:\SAPCustomTool`, create a folder called `output`
- Run the following command from the command prompt:

```
cd C:\SAPCustomTool\packages\Collaterals\Tools\CustomizationTool
```

After completing the tasks above, run the customization tool by running the following command from the command prompt:

```
customizationtool.exe xml=C:\SAPCustomTool\oem.xml packageDir=C:\SAPCustomTool
\packages
outputDir=C:\SAPCustomTool\output logDetail=error > C:\oemlog.log
```

Note

The SAP BusinessObjects customization tool may take several minutes to complete. You can check its progress by viewing the log file.

For more information on how to run the SAP BusinessObjects customization tool, see *Quick start for Crystal Reports for Enterprise* [page 105].

6.7.1 Command line parameters

This section explains the command line parameters that are used for the customization tool. Some parameters are mandatory while others are optional.

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Table 26: Mandatory parameters

Parameter	Description	Example
xml	Full path to the configuration file. The configuration file for the full installation program can have any name.	`xml=C:\SAPCustomTool\oem.xml`
packageDir	Full path to the folder that contains the installation program you are modifying. The installation program is downloaded from the SAP Service Marketplace. It contains the folders `Collaterals`, `dunit`, `langs`, and `setup.engine` in addition to other binaries.	`packageDir=C:\SAPCustomTool\packages`
outputDir	Full path to the folder where the customized installation program will be created. This folder must be empty before you can run the tool.	`outputDir=C:\SAPCustomTool\output`

Table 27: Optional parameters

Parameter	Description	Example
logDetail	The level of logging detail. The default value is `info`. The following are the accepted values: • `error` • `warn` • `info` • `debut` • `trace`	`logDetail=warn`
action	The tool mode. The default value is `generate`. The following are the accepted values: • `generate` The tool performs the specified customizations. • `validate` The tool validates the configuration file but does not perform any customizations.	`action=validate`

Related Information

Quick start for Crystal Reports for Enterprise [page 105]

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6.8 IDs and codes for Crystal Reports for Enterprise customization

The following section contains a list of all the IDs and codes you can use to customize the installation program, including the following:

- String IDs
- Language codes
- Installation screen and property IDs

6.8.1 String IDs

You can change the strings for the product name and version number in the installation program. You can replace a string for all languages or for a specific language.

To replace a string, use the `replaceString` element. For example:

```
<replaceString id="product.crjava_name" value="Custom Company Crystal Reports
lang="all"/>
```

Table 28: Commonly changed strings

String ID	Description
`product.crjava_name`	Product long name
`product_version`	Product version

Related Information

Customizing the product name and version number [page 110]

6.8.2 Language codes

The SAP BusinessObjects customization tool uses the following language codes to represent supported languages.

> **Note**
>
> - If you include multiple languages in the same element, each language code must be separated by a semicolon.
> - If you want a customization to apply for every supported language, use `all` as the value instead of a language code.

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Language	Code
English	EN
Czech	CS
Danish	DA
Dutch	NL
Finnish	FI
French	FR
German	DE
Hungarian	HU
Italian	IT
Japanese	JA
Korean	KO
Norwegian Bokmal	NB
Polish	PL
Portuguese	PT
Romanian	RO
Russian	RU
Simplified Chinese	zh_CN
Slovak	SK
Spanish	ES
Swedish	SV
Thai	TH
Traditional Chinese	zh_TW
Turkish	TR

Related Information

Customizing the product name and version number [page 110]
Customizing the Windows Start menu shortcut [page 112]
Customizing the Windows Add or Remove Programs utility [page 113]
Removing language packs [page 115]
Customizing the license agreement [page 117]
Customizing the strings in the program [page 122]

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6.8.3 Installation screen and property IDs

The installation screen IDs are used in the `removeDialog` element. You use this element to remove screens from the installation program. For example, use this element to remove the *Select Features* screen:

```
<removeDialog id="SelectFeatures.dialog"/>
```

The property IDs are used in the `replaceProperty` element. You use this element to change the default user input for the fields and settings in the installation program. For example, use this element to set the default installation type to **Custom**:

```
<replaceProperty id="InstallType" defaultValue="custom"/>
```

Table 29: Screen IDs

Title of installation screen	Installation screen ID	Property IDs in installation screen	Property values
Select the setup language	`SelectUILanguage.dialog`	Not applicable	Not applicable
Install cannot proceed	`SharedAlwaysFailure.dialog`	Not applicable	Not applicable
Check Prerequisites	`CheckPreRequisites.dialog`	Not applicable	Not applicable
Welcome to the installation wizard....	`ShowWelcomeScreen.dialog`	Not applicable	Not applicable
License Agreement	`ShowLicenseAgreement.dialog`	Not applicable	Not applicable
Configure Product Registration	`CREnterProductKey.dialog`	`ProductKey`	Your product keycode
Select Language Packages	`SelectLanguagePack.dialog`	Not applicable	Not applicable
Select Install Type	`ChooseInstallType2.dialog`	`InstallType`	• `default` (Typical) • `custom`
Select Features	`SelectFeatures.dialog`	Not applicable	Not applicable
Start Installation	`ShowInstallSummary.dialog`	Not applicable	Not applicable
SAP Crystal Reports for Enterprise 4.1 SP3 has been successfully installed	`ShowInstallComplete.dialog`	Not applicable	Not applicable
SAP Crystal Reports for Enterprise 4 FP3 has been successfully installed	`ShowInstallComplete_PatchUpdate.dialog`	Not applicable	Not applicable
Application Maintenance	`RunMaintenance.dialog`	Not applicable	Not applicable
Uninstall Confirmation	`VerifyToRemove.dialog`	Not applicable	Not applicable

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Title of installation screen	Installation screen ID	Property IDs in installation screen	Property values
SAP Crystal Reports for Enterprise 4.1 SP3 has been successfully uninstalled	`ShowUninstallComplete.dialog`	Not applicable	Not applicable

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