Oracle® Fusion Middleware

Getting Started with Oracle Business Intelligence Publisher

11*g* Release 1 (11.1.1)

E28374-02

September 2013

Welcome to *Getting Started with Oracle Business Intelligence Publisher*. This tutorial uses BI Publisher Trial Edition 11.1.1.7.1 to get you up and running quickly by giving you a tour of the BI Publisher report viewer and then guiding you through the creation of your first report.

To get you started using BI Publisher within your own enterprise, this tutorial also covers connecting to a data source and connecting to an email server.

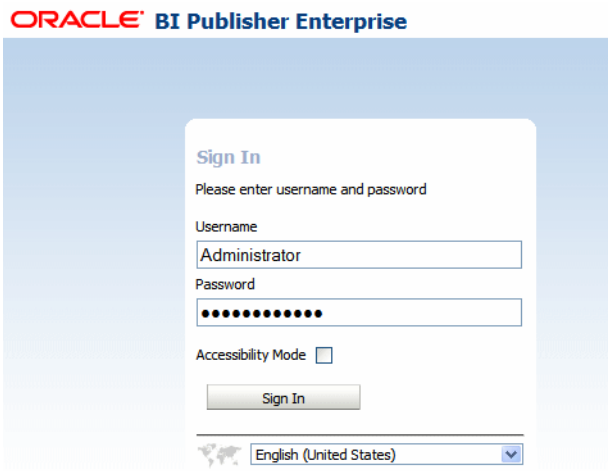
This guide covers the following topics:

- Signing In
- Viewing a Report
- Creating Your First Data Model
- Creating Your First Report and Layout
- Connecting to a Data Source
- Connecting to an Email Server
- Learning More About Oracle BI Publisher
- Documentation Accessibility

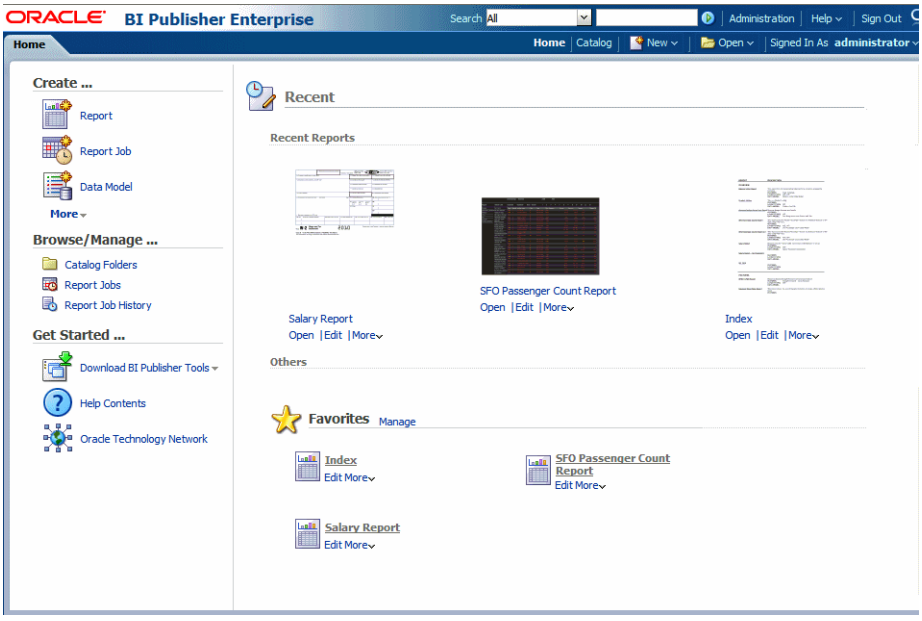
1 Signing In

To sign in to the BI Publisher Trial Edition:

1. Open the sign in window in one of the following ways:
   - From the welcome page, click **Sign In to BI Publisher**.
   - From the Windows **Start** menu, select **Programs**, then **Oracle BI Publisher Trial Edition**, then **Sign In to BI Publisher**.
2. In the sign in window, enter the credentials:
   - **Username**: The username you specified during installation
   - **Password**: The password you specified during installation



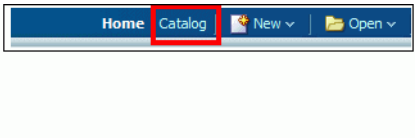
When you sign in to BI Publisher, the **Home** page displays. The Home page is a task-oriented, centralized workspace combined with a global header, allowing access to BI Publisher objects, editors, and help documentation. The **Recent** section enables quick access to the objects you have recently interacted with. Use the **Favorites** region to personalize the Home page with links to the items you use the most.



2 Viewing a Report

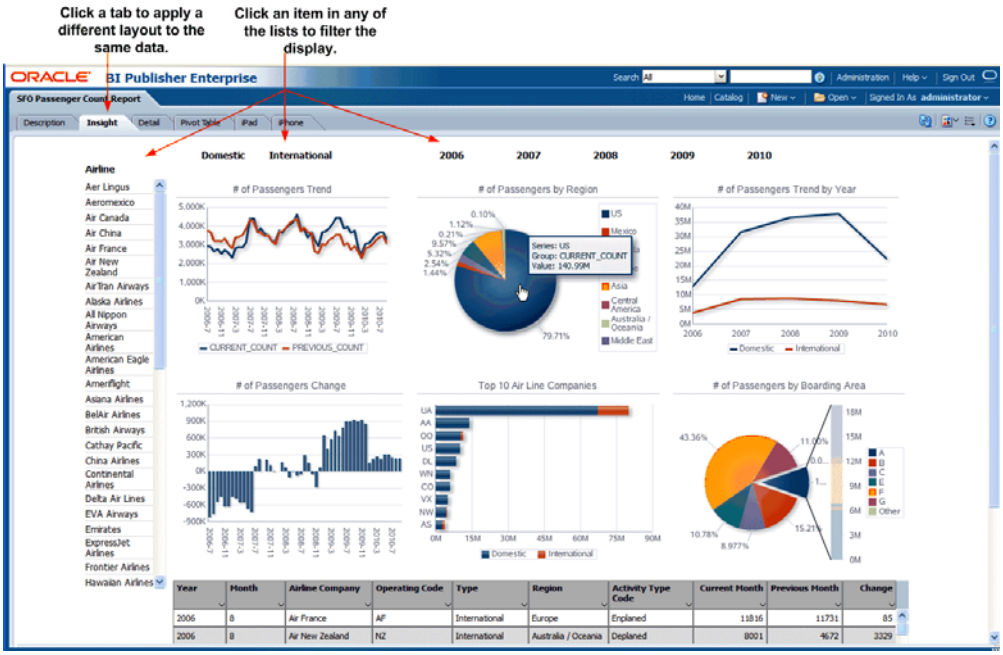
The BI Publisher Trial Edition comes with many predefined sample reports that demonstrate BI Publisher's robust reporting capabilities. To view a report:

1. Click the **Catalog** link in the **Browse/ Manage** section or click the **Catalog** link in the global header.



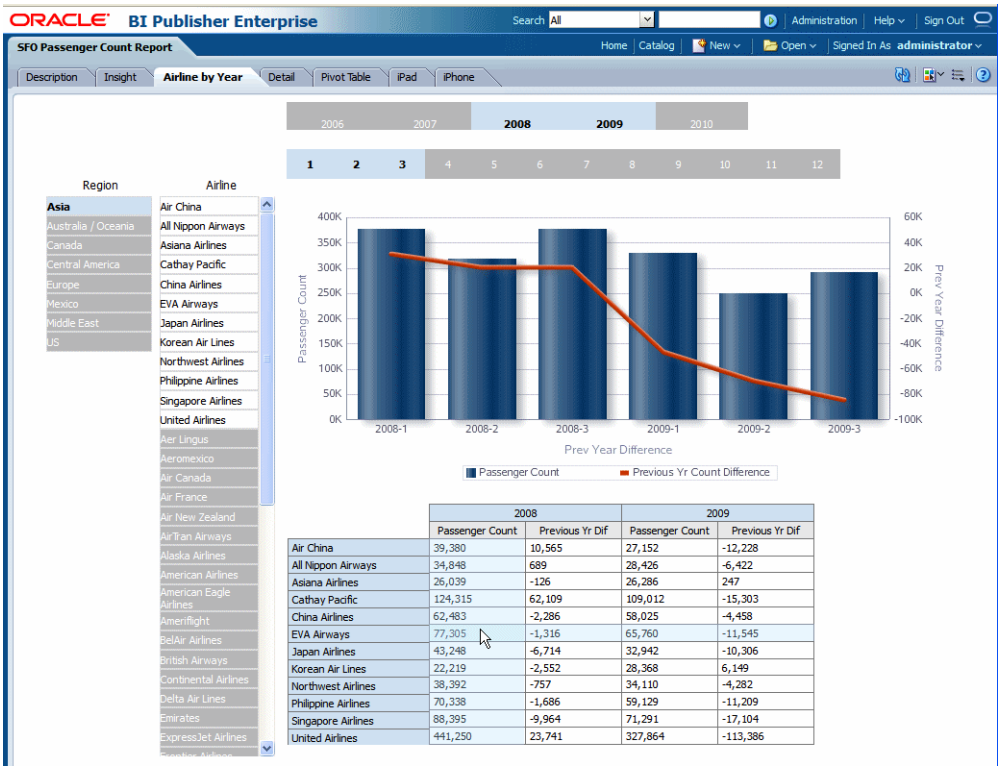
The **Catalog** page is displayed as a tree structure on the left side of the page with the details on the right. The catalog objects such as reports and data models are organized into folders.

2. Expand **Shared Folders**, expand the **Samples** folder, expand the **1. Overview** folder and click the **Open** link for the **SFO Passenger Count Report**.

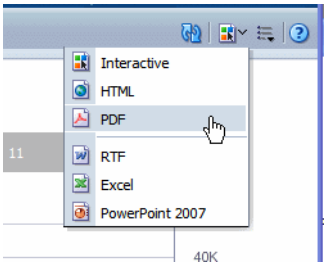


3. Explore the features of this interactive report on your own or follow these guided steps:

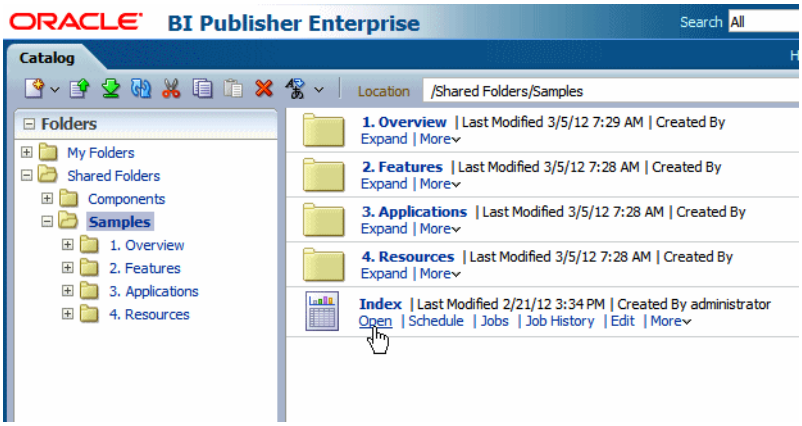
   - This report includes a **Description** tab that describes the insights provided by each of the report layouts. Each of the other tabs is a different layout of the same data. Click the **Description** tab to read about the highlights of the SFO Passenger Count Report.
   - Click the **Insight** tab.
     - Click a specific airline to filter the report components by just that airline. To filter by multiple choices, click additional airlines while pressing Shift+Ctrl. Notice that the selections move to the top of the list.
     - The horizontal lists enable you to filter the data by Domestic or International flights and by specific years.
     - Click any particular data point on a chart to filter the rest of the report components by that measure.
     - Note the scrollable table. You can filter the table by any value in any column and also sort based on any column.
   - Click the **Airline by Year** tab. This layout highlights the trend of passenger volume from one year to the next. Again, you can select a specific airline to focus on, or a specific region. Also, you can select specific years or months (to select multiple items click the items while pressing Shift+Ctrl). The following example shows the Airline by Year layout filtered by Region: Asia; Year: 2008, 2009; Month: 1,2,3.



- Note that these layouts by default display in the interactive output format. To change the output format, click the **View Report** toolbar button to select another format.



4. To continue exploring the features of the BI Publisher sample reports, navigate to Shared Folders, then Samples, and then Index. The **Index** provides descriptions of and links to each of the sample reports. The Index can help you find examples of the reporting features that your enterprise requires.



3 Creating Your First Data Model

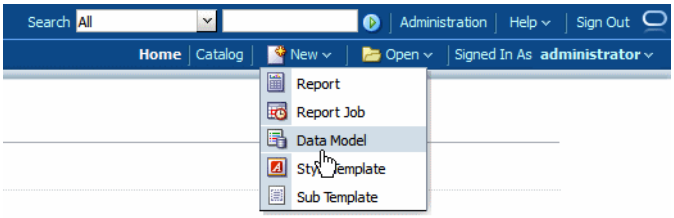
Your first report is based on employee data in the sample schema provided in the BI Publisher Trial Edition. In this procedure you create a data model to extract the employee information. This data model will include a parameter to enable users to make a selection for employee department at run time. This section includes the following procedures for creating your data model:

- Opening the Data Model Editor
- Setting the Data Model Properties
- Creating a SQL Data Set
- Defining a List of Values for the Parameter
- Viewing and Saving Sample Data

3.1 Opening the Data Model Editor

To open the data model editor:

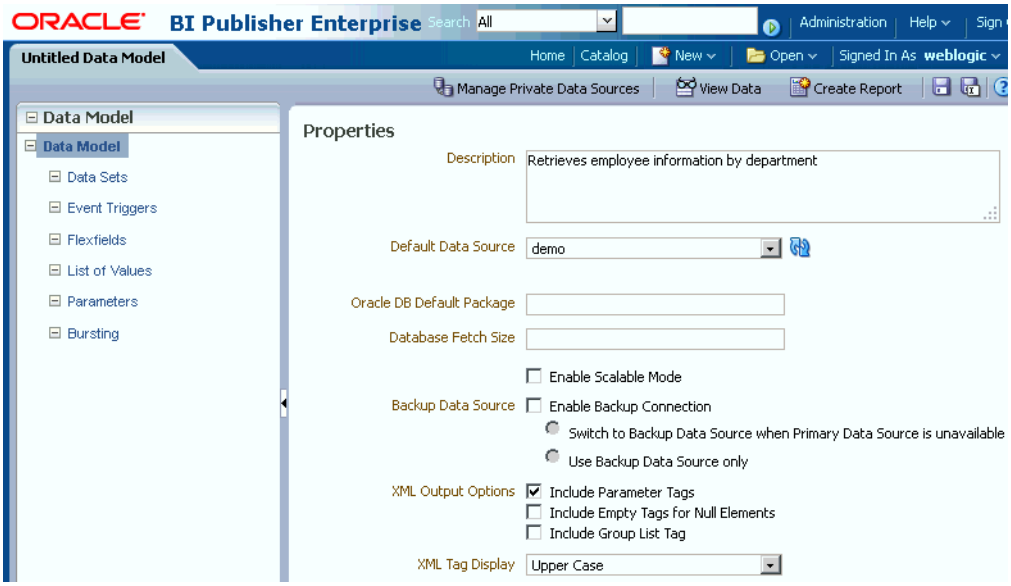
- On the global header, click **New** and then select **Data Model** from the menu.



3.2 Setting the Data Model Properties

Set the data model properties as follows:

- In the task pane on the left, select **Data Model** to display the **Properties** pane.
- From the **Default Data Source** list, verify that **demo** is selected. Optionally, add a description to the data model.

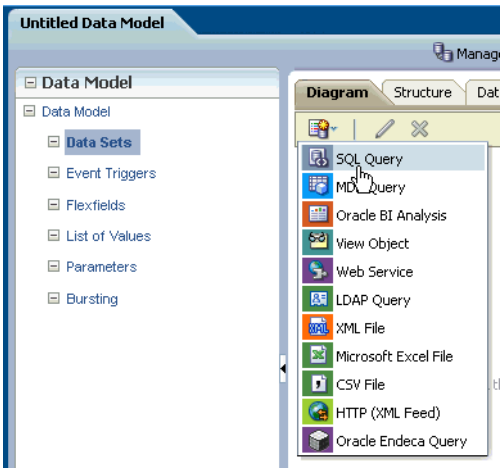


3.3 Creating a SQL Data Set

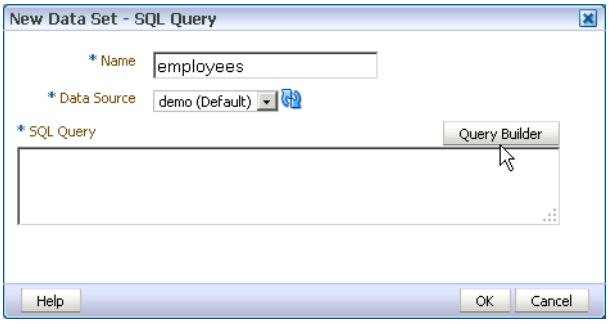
The employee data for this report is retrieved by a SQL query against the demo database.

To create a SQL data set:

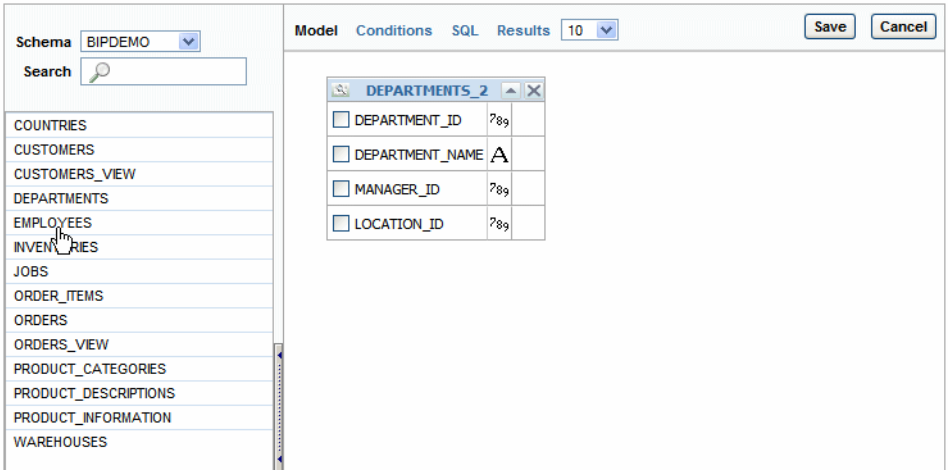
1. From the task pane on the left, select **Data Sets**.
2. From the **New Data Set** menu, select **SQL query**.



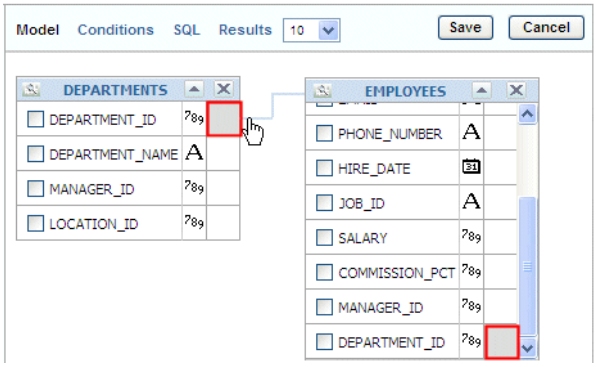
3. In the **Create Data Set - SQL** dialog box, enter a name for the data set (for example: employees) and click **Query Builder**.



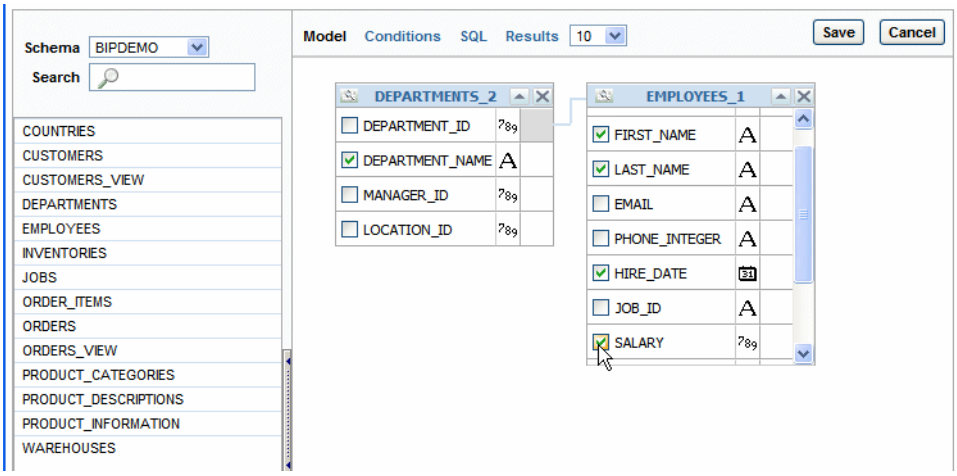
4. The **Query Builder** launches displaying the schema objects on the left side. Click **Departments** and **Employees** to add them to the work area.



5. Define a join between these two tables as follows: Click the join column beside **DEPARTMENT_ID** in the **DEPARTMENTS** table. Similarly click the join column for **DEPARTMENT_ID** in the **EMPLOYEES** table.

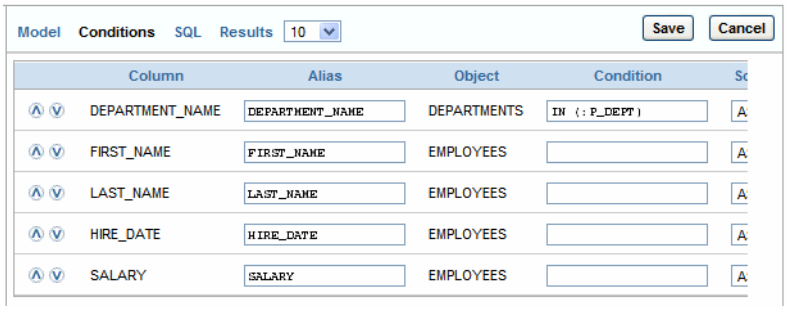


6. Select the following columns from the tables (by selecting the checkboxes beside the column names):
   - Select **DEPARTMENT_NAME** from the **DEPARTMENTS** table
   - Select **FIRST_NAME**, **LAST_NAME**, **HIRE_DATE**, and **SALARY** columns from the **EMPLOYEES** table



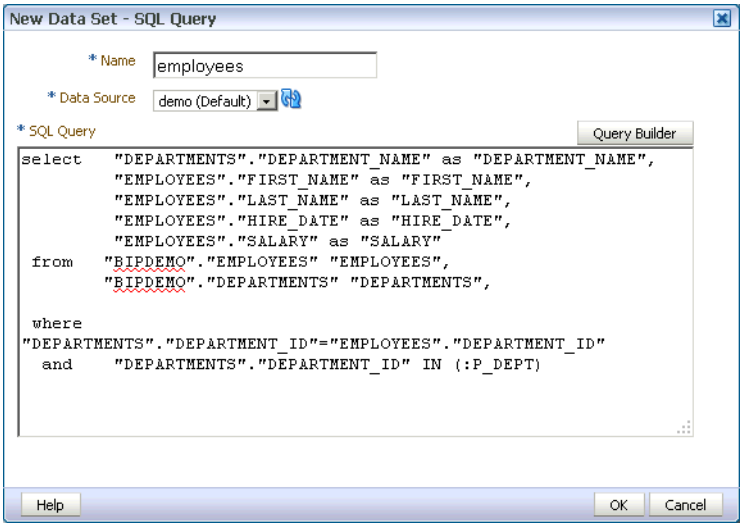
7. Click the **Conditions** tab.

8. Add a parameter condition by typing "IN (:P_DEPT)" in the **Condition** field for the DEPARTMENT_NAME column. This defines a parameter P_DEPT on the department name column.



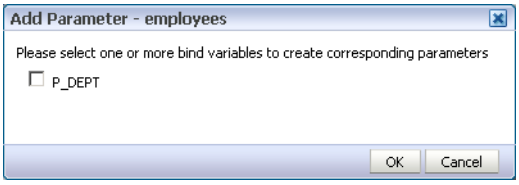
The IN condition is used here to enable the parameter to accept multiple values for the DEPARTMENT_NAME column.

9. Click **Save**. The SQL query displays in the **New Data Set** dialog.

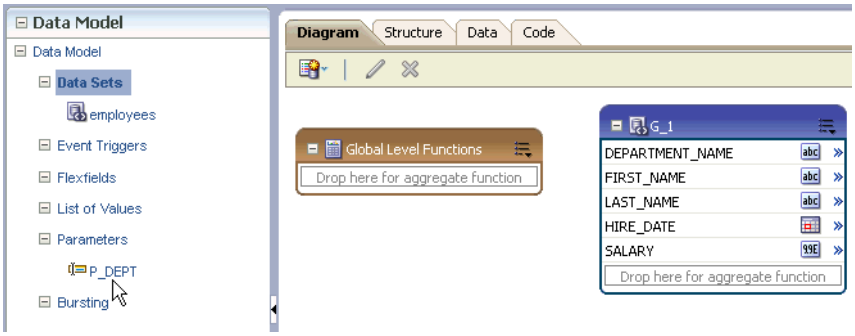


Tip: When building your own queries, if the Query Builder does not provide the functions required for your data set, you can edit the query manually in this dialog. You can also copy and paste SQL code from other SQL editors.

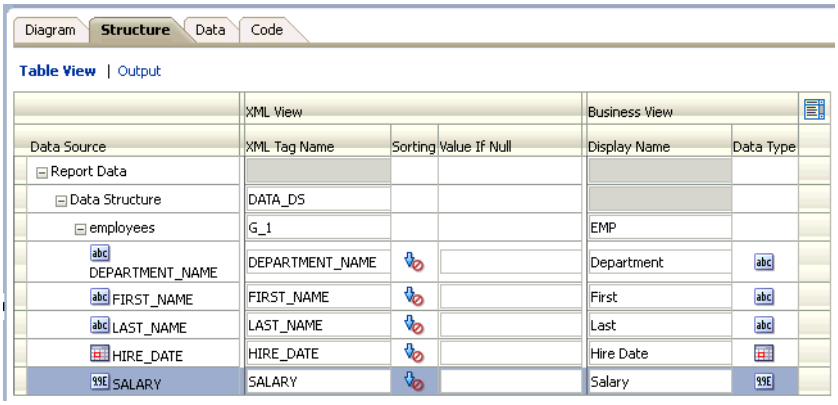
10. Select the parameter check box, and then click **OK**. The data model editor prompts you to allow the creation of the P_DEPT parameter.



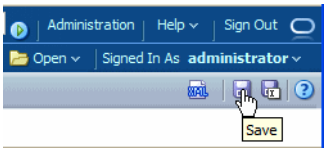
The data model editor confirms the creation of the parameter. Click **OK**. Note that the parameter has been created and the SQL data set now displays as an object on the **Diagram** tab called G_1.



11. Click the **Structure** tab. The **Structure View** enables you to edit characteristics of your data set, including the **Display Name** of the data elements. The display names can also be customized in the report layout, but it is often more efficient to edit the data set. Rename the **Display Name** for the column names as you would like them to appear in the report.

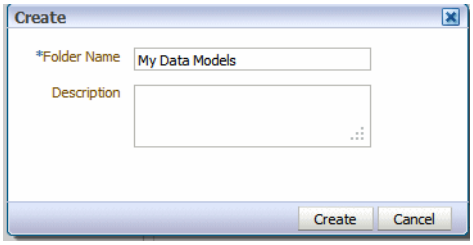


12. Click **Save**.

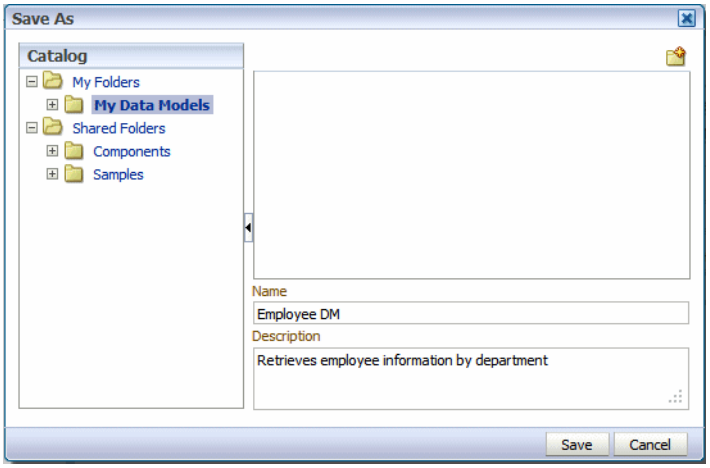


13. In the **Save** dialog, select **My Folders**. Click the **New Folder** icon to create a new folder for your data model.

    Enter a name for your folder and click **Create.**



14. Enter the name for your data model and click **Save** to save it to your new folder.

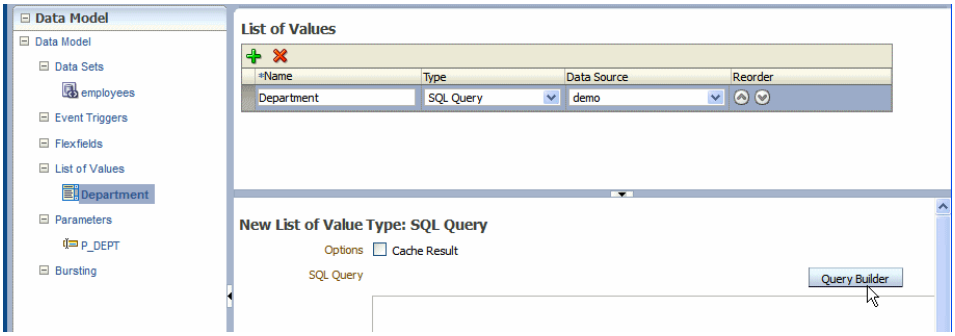


3.4 Defining a List of Values for the Parameter

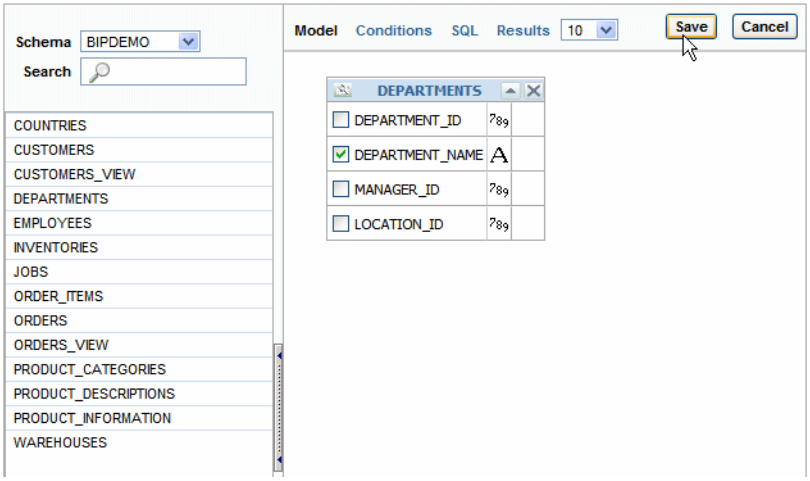
The data model editor created the parameter, P_DEPT, for you. In your final report, you select the value to pass to the report from a list of values (or menu).

To add the list of values and associate it with the parameter:

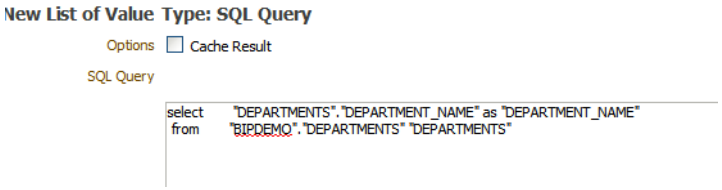
1. In the Data Model pane, click **List of Values**. In the **List of Values** pane click to create a new list of values. Enter the following:
   - Enter **Department** as the **Name** of the List of Values.
   - Select **SQL Query** as the **Type**.
   - Ensure that **demo** is selected as the **Data Source**.
   - Click **Query Builder** to define the query to return department names for the list of values.



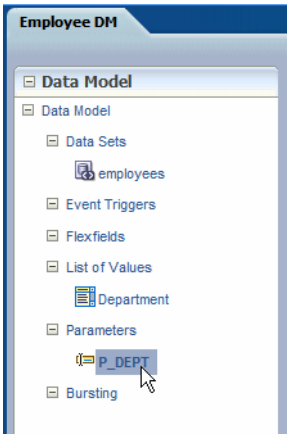
2. In the **Query Builder**, add the **DEPARTMENTS** table and select **DEPARTMENT_NAME**. Click **Save**.



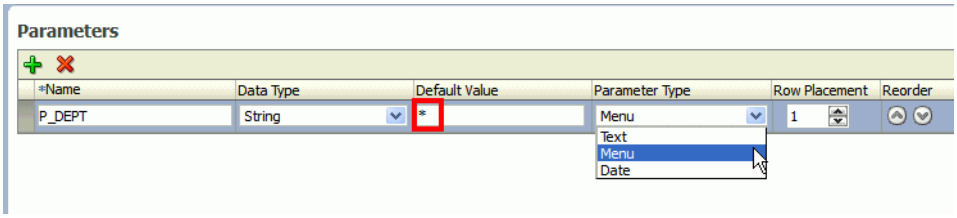
The list of values pane displays the SQL query. Click **Save** to save your data model.



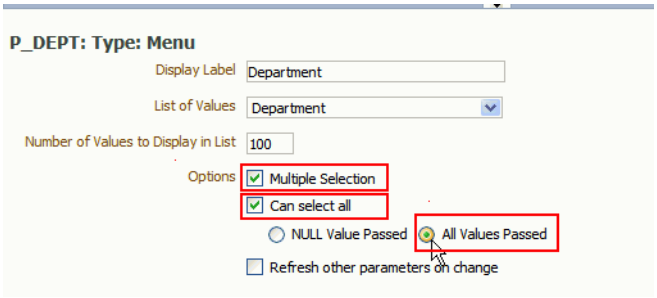
3. To associate the P_DEPT parameter with this list of values, under the **Parameters** node of the **Data Model** pane, click **P_DEPT**.



4. In the Parameters pane, in the **Default Value** field, enter * (asterisk), and then select **Menu** as the **Parameter Type**.



5. Set the Menu properties as follows:
   - In the **Display Label** field, enter Department.
   - Ensure that Department is selected as the **List of Values**.
   - Select the **Multiple Selection** check box.
   - Select the **Can select all** check box.
   - Select the **All Values Passed** option.



6. Click **Save**.

3.5 Viewing and Saving Sample Data

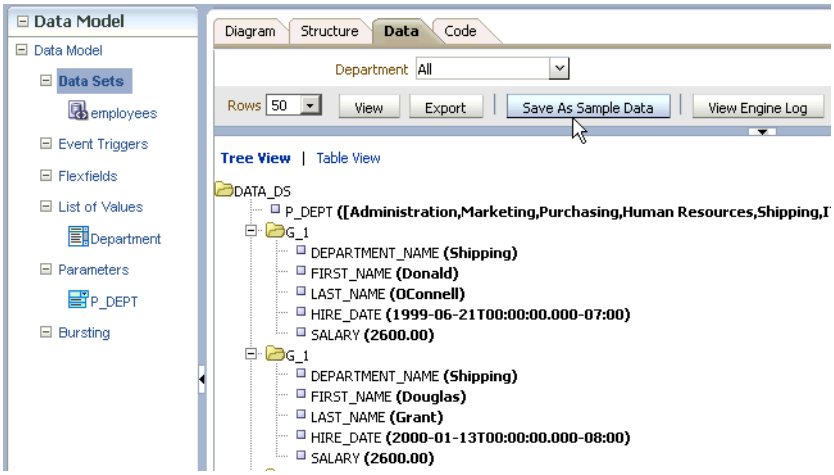
To use BI Publisher's report layout tools, your data model must include sample data.

To run the data model and save sample data:

1. On the data model editor toolbar, click **View Data**.

2. On the Data page, the Department parameter is set to the default value, All. Select the number of rows to return (50) and click **View**. The data displays in the viewer pane by default in the Tree View.

3. Click **Save As Sample Data** to save this sample to the data model.



4. Click **OK** to return to the data model.

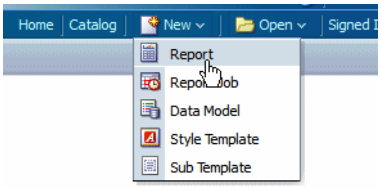
5. Click **Save**.

Your are now ready to create a report using your data model.

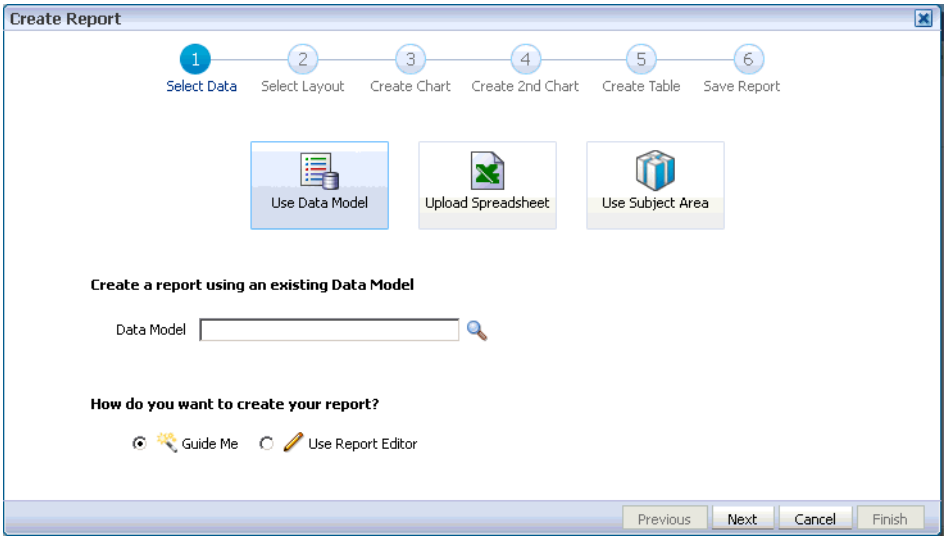
4 Creating Your First Report and Layout

To create a report:

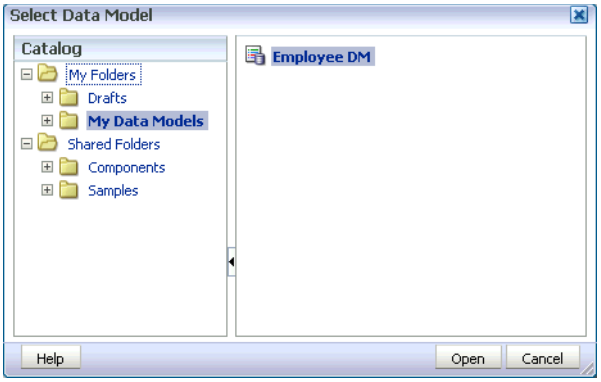
1. On the global header, click the **New** menu and then select **Report**.



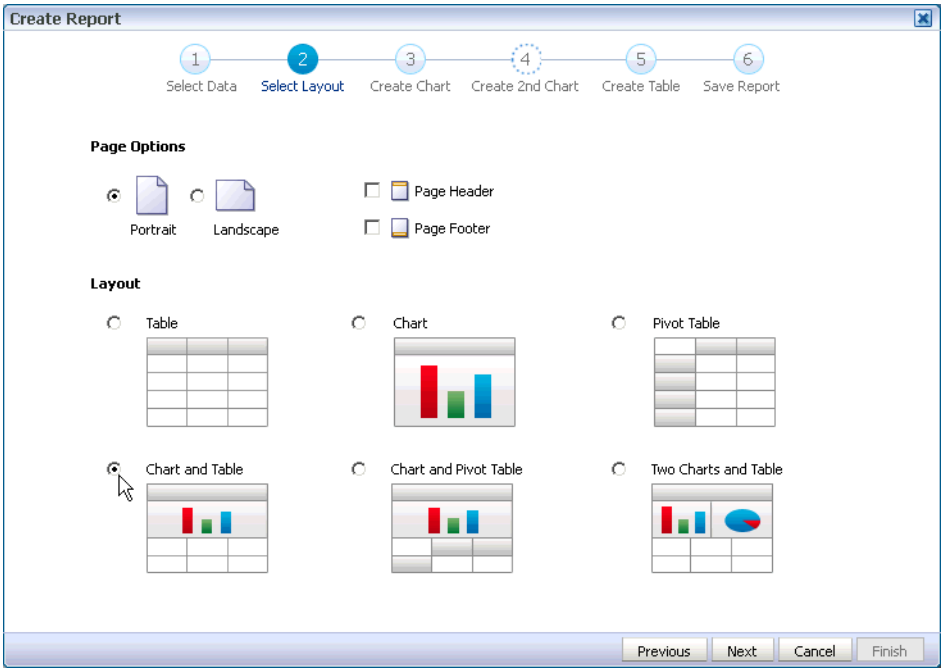
2. In the Report Wizard, the first step is to select the data. Select **Use Data Model**, and then to the right of the Data Model field, click the browse button.



3. In the **Select Data Model** dialog, select **Employee DM**, and then click **Open** to return to the Create Report Wizard.

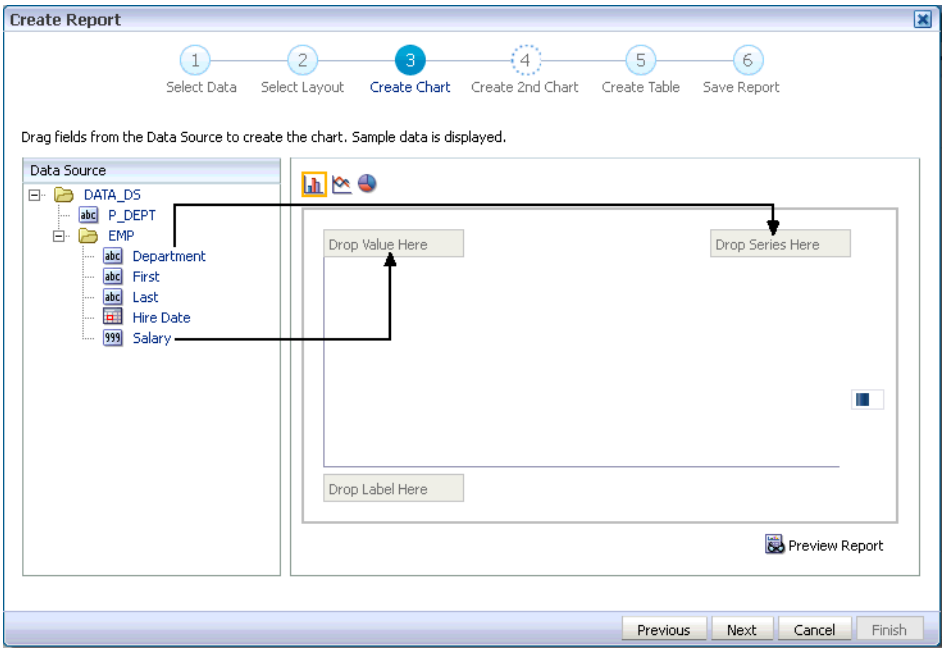


4. Click **Next**.
5. Select the **Chart and Table** option, and then click **Next**.



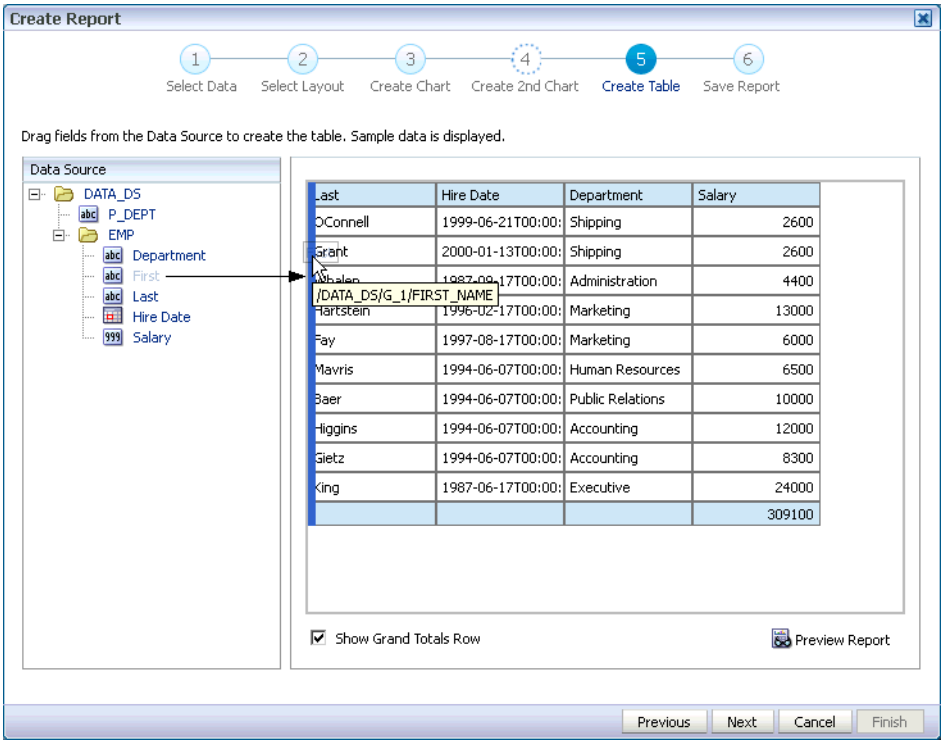
The templates provided here contain report components already inserted in a predefined layout. Predefined templates make building reports easier and faster and the report output more consistent.

6. Click the **Department** element and drag to the **Drop Series Here** position on the chart. Click the **Salary** element and drag it to the **Drop Value Here** position on the chart. The chart populates with data.

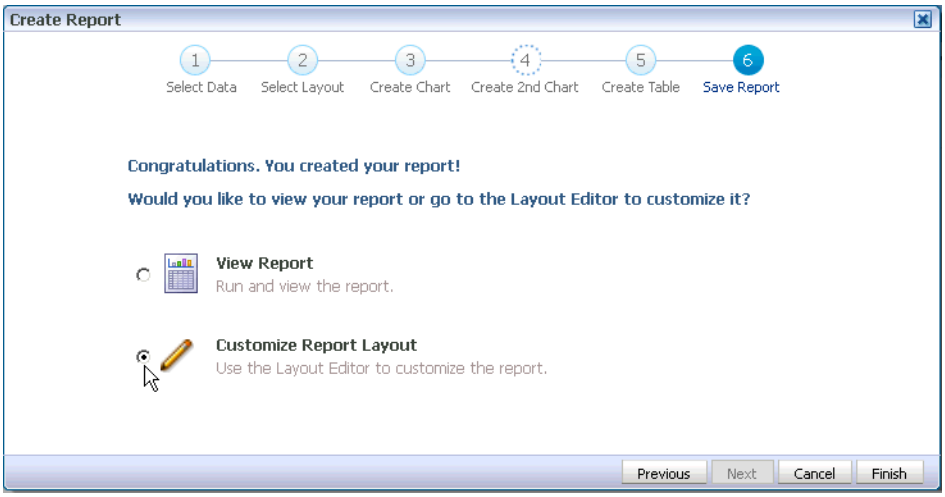


7. Click **Next**.

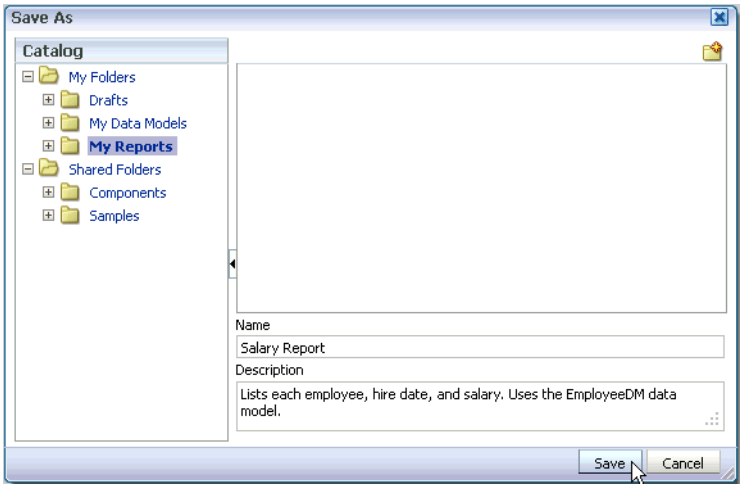
8. The table layout automatically includes the columns you selected for the chart. To complete the table, drag any additional columns from the data source, and then click **Next**.



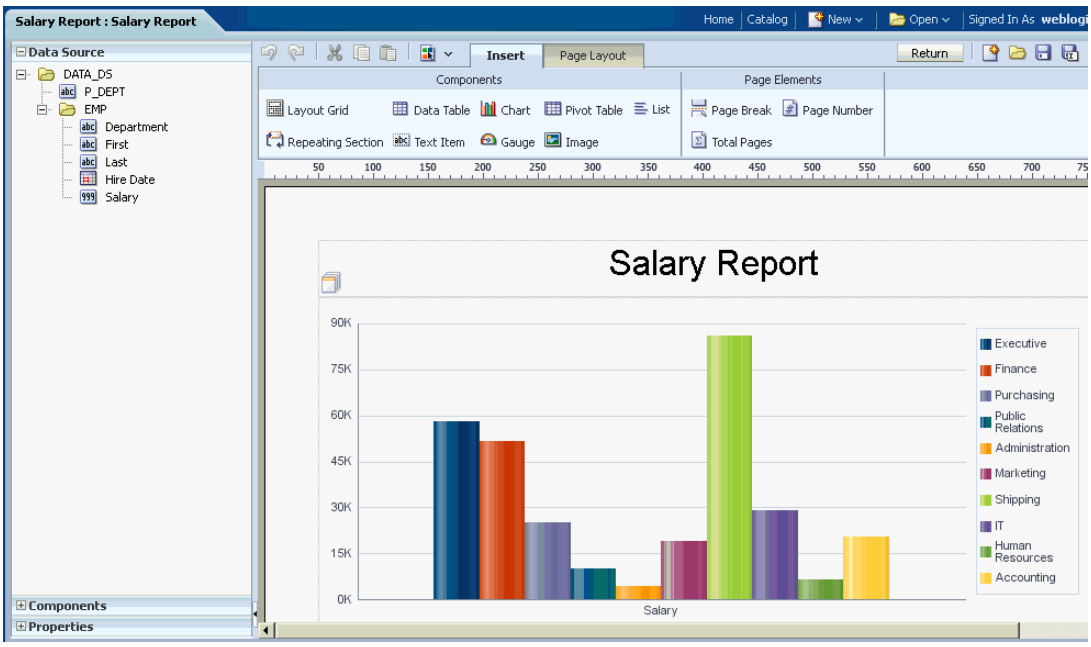
9. Select the **Customize Report Layout** option to navigate to the layout editor, and then click **Finish**.



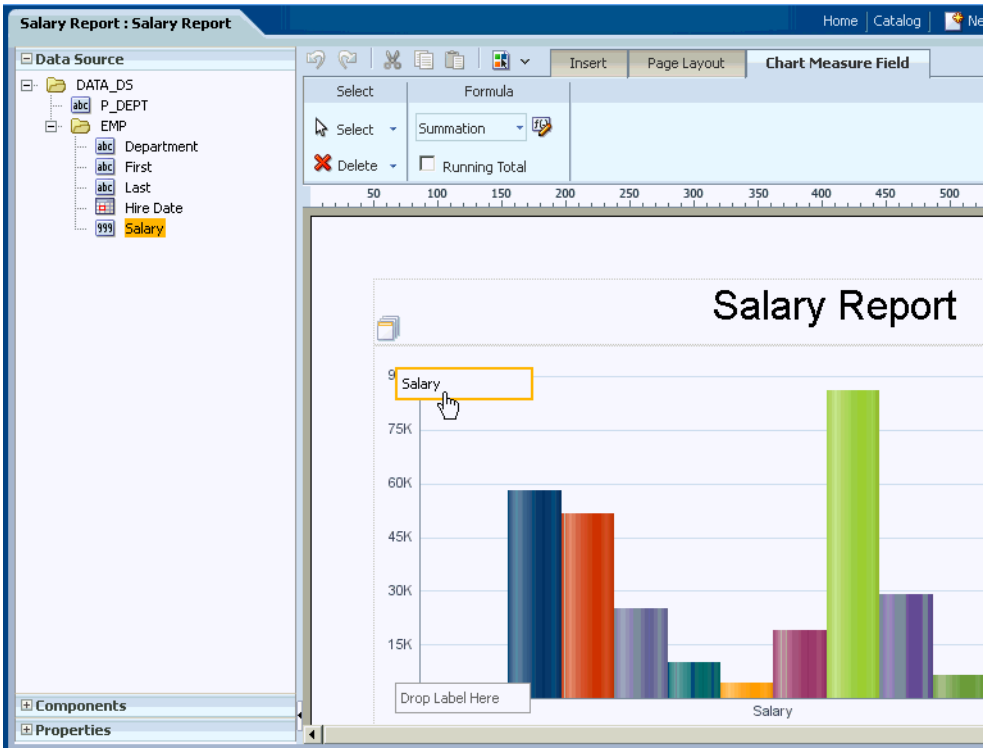
10. Enter a name and optional description for the report, and then click **Save**.



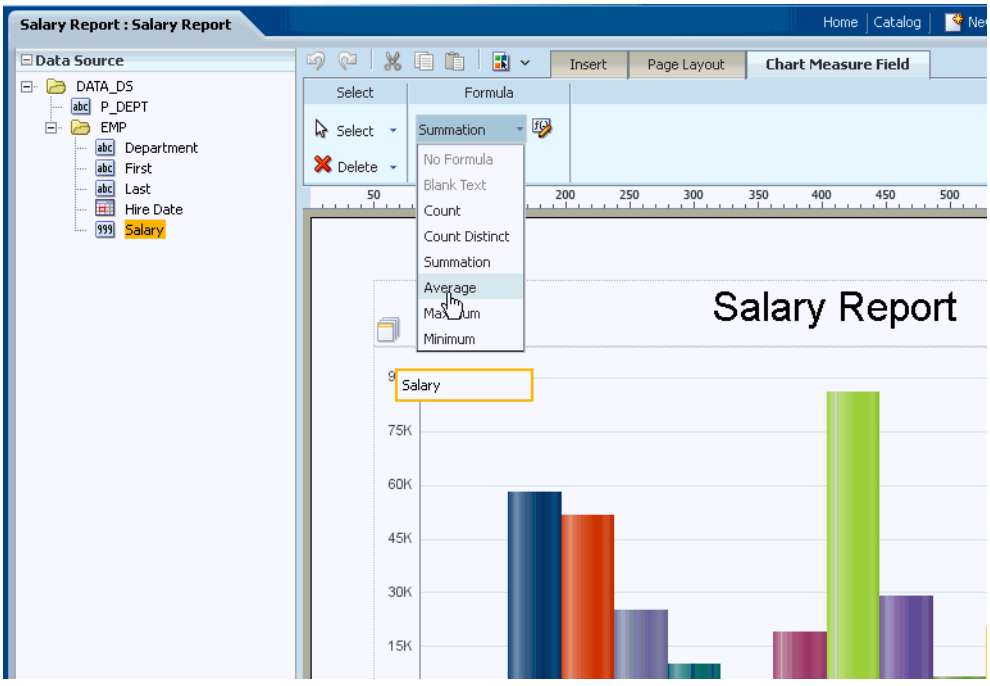
The report is displayed in the layout editor with the title automatically centered on the page.



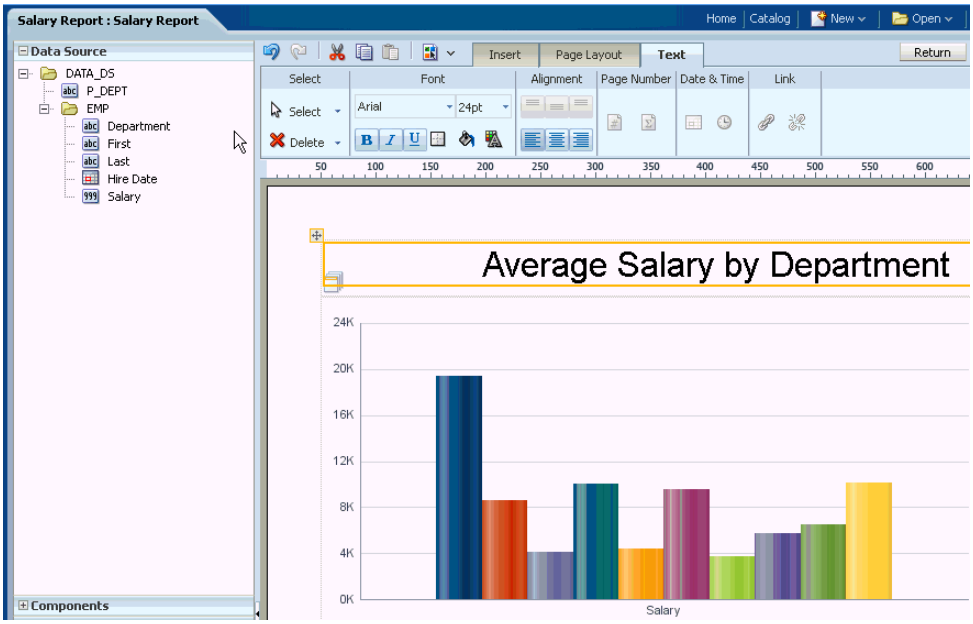
11. By default, the measure field (Salary) is summed. To change the function to average, first click in the chart area.
12. Click the **Salary** field to select it.



13. In the **Chart Measure Field** tab, from the **Formula** menu, select **Average**.



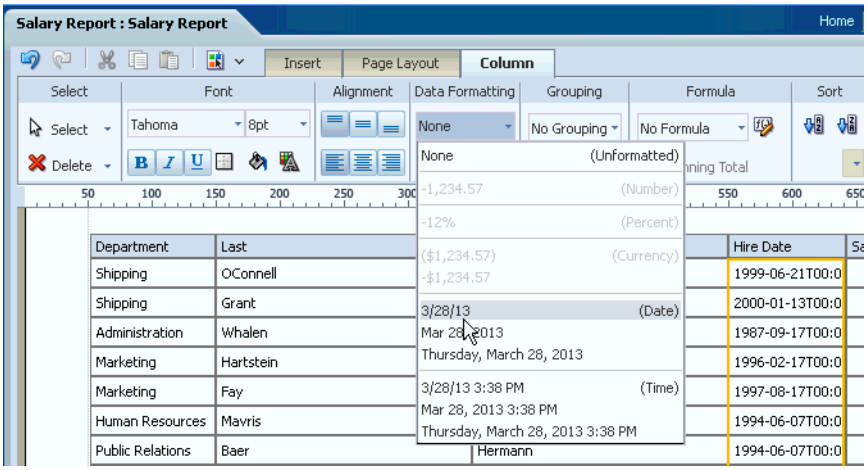
14. Double-click the **Title** and change it to "Average Salary by Department".



15. In the table, the date displays in the raw format from the data. To format the date for the report:

    a. Click inside the **Hire Date** column to select it. When the column is selected, the **Column** tab displays.

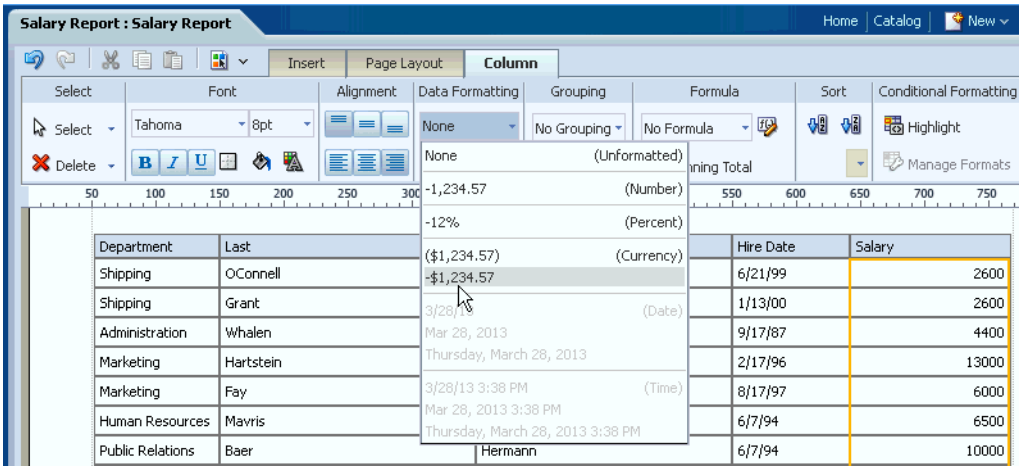
    b. On the **Column** tab, in the **Data Formatting** group, select the MM/DD/YY format.



16. Next, format the **Salary** data field as follows:

    a. Click inside the **Salary** column to select it.

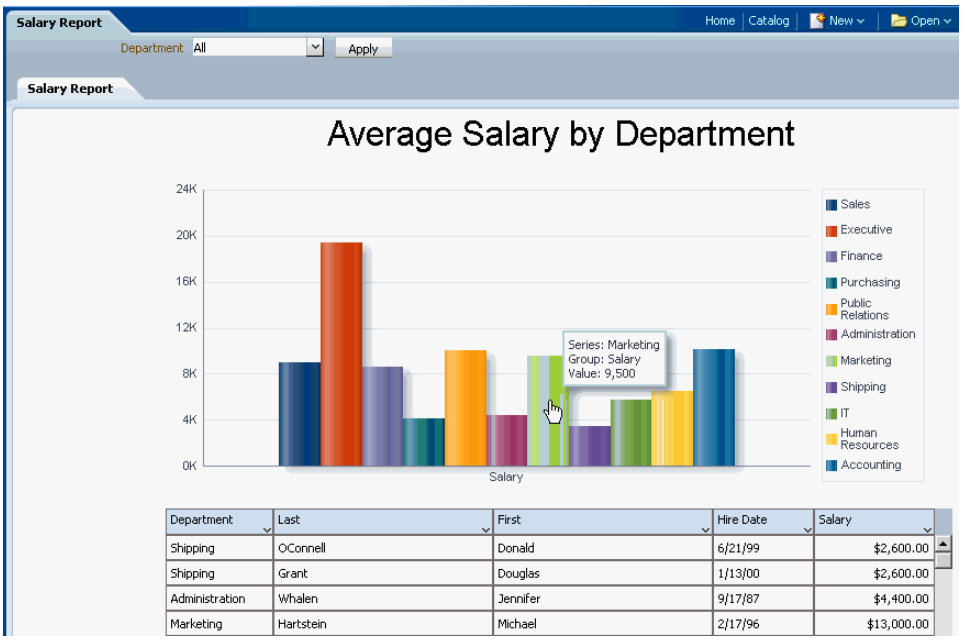
    b. On the **Column** tab, in the **Data Formatting** group, select -$1,234.56.



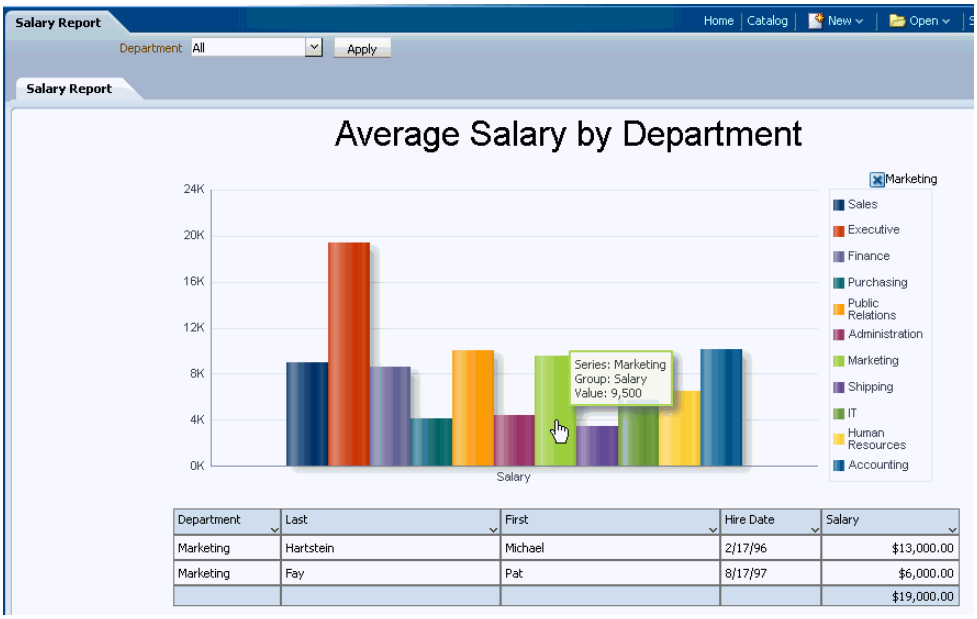
17. Click to save the layout.

18. Click **Return** to display the report in the report viewer.

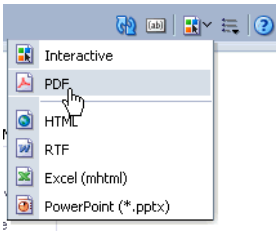
    Note that your report is interactive. The chart values display as you mouse over them and the table is enabled for filtering and sorting.



Note also that the table automatically filters to display the selections made on the chart. When you click a series item (such as Marketing) the table automatically filters to display only the Marketing employees.



19. Finally, from the **View Report** menu, select **PDF** to launch the PDF viewer inside the BI Publisher report viewer.



BI Publisher displays the same report components, in pixel-perfect positioning, now in a printable report format.

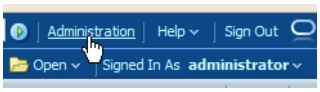
5 Connecting to a Data Source

To fully experience the BI Publisher Trial Edition you will want to connect BI Publisher to your own data sources. BI Publisher can leverage data from many types of sources including relational databases, multidimensional databases, Microsoft Excel spreadsheets, Web services, and XML files.

Before you can create a data model from your own database, you need to configure a connection. In this topic, you will learn how to configure a JDBC connection to an Oracle Database.

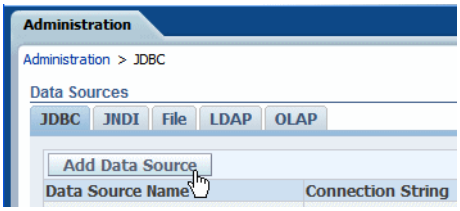
To configure a JDBC connection:

1. Click **Administration**.



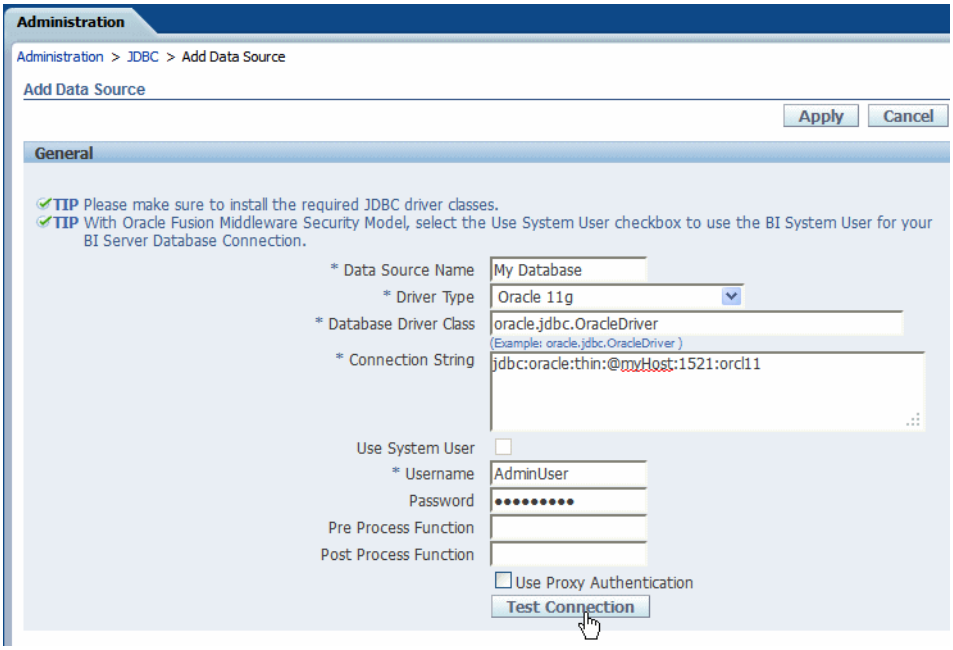
2. On the Administration page, under **Data Sources**, click **JDBC Connection**.

3. On the **Data Sources** page, on the **JDBC** tab, click **Add Data Source**.

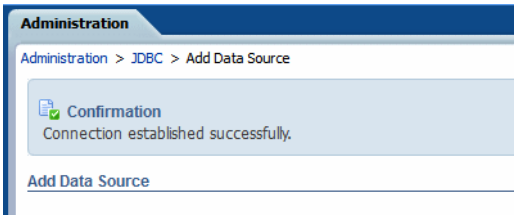


4. On the **Add Data Source** page, enter the details for your database as follows:

   - **Data Source Name** - Assign a name to this data source. The name you specify appears in the list of data sources shown in the data model editor.
   - **Driver Type** - Select a driver type to suit your database (for example, Oracle 11g).
   - **Database Driver Class** - This field automatically populates according to your choice of **Driver Type**. For example, oracle.jdbc.driver.OracleDriver.
   - **Connection String** - Provide the database connection details in the form `jdbc:oracle:thin:@[host]:[port]:[sid`, substituting the details for your database for `[host]`, `[port]` and `[sid]`.
   - **Username** and **Password** - Enter the username and password for the database.



5. Click **Test Connection**. When you see the confirmation message, click **Apply**.



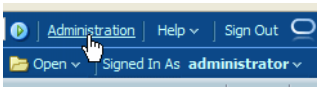
This data source is now available for building data models.

6 Connecting to an Email Server

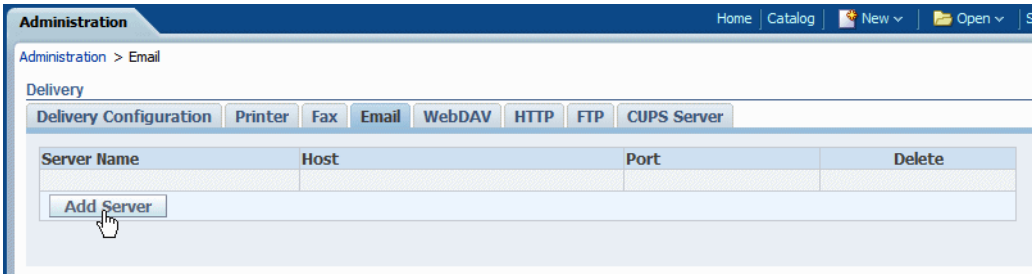
To deliver your reports, connect BI Publisher to your email server. Once configured you can use BI Publisher scheduled jobs to send reports to your colleagues.

To connect to an email server:

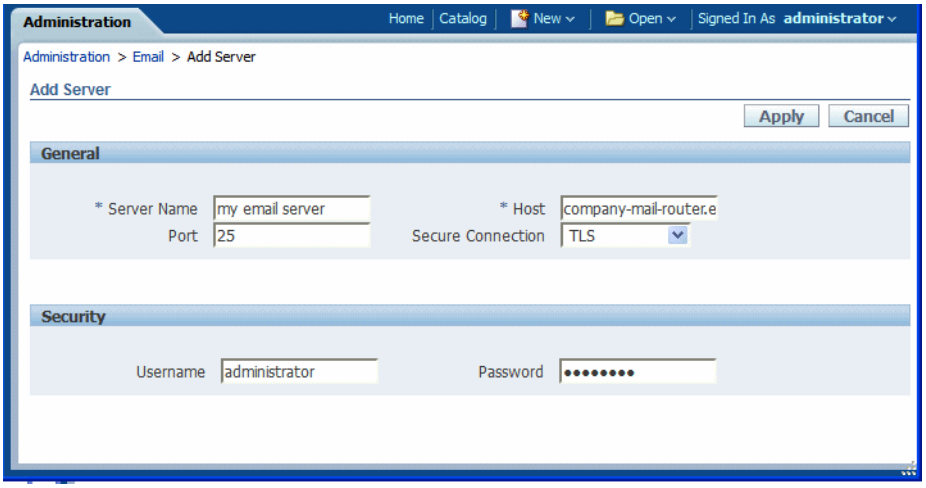
1. Click **Administration**.



2. On the Administration page, under **Delivery**, click **Email**.
3. This displays the **Delivery** page with the **Email** tab selected. Click **Add Server**.



4. On the **Add Server** page, enter the details for your email server as follows:
   - Enter a unique **Server Name**.
   - Enter the email server **Host** (for example: mail.example.com) and **Port**.
   - (Optional) Select the **Secure Connection** type.
   - (Optional) Enter the server **Username** and **Password**.



5. Click **Apply**.

Email is now available as a **Destination Type** for BI Publisher scheduled jobs.

7 Learning More About Oracle BI Publisher

To learn more about using Oracle BI Publisher, consult the resources in the following table.

Table 1 Oracle BI Publisher Resources

Resource	Use this resource to
Documentation	Find information on all aspects of using BI Publisher: ■ To create reports and design layouts see: *Oracle Fusion Middleware Report Designer's Guide for Oracle Business Intelligence Publisher* ■ To create data models see: *Oracle Fusion Middleware Data Modeling Guide for Oracle Business Intelligence Publisher* ■ To view reports and create scheduled report jobs see: *Oracle Fusion Middleware User's Guide for Oracle Business Intelligence Publisher* ■ To configure data sources, delivery servers, and manage users, see: *Oracle Fusion Middleware Administrator's Guide for Oracle Business Intelligence Publisher* ■ To integrate BI Publisher with your own applications, see: *Oracle Fusion Middleware Developer's Guide for Oracle Business Intelligence Publisher*
Blog	Find out more about BI Publisher through numerous articles providing tips, tricks, and real-world use case procedures for using BI Publisher in your enterprise.
Forum	Submit questions and get answers from other BI Publisher users.
Demo Videos	Watch feature demonstrations on the Oracle BI Publisher channel on YouTube.

8 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.

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.

Oracle Fusoin Middleware Getting Started with Oracle Business Intelligence Publisher, 11*g* Release 1 (11.1.1)
E28374-02

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