

# **Tamino**

## **Tamino Reporting**

Version 10.11

November 2021

This document applies to Tamino Version 10.11 and all subsequent releases.

Specifications contained herein are subject to change and these changes will be reported in subsequent release notes or new editions.

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**Document ID: INS-BIRT-1011-20211101**

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## Preface

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This document describes the Tamino Reporting feature. Tamino Reporting is based on BIRT, the *Business Intelligence and Reporting Tools*, which is an open source, Eclipse-based reporting system that can generate both HTML and PDF output. The Tamino Reporting feature tightly integrates BIRT with Tamino, leveraging the power of BIRT so that it can generate reports based on data taken from Tamino, Software AG's high-performance XML server for storing, managing, publishing and exchanging XML documents in their native format.

This document discusses the following topics:

[Eclipse and BIRT](#)

[Installing Tamino Reporting](#)

[Creating a Report that Retrieves Data from Tamino](#)

[Running the Report with the Tamino Reporting Runtime Engine](#)

[Deploying the Report to an Application Server](#)

[Running the Report](#)

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# 1

## About this Documentation

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## Document Conventions

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Convention	Description
<b>Bold</b>	Identifies elements on a screen.
Monospace font	Identifies service names and locations in the format <i>folder.subfolder.service</i> , APIs, Java classes, methods, properties.
<i>Italic</i>	Identifies:  Variables for which you must supply values specific to your own situation or environment. New terms the first time they occur in the text. References to other documentation sources.
Monospace font	Identifies:  Text you must type in. Messages displayed by the system. Program code.
{ }	Indicates a set of choices from which you must choose one. Type only the information inside the curly braces. Do not type the { } symbols.
	Separates two mutually exclusive choices in a syntax line. Type one of these choices. Do not type the   symbol.
[ ]	Indicates one or more options. Type only the information inside the square brackets. Do not type the [ ] symbols.
...	Indicates that you can type multiple options of the same type. Type only the information. Do not type the ellipsis (...).

## Online Information and Support

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To get information about fixes and to read early warnings, technical papers, and knowledge base articles, go to the [Knowledge Center](#).

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### **Software AG Tech Community**

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- Access product documentation, if you have Tech Community credentials. If you do not, you will need to register and specify "Documentation" as an area of interest.
- Access articles, code samples, demos, and tutorials.
- Use the online discussion forums, moderated by Software AG professionals, to ask questions, discuss best practices, and learn how other customers are using Software AG technology.
- Link to external websites that discuss open standards and web technology.

## **Data Protection**

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Software AG products provide functionality with respect to processing of personal data according to the EU General Data Protection Regulation (GDPR). Where applicable, appropriate steps are documented in the respective administration documentation.



## 2 Eclipse and BIRT

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■ The Business Intelligence and Reporting Tools (BIRT) .....	7

The following topics are discussed in this chapter:

## About Eclipse

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Eclipse is an open-source multi-language Integrated Development Environment (IDE) whose home is at <http://www.eclipse.org/>. Without any add-ons, Eclipse is a development environment for Java, but its main asset is that it can be augmented with plugins that can turn it into a development environment for almost anything, for example BIRT. A good starting point for getting to know about Eclipse is the [Wikipedia entry for Eclipse \(IDE\)](http://en.wikipedia.org/wiki/Eclipse_%28computing%29) ([http://en.wikipedia.org/wiki/Eclipse\\_%28computing%29](http://en.wikipedia.org/wiki/Eclipse_%28computing%29)).

Tamino comes with a version of Eclipse that has been enhanced by the addition of Software AG's base technologies. You should install this version of Eclipse if you intend to use the Tamino Reporting feature.

We now define some terms that are frequently used in connection with Eclipse.

### Projects and Workspaces

The files that are created when working with Eclipse are contained in *projects*, which in turn are bundled in *workspaces*. An Eclipse workspace is a folder at an arbitrary location in your file system, though Eclipse suggests placing the workspace in a folder imaginatively called *workspace* under *Documents and Settings/<userid>* on the drive where Eclipse was installed. When you create an Eclipse project, a corresponding folder is created in the current workspace.

### The Workbench and Perspectives

When using Eclipse, you work in the Eclipse *workbench*. A workbench window offers one or more *perspectives*. A perspective represents a way Eclipse has been customized for a certain purpose. It contains views and editors and offers certain commands in the Eclipse workbench menus and toolbars. The Eclipse default perspective which is included in the Eclipse installation is the Java perspective, which is designed to allow Java development. A perspective is added to Eclipse by installing a *feature*, such as BIRT. A perspective usually offers an editor (the main window displayed roughly in the center of the workbench) that shows the main object to be developed (for example a Java class) accompanied by a set of views to support development. A typical view for Java development might be a class hierarchy or a list of compiler messages.

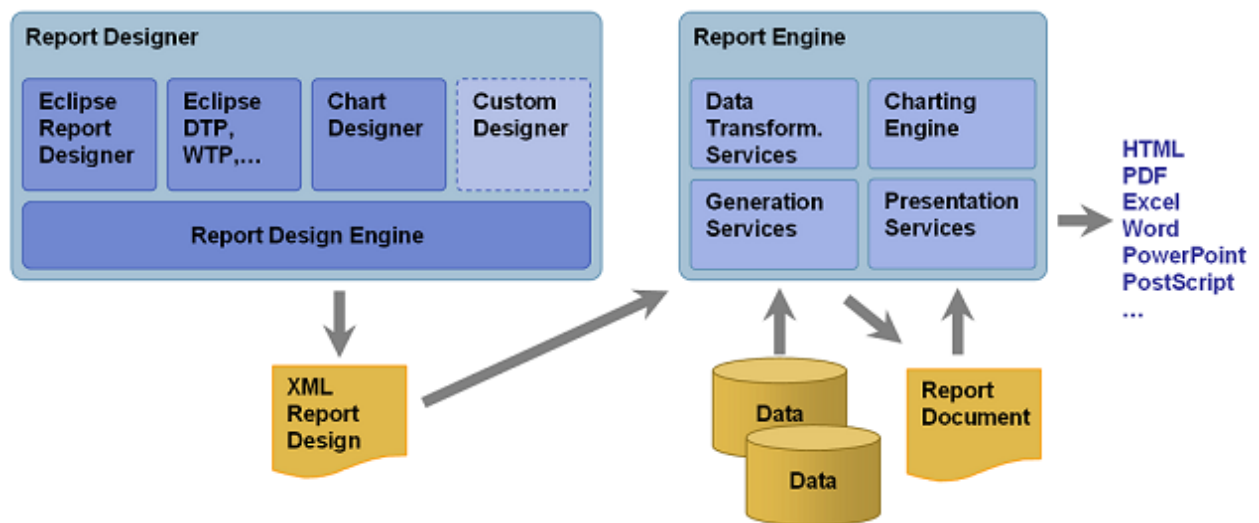
## The Business Intelligence and Reporting Tools (BIRT)

BIRT, a tool for generating and viewing reports, comprises:

- an Eclipse-based report designer;
- a runtime component, i.e. a viewer.

The data upon which a report is based is not hardcoded into the report; rather, the report contains Java objects to supply the data to be aggregated, for example using JDBC to access relational databases.

The following picture is taken from the [BIRT Overview](#) on the [Eclipse BIRT Project Page](#):



For a more thorough introduction to BIRT, see:

- the [BIRT Project Page](#) on the Eclipse web site, including free download;
- the [BIRT/FAQ](#) in the Eclipse Wiki.

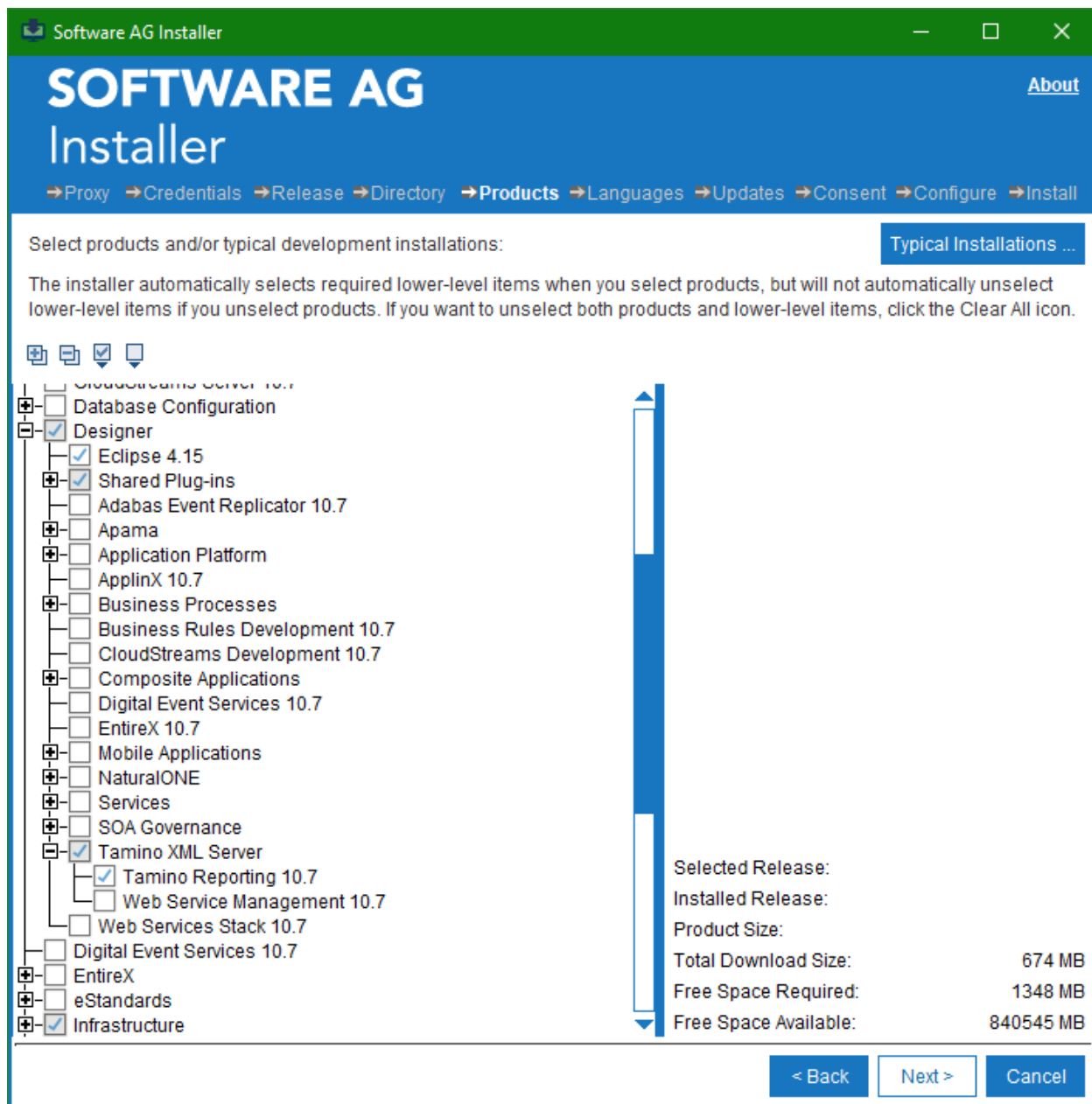
Instructions for creating a BIRT report are contained in the [BIRT Tutorial](#) on the [BIRT Project Page](#). There is no tutorial about creating a BIRT report with charts. For an introduction, see the [Flash presentation of BIRT](#). Also see the Examples on the Eclipse BIRT Project Page. Each *rptdesign* file can be downloaded into a report project's folder and be handled just like a self-written report in Eclipse/BIRT.



## 3 Installing the Tamino Reporting Feature

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In the Software AG Installer, check (tick) the tick box **Designer > Tamino XML Server > Reporting x.y**, in addition to any other selections that you may have made. The installation process will install a customized Eclipse package that includes BIRT and the Tamino Reporting feature.



**Note:** Although the Software AG Installer automatically checks (ticks) the box **Tamino XML Server** in the above selection menu, this procedure does *not* install the Tamino XML Server.

## 4 Creating a Report that Retrieves Data from Tamino

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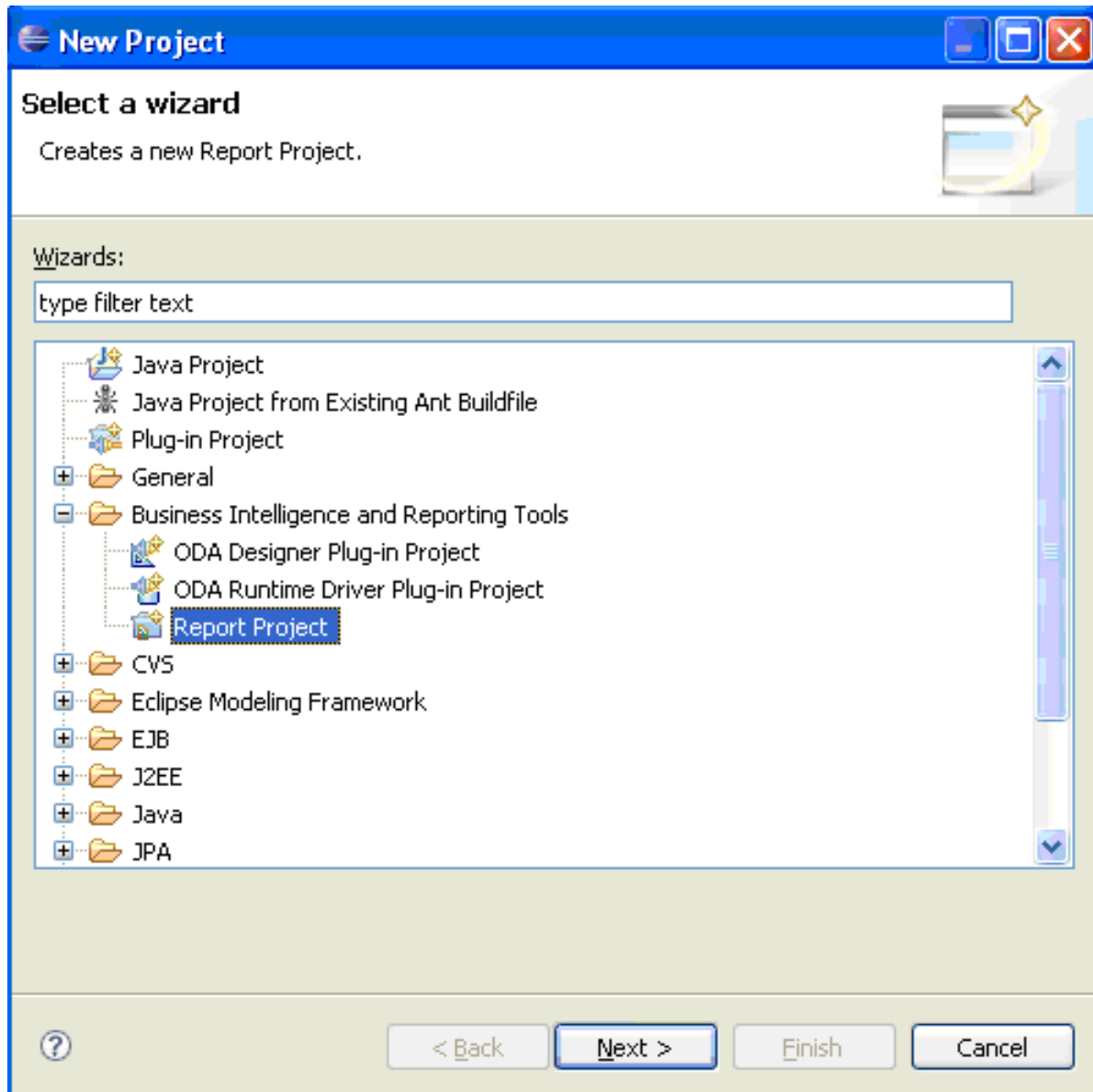
### ➤ To create a report that retrieves data from Tamino

Perform this procedure in the customized Software AG Eclipse environment.

#### 1 Create a Reporting Project.

From the Eclipse workbench, choose the menu entry **File > New > Project....**

The "New Project" wizard is started. In the list of wizards (shown below), select **Business Intelligence and Reporting Tools > Report Project**.



Choose **Next**.

In the next window, specify the name of the project.

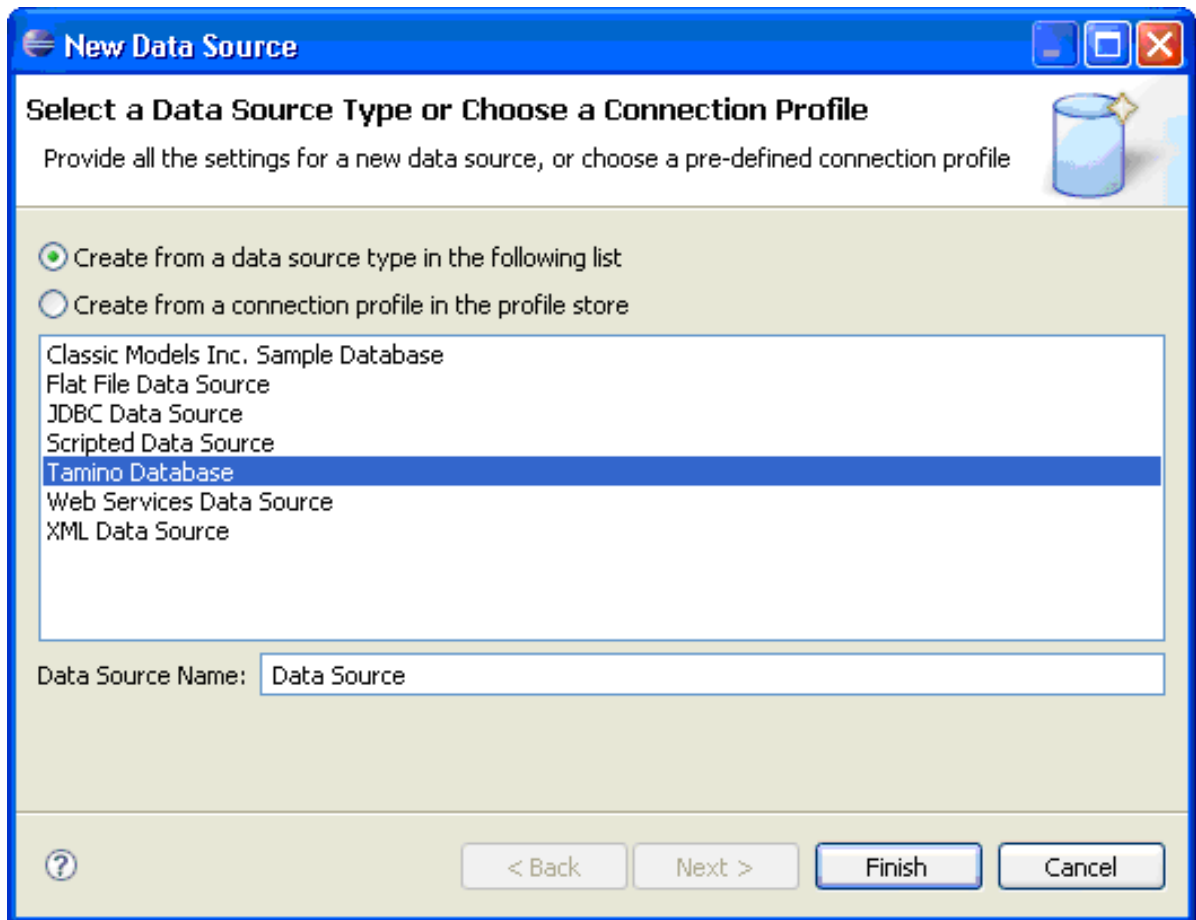
- 2 Create a Report.

In the Eclipse navigator, select your newly-created project. From the context menu (right mouse button), choose **New > Report**. In the following window, specify the name of the report.

- 3 Create a Data Source.

In the Eclipse reporting perspective, go to the Data Explorer view, select **Data Sources**, then from the context menu (right menu button) select **New Data Source**.

In the New Data Source wizard, ensure that the radio button **Create from a data source type** in the following list is checked, then select **Tamino Database**.

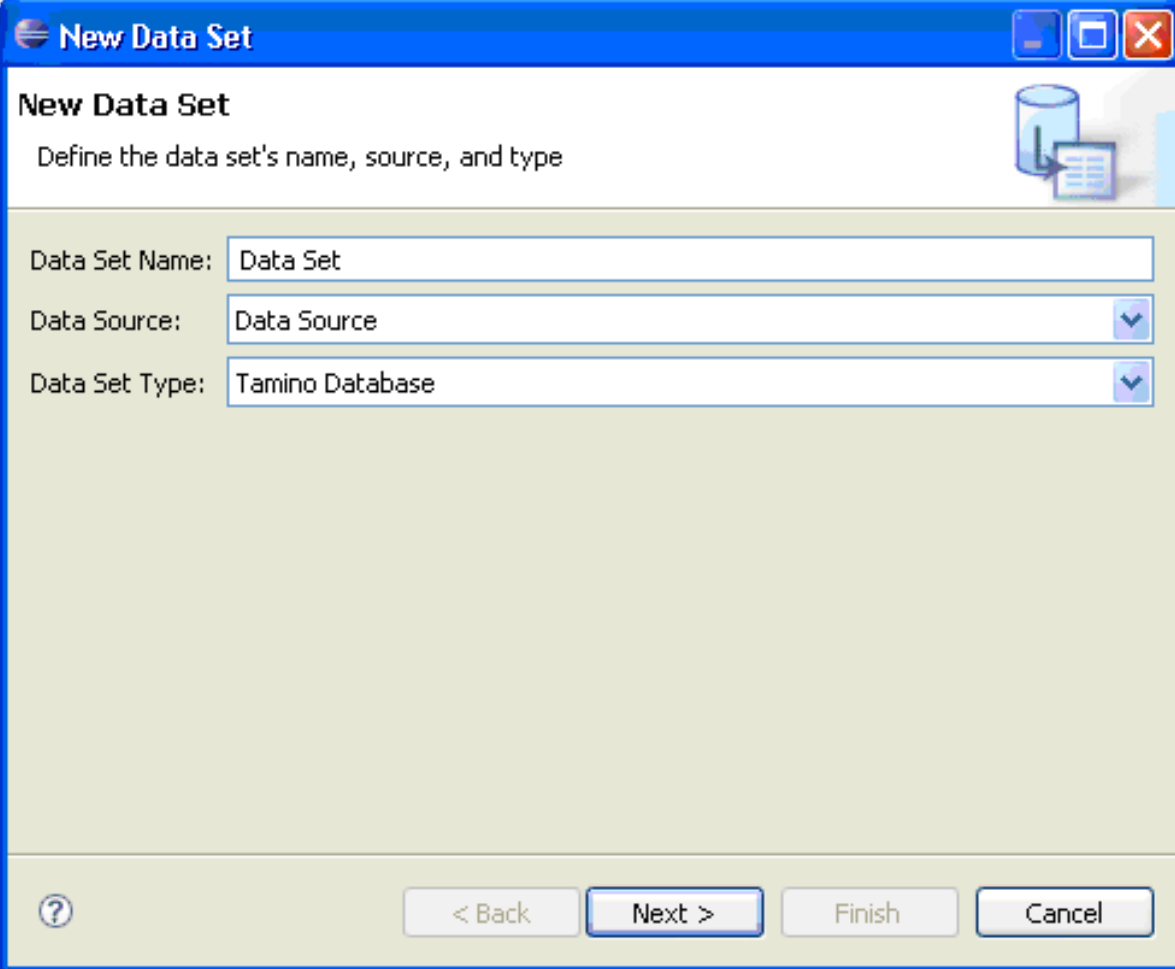


Choose **Finish**.

#### 4 Create a Data Set.

Select the data set. From the context menu, choose **New Data Set**.

In the next window, you can specify the data set's name, source and type:



The image shows a Windows-style dialog box titled "New Data Set". The title bar includes standard minimize, maximize, and close buttons. Below the title bar, the text "New Data Set" is followed by the instruction "Define the data set's name, source, and type". To the right of this text is an icon depicting a database cylinder and a document. The main area of the dialog contains three labeled input fields: "Data Set Name:" with the text "Data Set", "Data Source:" with the text "Data Source" and a dropdown arrow, and "Data Set Type:" with the text "Tamino Database" and a dropdown arrow. At the bottom left is a help icon (a question mark in a circle). At the bottom right are four buttons: "< Back", "Next >", "Finish", and "Cancel".

**New Data Set**

Define the data set's name, source, and type

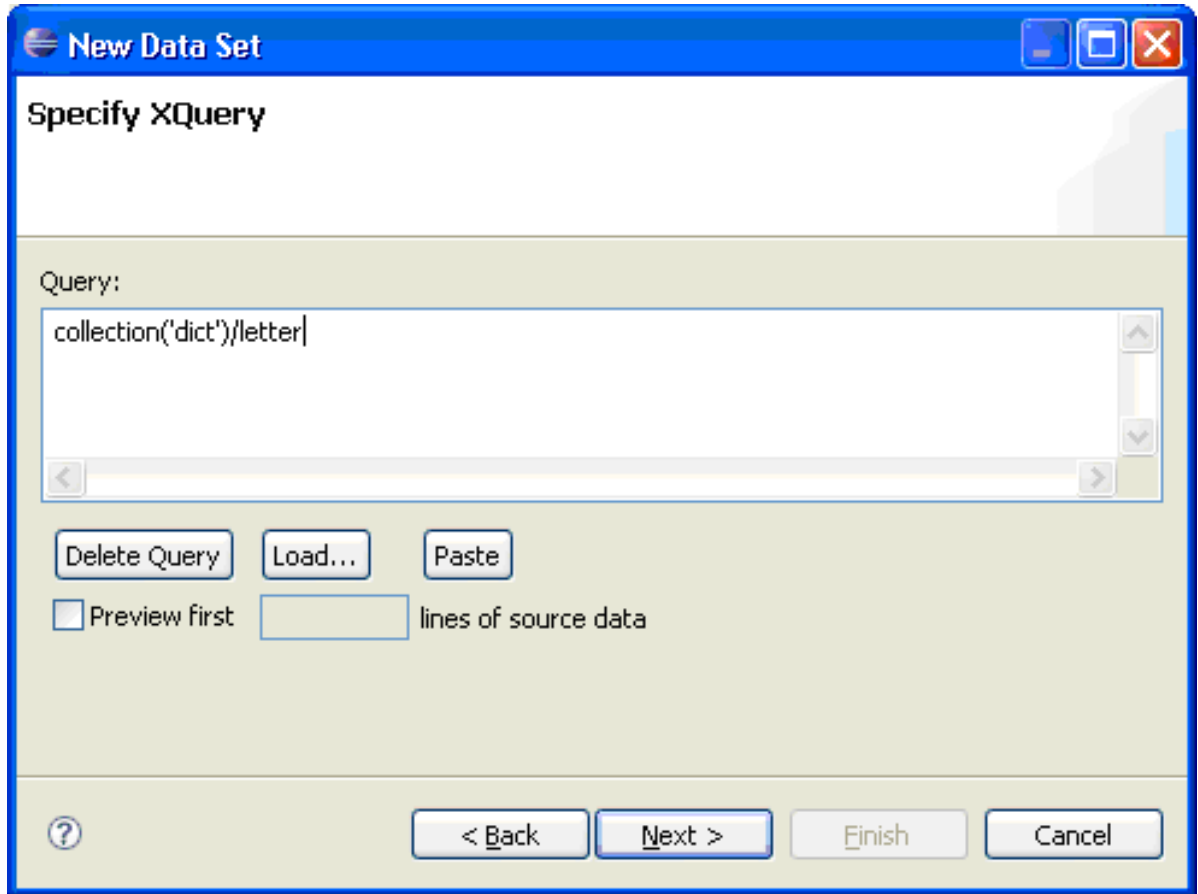
Data Set Name: Data Set

Data Source: Data Source

Data Set Type: Tamino Database

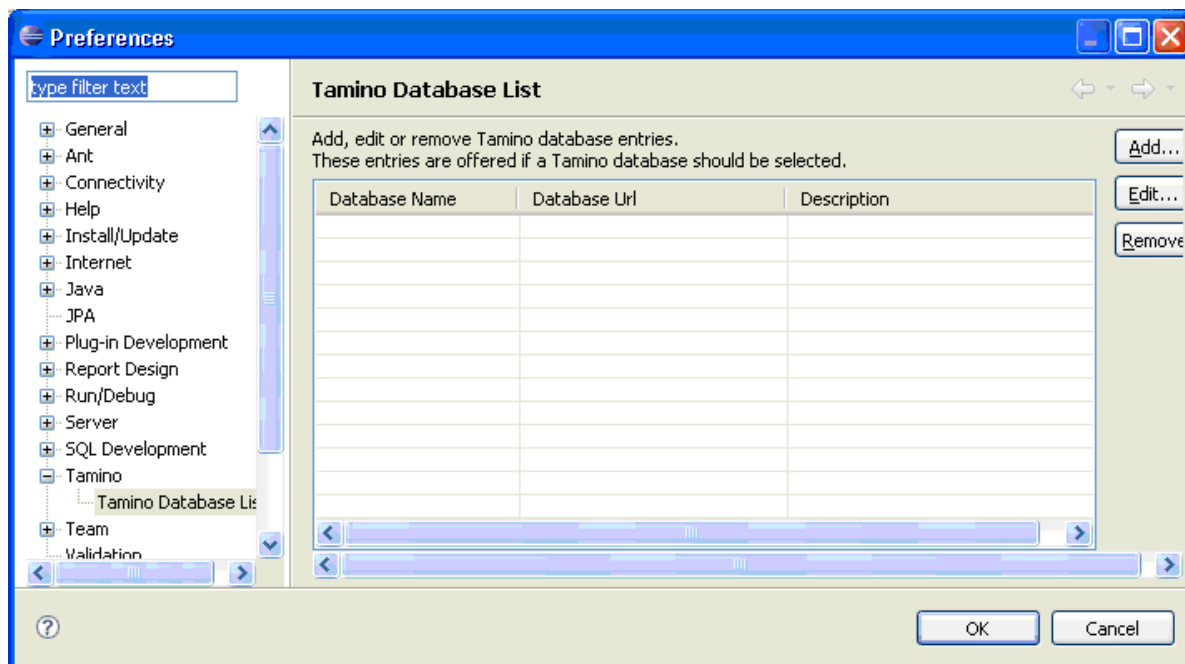
? < Back Next > Finish Cancel

In the next window, you can enter a query. The query should not use a serialization specification in the query prologue, nor should it include updating expressions:

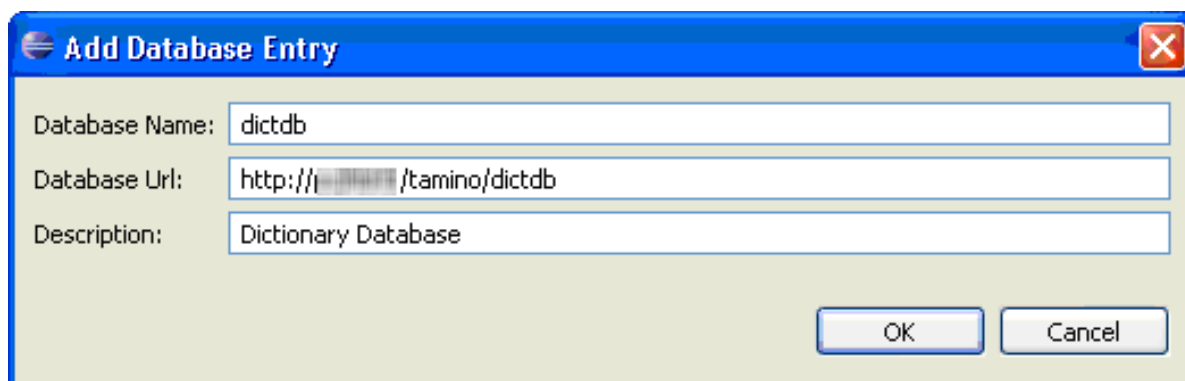


If the query returns a long list of results, you can use the **Preview first *nn* lines of source data** facility to limit the output.

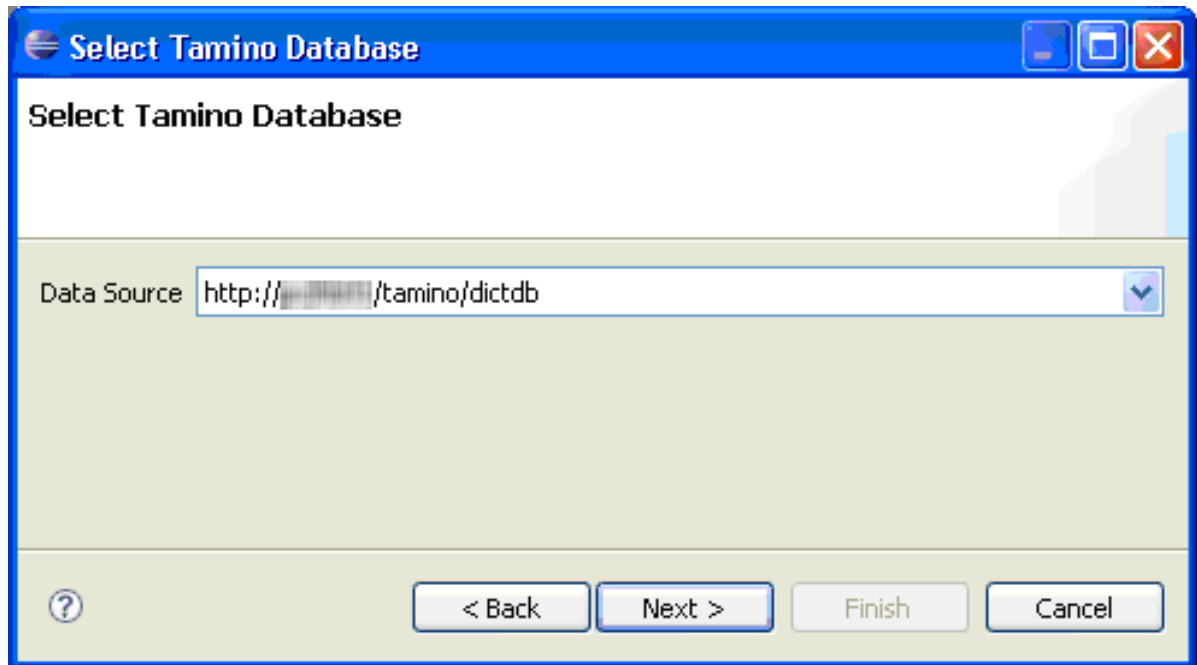
If a database URL has not yet been specified, the first time you run a query the Eclipse preference dialog will prompt you to specify the target database:



Choose **Add...** to add a new database URL, in the form *http://<server-url>/tamino/<database>*:

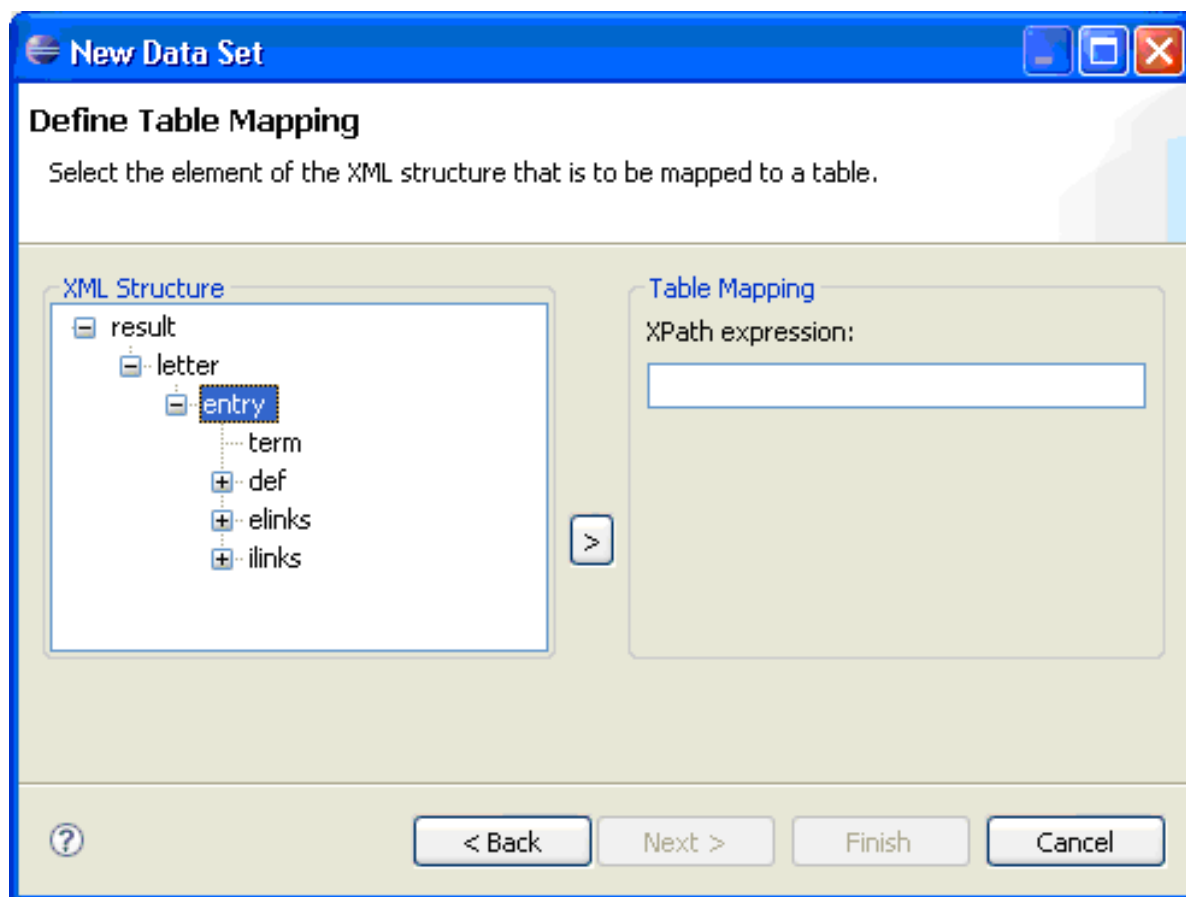


A pop-up now prompts you to choose select the database that is to be queried:



- 5 Put a table into the report and include the data from the data set.

In the next window, specify the element that should become the anchor of the intermediate result table:



In the next step, specify the columns that should be included in the table:

**New Data Set**

**Define Column Mapping**

Specify the elements of the XML structure that are to be mapped to table columns.

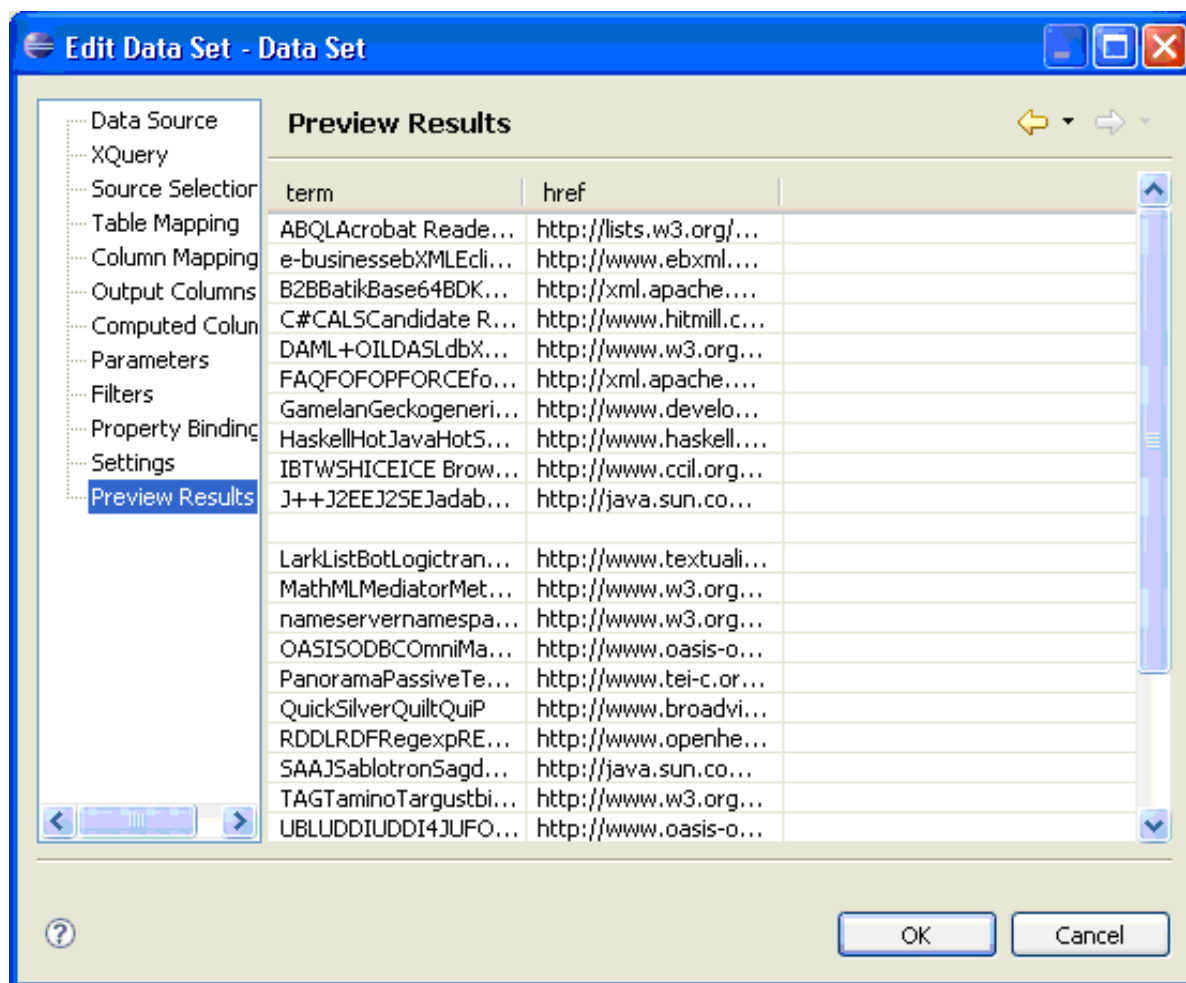
XML Structure

Column Mapping

Name	XPath	Type
term	/entry/term	String
href	/entry/elinks/eli...	String
<new mapping h...		

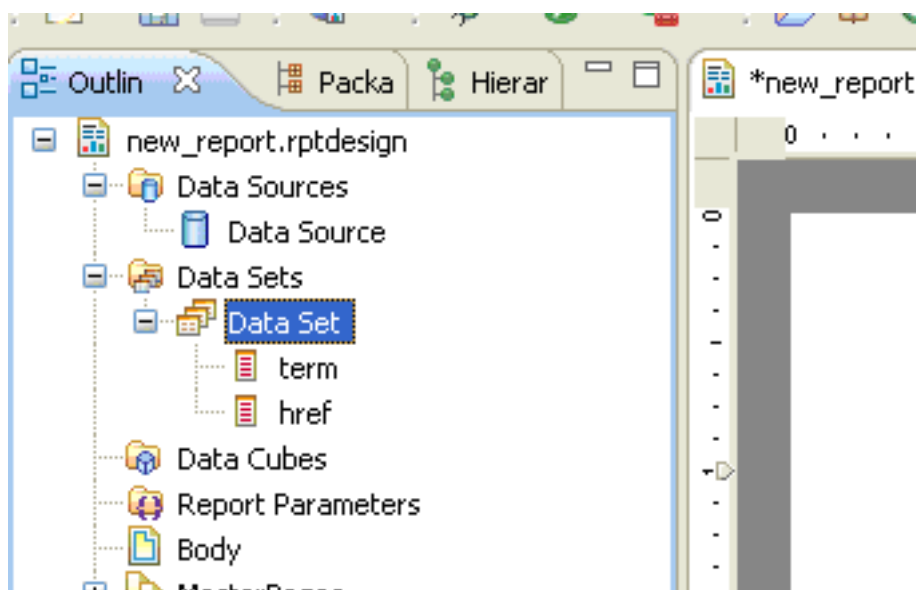
Table Preview


- You can now check your work by choosing **Preview Results**. This should show the result of your query:




In general, the options provided here correspond to the Tamino Reporting project, but the option **Source Selection** allows you to query from another database.

Choose **Finish**. You should now see the fields that you selected for the internal table, i.e. the output columns, beneath the data set's entry in the Eclipse Data Explorer view:



You can now use the data in a report. The easiest way to do this is to open the Eclipse Palette view, drag a table (2 columns) into the report editing area, then drag the two data fields into the detail row cells. Save the report, then preview it. It should show the data in the report:

term	
ABQL	<a href="http://lists.w3.org/Archives/Member/w3c-archive/2000Oct/att-0193/01-quilt">http://lists.w3.org/Archives/Member/w3c-archive/2000Oct/att-0193/01-quilt</a>
Acrobat Reader	<a href="http://www.adobe.com/products/acrobat/readstep2.html">http://www.adobe.com/products/acrobat/readstep2.html</a>
Active Desktop	
ActiveX	
ActiveXControl	<a href="http://www.microsoft.com/com/tech/activex.asp">http://www.microsoft.com/com/tech/activex.asp</a>
ADABAS	<a href="http://www.softwareag.com/adabas/">http://www.softwareag.com/adabas/</a>
Adept	<a href="http://www.arbortext.com/Products/products.html">http://www.arbortext.com/Products/products.html</a> <a href="http://www.arbortext.com/">http://www.arbortext.com/</a>
Adobe	<a href="http://www.adobe.com/">http://www.adobe.com/</a>
Ælfred	<a href="http://www.opentext.com/">http://www.opentext.com/</a>
AJAX	<a href="http://www.adaptivepath.com/publications/essays/archives/000385.php">http://www.adaptivepath.com/publications/essays/archives/000385.php</a> <a href="http://">http://</a>
alphaWorks	<a href="http://www.alphaworks.ibm.com/Misc/alphaWorks.txt">http://www.alphaworks.ibm.com/Misc/alphaWorks.txt</a>
Altova	<a href="http://www.xmlspy.com/company.html">http://www.xmlspy.com/company.html</a>
Amaya	<a href="http://www.w3.org/Amaya/">http://www.w3.org/Amaya/</a>
Ant	<a href="http://jakarta.apache.org/ant/">http://jakarta.apache.org/ant/</a>
Antenna House	<a href="http://www.antennahouse.com/home.html">http://www.antennahouse.com/home.html</a> <a href="http://www.antennahouse.com/xslfo:">http://www.antennahouse.com/xslfo:</a>
	
<div> Layout Master Page Script XML Source Preview </div>	

# 5

## Deploying the Tamino Reporting Runtime Engine

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Eclipse and BIRT are necessary parts of the software that creates Tamino reports, and you can use the integrated preview facility at any time in order to view your report. However, it may be desirable to view reports in environments where Eclipse and BIRT are not available. Tamino provides an enhanced BIRT runtime engine that allows you to do this. The Tamino Reporting runtime engine is a web application, in other words a WAR (web archive) file that is deployed under an application server, for example Tomcat. Tamino includes a version of the BIRT report engine that is aware of the additional parameter `URL`. This software is named *TaminoReportEngine*.

To run Tamino reports outside of Eclipse, copy the file *TaminoReportEngine.war* from the folder `$INODIR\ $INOVERS\Files` into the Software AG Common Tomcat folder *webapps*. Stop and restart Tomcat in order to unpack the WAR file and create a new folder named *TaminoReportEngine*.

Having prepared the runtime environment (application server) by deploying the Tamino Reporting Runtime Engine, you can now run reports on that application server. The next step is to deploy the report to the prepared application server, as described in the [next chapter](#).



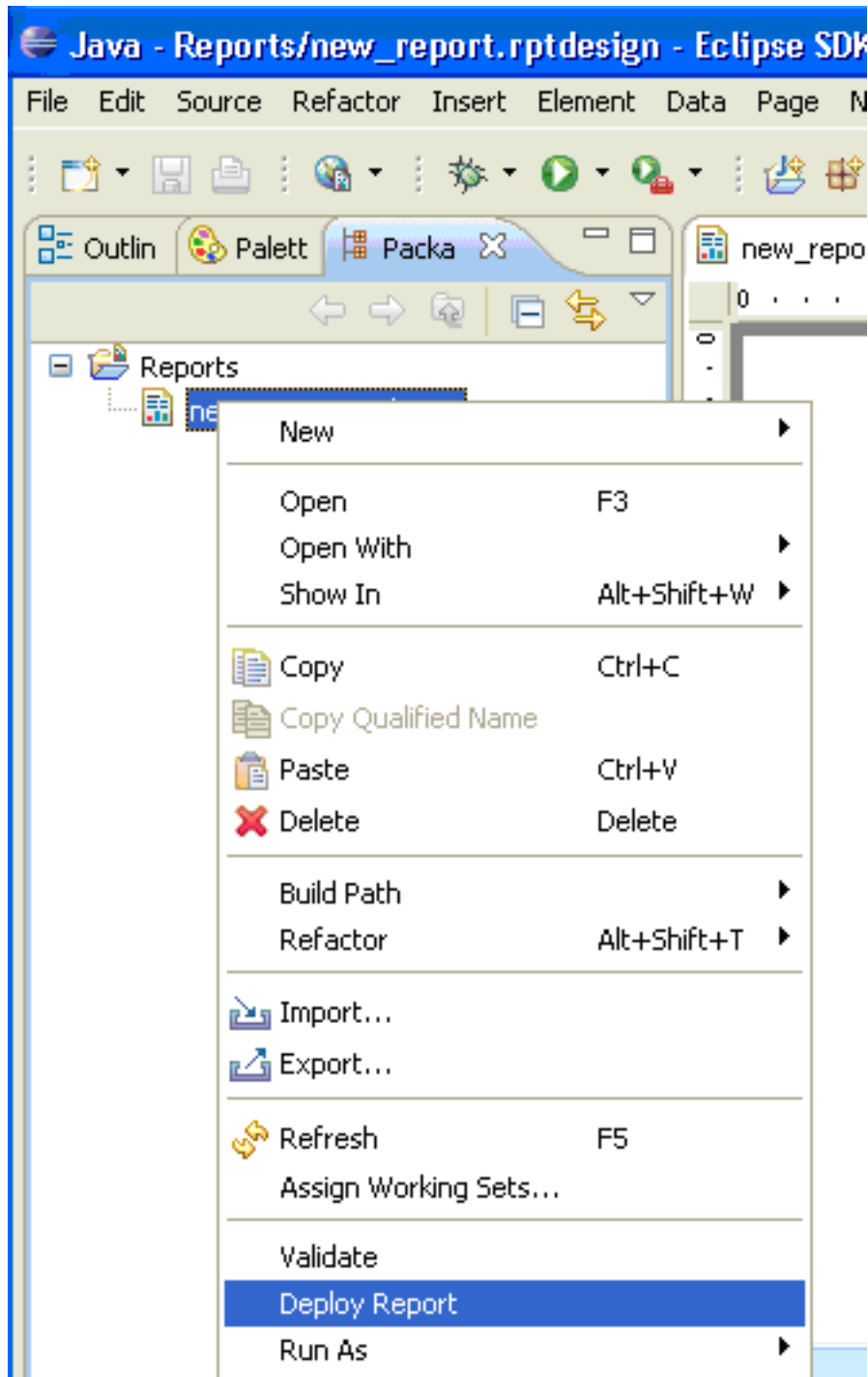
## 6 Deploying the Report to an Application Server

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Before deploying a report to an application server, the server must be prepared by deploying the Tamino Reporting Runtime Engine to it. This is described in the [previous chapter](#).

In order to run a Tamino report with the TaminoReportEngine, the report's *rptdesign* file must be present in the folder *webapps/TaminoReportEngine* of the appropriate application server. There are two ways of doing this:

- Copy it manually from the appropriate project folder in the Eclipse workspace; alternatively:
- Choose **Deploy Report** from the report's context menu in the Eclipse Package Explorer view:



This opens the Save As dialog. Browse to *Software AG Common Tomcat > webapps > TaminoReportEngine*, then save the report file.

# 7

## Running the Report

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### ➤ To run the report with the TaminoReportEngine

(i.e. typically in an environment that does not have Eclipse)

- 1 Start a web browser.
- 2 In the browser's address (URL) field, enter the URL of the Tamino report engine and specify 2 parameters:
  1. the name of the report file (rptdesign file);
  2. the URL of the Tamino database from which the report should fetch its data.



**Note:** Additional report parameters may be specified as necessary.

Example:

```
http://localhost:8080/TaminoReportEngine/run?__report=new_report.rptdesign&__URL=http://pcxyz/tamino/dictdb
```

