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# PeopleTools 8.54: BI Publisher for PeopleSoft

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July 2014

**ORACLE®**

PeopleTools 8.54: BI Publisher for PeopleSoft  
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# Preface

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## Understanding the PeopleSoft Online Help and PeopleBooks

The PeopleSoft Online Help is a website that enables you to view all help content for PeopleSoft Applications and PeopleTools. The help provides standard navigation and full-text searching, as well as context-sensitive online help for PeopleSoft users.

### PeopleSoft Hosted Documentation

You access the PeopleSoft Online Help on Oracle's PeopleSoft Hosted Documentation website, which enables you to access the full help website and context-sensitive help directly from an Oracle hosted server. The hosted documentation is updated on a regular schedule, ensuring that you have access to the most current documentation. This reduces the need to view separate documentation posts for application maintenance on My Oracle Support, because that documentation is now incorporated into the hosted website content. The Hosted Documentation website is available in English only.

### Locally Installed Help

If your organization has firewall restrictions that prevent you from using the Hosted Documentation website, you can install the PeopleSoft Online Help locally. If you install the help locally, you have more control over which documents users can access and you can include links to your organization's custom documentation on help pages.

In addition, if you locally install the PeopleSoft Online Help, you can use any search engine for full-text searching. Your installation documentation includes instructions about how to set up Oracle Secure Enterprise Search for full-text searching.

See *PeopleTools Installation* for your database platform, "Installing PeopleSoft Online Help." If you do not use Secure Enterprise Search, see the documentation for your chosen search engine.

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**Note:** Before users can access the search engine on a locally installed help website, you must enable the Search portlet and link. Click the Help link on any page in the PeopleSoft Online Help for instructions.

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### Downloadable PeopleBook PDF Files

You can access downloadable PDF versions of the help content in the traditional PeopleBook format. The content in the PeopleBook PDFs is the same as the content in the PeopleSoft Online Help, but it has a different structure and it does not include the interactive navigation features that are available in the online help.

### Common Help Documentation

Common help documentation contains information that applies to multiple applications. The two main types of common help are:

- Application Fundamentals

- Using PeopleSoft Applications

Most product families provide a set of application fundamentals help topics that discuss essential information about the setup and design of your system. This information applies to many or all applications in the PeopleSoft product family. Whether you are implementing a single application, some combination of applications within the product family, or the entire product family, you should be familiar with the contents of the appropriate application fundamentals help. They provide the starting points for fundamental implementation tasks.

In addition, the *PeopleTools: Applications User's Guide* introduces you to the various elements of the PeopleSoft Pure Internet Architecture. It also explains how to use the navigational hierarchy, components, and pages to perform basic functions as you navigate through the system. While your application or implementation may differ, the topics in this user's guide provide general information about using PeopleSoft Applications.

## Field and Control Definitions

PeopleSoft documentation includes definitions for most fields and controls that appear on application pages. These definitions describe how to use a field or control, where populated values come from, the effects of selecting certain values, and so on. If a field or control is not defined, then it either requires no additional explanation or is documented in a common elements section earlier in the documentation. For example, the Date field rarely requires additional explanation and may not be defined in the documentation for some pages.

## Typographical Conventions

The following table describes the typographical conventions that are used in the online help.

<b><i>Typographical Convention</i></b>	<b><i>Description</i></b>
Key+Key	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For Alt+W, hold down the Alt key while you press the W key.
... (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe ( ).
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object.  Ampersands also precede all PeopleCode variables.
⇒	This continuation character has been inserted at the end of a line of code that has been wrapped at the page margin. The code should be viewed or entered as a single, continuous line of code without the continuation character.

## ISO Country and Currency Codes

PeopleSoft Online Help topics use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.

ISO country codes may appear as country identifiers, and ISO currency codes may appear as currency identifiers in your PeopleSoft documentation. Reference to an ISO country code in your documentation does not imply that your application includes every ISO country code. The following example is a country-specific heading: "(FRA) Hiring an Employee."

The PeopleSoft Currency Code table (CURRENCY\_CD\_TBL) contains sample currency code data. The Currency Code table is based on ISO Standard 4217, "Codes for the representation of currencies," and also relies on ISO country codes in the Country table (COUNTRY\_TBL). The navigation to the pages where you maintain currency code and country information depends on which PeopleSoft applications you are using. To access the pages for maintaining the Currency Code and Country tables, consult the online help for your applications for more information.

## Region and Industry Identifiers

Information that applies only to a specific region or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

### Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in the PeopleSoft Online Help:

- Asia Pacific
- Europe
- Latin America
- North America

### Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in the PeopleSoft Online Help:

- USF (U.S. Federal)
- E&G (Education and Government)

## Access to Oracle Support

Oracle customers have access to electronic support through My Oracle Support. For information, visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info> or visit <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs> if you are hearing impaired.

## Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at <http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc>.

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## Using and Managing the PeopleSoft Online Help

Click the Help link in the universal navigation header of any page in the PeopleSoft Online Help to see information on the following topics:

- What's new in the PeopleSoft Online Help.
  - PeopleSoft Online Help accessibility.
  - Accessing, navigating, and searching the PeopleSoft Online Help.
  - Managing a locally installed PeopleSoft Online Help website.
- 

## Understanding BI Publisher for PeopleSoft Enterprise

Business Intelligence (BI) Publisher for PeopleSoft Enterprise is a template-based reporting solution that separates the data extraction process from the report layout and allows the reuse of extracted application data into multiple report layouts. BI Publisher uses select features from Oracle Business Intelligence Publisher (BI Publisher) that have been integrated into PeopleTools.

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## PeopleTools Related Links

[Oracle's PeopleSoft PeopleTools 8.54 Documentation Home Page \(Doc ID 1664613.1\)](#)

[PeopleSoft Information Portal](#)

[My Oracle Support](#)

[PeopleSoft Training from Oracle University](#)

[PeopleSoft Video Feature Overviews on YouTube](#)

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## Chapter 1

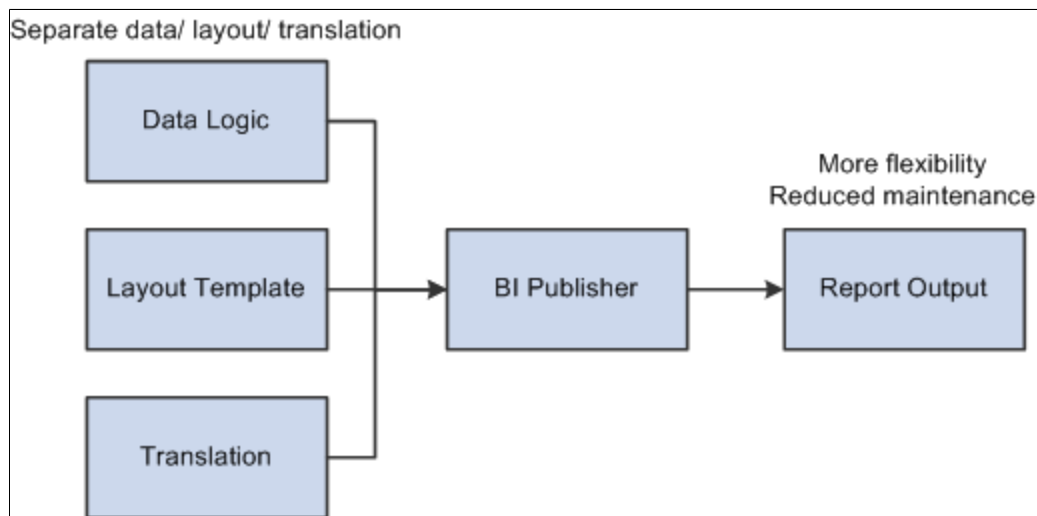
# Getting Started with BI Publisher

## BI Publisher Overview

Oracle Business Intelligence Publisher (BI Publisher, formerly XML Publisher) is an enterprise reporting solution that streamlines report and form generation. A primary feature of Oracle's BI Publisher product is the separation of the data extraction process from the report layout. BI Publisher enables you to design and create report layout templates with the more common desktop applications of Microsoft Word and Adobe Acrobat, and renders XML data based on those templates. With a single template, it can generate reports in many formats (PDF, RTF, Excel, HTML, and so on) in many languages. This approach to reporting can dramatically reduce report maintenance, enabling power business users to adjust report templates without involvement of IT resources.

### Image: BI Publisher concept

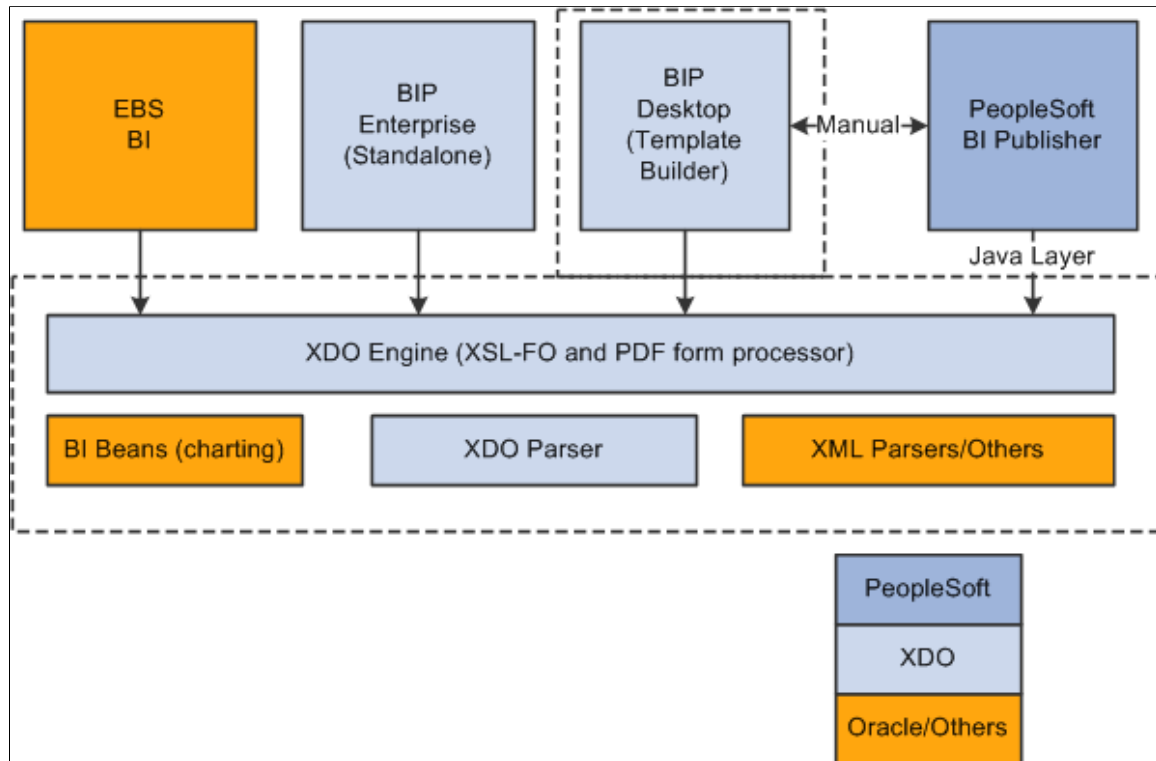
The following diagram illustrates the concept of BI Publisher.



Select features of Oracle's BI Publisher product have been integrated into and enhanced for use with PeopleTools.

**Image: Integration with BI Publisher**

This diagram illustrates the integration of PeopleSoft applications with BI Publisher.



PeopleSoft BI Publisher has a direct Java integration to the XDO Engine and XDO Parser. The BI Publisher Desktop requires installation and can be downloaded from a PeopleSoft Pure Internet Architecture page.

---

**Note:** Not all BI Publisher features are available through the PeopleSoft implementation.

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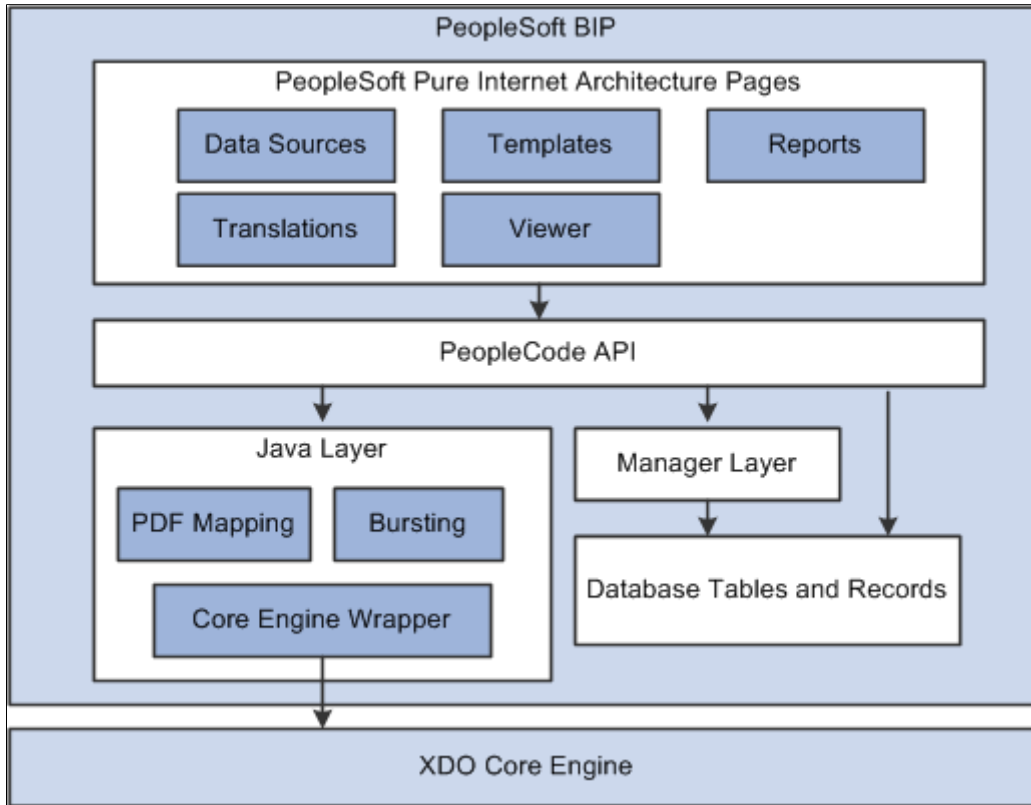
PeopleSoft Query as well as any PeopleTools based applications providing XML data are available to BI Publisher as a data source. BI Publisher for PeopleSoft Enterprise provides an environment for managing templates, data sources, reports, translations, and content components. It also offers an electronic bursting capability to produce reports according to a user-defined criteria and secure the reports using an



application's security join table. A set of PeopleCode BI Publisher classes for runtime report generation is also provided.

### Image: BI Components

This diagram illustrates the BI components within the PeopleSoft system.



Oracle provides a set of PeopleSoft Pure Internet Architecture pages for defining data sources, report definitions, templates, and translations and for running and viewing reports. Oracle also provides a set of PeopleCode application program interfaces (APIs) that wrap the Oracle XDO engine APIs. These APIs are used by the BI Publisher PeopleSoft Pure Internet Architecture pages and are available for advanced report developers to use for custom applications and batch processes.

## BI Publisher Phases

BI Publisher implementation includes the following phases:

- Set up BI Publisher.
- Create and register data sources.
- Create and upload report templates.
- Define BI Publisher reports.
- Run, locate, and view BI Publisher reports.

## Set Up BI Publisher

To prepare your system for using BI Publisher, perform the following steps:

<b>Step</b>	<b>Reference</b>
1. Define BI Publisher settings.	See <a href="#">Setting Up BI Publisher</a> .
2. Set up BI Publisher permission list security.	See <a href="#">Assigning BIP Permissions to Users</a> .
3. Set up Report Manager.	See "Understanding Report Manager" (PeopleTools 8.54: Process Scheduler).
4. Define report categories, including Report Definition Editor security.	See <a href="#">Setting Up Report Categories</a> .
5. Download design plug-ins to facilitate the offline template design activities.	See <a href="#">Working with Template Design Helpers</a> .

## Create and Register Data Sources

To create and register data sources, perform the following steps:

<b>Step</b>	<b>Reference</b>
<p>1. Identify or create the source of your report data.</p> <p>Data sources can be PS Query, Connected Queries, or XML files.</p> <hr/> <p><b>Note:</b> Rowset and XML Doc object data sources have been deprecated. Rowset and XML Doc object data sources created in previous releases will continue to be supported. To generate XML files from XML Doc or rowsets, refer to PeopleCode API documentation.</p> <hr/> <p>See "Understanding BI Publisher and the BI Publisher Classes" (PeopleTools 8.54: PeopleCode API Reference).</p>	<p>See "Creating New Queries" (PeopleTools 8.54: Query), "Running Queries" (PeopleTools 8.54: Query), and <a href="#">Creating Data Sources</a>.</p>
<p>2. Register schema and sample data files for BI Publisher data sources.</p> <p>For PS Query, you can automatically generate schema file and sample data.</p> <hr/> <p><b>Note:</b> Schema is no longer used for bursting starting in PeopleTools 8.50. It is still available for backwards compatibility. Schema is also used with XSLT Mapper for data transforms.</p>	<p>See <a href="#">Registering Data Sources</a>.</p>

## Create and Upload Report Templates

To create and upload templates, perform the following steps:

<b>Step</b>	<b>Reference</b>
1. Create and upload schema and sample data.	See <a href="#">Creating Data Sources</a> .
2. Download sample data from the appropriate data source to facilitate template design.	See <a href="#">Defining Reports</a> .
3. Use either Microsoft Word or Adobe Acrobat to develop and maintain custom report formats.	See <a href="#">Understanding Report Template Types</a> .
4. (Optional) Create and maintain reusable sub-template definitions.	See <a href="#">Maintaining Sub-Templates</a> .
5. (Optional) Register translation XLIFF files for report templates and Content Library sub-templates.	See <a href="#">Maintaining Template Translations</a> .

## Define BI Publisher Reports

To create and maintain report definitions, perform the following step:

<b>Step</b>	<b>Reference</b>
1. Define reports by associating data sources with layout template files.	See <a href="#">Defining Reports</a> .

## Run, Locate, and View BI Publisher Reports

You can run BI Publisher reports online or in batch through the Process Scheduler. For query-based reports, pages are available for running the reports both online and in batch. To run BI Publisher reports, perform the following steps:

<b>Step</b>	<b>Reference</b>
1. Schedule Query-based BI Publisher reports.	See <a href="#">Scheduling Reports in Query Report Scheduler</a> .
2. Schedule other BI Publisher reports.  <b>Note:</b> You will need to create an application engine program using BI PeopleCode APIs.	See <a href="#">Running Reports Using PeopleCode</a> .
3. View Query-based BI Publisher reports online in real time.	See <a href="#">Running Reports in Query Report Viewer</a> .
4. View other BI Publisher reports online in real time.	See <a href="#">Running Reports Using PeopleCode</a> .

<b>Step</b>	<b>Reference</b>
5. Locate BI Publisher reports using enhanced search criteria.	See <a href="#">Searching the BI Publisher Report Repository</a> , "Search Operator Values" (PeopleTools 8.54: PeopleCode API Reference).
6. View BI Publisher reports in the Report Manager.	See "Viewing Reports" (PeopleTools 8.54: Process Scheduler).

## Chapter 2

# Setting Up BI Publisher

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## Understanding BI Publisher Setup

Before using BI Publisher, there are some set up tasks necessary to set up the environment and facilitate template design. This table lists the categories for the set up tasks:

<b>Set Up</b>	<b>Description</b>
Properties	Properties for BI Publisher can be set at four levels. System and global properties should be configured as part of the initial set up for BI Publisher.
Security	Security is defined for creating and editing report definitions.
Template Design	Template Builder is an extension to Microsoft Word that simplifies the development of RTF templates. Template Builder can be downloaded from PeopleSoft Pure Internet Architecture page or Oracle Technical Network (OTN).

### BI Publisher Properties

There are two types of properties used in BI Publisher:

#### System Properties

System level properties are set in the xdo.cfg file. System level properties include:

- xslt-parser
- xslt-scalable
- system-cachepage-size
- system-temp-dir
- fonts

#### Non-system Properties

Non-system or functional properties are set in PeopleSoft Pure Internet Architecture.

### Property Definition Levels

There are four levels where properties are defined, this table lists the levels:

<b>Level</b>	<b>Description</b>	<b>Location</b>
System properties and fonts	System properties and fonts.	xdo.cfg file
Global properties	Global properties are shared by all reports and override the xdo engine default property values.	Reporting Tools, BI Publisher, Setup, Global Properties
Report properties	Properties are defined in the report definition and override global properties for a single report.	Reporting Tools, BI Publisher, Report Definition, Properties  See <a href="#">Setting Report Properties</a> .
Runtime properties	Override report properties.	Runtime properties are set at runtime through ReportDefn. SetRuntimeProperties PeopleCode API.

---

## Defining System Properties

This section provides an overview of the xdo.cfg file and discusses how to:

- Set system temp directory.
- Set Application Server or Process Scheduler domain-specific xdo.cfg file.

## Understanding xdo.cfg File

BI Publisher system properties settings are defined in the xdo.cfg file. The default xdo.cfg file is located in the \$PS\_CFG\_HOME/appserver directory, which is shared by all application server and process scheduler domains by default.

---

**Note:** In PeopleTools 8.4x, the xdo.cfg file is used to define all types of properties (system and non-system). In PeopleTools 8.50 the file should be used for system properties and fonts only. The result is unpredictable if the same property is defined in xdo.cfg and other levels.

---

This is an example of the xdo.cfg file:

```
<config version="1.0.0" xmlns="http://xmlns.oracle.com/oxp/config/">
  <properties>
    <!-- System level properties -->
    <property name="xslt-xdoparser">true</property>
    <property name="xslt-scalable">true</property>
    <property name="system-cachepage-size">50</property>
    <property name="system-temp-dir"></property>
  </properties>

  <!--<font>-->
    <!--<font family="3 of 9 Barcode" style="normal" weight="normal">-->
      <!--<truetype path="C:\WINNT\Fonts\3of9.ttf" />-->
      <!--</font>-->
    <!--</font>-->
  <!--</font>-->

```

```
</config>
```

See *Report Designer's Guide for Oracle Business Intelligence Publisher*, “Introduction to Designing Reports,” About Setting Run-Time Properties.

## Setting System Temp Directory

By default, the `system-temp-dir` property is not set. This property must be set to point to a temp folder on the server. Note that temporary files created in that directory could grow very large in size depending on the size of your reports, so you need to choose your `system-temp-dir` for optimum system performance.

## Setting Application Server or Process Scheduler Domain-Specific xdo.cfg File

You can also specify an application server or process scheduler domain-specific `xdo.cfg` file. To do this, you need to change the application server or process scheduler configuration file to update the `JavaVM Options -Dxdo.ConfigFile` setting. For example, to specify a separate `xdo.cfg` file for the application server domain `P8538041`, change the `[PS_CFG_HOME]/appserv/P8538041/psappsrv.cfg` file as indicated in the following code samples and put the new `xdo.cfg` into the `[PS_CFG_HOME]/appserv/P8538041` directory.

Original line in `psappsrv.cfg`:

```
JavaVM Options=-Xrs -Dxdo.ConfigFile=%PS_HOME%/appserv/xdo.cfg
```

New line in `psappsrv.cfg`:

```
JavaVM Options=-Xrs -Dxdo.ConfigFile==%PS_CFG_HOME%/appserv/P8538041/xdo.cfg
```

In the preceding code sample, `P8538041` is the Application Server domain name.

If you change the content of `xdo.cfg`, you don't need to restart the application server or the process scheduler domain that uses it. It refreshes automatically the next time you run it. But if you change the application server or process scheduler configuration file, you need to restart the affected domain.

---

## Setting Up BI Publisher

This section discusses how to:

- Set up report categories.
- Define global properties.
- Work with template design helpers.

## Setting Up Report Categories

Access the Report Category page (Select Reporting Tools, BI Publisher, Setup, Report Category.)

### Image: Report Category page

This example illustrates the fields and controls on the Report Category page. You can find definitions for the fields and controls later on this page.

Report Definition Editors and Viewers			
ID Type	Security ID	Description	Read Only
Role	PeopleSoft User	PeopleSoft User	<input type="checkbox"/>

Report Category is a required attribute on all report definitions and Content Library sub-templates. By assigning a report category, you are actually applying row level security to the data on those components.

### Report Category ID

Enter a report category ID to define a grouping that enables users to control who can access and edit report definitions and Content Library sub-templates.

### Description

(Optional) Enter descriptive text that provides more detail about the report category.

### Object Owner ID

Indicate which product, feature, or application owns this report category.

### ID Type

Select an ID type of either *Role* or *User ID* to grant authorization to.

### Security ID

Select the authorized editor's security ID based on the ID type.

### Description

A read-only field that indicates the related display value for the security ID.

### Read Only

(Optional) Select to indicate that the designated ID is only able to view the report definitions under this category and not update them.

---

**Note:** The PeopleCode BI Publisher classes also respect report category settings and read-only access rights.

---

## Defining Global Properties

Access the Global Properties page (Select Reporting Tools, BI Publisher, Setup, Global Properties.)



**Note:** To change the property setting at the global level and at the report-definition level, you require the BIP Report Developer role.

### Image: Global Properties page

This example illustrates the fields and controls on the Global Properties page. You can find definitions for the fields and controls later on this page.

The screenshot shows the 'Global Properties' page. At the top, there is a tab labeled 'Global Properties'. Below the tab, there is a section titled 'Global Properties' with a dropdown menu for 'Property Group' set to 'PDF Output'. Below this, there is a table with three columns: 'Property', 'Prompt', and 'Default'.

Property	Prompt	Default
pdf-compression	<input type="text"/>	True
pdf-hide-menubar	<input type="text"/>	False
pdf-hide-toolbar	<input type="text"/>	False
pdf-replace-smartquotes	<input type="text"/>	True

#### Property Group

Select the property group.

#### Property

All properties available for the property group selected appear.

#### Prompt

Select the value for the property.

#### Default

Displays the default value for the property.

### Property Groups

The following property groups are available:

- PDF Output
- FO Processing
- HTML Output
- PDF Digital Signature
- PDF Submit Settings
- PDF Security
- PDF Template
- PeopleTools Settings
- Printer Properties
- RTF Output

- RTF Template

See *Report Designer's Guide for Oracle Business Intelligence Publisher, "Introduction to Designing Reports," About Setting Run-Time Properties* for details on the properties.

---

**Note:** The Oracle Business Intelligence Publisher User's Guide (XDOUserGuide.pdf) is downloaded with Template Builder for Word and available in the directory selected for download. For example, C:\Program Files\Oracle\BI Publisher\BI Publisher Desktop\Template Builder for Word\doc\XDOUserGuide.pdf.

---

## PeopleTools Settings

The properties in PeopleTools Settings control report attributes that are specific to PeopleSoft implementation of BI Publisher.

### psxp\_debug

This property controls whether or not to leave temporary files on the application server or the process scheduler server for debugging purpose. It is recommended to set this property at the report definition level to debug a specific report. Valid values are:

- True

Temporary files will not be deleted from application server or process scheduler server for debugging purpose.

- False

Temporary files are deleted from application server or process scheduler server.

---

**Note:** If this property is set to true, remember to change it back to False when debugging is completed.

---

### psxp\_usedefaultoutdestination

This property is used to indicate that default processing directory is exposed to the OutDestination property even if this value has not been previously set. The default value is *False*.

- True

A basic tools directory is exposed to the user, without showing an additional RptInst directory. This is the behavior in pre-8.50 BI Publisher.

If this property is set to True and the user does not set value for OutDestination at runtime, then Tools will create an output file <Domain>\files\XMLP\123456789\RptInst\MyReport.HTM where 123456789 is for a directory name being generated with a random name. In this example the OutDestination property will return the value: <Domain>\files\XMLP\123456789.

Some directories will not be cleaned up after processing is done and the report is delivered into Report Manager. Any empty directories that are left after the BI reports

are delivered to the Report Manager will be cleaned up when the regularly scheduled Application Engine process PRCSYSPURGE runs. You can also run the Application Engine program PSXP\_DIRCLN to clean up the directories.

- False

This is the default value. Querying the OutDestination property without previously setting it at runtime, will cause it to return blank. After the reports have been delivered to the report repository, the temporary files and directories used for processing will be deleted.

### **psxp\_nocdatafields**

This property is used to indicate if character fields should not be wrapped in CDATA xml sections. By default, Query and Connected Query use CDATA xml sections for all character fields.

Use the Text field to indicate any fields that should not be wrapped in CDATA.

See [Understanding Rich Text Editor Data in BI Reporting](#).

### **psxp\_excel\_outputformat**

This property is used to indicate the Microsoft Excel output format of reports, that is whether you want to view the reports in the .xls or the .xlsx format. The valid values of this property are:

- XLS-HTML

The report can be viewed in Microsoft Excel versions 2002 and higher.

- XLS-MHTML

The report can be viewed in Microsoft Excel versions 2002 and higher.

- XLSX

This is the default value. The report can be viewed in Microsoft Excel versions 2007 and higher.

---

**Note:** You can override the global property setting for a specific report by changing the property setting at the report-definition level. For example, if you set the property to *XLS-MHTML* at the global level, you can override it for a specific report by choosing *XLSX* at the report-definition level.

---

### **psxp\_expand\_entityref**

This property eliminates XML entity expansion (XML Bomb). The default value is False.

Only a user with the Security Administrator role can see and modify this property setting on the Global Properties page. You cannot override this property setting at the report-definition level.

**psxp\_pdf\_optimized**


---

**Note:** PeopleSoft recommends that you do not change the default value of this property.

---

This property controls whether or not the core engine uses the "optimized" PDF Form Processing feature. This increases the efficiency and performance of PDF-template based reports, while disabling certain features. Valid values are:

- True.

Enables core engine optimization for PDF-based reports. The optimized engine will provide better performance, while disabling certain PDF-template specific features such as repeated fields and editable fields.

---

**Note:** Full path mapping can be used.

---

- False

Uses the unoptimized engine (same as BIP server), which will enable repeated fields and editable fields in a PDF template.

Allows using digital signature on PDF reports and creating updatable PDF reports.

---

**Note:** Full path mapping is not supported.

---



---

**Note:** The default setting for the psxp\_pdf\_optimized property is True at the global level, but you can override this setting at the report-definition level if required.

---



---

**Note:** The default behavior of PeopleSoft BIP PDF Form Processing engine that existed since 8.48.02 release is to enable multiple document output meaning that the PDF template is used to generate as many documents in the output as there are instances of the high level repeating node in the XML data. This uses the "performance optimized" engine introduced by the Oracle Core BIP product team specifically for PeopleSoft use. By design, the "performance optimized" engine does not support editable fields. The editable fields feature was eliminated in order to meet the necessary performance goals of the "performance optimized" engine. At the present time, to get the editable fields feature, the user must fall-back to the non-performance optimized engine by setting psxp\_pdf\_optimized=false. Also by design, the "non-performance optimized" engine does not, and never did support producing multiple documents based on the PDF template.

---

This table shows a summary of the differences in behavior:

<i>psxp_pdf_optimized = true</i>	<i>psxp_pdf_optimized = false</i>
<ol style="list-style-type: none"> <li>1. Editable Fields NOT supported.</li> <li>2. Repeated Fields NOT supported.</li> <li>3. Full Path mapping supported.</li> <li>4. Repeated document generation for each instance of high level repeating node in XML:.</li> </ol> <pre> &lt;?xml version="1.0"?&gt; &lt;root&gt; &lt;employee_details&gt;# repeating high   level node   &lt;employee_id&gt;1247&lt;/employee_id&gt;   &lt;employee_name&gt;Lesnar, Brock&lt;/ employee_name&gt;   ... &lt;/employee_details&gt; &lt;employee_details&gt;   &lt;employee_id&gt;1248&lt;/employee_id&gt;   &lt;employee_name&gt;Couture, Randy&lt;/ employee_name&gt;   ... &lt;/employee_details&gt; ... &lt;/root&gt; </pre>	<ol style="list-style-type: none"> <li>1. Editable Fields supported.</li> <li>2. Repeated Fields supported.</li> <li>3. Full Path mapping NOT supported.</li> <li>4. Single document output for single high level node in XML:.</li> </ol> <pre> &lt;?xml version="1.0"?&gt; &lt;root&gt; &lt;employee_details&gt; # single high level   node   &lt;employee_info&gt;     &lt;employee_id&gt;3256&lt;/employee_id&gt;     &lt;employee_name&gt;Carano, Gina&lt;/ employee_name&gt;     ...   &lt;/employee_info&gt;   &lt;employee_address&gt;     &lt;Street_Address&gt;24 Park Avenue&lt;/ Street_Address&gt;     &lt;City&gt;Richmond&lt;/City&gt;     &lt;State&gt;Virginia&lt;/State&gt;     ...   &lt;/employee_address&gt;   ... &lt;/employee_details&gt; &lt;/root&gt; </pre> <ol style="list-style-type: none"> <li>5. Digital signature in PDF reports supported.</li> <li>6. Updatable PDF reports supported.</li> </ol>

## Printer Properties

The printer properties are described here:

### PDF2X\_COPIES

This property is used to indicate the number of copies to be printed. This property is translated to PCL number of copies command (<esc>&l#X) on the output. The default value is 1.

Valid value for this property is an integer greater than 0.

### PDF2X\_MEDIA\_SIZE\_NAME

This property is used to specify the media size. When this property is set, media size in PDF is ignored. This property's value is translated to corresponding value of PCL page size command (<esc>&l#A).

Valid values:

- A3
- A4
- Com-10

- Executive
- International - b5
- International - c5
- International - dl
- Ledger
- Legal
- Letter
- Monarch

Media is selected based on page's media size.

### **PDF2X\_PAGE\_ORIENTATION**

This property is used to specify the page orientation. This property is valid only when the pdf2x-media-size-name property is specified. The default page orientation is portrait.

Valid values:

- Landscape
- Portrait
- Reverse-landscape
- Reverse-portrait

### **PDF2X\_PAGE\_RANGES**

This property is used to specify a range of pages to be printed. For example, 1, 3–5. The default value is all pages.

### **PDF2X\_SIDES**

This property is used to specify whether printing should be done on one side of paper only or both sides, and if it is both sides, which layout to use. This property does not work unless the printer has duplex unit.

By default, no values are set. A printer determines the sides for printing.

Valid values:

- Duplex
- One-sided
- Tumble

### **PDF2X\_PAGE\_WIDTH**

This property is used to specify the width of a print media in points (1/72 inches). This property is valid only when the pdf2x-page-height property is also set. When this property is set, media size in PDF is ignored. This property's value is translated to the corresponding value of PCL page size command (`<esc>&l#A`).

The default value is the PDF page's width

### PDF2X\_PAGE\_HEIGHT

This property is used to specify the height of a print media in points. This property is valid only when it is used in conjunction with the pdf2x-page-width property. When this property is set, media size in PDF is ignored. This property's value is translated to the corresponding value of PCL page size command (`<esc>&l#A`).

The default value is the PDF page's height.

### PDF2X\_MEDIA\_TRAY

This property is used to specify the media tray or bin for the print job. Converter ignores this property when the pdf2x-media-size-name property is specified. When this property is not specified, printer selects appropriate tray based on page size.

The default value is auto.

Valid values:

- Auto
- Manual

### PDF2X\_SHEET\_COLLATE

This property is used to specify whether or not the media sheets of each copy of each printed document in a job are to be in sequence, when multiple copies of the document are specified by the pdf2x-copies property. Printer determines collation when this property is not specified and number of copies is greater than 1.

**PDF2X\_PS\_CID\_FONT\_CONVTYPE** When converting to Postscript and if the PDF has embedded CID Font Type 2, this property determines whether to convert the font to Postscript Type0+Type42 fonts or Type0+Type3 fonts.

Valid values are 3 and 42. The default value is 42.

---

**Note:** Type42 font normally renders faster and produces better quality output. However, because of Postscript's internal limitation, an error may occur when the font has large number of glyphs (greater than 32768). Type3 font does not have the limitation, but it is slower on most printers. Type3 font may still hit memory limitation when font has large number of glyphs.

---

### PCL\_COLOR\_SUPPORTED

This property is used to specify whether a PCL printer supports color prints. The default value is false.

Valid values:

- True

When this property is set to true, the output will use PCL 5c, color PCL, commands. Text, vector, and raster graphics data

are generated in RGB color. The output is printable only by color PCL printer supporting PCL 5c.

- False

When this property is not set or set to false, the output will use PCL 5 commands only and color information is translated to black and white.

---

**Note:** Most PCL printers do not support PCL 5c unless these are color printers. Unlike Postscript printers which automatically translate color information to grayscale if printer only supports black and white, PCL 5c commands are not accepted by black and white PCL printers and sending PCL 5c file to black and white printer may produce garbage output.

---

**PCL\_EDGE\_TO\_EDGE\_SUPPORTED** Unlike Postscript printers which allow use of the full extent of the media by default, PCL printers imposes some margins around printable area (see the Printable Area section of PCL 5 Printer Language Technical Reference Manual). However, some PCL printers support elimination of PCL margins around printable area by using the XEDGETOEDGE PCL (Printer Job Language) command. When this property is set to true, the XEDGETOEDGE PCL command is set to on. Use this property with `pcl-page-scale=1.0` to get the unshrunked 100% size page output. This property works only on PCL printers that support XEDGETOEDGE PCL command, not on all the PCL printers.

Valid values are true or false. The default value is false.

### **PCL\_X\_ADJUSTMENT**

Adjust the x position of objects on a page. This property is translated to the Left Offset Registration PCL command (`<esc>&l#U`). This is helpful in aligning position of text on pre-printed form, typically used for check printing.

The adjustment is in points.

The default value is 0.

### **PCL\_Y\_ADJUSTMENT**

Adjust the y position of objects on a page. This property is translated to the Top Offset Registration PCL command (`<esc>&l#Z`). This is helpful in aligning position of text on pre-printed form, typically used for check printing.

The adjustment is in points.

The default value is 0.

## **PDF Digital Signature**

PDF Digital Signature properties are described here.



---

**Note:** The `psxp_signature_appclass`, `psxp_signature_mapfields`, and `psxp_signature_digitalID` properties are specific to the PeopleSoft implementation of BI Publisher.

---

<b>signature-enable</b>	<p>Set this property to true to enable digital signature for PDF report.</p> <p>The default value is False.</p>
<b>signature-field-name</b>	<p>This property reflects the digital signature field name. This property applies to PDF templates only.</p> <p>If your report is based on a PDF template, you can enter a field in the PDF template where the digital signature will be placed.</p> <p>For more information on designating a field for a signature in a PDF template, see <i>Report Designer's Guide for Oracle Business Intelligence Publisher</i>, “Creating PDF Templates,” <i>Adding or Designating a Field for a Digital Signature</i>.</p>
<b>signature-field-location</b>	<p>This property is applicable to RTF or PDF layout templates. The default value is top-left.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• Top-center</li> <li>• Top-left</li> <li>• Top-right</li> </ul>
<b>signature-field-pos-x</b>	<hr/> <p><b>Note:</b> If you set this property, do not set the X and Y coordinates or width and height properties.</p> <hr/> <p>This property is applicable to RTF or PDF layout templates. The default value is 0.</p> <p>Using the left edge of the document as the zero point of the X axis, enter the position in points that you want the digital signature to be placed from the left. For example, if you want the digital signature to be placed horizontally in the middle of an 8.5 inch by 11 inch document (which is 612 points in width and 792 points in height), enter 306.</p>
<b>signature-field-pos-y</b>	<p>This property is applicable to RTF or PDF layout templates. The default value is 0.</p> <p>Using the bottom edge of the document as the zero point of the Y axis, enter the position in points that you want the digital signature to be placed from the bottom. For example, if you want the digital signature to be placed vertically in the middle of an 8.5 inch by 11 inch document (which is 612 points in width and 792 points in height), enter 396.</p>
<b>signature-field-width</b>	<p>Enter in points (72 points equal one inch) the desired width of the inserted digital signature field. The default value is 0.</p>

This property should be set only if you set the X and Y coordinates properties.

**signature-field-height**

Enter in points (72 points equal one inch) the desired height of the inserted digital signature field. The default value is 0.

This property should be set only if you set the X and Y coordinates properties.

**psxp\_signature\_appclass**

This property sets which application class should be called by BI Publisher to map a generated PDF document to a signing authority. The application class should be created by application development implementing the existing PT\_BI\_PDFSIGNATURE:PDFSignature interface.

You must set this property if you do not specify a value for the psxp\_signature\_digitalID property.

---

**Note:** This property is specific to the PeopleSoft implementation of BI Publisher.

---

**psxp\_signature\_mapfields**

A list of fields to be used by supplying data values to the application class. Values of those fields could be use to figure out the required Signer ID.

This property is optional.

---

**Note:** This property is specific to the PeopleSoft implementation of BI Publisher.

---

**psxp\_signature\_digitalID**

If you do not specify a value for the psxp\_signature\_appclass property, you can specify the digital ID of the signer directly. If you specify the digital ID of the signer, do not set the psxp\_signature\_appclass property.

If the psxp\_signature\_appclass property and the psxp\_signature\_digitalID property are set, the psxp\_signature\_digitalID property is ignored.

---

**Note:** This property is specific to the PeopleSoft implementation of BI Publisher.

---



---

**Note:** PeopleSoft recommends that all properties of the PDF Digital Signature property group are set at the report-definition level.

---

## PDF Submit Settings

The properties of PDF Submit Settings are described here:

**psxp\_submit\_enable**

This property defines whether a PDF report is updatable. The default value is False.

At runtime, BI Publisher embeds Acrobat JavaScript into the template to create a Save or Submit button. The Save or Submit button may not be visible in a template, but appears on the PDF report.

If you set the value of this property to False, all other properties in the PDF Submit Settings property group are ignored.

**psxp\_submit\_field\_name**

This property allows you to designate an existing field in the PDF template as the Save or Submit button.

If you set this property, BI Publisher will not automatically create a Save or Submit button. Instead, BI Publisher will use the designated field for the Save or Submit button.

**psxp\_submit\_location**

This property specifies the location of the Submit button. The default value is bottom-right.

Valid values:

- Bottom-left
- Bottom-right
- Top-left
- Top-right

**psxp\_submit\_caption**

This property reflects the message catalog entry and should be set in the following format:

message\_set,message\_number

The default value is 235,250.

**psxp\_submit\_tooltip**

This property reflects the message catalog entry and should be set in the following format:

message\_set,message\_number

The default value is 235,251.

**psxp\_submit\_width**

Enter in points (72 points equal one inch) the desired width of the Submit button. The default value is 90.

**psxp\_submit\_height**

Enter in points (72 points equal one inch) the desired height of the Submit button. The default value is 18.

**psxp\_submit\_appclass**

This property specifies the application class name that saves submitted data to the database, and the application class name should be entered in the following format:

Application\_Package:Application\_class

For example, PDF\_SUBMIT\_TEST:PDFCONFIRM

**psxp\_submit\_use\_HTTPS**

This property sets the network protocol (HTTP or HTTPS) that will be used while submitting a PDF report. The default value is True.

Valid values:

- True
- False

**psxp\_submit\_service\_operation\_alias**

BI Publisher provides a default IB Service operation to be used for updatable reports. The default service operation is intended to be used mainly for self-service operations. If an updatable report is to be used for other purposes, you should provide an alternate IB service operation.

The default value is PSXP\_PDF\_SUBMIT.

The psxp\_submit\_service\_operation\_alias and the psxp\_submit\_service\_operation\_version properties enable you to specify an IB service operation.

**psxp\_submit\_service\_operation\_version**

Enter a value in the following format:

v<VERSION\_NUMBER>

For example, v1.

## Editing PDF Output

In previous releases the ability to edit PDF output was defined on the Report Definition Output page using the *PDF report output may be edited* check box. Starting with PeopleTools 8.50, this is now configured via properties set either on the Global Properties page for all reports or on the Report Properties page for a specific report.

To allow editing of PDF reports, the properties for the following property groups should be set as indicated:

<b>Property</b>	<b>Value</b>
pdf-security	True
pdf-encryption-level	2
pdf-changes-allowed	2 or higher

<b>Property</b>	<b>Value</b>
all-field-readonly	False

<b>Property</b>	<b>Value</b>
psxp_pdf_optimized	False

---

**Note:** It is recommended to set these properties at the report definition level.

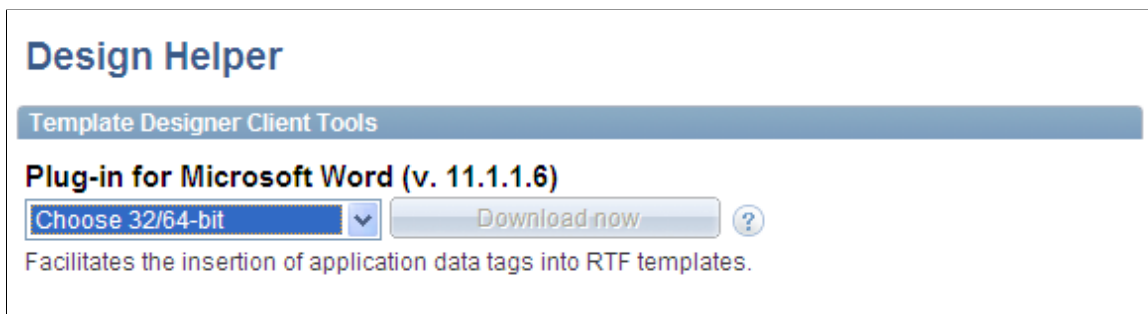
---

## Working with Template Design Helpers

Access the Design Helper page (Select Reporting Tools, BI Publisher, Setup, Design Helper.)

### Image: Design Helper page

This example illustrates the fields and controls on the Design Helper page.



During template creation, a design helper facilitates the insertion of application data tag placeholders into your templates. A schema or sample data file is required for using a design helper. If you use a sample data file, you can preview your template offline during the design process.

Two template design helpers are available: one for designing RTF reports (MS Word Template Builder) and one for the PDF template that gets embedded as a JavaScript inside the PDF template itself when you upload the template to PeopleTools.

This page enables users to download a plug-in for Microsoft Word to facilitate offline RTF template design. Two versions of the plug-in are available: one for 32-bit Word and another for 64-bit Word. Select a version that applies from the list to enable the download button.

The plug-in is downloaded as a zip file. Based on your selection, the zip file contains either BIPublisherDesktop32.exe or BIPublisherDesktop64.exe that should be run to install the plug-in.

Included in the BI Publisher desktop plug-in setup, multiple directories are created that contain documentation, samples, tutorial, and demos. The program is also added to the Start menu.

See [Using PDF Templates](#).

---

## Assigning BIP Permissions to Users

BI Publisher menu access is permission-list driven and depends on permission list and role assignment. PeopleTools delivers permission-list security and roles for BI Publisher report developers and BI Publisher power users.

Permission list PTPT2600 is intended for report developers. Users assigned a role with this permission list have access to all BI Publisher components, including setup capability on the advanced feature Report Definition Bursting page.

Permission list PTPT2500 is intended for power users and provides access to Query data sources for ad hoc reporting through Query Report Viewer and Query Report Scheduler. This permission list also provides access to report definitions and to the Content Library, though access to the report definition bursting information is view-only.

Users assigned to other permission lists and roles, such as permission list PTPT1000, can have access only to the BI Publisher Report Repository.

This table illustrates delivered permission-list security for BI Publisher:

<b>Component</b>	<b>XMLP Report Developer (PTPT2600)</b>	<b>XMLP Power User (PTPT2500)</b>	<b>PeopleSoft User (PTPT1000)</b>
Report Category	Yes	No	No
Design Helper	Yes	Yes	No
Global Properties	Yes	No	No
Data Source	Yes	No	No
Report Definition	Yes	Yes <hr/> <b>Note:</b> Display-only access for bursting. <hr/> <b>Note:</b> Report properties page is not available. <hr/>	No
Content Library	Yes	Yes	No
Template Translations	Yes	No	No
Query Report Viewer	Yes	Yes	No
Query Report Scheduler	Yes	Yes	No
Report Repository	Yes	Yes	Yes

## Chapter 3

# Creating and Registering Data Sources

---

## Creating Data Sources

This section provides an overview of data generation and discusses how to create schema and sample data.

## Understanding Data Generation

In BI Publisher, the data extraction is separate for the data presentation. Sample data can be used to design your RTF template and map your PDF templates. The data schema file is an XML Schema Definition (XSD) file that defines the structure and elements in the extracted XML. Data schema was used in previous releases for the bursting feature and is still available for backwards compatibility and bursting. If PeopleSoft queries are used for data extraction, the system will generate the schema; for all other data sources, you must create the data schema using tools outside of the PeopleSoft system. Schemas are also used for data transformation.

See [Using Data Transform](#).

BI Publisher can register PS/Query, Connected Query, and XML files as a data source, but you can generate XML data using any means including PS/Query, SQR, Application Engine, PeopleCode, File Layout, and so forth.

For RTF template-based reports, design your data source XML structure using groupings that resemble the groupings needed for the output report. This improves runtime performance by preventing unnecessary grouping by the formatting engine.

## Creating Schema and Sample Data

Use sample data source information for developing your RTF report templates, defining bursting, and mapping your PDF templates.

Storing the sample data file in PeopleTools provides a means to:

- Insert form field tags in RTF templates
- Conduct PDF mapping.
- Choose the bursting field during design time.
- Preview the template.

### Sample Data File

Requirements for the structure of XML sample data file include:

- Must consist of a root node with one repeating group.

Textual elements in this repeating group are candidates for bursting.

- Elements should have textual content.

Element should not be empty.

- All expected elements must be included.

All text elements should contain default values. All defined elements can be used for mapping.

This is an example of a sample XML file used as a data source:

```
<?xml version="1.0" encoding="UTF-8"?>
<root>
  <taxroot>
    <Box_Year>2005</Box_Year>
    <Box_Form>W2</Box_Form>
    <EE_SSN>111-11-1111</EE_SSN>
    <ER_EIN>ER_111111111</ER_EIN>
    <Employee>
      <EE_FirstName>Incheol</EE_FirstName>
      <EE_LastName>Kang</EE_LastName>
      <EE_Address1>500 Oracle Parkway</EE_Address1>
      <EE_Address2>Redwood Shores</EE_Address2>
      <EE_Address3>CA 94065</EE_Address3>
    </Employee>
    <Employer>
      <ER_Name>Oracle USA</ER_Name>
      <ER_Address1>500 Oracle Parkway</ER_Address1>
      <ER_Address2>Redwood Shores</ER_Address2>
      <ER_Address3>CA 94065</ER_Address3>
    </Employer>
    <Tax>
      <Fed_Wages_COR>20000</Fed_Wages_COR>
      <Fed_Tax_COR>20000</Fed_Tax_COR>
      <RETIRE_EE_PRV>Y</RETIRE_EE_PRV>
    </Tax>
  </taxroot>
</root>
```

---

**Note:** In this example, the elements *Box\_Form*, *Box\_Year*, *EE\_SSN* and *ER\_EIN* are available as burst candidates. All of the elements will be available for mapping.

---

The actual data file may contain repeated instances of the high level repeating group, as shown in this example:

```
<?xml version="1.0" encoding="UTF-8"?>
<root>
  <taxroot>
    <Box_Year>2005</Box_Year>
    <Box_Form>W2</Box_Form>
    <EE_SSN>111-11-1111</EE_SSN>
    <ER_EIN>ER_111111111</ER_EIN>
    <Employee>
      <EE_FirstName>Incheol</EE_FirstName>
      <EE_LastName>Kang</EE_LastName>
      <EE_Address1>500 Oracle Parkway</EE_Address1>
      <EE_Address2>Redwood Shores</EE_Address2>
      <EE_Address3>CA 94065</EE_Address3>
    </Employee>
    <Employer>
      <ER_Name>Oracle USA</ER_Name>
      <ER_Address1>500 Oracle Parkway</ER_Address1>
      <ER_Address2>Redwood Shores</ER_Address2>
```



```

    <ER_Address3>CA 94065</ER_Address3>
  </Employer>
  <Tax>
    <Fed_Wages_COR>20000</Fed_Wages_COR>
    <Fed_Tax_COR>20000</Fed_Tax_COR>
    <RETIRE_EE_PRV>Y</RETIRE_EE_PRV>
  </Tax>
</taxroot>
<taxroot>
  <Box_Year>2005</Box_Year>
  <Box_Form>W2</Box_Form>
  <EE_SSN>2222-22-2222</EE_SSN>
  <ER_EIN>ER_22222222</ER_EIN>
  <Employee>
    <EE_FirstName>Chang</EE_FirstName>
    <EE_LastName>Yu</EE_LastName>
    <EE_Address1>500 Oracle Parkway</EE_Address1>
    <EE_Address2>Redwood Shores</EE_Address2>
    <EE_Address3>CA 94065</EE_Address3>
  </Employee>
  <Employer>
    <ER_Name>Oracle USA</ER_Name>
    <ER_Address1>500 Oracle Parkway</ER_Address1>
    <ER_Address2>Redwood Shores</ER_Address2>
    <ER_Address3>CA 94065</ER_Address3>
  </Employer>
  <Tax>
    <Fed_Wages_COR>10000</Fed_Wages_COR>
    <Fed_Tax_COR>10000</Fed_Tax_COR>
    <RETIRE_EE_PRV>Y</RETIRE_EE_PRV>
  </Tax>
</taxroot>
</root>

```

## Schema File

This is the sample schema for the XML file shown previously:

```

<?xml version="1.0"?>
<xs:schema id="root" targetNamespace="http://tempuri.org/example_xml.xsd" xmlns:mstns="http://tempuri.org/example_xml.xsd" xmlns="http://tempuri.org/example_xml.xsd" xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns:msdata="urn:schemas-microsoft-com:xml-msdata" attributeFormDefault="qualified" elementFormDefault="qualified">
  <xs:element name="root" msdata:IsDataSet="true" msdata:EnforceConstraints="False">
    <xs:complexType>
      <xs:choice maxOccurs="unbounded">
        <xs:element name="taxroot">
          <xs:complexType>
            <xs:sequence>
              <xs:element name="Box_Year" type="xs:string" minOccurs="0" />
              <xs:element name="Box_Form" type="xs:string" minOccurs="0" />
              <xs:element name="EE_SSN" type="xs:string" minOccurs="0" />
              <xs:element name="ER_EIN" type="xs:string" minOccurs="0" />
              <xs:element name="Employee" minOccurs="0" maxOccurs="unbounded">
                <xs:complexType>
                  <xs:sequence>
                    <xs:element name="EE_FirstName" type="xs:string" minOccurs="0" />
                    <xs:element name="EE_LastName" type="xs:string" minOccurs="0" />
                    <xs:element name="EE_Address1" type="xs:string" minOccurs="0" />
                    <xs:element name="EE_Address2" type="xs:string" minOccurs="0" />
                    <xs:element name="EE_Address3" type="xs:string" minOccurs="0" />
                  </xs:sequence>
                </xs:complexType>
              </xs:element>
            </xs:sequence>
          </xs:complexType>
        </xs:element>
      </xs:choice>
    </xs:complexType>
  </xs:element>
</xs:schema>

```

```

        </xs:complexType>
      </xs:element>
      <xs:element name="Employer" minOccurs="0" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="ER_Name" type="xs:string" minOccurs="0" />
            <xs:element name="ER_Address1" type="xs:string" minOccurs="0" />
          >
            <xs:element name="ER_Address2" type="xs:string" minOccurs="0" />
          >
            <xs:element name="ER_Address3" type="xs:string" minOccurs="0" />
          >
          </xs:sequence>
        </xs:complexType>
      </xs:element>
      <xs:element name="Tax" minOccurs="0" maxOccurs="unbounded">
        <xs:complexType>
          <xs:sequence>
            <xs:element name="Fed_Wages_COR" type="xs:string" minOccurs="0" =>
          />
            <xs:element name="Fed_Tax_COR" type="xs:string" minOccurs="0" />
          >
            <xs:element name="RETIRE_EE_PRV" type="xs:string" minOccurs="0" =>
          />
          </xs:sequence>
        </xs:complexType>
      </xs:element>
    </xs:sequence>
  </xs:complexType>
</xs:element>
</xs:choice>
</xs:complexType>
</xs:element>
</xs:schema>

```

---

**Note:** Schema and sample data are generated for the PeopleSoft Query data source.

---

## Registering Data Sources

This section provides an overview of data source registration and discusses how to register data sources.

### Understanding Data Source Registration

A data source registers the schema and sample data design files. The extracted application fields from the data source files are placed into the template files to create the final report.

The data source can be PS Query, Connected Query, or XML files.

---

**Note:** PeopleSoft queries with in tree prompts are not allowed as a data source.

---

Benefits of data source registration include the ability to:

1. Reuse previously registered data sources with multiple report definitions.
2. Take advantage of built-in bursting features.

See [Setting Bursting Options](#).

**Note:** When creating a report definition, you can select a PS Query or Connected Query data source that has not yet been registered and that data source is registered automatically when you save the report definition. However, all other types of data sources must be registered before they can be associated with a report definition.

**Note:** You can check the format of an XML output file by opening it using Microsoft Internet Explorer (IE). IE opens the file and alerts you to any problems, such as unclosed tags.

## Registering Data Sources

Access the Data Source page (Select Reporting Tools, BI Publisher, Data Source.)

### Image: Data Source page

This example illustrates the fields and controls on the Data Source page. You can find definitions for the fields and controls later on this page.

### Data Source

**Data Source Type:** PS Query  
**Data Source ID:** XRFWIN

Data Source Properties			
<b>Description:</b>	<input type="text" value="XRFWIN"/>	<input checked="" type="checkbox"/>	<b>Active</b>
<b>Object Owner ID:</b>	<input type="text" value="PeopleTools"/>		
<b>Registered Date/Time:</b>	01/06/06 2:31:18PM	<b>Registered By:</b>	PTDMO
<b>Last Update Date/Time:</b>	02/28/06 4:26:18PM	<b>Updated By:</b>	PPLSOFT

Related Files				
File Type	File	Generate File	Or	Upload File
Sample Data File	<a href="#">XRFWIN.XML</a>	<a href="#">Regenerate</a>	Or	<a href="#">Upload</a>
Schema File	<a href="#">XRFWIN.XSD</a>	<a href="#">Regenerate</a>		

#### Data Source Type

Select *PS Query*, *Connected Query*, or *XML File*.

#### Data Source ID

Select or enter the data source ID.

When you are adding a new data source, for PS Query data source types, the corresponding data source ID listing is pulled from Query Manager.

For other data source types, this field accepts free-form text entry. Enter an ID that indicates what the data is, because you want to easily identify your data sources when defining reports.

#### Description

(Optional) Enter descriptive text that provides more detail about the data source.

The description is automatically supplied by default to the data source ID.

**Object Owner ID**

(Optional) Indicate which product, feature, or application owns this data source.

This field is used to extract and package production data source and report registrations and their supporting files.

**Registered Date/Time**

This is a read-only field maintained by the system that indicates the date that the initial data source registration was made.

**Last Update Date/Time**

This is a read-only field maintained by the system that indicates the date that the last update to the data source was made.

**Active**

Select to indicate that this is an active data source.

Only active data sources can be chosen when creating a new report definition. Only reports with active data sources can be processed.

**Registered By**

This is a read-only field maintained by the system that indicates the user ID of the operator who initially registered the data source.

**Updated By**

This is a read-only field maintained by the system that indicates the user ID of the operator who last updated the data source.

**Related Files**

The sample data file is an XML file with sample data that is used for data mapping, template preview, and determining burst fields. Preview action is available within a desktop template designer or from within the report definition page. For PS Query and Connected Query data source types the sample data file can be system-generated or uploaded. For XML file data source type, the sample data file must be uploaded.

---

**Note:** Prior to PeopleTools 8.50, the sample data field was only used for data mapping and preview and the schema file was used required for bursting. In PeopleTools 8.50, the sample data file is used for bursting, as well as data mapping and preview.

---

**File**

(Optional) Click the file name links to view the XML and XSD files after you have generated, regenerated, or uploaded them.

**Last Update Date/Time**

(Optional) This is a read-only field maintained by the system that indicates the date that the last update to the related file was made.

**Generate/Regenerate**

(Optional) Click the Generate link for PS Query or Connected Query data sources to generate the related sample data .

When the related files have been initially generated for PS Query or Connected Query data sources, click the Regenerate link to regenerate them in case the underlying query has changed.

## Upload

(Optional) Click the Upload link for XML file data sources to bring the related sample data and schema files into the database.

You can also upload a sample data file for PS Query or Connected Query if you would prefer to use a sample data file with more realistic data.

---

**Note:** A validation is run against the schema XSD file that is uploaded to a data source, alerting the developer if problems occurred while the system was using their schema.

---



## Chapter 4

# Creating Report Templates

---

## Understanding Report Template Types

Template design involves the construction of a report layout in a template file and is dependent upon what the core Oracle BI Publisher engines accept for processing.

The nature of the data plays a role in the selection of a template.

The following table lists and describes supported template types and provides guidelines for you to consider:

<i>Template Type</i>	<i>Description</i>
PDF Template	<p>Reports are prerendered PDF forms that are populated with data at runtime.</p> <p>Starting in PeopleTools 8.50 nested structures are supported. Nested structures should not be used for any reports that need to be backwards compatible.</p> <p>This template type is suitable when you have existing PDF forms that you need to use to generate reports, such as government forms.</p> <p>Generally, using this template type is faster than using RTF templates because no runtime rendering is involved.</p> <p>Use PDF templates when:</p> <ul style="list-style-type: none"><li>• You already have PDF templates that you must use (for example, government forms).</li><li>• You have simple form-based reporting requirements with no complex formatting, that is, no charting, dynamic tables, dynamic repeated fields, and so forth.</li></ul>
RTF Template	<p>Reports are full rendered, which means that the actual output is generated at runtime using XSLFO technology.</p> <p>Report designers have full control of output formatting and can incorporate charts, dynamic tables, conditional formatting, and so forth.</p> <p>Reports generation is generally slower than PDF-based reports because they involve real-time output rendering.</p>

<b>Template Type</b>	<b>Description</b>
eText	<p>eText templates are RTF-based templates that are used to generate flat-file text output that can be transmitted to a bank or other customer for Electronic Funds Transfer (EFT) or Electronic Data Interchange (EDI). Because the output is intended for electronic communication, these templates must follow specific format instructions for data placement.</p> <hr/> <p><b>Note:</b> XML file is the recommended data source for eText templates because the requirements for eText templates are very specific. XML produced by PS Query data sources lacks the required structure for eText templates and is therefore not available.</p> <hr/> <p>See <a href="#">Report Designer's Guide for Oracle Business Intelligence Publisher</a>, "Creating eText Templates."</p>
XSL Templates	<p>For more complex design requirements, a number of XSL and XSL-FO elements are supported for use with your XSL templates.</p> <hr/> <p>See <a href="#">Report Designer's Guide for Oracle Business Intelligence Publisher</a>, "Supported XSL-FO Elements."</p>

---

**Note:** Sample report templates are bundled with the BI Publisher Desktop, and available in <Installation Directory>\BI Publisher Desktop\samples.

---

## Using RTF Templates

RTF templates support most XSL functionality and can be designed with robust processing and formatting code.

This section discusses how to:

- Create RTF templates.
- Incorporate sub-templates.
- Include images.
- Change default template font.
- Use drilling URL in RTF template.

## Creating RTF Templates

To create an RTF template using Microsoft Word:

1. Download the delivered BI Publisher Template Builder plug-in for offline template design on the Reporting Tools, BI Publisher, Setup, Design Helper page to facilitate the insertion of application data tags into your RTF templates.



The BI Publisher Template Builder is an extension to Microsoft Word that simplifies the development of RTF templates. While the Template Builder is not required to create RTF templates, it provides many automated functions that may increase your productivity.

---

**Note:** You can choose to automatically view the Word Template Builder Tutorial File, Template Builder for Word Tutorial.doc, upon installing the plug-in. This document offers a quick and informative tutorial of the Template Builder.

The Template Builder for Word Tutorial.doc is located in the \Template Builder for Word\doc directory of the folder where Oracle BI Publisher Desktop, BI Publisher Template Builder plug-in, was installed.

Sample report templates are available in <Installation Directory>\BI Publisher Desktop\samples.

---

2. Download the XML sample data file by clicking the Sample Data link on the Reporting Tools, BI Publisher, Report Definition page for a specified query.
3. Load the sample data into the document by selecting Data, Load XML Data from the Microsoft Word Template Builder tool bar menu.
4. Design your template in the RTF document.

By using the downloaded XML sample data, you can insert the data field tags into your template rather than manually typing XSL-formatted tags.

You can preview the template output with the sample XML data from the Oracle BI Publisher menu using Preview Template or select Preview from the Template Builder toolbar.

5. Upload the completed template into the report definition by clicking the Upload button on the Reporting Tools, BI Publisher, Report Definition, Template page.

---

**Note:** Your data source XML structure should be designed to be as close as possible to the groupings used for in the actual report template structure; this improves runtime performance by preventing unnecessary XSL transformation. This is particularly applicable for reports with complex data structures and very large file sizes.

---

See [Report Designer's Guide for Oracle Business Intelligence Publisher](#), “Creating RTF Templates.”

See “\\Word Template Builder\doc\Word Template Builder Tutorial.doc.”

See [Working with Template Design Helpers](#), [Creating Report Definitions](#).

## Incorporating Sub-Templates

When designing a template, you can incorporate one or more sub-templates into your primary template.

You must use specific syntax to:

- Create sub-templates.
- Import sub-templates.
- Call sub-templates.

See [Maintaining Sub-Templates](#).

## Creating Sub-Templates

Within a single sub-template file, multiple sub-template components can be available. Start and end template indicators must exist to distinguish these various components.

```
<?template:component_name?>
<?end template?>
```

For example, syntax of a sub-template file containing two components could be:

```
<?template:peoplesoft?>
Pleasanton Campus
500 Oracle Lane
Pleasanton, CA 94488
<?end template?>

<?template:logo2x.5?>
Oracle_Logo
<?end template?>
```

where `<?template:peoplesoft?>` is the start template indicator of the component *peoplesoft* and `<?template:logo2x.5?>` is the start template indicator of the component *logo2x.5*. Each `<?end template?>` tag indicates the end of its respective component.

## Importing Sub-Templates

To import a sub-template file that is stored in the Content Library, place the following syntax at the top of the primary template file:

```
<?import:psxmlp://sub-template_NAME?>
```

where `sub-template_NAME` is the registered sub-template ID in the Content Library, for example: `<?import:psxmlp://STDHEADER?>`. This syntax must be in `Normal` text.

---

**Note:** The sub-template reference is defined only in the RTF template. The sub-template must be defined in Content Library; however, the relationship to templates using the sub-template is not defined in the database. Developers must be aware of the sub-template relationships when modifying the RTF sub-template.

---

See [Maintaining Sub-Templates](#).

## Calling Sub-Templates

Place the following syntax in the primary template file in the location where the desired text or XSL instructions from the sub-template file should appear:

```
<?call-template:peoplesoft?>
```

In the preceding sample code `peoplesoft` is the name of the component that you want to use in the sub-template file.

---

**Note:** Primary templates calling nonexistent or inactive sub-templates cause an error message to be issued indicating the reason for the problem. This error information is incorporated into Process Scheduler error handling as well as into online viewing or previewing of the report.

---

See [Running BI Publisher PeopleSoft Query Reports](#).

## Testing a Sub-Template in Microsoft Word

You should test your template and sub-template using Template Builder before uploading to PeopleTools to make your sub-template is accessible to your template on the file system.

Use the following syntax when importing:

```
<?import:file:C:///Template_Directory/subtemplate_file.rtf?>
```

Notice the triple slashes and the use of the actual file name instead of template ID.

When your design is complete, you can change the import statement back to make the sub-template available to the main template in PeopleTools environment:

## Including Images

BI Publisher supports a number of methods for including images in your reports:

- Inserting images.
- Importing images.
- Rendering image field data (BLOB).

### Inserting Images

To directly insert a .jpg, .gif, or .png image file into a template:

1. Select Insert, Picture, From File while the template is open in Microsoft Word.
2. Select the desired .jpg, .gif, or .png file to insert into the template.
3. Save the template.

---

**Note:** Oracle recommends that you use the Microsoft Word *Insert* menu option to insert the image, because the additional properties that you need to set for the RTF template to correctly generate reports with those images are automatically set by means of this method. Additionally, dragging and dropping an image onto a template creates a link to the local machine being used and may cause problems when the report is generated.

---

### Importing Images

To import an image from a sub-template file:

1. Embed the .jpg, .gif, or .png into the sub-template file.

For example,

```
<?template:logo2x.5?>
  Oracle_Logo
<?end template?>
```

where Oracle\_Logo is the actual .jpg, .gif, or .png.

2. Import the sub-template file that includes the image by including the following syntax at the top of the primary template file:

```
<?import:psxmlp://sub-template_NAME?>
```

In this code sample, `sub-template_NAME` is the registered sub-template ID in the Content Library.

3. Add the calling details in the primary template at the appropriate location using the following syntax:

```
<?call-template:logo2x.5?>
```

In this code sample, `logo2x.5` is the name of the component that contains the image in the sub-template file.

See [Incorporating Sub-Templates](#).

## Rendering Image Field Data (BLOB)

BI Publisher supports the rendering of BLOB (Base64 encoded) data fields in an XML file.

To render an image at runtime, add the following syntax in a Form Field Help Text box :

```
<fo:instream-foreign-object content-type="image/jpeg">
<xsl:value-of select="IMAGE_ELEMENT"/>
</fo:instream-foreign-object>
```

where `image/jpeg` is the MIME type of the image (other MIME types are `image/gif` and `image/png`) and `IMAGE_ELEMENT` is the element containing BLOB (Base64 encoded) data in the XML file.

Also, you can specify height and width attributes for the image to set its size in the published report. You can specify height and width attributes in inches, pixels, centimeters, or by percentage. BI Publisher scales the image to fit the size that you define. The following examples illustrate the attributes for height and width of an image:

Image size attributes in inches:

```
<fo:instream-foreign-object content-type="image/jpeg" height="3 in" width="4 in">
```

Image size attributes in pixels:

```
<fo:instream-foreign-object content-type="image/jpeg" height="300 px" width="400 px">
```

Image size attributes in centimeters:

```
<fo:instream-foreign-object content-type="image/jpeg" height="3 cm" width="4 cm">
```

Image size attributes as a percentage of the original dimensions:

```
<fo:instream-foreign-object content-type="image/jpeg" height="300%" width="300%">
```

---

**Note:** BI Publisher supports rendering of images in all output formats—PDF, HTML, RTF, and XLS.

---

Query and Connected Query data sources containing image fields generate the binary base64 encoded data string for these image fields in the generated XML file provided the query's Image Fields property is set correctly.

If you are using a Query or Connected Query data source, follow these steps for the underlying query containing the image field:

1. Open a query definition (Reporting Tools, Query, Query Manager).
2. Click the Properties link.
3. In the Image Fields group box, select Image Data.
4. Click OK, and save the query.

See "Viewing and Editing Query Properties" (PeopleTools 8.54: Query), Setting Image Fields.

## Changing Default Template Font

The output report from RTF template uses template-level default fonts for empty report spaces and empty table cells. If the default font size does not match the font height used in a template, a final report could look different from user expectations. In this case, the user can change the template default font either in design time or runtime:

- Design time

Set the xdo.cfg for the font. For example, set the default font for a specific report to be Helvetica, size 8: `<property name="rtf-output-default-font">Helvetica:8</property>`

- Runtime

Use PeopleCode to set the font. For example, set the default font for a specific report to be Times New Roman with height 10:

```
&asPropName = CreateArrayRept("", 0);
&asPropValue = CreateArrayRept("", 0);
&asPropName.Push("rtf-output-default-font");
&asPropValue.Push("Times New Roman:10");
&oRptDefn.SetRuntimeProperties(&asPropName, &asPropValue);
```

## Using Drilling URL in RTF Template

Drilling URLs are supported in BI Publisher reports with a data source of PS Query or Connected Query.

---

**Note:** Drilling URLs are supported only in RTF templates.

---

To use a drilling URL in a BI Publisher report:

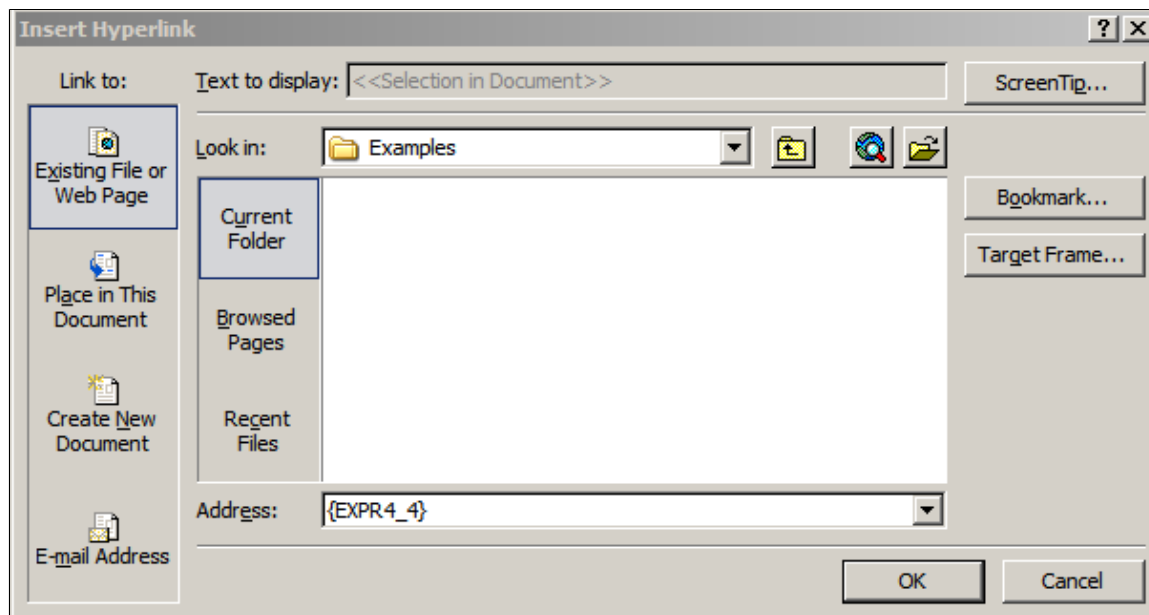
1. Create the query with the drilling URL defined as a field.
  - See "Drilling URL in PeopleSoft Query" (PeopleTools 8.54: Query).
2. Create an RTF template.
3. In the RTF template map one or more fields to the fields that contain drilling URL.
  - Highlight the field where you want to place the drilling URL.
  - Select Insert (from the Word menu), Hyperlink or use Ctrl+K.

- In the Insert Hyperlink dialog box, enter the URL link in Address field.

Each URL link should be defined as {URL\_FIELD}, where URL\_FIELD is the unique field name for the expression that contains a specific drilling URL.

**Image: Insert Hyperlink dialog box**

This example illustrates the fields and controls on the Insert Hyperlink dialog box.



- Use the Target Frame push button to select how this URL link will be opened, either in the same window or in the new window

---

**Note:** The URL value does not need to be added to the report, as long as the unique field name (data file that contains the URL) is mapped to a field in the report.

---

4. If the BI Publisher report is run in Process Scheduler using an application engine program, you will need to add additional code to identify the process instance for the application engine program before processing the report. The process instance can be retrieved from the state record PSXPQRYRPT\_AET. This call is needed to set a drilling URL during Query or Connected Query execution.

```
&ProcessInstance=PSXPQRYRPT_AET.PROCESS_INSTANCE;
&oRptDefn.ProcessInstance = &ProcessInstance;
&oRptDefn.ProcessReport("", "", %Date, "");
```

5. When you click the drilling URL in the report depending on the drilling URL type, one of the following occurs:
  - For Query URL, the Query results are displayed.
  - For Component URL, the appropriate PeopleSoft page is opened.
  - For External URL, the external page is opened.

See [Report Designer's Guide for Oracle Business Intelligence Publisher](#)

## Incorporating Data Created with Rich Text Editor (RTE) into Template

The data entered in an RTE (Rich Text Enabled) long edit field is stored in the PeopleSoft database as formatted HTML data. BI Publisher reports are capable of displaying this HTML formatted data in the output report without requiring any special conversion, as had been required in previous PeopleTools releases. The Oracle BI Publisher core engine natively supports the use of HTML formatted data fields in an RTF report template.

See [Understanding Rich Text Editor Data in BI Reporting](#).

## Embedding PCL Code into Template

You can embed custom Printer Command Language (PCL) code to enable font selection for secure check printing (that is, to invoke the MICR font used for bank account codes and the check's secure signature fonts). To embed PCL commands in the file that is printed, use the BI Publisher commands described below in your RTF template in the specific position on the page where you want the PCL commands to render.

RTF templates can be created with PCL hardcoded lines, which means that a user can directly specify the exact PCL command to be included at a specific visual position on a PCL page.

In the template, include the following syntax at the position where you want to print the text.

```
<pcl><control><esc/>(pcl command)</control>(text or data field)<sp/>(text or data field)</pcl>
```

where:

`<pcl></pcl>`: indicates the start and end of the custom PCL command sequence and the text to print using the custom command.

`<control></control>`: indicates the start and end of the PCL sequence.

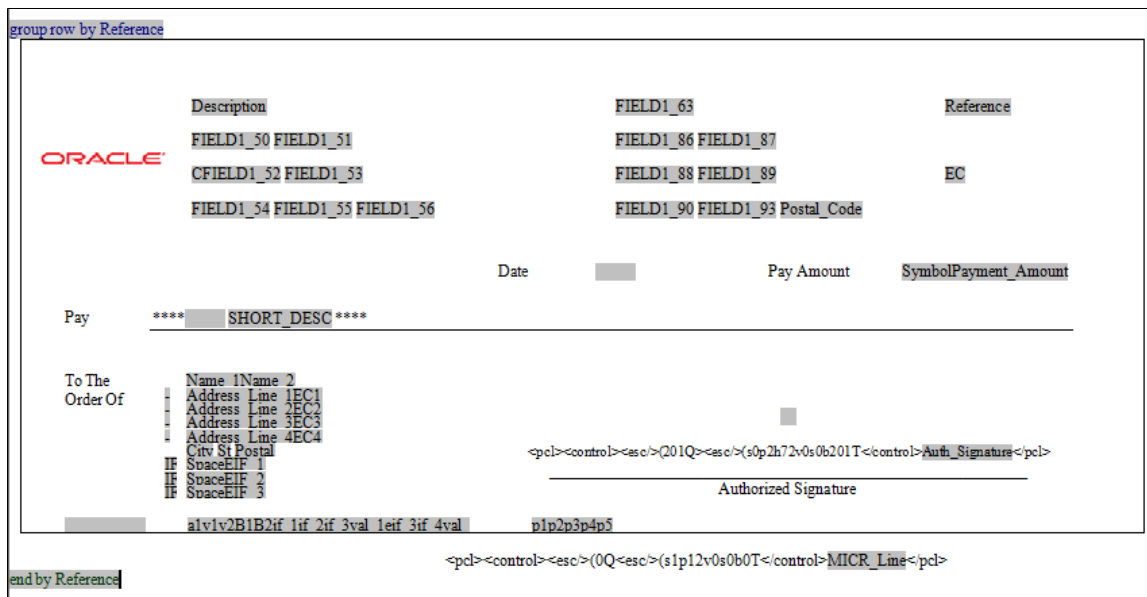
`<esc/>`: include `<esc/>` between `<control>` and `</control>` to escape character (ASCII 0x1b) in the output.

`<sp/>`: inserts a space.

This example illustrates the PCL command sequence in a RTF template.

**Image: RTF template**

RTF template with embedded PCL code



For PCL printing, a report follows the following process:

- Creating the report

For PCL outputs, during the report creation process, the RTF template will be populated with the XML data and then a PDF report will be created. In the resulting PDF, the PCL command sequence specified in the RTF template will still be displayed as regular text with the XML data replaced in the fields.

**Note:** Only the PDF report with the embedded PCL command sequence is stored in Report Manager. The PCL file is removed from the server unless the psxp\_debug property is enabled. However, if a password is required to open or modify the PCL file, the PCL file will be removed even when the psxp\_debug property is enabled.

- Printing the PDF report

When the PCL file is sent to a printer where the MICR fonts and the Troy Signatures are installed, the PCL command sequence is replaced with bank account code and signature.

## Using PDF Templates

This section discusses how to:

- Work with PDF templates.
- Create PDF templates.
- Map data tags.



See [Associating Templates](#).

## Working with PDF Templates

PDF templates do not require an external plug-in for offline template design. A mapping feature for XML data element tags is enabled when the PDF template file is uploaded to the Reporting Tools, BI Publisher, Report Definition, Template page. The BI Publisher PDF mapping functionality enables you to match existing form fields in a PDF template with sample data field tags.

You only need to do mapping, if the form field names in the PDF template do not match the tag names in the XML data. This is usually the case when you are using a third-party PDF template (such as government form) and when it is not easy to customize the tag names in XML data to match the PDF form fields.

Observe the following guidelines when working with PDF templates regardless of whether you are mapping PDF template fields or tags:

- The PDF document must allow editing.

Check the Security setting in the File, Document Properties, Summary page.

- Files must be Adobe Acrobat 5.0-compatible.

If you are using a later version of Adobe Acrobat, select File (or Document — depending on the version of Adobe), Reduce File Size and select the *Acrobat 5.0 and later* value in the Make Compatible with: option.

- Files must have form fields for the placement of application data, with each field tag being unique.

If no form fields exist, use the Adobe Professional version to add field tags. If duplicate tags or non-unique tags are in forms obtained from third parties, use Adobe Professional to update the tags.

- Files should not have embedded Javascript.

BI Publisher removes it during the course of the `Map Enablement` function when the `Generate` button on the Reporting Tools, BI Publisher, Report Definition, Template page is selected.

## Processing PDF Templates

The Oracle BI Publisher Core Engine adheres to the following rules when processing PDF templates:

- The search for the tag that matches the field name starts at the end of the XML file.
- The first match of the tag is used for the field value.
- If the tag is not found, the Oracle BI Publisher Core Engine looks at the map file (if provided).

This means that even if the form is mapped, when a tag is in the XML data that matches the PDF template form field tag, it has priority over the map for placing the data.

## Using Full Path Mapping

The PeopleSoft implementation for PDF mapping supports full path mapping. Full path mapping is not supported in the BIP Server. Full path mapping should only be used when you have no control on the structure and names of your XML data tags.

---

**Note:** Full path mapping is available only for PeopleTools 8.50 and later. It is not backward compatible.

---

## Creating PDF Templates

To create a PDF template without mapping tags using Adobe Acrobat:

1. Design your template in the PDF document as documented in [Report Designer's Guide for Oracle Business Intelligence Publisher](#).

Be sure that the PDF template field names match the XML data tags.

2. Upload the completed template into the Report Definition by clicking the Upload button on the Reporting Tools, BI Publisher, Report Definition, Template page.

---

**Note:** BI Publisher supports Adobe Acrobat 5.0 (PDF specification version 1.4). If you are using a later version of Adobe Acrobat, use the File, Reduce File Size option to save your file as Adobe Acrobat 5.0-compatible.

---

See [Report Designer's Guide for Oracle Business Intelligence Publisher](#), “Creating PDF Templates.”

## Mapping Data Tags

Third parties most often supply PDF templates in which the form fields already exist inside the form template. For the XML data element tags to know where they should print within the PDF template, a mapping is required between the field elements from the data source and the form field elements in the PDF template. Once a PDF form with editable form fields is mapped to the XML sample data fields, the template is ready for use by BI Publisher.

Prior to being able to perform this mapping, some BI Publisher-specific pre-processing of the file is required. This processing requires the existence of an open sample data and the report's data source. Adobe Standard or above and version 6 or above is required for the template mapping. In the event that the PDF form does not have form fields, the form field and tags can be inserted using the Designer or Professional versions of Adobe. The form field tags can then be mapped to the sample data tags.

To create a PDF template by mapping data element tags using Adobe Acrobat:

1. Upload the PDF template file to be mapped by clicking the template file Upload button on the Reporting Tools, BI Publisher, Report Definition, Template page.
2. If you are using full path mapping, select the Full Path Mapping check box.
3. Generate the file to be mapped by clicking the map file Generate button.

Generate creates a map-enabled PDF, with the following naming convention. The plug-in enables you to access the data tags by embedding a JavaScript plug-in inside the PDF template.

- A dash and the letter *m* added at the end of the file. For example, if the original file is *template.pdf*, the mapped file will be *template-m.pdf* if path mapping is not selected.
- A dash and the letter *mfp* added at the end of the file. For example, if the original file is *template.pdf*, the mapped file will be *template-mfp.pdf* if path mapping is not selected.

4. Visually map the data tags to the form's field tags.

The mapping exercise is performed offline within the Adobe Acrobat application.

5. Save the file.

The generated file name indicates the type of mapping, as previously defined in step 2.

6. Upload the mapped PDF file on the Reporting Tools, BI Publisher, Report Definition, Template page by selecting the map fileUpload button.

When uploaded to the server, the mapping information is stored in the database along with the PDF form template.

---

**Note:** If the PDF template's field names are the same as the data source's data tag names, then no mapping or uploading of a map file is required.

---

---

**Note:** PDF file security has to allow editing and saving for the mapping to be completed. The ability to perform these functions depends on the Adobe version that you are working with.

---

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**Note:** If no map file exists for your PDF file, selecting the Preview button on the Reporting Tools, BI Publisher, Report Definition, Template page will not show any data because the form fields names do not match XML data tag names.

---

## BI Publisher and Adobe

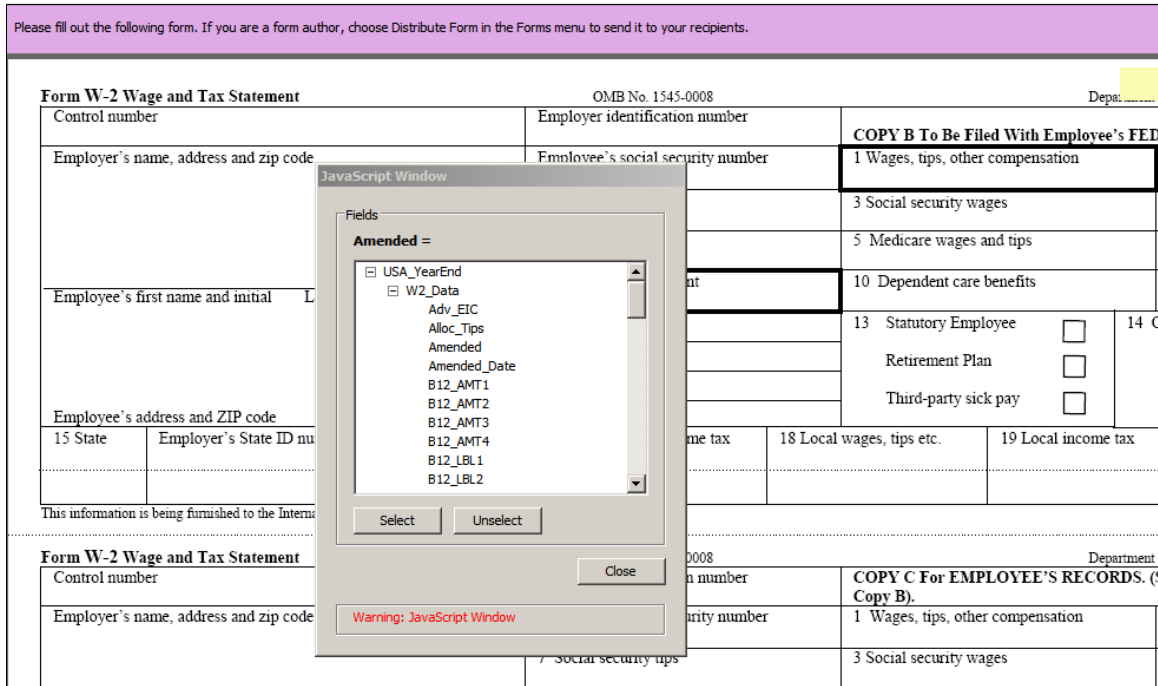
BI Publisher provides the following features within Adobe:

- A visual indication of the PDF form fields that have been mapped.  
A dark blue outline appears around the mapped form fields.
- Display of the mapped field tag name when the cursor hovers over the PDF form field.
- A pop-up dialog box containing an XML tag list that you can select from to insert the field tag when you click the PDF form field.

- Preparation of the PDF form for uploading to the report definition when you save the file locally by doing a File, Save.

**Image: Sample PDF file mapping**

This example illustrates the mapping of form fields on a PDF file.



**Creating Updatable PDF Report**

BI Publisher for PeopleSoft enables you to create PDF reports that can be edited and allows the changes to be saved in a database. BI Publisher uses an embedded button to submit the changes to database. PDF reports generated only from PDF templates support this functionality.

The updatable PDF report functionality is available for delivered self-service reports and for customer-created reports and is mainly used with government delivered PDF templates.

**Requirements**

To use the updatable PDF report functionality, the following requirements should be met.

- Supported browsers:
  - Internet Explorer (version 8 and above)
  - Firefox
  - Chrome
- If BI Publisher IB Handler is using HTTPS protocol, the web site used with PeopleSoft software should have SSL feature properly configured.

- The updatable PDF report functionality uses embedded Acrobat JavaScript to create updatable reports. Default PDF viewers that are currently delivered with Firefox and Chrome do not support Adobe JavaScript. In order to make Adobe JavaScript to work, an Adobe Reader plug-in should be used in the client browsers instead of default Firefox and Chrome PDF reader plug-ins.

Instead of using Adobe Reader plug-in, you can use Adobe Reader for opening PDF reports on client machine. Adobe Reader version 10 and above should be installed on a client machine.

- If stand-alone Adobe Reader is used to open updatable reports instead of browser plug-in and HTTPS protocol is used, trusted root certificate should be installed in the stand-alone Adobe Reader.

## Setting Integration Broker Features

BI Publisher uses PSXP\_PDF\_SUBMIT REST service with PSXP\_PDF\_SUBMIT\_POST service operation. This service operation uses the Basic Authentication method for user authentication. System Administrator can change the user authentication method to Basic Authentication and SSL authentication method if needed.

## Creating an Updatable PDF Report

To create an updatable PDF report:

1. Access the Report Definition page. (Reporting Tools, BI Publisher, Report Definition and click the Properties tab.)

Select PDF Submit Settings property group and enter values for the properties.

See [Defining Global Properties](#) for a description of properties associated with the PDF Submit Settings property group.

2. Select the PDF Security property group and set the following properties:

- pdf-security - set to False
- pdf-no-changing-the-document - set to False
- pdf-changes-allowed - set to 2

3. Select the PDF Template property group and set the following properties:

- all-field-readonly - set to False
- all-field-readonly-asis - set to True

This property must be set if some fields are read-only and some fields are updatable. If this property is set to True, the all-field-readonly property setting is ignored.

4. Select the PeopleTools Settings property group and set the psxp\_pdf\_optimized property to False.

5. In the PDF template, review the following:

- Ensure that all document restrictions are set to Allowed.

To check whether document restrictions are set to Allowed, open the PDF template, right-click in the template, choose Document Properties, and then select the Security tab.

If a PDF template is created with restrictions, for example, a template provided by a Government entity, the PDF template must be updated using Adobe Acrobat to ensure that the document restrictions are set to Allowed. Then, the template must be saved and re-uploaded to the report definition. The associated mapping file must also be re-generated, re-mapped, and re-loaded.

- Ensure that you select the Read Only check box (in Adobe Acrobat Text Field Properties box) for any fields that you do not want to be updatable.
6. If you are using a template with custom defined Submit or Save button by specifying a field name for the `psxp_submit_field_name` property in PDF Submit Settings property group, then you should define the following settings for this button in the Adobe Acrobat Text Field Properties box:
- In General Tab, in Form Field drop-down list, select Hidden.
  - In Appearance Tab, for the Border Color and the Fill Color options, select No Color.

These settings ensure that if a report is created as a static (not updatable) report the Submit or Save button will be invisible.

## Chapter 5

# Defining Report Definitions

---

## Creating Report Definitions

This section provides an overview of report definitions and discusses how to:

- Define reports.
- Associate templates.
- Use data transform.
- Set output options.
- Set report properties.
- Set security options.
- Set bursting options.

## Understanding Report Definitions

Report definitions associate a data source with template files. A data source registers the schema and sample data design files. The extracted application fields from the data source files are placed into the template files to create the final report.

A report can include multiple templates. A template is used to associate different layout formats as required by different countries and regions or as required by different channels (web posting, printer, fax, and so on).

The defined output options from the report definition are reflected on the output type and format prompts on the Process Scheduler request page when the application process that runs the report is assigned the process type of BI Publisher. Security settings for a report definition determine who can view the report when it has been run.

Report properties can be set to control formatting of the report.

With the advanced bursting feature, report generation results in separate output files when bursted reports are run through Process Scheduler.

Report definition access is based on user permission list security and roles. For example, bursting is read-only for BI Publisher power users, because only developers can set up bursting, and the page only appears when settings exist.

BI Publisher power users can start to define a report to download the sample data files to create their templates.

## Defining Reports

Access the Definition page (Reporting Tools, BI Publisher, Report Definition, Definition.)

### Image: Report Definition - Definition page

This example illustrates the fields and controls on the Report Definition - Definition page. You can find definitions for the fields and controls later on this page.

The screenshot shows a web interface for defining a report. At the top, there are tabs for 'Definition', 'Template', 'Output', 'Properties', 'Security', and 'Bursting'. The 'Definition' tab is active. Below the tabs, the 'Report Name' is set to 'XRFWIN'. A section titled 'Data Source' contains fields for 'Data Source Type' (PS Query), 'Data Source ID' (XRFWIN), and 'Data Source Description' (XRFWIN). Below this is a 'Report Properties' section with fields for 'Report Description' (Cross Reference Window Listing), '\*Report Status' (Active), '\*Report Category ID' (ALLUSER), 'Object Owner ID' (PeopleTools), and '\*Template Type' (RTF). At the bottom, there are fields for 'Retention Days', 'Registered Date/Time' (01/06/2006 2:33:09PM), 'Registered By' (PTDMO), 'Updated Date/Time' (02/28/2006 4:26:18PM), and 'Updated By' (PPLSOFT). A 'Download' section at the very bottom has links for 'Data Schema' and 'Sample Data'.

**Report Name** Enter a report name.

The report name must be unique, and it must not contain any special characters. If you enter spaces in the report name, the system replaces them with underscores.

**Data Source Type**

Select *Connected Query*, *PS Query*, *Rowset*, *XML Doc*, or *XML File*.

---

**Note:** For BI Publisher power users, the data source type is *PS Query* only and the drop-down list box is disabled. Rowset and XMLDoc are deprecated in PeopleTools 8.50. If the data source was defined in a previous release, it will be available. You can not create a new data source for rowset or XmlDoc.

---

See [Registering Data Sources](#).

**Data Source ID**

Select the data source ID.



You can choose from data source IDs that are based on previously registered data sources. You can select queries regardless of whether they have been previously registered as data sources. For queries, the lookup table respects the public, private, and query access group security for the current user ID.

When you save a report definition with an unregistered query data source, the query is systematically registered as a data source. The query has no object owner ID, but that value can be entered manually on the Data Source page, if required.

### Data Source Description

This is a read-only field that reflects the value that was entered when the data source was registered.

For unregistered query data sources, this field reflects the query description.

### Report Description

(Optional) Enter descriptive text that provides more detail about the report.

If this field is left blank, the report name appears by default.

### Report Status

Select *Active*, *In Progress*, or *Inactive*.

Setting the report status allows work in progress as well as retirement of report definitions. Active reports must have at least one active template. Only active reports can be selected at runtime and run to success.

### Report Category ID

Select a report category ID.

This is a grouping mechanism for reports that provides row-level security for editing report definitions per the rights defined on the report category setup table.

See [Setting Up Report Categories](#).

### Object Owner ID

(Optional) Indicate which product, feature, or application owns this report.

---

**Note:** The default value that appears here is based on the Object Owner ID setting in the Report Category component ( PSXPSETUPRPTCAT).

---

### Template Type

Select *PDF*, *RTF*, *ETX*, or *XSL*.

---

**Note:** ETX is only available if the data source is XML file.

---

Only one template type is allowed per report.

The template file extension that you can upload on the Template page is controlled by this value. This value also controls which report templates appear on the Translation

component (PSXPTMPLTRNS), because only RTF templates are translatable.

### **Retention Days**

(Optional) Enter a value to set the option to purge the reports from the Report Repository and archive the data to the Report Archive table.

The value that you enter overrides the system setting for retaining reports. The maximum value that you can enter is 9999 days. If you don't select a value, the value from the PeopleTools, Process Scheduler, System Settings page applies.

Only BI Publisher report developers or power users with permission list PTPT2600 or PTPT2500 can set this value.

See "Maintaining Reports" (PeopleTools 8.54: Process Scheduler).

### **Registered Date/Time**

This is a read-only field maintained by the system that indicates the date that the initial report definition was registered.

### **Updated Date/Time**

This is a read-only field maintained by the system that indicates the date that the last update to the report definition was made.

### **Registered By**

This is a read-only field maintained by the system that indicates the user ID of the operator who initially registered the report definition.

### **Updated By**

This is a read-only field maintained by the system that indicates the user ID of the operator who last updated the report definition.

### **Download**

Click [Data Schema](#) to detach the schema file or [Sample Data](#) to detach the data file.

Detaching the files enables the user to view the data elements prior to finalizing the report definition.

These links appear if the related files exist on the registered data source. For PS Query data sources, both links always appear regardless of whether the data source is registered because these files are system-generated.

See [Registering Data Sources](#).

## Associating Templates

Access the Template page (Reporting Tools, BI Publisher, Report Definition, Template.)

### Image: Report Definition-Template page (RTF template)

This example illustrates the fields and controls on the Report Definition-Template page (RTF template). You can find definitions for the fields and controls later on this page.

The screenshot shows the 'Template' page for a report definition named 'XRFWIN'. The page has several tabs: Definition, Template (selected), Output, Properties, Security, and Bursting. The 'Report Name' is 'XRFWIN'. The 'Template' section includes a search bar with 'Find | View All' and 'First 1 of 1 Last'. The 'Template ID' is 'XRFWIN\_1' and is marked as the 'Default Template'. The 'Description' field is empty. The '\*Language Code' is set to 'English' and the 'Channel' is empty. The 'Template Files' section includes a search bar with 'Find | View All' and 'First 1 of 1 Last'. The 'Effective Date' is '01/01/1900'. The '\*Status' is 'Active'. There are checkboxes for 'Use Data Transform' and 'Use Alt. XML'. The 'Template File' is 'xrfwin.rtf'. There are 'Upload' and 'Preview' buttons.

The Template group box on the Template page refers to a particular template layout, because one report definition can associate multiple template layouts differentiated by language code or channel.

#### Template ID

Enter a template ID that uniquely identifies this template.

The default template ID is a system-generated ID based on the report name. You can edit this ID when you first add a template to the report definition, but it must be unique across all templates in the system, not just within the current report definition.

#### Description

(Optional) Enter descriptive text that provides more detail about the template and identifies its use.

Entering a meaningful description helps the user select the proper template at runtime. For example, indicate a unique layout or channel.

#### Language Code

Select a language code for the template.

The default value reflects the default template language.

#### Default Template

Indicate whether this is the default template.

You can select only one template as the default template.

The first template that you add to the report definition is automatically selected as the default. You can change this selection as necessary.

Default templates are automatically used at runtime if no other value is supplied.

### Channel

(Optional) Select the distribution channel for the template.

The Channel attribute supports the need to identify different layout formats as required by the various distribution mechanisms. For example, a printout may require a different template layout than an email or a web posting. Leaving the channel blank would indicate that this particular template does not have a format that is specifically suited to just one channel.

These values are for information only and do not trigger a particular Process Scheduler distribution mechanism.

Developers can drive a template choice based on channel through the PeopleCode BI Publisher classes.

## Adding Template Files

Within each template layout defined previously is one or more effective-dated versions of the template. For example, you can have a new government form for each year. In the Template Files group box, you attach effective-dated files that are the actual report templates.

### Effective Date

Select an effective date for the template file in order to maintain new versions or versions specific to a particular time period. For example, a new file could be uploaded to reflect a new format, effective for reports as of the new date.

The default date for a newly added template file is the current system date. The user can change the data per effective-dating logic with Update, Update/Display, and Correction modes.

See "Using Effective Dates" (PeopleTools 8.54: Applications User's Guide).

### Status

Select a status of *In Progress Active*, or *Inactive* for the template file.

This field indicates the usability of the template file. Runtime selection logic for a template file uses this field in conjunction with the Effective Date field to determine which template file to use. At least one file must be active to save a report definition.

### Template File

When you upload the template, the template name appears as a link. Click this link to download the template file to your local computer for updating the field or tag assignments.

### Upload

Click to attach a template file to the template.

The file extension is checked against the template type value on the Definition page and a warning is issued if no match is found.

When you save the report definition, this button becomes disabled. To reupload a new version of the template, you must

either delete and add it again in correction mode or add a new effective-dated row.

## Preview

Click to preview the report using the current template file based upon the sample data file that was registered with the data source.

The Preview button is not enabled when no sample data file is registered with the data source.

The preview tab title depends on the default output type as follows:

- PDF output uses the template name with a system-generated number.
- HTML output uses the title property from the word template. To change the title property in MS Word, select File, Properties, Summary.

## Use Data Transform

Select to specify a data transform program to be applied to this report definition. Once you save the report definition, this field will be Display Only.

See [Using Data Transform](#).

## Use Alt. XML (Use alternate XML)

Select to use an alternate XML file for previewing. When you click the Preview button, a dialog box appears, where you can select the file.

---

**Note:** The preview button uses the sample XML data file to generate report output. Sometimes, if the sample data does not match the real data, you may find discrepancies between preview and real report outputs. This is specifically true when the report template uses sample data in variables and conditional formatting. Creating your own sample file with real data makes the report look more realistic. This sample file can also be used to preview reports using template builder.

---

See [Mapping Data Tags](#).

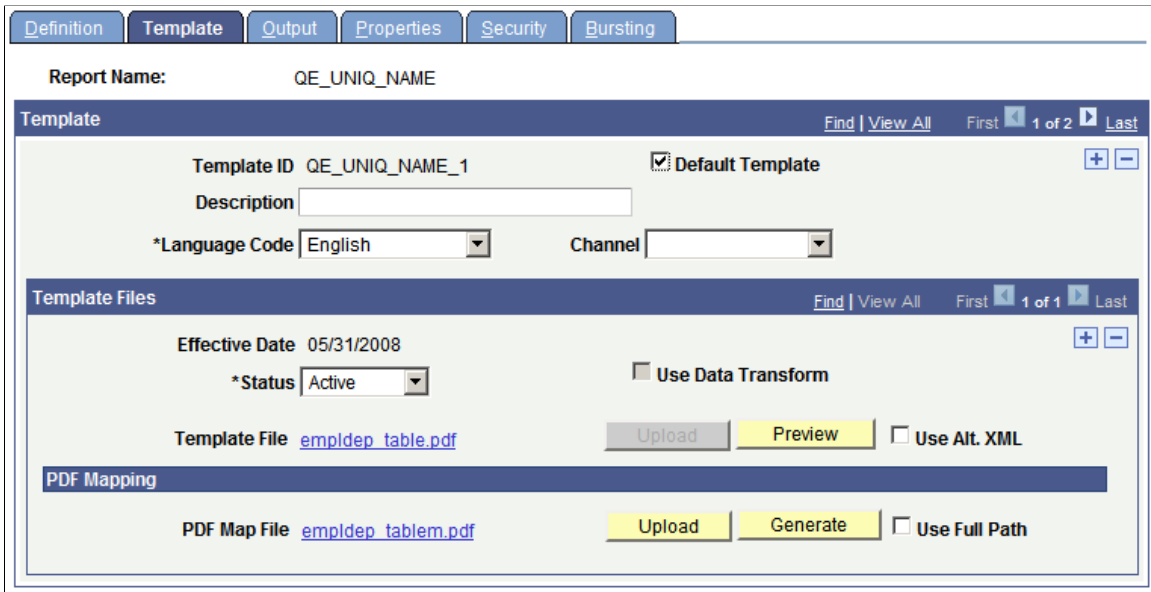
## Mapping PDF Template Files

For PDF files, a mapping is sometimes required between the field elements from the data source and the form field elements on the PDF template in order for the XML data element tags to print in the correct place within the PDF template. This is often true for third-party PDF templates, for which the form fields

already exist inside the form template. However, if you create PDF form fields and XML tag names that are the same, no mapping is necessary.

**Image: Template page for PDF mapping**

This example illustrates the fields and controls on the Template page for PDF mapping. You can find definitions for the fields and controls later on this page.



The following fields appear on the Template page for PDF templates files:

**Map File**

When you upload the mapped PDF file, the file name appears as a link. Click this link to open or download the file to your local computer.

If changes are required in the map file, you can make the changes and upload the revised file without creating a new effective-dated row.

**Generate**

Click to generate the PDF map file.

The system uses the uploaded PDF template file and the sample XML data associated with the data source definition to generate a PDF template embedded with a Visual JavaScript plug-in used for mapping.

Any changes made to XML tag names and structure after the template is defined or mapped, require you to redefine or remap the template.

---

**Note:** PDF file security must allow altering and saving for the mapping to be completed. This depends on the version of Adobe with which you are working.

When working with PDF map files, some indication of mapping file should be included in the file name to distinguish the mapping file from the unmapped template file. By default, the generated mapping file name is the name of the template file followed by a dash and either an *m* for map file or *mfp* for full path mapping.

---

## Upload

Click to upload the PDF map file when the tags have been mapped.

## Full Path Mapping

Select this check box if your XML data has elements with the same name at different levels. For instance, ADDRESS is used at the company level and also at the employee level.

This is an example of XML file that requires full path mapping:

```
<PayChecks>
  <PayCheck>
    <EmpNo>00001</EmpNo>
    <CompanyInfo>
      <Address>1 Company st. CA 00001</Address>
      <Description>Company Info</Description>
    </CompanyInfo>
    <EmployeeInfo>
      <Address>1 Employee st. CA 00001</Address>
      <Description>Employee Info</Description>
      <Salary>50000</Salary>
      <Vacation>12</Vacation>
      .....
    </EmployeeInfo>
  </PayCheck>
  <PayCheck>
    .....
  </PayCheck>
  <PayCheck>
    .....
  </PayCheck>
</PayChecks>
```

The JavaScript plug-in will use the full path for address data elements instead of the element name. So it will use *PayCheck.Employee.Address* to map to the employee's address form field, and use *PayCheck.Company.Address* to map to the company's address field.

See [Mapping Data Tags](#).

## Related Links

[Using Digital Signature in PDF Reports](#)

[Creating Updatable PDF Report](#)

## Using Data Transform

Data transform allows you to create a common template and then use the same template with different data sources. Each report template contains pre-defined placeholders (XML element tags) that are used for the mapping between the layout and the xml data file. These XML element tag names must be used in order to get the proper report output. When you create a new report definition that uses a common

template, you will need to create a new xsl program or use an existing xsl program that will map the data fields in the original schema to the data fields for your new report.

When using Query or Connected Query as a data source, the data schema is auto-generated by the system. These system generated tags may not match the XML element tags defined in the common template. In order to generate the standardized or common report properly, the XML data will need to be transformed to match the tags defined in the common template. To do this, an XSLT transform process will need to be applied to the incoming xml data source ahead of the standard BIP template processing.

You can manually create an xsl program or select to use the Oracle XSL Mapper directly from a link on the page. In order to use Oracle XSL Mapper, the system must be properly configured.

## Launching Oracle XSL Mapper from Report Definition Template Page

To use Oracle XSL Mapper from the Report Definition Template page you must:

- Install Oracle JDeveloper. If you are using Oracle JDeveloper 11g

See "Prerequisites for Developing Transforms Using Oracle XSL Mapper" (PeopleTools 8.54: Integration Broker).

- If you are using Oracle JDeveloper 11g, you need to install Jdeveloper extensions – Oracle SOA Composite Editor from Oracle Fusion Middleware Update Center.

In JDeveloper, select Help, Check for Updates.

- Set environment variables on client machine for JDEV\_HOME and JDEV\_MAPPER\_CLASSPATH.

- JDEV\_HOME should be set to the directory where Jdeveloper was installed. For example: D:\Oracle\JDeveloper.

- JDEV\_MAPPER\_CLASSPATH for JDeveloper 11.1.1.x should be set to:

```
jdev\extensions\oracle.bpm.mapper.jar;integration\lib\bpm-ide-common.jar;ide\lib
\javatools.jar;jdev\lib\xmleditor.jar;modules\oracle.xdk_11.1.0\xmlparserv2.jar;modules
\oracle.xmldef_11.1.1\xmlef.jar;modules\oracle.javatools_11.1.1\javatools-nodeps.jar
```

- Assign the role *XMLP Service User* to the Default User defined for the default local node.

See "Configuring Nodes" (PeopleTools 8.54: Integration Broker Administration), "Setting Roles" (PeopleTools 8.54: Security Administration).

---

**Note:** You must reboot your machine after adding the environment variables.

---

## Defining the Transform

To define the transform program:

1. Access the Template page in the report definition.
2. Select the Use Data Transform check box.
3. Click Upload and select the common template.
4. Click Upload and select the data schema associated with the common template.



5. Click Save.

---

**Note:** Both the data schema and template must be uploaded for the Mapping Tool link to appear when the page is saved.

---

6. Click the Mapping Tool link, if you want to create an XSLT program using XSL Mapper. If you already have an xsl program defined, you can skip this step and upload the transform file.

---

**Note:** The first time you access this link, the dialog box will be presented to open with Java(TM) Web Start Launcher (default). Select the check box *Do this automatically for files like this from now on* and click OK.

---

7. Oracle XSL Mapper will open with the source and target schema.

8. Map the source fields to the target.

See "Mapping Records and Fields" (PeopleTools 8.54: Integration Broker).

9. Click Save.

---

**Note:** The xsl file is saved using the template ID name.

---

10. Close JDeveloper.

11. On the Report Definition page, click the Correct History button.

12. Open the Report Definition.

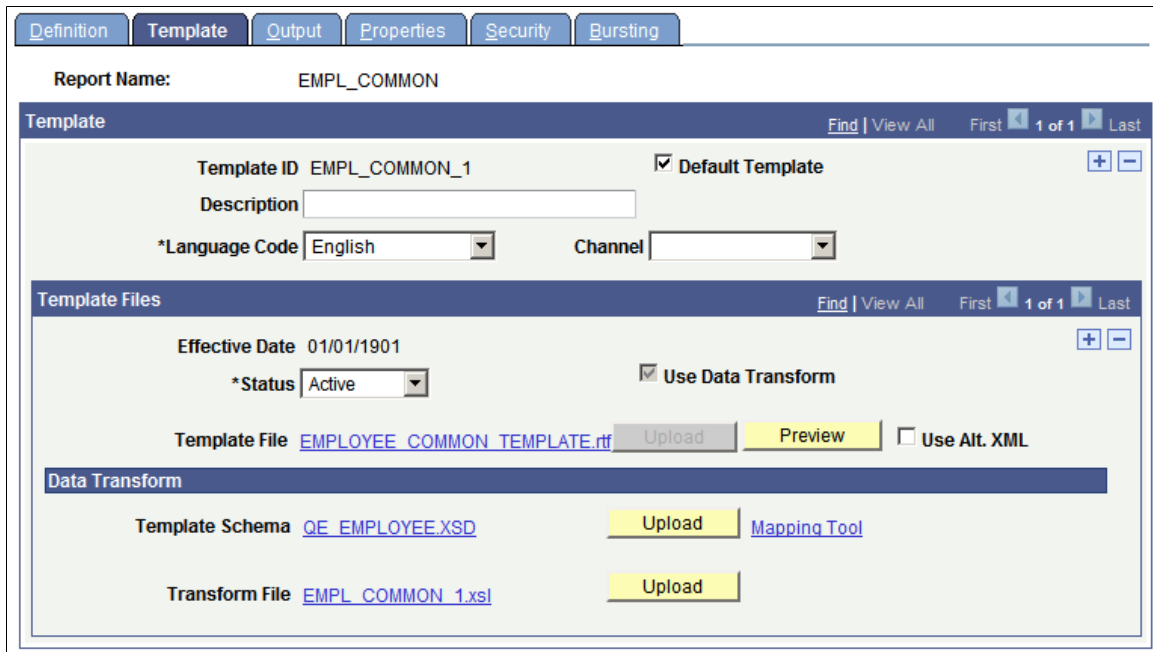
13. On the template page, click Preview and verify your report format.

14. Set the Report and Template Statuses to Active.

15. Click Save.

**Image: Template defined to use data transform**

This example illustrates the Template page defined to use data transform.



**Transform Example**

In this example, a common template is created for Employee. The tags generated from the query that will use this template, do not match the common template:

<b>Common Template Tags</b>	<b>Query Schema Tags</b>
EMPLID	EMPLID
NAME	QE_EMPLOYEE_NAME
FIRST_NAME	QE_FIRST_NAME
LAST_NAME	QE_LAST_NAME
SOC_SEC_NBR	QE_SOC_SEC_NBR
JOBCODE	QE_JOBCODE
DEPTID	DEPTID

To create the report with the query data source using the common template:

1. Select PeopleTools, BI Publisher, Report Definition.
2. Select Add a New Value and enter the report name, then click Add.

3. Enter a report description and category. The default template type is RTF.

**Image: Report definition page specifying RTF template**

This example illustrates the Report Definition page, which is defined to use the RTF template.

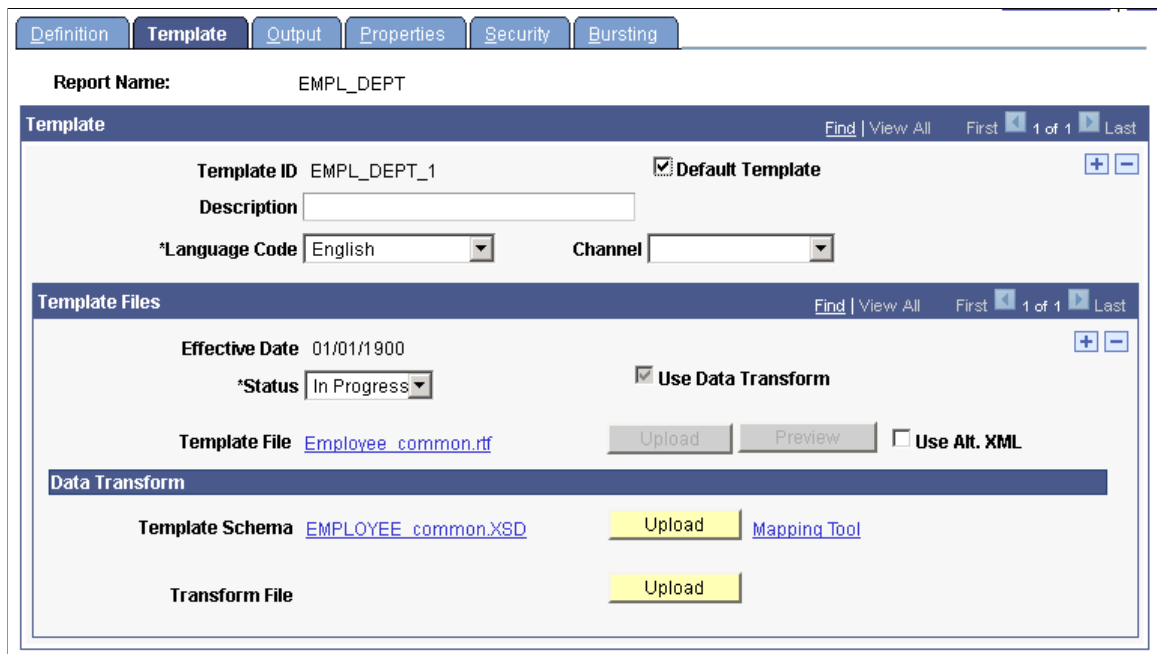
Definition	Template	Output	Properties	Security	Bursting
<b>Report Name:</b>	EMPL_DEPT				
<b>Data Source</b>					
<b>Data Source Type:</b>	PS Query				
<b>Data Source ID:</b>	QE_EMPLOYEE				
<b>Data Source Description:</b>	For Nested Sort Testing				
<b>Report Properties</b>					
<b>Report Description:</b>	<input type="text" value="Employee by Department"/>				
<b>*Report Status:</b>	<input type="text" value="In Progress"/>				
<b>*Report Category ID:</b>	<input type="text" value="ALLUSER"/> <input type="button" value="All PeopleSoft User"/>				
<b>Owner ID:</b>	<input type="text" value="PeopleTools"/>				
<b>*Template Type:</b>	<input type="text" value="RTF"/>				
<b>Retention Days:</b>	<input type="text"/>				
<b>Registered Date/Time:</b>					<b>Registered By:</b>
<b>Updated Date/Time:</b>					<b>Updated By:</b>

4. Select the Template page, enter the effective date and select Use Transform.
5. Upload the template file.
6. Upload the template schema.

7. Save the page.

**Image: Mapping Tool link is displayed**

This example illustrates the Mapping Tool link on the Report Template page.

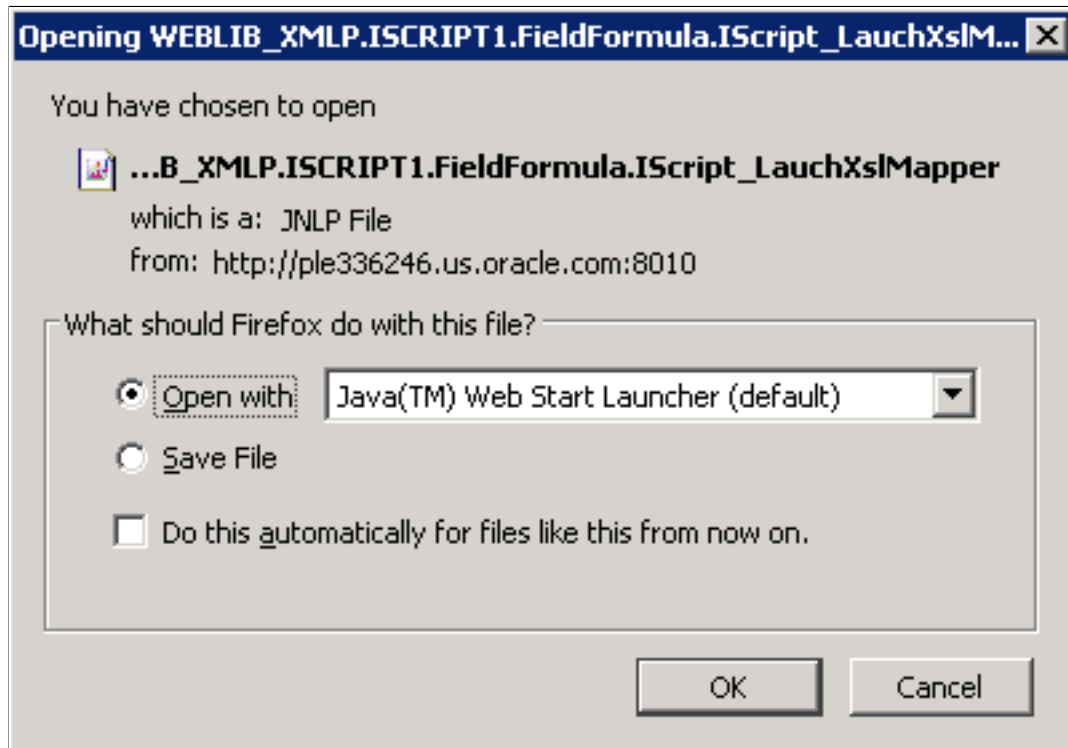


8. Click the Mapping Tool link.

XSL Mapper will open and you can map the fields. Depending on your environment setup, you may get prompted to open a JNLP file. (JNLP : Java Network Launching Protocol)

**Image: Java Network Launching Protocol**

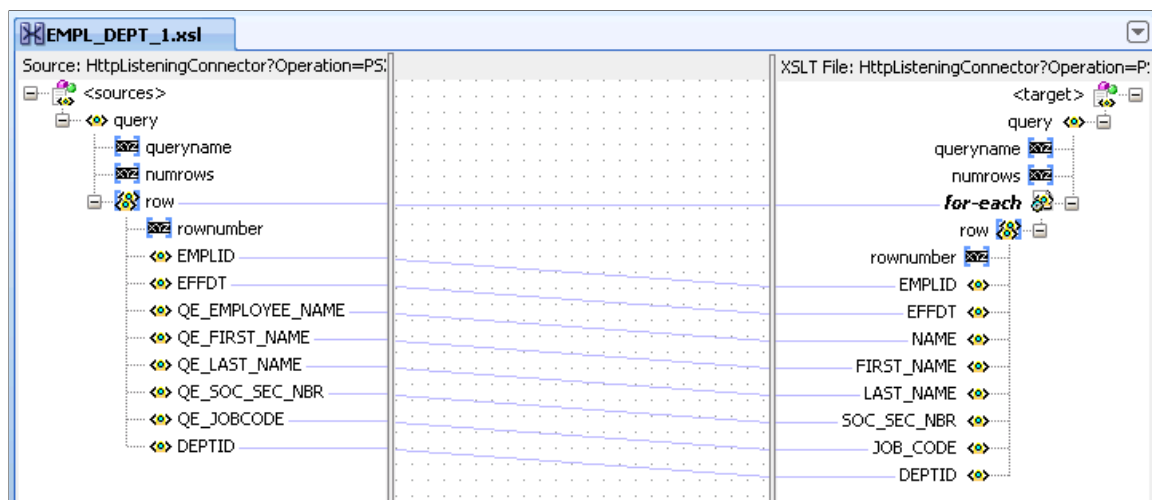
This example illustrates opening a Java Network Launching Protocol (JNLP) file.



- 9. When XSL mapper opens, you make the necessary mappings between the source and target fields by dragging the field from the source to the target pane in the mapper.

**Image: XSL mapping**

This example illustrates mapping between the source and the target fields.



10. Select File, Save in XSL Mapper when you have completed your mapping.

---

**Note:** This will automatically save the xslt file to the PeopleSoft system. The file will not appear on the page until you click Save again, or reopen the Report Definition.

---

11. If you want to save the xslt file locally, then select File, Save As and supply the file path.

---

**Note:** When you use Save As to a local file, the file is not saved to the PeopleSoft system. You will need to manually upload the xslt file on the Report Definition.

---

12. After saving the file, you can exit XSL Mapper.
13. On the Report Definition page, click the Correct History button.
14. Open the Report Definition.
15. On the template page, click Preview and verify your report format.
16. Set the Report and Template Statuses to Active.
17. Click Save.

## Determining When to Use PDF Mapping Versus Data Transform

If you are using a PDF template, keep the following in mind when determining which method to use for your report template:

- PDF mapping

Used to change template fields to match data file field names. This method is more efficient than data transform as it requires significantly less processing.

- Data Transform

Used to change XML data file field names to match the template field names. This method should be used when a common template is required to run in different organizational units.

## Setting Output Options

Access the Output page (Select Reporting Tools, BI Publisher, Report Definition, Output.)

### Image: Report Definition-Output page (RTF template)

This example illustrates the fields and controls on the Report Definition-Output page (RTF template). You can find definitions for the fields and controls later on this page.

Definition   Template   <b>Output</b>   Properties   Security   Bursting					
Report Name:		XRFWIN			
General					
Runtime Output Format Options					
Format Type	Enabled	Default			
HTML	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			
PDF	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
RTF	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
XLS	<input checked="" type="checkbox"/>	<input type="checkbox"/>			
Output Location					
*Location:	Any				
File Name	Menu Listing as of %ASD%				

#### Format Type

Dynamically lists the available output formats based on the template type.

#### Enabled

Select specific values to limit the output choices for the user at runtime.

#### Default

Select a default format type.

This value appears at runtime on the prompt or run control page. It specifies the output format that the system uses if no other value is fed into the BI Publisher engine.

#### Location

Select one of the following locations:

- *Any* indicates that the user can select the output location at runtime.
- *Email* indicates that the output goes to email.

---

**Note:** The users defined in the distribution list must have a valid email address defined in the user profile. If Allow viewer assignment at report runtime is selected, you can enter additional email addresses at runtime.

---

- *File* writes the output to the file that you indicate in the Output Destination field.
- *Printer* indicates that the output goes directly to a printer.

Specify the printer destination for the output in the Printer field. This field is available only when the output location that you select is *Printer*.

*Printer* is a valid selection only when PDF output format is enabled.

- *Web* indicates that the output goes to a web report repository that is accessible by the Report Manager.

Select the folder for the output from the Report Manager Folder Name lookup. This field is available only when the output location that you select is *Web*.

This is the default location used at runtime if no location is selected.

- *Window* indicates the output will be posted, like Web output, to the report repository and then streamed to the browser window, the same way scheduled query runs to Window.

---

**Note:** Window output is supported for scheduled and non-bursted reports only. Users building a custom process request page should check for the bursting field name ( *BurstFieldName*) in the ReportDefn class before issuing a process request.

---

## File Name

Specify a file name template that gets translated at runtime to a physical file name. This field accepts a combination of output variables and plain text.

Output variables are enclosed within percent signs (%) and used as part of the descriptive report name visible in the Report Manager or on the BIP Report Search page. The following variables are supported.

- *%ASD%* inserts the as of date.
- *%RID%* inserts the report ID.
- *%BTV%* inserts the burst field value.
- *%LAN%* inserts the report translation language.
- *%field%* where field is the name of a field from the XML data that lies below the first repeating field. For example, if you want the employee ID value to appear in the file name, you would use *%EMPLID%*.

---

**Note:** *%field%* variable is only supported for Report Definition where bursting is enabled, and only burst key candidates on the bursting page are eligible.

---



### See [Setting Bursting Options](#)

For example, if you have a report CERTIFICATE that is burst by STUDENT\_ID, you can use the file name to provide more details:

- If no file name is specified, the report description will use the report name, such as CERTIFICATE[2916]-CERTIFICATE.HTM.
- If a file name of *LOCATION %TRAINING\_LOC% %END\_DT%* is specified, the report description will include the variables, such as CERTIFICATE[2916]-LOCATION BOSTON 2009-03-13.HTM.
- If a file name of *%STUDENT\_NAME%* is specified, the report description will include the variables, such as CERTIFICATE[2916]-LEE,JAMES.HTM.

---

**Note:** If you leave the File Name field blank, the system uses the report ID as the file name. For bursted report, burst value can be used as file name if set programmatically through the ReportDefn class property UseBurstValueAsOutputFileName. The ReportFileName can also be set programmatically as a property of the ReportDefn class. If a ReportFileName is set either in PeopleCode or on the page, it overrides the UseBurstValueAsOutputFileName property.

---



---

**Note:** The BI Publisher report definition output options are reflected in the output type and output format prompts on the Process Scheduler Request page only when the application process that runs the report is assigned the process type of BI Publisher.

---

## Output Format Options

The output options are based on the template type as shown in this table:

<b>Template Type</b>	<b>Output Options</b>
RTF	.pdf, .html, .rtf, .xls (html)
PDF	.pdf
E-Text	.txt
XSL	.pdf, .html, .rtf, .xls (html)

## Printing BI Publisher Report Output

PeopleSoft applications support batch printing BI Publisher reports directly from a server using PDF output format. When you select *Printer* as the output location, PDF is the only output format displayed

in the Process Scheduler Process Request Dialog page. When PDF format is not supported for a report definition, printing is not supported for that report. If you are not printing directly upon posting the report, you must open and print the report from Adobe Acrobat. All bursted output reports are sent to a single printer, but as multiple print jobs.

You can also convert the generated PDF files to other conventional printer output formats with an external software program. PeopleSoft applications provide PeopleCode support for inserting conversion logic from PDF to different printer formats.

See "Understanding BI Publisher and the BI Publisher Classes" (PeopleTools 8.54: PeopleCode API Reference).

See "Scheduling Process Requests" (PeopleTools 8.54: Process Scheduler).

See [Customizing Printed Report Output](#).

## Setting Report Properties

Access the Properties page (Select Reporting Tools, BI Publisher, Report Definition, Properties.)

### Image: Report Properties page

This example illustrates defining properties on the Report Properties page.

Report Name: XRFWIN

Report Properties

Property Group: PeopleTools Settings

Property	Prompt	Default
psp_pdf_optimized	<input type="text"/>	True
psp_usedefaultoutdestination	<input type="text"/>	False
psp_debug	<input type="text"/>	False

Properties defined in the report definition will override the global properties for this report.

See [Defining Global Properties](#).

## Setting Security Options

Access the Security page (Select Reporting Tools, BI Publisher, Report Definition, Security.)

### Image: Report Definition-Security page

This example illustrates the fields and controls on the Report Definition-Security page. You can find definitions for the fields and controls later on this page.

The screenshot shows the 'Security' tab of the Report Definition page for report 'XRFWIN'. It includes a 'Report Viewers' section with a checked checkbox for 'Allow viewer ID assignment at report runtime'. Below this is a table with columns for ID Type, Distribution ID, and Description. Two entries are listed: 'User' with 'PSADMIN' (PeopleSoft Administrator) and 'Role' with 'Portal Administrator' (Portal Administrator). Each entry has '+' and '-' buttons for adding or removing the viewer.

ID Type	Distribution ID	Description		
User	PSADMIN	PeopleSoft Administrator	+	-
Role	Portal Administrator	Portal Administrator	+	-

The Security page captures attributes regarding who can view web-posted output in the Report Manager repository and through the BIP Report Search page.

**Allow viewer ID assignment at report runtime** Select to indicate that the report requestor can add to the standard Distribute To values on the Process Scheduler Request, Distribution Detail page.

**Note:** If you are using security join tables to limit report distribution, leave this check box cleared. If you add a user or role at runtime, the associated users will be able to view all bursted reports for that report instance.

**ID Type** Select an ID type of either *Role* or *User ID*.

**Distribution ID** Select a corresponding distribution ID based on the ID type.

**Description** Displays the related description of the distribution ID.

**Note:** The users and roles defined on this page can view all bursted reports. If you are using security join tables to limit report distribution, do not enter any roles or users on this page.

## Setting Bursting Options

Bursting is an optional advanced feature that is available only when reports are run through Process Scheduler. It is not intended for real-time online viewing. It is typically used when you are repeating the generation of a templated report layout many times for multiple like sets of data, for example, generating a batch run on vendor purchase orders or customer invoices. With bursting, you can generate individual report files resulting in separate secured output, for example, generating a file for each vendor, customer or employee.

Setting up bursting requires thorough knowledge and understanding of data values and schema structures. You could possibly make entries on the Bursting page that would cause the report to fail at runtime. When you generate a bursted report, the system creates separate document files for each unique data value for a specified field tag.

---

**Note:** This Burst by field tag must be from the highest level repeating group (node) in the XML data. For bursting to work, only one high-level repeating group should be in the XML source.

---

Because bursting is an advanced feature, PeopleTools delivers permission list security that is intended for BI Publisher report developers (PTPT2600). When users are assigned a role with this permission list, they have access to setup entries on the Bursting page. A view-only permission list (PTPT2500) option also exists for BI Publisher power users that provides view-only access to the bursting information. The Bursting page appears for the power user only when bursting instructions exist for the report.

---

**Note:** In previous versions of BI Publisher, schemas were necessary for bursting. For backwards compatibility, you can still register and use schemas to define bursting.

---

Access the Bursting page (Select Reporting Tools, BI Publisher, Report Definition, Bursting.)

**Image: Report Definition-Bursting page**

This example illustrates the fields and controls on the Report Definition-Bursting page. You can find definitions for the fields and controls later on this page.

The screenshot shows the 'Bursting' tab of a report definition interface. At the top, there are navigation tabs: Definition, Template, Output, Properties, Security, and Bursting. The 'Report Name' is 'QE\_BURST\_PUB'. Under the 'Bursting' section, 'Burst by' is set to 'CUST\_ID' and 'Enforce Unique Burst Value' is unchecked. The 'Template' section shows 'Template controlled by' as 'SETID'. Below this is a table for 'Template Application Criteria' with columns for Data Value, Template ID, and Language. The table contains three rows: CRM01 with Template ID QE\_BURST\_PUB\_1 and Language (blank), CRM02 with Template ID QE\_BURST\_PUB\_2 and Language Japanese, and CRM03 with Template ID QE\_BURST\_PUB\_3 and Language French. The 'Burst Security' section shows 'Security Join Table' as 'SEC\_SETID\_CLS', 'Security Field' as 'OPRCLASS', and 'Security ID Type' as 'Permission List'. Below that is a 'Field Mapping' table with columns for Security Join Table Field and Data Source Field, showing a mapping for 'SETID'. Finally, the 'Search Keys' section has a table with columns for Search Field, with entries for 'COUNTRY', 'NAME1', and 'SETID'.

*Data Value	*Template ID	Language		
CRM01	QE_BURST_PUB_1		+	-
CRM02	QE_BURST_PUB_2	Japanese	+	-
CRM03	QE_BURST_PUB_3	French	+	-

Security Join Table Field	Data Source Field		
SETID	SETID	+	-

Search Field		
COUNTRY	+	-
NAME1	+	-
SETID	+	-

**Burst by**

Select a burst by field to enable report bursting.

All subsequent bursting features are disabled until you select this value. The values in the drop-down list box are the children from the highest-repeating level (group node) in the XML schema associated with the data source that is assigned to the report definition.

When you select a burst field, the report generates multiple files at runtime with a separate report instance file generated each time a unique value appears for the Burst by data tag. For example, this could be one report file for each employee when you are bursting by EmplID or one report for each department

(that includes multiple occurrences of the report, one for each employee) when you are bursting by DeptID.

### **Enforce Unique Burst Value**

Select this check box to indicate that the Burst by field contains unique values. If a non unique value is found, the report will not be published and an error will be logged. It is recommended to use unique bursting values.

If this check box is cleared, bursted files with the same Burst by field will be combined in one report.

---

**Note:** Prior to 8.5x, unique burst value was not enforced. Non unique burst value will produce unpredictable results including incorrect search.

---

### **Template Assignment for Bursting (Optional)**

This feature dynamically drives the template assignment at runtime based upon the data value of a designated schema tag. You can assign a language code to apply a specific template translation as well. This means that the various bursted report occurrences in one batch run can each have an appropriately assigned template and translation. For example, you can print Canadian paychecks in English or French depending upon the employee's preference.

You should select a template ID for each data value that requires a special template.

At runtime, the process looks for the specified template and language. If the language does not exist, then it applies the base untranslated template. If the process encounters a data value that is not assigned on the report definition, then it assigns the template ID that is entered on the run control. If the system captures no template ID selection at runtime, then it applies the default template of the report definition.

#### **Template controlled by**

Select the schema tag value from the first child level to indicate the field with the template translation preference.

#### **Data Value**

Enter a row for each data value that requires a specific template or template translation.

#### **Template ID**

Select the template ID to apply when the data value specified previously is found in the XML data.

These drop-down list box values are dynamically determined by those already defined on the report.

#### **Language**

(Optional) Select a language code for the desired translation of the template when the specified data value is found in the XML data.

The language choices in the drop-down list box reflect the complete list of available languages and are not limited by the existing registered Translation XLIFF files.

See [Maintaining Template Translations](#).

## Security for Bursting (Optional)

When a report is set up to be bursted, the report designer can also designate how the generated documents are secured when they are posted to the Report Manager. At runtime, the system uses this information to determine who can view each bursted report instance. You can use bursting security to supplement or replace the basic report viewer security by role or user ID. Otherwise, the system limits access to each report instance based on preexisting system security definitions.

The system automatically limits access to each report instance based on the Burst by field. For example, if the report is burst by employee ID, only the users designated with access to each employee ID can view the output file.

The report designer must provide the record name of the security join table and designate the common fields to join with the bursting field. The system performs the join and determines who can view the report instances. This matching allows the Report Manager's posting process to dynamically identify the user IDs or roles that are assigned viewing rights for each report instance.

---

**Note:** If a user has the role ReportDistAdministrator, that user can view all bursted reports, regardless of security join table.

---

<b>Security Join Table</b>	Select the record name for the table that stores either a user ID or a permission list assigned to a data value in the XML data.
<b>Security Field</b>	Select the field from the Security Join table that stores the user ID or permission list to secure on.
<b>Security ID Type</b>	Select either <i>User ID</i> or <i>Permission List</i> to indicate what type value is in the Security Field.
<b>Security Join Table Field</b>	Select the field from the Security Join table that joins with the data tag to identify the proper row from which to find the value in the in the Security Field that is used to secure the bursted file.
<b>Data Source Field</b>	Select the data tag that stores the values that determines the security assignment.  This may require more than one tag, because they must be first-child level tags. For example, they could be employee, customer, department ID, or a set ID/vendor ID combination, and so on.

## Search Keys (Optional)

When report results are burst into separate files, you should be able to locate the desired individual report from the Report Manager repository. Delivered search keys include Burst By, Report Definition Name, and Generated On Date. You can define additional search keys to provide even more specific granularity.

At report runtime, the report posting program uses this information to store the key names defined here along with the specific data values for each burst report. From the BI Publisher Report Search page, users can use these configurable search fields to locate a specific report occurrence. For example, if the pay advice report runs regularly and posts numerous report files for self-service access, and as an employee you want to locate a particular dated advise, you would not want to browse through all the advise files to locate the one you want to see. By assigning the pay period as a Search Field in the report definition, the user can enter a date to search for the correct advise.

## Search Field

Select an additional field to search on from within the BI Publisher Report Search page.

The drop-down list box values are taken from the children from the highest repeating level (group node) in the XML schema. Make sure that these values are unique per burst value.

At design time, you can select as many search fields as are required. However, at search time, the BI Publisher Report search page allows only two search criteria in addition to the Burst by value.

An API is provided to facilitate finding bursted BI Publisher reports in the Report Manager repository. When reports are burst into multiple separate files and posted in the Report Manager, the configurable search keys with their values are available as search keys in addition to Report Name, Burst By, Date, and Process Instance ID.

---

**Note:** The search feature uses Integration Broker functionality. The service operation PSXP\_RATTR is used to insert BIP report metadata for searching. This service operation must be active with a local-to-local routing.

---

See "Search Operator Values" (PeopleTools 8.54: PeopleCode API Reference).

---

## Assigning Report Viewers at Runtime

There are three settings in the report definition that determine how web reports are distributed at runtime:

1. Report Viewer List on the report definition security page.

Assign users and roles allowed to view the reports regardless of whether the report is bursted or not.

2. Security Join Table on the report definition bursting page.

Assign users that can view individual bursted report files based on security join tables. These users are combined with the users and roles defined on the security page.

---

**Note:** When security join tables are used, and the Allow viewer ID assignment at report runtime check box is selected, any users, roles or email addresses added at runtime will see all bursted reports. If roles or users are defined on the security page or at runtime, they can view all bursted reports ignoring the security join table.

---

3. Allow viewer ID assignment at report runtime check box on the report definition page.

Allows the users running the report the ability to modify (add or remove) additional roles, users or email addresses on the runtime report distribution page.



This table describes how viewers are selected for non-bursted reports based on the report definition security settings.

<b><i>Report viewers assigned</i></b>	<b><i>Allow viewer ID assignment at report runtime</i></b>	<b><i>Viewers</i></b>
Yes	No	Reports are distributed to all roles and users defined on the security page. Runtime overrides are not allowed.
Yes	Yes	Reports distributed to all users and roles defined on the security page. Runtime overrides are allowed.
No	Yes	Distribution list is assigned at runtime on the Process Scheduler distribution detail page. By default the requester is added.
No	No	No reports posted to Report Repository. Runtime overrides are not allowed.

This table describes how viewers are selected for bursted reports based on the combination report definition settings.

<b><i>Report viewers assigned</i></b>	<b><i>Security join table implemented</i></b>	<b><i>Allow viewer ID assignment at report runtime</i></b>	<b><i>Viewers</i></b>
Yes	No	No	All bursted reports are distributed to all roles and users defined on the security page. Runtime overrides are not allowed.
Yes	Yes	No	All users and roles defined on the security page will see all bursted reports. Users defined from the security join table will see only the bursted reports based on their join criteria. Runtime overrides are not allowed.
Yes	Yes	Yes	All users and roles identified at runtime will see all bursted reports. Users defined from the security join table will see only the bursted reports based on their join criteria. Runtime overrides are allowed.  Any users, roles or email addresses entered on the Process Scheduler distribution detail page will see all bursted reports.

<b>Report viewers assigned</b>	<b>Security join table implemented</b>	<b>Allow viewer ID assignment at report runtime</b>	<b>Viewers</b>
Yes	No	Yes	All bursted reports are distributed to all roles and users defined on the security page. All users, roles or email addresses identified at runtime will see all bursted reports. Runtime overrides are allowed
No	Yes	No	Users defined from the security join table will see only the bursted reports based on their join criteria. Runtime overrides are not allowed.
No	No	Yes	Assign distribution at runtime. By default requester is added.  Any users, roles or email addresses entered on the Process Scheduler distribution detail page will see all bursted reports.
No	Yes	Yes	All users and roles identified at runtime will see all bursted reports. Runtime overrides are allowed. Users defined from the security join table will see only the bursted reports based on their join criteria.
No	No	No	No reports posted to Report Repository. Runtime overrides are not allowed.

## Maintaining Sub-Templates

This section provides an overview of sub-templates and discusses how to maintain sub-templates.

### Understanding Sub-Templates

You may have text, images, or logic in your templates that you want to reuse across many report templates. Examples include company headquarter address information or standard legal language. Rather than replicate this text, code in every template, or both, you can store sub-template files that include the reusable content. These sub-template files are referenced with standard XSL commands in the primary template file. Sub-template functionality is available for use only with primary RTF and XSL templates.

*Sub-templates* are secondary RTF or XSL templates that are imported by primary RTF or XSL report templates. The primary template accesses the sub-template through the XSL import style sheet feature.

You can import any XSL style sheets or other RTF or XSL templates using standard XSL import and call functions. PeopleTools simplified sub-template syntax is also supported.

Primary templates calling nonexistent or inactive sub-templates causes an error message to be issued indicating the reason for the problem. This error information is incorporated into Process Scheduler error handling as well as into online viewing or previewing of the report.

The sub-template files are independently stored and are not registered in association with a data source or primary template. This being the case, if any form fields exist inside the sub-template, the report in which the sub-template is placed must have a related data source that supplies those fields, or the data must be passed in as runtime parameters.

The Content Library is a component provided for the registration of reusable sub-template files. The metadata is similar to that of primary template files and includes the sub-template ID, sub-template description, language, object owner ID, report category, effective date, and status. As with Report Definition security, sub-template editor registration security is applied through report categories. Because Report Category secures the data in the component, you can assign select users read-only access for a report category. These users can browse, view, and download sub-template files but not add them. This facilitates the offline design of primary templates for users who can access the library of existing sub-templates but who can't alter them.

Sub-template names are not exposed to the end user at either report design time or runtime. The complete template (primary and sub-templates) is systematically assembled by the BI Publisher engine during report generation. The same occurs during online previewing as long as the sub-template file exists.

---

**Note:** No method is available for viewing which report templates include which sub-templates. This means that users must be careful about changing, deleting, or inactivating sub-templates.

---

## Maintaining Sub-Templates

Access the Content Library page (Select Reporting Tools, BI Publisher, Content Library.)

### Image: Content Library page

This example illustrates the fields and controls on the Content Library page. You can find definitions for the fields and controls later on this page.

The screenshot shows the 'Content Library' interface. At the top, the 'Sub-Template ID' is 'STDHEADER'. Below this is a section titled 'Sub-Template Properties' with the following fields: 'Description' (Standard Heading), '\*Language' (English), '\*Report Category ID' (ALLUSER with a search icon and 'All PeopleSoft User' text), 'Object Owner ID' (PeopleTools), and 'Sub-Template Type' (RTF). Below the properties is a 'Sub-Template File' section with a table-like view showing 'Effective Date' (01/01/1900), '\*Status' (Active), and 'Template File' (Header\_Std\_lower.rtf). There are 'Upload', 'Download', and 'View' buttons at the bottom right of the file section. Navigation controls like 'Find', 'View All', 'First', '1 of 1', and 'Last' are also visible.

- Sub-Template ID** Enter a unique sub-template ID.
  
- Description** (Optional) Enter descriptive text that provides more detail about the sub-template and identifies its use.
  
- Language** Select a language code for the sub-template.  
The default value reflects the users base language.
  
- Report Category ID** Select a report category ID.  
  
This is a grouping mechanism that provides row-level security for editing sub-templates per the rights defined on the report category setup table.  
  
See [Setting Up Report Categories](#).
  
- Object Owner ID** (Optional) Indicate which product, feature, or application owns this sub-template.  
  
Use this field to extract and package production data source and report registrations and their supporting files.
  
- Sub-Template Type** Select *RTF* or *XSL*.
  
- Effective Date** Select an effective date for the sub-template file in order to maintain new versions or versions that are specific to

a particular time period. For example, a new file could be uploaded to reflect a new format or new legal language for reports, and the new sub-template is automatically used as of the new effective date.

The default date for a newly added sub-template file is the current system date. This effective date has no correlation with the effective date of the primary template. The as of date on the Query Report Viewer, Query Report Scheduler, or Run Control page determines which effective-dated templates and sub-templates are run.

<b>Status</b>	<p>Select a status of <i>In Progress</i>, <i>Active</i>, or <i>Inactive</i> for the sub-template file.</p> <p>This field indicates the usability of the sub-template file. Runtime selection logic for a sub-template file uses this field in conjunction with the Effective Date field to determine which sub-template file to use at runtime. At least one file must be active to save a sub-template in the Content Library.</p>
<b>Template File</b>	Displays the name of the sub-template file.
<b>Upload</b>	<p>Click to attach an actual effective-dated sub-template file.</p> <p>When you save the sub-template, this button becomes disabled. To reupload a new version of the sub-template, you must delete and add it again.</p>
<b>Download</b>	Click to download the sub-template to your local computer for updating.
<b>View</b>	Click to view the contents of the sub-template.

---

## Maintaining Template Translations

This section provides an overview of template translations and discusses how to:

- Search template translations.
- Maintain template translations.

## Understanding Template Translations

The Template Translation component interacts with both report definition templates and Content Library sub-templates. Template translation files can be created only when a report's template type is RTF. Template Translation is a separate component with no row-level security, because the target user is different from the report developer, requestors, or viewers.

The Template Translation feature is based upon standard Localization Interchange File Format (XLIFF) .xlf file processing. Each report template or sub-template file can have related translation

XLIFF files. These XLIFF files include translation units for each content element to be translated. The translatable units include all the fixed verbiage of the template excluding any values supplied by the data source. The Template Translations page includes an action button that generates a translatable file that must then be manually edited with the appropriately translated values. When the translation exercise is complete, the XLIFF file is uploaded and integrated into the BI Publisher translation system.

The Template Translation Search page provides advanced search capabilities to facilitate the location and management of template translations. Using this search page, you can determine whether a particular translation exists. The search can be focused by template or report, thus handling both Report Definition templates and Content Library sub-templates. You can also search based on target language.

**Note:** A template must exist before it can be translated.

Template translations are not available for template types other than RTF. For a PDF report, multiple PDF templates must be registered to the report, one for each locale or language as required.

## Searching Template Translations

Access the Template Translations Search page (Select Reporting Tools, BI Publisher, Translations.)

### Image: Template Translations Search page

This example illustrates the fields and controls on the Template Translations search page.

### Template Translations

Enter any information you have and click Search. Leave fields blank for a list of all values.

Report Template   
  Sub-Template

**Report Name:** begins with

**Template ID:** begins with

**Base Language:** =  

**Effective Date:** =  

**Status:** =  

**Target Language:** = French  Translated

When using the IN or BETWEEN operators, enter comma separated values without quotes. i.e. JOB,EMPLOYEE,JRNL\_LN.

Include History   
  Correct History

Search   
 Clear   
 [Basic Search](#)

### Search Results

Template ID	Effective Date	Report Name	Base Language	Status
COUNT_TEST_1	<a href="#">2006-08-06</a>	COUNT_TEST	English	Active
QESMOKEXMLP_1	<a href="#">2006-02-15</a>	QESMOKEXMLP	English	Active

To search for a template translation:

1. Select either the Report Template or Sub-template option, depending on whether you want to search the Report Definition templates or the Content Library sub-templates.

The subsequent search prompts vary depending upon this choice. For example, the Report Name drop-down list box appears only if Report Template is selected.

2. Select your search criteria and click the Search button.

The Translated check box appears only when you have selected a value in the Target Language field. When selected, this check box enables you to search for templates that have already been translated into the selected target language. If this check box is cleared, you are searching for templates that have not yet been translated into the target language.

3. When your search results appear, select the effective date of the template for which you want to maintain translations.

## Maintaining Template Translations

Access the Template Translations page (Select Reporting Tools, BI Publisher, Translations.)

### Image: Template Translations page

This example illustrates the fields and controls on the Template Translations page. You can find definitions for the fields and controls later on this page.

Template Translations						
Template ID:	XRFWIN_1	Effective Date:	01/01/1900			
Report Properties						
Data Source Type:	PS Query	Data Source ID:	XRFWIN			
Report Name:	XRFWIN	Description:	Cross Reference Window Listing			
Template Properties						
Description:						
Base Language:	English	Channel:				
Template File:	xrfwin.rtf					
Status:	Active	<a href="#">Download</a>	<a href="#">Preview</a>	<a href="#">Generate Translatable File</a>		
Translation Files						
Active	XLIFF File	Language	Preview	Upload		
<input checked="" type="checkbox"/>	<a href="#">xrfwin_es.xlf</a>	Spanish	<a href="#">Preview</a>	Upload	<a href="#">+</a>	<a href="#">-</a>
<input checked="" type="checkbox"/>	<a href="#">xrfwin_du.xlf</a>	Dutch	<a href="#">Preview</a>	Upload	<a href="#">+</a>	<a href="#">-</a>
<input checked="" type="checkbox"/>	<a href="#">xrfwin_fr.xlf</a>	French	<a href="#">Preview</a>	Upload	<a href="#">+</a>	<a href="#">-</a>

#### Template ID/Sub-Template ID

Displays the unique template ID or sub-template ID.

#### Effective Date

Displays the effective date as registered for the template under the Report Definition component or for the sub-template under the Content Library component.

---

**Note:** The translation inherits the same date and cannot be changed.

---

## Report Properties

When the file to be translated is a report template, basic metadata about the report appears. This information does not appear when the file selected is a Content Library sub-template.

<b>Data Source Type</b>	Displays the report's corresponding data source type of <i>PS Query</i> , <i>Rowset</i> , <i>XML Doc</i> , or <i>XML File</i> .
<b>Data Source ID</b>	Displays the report's data source ID.
<b>Report Name</b>	Displays the report's name.
<b>Description</b>	Displays the report's description.

## Template Properties/Sub-Template Properties

The Template Properties/Sub-Template Properties group box displays basic metadata about the base-language template file that has been selected for translation.

<b>Description</b>	Displays the template's description.
<b>Base Language</b>	Displays the base language of the template.
<b>Channel</b>	Displays the distribution channel for the template.
<b>Template File</b>	Displays the name of the template file.
<b>Status</b>	Displays a status of <i>In Progress</i> , <i>Active</i> , or <i>Inactive</i> for the template file.
<b>Download</b>	Click to open or save the base template file.
<b>Preview</b>	For report templates, click to preview the report template with sample data from the sample data file that was registered with the data source.  The Preview button is not enabled when no sample data file is registered with the data source.  For sub-templates, click the View button to view the sub-template file.
<b>Generate Translatable File</b>	Click to generate an .xlf file, which includes all translatable units extracted from the fixed text of the selected template or sub-template file.  This file must be saved locally and then manually translated.

## Translatable Files

The generated translatable XLIFF file includes the template's static headings and body text that require translation into another language. At the top of the file, the `<source-language>` tag indicates the base language value. You must update the `<target-language>` tag to the language that you are translating into. Initially the `<source-language>` and `<target-language>` values are the same.



Prior to uploading the translated file into the database, you must edit the `<target-language>` tag to the translated language code. The value must be the two-character ISO language code.

For example, `fr` equals French, `jp` equals Japanese, and so on. The file won't load if the file type isn't `.xlf` or if the `<source-language>` equals the `<target-language>` and an error message appears.

In the `<body>` section of the file, each `<trans-unit id>` tag contains both a `<source>` tag and a `<target>` tag. The `<source>` tag contains the text in the base language. The corresponding `<target>` tag contains the translated text.

No naming restriction is placed on XLIFF files; however, you should keep them close to the template file name and include the language. For example, for a French translation of the XRFWIN template, you could use `XRFWIN_FR.xlf`.

This code is an example of a translated XLIFF file:

```
<?xml version="1.0" encoding="utf-8" ?>
- <xliff version="1.0">
- <file source-language="en-US" target-language="fr-FR" datatype="XDO"
  original="orphen.rtf" product-version="orphen.xlf" product name="">
  <header />
  <body>
  - <trans-unit id="" maxbytes="4000" maxwidth="15"
    size-unit="char" translate="yes">
    <source>Total</source>
    <target>Totale</target>
    <note>Text located: body/table</note>
  </trans-unit>
  - <trans-unit id="" maxbytes="4000" maxwidth="22"
    size-unit="char" translate="yes">
    <source>Seq Name</source>
    <target>Nom de Seq</target>
    <note>Text located: body/table/table header</note>
  </trans-unit>
```

## Translation Files

You maintain the translated XLIFF files for your templates in the Translation Files grid.

**Active** When it is uploaded, the translated template must be *Active* to make that language translation available at runtime.

The file is *Active* by default.

**XLIFF File** Click the name of the uploaded translation file to open or save the file.

This action opens a new window that displays the file per the user's browser and OS settings and allows for updating and reloading the file.

**Language** Displays the language into which the file was translated.

During the upload of the translated file, the system determines the language from the `<target-language>` tag and automatically updates the template translation metadata.

**Preview** Select to display a translated version of the report in a new window.

This link is active only if the report's data source has a sample data file. No link is available for sub-templates, because no report context is available to preview.

**Upload**

Select to browse and upload the translation file.

# Running, Locating, and Viewing BI Publisher Reports

## Running BI Publisher PeopleSoft Query Reports

You can view and schedule query-based reports with BI Publisher. You can run custom reports as well as query-based reports batch through the Process Scheduler or online using PeopleCode APIs.

You can view and schedule query-based reports with BI Publisher-delivered PeopleSoft Internet Architecture pages.

This section discusses how to:

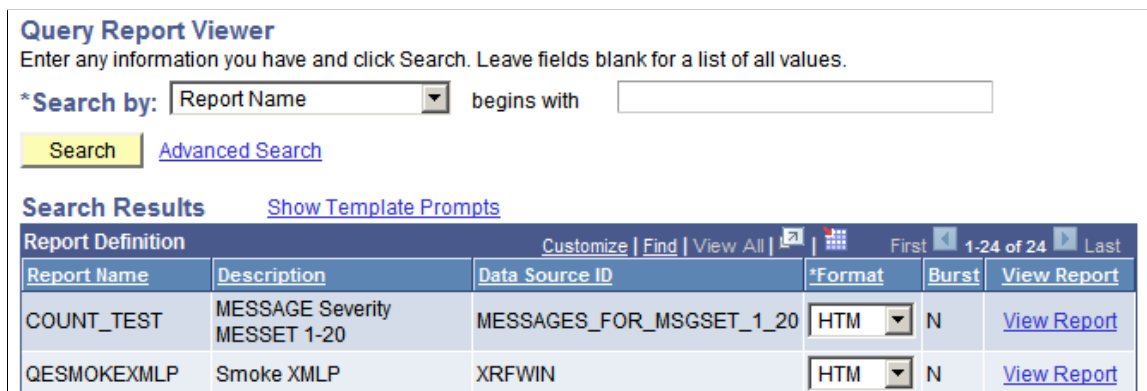
- Run reports in Query Report Viewer.
- Schedule reports in Query Report Scheduler.

## Running Reports in Query Report Viewer

Access the Query Report Viewer page (Select Reporting Tools, BI Publisher, Query Report Viewer.)

### Image: Query Report Viewer page

This example illustrates the fields and controls on the Query Report Viewer page. You can find definitions for the fields and controls later on this page.



The Query Report Viewer allows selection and online viewing of those reports that have a data source type of PeopleSoft Query. Existing Query security applies so that each user has access to run only the reports to which he or she has qualified Query access to the data source.

### Show Template Prompts

Click to expand the Report Definition Search Results grid to include the template ID and as of date template prompts.

<b>Report Name</b>	Displays the name of the report.
<b>Description</b>	Displays the report's description.
<b>Data Source ID</b>	Displays the report's data source ID.
<b>Template ID</b>	Select from the templates associated with the report definition.
<b>As Of Date</b>	Select the as of date for the template version that you want to view.
<b>Format</b>	Select from the output format choices associated with the report definition.
<b>Burst</b>	Indicates whether the report definition includes bursting instructions. <hr/> <b>Note:</b> Bursted reports are listed, but you can't run them from the Query Report Viewer component. Bursted reports must be run from the Query Report Scheduler component. <hr/>
<b>View Report</b>	Click to view the report online. When Query runtime parameters exist, the parameters are displayed.  A new window opens displaying the report results according to the runtime inputs. You can save the report results locally by using the browser's Save functionality. <hr/> <b>Note:</b> This link is disabled for bursted reports. <hr/>

---

**Note:** The data and template translation language choice is automatically supplied to the user's session language.

---

## Scheduling Reports in Query Report Scheduler

Access the Query Report Scheduler page (Select Reporting Tools, BI Publisher, Query Report Scheduler.)

### Image: Query Report Scheduler page

This example illustrates the fields and controls on the Query Report Scheduler page. You can find definitions for the fields and controls later on this page.

The screenshot shows the 'Query Report Scheduler' interface. At the top, it displays 'Run Control ID: msg' and 'Language: English'. There are links for 'Report Manager', 'Process Monitor', and a 'Run' button. Below this is the 'Report Definition' section with fields for 'Data Source Type' (set to 'Query'), 'Report Name' (MSGSET), 'Template ID' (MSGSET\_1), and 'Template As Of Date'. A 'Channel' field is also present. Below the report definition is the 'Query Parameters' section, which contains a table with two columns: 'Prompt Name' and 'Prompt Value'. The table has one row with 'MESSAGE\_SET\_NBR' and '2'. There are also links for 'Update Parameters' and 'Go to BIP Report Search'.

Query Report Scheduler uses the existing Process Scheduler functionality to:

- Select runtime parameters for query-based and connected query-based reports.
- Monitor the report process request.
- Post and secure the results to either the Report Manager, a printer, or the Process Scheduler file directory.

**Note:** If a query is run through Reporting Tools, Query, Schedule Query the BI Publisher-related prompts do not appear. Only the basic table-formatted query results are generated.

### Run Control ID

Enter a run control ID.

### Language

Indicates the language of the run control.

The report selects data and template translations based upon the language code of the run control. The user sets this value on the My System Profile, General Profile Information page in the My Preferred Language for Reports and Email field. The language appears in the Query Report Scheduler Search Results so that you are informed of the language selection criteria.

### Data Source Type

Select either *Query* or *Connected Query*.

<b>Report Name</b>	<p>Select the name of the Query or Connected Query-based report that you want to schedule.</p> <p>The drop-down list box values are based on previously registered report definitions. Existing Query security applies so that each user has access to run only reports to which they have Query access.</p>
<b>Burst Field Name</b>	<p>Displays the value set in the Burst by field of the Report Definition, Bursting page. This field appears for bursted reports only.</p>
<b>Dynamic Template</b>	<p>Displays either <i>Active</i> or <i>Inactive</i>, depending on whether criteria exists to dynamically select the template, language, or both based upon a data value that is set in the Template group box of the Report Definition, Bursting page. This field appears for bursted reports only.</p>
<b>Bursting Security</b>	<p>Displays either <i>Active</i> or <i>Inactive</i>, depending on whether criteria exists to assign unique bursting security that is set in the Burst Security group box of the Report Definition, Bursting page. This field appears for bursted reports only.</p>
<b>Template ID</b>	<p>Select from the templates associated with the report definition.</p>
<b>Template As Of Date</b>	<p>(Optional) Select the as of date for the template version to use for the report.</p> <p>The system looks at the report definition for templates that are active as of this date.</p>
<b>Channel</b>	<p>Indicates the distribution channel of the template.</p>
<b>Update Parameters</b>	<p>Click to update the Query or Connected Query runtime prompt values.</p> <p>After runtime values are entered, they are saved with the run control ID.</p>
<b>Report Manager</b>	<p>Click to go to the Report Manager to check the progress of your process request and to view the report content immediately after the output file is posted.</p> <p>The final output file is posted to the Report Manager repository for web access by authorized users.</p> <p>See "Viewing Reports" (PeopleTools 8.54: Process Scheduler).</p>
<b>Process Monitor</b>	<p>Click to go to the Process Monitor to check the progress of your request.</p> <p>See "Understanding Process Monitor" (PeopleTools 8.54: Process Scheduler).</p>

**Run**

Click to access the Process Scheduler Request page.

The Process Scheduler Request page enables you to specify variables, such as where a process runs and in what format the process output is generated.

The values for output type and output format appear by default per the report definition and can be changed if the report definition allows it. Distribution options are also active, allowing updates to viewers, only as allowed in the report definition.

**Go to BIP Report Search**

Click to access the BIP Report Search page.

See [Searching the BI Publisher Report Repository](#).

See "Submitting Process Requests" (PeopleTools 8.54: Process Scheduler) and "Scheduling Process Requests" (PeopleTools 8.54: Process Scheduler).

## Running Reports in Process Scheduler

This section discusses how to:

- Use the Process Scheduler Request page.
- Create the run control page.
- Create a process definition.
- Monitor requests.

### Using the Process Scheduler Request Page

At runtime, the Process Scheduler Request page appears after you click the Run button on the run control page. This page includes operator-selectable choices of output type and output format. Output type choices reflect the location values from the report definition. Output format choices reflect the output format values from the report definition.

Because values for output location, output format, and viewer security are associated with each report definition, these values should be passed to the Process Scheduler Request page. These values are passed automatically only when the process definition type is *XML Publisher*.

**Note:** In order to execute BI Publisher reports with DB2 z/OS databases you will need to configure a Process Scheduler on a PeopleTools certified Windows or other UNIX batch server. The PeopleTools Process Scheduler on z/OS cannot execute BI Publisher reports.

### Printing PDF Reports in PCL and PS Formats

BI Publisher reports can be printed to PCL (Printer Command Language) and PS (PostScript) compatible printers. The Process Scheduler Request page allows you to select PCL and PS as output formats when

you select printer as output type; however only a PDF version of the report is stored in the Report Manager.

See [Embedding PCL Code into Template](#)

## Creating the Run Control Page

You need to create a custom run page that contains the prompts required by your report definition.

Your run control page should be a combination of the PeopleSoft PeopleTools-supplied run control subpage and the application-specific section for runtime parameters for the data extraction program. It should include report, template name, language, and as of date. Depending upon your application design, these values could be systematically deduced from user preferences, come from program defaults, or come from the operator input selection.

See "Running Processes from PeopleSoft Applications" (PeopleTools 8.54: Process Scheduler).

## Creating a Process Definition

A process type of *XML Publisher* is delivered as system data and is available on the PeopleTools, Process Scheduler, Process Definition page. When application processes are defined and assigned the *XML Publisher* process type, entries for output type and format on the runtime Process Scheduler Request page reflect the definitional metadata under the BI Publisher report definition.

The BI Publisher report name, Process Scheduler process name, and the Application Engine process name are the same.

See "Defining Process Definitions" (PeopleTools 8.54: Process Scheduler).

## Monitoring Requests

The Process Scheduler processes BI Publisher-based reports. You can define multiple related activities as separate processes. For example, generation of the XML data, the BI Publisher merging of that data with the template and creating the final output, and the subsequent postprocessing to send related emails. Each process appears separately in the Process Monitor. Error messages indicate whether the problem is on the data extraction or the BI Publisher portion of the report request.

---

## Running Reports Using PeopleCode

This section provides an overview of PeopleCode BI Publisher classes and discusses how to:

- Run reports using PeopleCode.
- Choose a template.
- Pass parameters.
- Use time zones in BI Publisher reports.
- Burst reports.



- Customize printed report output.
- Distribute reports.
- Search for reports.

## Understanding PeopleCode BI Publisher Classes

All report runtime functionality is available using the PeopleCode BI Publisher classes. The classes and methods that you use to define custom reports respect the report category security assigned to the report definition. Users with read-only access to report definitions cannot edit them.

Runtime classes are available to call and pass in XML data and a choice of report template to the BI Publisher core engine to generate the output in a desired format. For online viewing, a function is available to pass the output back to the browser. Processing a report through the Process Scheduler posts BI Publisher output entries to the web, the Report Manager, or both according to the existing processes. When processes are categorized under the XML Publisher process type, the capability to establish output destination, format, and authorized viewer choices from the related report definition is enhanced. A search method is also available for accessing reports in the report repository.

You can call the PeopleCode from a page for online processing, or you can create an application engine program to run the report in batch.

See [Creating Report Definitions](#).

See "Creating, Opening, and Renaming Programs" (PeopleTools 8.54: Application Engine).

See "Understanding BI Publisher and the BI Publisher Classes" (PeopleTools 8.54: PeopleCode API Reference).

## Running Reports Using PeopleCode

The BI Publisher classes enable you to access the runtime portions of the BI publishing process programmatically, that is, after the templates and reports have been created. The BI Publisher classes are not built-in classes, like rowset, field, record, and so on. They are application classes. Before you can use these classes in your PeopleCode program, you must import them to your program.

Your import statements should look like this:

```
import PSXP_RPTDEFNMANAGER.*;
```

See "ReportDefn Class Constructor" (PeopleTools 8.54: PeopleCode API Reference).

### Example: Publish a Report Based on PS Query

This is a code snippet example for publishing a report based on PS Query:

```
import PSXP_RPTDEFNMANAGER.*;

/* get report definition object */
&ORptDefn = create PSXP_RPTDEFNMANAGER:ReportDefn (&SRptDefn);
&ORptDefn.Get();
/* fill query runtime prompt record */
&rcdQryPrompts = &ORptDefn.GetPSQueryPromptRecord();
If Not &rcdQryPrompts = Null Then
    &ORptDefn.SetPSQueryPromptRecord(&rcdQryPrompts);
End-If;
```

```

/*generate report*/
&oRptDefn.ProcessReport (&sTpltID, &sLangCd, &AsOfDate, &sOutFormat);
/*publish report */
&oRptDefn.Publish(&sPrCsServerName,"",&sFolder, &prcsInstId);

```

### Example: Print a Report Based on XMLFile

This is a code snippet example for printing a report based on XMLFile:

```

import PSXP_RPTDEFNMANAGER:*;

/* get report definition object */
&oRptDefn = create PSXP_RPTDEFNMANAGER:ReportDefn (&sRptDefn);
&oRptDefn.Get();
/* pass XMLFile to the report definition */
&oRptDefn.SetRuntimeDataXMLFile(&sXMLFilePath);
/*generate report*/
&oRptDefn.ProcessReport (&sTpltID, &sLangCd, &AsOfDate, &sOutFormat);
/*print report */
&oRptDefn.PrintOutput(&sDestinationPath);

```

## Choosing a Template

Because report definition information is available from the PeopleCode BI Publisher classes, you can incorporate prompts on runtime pages to select reports and templates. You must pass in XML data and a choice of report template to the BI Publisher core engine to generate the output in a desired format.

You can retrieve a particular template file or expose a choice of templates at runtime. Only active reports and templates are retrieved. An as of date is also required to coordinate with the template file's effective date. If not supplied, the as of date is assumed to be the system date. At runtime, the template as of date is used to select the appropriate active effective-dated template and sub-template that is current as of that date.

A PeopleCode class is available to retrieve a report's template IDs based on a channel value, although it is not exposed on a PeopleSoft PeopleTools-delivered Pure Internet Architecture page. You can also incorporate template administration functionality directly into your application pages. This functionality includes creating the definitions and storing the related files, as well as querying to find the templates associated with a report definition.

## Passing Parameters

The system may need to pass runtime parameters into the BI Publisher core engine. Numbers and text are sent as strings with single quotes. By default, PeopleTools( through the ReportDefn class ProcessReport method) always passes the following parameters/tags:

```

<?$ReportID?>
<?$ReportTitle?>
<?$RunDate?>
<?$RunTime?>

```

These tags can be included in the template layout wherever they are needed, they are especially useful for report headers. Before inserting these parameters into the template (or sub-template), the following declarations must be entered under a form field at the top of the report's primary template; one for each parameter called:

```

<xsl:param name="ReportID" xdofo:ctx="begin"/>
<xsl:param name="ReportTitle" xdofo:ctx="begin"/>
<xsl:param name="RunDate" xdofo:ctx="begin"/>
<xsl:param name="RunTime" xdofo:ctx="begin"/>

```

These tags can be included in the template layout wherever they are needed. These parameters are especially useful for report headers.

The PeopleSoft-delivered BI Publisher report XRFWIN demonstrates the usage of these values in a report calling a sub-template for a header.

For the standard parameter passage of report ID and report description, the translation of report descriptions may become important for report headers. BI Publisher includes PeopleSoft-related language tables for the data source, and report and template tables that support the report's data language values for the description fields.

## Bursting Reports

The ReportDefn class ProcessReport method has code built in to process a single report request to create multiple output files per the bursting instructions defined on the report definition. Bursting always occurs at runtime if a burst value is stored in the report definition's burst field value.

See [Setting Bursting Options](#).

## Customizing Printed Report Output

The PeopleSoft application supports batch printing BI Publisher reports directly from a server using PDF output format. Printers with Postscript level 3 interpreter natively support printing PDF format. You can also print to PCL and Postscript printers by specifying the type of printer in the ReportDefn.SetPrinterType() class method. The PeopleSoft application provides PeopleCode support for sending PDF files directly to a specified printer, and it also provides customization capability for inserting conversion logic from PDF to different printer formats.

To send a BI Publisher report to a printer and to specify a printer type, use the PrintOutput and the SetPrinterType methods after the ProcessReport method as shown in this example:

```
&MyReportDefn.ProcessReport("myTemplate", "", %Date, "PDF");
&MyReportDefn.SetPrinterType("PCL" or "PS")
&MyReportDefn.PrintOutput(&PrinterPath);
```

If you want to insert conversion logic from PDF to a different printer format (other than PCL and PS) before an output file is sent to a printer, create a batch file named `psxprint.bat` on Microsoft Windows or `psxprint.sh` on Unix under the Process Scheduler server home directory `%PS_HOME%\appserv\prcs\%domain_name%` and write a call to an external conversion program in this batch file.

In the batch file, you can use the following variables, which the `ReportDefn.PrintOutput()` method replaces with actual data at report runtime:

<b>Variable</b>	<b>Description</b>
<code>%RPTOUTDIR%</code>	Full path to the report output directory.
<code>%REPORTFILE%</code>	Full path to the report output file.
<code>%DESTPRINTER%</code>	Full path to the destination printer.

See [Setting Output Options](#).

## Related Links

"Understanding BI Publisher and the BI Publisher Classes" (PeopleTools 8.54: PeopleCode API Reference)

## Distributing Reports

PeopleCode options are available for posting your generated report to a file server, printing it, or publishing it to the Report Manager with appropriate security.

For online viewing, a method is available for passing the output back to the browser. No report results are persisted, but the user viewing the results can use the browser's Save As feature to retain the report file locally.

When the output type is *Printer*, the output format is limited to PDF. A printer location must be specified, and the printer must be capable of printing PDF output. If the output file is large, adequate memory must be available on the print server.

Distribute To IDs are those defined in the Report Definition, Security page. Distribution functionality within the Process Scheduler is enhanced to assign values systematically per the BI Publisher report definition. The Report Definition, Security page provides choices for selecting a Report Manager folder as well as the ability to assign viewing rights to additional roles or user IDs at runtime if allowed by the report definition.

When the report definition has the Allow viewer ID assignment at report runtime check box selected, the report requestor can add or delete IDs. If no viewers are assigned, by default the requestor's ID is added systematically.

## Searching for Reports

A search method is available for accessing reports in the Report Manager repository. The PeopleCode uses additional search keys based on the report definition's additional metadata.

See [Setting Bursting Options](#), [Searching the BI Publisher Report Repository](#).

---

## Using Time Zones in BI Publisher Reports

When displaying datetime values, BI Publisher takes into consideration the time zone of the user running the report. The time zone is retrieved from the user's Personalization settings (My Personalizations, Regional Settings, Local Time Zone). Personalized time zone display is dependent on the following conditions:

- The report template must be either *RTF* or *XSL*.
- The datetime element in the XML file must include the UTC offset, for example, 2008-07-28T09:00:00-0700.

---

**Note:** A Query data source includes the offset for datetime fields.

---

- The time zone must have a valid 3 character time zone code, for example *PST* or *EST*. If custom time zones have been implemented in your environment, BI Publisher does not recognize these custom time zones and will display the time in UTC.
- The datetime field in the template should be formatted using an Oracle abstract format mask that displays the time zone. For example:

```
<?format-date:STARTDATETIME;'SHORT_TIME_TZ'??>
```

---

**Note:** Oracle abstract format masks are listed in *Oracle Business Intelligence Publisher Users Guide*, “Creating an RTF Template,” Using Oracle Abstract Format Masks.

---

**Note:** BI Publisher uses Java Time Zones based on the JRE running under the PeopleSoft application server. In some releases of JRE, a known issue exists in that Daylight Savings Time is calculated incorrectly for EST, MST, and HST time zones. This problem has been documented by Sun and a solution is available on their website: <http://java.sun.com/developer/technicalArticles/Intl/alert.html>

---

---

## Locating and Viewing BI Publisher Reports

This section discusses how to search the BI Publisher report repository.

## Searching the BI Publisher Report Repository

Access the BI Report Search page (Select Reporting Tools, BI Publisher, BIP Report Search.)

### Image: BIP Report Search page

This example illustrates the fields and controls on the BIP Report Search page. You can find definitions for the fields and controls later on this page.

The screenshot shows the 'BIP Report Search' interface. At the top, there are links for 'Process Monitor' and 'Report Manager'. The search criteria section includes:
 

- Report Defn ID:  with a search icon.
- Burst w JPN Data w RTF Temp
- Folder Name:
- Instance:  to
- Created On:  with a calendar icon.
- Or
- Last:  Days

 Below this is a section titled 'View Reports Using Search Keys' with a 'Case Sensitive' checkbox. It contains three rows, each with a 'DESCR' label, a dropdown menu set to 'begins with', and an input field. At the bottom of this section are 'Search' and 'Clear' buttons.
   
 The 'Reports' section features a table with columns: Report, Folder, Completion Date/Time, Expiration Date, Report ID, and Prcs Instance. The table shows three reports:
 

Report	Folder	Completion Date/Time	Expiration Date	Report ID	Prcs Instance
1 <a href="#">QE_BRST_JPN1 [ビジネス経費承認]-QE_BRST_JPN1.htm</a>	GENERAL	03/15/11 10:12AM	03/22/2011	14	59
2 <a href="#">QE_BRST_JPN1 [ワークスペースワークリストメッセージ]-QE_BRST_JPN1.htm</a>	GENERAL	03/15/11 10:12AM	03/22/2011	13	59
3 <a href="#">QE_BRST_JPN1 [ユーザーファイルの同期]-QE_BRST_JPN1.htm</a>	GENERAL	03/15/11 10:12AM	03/22/2011	12	59

 The table also includes navigation controls like 'Personalize', 'Find', 'View All', and 'First 1-5 of 5 Last'.

Enter criteria to filter the reports to list. BI Publisher Report Search ignores criteria for fields that are blank.

#### Report Definition ID

(Optional) Select the name of the report definition to search on. If you want to use additional search keys, you must select the Report Definition ID.

#### Folder Name

(Optional) Select a specific folder to list only the reports that are contained in that folder.

#### Created On

(Optional) Use the calendar, or enter a specific date to list only reports that are created on that date.

#### Instance and to

(Optional) Enter a range of process instances. Leave the to field blank to list all instances after the number that you enter in the Instance field.

#### Last

(Optional) Use to display only those reports that were created in the last number of days, hours, or minutes. For example, to list

only those reports that were created within the last two hours, enter *2* and select *Hours*.

### **Report Manager**

Click to go to the Report Manager.

See "Understanding Report Manager" (PeopleTools 8.54: Process Scheduler).

### **Process Monitor**

Click to go to the Process Monitor.

See "Understanding Process Monitor" (PeopleTools 8.54: Process Scheduler).

See "Viewing Reports" (PeopleTools 8.54: Process Scheduler).

## **Viewing Reports Using Additional Search Keys**

Additional search keys are available based on the Report Definition ID.

Users can also search by the following criteria for bursted reports:

- A specific value in the Burst By field.

This is a read-only field that appears automatically when a value is set in the Burst by field of the Report Definition, *Bursting* page.

- Up to two additional values in the predefined bursting Search Key fields.

These drop-down list boxes display the values set in the Search Keys region of the Report Definition, *Bursting* page.

To view bursted reports using the additional search keys:

1. Select the Case Sensitive check box to perform a case-sensitive search.
2. For the Burst By field, select a search operator.
3. Enter a value to search on.
4. For the additional Search Key fields, select the search field name, search operator and search value.

See [Setting Bursting Options](#).





# Creating Reports that Include Rich Text Editor Data

---

## Understanding Rich Text Editor Data in BI Reporting

The rich text editor control extends the capability of a long edit box. It allows for rich formatting of text content, including common structural treatments such as lists, formatting treatments such as bold and italic text, and so forth.

The data entered in an RTE (Rich Text Enabled) long edit field is stored in the PeopleSoft database as formatted HTML data. BI Publisher reports are now capable of displaying this HTML formatted data in the output report without requiring any special conversion, as had been required in previous PeopleTools releases. The Oracle BI Publisher core engine now natively supports the use of HTML formatted data fields in an RTF report template.

### Requirements for Reports Using RTE Fields

In order to create reports that include RTE data fields:

1. User data must be input using the RTE Tool supplied by PeopleSoft.
2. Report needs to use an RTF template.
3. The following form field syntax should be applied for all RTE formatted data fields in the RTF template:

```
<?html2fo:elementname?>
```

where `elementname` is the XML element that contains the RTE field data.

4. The RTE formatted data field should be enclosed in a CDATA section in the XML file.

In an XML file generated from Query/Connected data source, the character fields are always enclosed in CDATA..

5. Images are not supported in the HTML data.

The following example illustrates how RTE fields can be used in a BI Publisher report.

Query generated XML file containing an RTE field—QEPC\_RTE\_DATA:

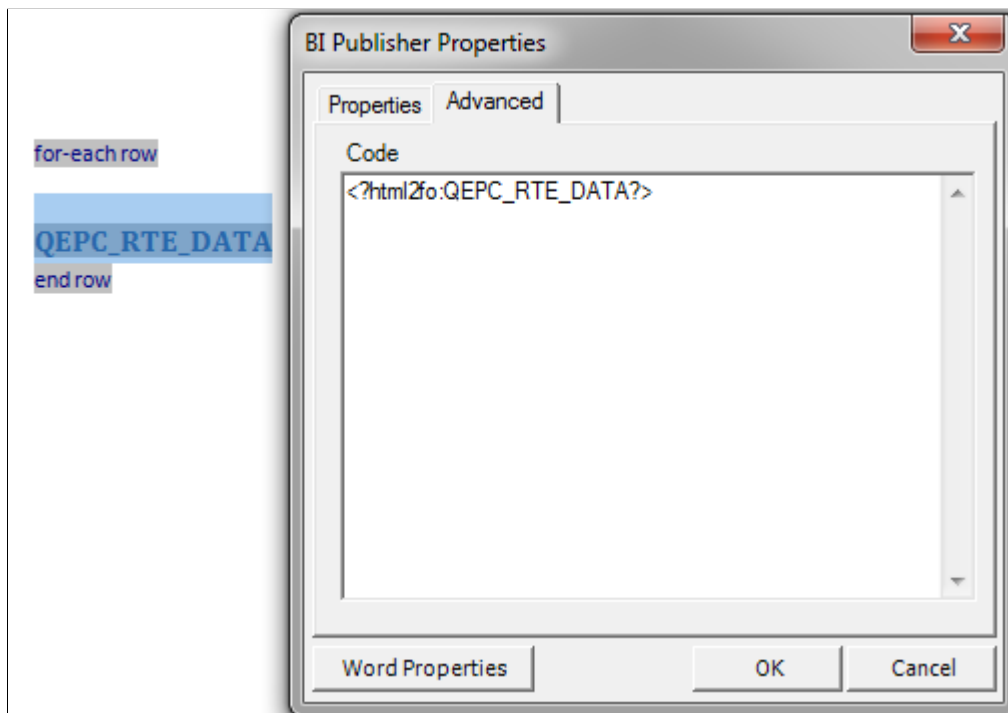
```
<?xml version='1.0'?>
<query numrows="1" queryname="RTE_TEST" xmlns:xsi="http://www.w3.org/2001/XMLSchema-
-instance" xsi:noNamespaceSchemaLocation="">
<row rownumber="1">
<QEPC_SPORT><![CDATA[TEST]]></QEPC_SPORT>
<QEPC_RTE_DATA><![CDATA[<h1><span style="font-family:georgia,serif">RTE TEST DATA</span>
</h1><em><strong>This is Bold and Italicized Text</strong></em>.<br />This is =>
a <a href="http://www.oracle.com/technetwork/documentation/psftent-090284.html">hyp=>
```

```
erlink </a>to the PeopleSoft Documentation Site.<br />The following is a bulleted list:
<ul> <li><span style="color:#0000FF">Item 1 in blue</span></li> <li><u><span style="color:#FF0000">Item 2 in red and underlined</span></u></li></ul>
The following is a numbered list:
<ol> <li>Item 1 with special chars &pound;, &acute;, &euro;</li> <li><s>Item 2 striked out</s></li></ol>
This is a table with 2 columns and 2 rows:
<table border="1" cellpadding="1" cellspacing="1" style="width:100%"> <caption>&nbs
p;</caption> <tbody> <tr> <td style="text-align: center;">Column 1</td> <td style="
text-align: center;">Column 2</td> </tr> <tr> <td style="text-align: center;">Row 2
</td> <td style="text-align: center;">Row 2</td> </tr> </tbody></table>]]</QEPC_RT
E_DATA>
</row>
</query>
```

Example of required syntax entered in form field for a RTE field in the RTF template:

**Image: BI Publisher Properties dialog box**

This example illustrates the required syntax in form field for a RTE field.



The following example shows a PDF output displaying RTE data:

**Image: PDF output**

This example illustrates RTE data in a PDF output.

## RTE TEST DATA

*This is Bold and Italicized Text.*

This is a [hyperlink](#) to the PeopleSoft Documentation Site.

The following is a bulleted list:

- Item 1 in blue
- Item 2 in red and underlined

The following is a numbered list:

1. Item 1 with special chars £, é, €
2. ~~Item 2 striked out~~

This is a table with 2 columns and 2 rows:

Column 1	Column 2
Row 2	Row 2

---

## Transitioning From RTE Handling Method in PeopleTools 8.52/8.53 to New Method in PeopleTools 8.54

Starting from PeopleTools 8.52, BI Publisher reports were fully capable of displaying formatted HTML data (RTE) via the use of a special XSL transformation stylesheet that was applied to the RTE field at runtime. This XSL stylesheet was provided via the delivered sub-template HTML\_SUB that needed to be imported into the RTF template in order to successfully transform the HTML formatted data into its XSL-FO equivalent expected by the BI Publisher core engine. That method is now being deprecated, and starting from PeopleTools 8.54, is being replaced with the native Rich Text handling support built into the current version of the Oracle BI Publisher core engine.

The steps to move from the previous method to the new built-in RTE handling method in 8.54 are as follows:

For XML file data sources:

1. If you are using XMLDoc or File Layout to create the XML file, wrap the RTE field data in a CDATA block.
2. Remove the PeopleCode substitution logic that was added for unescaping and restoring the XHTML tags previously.

The PeopleCode substitution logic is no longer required because the CDATA section preserves the original formatting tags.

3. Modify the RTF template to remove the sub-template import statement: `<?import:psxmlp://HTML_SUB?>`.
4. Replace the `<xsl:apply-templates select="field_name"/>` syntax with `<?html2fo:field_name?>` in the form field for each RTE field.

For Query/Connected Query data sources:

1. Open the report definition and click the Properties tab.
2. Select the PeopleTools Settings property group.
3. In the `psxp_nodatafields` property, remove all RTE enabled field names specified here. This property should be set to a blank value.

The new method relies on the RTE field being enclosed in a CDATA section. If any field(s) are specified in this property value, the CDATA section for these field(s) will be removed at runtime.

4. Complete steps 3 and 4 listed in the For XML file data sources section.

---

## Configuring RTE on Page for BI Reporting

In order to use rich text in a BI Report, the rich text must be entered from a Rich Text long edit box on a PeopleSoft page.

PeopleSoft delivers a configuration file `PT_RTE_CFG_PTXP` that hides the Image buttons in the RTE toolbar.

To enable rich text editor functionality for the long edit box:

1. Add the long edit box to a page.
2. Double-click the control.

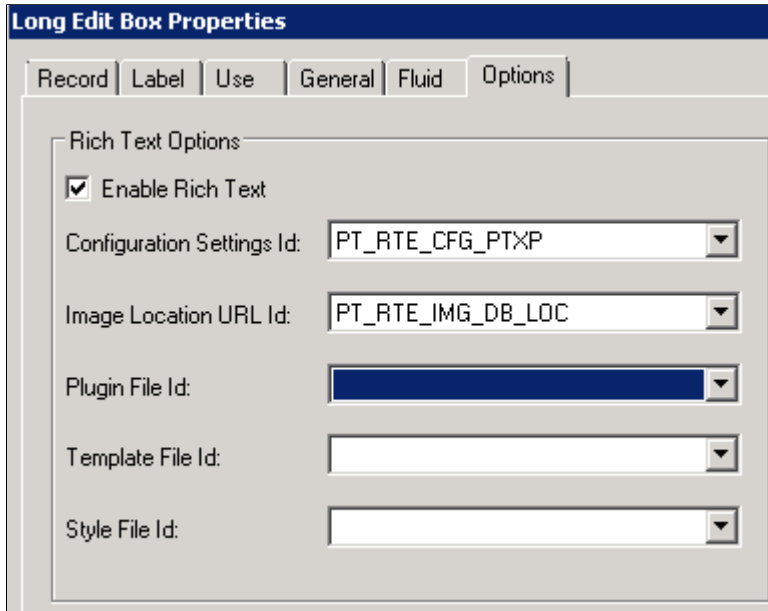
Alternatively, you can highlight the control and select Page Field Properties from the Edit menu or the pop-up menu, which is activated by right clicking the control.

3. Access the Options tab and select Enable Rich Text Editor.

4. Select the Configuration Setting Id `PT_RTE_CFG_PTXP` or any other configuration file that hides the Image buttons.

**Image: Long Edit Box Properties dialog box**

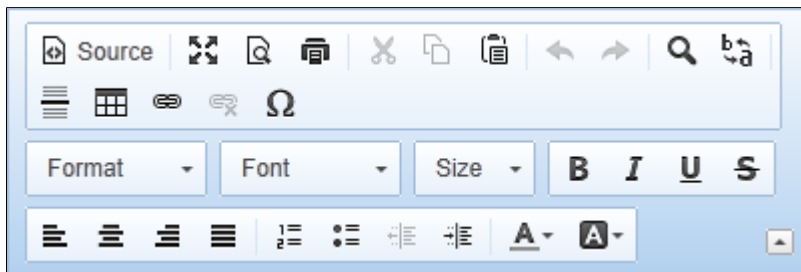
This example illustrates enabling rich text in the Long Edit Box Properties dialog box.



The toolbar displayed on the page will not allow Images.

**Image: Rich text editor toolbar**

This example illustrates the Rich text editor toolbar.



See "Creating Custom Configurations" (PeopleTools 8.54: Application Designer Developer's Guide).

## Using CDATA in an XML File Generated Through XML File Layout

Utilizing BI Publisher's built-in support for Rich Text data (using `html2fo` function in form field) requires the use of CDATA sections for RTE data elements in an XML file. However, when using XML File Layout to create the XML file, there is currently no native support for creating these CDATA sections. As a result, the CDATA sections should be added manually prior to writing the XML file.

The following example illustrates how to manually add the CDATA sections.

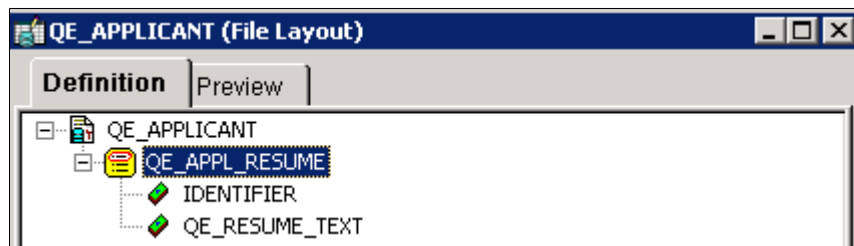
Consider the following record QE\_APPL\_RESUME, having character fields IDENTIFIER and QE\_RESUME\_TEXT, the latter containing RTE data.

```
select * from PS_QE_APPL_RESUME;
IDENTIFIER      QE_RESUME_TEXT                                     =>
-----
12231          <p><strong>RTE Text</strong><br />containing <,>," , and &</p>
```

The following screenshot shows XML File Layout defined for this record.

### Image: XML File Layout

This example illustrates the XML File Layout defined for the sample record.



The following PeopleCode is used to generate an XML file using the WriteRecord() method in XML File Layout:

```
Local Record &Rec;
Local File &fXML;
Local SQL &SQL;

&fXML = GetFile("c:\temp\QE_APPLICANT1.xml", "W", "UTF-8", %FilePath_Absolute);

If &fXML.IsOpen Then
    If &fXML.SetFileLayout(FileLayout.QE_APPLICANT) Then
        &Rec = CreateRecord(Record.QE_APPL_RESUME);
        &SQL = CreateSQL("%Selectall(:1)", &Rec);
        While &SQL.Fetch(&Rec)
            &fXML.WriteRecord(&Rec);
            &fXML.WriteLine("</QE_APPL_RESUME>");
        End-While;
    End-If;
End-If;

&fXML.Close();
```

The following is a snippet from the generated XML file:

```
<QE_APPL_RESUME>
<IDENTIFIER>12231</IDENTIFIER><QE_RESUME_TEXT>&lt;p&gt;&lt;strong&gt;RTE Text&lt;/s=
trong&gt;&lt;br /&gt;containing &lt;,&gt;,&quot; , and &amp;&lt;/p&gt;</QE_RESUME_TE
XT>
</QE_APPL_RESUME>
```

BI Publisher's built-in support for Rich Text data requires that RTE text must *not* be escaped with entity reference characters, but rather the RTE text must be in a CDATA block for the BIP Reporting Engine to be able to process it.

The way around this is to use WriteString() method instead of WriteRecord() and manually write the CDATA section for each individual field that contains RTE data:

The following snippet illustrates the modified PeopleCode:

```

Local Record &Rec;
Local File &fXML;
Local SQL &SQL;

&fXML = GetFile("c:\temp\QE_APPLICANT2.xml", "W", "UTF-8", %FilePath_Absolute);

If &fXML.IsOpen Then
  If &fXML.SetFileLayout(FileLayout.QE_APPLICANT) Then
    &Rec = CreateRecord(Record.QE_APPL_RESUME);
    &SQL = CreateSQL("%Selectall(:1)", &Rec);
    While &SQL.Fetch(&Rec)
      rem &fXML.WriteRecord(&Rec);
      &fXML.WriteLine("<QE_APPL_RESUME>");
      &fXML.WriteString("<IDENTIFIER>");
      &fXML.WriteString(&Rec.IDENTIFIER.Value);
      &fXML.WriteString("</IDENTIFIER>");
      &fXML.WriteString("<QE_RESUME_TEXT><![CDATA[");
      &fXML.WriteString(&Rec.QE_RESUME_TEXT.Value);
      &fXML.WriteString("]]></QE_RESUME_TEXT>");
      &fXML.WriteLine("</QE_APPL_RESUME>");
    End-While;
  End-If;
End-If;

&fXML.Close();

```

It is essentially the same as the original code, but uses WriteString() to individually write out all fields from the record that contains the RTE field. This is necessary to be able to write the CDATA section string around the RTE field contents.

The following snippet is from the generated XML file:

```

<QE_APPL_RESUME>
<IDENTIFIER>12231</IDENTIFIER><QE_RESUME_TEXT><![CDATA[<p><strong>RTE Text</strong>=>
<br />containing <, >, ", and &</p>]]></QE_RESUME_TEXT></QE_APPL_RESUME>
<QE_APPL_RESUME>

```





## Chapter 8

# Attaching Digital Signature to PDF Reports

---

## Understanding Digital Signature in BI Publisher Reports

BI Publisher for PeopleSoft enables you to add a digital signature to PDF reports so that you can verify the authenticity of the documents or reports you send and receive. Also, the receiver of the documents or reports can verify the authenticity of the documents or reports.

In order to attach a digital signature to a report, BI Publisher for PeopleSoft accesses your digital ID file from a central, secure location and at runtime signs the PDF report with the digital ID. The digital signature verifies the signer's identity and ensures that the document was not altered after it was created and signed.

BI Publisher for PeopleSoft supports attaching digital signatures only to PDF reports that are based on PDF or RTF templates.

---

## Using Digital Signature in PDF Reports

A digital signature can be applied to PDF reports that are based on RTF and PDF templates.

This section discusses:

- Prerequisites for using digital signatures in PDF reports.
- Limitations in using digital signatures in PDF reports.
- Applying a digital signature to a PDF report.

## Prerequisites

Before a user can use digital signatures on PDF reports in BI Publisher for PeopleSoft, the following prerequisites must be completed:

- Obtain a digital ID from a public certificate authority or from a private/internal certificate authority (if for internal use only).
- Store the digital ID inside a PFX file.
- Upload the PFX file and its related password to the PeopleSoft keystore.

## Limitations

The following limitations are applicable when using digital signatures on PDF reports in BI Publisher for PeopleSoft:

- Only a single digital ID can be used to sign a PDF document.
- Digital signature is enabled at the report level. Therefore, multiple templates assigned to the same report share the digital signature properties.

## Attaching a Digital Signature to a Report

To apply a digital signature to a report:

1. Access the Report Definition page. (Reporting Tools, BI Publisher, Report Definition and click the Properties tab.)

A user must have the XMLP Report Developer role to access the PDF Digital Signature property group.

See [Defining Global Properties](#) for a description of the properties associated with the PDF Digital Signature property group.

2. Enable a digital certificate for the report.
3. Specify the position to place the digital signature on the report. You can specify the position of the digital signature by entering values for the properties related to location.
  - If your report is based on a PDF template, you can designate a field in which the digital signature should be placed.

For information on designating a field in a PDF template for a digital signature, see *Report Designer's Guide for Oracle Business Intelligence Publisher, "Creating PDF Templates," Adding or Designating a Field for a Digital Signature*.

---

**Note:** If you use a pre-existing field in the PDF template to hold the digital signature, the PDF template should be able to handle updatable fields. In this case, the PeopleTools `psxp_pdf_optimized` property is set to `False` for the report. For details of the `psxp_pdf_optimized` property, see [Defining Global Properties](#) and for information on updatable fields in PDT template, see [Creating Updatable PDF Report](#).

---

- If you set the location of digital signature by entering values for the coordinates/width/height properties, the signature appears on the last page of the report and the coordinates will be calculated from the lower right corner of the report page.
4. Specify the name of PeopleSoft application class that will obtain the digital certificate ID necessary for retrieving the PFX file and its password from the keystore.

The application class should implement the `IPT_PDFSIGNATURE_INT:IPDFSignature` interface class, and the application class should be used for mapping specific report(s) to the correct signer's digital certificate. For details of the `IPT_PDFSIGNATURE_INT:IPDFSignature` interface class, see "Understanding BI Publisher and the BI Publisher Classes" (PeopleTools 8.54: PeopleCode API Reference).

The digital signature functionality is tightly connected to the security functionality for external PFX certificates. For more information on security functionality, see "Using the External Digital Certificates Page" (PeopleTools 8.54: Security Administration) and "Understanding Applying Digital Signatures to PDF Report Output" (PeopleTools 8.54: Security Administration).

5. Specify a set of key fields used for mapping digital signature ID based on report field values.

At runtime, digital signature for bursted reports will either be attached individually for each report or a single signature for all bursted reports based on the definition in the application class.



## Appendix A

# Securing BI Publisher

---

## BI Publisher Security

BI Publisher security can be separated into three categories:

- Defining reports.
- Running reports.
- Viewing reports.

When you are defining Query-based reports, Query security determines which queries you can access and select from to create your BI Publisher report definitions. Security for editing and viewing report definitions is controlled by the Report Category ID attribute, which is set on the Reporting Tools, BI Publisher, Setup, Report Category page.

Security for running and viewing BI Publisher reports is controlled by setting options in a number of places. This table illustrates where security can be set:

<b>Activity</b>	<b>Security Settings</b>	<b>Query-based reports (Non-Bursting)</b>	<b>Query-based reports (Bursting)</b>	<b>Non-Query-based reports (Non-Bursting)</b>	<b>Non-Query-based reports (Bursting)</b>
Running Reports	Query Security	X	X	NA	NA
Running Reports	Application Security	X	X	X	X
Running Reports	Process Scheduler Security	X	X	X	X
Viewing Report Definitions	Report Definition, Security page	X	X	X	X
Viewing Report Definitions	Report Definition, Bursting page	NA	X	NA	X

Application security and Process Scheduler security determine who can run reports. BI Publisher does not provide additional security beyond what Oracle currently provides. That means that the component security of the data extraction program drives access control to the associated reports. For processes, process security prevails and for queries, query security prevails. When you are running a Query-based report, the requester's row-level security to the underlying data source always applies.

Query-based reports viewed online in real time from the Query Report Viewer respect query access groups for the user's primary permission list. For non-Query-based reports viewed online in real time, security is controlled by the application.

When you are viewing a report that was run through either the Query Report Scheduler or the Process Scheduler, security is controlled by both the Distribution ID field on the Report Definition, Security page and, when the Allow viewer ID assignment at report runtime check box is selected, by those IDs selected at runtime on the Process Scheduler Request, Distribution Detail page. Additional viewing security can also be defined for bursted reports on the Report Definition, Bursting page.

If no viewers are designated on the Report Definition, Security page and the Allow viewer ID assignment at report runtime is selected, then the report requestor's ID is applied as a viewer by default at runtime. This applies to bursted reports as well.

See [Setting Up Report Categories](#), [Creating Report Definitions](#), "Scheduling Process Requests" (PeopleTools 8.54: Process Scheduler).

# Migrating BIP Definitions

---

## BIP Definitions Overview

To facilitate the movement of reports and templates from development to test and then to production, BI Publisher (BIP) objects are available as managed objects that can be placed into projects for migration from database to database. To facilitate the location of report-related objects, these items can be identified based on object owner ID.

---

## Migrating BIP Definitions

The following definition types can be added to projects in Application Designer:

- BIP Data Source Definitions
- BIP File Definitions
- BIP Report Definitions
- BIP Template Definitions

If the data source for the BIP report is PS Query or Connected Query, then the query or connected query definition should also be included in the project.

---

**Note:** Because BI Publisher is based on managed objects, all updates to your data need to be performed using the PeopleSoft BI Publisher Pure Internet Architecture pages, PeopleSoft Application Designer, or BI Publisher PeopleCode APIs.

---

**Note:** As with other PeopleTools-delivered features, BI Publisher for PeopleSoft Enterprise uses managed object functionality, and you cannot use the switching feature of multilanguage data entry. You can populate Related Language tables by signing in and establishing a different session language. Then you can populate the Related Language table for that session.

---

See "Understanding Related Language Tables" (PeopleTools 8.54: Global Technology), "PeopleSoft Pure Internet Architecture Fundamentals" (PeopleTools 8.54: Portal Technology).

---

## Migrating BI Publisher-Translated Languages

BIP template translation uses related XLIFF files (one for each language) that contain not only specific translation pairs but the whole template definition. This is a standard for using XLIFF translation methodology.

Because the translation is tied to the template definition, the translation file (BIP Template Definition) as well as the specific XLIFF files (BIP File Definition) should be included in the project.

---

**Note:** If the template file is not copied with the language files, the correct translation file cannot be used when you run the report. Run a SYSAUDIT for Audit BI Publisher Integrity and delete any orphaned definitions.

---

See "BI Publisher Integrity" (PeopleTools 8.54: Data Management).

---

## Cleaning Up BI Publisher Metadata

To ensure the integrity of the BI Publisher files, run the application engine program PSXPCLEAN.

This application engine program finds:

- Unreferenced objects in PSFILEDEFN.
- Template definitions and template translations for which file objects are missing.
- Inconsistencies between PSFILEDEFN and PSFILEDATA.

This application engine program is delivered in *Report and Delete* mode. To run the program in *Report Only* mode, open the application engine program PSXPCLEAN in Application Designer and remove the comment in the following statement in PSXPCLEAN:Main:Start PeopleCode action:

```
rem PSXPFILECLN_AET.REPORT_ONLY_FLAG = "Y"
```

You can schedule and run PSXPCLEAN using the PeopleTools, Process Scheduler, System Process Request page. You should run this program on a regular basis to keep template metadata consistent.