

How to create a Crystal Report from my ChilliDB data

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Introduction

Polymorphic Solutions recommend that someone within each client attend a Crystal Reports training course to be able to use the Crystal Reports software. The following fact sheet will step through creating a simple report against your ChilliDB database.

When ChilliDB was installed, a member of your organisation would have received an email with a subject of either "ChilliDB Installation Complete" or "ChilliDB for Divisions Installation Complete". Some older installations may have referred to "ChilliDB for Divisions" as "Division Information System". This email is important as it includes information for your Report Writer (for the ChilliDB website and reporting help), your Systems Administrator (for backups), and your key user (for the ChilliDB website, and lodging support requests).

The following are examples of part of the content from that email which deals with the Report Writer information – some parts of your email of course will be different; however the email will have your information in it.

For authoring reports, you will need the following information, to connect to your sql server from the Crystal Reports designer:

SQL Server Name: SERVER1
SQL Server Login: chillidb_reporting
SQL Server Password: acme
SQL Server Database: ChilliDB

Figure 1 Example A

For authoring reports, you will need the following information, to connect to your sql server from the Crystal Reports designer:

SQL Server Name: SERVER1\ChilliDB
SQL Server Login: chillidb_reporting
SQL Server Password: acme
SQL Server Database: ChilliDB

Figure 2 Example B

For authoring reports, you will need the following information, to connect to your sql server from the Crystal Reports designer:

SQL Server Name: dis.chillidb.com,30002
SQL Server Login: dgp_dis_reporting
SQL Server Password: acme
SQL Server Database: ChilliDB_ACME

Figure 3 Example C

For authoring reports, you will need the following information, to connect to your sql server from the Crystal Reports designer:

SQL Server Name: SERVER1\DIS
SQL Server Login: dgp_dis_reporting
SQL Server Password: acme
SQL Server Database: DGP_DIS

Figure 4 Example D

Getting started, identifying the ChilliDB data

There is a special document which will identify all of the database views which make the data available for report writers in an easy to use and understand format. It will identify how to link the views together to join the related information so for example, you may select basic information about a Contact such as they Name, Gender, and then also include information about their Organisations, their Address and Communication details. This document is called the Reporting Interface Database Layer, or Reporting Interface document for short - obtain a copy from the ChilliDB Website, <http://www.chillidb.com>.

You will need to register on the ChilliDB website if you do not have an account. During the registration process, a Polymorphic Solutions representative will check your registration details and enable your account to give you access to the website.

Once registered, log into the ChilliDB website and locate the **Support & Training** menu > then **Support** menu > then **Support Fact Sheets and White Papers**. You can browse all documents there or type **report** into the Search box and click the **Search** button to filter the documents to those related to reporting. You can then view and download the documents for your use.

In the next sections of this document, you will step through the process of connecting to a ChilliDB database, selecting some Contact data for reporting on, and then the creation of a sample report in either Crystal Reports XI or Crystal Reports 2008 report designer.

Once you have created your report, this document will also step you through uploading this report into ChilliDB to share with other users.

Finally, you should also review the tips in the [Report Writing Tips](#) section of this document which will help you to produce great reports.

Creating a Report – version XI of the Report Designer

The following steps are for clients using Crystal Reports XI.

Steps

1. Open Crystal Reports and then select **File** menu > **New** > **Standard Report**.
2. You need to choose a data source. While doing this, we will add the database to the **Favourites** section of the tree view, so next time you will be able to expand that and see your database there to use for future reports. Expand the **Create New Connection** tree view item. Expand the **OLE DB (ADO)** tree view item, and the dialog box shown below will appear. Scroll down until you find **Microsoft OLE DB Provider for SQL Server**, and click **Next** to continue.

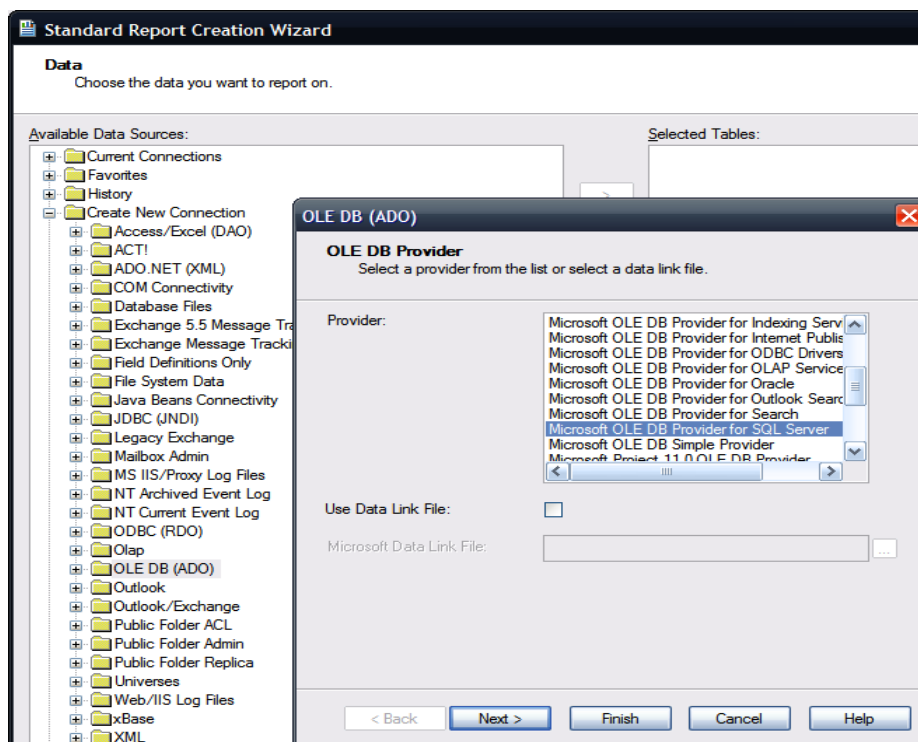


Figure 5: Selecting the Data Source

3. Using the information described at the top of this document (i.e. from the email it discusses), fill out the connection details for **Server** (the SQL Server Name), **User Id** (the SQL Server Login), **Password** (the SQL Server Password), and **Database** (the SQL Server Database). In the following image (**Figure 6**). Click **Finish** to complete this process, and the popup will close itself.

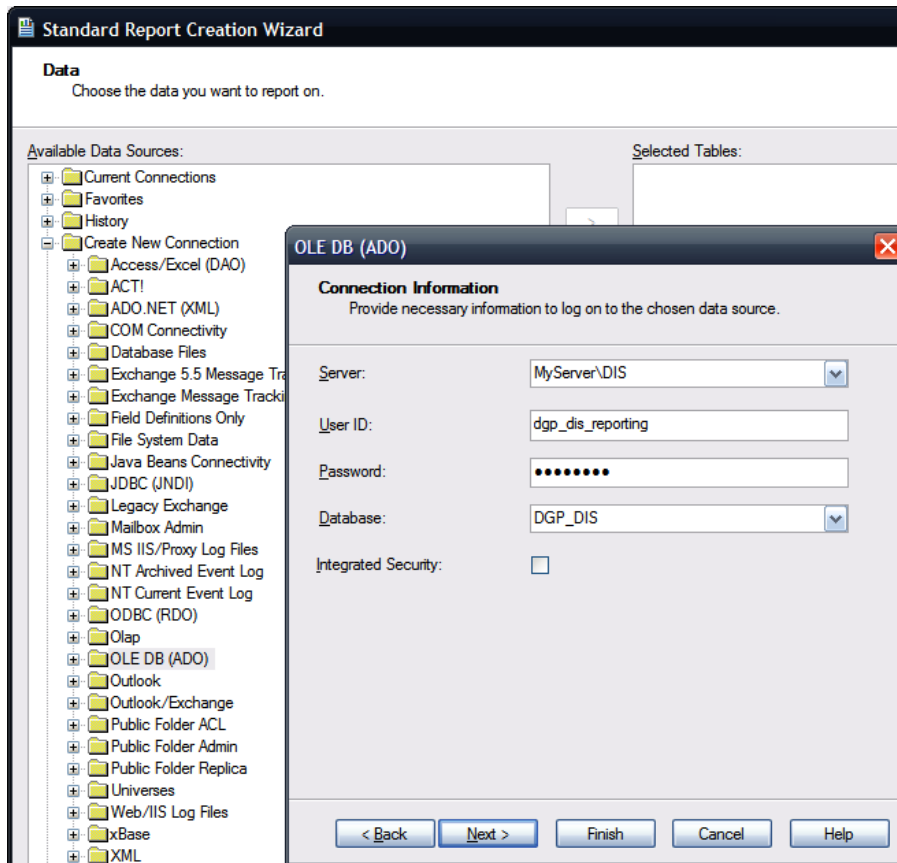


Figure 6: Providing the Server and Login details

- You should see your server listed under the tree view. Right click on the name of your server, and select **Add to Favorites** as shown below in **Figure 6**. You will not have to do steps 2 and 3 again next time you open Crystal Reports.

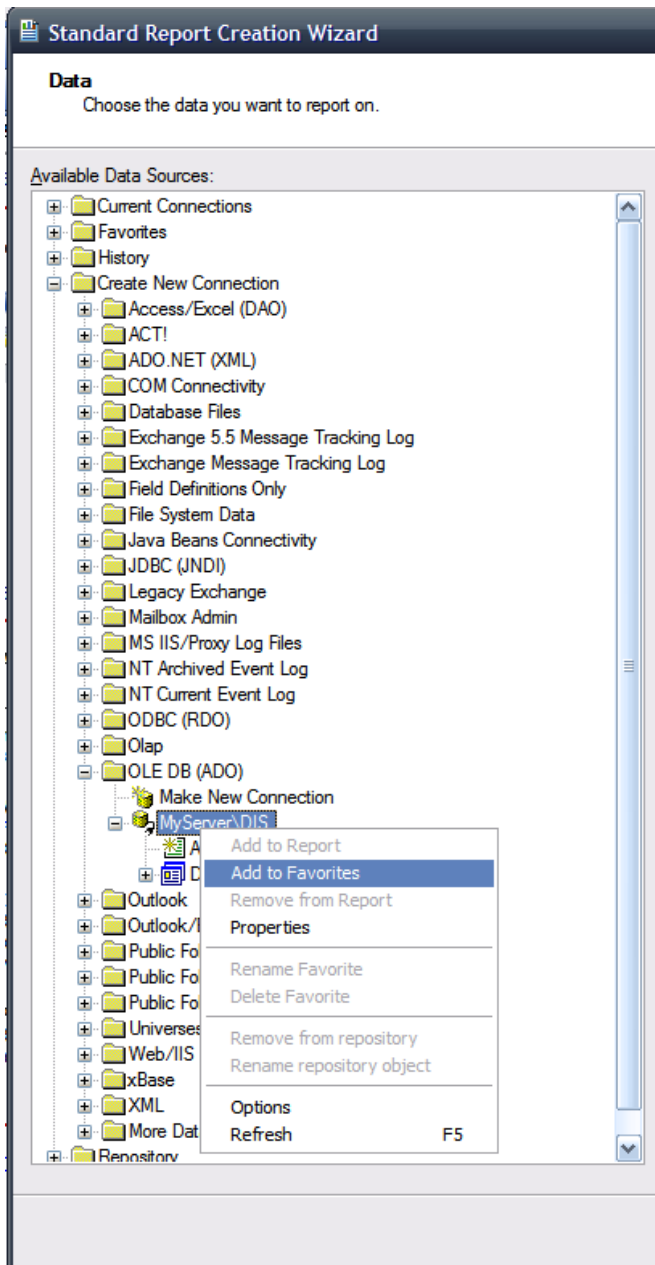


Figure 7: Add to Favorites

5. Under your server shown in **Figure 7**, you will see the database name, in this case **DGP_DIS**. Expand that item in your tree view, and under **dbo** you will see **Tables** and **Views**. ChilliDB comes with a clearly defined reporting interface (available from the ChilliDB website) based on database views which allow you easy access to ChilliDB data in a logical way, saving you the need to gain an understanding of the tables within your database. Expand the **Views** item and select **rpt_Contact**, and click on the arrow button to add it to the **Selected Tables** part of the window. This view represents your contact data, and will be used in this walk through. Select **Next** to continue.
6. We now will select what fields should be displayed on the report. Select as many fields as you like, or all of them, and click on the arrow button to add them to the **Fields to Display** part of the window. Click **Next** to continue.
7. You can now choose to Group your data. In the left part of the window, you will see all the fields currently on your report, as well as any from the **rpt_Contact** view which we selected above. Select **Type** from either of the two sections of fields on the left hand side, and click the arrow button to add it to the **Group By** part of the screen. Click **Next** to continue.
8. The next step is to add some summary data to your report. Leave the standard ones and click **Next** to continue.
9. The next step will allow you to add a chart to your report. Leave this as is, and click **Next** to continue.
10. The next step will allow you to filter your report data (perhaps to Contacts who's surname begins with 'S'). Leave this as is, and click **Next** to continue.
11. The next step will allow you to apply a template to your report. Select **No Template** and click **Finish** to complete your report.
12. Optionally, you may set some File Properties for this report, a name and description which ChilliDB will automatically then extract when you upload the report into ChilliDB. In Crystal Reports, select the **File** menu > **Summary Info** and provide a **Title** and **Description**.
13. You have now created your first report.
14. You should now save this report to the file system somewhere, call this your "report repository" or "report source", where you keep all of your report templates.
15. You may close Crystal Reports now.

Creating a Report – version 2008 of the Report Designer

The following steps are for people using the 2008 version of Crystal Reports.

Steps

1. Open Crystal Reports and then select **File** menu > **New** > **Standard Report**.
2. You need to choose a data source. While doing this, we will add the database to the **Favourites** section of the tree view, so next time you will be able to expand that and see your database there to use for future reports. Expand the **Create New Connection** tree view item. Expand the **OLE DB (ADO)** tree view item, and the dialog box shown below will appear. Scroll down until you find **Microsoft OLE DB Provider for SQL Server**, and click **Next** to continue.

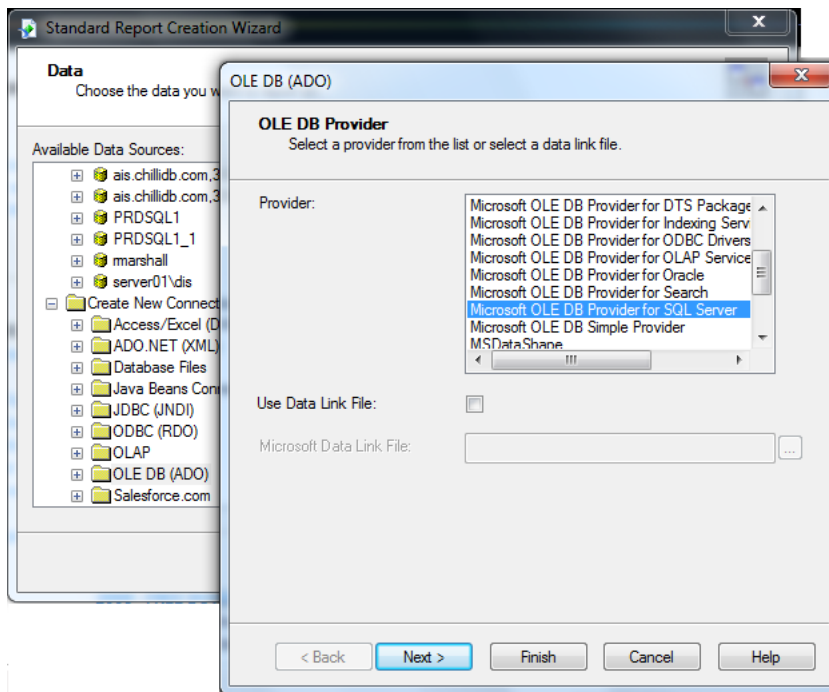


Figure 8: Selecting the Data Source

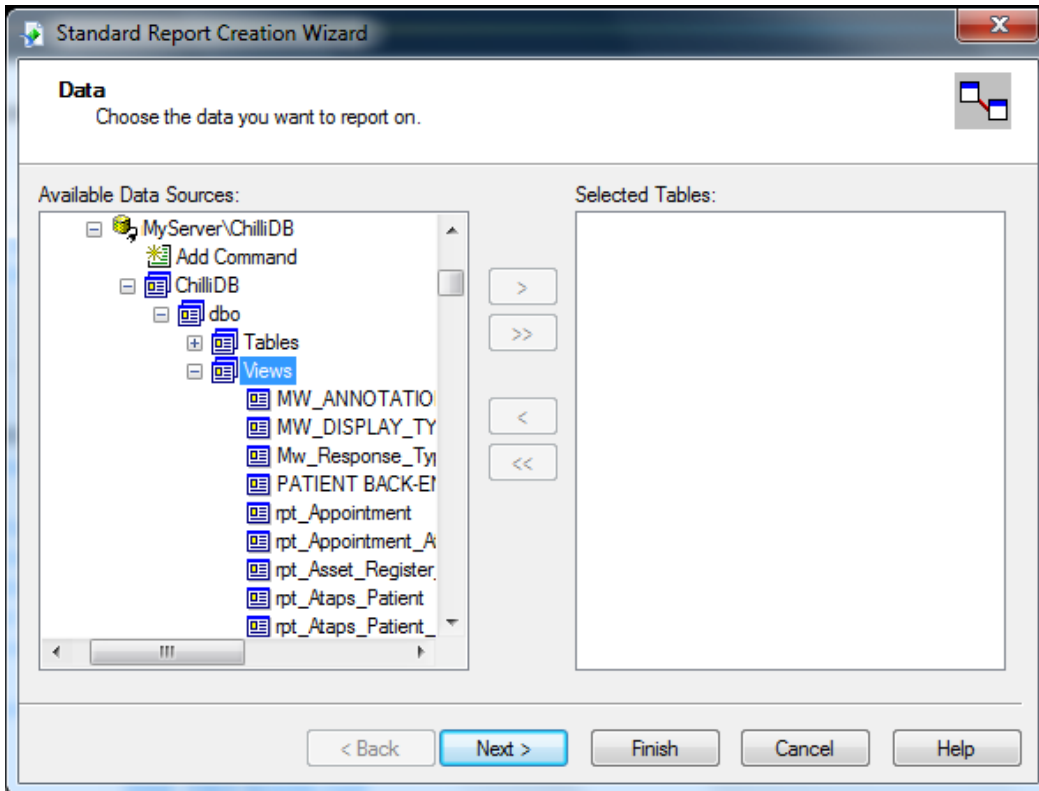
- Using the information described at the top of this document (i.e. from the email it discusses), fill out the connection details for **Server** (the SQL Server Name), **User Id** (the SQL Server Login), **Password** (the SQL Server Password), and **Database** (the SQL Server Database). In the following image (**Figure 6**).

Note, in my case, my server is called MyServer, and my server is a named database server instance called ChilliDB. My database is called ChilliDB

The screenshot shows a Windows dialog box titled "OLE DB (ADO)" with a close button in the top right corner. Below the title bar is a section titled "Connection Information" with the instruction "Provide necessary information to log on to the chosen data source." The dialog contains five input fields: "Server:" with a dropdown menu showing "MyServer\ChilliDB"; "User ID:" with a text box containing "chillidb_reporting"; "Password:" with a text box containing ten dots; "Database:" with a dropdown menu showing "ChilliDB"; and "Integrated Security:" with an unchecked checkbox. At the bottom of the dialog are five buttons: "< Back", "Next >" (highlighted with a blue border), "Finish", "Cancel", and "Help".

Figure 9: Providing the Server and Login details

Click **Finish** to complete this process, and the popup will close itself and you will see the following screen (**Figure 7**).



Under your server shown in **Figure 7**, you will see the database name (**ChilliDB**). Expand that item in your tree view, and under **dbo** you will see **Tables** and **Views**. It is strongly recommended that you use the database Views rather than the tables.

- Expand the **Views** item and select **rpt_Contact**, and click on the arrow button to add it to the **Selected Tables** part of the window. This view represents your contact data, and will be used in this walk through. Select **Next** to continue.

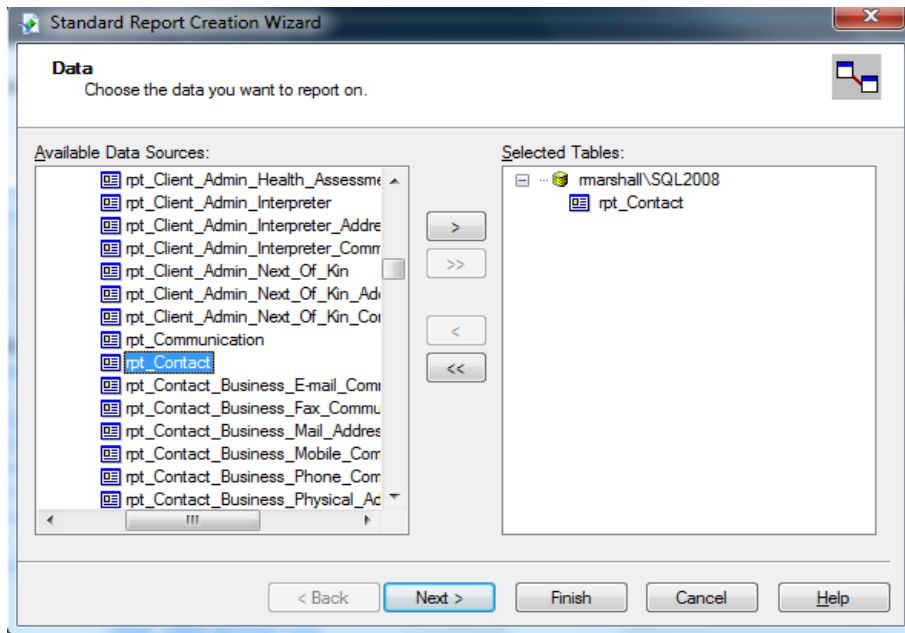


Figure 10: rpt_Contact has been selected to provide our data

- We now will select what fields should be displayed on the report. Select as many fields as you like, or all of them, and click on the arrow button to add them to the **Fields to Display** part of the window. Click **Next** to continue.

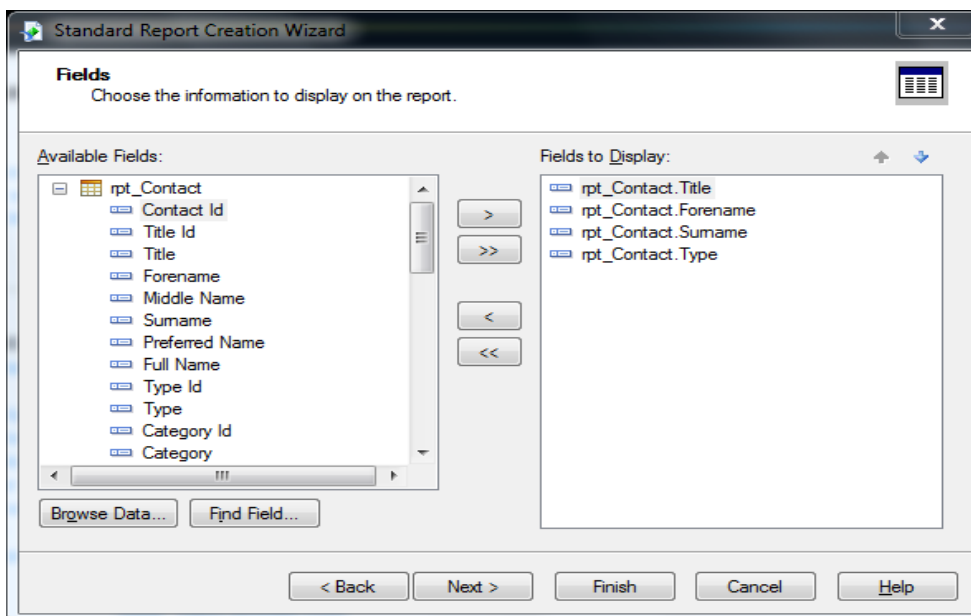


Figure 11: Basic name fields have been selected

- You can now choose to Group your data. In the left part of the window, you will see all the fields currently on your report, as well as any from the **rpt_Contact** view which we selected above. Select **Type** from either of the two sections of fields on the left hand side, and click the arrow button to add it to the **Group By** part of the screen. Click **Next** to continue.

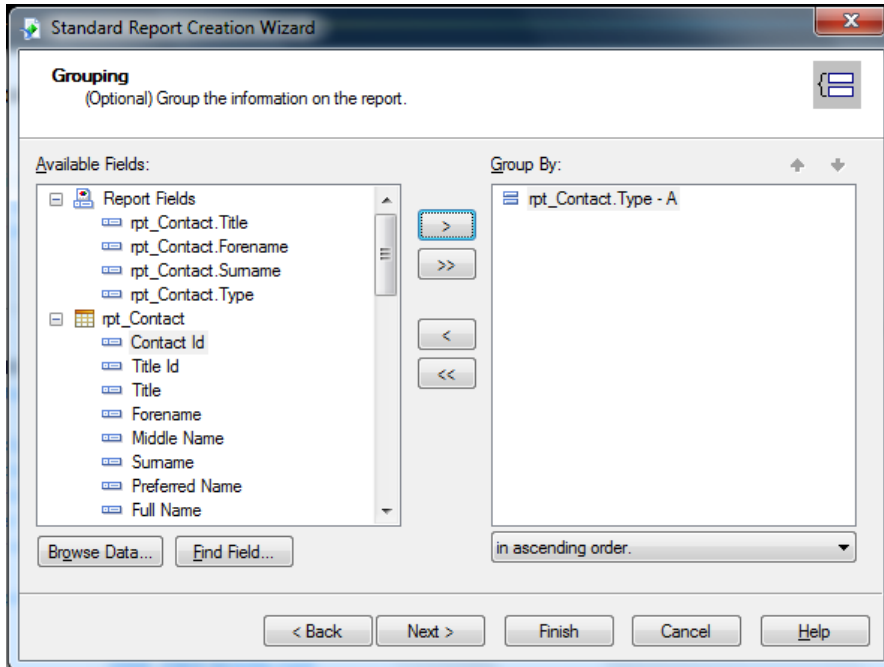


Figure 12: Grouped by Contact Type

- The next step is to add some summary data to your report. Leave the standard ones and click **Next** to continue.
- The next step will allow you to add a chart to your report. Leave this as is, and click **Next** to continue.
- The next step will allow you to filter your report data (perhaps to Contacts who's surname begins with 'S'). Leave this as is, and click **Next** to continue.
- The next step will allow you to apply a template to your report. Select **No Template** and click **Finish** to complete your report. Your report will execute and you will see your data displayed on the report.

Type	Title	Forename	Surname
Administrator			
Administrator	Ms	Suzie	Srbinovska
Administrator	Ms	Susan	Bosevska
Administrator	Ms	Rose	Balfour
Administrator	Mrs	Soula	Kollios
Administrator	Mrs	Lavina	Melvani
Administrator	Mrs	Ba	Nguyen
Administrator	Mrs	Tong	Wong
Administrator	Ms	Josie	Camilleri
Administrator	Ms	Natalie	Barbara
Administrator	Ms	Dianne	Owens

Figure 13: Report data

- Optionally, you may set some File Properties for this report, a name and description are the most obvious ones. When you upload the report into ChilliDB, ChilliDB will give you options to extract this information to automatically fill in the Upload screen with the same Title and Description you enter here. In Crystal Reports, select the **File** menu > **Summary Info** and provide a **Title** and **Description**.
- You have now created your first report!
- You should now save this report to the file system somewhere, call this your "report repository" or "report source", where you keep all of your report templates.
- You may close Crystal Reports now and proceed to login to ChilliDB to upload the report for other users to view.

Uploading the Report into ChilliDB

To share this report with other ChilliDB users, you should upload the report into ChilliDB.

Steps:

- To share this report with other users of ChilliDB, login to ChilliDB and navigate to the **Reports** menu > select **Upload** > select the **Find** link produce a window which will let browse for your report in the "report repository" or "report source" (where you chose above to save your reports into).
- After selecting a report, click the **Upload** button to upload the report into ChilliDB. Click the **Read Title and Description From Report File** button to populate the **Report Title** and **Report Description** information straight from the report file (if you performed **Step 12** above in **Creating a Report**) or enter information for those fields manually.

3. Select a **Report Type** to classify this report. You may add additional Report Type values through the **Reference Table Manager** within ChilliDB, where you would add items to the **Report Type** table
4. Click **Save** to complete this process, and you then will see your report within ChilliDB.

Report Writing Tips

The following tips will answer frequently asked questions and provide some expert tips to assist you with your report writing.

Twaking your Crystal Reports Options

- **Crystal Reports – Automatic Smart Linking:** We recommend that you avoid using the **Auto Link** feature within the Crystal Reports Database Expert. What it will do is try to link tables/views based on their field name or data types, however it often this is not correct and can lead to missing data or incorrect data shown in your report. You can set this as your preference when writing all reports in Crystal by going to **File** menu > **Options** > **Database** tab of the popup which appears > set **Automatic Smart Linking** to off.
- **Crystal Reports - Save Data with Report:** This will feature allows the report to cache data shown in the report from the database when writing the report. When ChilliDB runs the report, it shows the cached data, not live data. It is best if you disable this preference through the **File** menu > **Options** > **Reporting** tab of the popup which appears > set **Save Data with Report** to off. If you decide to use Saved Data while authoring your report, you can check the status or enable/disable this feature from the **File** menu > **Save Data with Report**. If you receive a report from someone, you should check this option is off before uploading into ChilliDB.
- **Crystal Reports - No Printer:** We recommend turning this option off to increase the speed of displaying reports in ChilliDB. You need to do this for each report you write (i.e. it's not a configuration option). This option is found on the **File** menu > **Page Setup** > **Printer Options** sections of the popup window which appears > set **No Printer (optimized for screen display)** to being checked.

Report Writing Tips for ChilliDB

- **Database Connections – Creating:** Crystal Reports should be written using **OLE DB (ADO)** to connect to your SQL Server. Do not use **ODBC** to connect to ChilliDB.

- **Polymorphic Solutions Reporting Views** - Polymorphic Solutions provide a reporting layer to our database using Database Views. Our reporting views are prefixed with **rpt_**. While there may be some deprecated (obsolete) reporting views present within the database, they will in time be removed. Those deprecated views are named with a **v_** prefix. You should avoid using those, and migrate any reports you may have to use the **rpt_** reporting views.
- **Creating your own Customised Views:** When the Polymorphic Solutions Reporting Views aren't sufficient for your needs, you may choose to create custom database views, tables, or stored procedures (collectively referred to as Database Objects) within your database. To ensure that updates to the system do not overwrite your customised database objects, Polymorphic Solutions recommends that you prefix your custom Database Objects with a prefix. We recommend using your organisation prefix. For example a view showing Contacts in Brisbane for a company called **ACME Inc** would use create a view named **acme_Contacts_In_Brisbane**. The **rpt** prefix is reserved and should not be used for your custom reporting views.
- **Automatic View Generation** – Dynamic Data automatically generated Reporting Views for each **Section** of **Dynamic Data**. Custom **Address** and **Communication** types do not automatically generate Reporting Views. If you create custom **Address** and **Communication** types you need to use ChilliDB to refresh your reporting views by navigating to the ChilliDB **Reports** menu > **Reporting View Maintenance** > **Reporting Views** menu item.
- **Renaming Dynamic Data Sections and Items** – if you notice that a report no longer works and you then load it into Crystal Reports and it informs you that a field cannot be found, it is because the field may have been renamed within ChilliDB by one of your users. You should correct the report and then upload it back into ChilliDB.
- **Report Branding** – Using information from the Crystal Report branding view to display your company details will allow you to easily share your reports with other ChilliDB users in the community. You can configure the information displayed in this view by selecting **Reports** > **Report Branding** from the ChilliDB menu. From that screen you configure your display name, address details, privacy or confidentiality statement and even upload your organisation logo image to be included in your reports.
- **Modifying or Copying Polymorphic Solutions Reports:** You are free to modify the Polymorphic Solutions reports and customise them to suit your needs. To avoid them being overwritten, you should make a copy and give them a different name.

- **Filtering out Expired records:** ChilliDB records a date in the **Expired** field of **Contacts** and **Organisations** reporting views as a datetime value, meaning if a datetime is present, that record is expired. If it is not expired, it be NULL. Example formulas for **Contacts** and **Organisations** would be:
 - **IsNull ({rpt_Contact.Expired})** for Contacts,
 - **IsNull ({rpt_Organisations.Expired})** for Organisations
- **Date Time Values are stored in Greenwich Mean Time (GMT) time:** ChilliDB stores database date time data in Greenwich Mean Time (GMT) and displays the date and time in localised time through the web application. All **rpt_** reporting views automatically convert the GMT date time values to localised date time values for you. If you report off database tables directly, you should refer to the document called **Fact Sheet – 2.5.0 Timezone Support and Reporting off of Tables instead of Views** for further instructions also available from the ChilliDB website.