Content

1 Document History .............................................................. 6

2 Getting Started ................................................................. 7
  2.1 About this guide ............................................................ 7
  Terminology ................................................................. 7
  2.2 Before you begin ............................................................ 9
  Customizing SAP BusinessObjects Business Intelligence platform ........................................... 9
  Customizing SAP Crystal Reports ........................................... 12
  Customizing SAP Crystal Reports for Enterprise ......................................................... 14

3 Business Intelligence Platform Installer Customization ......................................................... 15
  3.1 Introduction ................................................................. 15
  3.2 Quick start for the Business Intelligence platform (Windows) ........................................... 15
  3.3 Quick start for the Business Intelligence platform (Unix or Linux) ..................................... 16
  3.4 To download the server installation program ................................................................. 17
  3.5 Planning the customization process ................................................................. 18
    Best practices ............................................................... 18
  3.6 Creating the configuration file ......................................................... 20
    Configuration file overview ..................................................... 20
    Renaming the product .................................................. 21
    Customizing user input .................................................... 28
    Removing installation screens .................................................. 30
    Embedding a keycode ......................................................... 30
    Removing features .................................................. 31
    Preventing prerequisite checks .................................................. 31
    Installing on unsupported Red Hat Linux platforms .................................................. 32
    Removing language packs .................................................. 33
    Preventing the WDeploy tool from running .................................................. 33
    Removing the default database .................................................. 34
    Changing resources .................................................. 34
    Removing items from the Collaterals folder .................................................. 37
  3.7 Running the tool ............................................................... 38
    Command line parameters .................................................. 39

3.8 Customizing update installation programs ................................................................. 41
  Frequently asked questions about update installation programs ........................................... 41
  Quick start for update installation programs ................................................................. 42
  How to customize update installation programs ................................................................. 43
3.9 IDs and codes for BI Platform customization ........................................... 45
   Feature IDs. ....................................................................................... 45
   Shortcut deployment unit IDs (Windows only). .................................. 48
   String IDs. ......................................................................................... 49
   Language codes. ................................................................................ 50
   Installation screen and property IDs. ................................................. 51

4 Web Application Customization. ............................................................. 59
4.1 Introduction. ..................................................................................... 59
   Key concepts ..................................................................................... 59
   Testing your customizations. ............................................................... 61
4.2 Quick start. ...................................................................................... 61
4.3 Customizing BI launch pad. ............................................................... 63
   To customize the favicon image. ....................................................... 63
   To customize logos. .......................................................................... 63
   Customizing other user interface elements. ..................................... 63
   Working with BI workspaces and compound modules. .................. 70
   To change the name of BI launch pad. .............................................. 71
4.4 Customizing OpenDocument. ............................................................. 72
4.5 Customizing the Crystal Reports JavaScript viewer. ......................... 73
   Customizing the viewer. ................................................................. 74

5 SAP Crystal Reports 2011 Customization. .............................................. 76
5.1 Introduction. ..................................................................................... 76
5.2 Quick start for Crystal Reports. ......................................................... 76
5.3 To download the installation program. .............................................. 77
5.4 Planning the customization process. ................................................ 78
   Best practices. .................................................................................. 78
5.5 Creating the configuration file. .......................................................... 79
   Configuration file overview. ............................................................. 80
   Renaming the product. .................................................................... 81
   Customizing default user input. ....................................................... 88
   Removing installation screens. ....................................................... 89
   Embedding a keycode. .................................................................... 90
   Removing features. ......................................................................... 90
   Preventing prerequisite checks. ...................................................... 91
   Removing language packs. ............................................................. 91
   Changing resources. ....................................................................... 91
   Removing items from the Collaterals folder. .................................. 94
5.6 Customizing the report designer. ....................................................... 95
   Customizing the splash screen. ...................................................... 96
   Customizing the start page. ............................................................ 96
Customizing menu strings. ............................................................. 97
Deploying the OEM customization file. ...................................... 98
5.7 Running the tool. ................................................................. 99
Command line parameters. ......................................................... 100
5.8 Customizing update installation programs. ......................... 102
Frequently asked questions about update installation programs ... 102
Quick start for update installation programs. ......................... 103
How to customize update installation programs. .................... 104
5.9 IDs and codes for Crystal Reports customization. ............. 106
Feature IDs. ........................................................................... 106
Shortcut deployment unit IDs. .................................................... 109
String IDs. .......................................................................... 109
Language codes. ................................................................... 110
Installation screen and property IDs. ....................................... 111
6 SAP Crystal Reports for Enterprise Customization. ............... 113
6.1 Introduction. .................................................................... 113
6.2 Quick start for Crystal Reports for Enterprise. ................. 113
6.3 To download the installation program. ............................ 115
6.4 Planning the customization process. ................................. 115
   Best practices. ................................................................. 116
6.5 Creating the configuration file. ........................................... 117
   Configuration file overview. ............................................... 117
   Renaming the product. ....................................................... 118
   Customizing the default user input. .................................... 122
   Removing installation screens. ........................................... 122
   Preventing prerequisite checks. .......................................... 122
   Removing language packs. ................................................. 123
   Changing resources. .......................................................... 123
   Removing items from the Collaterals folder. ....................... 126
6.6 Customizing the report designer. ....................................... 126
   Customizing the splash screen. ........................................... 127
   Hiding parts of the start page. ............................................. 128
   Customizing the strings in the program. ............................ 130
   Customizing the Help menu. .............................................. 131
   Changing the images in the About dialog box. .................... 133
   Deploying the OEM customization file. .............................. 134
   Attributes for .properties files. .......................................... 135
6.7 Running the tool. ................................................................. 136
   Command line parameters. ................................................ 137
6.8 IDs and codes for Crystal Reports for Enterprise customization. 138
   String IDs. ..................................................................... 138
# Document History

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

<table>
<thead>
<tr>
<th>Version</th>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP BusinessObjects Business Intelligence Suite 4.1</td>
<td>May, 2013</td>
<td>First release of this document.</td>
</tr>
</tbody>
</table>
| SAP BusinessObjects Business Intelligence Suite 4.1 Support Package 1 | August, 2013 |  - Added section *Installing on unsupported Red Hat Linux platforms* [page 32].  
  - Updated section *Customizing the installation folder* [page 28]. 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. |
| SAP BusinessObjects Business Intelligence Suite 4.2 | November 2015 | Updated the guide with branding changes. |
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 9] 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.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;INSTALLDIR&gt;</td>
<td>The file path where the BI platform is installed. On a Windows machine, the default file path is C:\Program Files (x86)\SAP BusinessObjects.</td>
</tr>
</tbody>
</table>

2.1.1  Terminology

The following terms are used throughout the BI platform documentation:

Table 1:

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>add-on products</td>
<td>Products that work with the BI platform but have their own installation program, such as SAP BusinessObjects Explorer</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------------------</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Auditing Data Store (ADS)</td>
<td>The database used to store auditing data</td>
</tr>
<tr>
<td>BI platform</td>
<td>An abbreviation for the SAP BusinessObjects Business Intelligence platform</td>
</tr>
<tr>
<td>bundled database; bundled web application server</td>
<td>The database or web application server shipped with the BI platform</td>
</tr>
<tr>
<td>cluster (noun)</td>
<td>Two or more Central Management Servers (CMSs) working together and using a single CMS database</td>
</tr>
<tr>
<td>cluster (verb)</td>
<td>To create a cluster.</td>
</tr>
<tr>
<td></td>
<td>For example, to create a cluster:</td>
</tr>
<tr>
<td></td>
<td>1. Install a CMS and CMS database on machine A.</td>
</tr>
<tr>
<td></td>
<td>2. Install a CMS on machine B.</td>
</tr>
<tr>
<td></td>
<td>3. Point the CMS on machine B to the CMS database on machine A.</td>
</tr>
<tr>
<td>cluster key</td>
<td>Used to decrypt the keys in the CMS database.</td>
</tr>
<tr>
<td></td>
<td>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.</td>
</tr>
<tr>
<td>CMS</td>
<td>An abbreviation for the Central Management Server</td>
</tr>
<tr>
<td>CMS database</td>
<td>The database used by the CMS to store information about the BI platform</td>
</tr>
<tr>
<td>deployment</td>
<td>The BI platform software installed, configured, and running on one or more machines</td>
</tr>
<tr>
<td>installation</td>
<td>An instance of BI platform files created by the installation program on a machine</td>
</tr>
<tr>
<td>machine</td>
<td>The computer on which the BI platform software is installed</td>
</tr>
<tr>
<td>major release</td>
<td>A full release of the software, such as 4.0</td>
</tr>
<tr>
<td>migration</td>
<td>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.</td>
</tr>
<tr>
<td>minor release</td>
<td>A release of some components of the software, such as 4.2</td>
</tr>
<tr>
<td>Term</td>
<td>Definition</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>node</td>
<td>A group of BI platform servers that run on the same machine and are managed by the same Server Intelligence Agent (SIA)</td>
</tr>
<tr>
<td>Patch</td>
<td>A small update for a specific Support Package version</td>
</tr>
<tr>
<td>promotion</td>
<td>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</td>
</tr>
<tr>
<td>server</td>
<td>A BI platform process. A server hosts one or more services.</td>
</tr>
<tr>
<td>Server Intelligence Agent (SIA)</td>
<td>A process that manages a group of servers, including stopping, starting, and restarting servers</td>
</tr>
<tr>
<td>Support Package</td>
<td>A software update for a minor or major release</td>
</tr>
<tr>
<td>web application server</td>
<td>A server that processes dynamic content. For example, the bundled web application server for 4.2 is Tomcat 8.</td>
</tr>
<tr>
<td>upgrade</td>
<td>The planning, preparation, migration, and post-processes required to complete a migration process</td>
</tr>
</tbody>
</table>

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.

- Customize BI launch pad and OpenDocument web applications.
  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 59] for “Web Application Customization” in this document.
You can 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 73] 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:
To customize the installation program:

Download the installation program for the BI platform, plus the installation programs for any desired Support Packages or Patches.

To customize:
- BI Launch Pad
- OpenDocument
- Crystal Reports
- Javascript Viewer

Customize the installation program(s)

Extract branding bundles from template.zip and customize.

Repackage customizations into template.zip

Add template.zip to the customized installation program

Result: Customized installation program(s) with template.zip file

Result: Customized installation program(s) containing customizations

Ship customized installation program(s) to customers

Result: Customized installation program(s)
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 76].
- 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 76] 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 95] in this document.

The following diagram illustrates the workflow where all types of customizations are performed:
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 113] 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 126] in the “SAP Crystal Reports for Enterprise Customization” section of this document.
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.

i 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 17] 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_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 17] for instructions.

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 command 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

2. Select Installations and Upgrades ➔ A–Z Index.
3. Select B ➔ SBOP BI platform (former SBOP Enterprise) ➔ SBOP BI PLATFORM (ENTERPRISE) ➔ SBOP BI PLATFORM 4.2.
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://support.sap.com/home.html ➔ Software Downloads ➔ Support Packages and
Note

- Users need to use the SAP Download manager for download. When you download the server installation program without the download manager, it results in failed or partial downloads.
- To extract the solaris and air tar files, users need to use gnu tar, or gtar, to extract, and not the default tar utility. Else, the installation would fail.

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 17].
2. Decide what customizations are required. See Creating the configuration file [page 20].
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:

- 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 39]
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
  - 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:

<table>
<thead>
<tr>
<th>Platform</th>
<th>Location of sample configuration file</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>Collaterals\Tools\CustomizationTool\example_customization_win_boe.xml</td>
</tr>
<tr>
<td>Unix or Linux</td>
<td>Collaterals/Tools/CustomizationTool/</td>
</tr>
<tr>
<td></td>
<td>example_customization_linux_boe.xml</td>
</tr>
</tbody>
</table>

The file must have this format:

```xml
<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 43].

**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.

**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.

```xml
<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:

```xml
<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 3: Product name and version number

<table>
<thead>
<tr>
<th>String description</th>
<th>String ID</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product long name</td>
<td>product.boe64_name</td>
<td>SAP BusinessObjects BI platform</td>
</tr>
<tr>
<td>Product short name</td>
<td>product.boe64_shortname</td>
<td>BI platform server</td>
</tr>
<tr>
<td>Product version</td>
<td>product_version</td>
<td>4.1</td>
</tr>
<tr>
<td>Product major version</td>
<td>product_majorversion</td>
<td>4</td>
</tr>
</tbody>
</table>

**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.

```xml
<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:
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:

Table 4:

<table>
<thead>
<tr>
<th>File name</th>
<th>Original line</th>
<th>Modified line</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\uitext\BusinessObjects64\product.lang_&lt;language code&gt;.uitext.xml</code></td>
<td><code>&lt;string id=&quot;productname_patch&quot; value=&quot;FP3&quot;/&gt;</code></td>
<td><code>&lt;string id=&quot;productname_patch&quot; value=&quot;&quot;/&gt;</code></td>
</tr>
<tr>
<td><code>dunit\product.businessobjects64-4.0-core-32\setup.ui.framework\uitext\framework\setup.ui.framework.lang_&lt;language code&gt;.uitext.xml</code></td>
<td><code>&lt;string id=&quot;product_patch&quot; value=&quot;FP3&quot;/&gt;</code></td>
<td><code>&lt;string id=&quot;product_patch&quot; value=&quot;&quot;/&gt;</code></td>
</tr>
<tr>
<td>Same as above</td>
<td><code>&lt;string id=&quot;product_patch_prespace&quot; value=&quot;FP3&quot;/&gt;</code></td>
<td><code>&lt;string id=&quot;product_patch_prespace&quot; value=&quot;&quot;/&gt;</code></td>
</tr>
</tbody>
</table>

You must modify one file for every language that the installation program supports. For a list of language codes, see [Language codes [page 50]]. 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:
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:

```xml
<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>
```

Table 5:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>duSourceId</td>
<td>The shortcut deployment unit ID that you want to modify. Typical values include:</td>
</tr>
<tr>
<td></td>
<td>• product.businessobjects64.shortcut.ccm-4.0-core</td>
</tr>
<tr>
<td></td>
<td>Central Configuration Manager</td>
</tr>
<tr>
<td></td>
<td>• product.businessobjects64.shortcut.infoview-4.0-core</td>
</tr>
<tr>
<td></td>
<td>BI launch pad</td>
</tr>
<tr>
<td></td>
<td>• product.businessobjects64.shortcut.cmc-4.0-core</td>
</tr>
<tr>
<td></td>
<td>Central Management Console</td>
</tr>
</tbody>
</table>

For a complete list of sourceId values, see Shortcut deployment unit IDs (Windows only) [page 48].
### Attribute | Value
--- | ---
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. You can specify one link for each language. For a list of language codes, see Language codes [page 50].
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.

```xml
<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:
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.

```xml
<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>
  <arg id="description" value="<tooltip string>" lang="<language list>">
  </arg>
</shortcut>
```

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

```xml
<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>
  <arg id="description" value="<tooltip string>" lang="<language list>">
  </arg>
</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.

```xml
<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>
```

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:

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

The customization appears below:

```
<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 51].

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.

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.

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

The customization appears below:

```
Sales Insight Platform 1.0 FP3 setup

Choose Install Type

Select one of the options below.

- Full
  Install a complete Sales Insight Platform system

- Custom / Expand
  Choose the application features you want to install, or add servers to an existing Sales Insight Platform system.

- Web Tier
  Install only the Web Tier features.

Back  Next  Cancel
```
3.6.4 Removing installation screens

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

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

For a list of installation screen IDs, see Installation screen and property IDs [page 51].

**Example**

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

```xml
<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.

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

Related Information

Installation screen and property IDs [page 51]
Customizing user input [page 28]
Removing installation screens [page 30]
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 45].

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.

**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 45]

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`.
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.

```bash
# 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 distributions 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/.*\([0-9,.]\)* .*\(\1\)/\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.el6.1686 or higher."" fi
  fi
  if [ -f "/etc/SuSE-release" ]; then
    version="`cat /etc/SuSE-release | grep "VERSION = 11"`" if [ "$version" != "" ]; then
      libstd="`rpm -qa | grep libstdc++33-32bit`" if [ "$libstd" = "" ]; then
        requiredLibs="$requiredLibs "libstdc++33-32bit"" fi
  fi
  if [ "$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.

```xml
<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://support.sap.com/home.html

### 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:

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

For a list of language codes, see Language codes [page 50].

**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.

```xml
<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**

```xml
<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.

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.

```xml
<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:

```xml
<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 35]
Customizing the license agreement [page 36]

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 6: Image files in the resources folder

<table>
<thead>
<tr>
<th>Image name</th>
<th>File name</th>
<th>Size (W x H)</th>
<th>Default image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome screen</td>
<td>dialogFull.bmp</td>
<td>500 x 400 px</td>
<td></td>
</tr>
<tr>
<td>Top image for all screens</td>
<td>dialogTop.bmp</td>
<td>500 x 83 px</td>
<td></td>
</tr>
</tbody>
</table>
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 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:
   ```xml
   <resources cleanTarget="no" sourcePath="C:\SAPCustomTool\MyResources"/>
   ```

**Related Information**

[Changing resources](#) [page 34]

**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>\license_en.rft
```

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 50].
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.
3. Ensure the `resources` element exists in the configuration file as follows:

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

**Related Information**

Changing resources [page 34]

### 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>"`:

```xml
<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 7: Description of items in the Collaterals folder

<table>
<thead>
<tr>
<th>Folder</th>
<th>Description</th>
<th>When to remove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaterals &gt; Add-Ons &gt; SAP</td>
<td>Provides connectivity to SAP systems.</td>
<td>Remove if there is no need to connect to SAP systems.</td>
</tr>
<tr>
<td>Collaterals &gt; Add-Ons &gt; Subversion</td>
<td>Subversion is the default version control system that is used by Lifecycle Management (LCM).</td>
<td>Remove if the LCM feature is removed.</td>
</tr>
<tr>
<td>Collaterals &gt; Add-Ons &gt; Tivoli Agent</td>
<td>The server monitoring feature can integrate with IBM Tivoli, and this item provides the connectivity.</td>
<td>Remove if integration with IBM Tivoli is not required.</td>
</tr>
<tr>
<td>Collaterals &gt; Customization Template</td>
<td>Required template files.</td>
<td>Do not remove this folder.</td>
</tr>
<tr>
<td>Collaterals &gt; DiagnosticsAgent7.3</td>
<td>SAP Solution Manager Diagnostics (SMD) agent. SMD is used by SAP Support tools to troubleshoot installed product.</td>
<td>Remove if the SMD feature is removed.</td>
</tr>
<tr>
<td>Collaterals &gt; Docs</td>
<td>Documentation in every language that SAP BusinessObjects Business Intelligence platform supports.</td>
<td>Remove any languages that are not included in the customized installation program. For a list of language codes, see Language codes [page 50].</td>
</tr>
<tr>
<td>Collaterals &gt; Tools &gt; CustomizationTool</td>
<td>The SAP BusinessObjects customization tool.</td>
<td>Remove this folder if the customers do not need to customize their own installation programs.</td>
</tr>
<tr>
<td>Collaterals &gt; Tools &gt; LCM command line tool</td>
<td>Command-line utility for Lifecycle Management (LCM).</td>
<td>Remove if the LCM feature is removed.</td>
</tr>
<tr>
<td>Collaterals &gt; Tools &gt; wdeploy</td>
<td>WDeploy is used to deploy web applications to web application servers other than Tomcat.</td>
<td>Not recommended to remove. Remove only if customers will use Tomcat exclusively.</td>
</tr>
</tbody>
</table>

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.

**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 17].
- 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>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Example (Windows)</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>xml</code></td>
<td>Full path to the configuration file.</td>
<td><code>xml=example_customization_win_boe.xml</code></td>
</tr>
<tr>
<td><code>packageDir</code></td>
<td>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.</td>
<td><code>packageDir=C:\SAPCustomTool\packages</code></td>
</tr>
<tr>
<td><code>outputDir</code></td>
<td>Full path to the folder where the customized installation program will be created. Must be empty before running the tool.</td>
<td><code>outputDir=C:\SAPCustomTool\output</code></td>
</tr>
</tbody>
</table>
Table 9: Optional parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Example (Windows)</th>
</tr>
</thead>
<tbody>
<tr>
<td>baselinePath</td>
<td>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.</td>
<td>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 example, 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 41] for more information and examples of the baselinePath parameter.</td>
</tr>
<tr>
<td>logDetail</td>
<td>The level of logging detail. Default value is info. Accepted values: error, warn, info, debug, trace</td>
<td>logDetail=warn</td>
</tr>
<tr>
<td>action</td>
<td>The tool mode. Accepted values are:</td>
<td>action=validate</td>
</tr>
<tr>
<td></td>
<td>• generate (default value) The tool performs the specified customizations.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• validate The tool validates the configuration file but does not perform any customizations.</td>
<td></td>
</tr>
</tbody>
</table>

Related Information

Quick start for the Business Intelligence platform (Windows) [page 15]
Quick start for the Business Intelligence platform (Unix or Linux) [page 16]
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 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?

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 20] and Running the tool [page 38], with some modifications to the command line and the configuration file. See How to customize update installation programs [page 43] 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.

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 15], 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://support.sap.com/home.html.

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 21].

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
   ```

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 20] and Running the tool [page 38] 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 20] and IDs and codes for BI Platform customization [page 45] 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:

```xml
<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**.

**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**.

```xml
<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\%
```
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
**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)
    - 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
- DataAccess.Essbase
- DataAccess.Peoplesoft (PeopleSoft Enterprise)
Related Information

Removing features [page 31]

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 10: Shortcut deployment unit IDs

<table>
<thead>
<tr>
<th>Shortcut deployment unit ID</th>
<th>Shortcut target</th>
</tr>
</thead>
<tbody>
<tr>
<td>product.businessobjects64.shortcut.wdeploy-4.0-core</td>
<td>WDeploy</td>
</tr>
<tr>
<td>product.businessobjects64.shortcut.ccm-4.0-core</td>
<td>Central Configuration Manager</td>
</tr>
<tr>
<td>product.businessobjects64.shortcut.cmc-4.0-core</td>
<td>Central Management Console</td>
</tr>
</tbody>
</table>
### Related Information

**Customizing the Windows Start menu shortcuts (Windows only) [page 24]**

### 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:

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

**Table 11: Commonly changed strings**

<table>
<thead>
<tr>
<th>String ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>product.boe64_name</code></td>
<td>Product long name</td>
</tr>
<tr>
<td><code>product.boe64_shortname</code></td>
<td>Product short name</td>
</tr>
<tr>
<td><code>product_version</code></td>
<td>Product version</td>
</tr>
<tr>
<td><code>product_majorversion</code></td>
<td>Product major version</td>
</tr>
</tbody>
</table>

### Related Information

**Customizing the product name and version number [page 21]**
3.9.4 Language codes

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

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

Related Information

- Customizing the product name and version number [page 21]
- Customizing the Windows Start menu shortcuts (Windows only) [page 24]
- Customizing the Windows Add Remove Program utility (Windows only) [page 27]
- Removing language packs [page 33]
Customizing the license agreement [page 36]

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:

```xml
<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`:

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

**Note**

Property values are case-sensitive.

### Table 13: Installation screen IDs and associated properties

<table>
<thead>
<tr>
<th>Title of installation screen</th>
<th>Installation screen ID</th>
<th>Property ID(s)</th>
<th>Allowed property value(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Check Prerequisites</strong></td>
<td>CheckPreRequisites.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Select Installer Language</strong></td>
<td>SelectUILanguage.dialog</td>
<td>SortedAvailableSetupLanguages</td>
<td>Set of language codes that the installation program can be run in, for example &quot;en;ja&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SetupUILanguage</td>
<td>Single language code describing the language that the installation program will be run in, for example &quot;en&quot;</td>
</tr>
<tr>
<td><strong>Welcome to the installation wizard ...</strong></td>
<td>ShowWelcomeScreen.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>License Agreement</strong></td>
<td>ShowLicenseAgreement.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Configure Product Registration</strong></td>
<td>EnterProductKey.dialog</td>
<td>RegisteredUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RegisteredCompany</td>
<td>Company name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ProductKey</td>
<td></td>
</tr>
<tr>
<td><strong>Select Language Packages</strong></td>
<td>SelectLanguagePack.dialog</td>
<td>SelectedLanguagePackages</td>
<td>The set of language packs to be installed, for example &quot;en;ja&quot; For a list of language codes, see Language codes [page 50].</td>
</tr>
</tbody>
</table>
| **Select Install Type**      | ChooseInstallType.dialog | InstallType | • default (Full)  
• custom  
• webtier |
<table>
<thead>
<tr>
<th>Title of installation screen</th>
<th>Installation screen ID</th>
<th>Property ID(s)</th>
<th>Allowed property value(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Configure Destination Folder</td>
<td>ChooseInstallDir.dialog</td>
<td>InstallDir</td>
<td>Installation folder</td>
</tr>
<tr>
<td>Select Default or Existing Database</td>
<td>SelectDataSource.dialog</td>
<td>SelectIntegratedDatabase</td>
<td>• 0 (Use an existing database)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 1 (Install and use the default database)</td>
</tr>
<tr>
<td>Expand Installation</td>
<td>ExpandInstallMessage.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Select Java Web Application Server</td>
<td>ChooseWebAppServer.dialog</td>
<td>WebAppServerType</td>
<td>• tomcat</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• manual</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• wacs</td>
</tr>
<tr>
<td>Select Features</td>
<td>SelectFeatures.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Select Version Management</td>
<td>SelectLCM.dialog</td>
<td>NewOrExistingLCM</td>
<td>• existing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• new</td>
</tr>
<tr>
<td>Select New or Expand Installation</td>
<td>ChooseExpandInstall.dialog</td>
<td>NewOrExpandInstall</td>
<td>• new</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• expand</td>
</tr>
<tr>
<td>Configure Subversion</td>
<td>SetLCMConfig.dialog</td>
<td>LCMName</td>
<td>Repository name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMPort</td>
<td>Repository port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMUserName</td>
<td>Repository user</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMPassword</td>
<td>Repository password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMPasswordConfirm</td>
<td>Confirm password</td>
</tr>
<tr>
<td>Configure Server Intelligence Agent (SIA)</td>
<td>GetSIAInfo.dialog</td>
<td>SIAPort</td>
<td>SIA port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SIAName</td>
<td>Node name</td>
</tr>
<tr>
<td>Configure Central Management Server (CMS)</td>
<td>GetCMSInfo.dialog</td>
<td>CMSPort</td>
<td>Any valid port number</td>
</tr>
<tr>
<td>Configure CMS Account</td>
<td>GetCMSPassword.dialog</td>
<td>CMSPassword</td>
<td>The CMS password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CMSPasswordConfirm</td>
<td>The CMS password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ClusterKey</td>
<td>The CMS cluster key</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ClusterKeyConfirm</td>
<td>The CMS cluster key</td>
</tr>
<tr>
<td>Configure Sybase SQL Anywhere</td>
<td>GetSQLAnywhereInfo.dialog</td>
<td>SQLAnywhereServerName</td>
<td>The SQL Anywhere server name (Unix and Linux only)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQLAnywherePort</td>
<td>The SQL Anywhere port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SQLAnywhereAdminPassword</td>
<td>The SQL Anywhere administrator password (username is dba)</td>
</tr>
<tr>
<td>Title of installation screen</td>
<td>Installation screen ID</td>
<td>Property ID(s)</td>
<td>Allowed property value(s)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>---------------------------</td>
</tr>
</tbody>
</table>
| Select Automatic Server Start | ChooseToEnableServers.dialog | EnableServers | • 0 (Stop servers upon installation)  
• 1 (Start servers upon installation) |
| Configure Tomcat | ▪ ShowTomcatInfo.dialog  
▪ GetTomcatInfo.dialog | 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  
• oracle  
• mysql  
• mssql  
• maxdb  
• none |
<table>
<thead>
<tr>
<th>Title of installation screen</th>
<th>Installation screen ID</th>
<th>Property ID(s)</th>
<th>Allowed property value(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select Existing CMS Database Type</strong></td>
<td>SelectCMSDatabase. dialog</td>
<td>UsingCMSDBType</td>
<td>• sybase</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• db2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• oracle</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• mysql</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• mssql</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• maxdb</td>
</tr>
<tr>
<td><strong>Existing CMS Deployment Information</strong></td>
<td>SetRemoteCMSInfo. dialog</td>
<td>RemoteCMSName</td>
<td>Name of the existing CMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RemoteCMSPort</td>
<td>Port number for the existing CMS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RemoteCMSAdminName</td>
<td>Administrator's username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>RemoteCMSAdminPassword</td>
<td>Administrator's password</td>
</tr>
<tr>
<td><strong>SAP BusinessObjects BI platform has been successfully installed</strong></td>
<td>ShowInstallComplete LaunchWDeploy. dialog</td>
<td>LaunchWDeploy</td>
<td>• 0 (Do not launch WDeploy tool after install)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• 1 (Automatically launch WDeploy tool after install)</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - DB2</strong></td>
<td>ExistingAuditDB2. dialog</td>
<td>ExistingAuditingDBServer</td>
<td>DB2 alias name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - SQL Anywhere (ODBC)</strong></td>
<td>ExistingCMSSQLAnywhere.dialog</td>
<td>ExistingCMSDBSN</td>
<td>Data source name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username for existing database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>User's password</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - SQL Anywhere (ODBC)</strong></td>
<td>ExistingAuditSQLAnywhere.dialog</td>
<td>ExistingAuditingDBDatabase</td>
<td>Name of existing auditing database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBUser</td>
<td>Username for existing database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>User's password</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - MaxDB</strong></td>
<td>ExistingAuditMaxDB. dialog</td>
<td>ExistingAuditingDBDatabase</td>
<td>Name of existing auditing database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBUser</td>
<td>Username for existing database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>User's password</td>
</tr>
<tr>
<td>Title of installation screen</td>
<td>Installation screen ID</td>
<td>Property ID(s)</td>
<td>Allowed property value(s)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPort</td>
<td>Port number for existing database</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBServer</td>
<td>MaxDB server name</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - SQL Server (ODBC)</strong></td>
<td>ExistingAuditMSSQL .dialog</td>
<td>ExistingAuditingDBDatabase</td>
<td>SQL database name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBServer</td>
<td>SQL server name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBUseTrustedConnection</td>
<td>Use trusted connection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBDataSource</td>
<td>Data source name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBShowSysDB</td>
<td>Show system database</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - MySQL</strong></td>
<td>ExistingAuditMySQL .dialog</td>
<td>ExistingAuditingDBDatabase</td>
<td>Auditing database name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPort</td>
<td>MySQL Port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBServer</td>
<td>MySQL Server</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - Oracle</strong></td>
<td>ExistingAuditOracle .dialog</td>
<td>ExistingAuditingDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBServer</td>
<td>Oracle TNSNAME</td>
</tr>
<tr>
<td><strong>Configure Auditing Database - Sybase</strong></td>
<td>ExistingAuditSybase .dialog</td>
<td>ExistingAuditingDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingAuditingDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td>Title of installation screen</td>
<td>Installation screen ID</td>
<td>Property ID(s)</td>
<td>Allowed property value(s)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - DB2</strong></td>
<td>ExistingCMSDB2.dialog</td>
<td>ExistingCMSDBServer</td>
<td>Sybase service name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBReset</td>
<td>0 (Do not reset existing database) 1 (Reset existing database)</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - MaxDB</strong></td>
<td>ExistingCMSMaxDB.dialog</td>
<td>ExistingCMSDBServer</td>
<td>CMS Database Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBReset</td>
<td>0 (Do not reset existing database) 1 (Reset existing database)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBDatabase</td>
<td>MaxDB Server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPort</td>
<td>MaxDB Port</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - SQL Server</strong></td>
<td>ExistingCMSMSSQL.dialog</td>
<td>ExistingCMSDBServer</td>
<td>Existing server name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBReset</td>
<td>0 (Do not reset existing database) 1 (Reset existing database)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBDatabase</td>
<td>CMS Database Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUseTrustedConnection</td>
<td>Use trusted connection</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBDSN</td>
<td>Data source name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBShowSysDB</td>
<td>Show system database</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - MySQL</strong></td>
<td>ExistingCMSMySQL.dialog</td>
<td>ExistingCMSDBServer</td>
<td>MySQL Server</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td>Title of installation screen</td>
<td>Installation screen ID</td>
<td>Property ID(s)</td>
<td>Allowed property value(s)</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>ExistingCMSDBReset</td>
<td></td>
<td>ExistingCMSDBReset</td>
<td>● 0 (Do not reset existing database)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBDatabase</td>
<td>CMS Database Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPort</td>
<td>MySQL Port</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - Oracle</strong></td>
<td>ExistingCMSOracle. dialog</td>
<td>ExistingCMSDBServer</td>
<td>Oracle TNSNAME</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBReset</td>
<td>● 0 (Do not reset existing database)</td>
</tr>
<tr>
<td><strong>Configure CMS Repository Database - Sybase</strong></td>
<td>ExistingCMSSybase. dialog</td>
<td>ExistingCMSDBServer</td>
<td>Sybase service name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBUser</td>
<td>Username</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ExistingCMSDBReset</td>
<td>Reset existing database</td>
</tr>
<tr>
<td><strong>Configure Subversion</strong></td>
<td>SetLCMConfig.dialo g</td>
<td>LCMName</td>
<td>Repository Name</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMPort</td>
<td>Repository Port</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMUserName</td>
<td>Repository User</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMPassword</td>
<td>Password</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCMPasswordConfirm</td>
<td>Confirm password</td>
</tr>
<tr>
<td><strong>SAP BusinessObjects BI platform has been successfully installed</strong></td>
<td>ShowInstallComplete.dia log</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LaunchWDeploy</td>
<td>● 0 (Do not launch WDeploy tool after install)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LaunchSSW</td>
<td>● 0 (Do not launch System Setup Wizard after install)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ViewLogButton</td>
<td>● 0 (Do not view log file after install)</td>
</tr>
<tr>
<td><strong>Start Installation</strong></td>
<td>ShowInstallSummary.dia log</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Title of installation screen</td>
<td>Installation screen ID</td>
<td>Property ID(s)</td>
<td>Allowed property value(s)</td>
</tr>
<tr>
<td>-------------------------------------------------------------------</td>
<td>------------------------------</td>
<td>----------------</td>
<td>---------------------------</td>
</tr>
<tr>
<td>Post Installation Steps</td>
<td>ShowPostInstall.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Uninstall Confirmation</td>
<td>VerifyToRemove.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>SAP BusinessObjects BI platform has been successfully uninstalled</td>
<td>ShowUninstallComplete.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

**Related Information**

Customizing user input [page 28]
Removing installation screens [page 30]
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.

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
```

  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
```
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.

i 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.
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.
   `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

   ```bash
   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`:
   ```bash
   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:

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use the bundled Tomcat server</td>
<td>Selected during the installation process.</td>
</tr>
<tr>
<td>Use your own supported Java application server</td>
<td>Performed after the installation program completes. Use the WDeploy tool.</td>
</tr>
</tbody>
</table>

   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
  \images
  favicon.ico
  \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.

![http://localhost:8080/BOE/BI](http://localhost:8080/BOE/BI)

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.

4.3.3 Customizing other user interface elements

Logos, background, styles, and other user interface elements of 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.
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.

1. (0.1) customize the background of pages and sub-pages (inside frames)
2. (0.2) input text field
3. (0.4) 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

10. (2.1.1) top banner area (background pattern)
11. (2.1.2) banner logo
12. (2.2.1) tab container
13. (2.2.2) active tab
14. (2.2.3) inactive tab
15. (2.3.1) BI launch pad icon

16. (2.2.4) tab buttons
17. (0.7) spinner

18. (3.1.1) accordion inactive header
19. (3.1.2) accordion active header
20. (3.1.3) accordion drawer/tree background
21. (3.3.1) toolbar background
22. (3.4) footer background
23. (3.5.2) selected unfocused row in both the list pane and the tree view (on the left)
24. (3.6) accordion-list pane resize bar
25. (3.2.1) list pane container
26. (3.2.2) list pane heading
27. (3.2.3) list pane rows
28. (3.5.1) selected focused row in both the list pane and tree view (on the left)
29. (5.1.2, 5.1.3, 5.1.4) resize handle and knob
30. (0.8.1) context menu container
31. (0.8.2) context menu body
32. (0.8.3) context menu item
33. (0.8.4) context menu selected item

34. (0.9) tooltip
35. (4.1) details container
36. (5.2) details header

37. (6.1) simple dialog container
38. (6.2.1) simple dialog header
39. (6.2.2) close button dialog header
40. (6.3) simple dialog body
41. (6.4) simple dialog footer
42. (6.5) simple dialog text field (overrides general text field)
43. (6.6) simple dialog buttons

44. (3.3.2, 3.3.3) toolbar button hover/press
45. (3.3.4) toolbar menu item
46. (3.3.5) toolbar menu item hovered
47. (3.3.6) toolbar menu separator
48. (3.3.7) toolbar menu frame
49. (3.3.8) toolbar menu refresh icon

50. (7.1.1) large dialog header
51. (7.1.2) large dialog header – maximize button (hover)
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.

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.
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.
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.
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.

### 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  
\css\customize.css  
\images  
\images\theme  
\images\*.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)
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.
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:

<table>
<thead>
<tr>
<th>template.zip</th>
<th>Modify</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAP BusinessObjectsEnterprise XI 4.0\warfiles\webapps\BOE\WEB-INF\eclipse\plugins\com.businessobjects.webpath.CrystalReports_oem.jar</td>
<td>Unzip and modify.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>CrystalReports_oem.jar</th>
<th>Modify</th>
</tr>
</thead>
<tbody>
<tr>
<td>\web</td>
<td>Add custom or external JavaScript and CSS files to this folder.</td>
</tr>
<tr>
<td>\web\CustomListener.js</td>
<td>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.</td>
</tr>
<tr>
<td>\WEB-INF\classes\JSAPI-properties.json</td>
<td>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:</td>
</tr>
</tbody>
</table>

```json
{
    "logo": [
        "img": "images/logo.gif",
        "tooltip": "SAP Crystal Reports",
```
<table>
<thead>
<tr>
<th>CrystalReports_oem.jar</th>
<th>Modify</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&quot;url&quot;: &quot;<a href="http://www.businessobjects.com/ipl/default.asp?destination=ViewerLogoLink&amp;product=crystalreports&amp;version=14%5C%2E0">http://www.businessobjects.com/ipl/default.asp?destination=ViewerLogoLink&amp;product=crystalreports&amp;version=14\%2E0</a>&quot;</td>
</tr>
</tbody>
</table>
|                        | "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.
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 77] 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.

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

2. On the Find your software tab, under the A–Z Index, select Installations and Upgrades.
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://support.sap.com/home.html > 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 102].
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 77].
2. Decide what customizations are required. See Creating the configuration file [page 79].
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.

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 100]

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
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 104].

### 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"/>
```

© 2015 SAP SE or an SAP affiliate company. All rights reserved.
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 14: Product name and version number

<table>
<thead>
<tr>
<th>String description</th>
<th>String ID</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product long name</td>
<td>product.cr_name</td>
<td>Crystal Reports</td>
</tr>
<tr>
<td>Product short name</td>
<td>product.cr_shortname</td>
<td>Crystal Reports</td>
</tr>
<tr>
<td>Product version</td>
<td>product_cr_version</td>
<td>2011</td>
</tr>
<tr>
<td>Product major version</td>
<td>product_cr_majorversion</td>
<td>2011</td>
</tr>
</tbody>
</table>

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 110].
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.

```xml
<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:

![Custom Company Crystal Reports 1.0 FP3 setup](image)

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:

Table 15:

<table>
<thead>
<tr>
<th>File name</th>
<th>Original line</th>
<th>Modified line</th>
</tr>
</thead>
<tbody>
<tr>
<td>dunit\product.crystalreports-4.0-core-32\setup.ui.framework\uitext\CrystalReports\product.lang_&lt;language code&gt;.uitext.xml</td>
<td>&lt;string id=&quot;productname_patch&quot; value=&quot; FP3&quot;/&gt;</td>
<td>&lt;string id=&quot;productname_patch&quot; value=&quot;&quot;/&gt;</td>
</tr>
</tbody>
</table>
You must modify one file for every language that the installation program supports. For a list of language codes, see Language codes [page 110]. 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:
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>
```

Table 16:

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>duSourceId</td>
<td>The shortcut deployment unit ID that you want to modify. Typical values include:</td>
</tr>
<tr>
<td></td>
<td>● product.crystalreports.shortcut.crw-4.0-core</td>
</tr>
<tr>
<td></td>
<td>Crystal Reports 2011</td>
</tr>
<tr>
<td></td>
<td>● product.crystalreports.shortcut.odbc-4.0-core</td>
</tr>
<tr>
<td></td>
<td>ODBC Data Source Administrator</td>
</tr>
<tr>
<td></td>
<td>● product.crystalreports.shortcut.rptpubwiz-4.0-core</td>
</tr>
<tr>
<td></td>
<td>Report Upload Wizard</td>
</tr>
<tr>
<td></td>
<td>For a complete list of duSourceId values, see Shortcut deployment unit IDs [page 109].</td>
</tr>
<tr>
<td>linkFullPath</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>You can specify one link for each language. For a list of language codes, see Language codes [page 110].</td>
</tr>
<tr>
<td>description</td>
<td>The tooltip string to display when the user hovers the mouse over the shortcut. You can specify one tooltip for each language.</td>
</tr>
</tbody>
</table>

**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.
● 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](#) for more information.

The result of the customization appears below:
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>">
        </arg>
      </arg>
    </arg>
  </arg>
</arp>
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 110].

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`.

```xml
<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:
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>"`:

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

**Example**

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

```xml
<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:

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

For a list of property IDs, see Installation screen and property IDs [page 111].

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.

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

The result of the customization appears below:
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 111].

Example

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

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

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

**Related Information**

- Installation screen and property IDs [page 111]
- Customizing default user input [page 88]
- Removing installation screens [page 89]

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>"`:

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

For a list of feature IDs, see Feature IDs [page 106].

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:

```xml
<removeFeature id="Mapping"/>
```
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 110].

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:
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 92]
- Customizing the license agreement [page 94]
Table 17: Image files in the resources folder

<table>
<thead>
<tr>
<th>Image name</th>
<th>File name</th>
<th>Default image</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome screen</td>
<td>dialogFull.bmp</td>
<td></td>
</tr>
<tr>
<td>Top image for all screens</td>
<td>dialogTop.bmp</td>
<td></td>
</tr>
<tr>
<td>Billboard for progress dialog</td>
<td>billboard.bmp</td>
<td></td>
</tr>
</tbody>
</table>

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

**Related Information**

Changing resources [page 91]
### 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 110].

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.rft`

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:

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

#### Related Information

Changing resources [page 91]

### 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>"`:

```xml
<collaterals cleanTarget="yes" sourcePath="<full path to custom Collaterals 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:

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

<table>
<thead>
<tr>
<th>Folder</th>
<th>Description</th>
<th>When to remove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaterals &gt; Add-Ons &gt; SAP</td>
<td>Provides connectivity to SAP systems.</td>
<td>Remove this folder if there is no need to connect to SAP systems.</td>
</tr>
<tr>
<td>Collaterals &gt; CustomizationTemplate</td>
<td>Contains the sample template.zip file for customizations to the report designer.</td>
<td>Remove this folder if the customers do not need to provide a sample template.zip file.</td>
</tr>
<tr>
<td>Collaterals &gt; Docs</td>
<td>Documentation in every language that Crystal Reports supports.</td>
<td>Remove any languages that are not included in the customized installation program. For a list of language codes, see Language codes [page 110].</td>
</tr>
<tr>
<td>Collaterals &gt; Tools &gt; CustomizationTool</td>
<td>The SAP BusinessObjects customization tool.</td>
<td>Remove this folder if the customers do not need to customize their own installation programs.</td>
</tr>
</tbody>
</table>

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.
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 98].

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 98].

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 110].
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:

Table 19:

<table>
<thead>
<tr>
<th>Property name</th>
<th>Description</th>
<th>Location</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ProductName</td>
<td>Product name</td>
<td>Window title</td>
<td>SAP Crystal Reports</td>
</tr>
<tr>
<td>CrystalReportHelp</td>
<td>Product help</td>
<td>Help menu</td>
<td>SAP Crystal Reports Help</td>
</tr>
<tr>
<td>AboutCrystalReport</td>
<td>About product help</td>
<td>Help menu</td>
<td>About SAP Crystal Reports</td>
</tr>
</tbody>
</table>

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 110].

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 98].

Example

This example makes the following customizations:
● **Change the** **ProductName** **value to** Custom CR

● **Change the** **CrystalReportHelp** **value to** Custom CR help

● **Change the** **AboutCrystalReport** **value to** About Custom CR

```xml
<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:

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

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

  ```xml
  <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**:
Table 20:

<table>
<thead>
<tr>
<th>Customized file</th>
<th>Location in template.zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>splash.bmp</td>
<td>SAP BusinessObjects Enterprise XI 4.0\win32_x86</td>
</tr>
<tr>
<td>start.html (for English)</td>
<td>SAP BusinessObjects Enterprise XI 4.0\win32_x86\Start Page\en</td>
</tr>
<tr>
<td>crw_oem_res_en.xml</td>
<td>SAP BusinessObjects Enterprise XI 4.0\win32_x86</td>
</tr>
</tbody>
</table>

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 77].
Create a folder called `output` in the location `C:\SAPCustomTool`.

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 76].

### 5.7.1 Command line parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>xml</code></td>
<td>Full path to the configuration file. The configuration file for the full installation program can have any name.</td>
</tr>
<tr>
<td><code>packageDir</code></td>
<td>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 <code>Collaterals</code>, <code>dunit</code>, <code>langs</code>, and <code>setup.engine</code> in addition to other binaries.</td>
</tr>
<tr>
<td><code>outputDir</code></td>
<td>Full path to the folder where the customized installation program will be created. Must be empty before running the tool.</td>
</tr>
</tbody>
</table>
### Table 22: Optional parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
</table>
| 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 packages 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 102] 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, debug, 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 76]
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 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?

2. On the Find your software tab, under the A–Z Index, click Support Packages and Patches.
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 79] and Running the tool [page 99], with some modifications to the command line and the configuration file. For more information, see How to customize update installation programs [page 104] 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.

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 76], 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://support.sap.com/home.html.

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 81].
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
   ```

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 79] and *Running the tool* [page 99] 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 79] and *IDs and codes for Crystal Reports customization* [page 106] 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:

```xml
<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 \texttt{product version}. 

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

\begin{verbatim}
<oem name="Custom Patch Tool">
  <clonePatchProduct sourceId="product.cr.patch-4.1.0.1-core-32">
    ... 
  </clonePatchProduct>
</oem>
\end{verbatim}
\end{example}

\section*{To use the \texttt{baselinePath} parameter}

Use the command line parameter \texttt{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.

\begin{note}
This parameter replaces the \texttt{baselinePackages} parameter introduced in 2011 Feature Pack 3.
\end{note}

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

\begin{example}
\textbf{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:

\begin{verbatim}
C:\productUpdates\2011\ 
 \2011 Full\ 
 \SP4\ 
\end{verbatim}

Set the \texttt{baselinePath} parameter to:

\begin{verbatim}
baselinePath=C:\productUpdates\2011\ 
\end{verbatim}
\end{example}
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\SP4\SP5\SP5 Patch 1\n
Set the `baselinePath` parameter to:

`baselinePath=C:\productUpdates\2011\`

Related Information

Command line parameters [page 100]

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 23: Data access

<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>DataAccess</td>
<td>Data access</td>
</tr>
<tr>
<td>Access</td>
<td>Microsoft Access</td>
</tr>
<tr>
<td>ADO.NET</td>
<td>ADO.NET</td>
</tr>
<tr>
<td>BDE</td>
<td>IDAPI Database DLL</td>
</tr>
<tr>
<td>Btrieve</td>
<td>Pervasive Database Driver (Btrieve)</td>
</tr>
<tr>
<td>COMData</td>
<td>COM Data Provider</td>
</tr>
<tr>
<td>Comm_Rep</td>
<td>Command in repository</td>
</tr>
<tr>
<td>DB2</td>
<td>IBM DB2</td>
</tr>
<tr>
<td>dBase</td>
<td>dBase</td>
</tr>
<tr>
<td>Exchange</td>
<td>Microsoft Exchange</td>
</tr>
<tr>
<td>FieldDefinitions</td>
<td>Field Definitions</td>
</tr>
<tr>
<td>FileSystem</td>
<td>File System</td>
</tr>
<tr>
<td>HPNeoview</td>
<td>HP Neoview</td>
</tr>
<tr>
<td>Informix</td>
<td>Informix</td>
</tr>
<tr>
<td>JavaData</td>
<td>Java Data Provider</td>
</tr>
<tr>
<td>JDBC</td>
<td>JDBC (JNDI) Data Driver</td>
</tr>
<tr>
<td>MicrosoftOutlook</td>
<td>Microsoft Outlook</td>
</tr>
<tr>
<td>MyCube</td>
<td>OLAP Cube</td>
</tr>
<tr>
<td>MYSQL_DataAccess</td>
<td>MySQL</td>
</tr>
<tr>
<td>NCRTeradata</td>
<td>NCRTeradata</td>
</tr>
<tr>
<td>NETEZZA</td>
<td>NETEZZA</td>
</tr>
<tr>
<td>NTEventLog</td>
<td>NT Event Log</td>
</tr>
<tr>
<td>OLE_DB_Data</td>
<td>OLE DB Data</td>
</tr>
<tr>
<td>OptionalDataDirectODBC</td>
<td>DataDirect ODBC</td>
</tr>
<tr>
<td>Oracle</td>
<td>Oracle</td>
</tr>
<tr>
<td>Progress.OpenEdge</td>
<td>Progress OpenEdge</td>
</tr>
<tr>
<td>RDO</td>
<td>ODBC RDO</td>
</tr>
<tr>
<td>SFORCE</td>
<td>Salesforce.com Driver</td>
</tr>
<tr>
<td>SIEBEL</td>
<td>Siebel</td>
</tr>
<tr>
<td>Sybase</td>
<td>Sybase</td>
</tr>
<tr>
<td>SymantecACT</td>
<td>ACT!</td>
</tr>
</tbody>
</table>
### Table 24: Enterprise system integration

<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Universe</td>
<td>BusinessObjects Universe</td>
</tr>
<tr>
<td>UWSC</td>
<td>Universal Web Services Connector</td>
</tr>
<tr>
<td>WebActivityLog</td>
<td>Web Activity Log</td>
</tr>
<tr>
<td>XML</td>
<td>XML Driver</td>
</tr>
</tbody>
</table>

### Table 25: Export support

<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>IntegrationOptions</td>
<td>Integration options</td>
</tr>
<tr>
<td>EBS</td>
<td>Oracle E-Business Suite</td>
</tr>
<tr>
<td>JDE</td>
<td>JD Edwards EnterpriseOne</td>
</tr>
<tr>
<td>PSFT</td>
<td>Peoplesoft Enterprise</td>
</tr>
<tr>
<td>SAP</td>
<td>SAP Solutions</td>
</tr>
<tr>
<td>SIEBEL</td>
<td>Siebel</td>
</tr>
<tr>
<td>Application</td>
<td>Export to an application</td>
</tr>
<tr>
<td>CharacterSeparated</td>
<td>Character Separated format</td>
</tr>
<tr>
<td>CrystalReports</td>
<td>Crystal Reports format</td>
</tr>
<tr>
<td>DiskFile</td>
<td>Export to a file</td>
</tr>
<tr>
<td>Excel</td>
<td>Microsoft Excel 97-2003 format</td>
</tr>
<tr>
<td>ExchangeFolders</td>
<td>Exchange Folder</td>
</tr>
<tr>
<td>HTML</td>
<td>HTML 3.2 and HTML 4.0 (DHTML) formats</td>
</tr>
<tr>
<td>LegacyXMLExport</td>
<td>Legacy XML format</td>
</tr>
<tr>
<td>LotusNotes</td>
<td>Lotus Notes document</td>
</tr>
<tr>
<td>LotusNotesMail</td>
<td>Lotus Domino</td>
</tr>
<tr>
<td>ODBC</td>
<td>Export to any of your installed ODBC formats</td>
</tr>
<tr>
<td>PDF</td>
<td>PDF format</td>
</tr>
<tr>
<td>Record</td>
<td>Record Style format</td>
</tr>
<tr>
<td>ReportDefinition</td>
<td>Report Definition format</td>
</tr>
<tr>
<td>RichTextFormat</td>
<td>Rich Text Format</td>
</tr>
<tr>
<td>Text</td>
<td>Text formats</td>
</tr>
<tr>
<td>WordforWindows</td>
<td>Microsoft Word 97-2003 format</td>
</tr>
<tr>
<td>XMLExport</td>
<td>XML document</td>
</tr>
</tbody>
</table>
Table 26: Other

<table>
<thead>
<tr>
<th>Feature ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CrystalReportsRoot</td>
<td>Crystal Reports 2011</td>
</tr>
<tr>
<td>crw</td>
<td>Crystal Reports Designer</td>
</tr>
<tr>
<td>Mapping</td>
<td>Geographic mapping</td>
</tr>
<tr>
<td>MicrosoftMail</td>
<td>Microsoft Mail Destination</td>
</tr>
<tr>
<td>PGEditor</td>
<td>Custom charting</td>
</tr>
<tr>
<td>UploadWizard</td>
<td>Report Upload Wizard</td>
</tr>
</tbody>
</table>

Related Information

Removing features [page 90]

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 27: Shortcut deployment unit IDs

<table>
<thead>
<tr>
<th>Shortcut deployment unit ID</th>
<th>Shortcut target</th>
</tr>
</thead>
<tbody>
<tr>
<td>product.crystalreports.shortcut.crw-4.0-core</td>
<td>Crystal Reports 2011</td>
</tr>
<tr>
<td>product.crystalreports.shortcut.odbc-4.0-core</td>
<td>ODBC Data Source Administrator</td>
</tr>
<tr>
<td>product.crystalreports.shortcut.rtpubwiz-4.0-core</td>
<td>Report Upload Wizard</td>
</tr>
</tbody>
</table>

Related Information

Customizing the Windows Start menu shortcuts [page 83]

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:

```xml
<replaceString id="product.cr_name" value="Custom Company Crystal Reports lang="all"/>
```
Table 28: Commonly changed strings

<table>
<thead>
<tr>
<th>String ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>product.cr_name</td>
<td>Product long name</td>
</tr>
<tr>
<td>product.cr_shortname</td>
<td>Product short name</td>
</tr>
<tr>
<td>product_cr_version</td>
<td>Product version</td>
</tr>
<tr>
<td>product_cr_majorversion</td>
<td>Product major version</td>
</tr>
</tbody>
</table>

Related Information

Customizing the product name and version number [page 81]

5.9.4 Language codes

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

Table 29:

<table>
<thead>
<tr>
<th>Language</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>EN</td>
</tr>
<tr>
<td>Czech</td>
<td>CS</td>
</tr>
<tr>
<td>Danish</td>
<td>DA</td>
</tr>
<tr>
<td>Dutch</td>
<td>NL</td>
</tr>
<tr>
<td>Finnish</td>
<td>FI</td>
</tr>
<tr>
<td>French</td>
<td>FR</td>
</tr>
<tr>
<td>German</td>
<td>DE</td>
</tr>
<tr>
<td>Hungarian</td>
<td>HU</td>
</tr>
<tr>
<td>Italian</td>
<td>IT</td>
</tr>
<tr>
<td>Japanese</td>
<td>JA</td>
</tr>
<tr>
<td>Korean</td>
<td>KO</td>
</tr>
<tr>
<td>Norwegian Bokmal</td>
<td>NB</td>
</tr>
<tr>
<td>Polish</td>
<td>PL</td>
</tr>
<tr>
<td>Portuguese</td>
<td>PT</td>
</tr>
<tr>
<td>Romanian</td>
<td>RO</td>
</tr>
<tr>
<td>Russian</td>
<td>RU</td>
</tr>
<tr>
<td>Simplified Chinese</td>
<td>zh_CN</td>
</tr>
</tbody>
</table>
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:

```xml
<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`:

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

### Table 30: Screen IDs

<table>
<thead>
<tr>
<th>Title of installation screen</th>
<th>Installation screen ID</th>
<th>Property IDs in installation screen</th>
<th>Property values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please choose a setup language</td>
<td>SelectUILanguage.dialog</td>
<td>SortedAvailableSetupLanguages</td>
<td>Set of language codes representing supported setup languages</td>
</tr>
<tr>
<td></td>
<td></td>
<td>SetupUILanguage</td>
<td>Single language code representing the setup language</td>
</tr>
<tr>
<td>Install cannot proceed</td>
<td>SharedAlwaysFailure.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Title of installation screen</td>
<td>Installation screen ID</td>
<td>Property IDs in installation screen</td>
<td>Property values</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------------------------</td>
<td>--------------------------------------</td>
<td>-----------------</td>
</tr>
</tbody>
</table>
| 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             | CReEnterProductKey.dialog | RegisteredUser                       | Your Username    |
|                              |                        | RegisteredCompany                    | Your Company name |
|                              |                        | ProductKey                           | Your Product keycode |
| Specify the Destination Folder | ChooseInstallDir.dialog | InstallDir                           | Filepath of the installation folder |
| Choose Language Packs        | SelectLanguagePack.dialog | SelectedLanguage Packs               | 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_Patch Update.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 |
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 115].
   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 17].
   d.  Create the following folder: `C:\SAPCustomTool\output`
2. Create the configuration file.
   a. Copy and paste the following code into a text editor:

   ```xml
   <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:

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

**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://support.sap.com/home.html](https://support.sap.com/home.html) and select **Software Downloads**.
2. On the **Find your software** tab, under the **A–Z Index**, select **Installations and Upgrades**.
4. Select `Installation and Upgrade` ➤ **WINDOWS** ➤ `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](#).
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 17].

3. Decide what customizations are required.
4. Write the configuration file to specify the customizations.
   For more information, see Creating the configuration file [page 117].
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.
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:

```xml
<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.
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.

```xml
<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:

```xml
<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.

**Table 31: Product name and version number**

<table>
<thead>
<tr>
<th>String description</th>
<th>String ID</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product long name</td>
<td>product.crjava_name</td>
<td>Crystal Reports for Enterprise</td>
</tr>
</tbody>
</table>
You can specify a different name and version number for each language. For a list of language codes, see *Language codes* [page 139].

**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.

```xml
<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:

#### Table 32:

<table>
<thead>
<tr>
<th>File name</th>
<th>Original line</th>
<th>Modified line</th>
</tr>
</thead>
<tbody>
<tr>
<td>dunit \product.crystalreportsjava-4.0-core-32\setup.ui.framework \uitext\CrystalReportsJava \product.lang_&lt;language code&gt;.uitext.xml</td>
<td>&lt;string id=&quot;productname_patch&quot; value=&quot;#product_patch#&quot;/&gt;</td>
<td>&lt;string id=&quot;productname_patch&quot; value=&quot;&quot;/&gt;</td>
</tr>
<tr>
<td>dunit \product.crystalreportsjava-4.0-core-32\setup.ui.framework \uitext\framework \setup.ui.framework.lang_&lt;language code&gt;.uitext.xml</td>
<td>&lt;string id=&quot;product_patch&quot; value=&quot; SP3&quot;/&gt;</td>
<td>&lt;string id=&quot;product_patch&quot; value=&quot;&quot;/&gt;</td>
</tr>
<tr>
<td>Same as above</td>
<td>&lt;string id=&quot;product_patch_prespaces&quot; value=&quot; SP3&quot;/&gt;</td>
<td>&lt;string id=&quot;product_patch_prespaces&quot; value=&quot;&quot;/&gt;</td>
</tr>
</tbody>
</table>
You must modify one file for every language that the installation program supports. For a list of language codes, see Language codes [page 139]. 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.uiext.xml
- setup.ui.framework.lang_en.uiext

### 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:

```xml
<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>
```

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>duSourceId</td>
<td>The shortcut deployment unit ID to modify: product.crystalreportsjava.shortcut=4.0</td>
</tr>
<tr>
<td>linkFullPath</td>
<td>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 139].</td>
</tr>
<tr>
<td>description</td>
<td>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 139].</td>
</tr>
</tbody>
</table>

**Example**

This example makes the following customizations:

- 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”.

© 2015 SAP SE or an SAP affiliate company. All rights reserved.
The shortcut name and tooltip will remain unchanged for all other languages.

```xml
<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:

```xml
<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 139].

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`

```xml
<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>
```
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 140].

**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 140].

**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"

**i 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 Check Prerequisites screen and prevents prerequisite checks from being performed.

```xml
<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:

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

For a list of language codes, see Language codes [page 139].

**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.

```xml
<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.
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 124]
Customizing the license agreement [page 125]

### 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 34: Image files in the resources folder

<table>
<thead>
<tr>
<th>Image</th>
<th>File name</th>
<th>Resolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome screen</td>
<td>dialogFull.bmp</td>
<td>500 pixels by 400 pixels</td>
</tr>
<tr>
<td>Top image for all screens</td>
<td>dialogTop.bmp</td>
<td>500 pixels by 83 pixels</td>
</tr>
<tr>
<td>Billboard for progress dialog</td>
<td>billboard.bmp</td>
<td>500 pixels by 193 pixels</td>
</tr>
</tbody>
</table>

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"/>

   © 2015 SAP SE or an SAP affiliate company. All rights reserved.
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.rtf

For a list of language codes, see Language codes [page 139].

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 123]
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:

```xml
<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:

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

**Table 35: Description of items in the Collaterals folder**

<table>
<thead>
<tr>
<th>Folder</th>
<th>Description</th>
<th>When to remove</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaterals &gt; Docs</td>
<td>Documentation in every language that Crystal Reports for Enterprise supports.</td>
<td>Remove any languages that are not included in the customized installation program. For a list of language codes, see Language codes [page 139].</td>
</tr>
<tr>
<td>Collaterals &gt; Tools &gt; CustomizationTool</td>
<td>The SAP BusinessObjects customization tool.</td>
<td>Remove this folder if the customers do not need to customize their own installation programs.</td>
</tr>
</tbody>
</table>

6.6 Customizing the report designer

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

- Splash screen.
- 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 134].

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 showSplashProgressBar 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 showSplashProgressBar=no in a file named cr_oem_config.properties and then follow the instructions in Deploying the OEM customization file [page 134].

1. (Optional) If you do not already have the cr_oem_config.properties file, create it and save it in the configuration folder.
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 135]*

### 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>
```

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 129].

**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.

```plaintext
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 134].

**Related Information**

Attributes for `.properties` files [page 135]

**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 134].

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 139].

2. Place `startpage_<language code>.html` in the configuration folder.

   By default, the configuration folder file path is:
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 128].

### 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:

<table>
<thead>
<tr>
<th>Property name</th>
<th>Description</th>
<th>Location</th>
<th>Default value</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>&lt;product_name&gt;</code></td>
<td>The product name.</td>
<td>Window title</td>
<td>‘SAP Crystal Reports for Enterprise’</td>
</tr>
<tr>
<td>help_help_menu</td>
<td>The product help menu item.</td>
<td><strong>Help</strong> menu</td>
<td>‘SAP Crystal Reports for Enterprise Help’</td>
</tr>
<tr>
<td>help_about_menu</td>
<td>The About &lt;product name&gt; menu item.</td>
<td><strong>Help</strong> menu</td>
<td>‘About SAP Crystal Reports for Enterprise’</td>
</tr>
</tbody>
</table>

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 139].

**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”.
- Change the text of the About <product name> menu item to “About Custom CR for Enterprise”.

```plaintext
product_name=Custom CR for Enterprise
help_help_menu=Custom CR for Enterprise help
help_about_menu=About Custom CR for Enterprise
```
Related Information

Attributes for .properties files [page 135]

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.
- The file must use UTF-8 encoding to support multiple languages.
Example

This example hides the Help Register menu item.

```text
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 134].

Related Information

Attributes for .properties files [page 135]

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:
  ```text
  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:

```text
help_contactus_location=<URL or file path>
```

To redirect the link for the Documentation menu item, use the `help_documentation_location` attribute:

```text
help_documentation_location=<URL or file path>
```
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_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 134].

Related Information

Attributes for .properties files [page 135]

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 134].

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:

   ```bash
   ```
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.

<table>
<thead>
<tr>
<th>Customized file</th>
<th>Location in template.zip</th>
</tr>
</thead>
<tbody>
<tr>
<td>splash.bmp</td>
<td>Crystal Reports for Enterprise XI 4.0</td>
</tr>
<tr>
<td>about_banner.bmp</td>
<td>Crystal Reports for Enterprise XI 4.0</td>
</tr>
<tr>
<td>about_logo.bmp</td>
<td>Crystal Reports for Enterprise XI 4.0</td>
</tr>
<tr>
<td>startpage_en.html</td>
<td>Crystal Reports for Enterprise XI 4.0\configuration</td>
</tr>
<tr>
<td>cr_oem_config.properties</td>
<td>Crystal Reports for Enterprise XI 4.0\configuration</td>
</tr>
<tr>
<td>cr_oem_config_en.properties</td>
<td>Crystal Reports for Enterprise XI 4.0\configuration</td>
</tr>
</tbody>
</table>

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.
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 38: Attributes that do not require localized strings

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Possible values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show_splash_progressbar</code></td>
<td>=yes</td>
<td>Displays the progress bar on the splash screen.</td>
</tr>
<tr>
<td></td>
<td>=no</td>
<td>Hides the progress bar on the splash screen.</td>
</tr>
<tr>
<td><code>show_startpage_history</code></td>
<td>=yes</td>
<td>Displays the top section of the start page.</td>
</tr>
<tr>
<td></td>
<td>=no</td>
<td>Hides the top section of the start page.</td>
</tr>
<tr>
<td><code>show_startpage_onlinefeed</code></td>
<td>=yes</td>
<td>Displays the bottom section of the start page.</td>
</tr>
<tr>
<td></td>
<td>=no</td>
<td>Hides the bottom section of the start page.</td>
</tr>
<tr>
<td><code>show_help_register_menu</code></td>
<td>=yes</td>
<td>Displays the Help Register menu item.</td>
</tr>
<tr>
<td></td>
<td>=no</td>
<td>Hides the Help Register menu item.</td>
</tr>
<tr>
<td><code>help_contactus_location</code></td>
<td>=&lt;URL or file path&gt;</td>
<td>Redirects the Help Contact Us menu item to a custom URL or a file path.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- There are no restrictions to the file type that you can use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative file paths are not supported.</td>
</tr>
<tr>
<td><code>help_documentation_location</code></td>
<td>=&lt;URL or file path&gt;</td>
<td>Redirects the Help Documentation menu item to a custom URL or a file path.</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>Note</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- There are no restrictions to the file type that you can use.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Relative file paths are not supported.</td>
</tr>
</tbody>
</table>
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 139).

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Possible values</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>product_name</code></td>
<td>=&lt;Product Name&gt;</td>
<td>Replaces <code>SAP Crystal Reports for Enterprise</code> in the Window title with <code>&lt;Product Name&gt;</code>.</td>
</tr>
<tr>
<td><code>help_help_menutitle</code></td>
<td>=&lt;Product Name Help&gt;</td>
<td>Replaces <code>SAP Crystal Reports for Enterprise help</code> in the Help menu with <code>&lt;Product Name Help&gt;</code>.</td>
</tr>
<tr>
<td><code>help_about_menutitle</code></td>
<td>=About &lt;Product Name&gt;</td>
<td>Replaces <code>About SAP Crystal Reports for Enterprise</code> in the Help menu with About <code>&lt;Product Name&gt;</code>.</td>
</tr>
</tbody>
</table>

Related Information

- [Removing the progress bar on the splash screen](page 127)
- [Customizing the start page](page 129)
- [Customizing the strings in the program](page 130)
- [Hiding the Register menu item](page 131)
- [Redirecting item links in the Help menu](page 132)

### 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 115].
- 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 113].

### 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.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>xml</code></td>
<td>Full path to the configuration file. The configuration file for the full installation program can have any name.</td>
<td><code>xml=C:\SAPCustomTool\oem.xml</code></td>
</tr>
<tr>
<td><code>packageDir</code></td>
<td>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 <code>Collaterals</code>, <code>dunit</code>, <code>langs</code>, and <code>setup.engine</code> in addition to other binaries.</td>
<td><code>packageDir=C:\SAPCustomTool\packages</code></td>
</tr>
<tr>
<td><code>outputDir</code></td>
<td>Full path to the folder where the customized installation program will be created. This folder must be empty before you can run the tool.</td>
<td><code>outputDir=C:\SAPCustomTool\output</code></td>
</tr>
</tbody>
</table>
Table 41: Optional parameters

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>logDetail</td>
<td>The level of logging detail. The default value is info. The following are the accepted values:</td>
<td>logDetail=warn</td>
</tr>
<tr>
<td></td>
<td>● error</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● warn</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● info</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● debut</td>
<td></td>
</tr>
<tr>
<td></td>
<td>● trace</td>
<td></td>
</tr>
</tbody>
</table>

| action     | The tool mode. The default value is generate. The following are the accepted values: | action=validate |
|           | ● generate  |         |
|           | The tool performs the specified customizations. |         |
|           | ● validate  |         |
|           | The tool validates the configuration file but does not perform any customizations. |         |

Related Information

Quick start for Crystal Reports for Enterprise [page 113]

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:

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

Table 42: Commonly changed strings

<table>
<thead>
<tr>
<th>String ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>product.crjava_name</td>
<td>Product long name</td>
</tr>
<tr>
<td>product_version</td>
<td>Product version</td>
</tr>
</tbody>
</table>

Related Information

Customizing the product name and version number [page 118]

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.

<table>
<thead>
<tr>
<th>Language</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>EN</td>
</tr>
<tr>
<td>Czech</td>
<td>CS</td>
</tr>
<tr>
<td>Danish</td>
<td>DA</td>
</tr>
<tr>
<td>Dutch</td>
<td>NL</td>
</tr>
<tr>
<td>Finnish</td>
<td>FI</td>
</tr>
<tr>
<td>French</td>
<td>FR</td>
</tr>
<tr>
<td>German</td>
<td>DE</td>
</tr>
<tr>
<td>Hungarian</td>
<td>HU</td>
</tr>
<tr>
<td>Italian</td>
<td>IT</td>
</tr>
<tr>
<td>Japanese</td>
<td>JA</td>
</tr>
</tbody>
</table>
### Related Information

- Customizing the product name and version number [page 118]
- Customizing the Windows Start menu shortcut [page 120]
- Customizing the Windows Add or Remove Programs utility [page 121]
- Removing language packs [page 123]
- Customizing the license agreement [page 125]
- Customizing the strings in the program [page 130]

### 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:

```xml
<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`:

```xml
<replaceProperty id="InstallType" defaultValue="custom"/>
```
### Table 44: Screen IDs

<table>
<thead>
<tr>
<th>Title of installation screen</th>
<th>Installation screen ID</th>
<th>Property IDs in installation screen</th>
<th>Property values</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Select the setup language</strong></td>
<td>SelectUILanguage.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Install cannot proceed</strong></td>
<td>SharedAlwaysFailure.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Check Prerequisites</strong></td>
<td>CheckPreRequisites.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Welcome to the installation wizard...</strong></td>
<td>ShowWelcomeScreen.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>License Agreement</strong></td>
<td>ShowLicenseAgreement.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>Configure Product Registration</strong></td>
<td>CREnterProductKey.dialog</td>
<td>ProductKey</td>
<td>Your product key-code</td>
</tr>
<tr>
<td><strong>Select Language Packages</strong></td>
<td>SelectLanguagePack.dialog</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>
| **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 |
| **SAP Crystal Reports for Enterprise 4.1 SP3 has been successfully uninstalled** | ShowUninstallComplete.dialog | Not applicable | Not applicable |
Important Disclaimers and Legal Information

Coding Samples

Any software coding and/or code lines / strings (“Code”) included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended to better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, unless damages were caused by SAP intentionally or by SAP’s gross negligence.

Accessibility

The information contained in the SAP documentation represents SAP’s current view of accessibility criteria as of the date of publication; it is in no way intended to be a binding guideline on how to ensure accessibility of software products. SAP in particular disclaims any liability in relation to this document. This disclaimer, however, does not apply in cases of wilful misconduct or gross negligence of SAP. Furthermore, this document does not result in any direct or indirect contractual obligations of SAP.

Gender-Neutral Language

As far as possible, SAP documentation is gender neutral. Depending on the context, the reader is addressed directly with “you”, or a gender-neutral noun (such as “sales person” or “working days”) is used. If when referring to members of both sexes, however, the third-person singular cannot be avoided or a gender-neutral noun does not exist, SAP reserves the right to use the masculine form of the noun and pronoun. This is to ensure that the documentation remains comprehensible.

Internet Hyperlinks

The SAP documentation may contain hyperlinks to the Internet. These hyperlinks are intended to serve as a hint about where to find related information. SAP does not warrant the availability and correctness of this related information or the ability of this information to serve a particular purpose. SAP shall not be liable for any damages caused by the use of related information unless damages have been caused by SAP’s gross negligence or wilful misconduct. All links are categorized for transparency (see: http://help.sap.com/disclaimer).