

attaché

Attaché BI ClearView

Report Designer

User Guide

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Introduction to ClearView Report Designer

ClearView Report Designer (RD) is a fully integrated graphical reporting tool for Attaché Accounts.

- **Create Reports and Dashboard Gadgets.** Design reports for Attaché using the easy to use graphical reporting tool. Dashboard gadgets can also be designed using the RD.
- **Copy Standard Reports.** You can copy standard reports and gadget content (data sources) and then make changes. Custom gadgets can be displayed on the ClearView Dashboard.
- **Report Wizard.** The inbuilt report wizard steps you through creating your own custom reports, or you can create a new report from scratch. Your Attaché consultant can also create reports that you can import into your system.
- **Charts.** Add visual 2-D or 3-D charts and choose from a variety of chart types and colours.
- **Background Images.** Add background images which show up behind your data, and customize the size of your report (for labels etc).
- **User-friendly interface.** All the controls, data fields, system fields and parameters you need can be found in tool windows on the left hand side of the application interface. Controls, data fields, system fields and parameters can be dragged from the tool windows and dropped onto your report. Right-click context menus give easy access to control properties such as font, border etc. You can also use familiar hotkeys (Ctrl-B etc) to save your report, set styles and change the alignment on controls.
- **Create 'smart' reports.** Add controls that allow users to manipulate report data during display mode, e.g. expand or collapse report sections (to show or hide details), or sort columns in ascending or descending order. Imbed one report into another, or add interactive links in your report that navigate to other reports. Report text can also be formatted depending on the outcome of your data, e.g. display low GP% in red. You can also generate KFI (keystroke file import) files based on report output.
- **Off-Line ODBC.** Turn reports which use the Attaché ODBC Driver into off-line reports and get a huge improvement in speed for reports which use tables with large data sets or complex joins.
- **Export to PDF and Excel.** You can print reports to a printer, the screen or export them to Excel or PDF format.

- **Import and Export.** You can share reports with other RD user's using the Import and Export features. Multiple reports can be "zipped" up for export.
- **Cross Tab Reports.** Create spreadsheet style grid to generate a summary of the report data, using dynamic columns and rows.
- **Conditional Formatting.** Change the format of a field on a report based on criteria. For example, show negative values in red.
- **Row Count.** Display a counter for each detail record on your reports. This is useful for data sets which do not provide a counter.
- **KFI.** Create a report which produces a KFI file suitable for importing into Attaché.
- **Expand and Collapse.** Expand and collapse sections of a report to show or hide details. For example, you may create a report listing customers by postcode and click to expand to show customers belonging to a single postcode.
- **Drill Down.** Open another report by clicking on a field on the report. For example, a report displaying a list of invoices with invoice numbers could open another report showing the invoice line details.
- **Sub-Reports.** Embed another report into a report to create reports with complex layouts. For example, create a report which displays 2 other reports side by side.
- **Column Sorting.** Allow sorting on any column within a report section when previewing a report to the screen.

Who Should Read this Guide

This guide is for Attaché Accounts users and consultant who have installed the ClearView Dashboard and Report Designer modules and wants to learn how to create custom reports and gadgets.

As the module name suggests, features are designed for anyone who wants to design reports or gadget content using Attaché ODBC Driver, ClearView or PowerLink tables.

A good working knowledge of SQL and Attaché tables and fields is essential to use the Report Designer, although users with limited knowledge may be able to produce simple reports using the [Reports Wizard](#).

Refer to the **Accounts Data Dictionary for Attaché ODBC** and the **Payroll Data Dictionary for Attaché ODBC** and the **Data Transfer Data Dictionary** in the **Documentation** section of the **Attaché Members Web Site** for more information on Attaché Tables and Fields.

Refer to the **ClearView Data Dictionary** for more information on PowerLink and ClearView Tables and Fields.

What is covered in this Guide

This guide discusses how to use the ClearView Report Designer (RD) module. It assumes that you have a good working knowledge of SQL and Attaché tables and fields.

For more information see the ClearView Dashboard User Guide.

- **Quick Start.** The [Quick Start](#) section shows you how to install and setup the Report Designer module and start it.
- **Using Report Designer.** In the [Using Report Designer](#) section you will learn how to use the features of the Report Designer module to create new reports and dashboard gadgets.

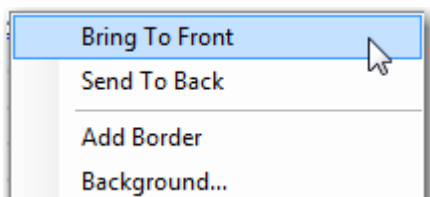
- **Tutorials.** In the [Tutorials](#) section there are step by step instructions for performing common tasks using simple examples. Not all features are covered here but there should be enough information to get you up and running quickly, especially if you are familiar with other reporting tools.
- **Function Reference.** A list of available functions which can be used in SQL and within report controls is described in the **ClearView SQL and Function Reference**.
- **Operator Reference.** A list of available operators which can be used in SQL and within report controls is described in the **Operator Reference** section in the **ClearView SQL and Function Reference**.
- **SQL Reference.** A good working knowledge of SQL and Attaché tables and fields is essential to use the Report Designer. A basic introduction to SQL can be found in the **SQL Basic Reference** section of the **ClearView SQL and Function Reference**.
- **Data Dictionary.** Refer to the **ClearView Data Dictionary** for more information on PowerLink and ClearView Tables and Fields. Refer to the **Documentation** section of the **Attaché Members Web Site** for more information on Attaché Tables and Fields.

Conventions and Terminology

Throughout this guide you will be directed to dashboard pages, context menu items, forms and various other places. You will also be introduced to new terms which will be abbreviated from time to time to improve readability.

This section defines the conventions and abbreviations that will be used for the remainder.

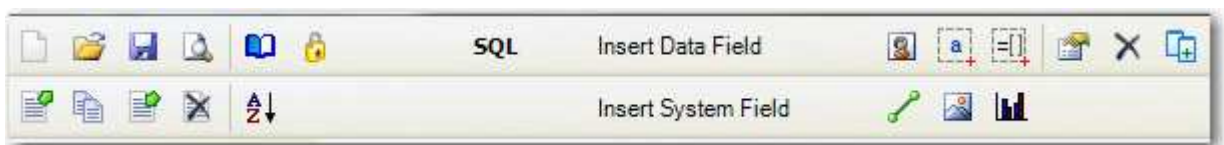
- **RD.** Report Designer.
- **Context Menu** This is the menu which appears when you right mouse click on a control on the main Report Designer window. The context menu is sensitive to the type of control that you click on. For example, when you click on a text data control you will see this.



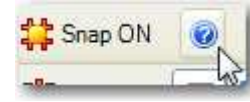
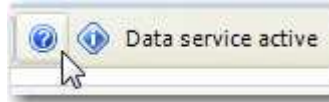
- **Dashboard Toolbar** This is the strip of buttons which appears at the top of the ClearView Dashboard. For more information about each one, refer to the ClearView Dashboard User Guide. The two buttons on the right are specific to the Report Designer and open the **Print Report** and **Report Designer** programs.



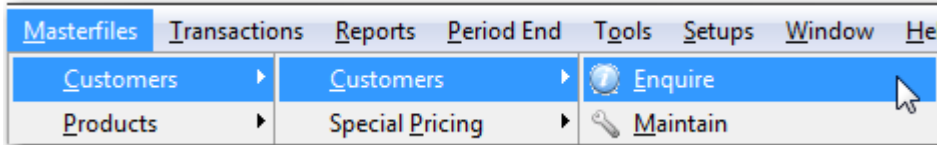
- **Report Designer Toolbar** This is the strip of buttons at the top of the Report Designer. For more information about each one refer to the section [Report Designer Toolbar](#).



- **On-Line Help** You can get on-line help on a specific gadget by clicking on the help icon to the left of the gadget caption. Report Designer help (including this content) is available by clicking on the main toolbar help icon and from within the Report Designer itself.



- **Attaché Menu** When asked to start a program from a menu, the program will be identified using the format **Menu | Sub-Menu | Program** format. For example, the Attaché Customer Enquiry program would be specified using Masterfiles | Customers | Customers | Enquiry. A similar convention is adopted for context menu items.



- **SQL** This stands for Structured Query Language and is a database computer language designed for managing and retrieving data in a database. Teaching SQL is beyond the scope of this guide however a **SQL Basic Reference** section is included in the **ClearView SQL and Function Reference**. For more information you can use an internet search engine to access almost unlimited SQL topics.
- **SQD** This stands for a Saved Query Definition (also known as a sub-query). An SQD is useful for simplifying report SQL. See [Create a Saved Query Definition](#) for an example of creating an SQD.

Quick Start

Important: You should have already installed the ClearView Dashboard and completed the Dashboard Quick Start checklist and the ClearView Getting Started section before you set up and use Report Designer.

This section contains a summary of steps required to set up Clearview Report Designer. You can print this page and use it as checklist.

1. **License.** You will only have access to RD if you have this module installed. Go to Help | About Attaché and select “Modules Installed”. Check for “Report Designer”. If you do not see this then contact Attaché to get an updated license.
2. **Menu Access Rights.** By default, access to RD programs and reports is restricted to users who have access to the Attaché **Setups | ClearView | Report Designer | Report Designer** program.
3. **ODBC.** This is optional but recommended if you want to write reports using Attaché ODBC data sources. If you do not have the ODBC driver you can still access a large number of tables and fields which are used by other ClearView modules and stored by the Data Service. For more information about the Data Service refer to the **ClearView Getting Started User Guide**.
4. **Starting Report Designer.** To start the Report Designer, go to **Setups | ClearView | Report Designer | Report Designer** or select the Report Designer button on the dashboard toolbar. Refer to [Using Report Designer](#) for more information about starting using the Report Designer.

Using Report Designer

This section describes each of the features of the ClearView Report Designer.

If you want to get up and running quickly and start creating your own reports, you should read the [Tutorials](#) section. This covers some of the more frequent tasks that you may want to perform with the Report Designer such as modifying an existing report, or creating a dashboard gadget.

If you need in depth information about a particular feature you should find it in this section.

Starting Report Designer

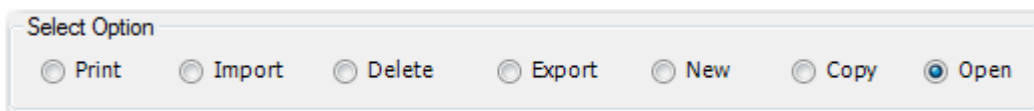
To start the Report Designer, go to **Setups | ClearView | Report Designer | Report Designer** or select the **Report Designer** button on the [Dashboard Toolbar](#).



TIP: Where possible always use the Report Designer button on the dashboard toolbar to open the report designer. It is faster to open and changes can be tested during the design process as variables are in shared memory.

Report Navigator

When you open Report Designer, the Open Report screen will appear and you'll see a list of Available Reports and the date they were Last Opened. If you do not see anything here then it is because you have not created any reports.



Those that begin with "BI" (business intelligence) are dashboard gadget data sources, which are simply specialized reports. These can be printed but some focus on a selected customer or employee so they will not display any results when printed outside the dashboard.

Standard and custom reports can have a report Category. Select a Report Category to find a report more easily (e.g. Payroll will show all employee related gadget data sources).

The **Search** field allows for the Available Reports list to be filtered allowing for reports to be located quickly.

NB. The Search field contents are combined with the Report category when narrowing the list of reports. To search all reports make sure you choose category (All).

You can navigate Report Designer functions using the radio buttons in the Select Option frame. Refer to the appropriate section for more details.

Print Allows you to print a Standard or Custom report.

Import Allows you import a custom report from a disk file.

Delete Allows you to delete a custom report.

Export Allows you export a report to a disk file.

New Allows you to create a new custom report using the Wizard or starting from a blank report.

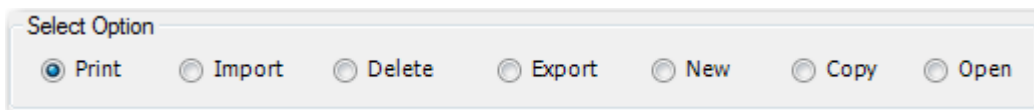
Copy Allows you to create a new report using a copy of an existing Custom or Standard report.

Open Opens an existing custom report for modification.

Printing Report

You can print reports to the screen, text file, PDF document or printer.

1. **Report Navigator** Open the [Report Navigator](#), select **Print** and then select the **Report Type** and then the report from the **Available Reports** and press **Print (F9)** to open the report in print mode.

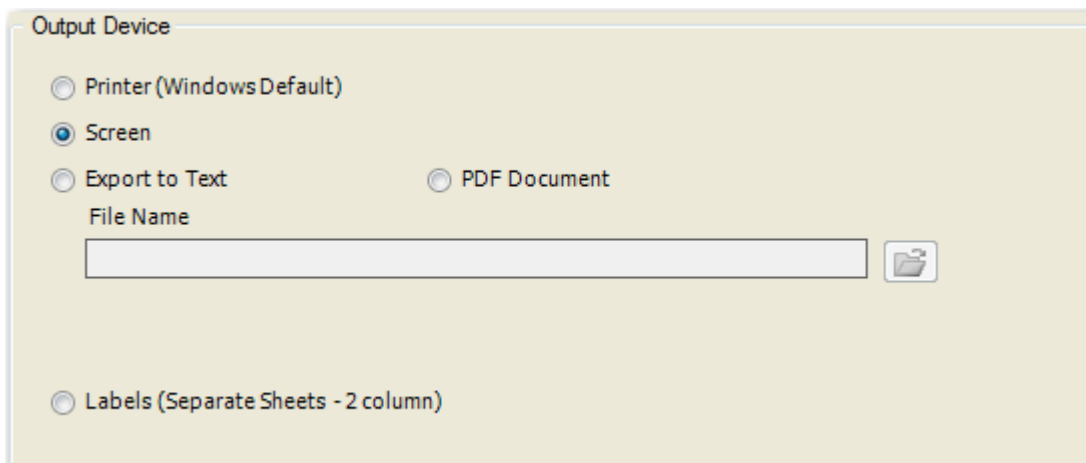


Note: You can also click the **Preview Report** button on the [Report Designer Toolbar](#) or by selecting **Reports | ClearView | Report Designer | Print Report** from the [Attaché Menu](#) or by clicking the **Print Report** button on the [Dashboard Toolbar](#)

2. **Report Name** Select the report from the list. This list will only show reports which match the selected criteria. If you cannot see your report make sure “(All)” is selected for **Report Category** and that the **Report Type** is “Custom” or “Standard” depending on the reports you want to see.



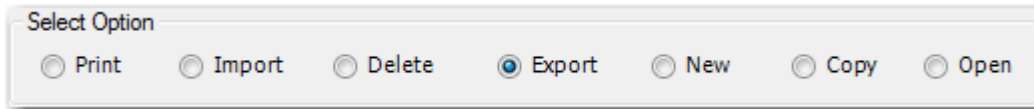
3. **Parameters** Enter the report parameters by filling in the ranges and other report options which are presented for the report.
4. **Output Device** Select the output device where you want the report to be displayed. You can print a report to the printer, the screen, a text file or to a PDF document.



Export Report

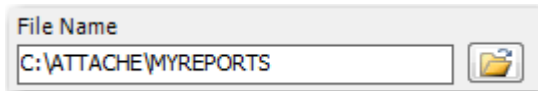
You can export custom reports which you have created so that they can be shared with other users.

1. **Report Navigator** Open the [Report Navigator](#), select **Export**.



*Note: You can also click the **Export Report** button on the [Report Designer Toolbar](#) or by select **Reports | ClearView | Report Designer | Export Report** from the [Attaché Menu](#).*

2. **Select Reports** Select the reports from the list. You can select multiple reports by holding down the CTRL button and clicking on them.
3. **File Name** Enter a name for the export file.

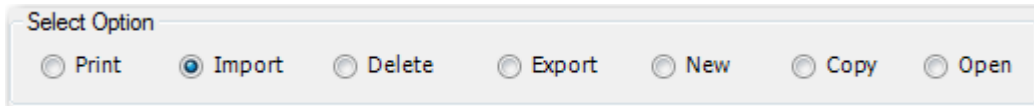


4. **Export** Press **Export (F9)** to export the files to a zip file. When prompted confirm the version number or clear if you want the report to be importable anywhere. The Version Control is a safeguard to stop users with older versions of ClearView importing a report which may use new features.

Import Report

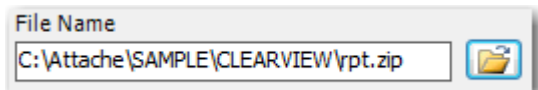
You can import reports which have been exported to a zip file using the [Export Report](#) program.

1. **Report Navigator** Open the [Report Navigator](#), select **Import**.

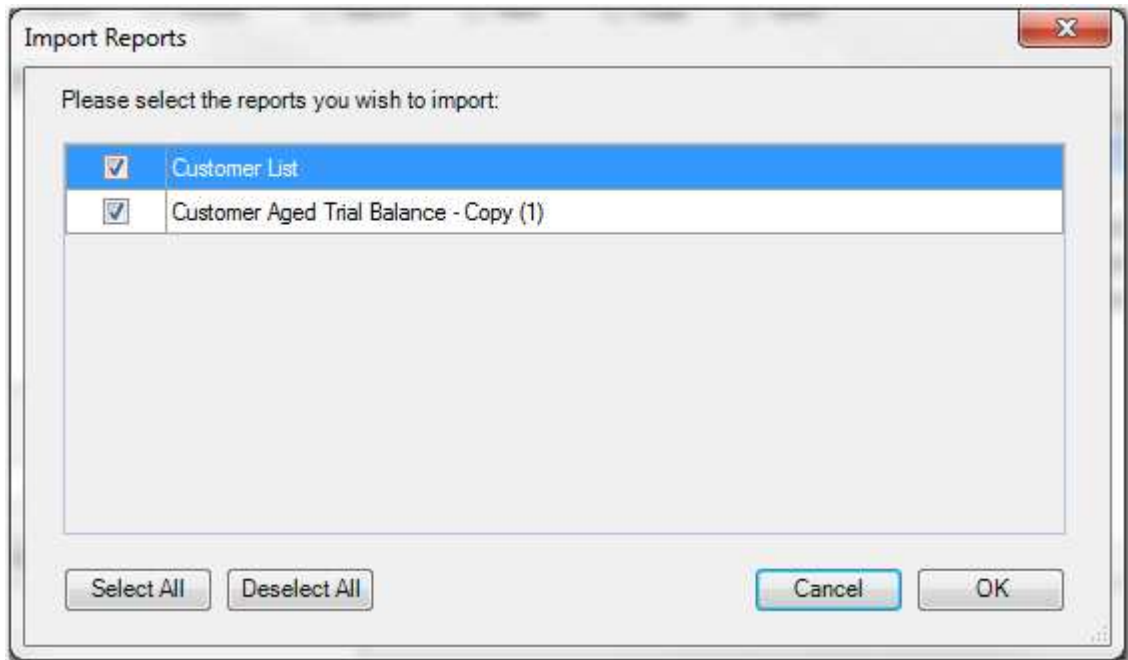


*Note: You can also click the **Import Report** button on the [Report Designer Toolbar](#) or by select **Reports | ClearView | Report Designer | Import Report** from the [Attaché Menu](#).*

2. **File Name** Enter a name for the file. The file must include the **.zip** extension.



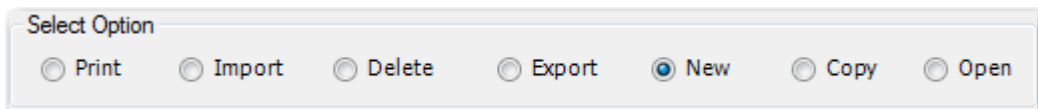
3. **Import** Press **Import (F9)** to import the files from a zip file.
4. **Select Reports** Select the reports to import. You cans selectively include which report you want.



New Report

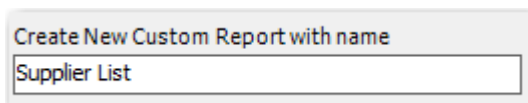
You can create a new blank report using the Report Designer.

1. **Report Navigator** Open the [Report Navigator](#), select **New**.



Note: You can also click the **New Report** button on the [Report Designer Toolbar](#).

2. **File Name** Enter a name for the report.



3. **New** Press **New (F9)** to create the empty report. See section [Create a New Report from Scratch](#) to find out how to design a report.

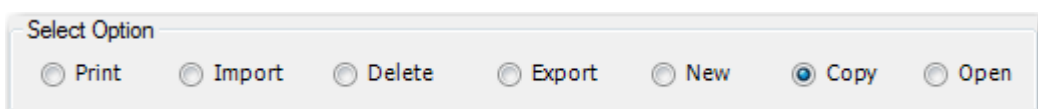
OR

Wizard Press **Wizard (F2)** to create a new report with the assistance of the Report Wizard. See section [Create a New Report Using the Report Wizard](#) for more information.

Copy Report

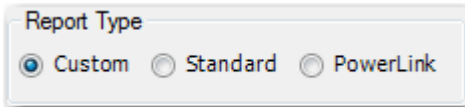
If there is an existing report which is close to what you want, you can copy it and modify it to suit your needs.

1. **Report Navigator** Open the [Report Navigator](#), select **Copy**.

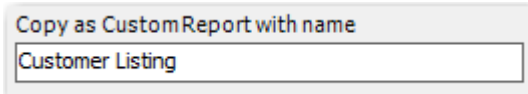


Note: You can also click the **Copy Report** button on the [Report Designer Toolbar](#).

2. **Report Type** You can copy a Standard, Custom or PowerLink report.



3. **Select Report** Select the report you wish to use as the template for your new report from the **Available Reports**.
4. **Report Name** Enter a name for the report. By default the report will be given the same name with “ - Copy(1)” appended to the end.

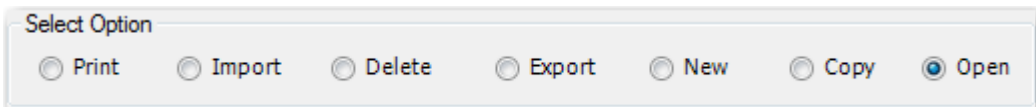


5. **Copy** Press **Copy (F9)** to create the report using the selected report as a template. See section [Customise a Standard Report](#) for a tutorial on how this feature can be used to modify one of the built in ClearView reports.

Open Report

You can open a custom report to make changes to its design.

1. **Report Navigator** Open the [Report Navigator](#), select **Open**.



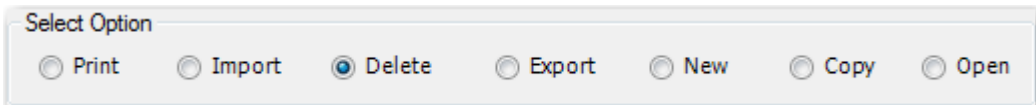
Note: You can also click the **Open Report** button on the [Report Designer Toolbar](#).

2. **Select Report** Select the report from the **Available Reports**.
3. **Open** Press **Open (F9)** to open the report.

Delete Report

You can delete a custom report.

1. **Report Navigator** Open the [Report Navigator](#), select **Delete**.



Note: You can also click the **Delete Report** button on the [Report Designer Toolbar](#).

2. **Select Report** Select the report from the Available Reports.
3. **Delete** Press **Delete (F9)** to delete the report.

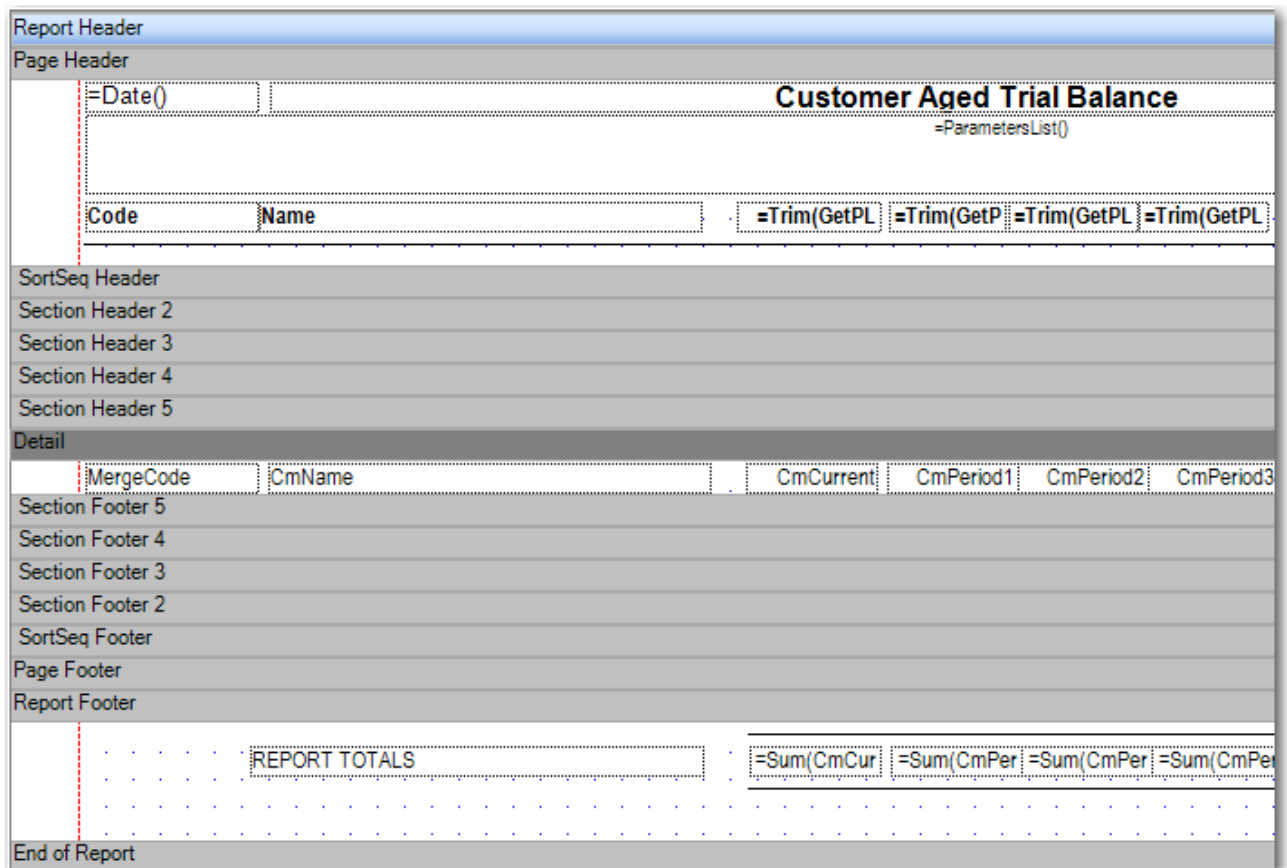
Report Windows, Toolbars and Menus

Report Windows and Sections

When you open a report from the navigator, the report will be loaded and ready to be worked upon. The design area of the report is shown in the report window.

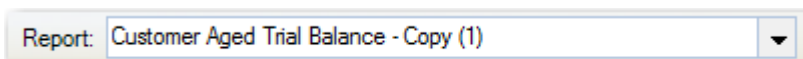
All reports have a **Report Header**, **Report Footer**, **Page Header**, **Page Footer**, and **Detail** sections as well as optional group **Section Header** and **Section Footer** controlled by the Sorting and Grouping levels which are shown in the report window.

The example below has a single group section based on the field "SortSeq". See [Sorting and Grouping](#) for details about how to add groups to your report.



Click a grey section bar to select that section. When fields are added they will be inserted into the current (selected) section. By default the **Detail** section is selected (as shown above).

You can open multiple reports and switch between report windows using the Report selector.



Report Designer Toolbar

The Report Designer Toolbar is located above the main report window and consists of controls which are grouped according to the type of function they perform.



The Report Designer toolbar has a number of tools to assist you when designing reports.

The [Navigation Tools](#) allow you to open, close, save, import, export, delete and preview reports.

The [Report Setup Tools](#) allow you to change the report properties, data source (SQL) and security of the report.

The [Design Tools](#) allow you to select and modify the properties of report controls such as font, alignment as well as adding new controls. You can select and modify multiple controls using rectangle-select, similar to a Word document. For example, you can select all fields in your page header and change the font to Arial 10point Bold.

The [Display Tools](#) allow you to change how the report is displayed while working in design mode. This includes the design grid, snap and showing or hiding the [Tool Window](#).


Navigation Tools

The Navigation Tools allow you to open, close, save, import, export, delete and preview reports.



New Report. Opens the report navigator in New mode so you can create a new report from scratch or using the wizard.



Open Report. Allows you to open a selected report. You can have multiple reports open simultaneously; drag the windows around to layer your reports. Use  (or Esc on your keyboard) to close the current report.



Save Report. Saves the current report. You can also use the Ctrl-S hot key.



Preview Report. Prints (previews) the current report to the screen. See *Previewing a Report*.



Export Report. Opens the report navigator in Export mode so you can export a report to a disk file.



Copy Report. Opens the report navigator in Copy mode so you can make a copy of the report.



Import Report. Allows you import a report from a disk file. When selected, the report navigator will open in Import mode.



Delete Report. Opens the report navigator in Delete mode so you can delete reports.

Report Setup Tools

The Report Setup Tools allow you to change the report properties, data source (SQL) and security of the report.




Report Properties. Opens the report properties dialog where you can specify the report Description, Type and Category, set page orientation, default font, before and after print events etc. Also see *Report Properties*.



Security. Allows you to Set a menu object ID and password level to protect access to your report. Also see *Report Security*.



Report Table Designer. Opens a dialog where you can create and maintain a table for use in reporting.

 **Edit Report Data Source SQL.** Opens a dialog where you can edit the SQL which is used to provide the data for your report. You can also create parameters and data dependencies for the report.

Report Design Tools

The Design Tools allow you to select and modify the properties of report controls such as font, alignment as well as adding new controls. You can select and modify multiple controls using rectangle-select, similar to a Word document. For example, you can select all fields in your page header and change the font to Arial 10point Bold.



Add Background Image. Inserts the selected image into the detail section of the report. Also used to remove an image.



Insert Text. Inserts a text field into the current section of the report.



Insert Calculation. Inserts a calculation field into the current section of the report. Also see *Toolbox items*.



Field Properties. Allows you to change the properties of the currently selected field or section. See section [Field Properties](#) for more information.



Delete Field. Deletes the selected field from the report. You can also use your keyboard's F6 or Delete key, or Ctrl-X.



Copy Field. Duplicates the selected field and places it immediately below the original field. You can also use your keyboard's F8 key (or Ctrl-C and Ctrl-V).



B I U **Bold, Italics, Underline.** Applies formatting to the selected field. You can also apply formatting using via the Format tab in the Field Properties, or using hotkeys (Ctrl-B Ctrl-I Ctrl-U).



A **Modify Font.** Allows you to access various font styles and effects.



Border. Applies a border to, or removes it from, the selected field.



Sorting and Grouping. Opens a dialog where you can specify which report fields will be used to sort and group information displayed on the report. See section [Sorting and Grouping](#) for more information.



Insert Line. Inserts a line into the current section of the report. Also see *ToolBox items*.



Insert Picture. Inserts an image into the current section of the report. Image fields are links to a image file on the computer. When distributing reports, image files must also be distributed.



Insert Chart. Launches the chart wizard to allow a chart to be inserted into the relevant report section. See section [Add a Chart to a Report](#).



etc

Align (left, centre, right). Applies alignment to the selected field. You can also apply formatting via the Format tab in the Field Properties, or use hotkeys (Ctrl-L Ctrl-R Ctrl-E).



Background Colour. Applies a background colour to the selected field.



Column Sorting Allows users to sort columns in ascending or descending order in display mode. See also [Control Context Menu](#).



Undo and Redo. Use these icons to undo and redo changes to the report.

Display Tools

The Display Tools allow you to change how the report is displayed when working in design mode. This includes the displaying design grid, controlling snap and showing or hiding the [Tool Window](#).



Snap to Grid. Turns snap to grid on and off. When on, it makes alignment of fields easier. When off, you can position a field exactly where you want to.



Sensitivity. Changes the grid sensitivity level. Select multiple times to cycle through available levels.



Show Grid Lines. Click to show (or hide) gridlines on your report. Gridlines help you position controls.



Show Tool Window. Click to show (or hide) the tool window on your report.



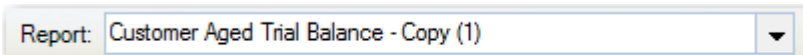
Show Guidelines. Click to show (or hide) guidelines on your report. Guidelines are the blue lines that help you line up a control as you move it around your report.



Help. Click this icon to access ClearView's help files.



Control Selector When dealing with reports with large numbers of controls or controls which are small or hard to see (such as lines), you can use the **Control Selector** to find and select a control.



Report Selector When multiple reports are open you can switch between report windows using this tool.



Objects Selector When you need to select multiple controls (to move or format) you can use this tool by clicking on an empty section of the report and dragging over the controls you want to select.

Report Tool Window

When you open a report you'll see a tool window at the left hand side.



This is a quick way to find all the controls, data fields, system fields and parameters relating to your report. Toggle between tool windows using the tool window toolbar:



Tools. This window opens by default when you open the Report Designer and displays report elements available such as label and calculation controls, image, line, chart etc. Items can be dragged onto your report; see [Tools](#) for a more detailed explanation.



Data Fields. Displays the data fields available based on the report's data source SQL. You can also switch to this tool window by clicking [Insert Data Field](#)



System Fields. Displays the system fields available such as page number, date, report parameter selections, Attaché option values etc. You can also switch to this tool window by clicking [Insert System Field](#)




Parameters. Displays the parameters available based on the report's data source SQL. If required you can drag them onto your report, e.g. to create a customised parameter listing.



KFI. This is only displayed on KFI Reports. Select this to add special KFI keys like <F9> and <ENTER>.



Close Tool Windows. You can close the Tool Window to give more room for working on your report, then open it again via the Show Tool Window icon .

Tools

The Tools window displays the available tools which can be used to create new report controls. You can drag these directly on to your report. Examples of how to use many of these tools are found in the [Tutorials](#) section.

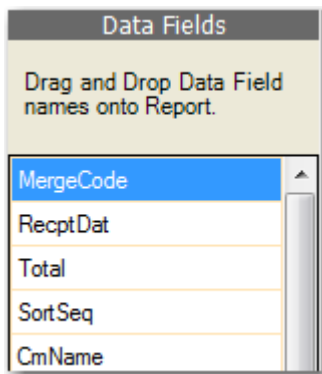
Label	Inserts a label (text) field.
Calculation	Inserts a calculation field. E.g. on a customer report a calculation field with contents <code>= "Phone: " & CmPhone</code> would display as <code>Phone: 9999 8888</code>
Image	Inserts an image. Browse to select the image required.
Line	Inserts a line. The line appears in a diagonal format; stretch and shrink it to the size required. You can also position lines via the Position tab in the Field Properties (right-click the line and select Properties).
Chart	Inserts a chart using the chart wizard.
Expand/Collapse	Inserts a control that allows users to expand or collapse report sections during print preview.
Sub Report	Embeds another report into the main report using the sub report design wizard.
Drill-Down Report	Converts a data field textbox into an interactive link that navigates to another report when clicked.
Record number	Inserts a calculation field with contents <code>=RowNumber(Nothing)</code> This counts the number of records that appear on the report.
Cross Tabs	Creates a spreadsheet style grid to generate a summary of the report data, using dynamic columns and rows.
Headings	Automatically builds a Page Header using the controls in detail section. Drag this into the Page Header.

Totals Automatically builds Totals using numeric controls in detail section. Drag this into a Footer section.

Drill-Down Form Inserts a Label control which is linked to a drill-down action (task) in Attaché. This is only applicable to reports with a Report Type of “Dashboard Gadget”. Drag into the Page Header. You will be prompted for the field containing the Attaché code, and the program you want to open using this code.

Data Fields

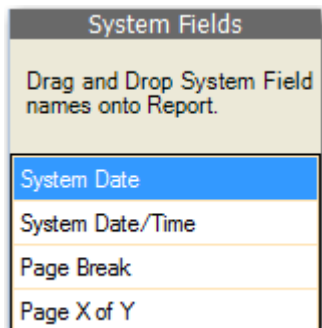
The Data Source SQL controls what fields are available to your report. The Data Fields window displays these fields and allows you to drag them on to your report. Commonly you would place these in to the [Detail](#) section.



When you drag the fields on to the report, they will automatically be sized according to their data type. For example, customer code is 8 characters and will be narrower than customer name which is 35 characters. Numeric fields will be right justified while text fields will be left justified.

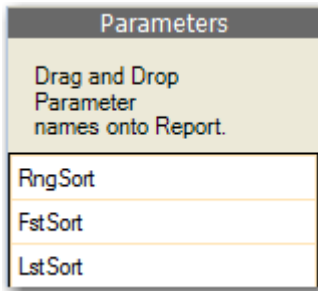
System Fields

The System Fields window displays fields which are available to all reports and allows you to drag them on to your report. Commonly you would place these in to the [Page Header](#) section. System fields include page numbers and Attaché option settings (company name etc).



Parameters

The report parameters available to your report are displayed in the Parameters window where they can be dragged on to your report. Commonly you would place these in to the [Page Header](#) section. Parameters can be defined via the Report Parameters tab in the Data Source SQL window. See section [Report Setup Tools](#) for more information.








KFI

The KFI Tools allow you to drag commonly used keys like <F9>, <ENTER> onto your report. You can manually add any keys you like by dragging one of these on to your report and editing it via the [Data](#) tab in the [Field Properties](#).

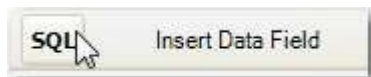
Control Context Menu

When you right-click on a control on your report you'll see a context menu; this gives you quick and easy access to various settings.

Bring to Front	Changes the order of selected controls.
Send to Back	
Add Border	Does the same as  (adds a border to, or removes it from, the selected field).
Background...	Does the same as  (applies a background colour to the selected field).
Font...	Does the same as  (allows you to access various font styles and effects).
Column Sorting...	Does the same as  (makes reports interactive by allowing users to sort columns in ascending or descending order in display mode).
Conditional Formatting...	Allow data of particular interest to be highlighted while displaying a report.
Properties...	Does the same as  (allows you to change the properties of the currently selected field or section). See section Field Properties for more information.

SQL Tool

You can define which data is available on your report using the **SQL** button.



You can also create parameters and data dependencies for the report.

Data Source SQL

The Data Source SQL tab contains an area where you can edit the [SQL](#) to create a query which is used to provide the data for your report. You can resize the window to suit your personal taste.

The simplest sort of query is a SELECT query.

```
SELECT * FROM Cust_mast
```

For example, the above SQL statement effectively says that we want to access all the data fields in the customer master file (Cust_mast table). The * operator is known as a wildcard, which means "all" and is normally not recommended because it is less efficient than listing just the fields you need. The following SQL is better.

```
SELECT CmCode, CmName, CmContact, CmSRep, CmYSales, CmPSales FROM Cust_mast
```

View SQL (F7) You can view the data your SQL statement will capture by clicking the **View SQL** button; a table will display the data then you can press the X to close the window. This is a good way to check that your SQL code is correct.

Save (F9) Press Save to return to the report screen. After saving, fields in the SQL can be dragged directly on to your report from the [Data Fields](#) window. You can only save valid SQL so if there is a problem you will need to fix it.

Code Font (F4) You can change the font used to display the SQL to suit for personal taste.

ODBC Settings (F6) You can use Attaché ODBC tables in your SQL. The tutorial [Create an ODBC Report](#) has a good example of this.

Build SQL (F8) You can use the ClearView Query Builder tool to assist you in creating complex queries, especially when there is more than one table involved. The tutorial [Create a Query Using the Query Builder](#) has a good example of this.

Custom Query (F5) Many standard reports use built in queries which are hidden from users to keep things simple and for efficiency. You can use these queries and even modify them by converting them to an SQD or Saved Query Definition. The tutorial [Create a Saved Query Definition](#) has a good example of this.

External Data (F12) You can enter SQL which references a table in a database outside of ClearView using the External Data feature. The tutorial [Create an Report using External Data](#) has a good example of this.

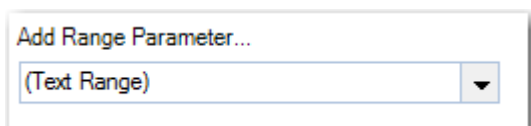
Data Sources You can select from a range of available data sources by selecting the radio button. External Data, ODBC, Custom Queries will be displayed. You can also use the **Build SQL (F8)** to access data sources.

View (F11) You can preview the data in a Data Source without affecting the SQL which you have already entered.

Report Parameters

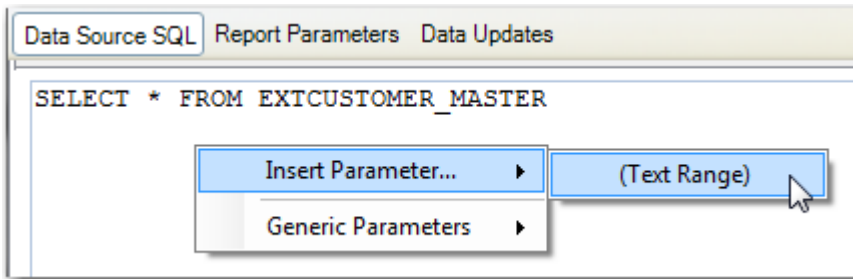
You can add parameters to your reports from the Report Parameter tab. Before you begin you should have created the SQL for your report using the [Data Source SQL](#) tab.

Add Range Parameter The easiest way to create a parameter is to copy one from an existing report using the Add Range drop down list. You will see a list of internal reports and their ranges. Alternatively you can create your own by selecting **(Text Range)**, **(Date Range)** or **(Numeric Range)**.



After you have created your parameters you must include them in the WHERE clause of your [Data Source SQL](#).

Immediately after creating the parameter it is available from the context menu in the [Data Source SQL](#) window.



```
SELECT * FROM EXTCUSTOMER_MASTER WHERE (Not UseParameter
("RngText1") OR (UseParameter("RngText1") AND TextFieldName>
=UseParameter("FstText1") AND TextFieldName<=UseParameter
("LstText1")))
```

Replace **TextFieldName** with the real field names to complete the process. For example, if I added a range for customer code, and the field which corresponds to this is called **Code**, then the SQL will look like:

```
SELECT * FROM EXTCUSTOMER_MASTER WHERE (Not UseParameter("RngText1") OR
(UseParameter("RngText1") AND Code>=UseParameter("FstText1") AND
Code<=UseParameter("LstText1")))
```

You can customise the appearance of the parameters using these settings.

Index This is the position of the control on the screen. Valid numbers are from **1** to **24**.

Name This is the name of the parameter.

Type This is the type of the parameter.

Description This is what the user sees as the description. You should change this value to suit your needs.

Lookup Type and Lookup Table / Query You can add drop down lists to a parameter by entering a **Value List** or a **Query**. For example, the following SQL can be used to display a list of customers:

```
SELECT CmCode,CmName FROM Cust_mast ORDER BY CmCode
```

Column Widths Enter an optional width for each field defined in the **Lookup Table / Query** SQL. For example, if the

Index	Name	Type	Description
1	RngText1	Bit	Customer Code Range
2	FstText1	Text	First Customer
3	LstText1	Text	Last Customer

Refer to the ClearView SQL and Function Reference for more information about the USEPARAMETER function.

Data Updates

You can convert a live ODBC report into an Off-Line ODBC report from the Data Updates tab. The tutorial [Create an Off-Line ODBC Report](#) shows an example of how to do this.

Using Functions in Report SQL

The SQL must comply with the standard used by the Microsoft Jet OLEDB 4.0 provider. This allows for the use of a large variety of standard functions to manipulate data. For example, the DATEADD and DATEDIFF are useful when comparing dates.

You can also access some user defined functions which are native to ClearView. For example, the USEPARAMETER function can be used to pass report parameters entered by the user to the SQL. Some of the more useful user defined parameters are listed below.

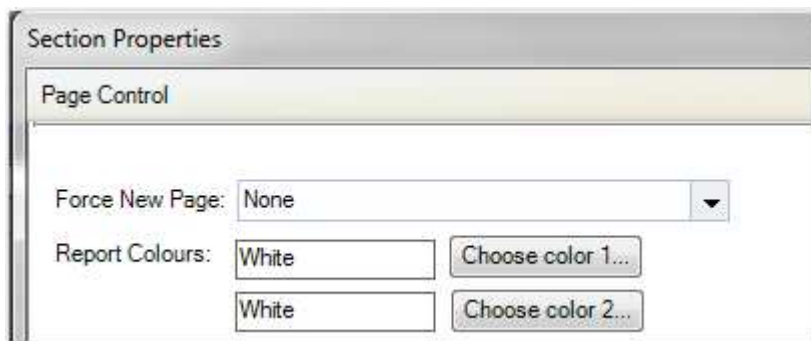
USEPARAMETER	Returns the value of a specified report parameter.
NZ	Converts a null value into a zero value or zero length string.
ACCESSDATE, DTOS	Converts a string date value into a date value and vice versa.
PADL, PADR	Pads a string.
PLGETVAR	Returns the value of a dashboard variable previously set using PL.VAR or PLSETVAR function.
GETVALUE	Returns the value of a solution variable set with the SETVALUE command.
GETPLOPTION	Returns a system option from the SYSSETTING table.

For more information about the standard and user defined functions which are available see the ClearView SQL and Function Reference.

Section Properties

All reports have a header, footer, page header, page footer, and detail sections as well as optional group sections controlled by the Sorting and Grouping levels. Use the grey section bars to select a section. When fields are added they will be inserted into the current selected section.

You can change the properties of the currently selected section by pressing the [Field Properties](#) button after selecting a section.



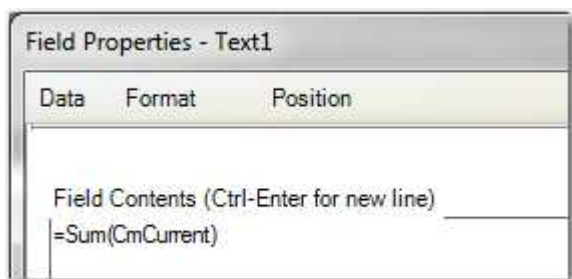
Force New Page Use this field to force the report to create a new page **Before**, **After** or **Before and After** this section.

Report Colours This option is only available for Detail sections, and allows you to highlight rows of the report in different colours. Up to two colours can be selected, or leave the default selection (White).

Field Properties

You can change the properties of the currently selected field (or report control) by pressing the [Field Properties](#) button after selecting a report control field.

Data (Field Contents)



Data Field Enter a valid SQL field name. Valid names are displayed in the [Data Fields](#) window.

Calculation Enter a calculation based on a field name by prefixing with an equals (=) character. For example, if you have data fields **FirstName** and **LastName** you can enter either of these here or use both in a calculation:

```
=FirstName & " " & LastName
```

Image For images this is the full path to the image file.

Line For lines this is not used.

Label For labels this is the label caption.

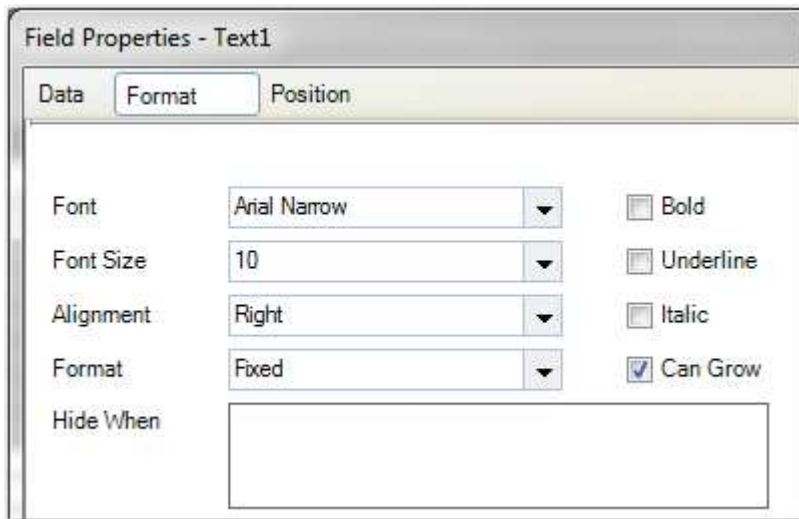
Chart For charts this is a valid chart expression (calculation). It is generally easier to delete and recreate a chart control than to edit it.

Sub-Report For sub-reports this is not used.

Record Number For a record number control this is the calculation **=RowNumber(Nothing)**.

Format

Here you can change the font style, size, alignment and other properties which affect the appearance of a control.



Format You can format a report control to change its appearance, e.g. currency, percentage etc (similar to formatting a cell in Excel). This field can also accept expressions by placing an = sign at the beginning on the format field eg. ="0.00000" or =QtyFmt where the select statement for the report returns a field QtyFmt that is a valid format string. This also means that that the field can be formatted on a record by record basis at runtime.

Can Grow If the amount of data exceeds the size of the control it will automatically resize (grow) to fit the amount of data. To restrict the size of the control, deselect this option.

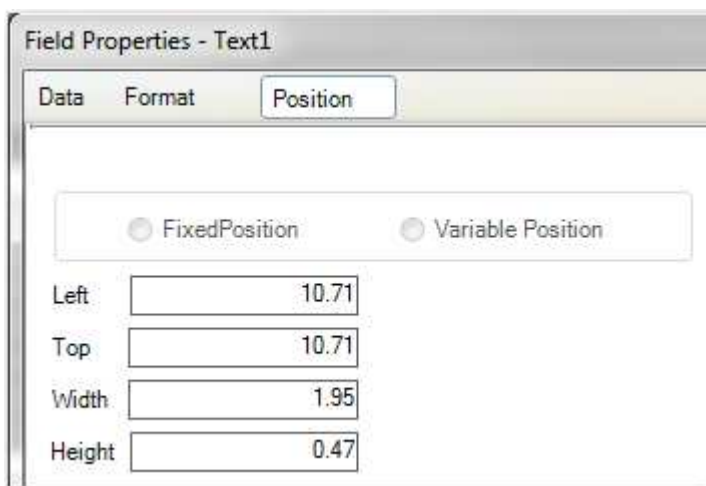
Hide When Allows so to hide a control (so it does not print) when certain conditions are met. If the condition entered in the Hide When property evaluates to Boolean TRUE, the control will be hidden. E.g. if you enter TRUE the control will always be hidden. You can also enter a complex expression:

`CmCurrent=0` can be used to hide controls when a customer has a zero current balance and

`CmCurrent<>0` can be used to hide controls when a customer has a non-zero current balance.

Position

For fine control over the placement of a control you can set the Left, Top, Width and Height. This is often useful when working with Line controls which are difficult to position. To select a control to position you can use the [Control Selector](#) or the [Objects Selector](#).



It is also possible to move a selected single control or groups of controls using the arrow keys. The arrow keys by themselves will move the controls in small increments. The Arrow keys and the Ctrl key move the

controls to the closest grid position. The Arrow keys and the Shift key will make the controls bigger or smaller in size.

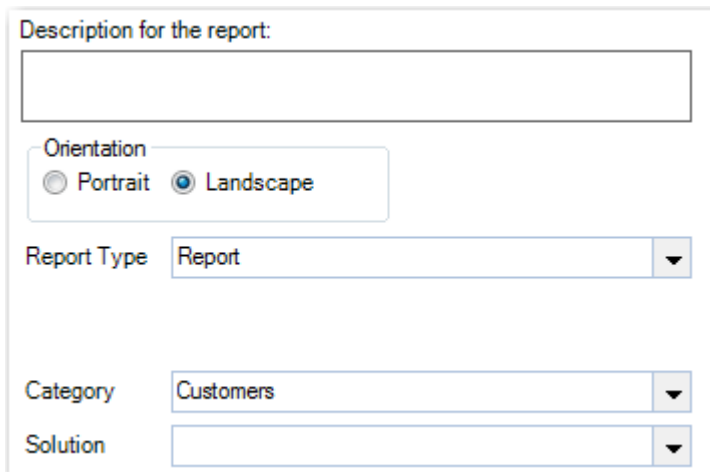
NB. This feature only works on groups of controls in the same section and the movement will be restricted by the limitations of all controls.

Report Properties

Here you can define various report settings including type, default font, page size etc.

Report Properties

On the Report Properties tab you can define:



Description for the report:

Orientation
 Portrait Landscape

Report Type: Report

Category: Customers

Solution:

Description Add information such as the purpose of the report. This will display in the Report Description field of the report navigator to help you select the right report.

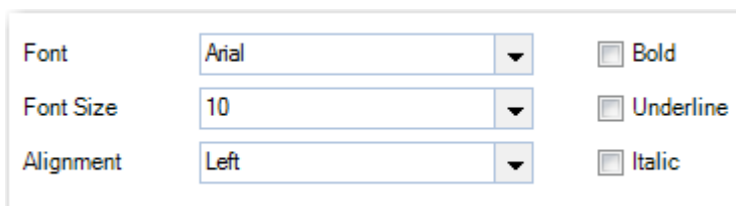
Orientation Select whether the report is to be Portrait or Landscape.

Report Type This controls where the report will be available. Commonly used report types are:

- Report: This is the default type and will make the report available via the Reports | Custom Reports | Print a Custom Report program.
- Dashboard Gadget: This allows the data source to be accessed via the ClearView dashboards.
- Mail Merge: Reports which include SQL fields “MergeCode” and “MergeType” can be made into a mail merge report using this type. When printing the report some additional Output Device options are displayed.

Category You can create your own report categories and use this to filter the list in the report navigator.

Default Font



Font: Arial

Font Size: 10

Alignment: Left

Bold

Underline

Italic

On the Default Font tab, specify the font, font size and alignment required for new fields which are added to the report. This can speed up the creation of your report if you are adding multiple label and calculation fields.

KFI Properties

<input type="checkbox"/> KFI/Export	Filename	Number File	Next No.
On Creation	RPTFILE.KFI	<input type="checkbox"/>	1
On Success	RPTFILE.OLD	<input type="checkbox"/>	
On Error	RPTFILE.ERR	<input type="checkbox"/>	

To output the report to a disk (KFI) file, you can select the **KFI/Export** option. When the report is generated a message will appear prompting the user to import the file into the relevant Attaché entry screen. When the user presses OK, then another message asks if the import was successful and will rename the file according to the **On Success** or **On Failure** settings. You can keep a history of files by using the **Number File** option.

Suppress Screen Output The Suppress Screen Output option can be used to stop confirmation messages appearing when generating KFI reports.

When a KFI report is generated, you normally see a confirmation message “Did the file import OK?”



This message can be suppressed using the Suppress Screen Output option in the Report Properties (KFI Properties). When messages are suppressed, you should perform custom checking in the reports AFTER UPDATE event.

Report Properties				
Default Font	Report Properties	KFI Properties	Events	Page Setup
<input checked="" type="checkbox"/> KFI/Export	Filename	Number File	Next No.	
On Creation	FileName.kfi	<input type="checkbox"/>	4	
On Success	FileName.old	<input type="checkbox"/>		
On Error	FileName.err	<input type="checkbox"/>		
<input type="checkbox"/> Suppress screen output				

TIP: To create a KFI report, use the Report Wizard and select a KFI Report when prompted. After creating the report you can modify the report, but most of the work will be done for you by the Wizard.

Page Setup

The screenshot shows a 'Page Setup' dialog box with two main sections: 'Paper Size' and 'Margins'. In the 'Paper Size' section, the 'Size' is set to 'A4' in a dropdown menu, 'Width' is 21 cm, and 'Height' is 29.7 cm. The 'Margins' section has four input fields: 'Top Margin' (1 cm), 'Bottom Margin' (1 cm), 'Left Margin' (1 cm), and 'Right Margin' (1 cm). Below the margins is a checked checkbox labeled 'Show Page Header on first page' and a button labeled 'Gadget Properties'.

Paper Size You can select the paper dimensions from the drop-down box or type your customised size dimensions into the **Width** and **Height** fields.

Show Page Header on first page The page header is displayed on the first page by default. To hide the page header on the first page, deselect this option.

Margins You can set the margins to suit your needs via the “More Page Properties...” button.

Gadget Properties If the [Report Type](#) is a gadget you can specify the default gadget settings which are to be saved to the users SETTINGS.INI file (which controls how the gadget is displayed).

Events

A limited subset of PowerLink Solution Builder events are supported and can be entered into the **Before Print Event** and **After Print Event**.

```
Before Print Event
IF=MSGBOX("Do you want to rebuild data?",1)=1;
  RUNQUERY=SQDMYQUERY;
ELSE::;
ENDIF::;
```

Refer to the **PowerLink Solution Builder Programmer User Guide** and the **PowerLink Solution Builder Programmer Reference** for more information.

Event Commands

Supported commands include RUNQUERY, REFRESHDATA, SETVALUE, MSGBOX, GOTO, MOVEFILE, COPYFILE, RENAMEFILE and PL.VAR.

Event Functions

You can also use functions with Event Commands. Some examples are shown below.

The DIR command can be used to detect if a file exists

Checking if a file exists can be done using the DIR function in a reports BEFORE PRINT or AFTER PRINT event. The following example show how the function can be used.

```
IIF=Dir("C:\TEMP\TEST.TXT")="";
  MSGBOX="File not found";
ELSE::;
  MSGBOX="File found";
ENDIF::;
```

The DMIN, DMAX and DLOOKUP aggregate functions can be used to return values in a report print event

DMIN is used to return a minimum value in a domain.

DMAX is used to return a maximum value in a domain.

DLOOKUP is used to return a value matching specified criteria in a domain.

These functions can be used in a report BEFORE PRINT or AFTER PRINT event. The following examples show how each function can be used.

```
PL.VAR("X")=DMIN("CmCode","Cust_mast","CmCode>'DTR'");
```

```
PL.VAR("X")=DMAX("CmCode","Cust_mast","CmCode<'DTR'");
```

```
PL.VAR("X")=DLOOKUP("CmName","Cust_mast","CmCode='DTR'");
```

To test the function, in the details section of the report add a calculation field with the value:

```
=PLGETVAR("X")
```

Sorting and Grouping

The [Sorting and Grouping](#) button allows you to sort your report in a particular order. Adding a sorting level also add a group [section](#) to your report.

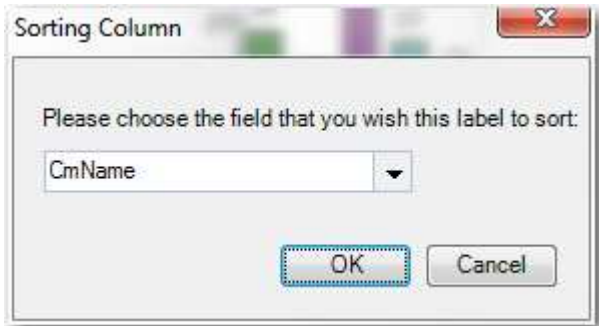


You can force a new page at the start of a section using [Section Properties](#).


Column Sorting

The [Column Sorting](#) button allows you to interact with a report which has been printed to screen by clicking on a heading and sorting the data in that column. This feature is designed for reports which are only printed to screen.

Because column sorting is tied in with [Sorting and Grouping](#) level, you can only apply column sorting to labels which are in a [group section header](#). For these reports, you should move your headings into the section header rather than have a [page header](#).



Previewing a report

When you preview  a report, various actions are available on the preview toolbar:



Next Page, Last Page, First Page, Previous Page. Move forward (or backward) page-by-page or go straight to the end (or beginning) of the report. You can also type in a page number and press enter to go directly to that page.



Print. Allows you to select the relevant printer and the pages to print.



Print Layout. This shows how your document will look when it's printed.



Page Setup. Allows you to define the paper size, source, orientation and margins. Note that this only affects the print layout; if you would like to make permanent changes you'll need to modify your report via the Page Setup in Report Properties (see Report Properties).

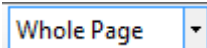
Export Excel



Save the report in Excel format. **Note:** a Document map is also created; the report details are displayed on Sheet1.

Acrobat (PDF) file Save the report in PDF format.

Email Report Attach the report directly to an email as a PDF.




Zoom. Select your preference for viewing the report.



Back You can navigate back to the main report when you drill into a drill-down report. See [Create a Drill-Down Report](#) for more information.

Report Security

Protect sensitive data from unauthorised access using the Security  feature.

Attaché Menu Object ID

You can assign menu access rights to a report by entering the corresponding Attaché Menu Object ID. For example, you may want to restrict printing of a "customer transaction report" to users who have access to the Customer Enquiry program (menu object ID 87).

TIP: To find the menu object ID, press <LSHIFT><RSHIFT> and <F1> while the program is open.

Password Level

You can assign password level access rights to a report by entering the corresponding Attaché password Level (1 being highest and 9 being lowest). For example, you may want to restrict printing of a “customer transaction report” to users who have access to the Customer Enquiry program (menu object ID 87).

A separate password level access can be assigned to preview and design access to the report.

Tutorials



This section shows you how to perform some common tasks such as copying an existing report and modifying it.


Features of the Report Designer are not covered by the tutorials. If you need to find out more about a feature, refer to the [Using Report Designer](#) section of the user guide.

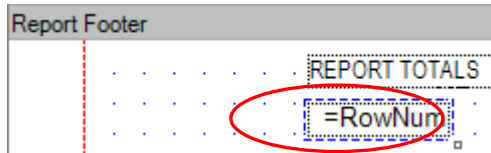
Customise a Standard Report


In this tutorial we will modify a standard report and modify the font style, add a background image, add a line count to see a running total of the number of records displayed, use conditional formatting to highlight lines with a quantity of more than 50 and use an expand / collapse control to allow interaction with the report when displayed on the screen

Any standard report can be copied and modified to suit your needs. We'll work with the **Supplier Purchase Analysis – Product Totals** report.

1. [Start the Report Designer](#) and [Copy a Standard Report](#) by selecting **Standard** for the **Report Type** and select the **Supplier Purchase Analysis – Product Totals** report.
2. **Modify the Font Style** We can modify the font for multiple fields at the same time.
 - a. In the Page Header section of the report, select all heading fields (Product, Description etc). To do this, click then drag the mouse so that a rectangle appears using the [Object Selector](#) tool. Only drag the rectangle through the controls you want to select.
 - b. While the fields are selected, click  then change the font size, style or colour.
 - c. When you are finished, press the [Preview](#) button to display to the screen.
3. **Background Image** A Background image can be added to the detail section of the report.
 - a. Click the 'Add background Image' icon  in the report toolbar.
 - b. Browse for an image then double-click to embed it into the report.
 - c. Click 'Add background Image' again to remove the image. You'll be asked if you wish to remove the current background image. Click Yes, and then Cancel.

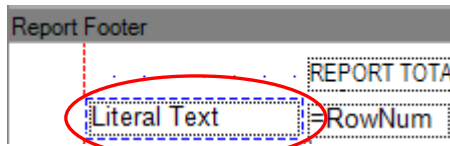
Note: To remove a background image, select the "Add Background Image" button and select Yes when prompted to remove it.
4. **Add a Record number** Let's add a record count so we can see the total number of number of products.
 - a. In the tool window, select to show the ToolBox 
 - b. Click the 'Record Number' item then drag it into the **Report Footer** section of the report. Stretch the field to make it a bit larger.



- c. Let's left-align the field. While the field is selected, click 
- d. Preview the report and go to the last page. You should now see a number; this is the total products on the report.

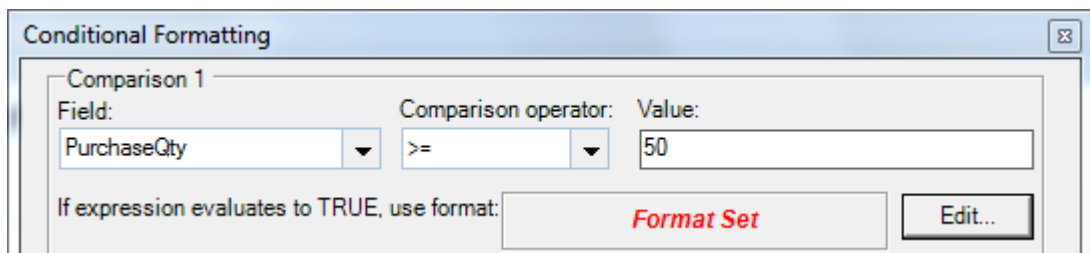
5. **Add a Label** Let's add a description for the record count.

- a. In the ToolBox, click the 'Label' item and drag it onto the report to the left of the record number field. Shrink the field a little so it fits nicely:



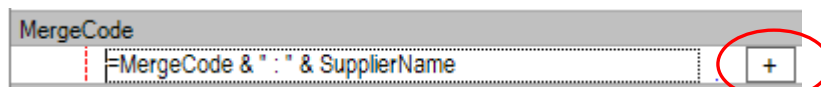
- b. Right-click the label field and select **Properties...** Change the field contents to **Total Products:** then click OK.
 - c. When you are finished, press the [Preview](#) button to display to the screen.
6. **Add Conditional Formatting** Let's highlight high volume product purchases so we can negotiate better pricing arrangements.

- a. In the Detail section of the report, right-click the **Product** field and select 'Conditional Formatting'.
- b. Create an expression by selecting a Field: **PurchaseQty**, Comparison operator: **>=** (greater than or equal to) and Value: **50**.
- c. Click the **Edit** button then select font style **Bold Italic** and colour **Red**, then click OK. This dictates how the Product field is to appear if the purchase quantity is 50 or more.





- d. Let's apply the same formatting to the product description so it really stands out. Repeat the previous steps for the **ProductDesc** field.
 - e. When you are finished, press the [Preview](#) button to display to the screen.
7. **Add an Expand/Collapse control** Let's allow users to expand or collapse the product details during print preview.

- a. In the ToolBox, click the 'Expand/Collapse' item then drag it onto the **MergeCode** section of your report, to the right of the SupplierName field. A plus symbol will appear; this just indicates that the control exists:



- b. When you are finished, press the [Preview](#) button to display to the screen. You will notice that the details have collapsed.

- c. On the preview screen, click the  symbol to expand the details then  to collapse again.


Create a New Report “From Scratch”

This section will show you how to create a very simple report and give you a basic understanding of report components.

1. [Start the Report Designer](#) and [Create a New Report](#) with the name **Customer Sales**.
2. Select the [SQL Tool](#) button and enter the following SQL statement:

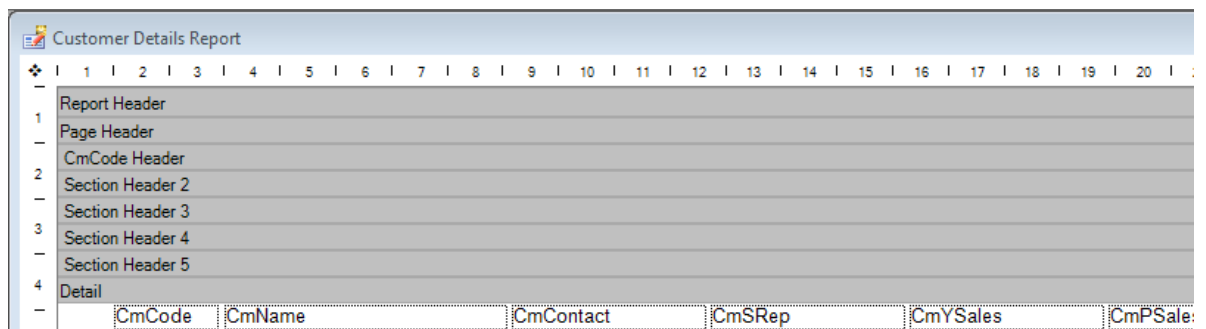
```
SELECT * FROM Cust_mast
```


This statement effectively says that we want to access all the data fields in the customer master file (Cust_mast table). The * is known as a wildcard, which means "all". View the data your SQL statement will capture by clicking the View SQL button; a table will display the data then you can press the X to close the window. This is a good way to check that your SQL code is correct.

3. Press **Save** to return to the report screen.
4. In the tool window at the left of the screen, click  to open the Data Fields window. Here you can see all the fields available based on the SQL statement.
5. Now let's make a change to the SQL so that we are only looking at at the data fields that we want on the report. This is usually recommended as the report will generate faster because it doesn't have to fetch unnecessary information. Click the SQL button again and change the SQL statement to:



```
SELECT CmCode, CmName, CmContact, CmSRep, CmYSales, CmPSales  
FROM Cust_mast
```

6. Press **Save** to return to the report screen. You'll notice that the fields available in the tool window have reduced.
7. **Add fields and labels** Drag each field in the Data Fields window onto the Detail section of the report. Reduce the size of the CmCode field and increase the CmName field so that your screen looks like this:



8. **Headings** Now we need to add some headings. Click the CmCode Header and drag it down to make some space in the Page Header. In the tool window at the left of the screen, click  to open the Toolbox window. Drag a Label into the Page Header for each field, lining up with the fields. Double-click each label to bring up the Field Properties, and change the field contents appropriately. Your screen should now look like this:

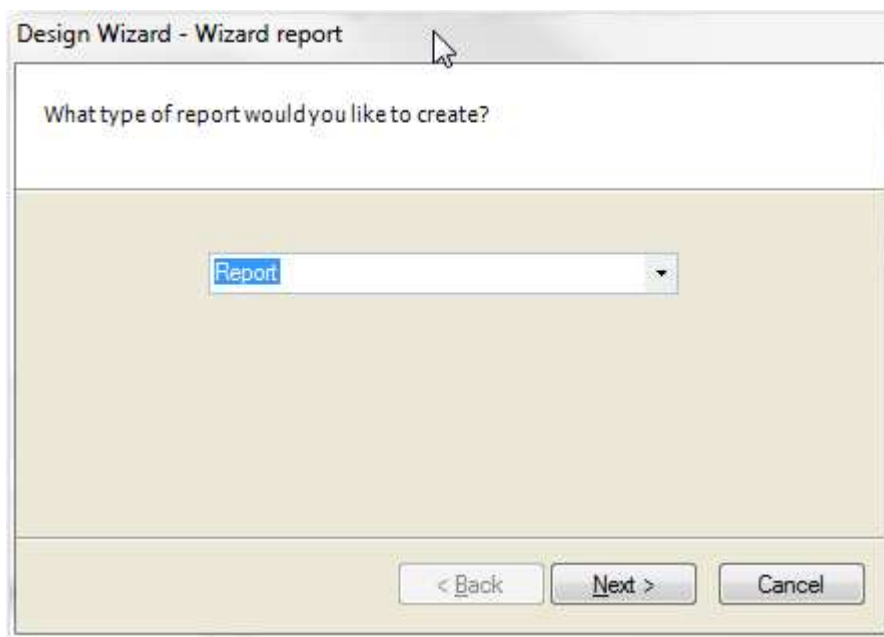
Code	Name	Contact	Rep	YTD Sales	PTD Sales
CmCode	CmName	CmContact	CmSRep	CmYSales	CmPSales

9. Click  to preview your report. You'll notice that the sales values are not displaying as currency; close the preview and we'll fix this in the next step.
10. Double-click the CmYSales field and go to the Format tab. Change the Format to **Currency** and the Alignment to Right, then press Ok. Do the same for the CmPSales field. Change the alignment of the labels for these fields to Right as well (you can just select the field then click ).
11. Preview your report to see the changes.

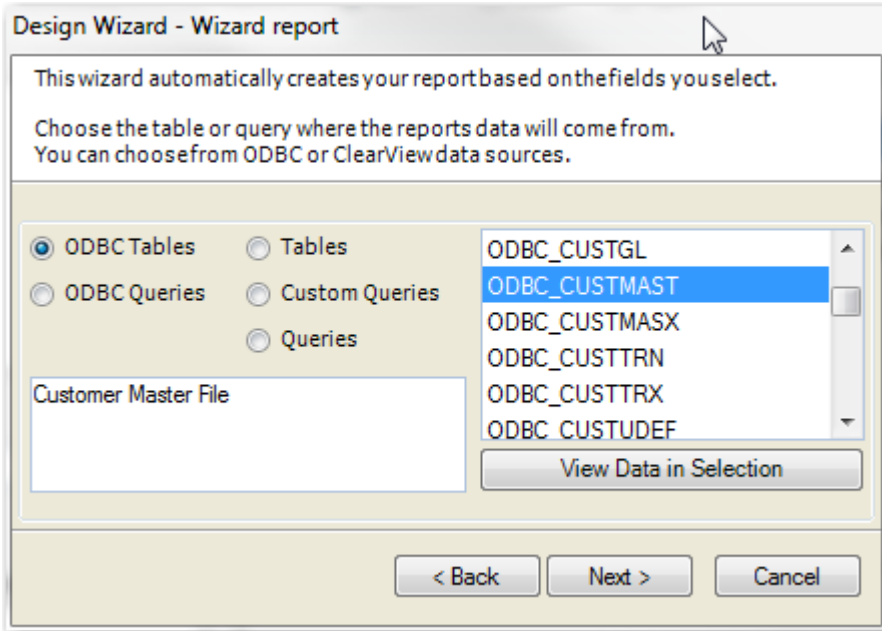
Create a New Report Using the Wizard

This section will show you how to create a very simple report using the Report Wizard.

1. [Start the Report Designer](#) and [Create a New Report](#). Enter a **Report Name**, select **New** and select **Wizard** button.
2. **Select Report Type** Select **Report** and press **Next**. You can create a normal **Report** or a **Label Report**.



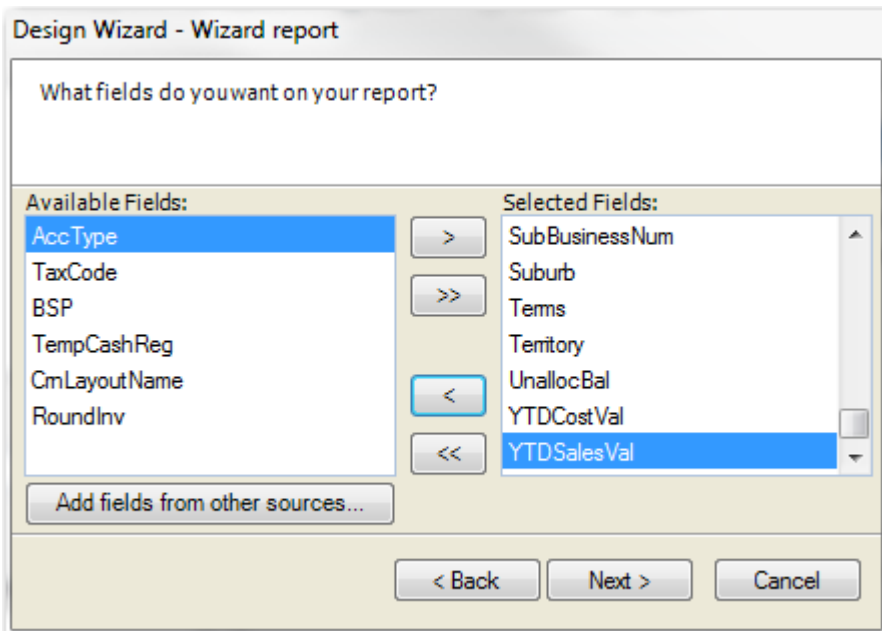
3. **Select Report Data Source** Select **ODBC_CUSTMAST** and press **Next**.



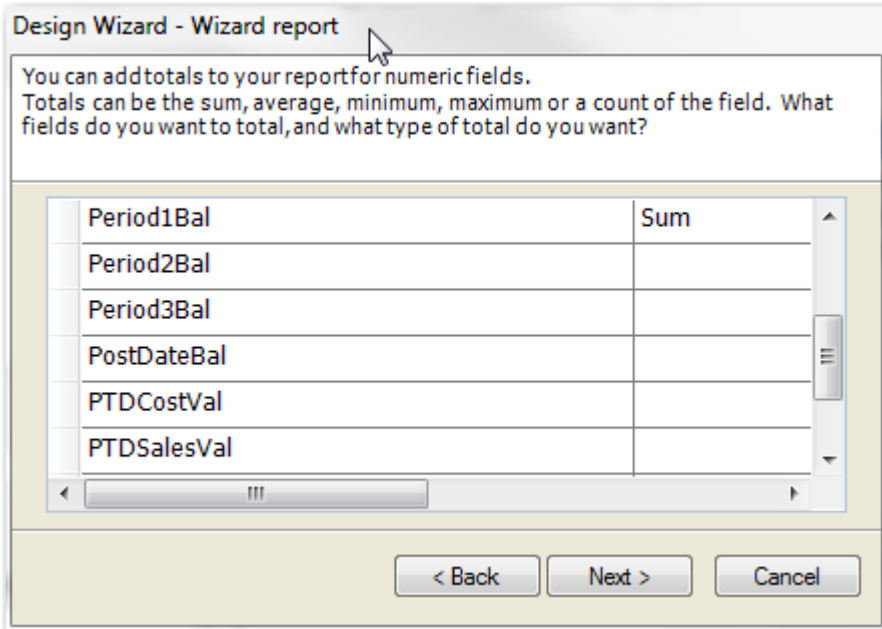
You can select from a range of tables, queries and ODBC data sources.

TIP: You can create your own data source as a Saved Query Definition (SQD) by creating a report with a name starting with "SQD". The data source can then be selected by pressing the **Custom Queries** option. This is a quick way of laying out a report because the Wizard does all the work.

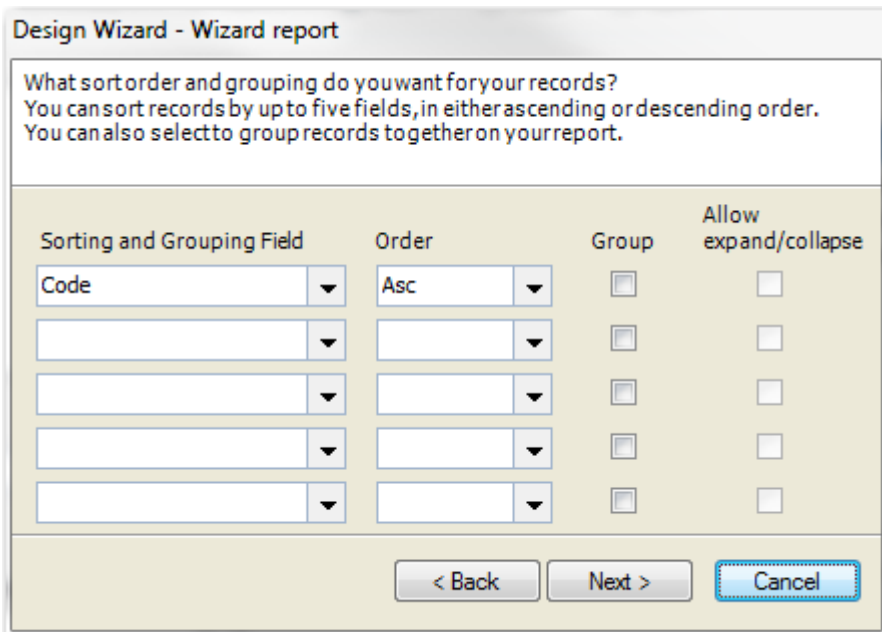
4. **Select Fields** Select which fields you want on the report and press **Next**.



5. **Select Report Totals** If you selected numeric fields in the previous step, you can add totals and other calculations.



6. **Select Sorting and Grouping** Select to sort by **Code** in **Ascending** order.



7. **Select Report Ranges** Add a report range for the Customer **Code**.

Design Wizard - Wizard report

What fields do you want to range your report on?
 You can restrict records using up to five ranges. When you print the report, you can enter range values which determine what records are included on the report. Eg. Customer Range, Date Range, etc.

Range Field Name	Range Description
Code	Customer

< Back Next > Cancel

8. **Select Sub-Reports** For this example we will not be adding a sub-report. See [Create a Report with a Sub-Report](#) for how you can add a sub-report to an existing report.

Design Wizard - Wizard report

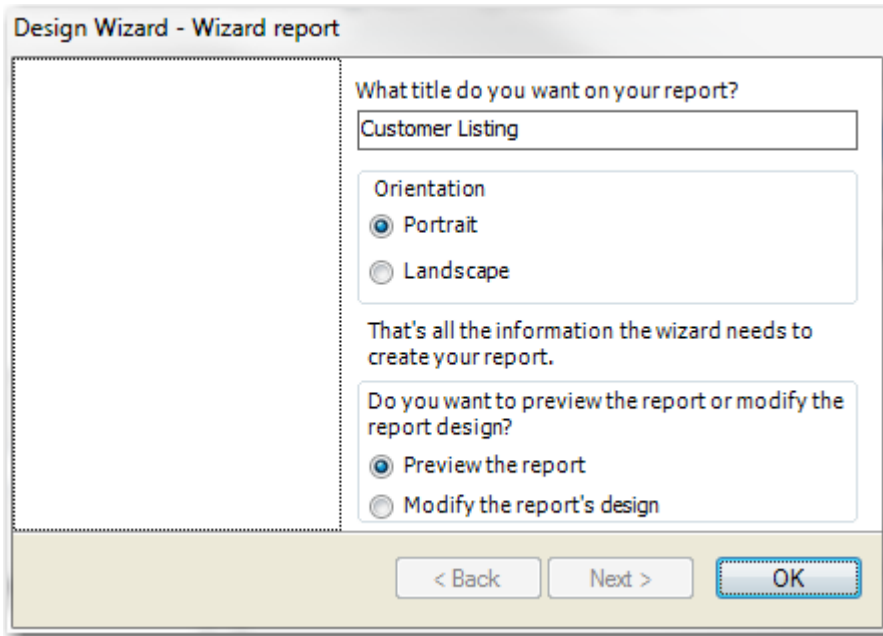
When running a report, you have the ability to click on a field value and step into a sub report that relates to the value you clicked on.

To add linked reports, click on the box below.

Do you wish to link other reports to this report? Yes

< Back Next > Cancel

9. **Select Title and Orientation** We will display our report in Portrait and give it a title **Customer Listing**.

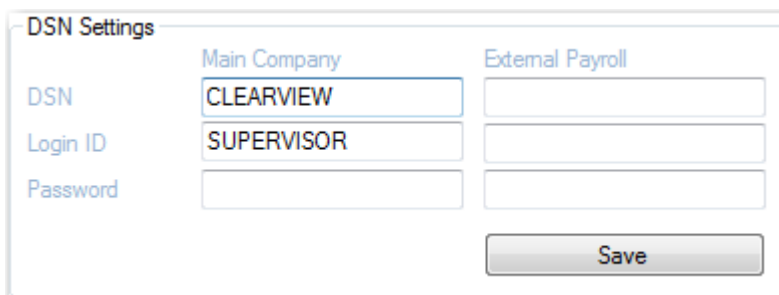


Create an ODBC Report

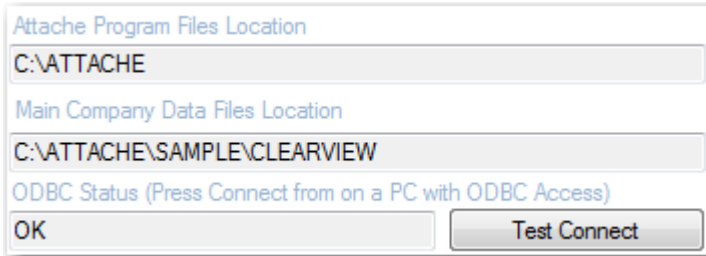
This section will show you how to create a very simple report using off-line ODBC tables. This section assumes that you have installed the Attaché ODBC Driver and have created a DSN.

Refer to the **Attaché ODBC Installation and Administration Guide** in the **Documentation** section of the **Attaché Members Web Site** for more information.

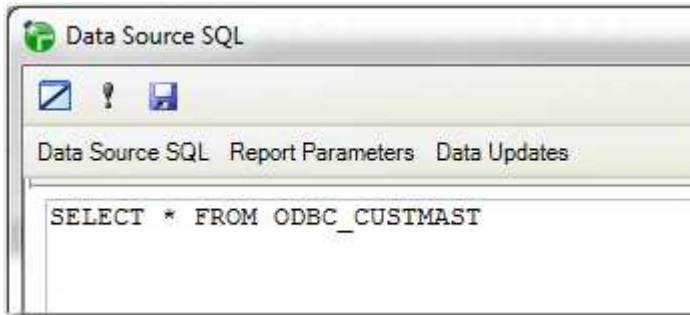
1. [Start the Report Designer](#). [Create a New Report](#) using the name "Customer List".
2. Select the [SQL Tool](#) button.
3. **ODBC Settings** Check that ODBC settings have been configured for ClearView. Using **ODBC Settings (F6)** button.
4. **ODBC Options** The ODBC Options will open. Check that the **DSN**, **Login ID** and **Password** have been entered.



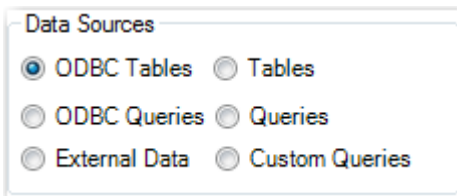
5. Press **Test Connect** followed by **Save** and close the window to return to the Report Designer.



6. Enter the SQL using the native ODBC table names.

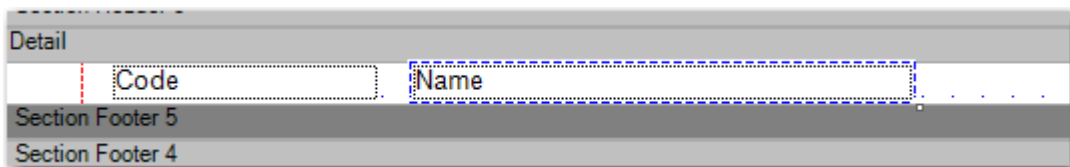


For a full list of ClearView ODBC table names select the **ODBC Tables** option in the **Data Sources** option group.



Note: The TRACK_USERLOG (Track User Log File) is not accessible using the Report Designer as it resides in the Attache Program Folder.

7. Press **Save (F9)** to return to the Report Designer.
8. **Add Fields** You will not be able to print your report until you have added report fields to your report. Drag these in from the **Data Fields** Tool Box.



9. At this stage you should have a fully working "live" ODBC report. Press the **Preview** button to confirm.

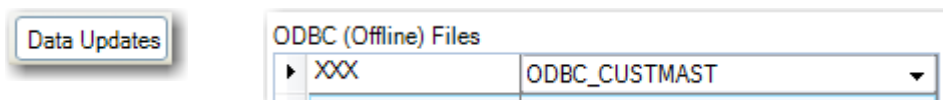


See section [Create an Off-Line ODBC Report](#) for details on how to convert the live report into an off-line ODBC report which can give a dramatic improvement in performance. In fact some complex ODBC queries would be too slow to run in live mode.

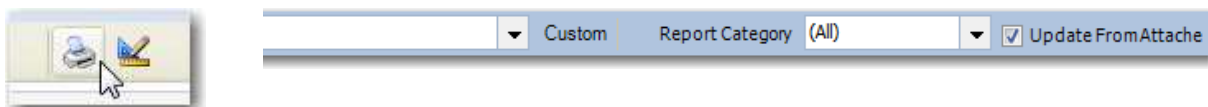
Create an Off-Line ODBC Report

To convert any “live” ODBC report to an “off-line” ODBC report requires that you declare which tables you want to be used in off-line mode.

1. **Create an ODBC Report** See [Create an ODBC Report](#) for the steps.
2. Select the [SQL Tool](#) button.
3. Select **Data Updates** button and add the ODBC tables to the list.



4. Press **Save (F9)** to return to the Report Designer and press the **Save** button.
5. When you are finished, press the [Preview](#) button to display to the screen.
6. You can also print your report by selecting the **Print** button on the [Dashboard Toolbar](#). Select your report from the list and press **Generate (F9)**. The **Update from Attaché** option must be selected when printing the report for the first time and whenever you want to refresh the off-line ODBC tables.



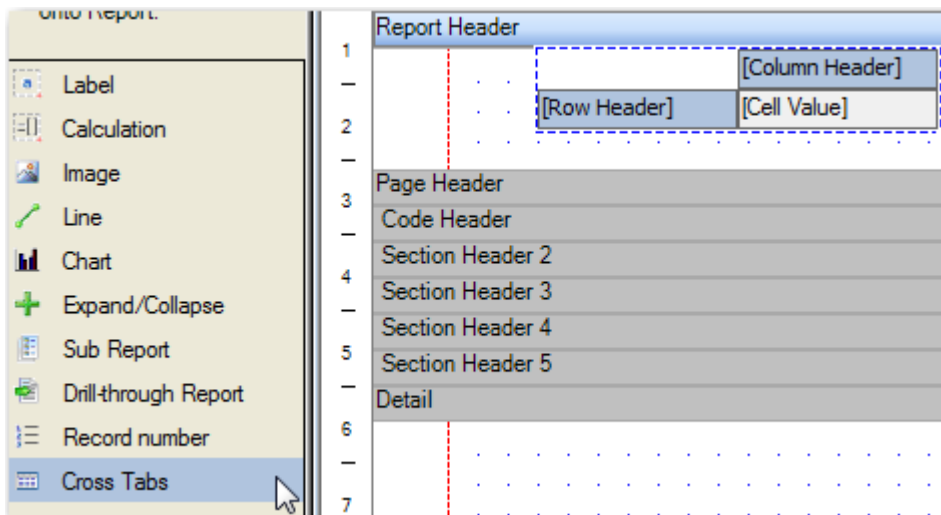
Create a Cross Tab Query Report

A cross tab query is a matrix where the column headings come from the values in a field. Consider the example where you want to display a list of your top 5 customers across the page based on YTD sales.

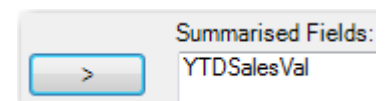
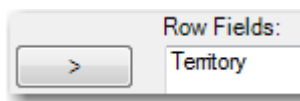
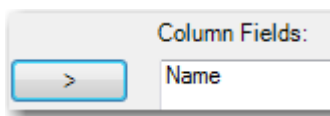
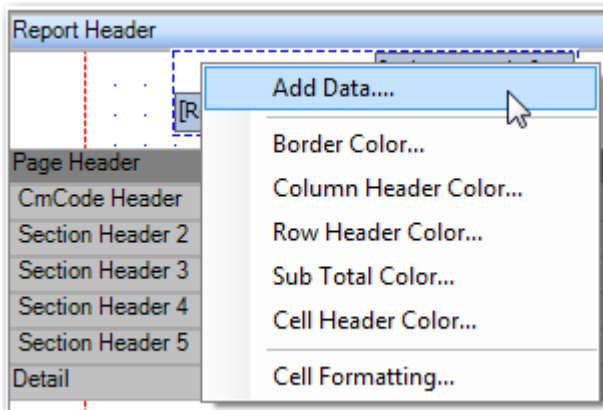
	Home Stores	Abel Sound Systems Pty Ltd	Lanes Department Store	Ace Kitchens Pty Ltd	More Music	Total
NSW	163200.00	86620.01				249820.01
VIC			82812.48			82812.48
SA				79662.40		79662.40
QLD					58883.30	58883.30
Total	163200.00	86620.01	82812.48	79662.40	58883.30	471178.19

1. [Start the Report Designer](#) and [Create a New Report](#).
2. Name it **Cross Tab Example** and select **Copy (F9)**.
3. Select the [SQL Tool](#) button and enter the SQL.

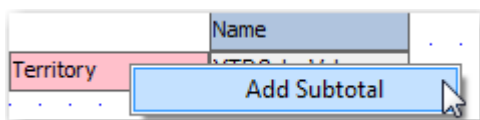

```
SELECT TOP 5 *
FROM ODBC_CUSTMAST
ORDER BY YTDSalesVal DESC
```
4. Make room in the Report Header and drag the [Cross Tab](#) Control on to the report.



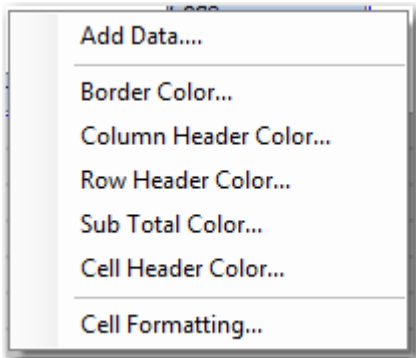
5. **Add Data** to the Cross Tab control using the context menu. Add **Column**, **Row** and **Summarised Fields** using fields **Name**, **Territory** and **YTDSalesVal**.



6. Add Sub-Totals Row and column sub-totals can be added using the [context menu](#). Click on **Territory** and **Name** and **Add Subtotal**.



7. **Formatting** You can change border colour, font and apply other formatting using the [context menu](#).



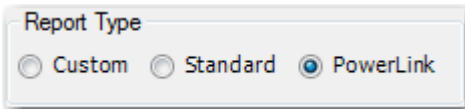
8. When you are finished, press the [Preview](#) button to display to the screen.
9. **Cross Tab Query Using TRANSFORM Statement** If you need more control over the output you can use the TRANSFORM statement.

```
TRANSFORM Sum(YTDSalesVal) As SumYTDSales
SELECT Territory, Sum(YTDSalesVal) As TotalYTDSales
FROM ODBC_CUSTMAST
GROUP BY Territory
PIVOT Name
```

Convert a PowerLink Report to ClearView

In this tutorial we convert a PowerLink report to ClearView. After converting a report you will may need to modify the SQL as not all features are supported.

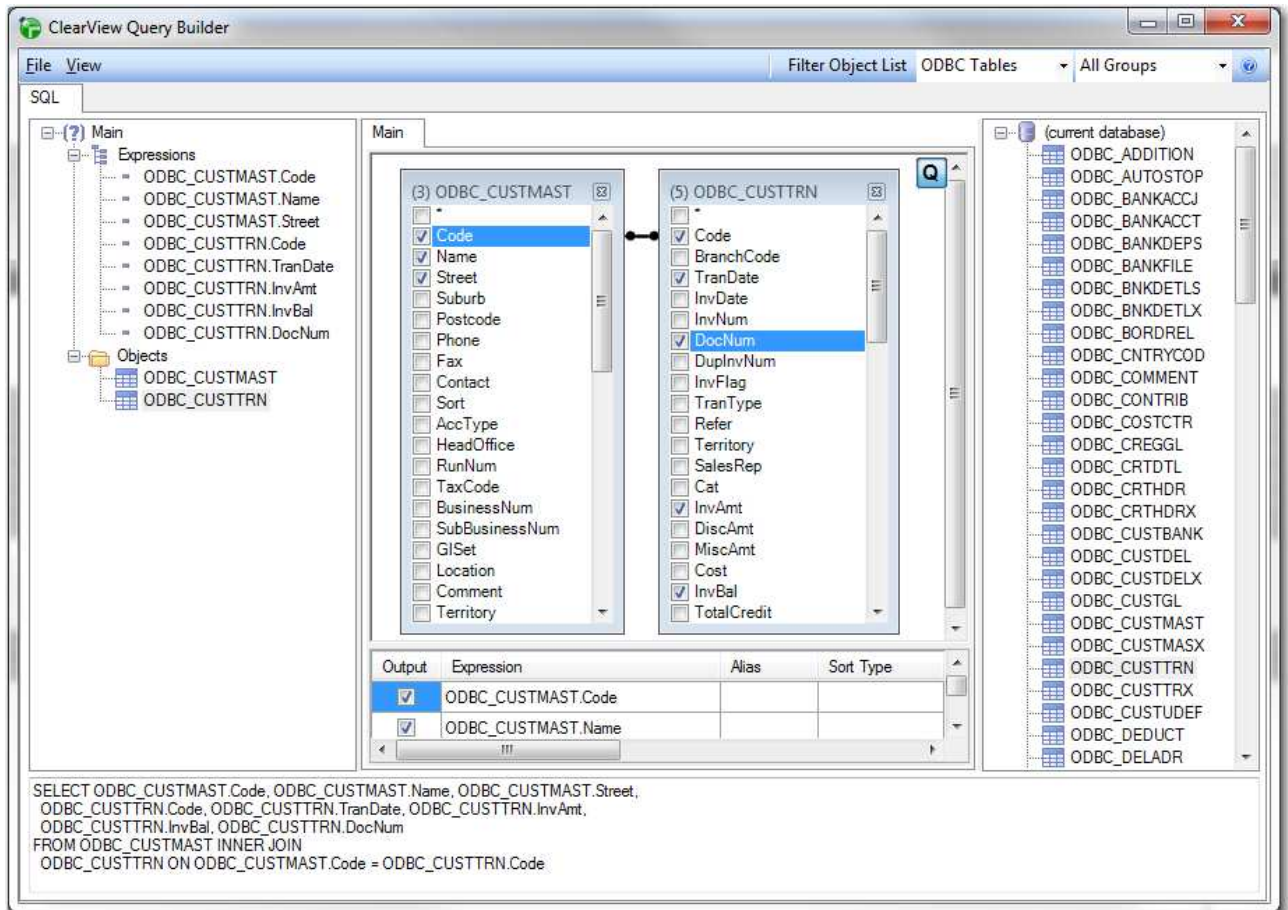
1. [Start the Report Designer](#) and [Copy a Standard Report](#) by selecting **PowerLink** for the **Report Type** and select the **HDM DIC Errors** report.



2. **Conversion Errors** Any Errors during conversion will be displayed. Press **OK** to accept.

Create a Query Using the Query Builder

1. [Start the Report Designer](#) and [Create a New Report](#).
2. Select the [SQL Tool](#) button.
3. Open the Query Builder by selecting **Build SQL (F8)**.
4. Select ODBC Tables from the **Filter Object List** to show only ODBC tables.
5. Drag the ODBC_CUSTMAST and ODBC_CUSTTRN from the **Current Database** list into the **Main** working area.
6. Select fields you want from each table.
7. Select the common field in each table which is used to join the tables. In this example Code is used. Click on the Code field in ODBC_CUSTMAST and drag over to the Code field in ODBC_CUSTTRN. A line joining the two table should appear.
8. **Close** and select **Yes** when prompted to paste the SQL back into the Report Designer.

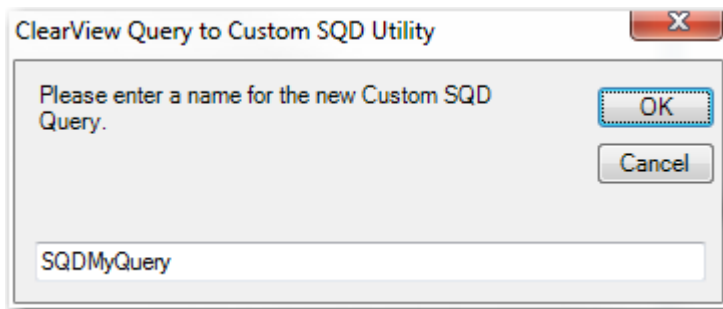


Create a Saved Query Definition (SQD)

Saved Query Definitions or an SQD is a great way of reusing a query that you have written in multiple reports. It is also a good way of speeding up reports. SQD is also commonly known as a sub-query.

The following example shows you how to create an SQD name **SQDMyQuery** from the internal ClearView query **PLQRY_BIEnquiryCustomerOverdueInvoices** but you can also manually create an SQD using any SQL by creating a new report with a name starting with SQD.

1. [Start the Report Designer](#) and [Create a New Report](#).
2. Select the [SQL Tool](#) button.
3. Open the Query Builder by selecting **Build SQL (F8)**.
4. Select **PowerLink Queries** from the **Filter Object List** to show only internal queries which are not normally visible to users.
5. Drag the **PLQRY_BIEnquiryCustomerOverdueInvoices** from the **Current Database** list into the **Main** working area.
6. **Close** and select **Yes** when prompted to paste the SQL back into the Report Designer.
7. Highlight the word **PLQRY_BIEnquiryCustomerOverdueInvoices** in the SQL using your cursor and select **Custom Query (F5)**.
8. Enter a **Name** for your SQD but make sure it begins with the letters SQD and press **OK**.



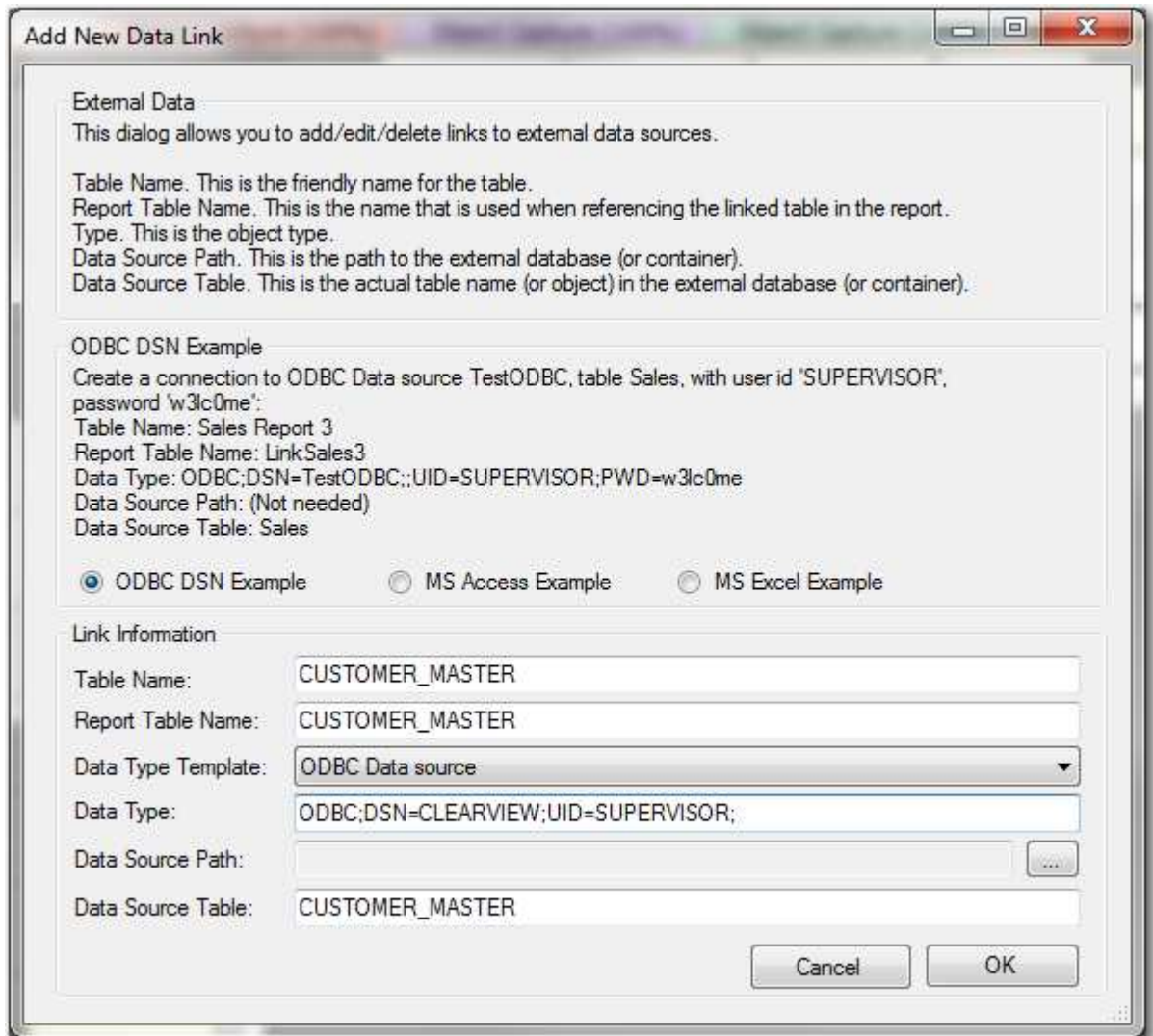
9. The SQD named **SQDMyQuery** has been created and is ready for use in a report. You can also edit the SQL by [opening the report](#) and selecting the [SQL Tool](#) button.

Create an Report using External Data

External Data Sources can be referenced in your SQL to create reports using data in another application. That is, the ClearView Report Designer can be used as a reporting tool for virtually any application which can be opened using a connection string.

The following example shows you how to create an External Data Source to the Customer Master File in another Attaché company with a DSN "CLEARVIEW".

1. [Start the Report Designer](#) and [Create a New Report](#).
2. Select the [SQL Tool](#) button.
3. Open the External Data Source Options by selecting **External Data (F12)**.
4. Select **Add Link**.
5. Enter **CUSTOMER_MASTER** for **Table Name**, **Report Table Name** and **Data Source Table**.
6. Select **ODBC Data Source** as the **Data Type Template**.
7. Enter **ODBC;DSN=CLEARVIEW;UID=SUPERVISOR;pwd=;** as the connection string in the **Data Type** field. In this example I am using an Attache ODBC Driver DSN called CLEARVIEW which I have previously setup.
8. Press **OK** to save.
9. Press **Connect**. You will be automatically connected to this data source when you login in future.
10. **Close** to return to the Report Designer.
11. A link to the external table named **EXTCUSTOMER_MASTER** has been created and is ready for use in a [new report](#).

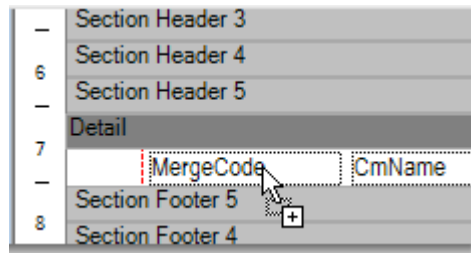
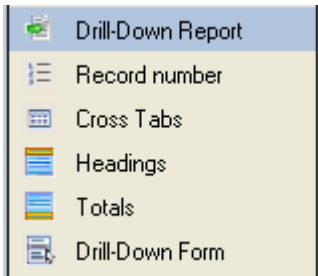


Create a Drill-Down Report

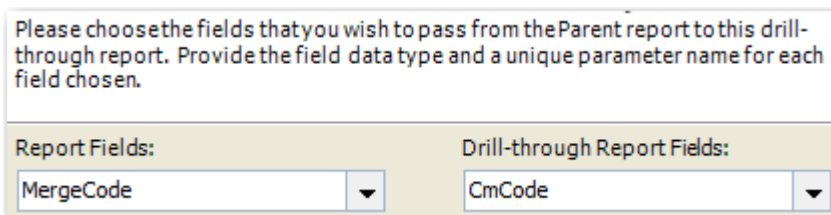
A drill-through or drill-down report allow you to interact with a report when it is previewed to the screen by clicking on a field on the report and opening another report.

For example you can have a customer list and then add a drill-through report to open up a report which shows the customer details.

1. [Start the Report Designer](#) and [Copy a Standard Report](#) by selecting **Standard** for the **Report Type** and select the **Customer Aged Trial Balance** report.
2. Name it **Customer Aged Trial Balance Drill Down** and select **Copy (F9)**.
3. Drag the **Drill-Down Report** tool from the [Tools](#) window onto the **MergeCode** field which will be the field that we want to enable drill-down for.



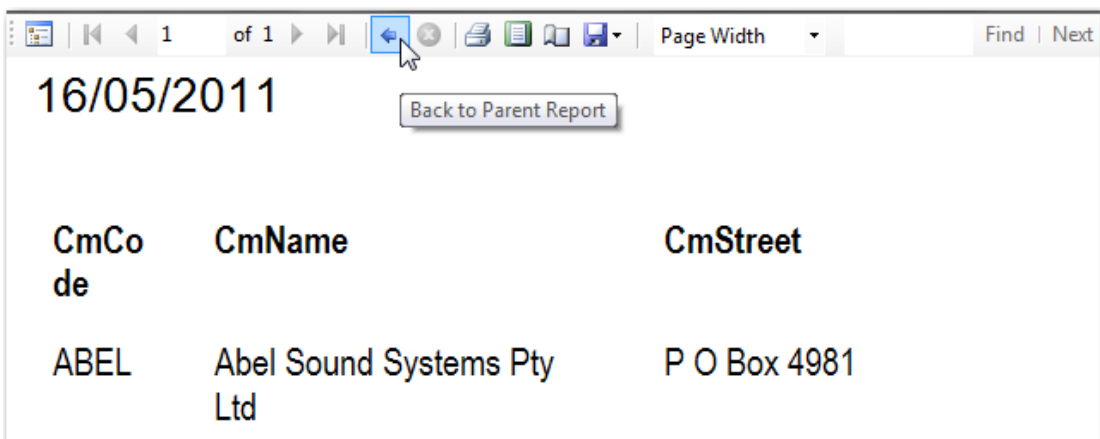
4. The **Drill-Down Report Wizard** will open and prompt you for a **Report Name**. Enter **Customer Details** and press **Next**.
5. Continue through the wizard answering each question. See [Create a New Report Using the Wizard](#) if you are unsure of any step. When you get to the Report Fields part, link **MergeCode** to **CmCode** (which must be one of the fields that you include).



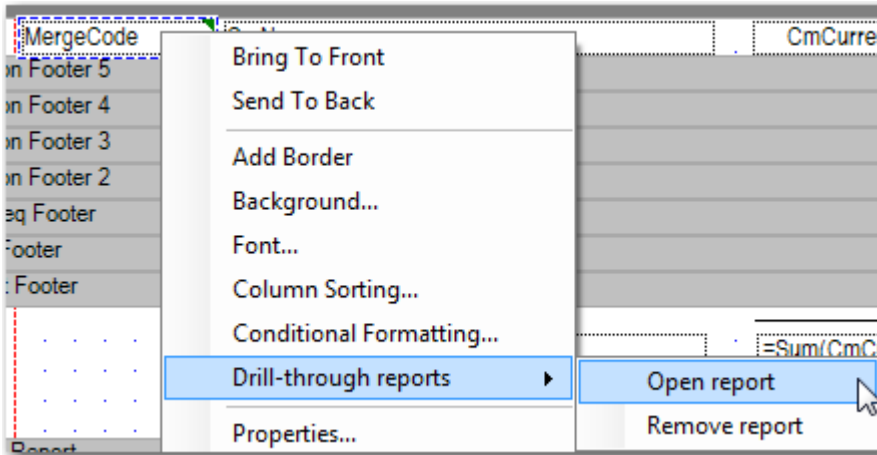
6. When you are finished, press the [Preview](#) button to display to the screen. You will notice that the **Code** field now appears as a link. Click on it to open the linked drill-down report.

Code	Name
ABEL	Abel Sound Systems Pty Ltd
ACE	Ace Kitchens Pty Ltd
HOMEHO	Home Stores Head Office
LANE	Lanes Department Store

7. Press the [Back](#) button to navigate back to the main report.



- You can modify the format of the drill-through report using the context menu or by [opening](#) the report in design mode.



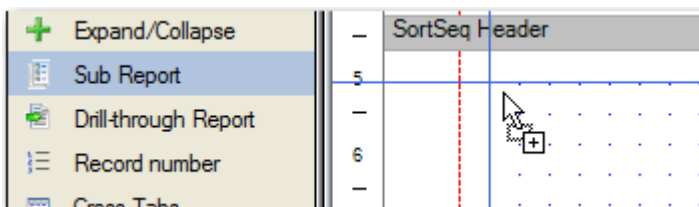
TIP: Due to a design limitation you must create a new report when add a drill-down report to an existing report. If you already have a report that you want to link, you can create a dummy report using the Drill-Down Report Wizard and then relace it with your report. Thiswill require using the same SQL which is best done using an [SQD](#).

Create a Report with a Sub-Report

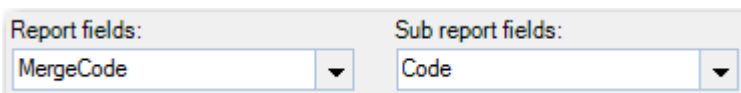
You can create reports with a report within in (called a sub-report). Sub-Reports are useful for complex layouts which are not tabular or columnar in nature. Almost all standard ClearView reports are simple and display data in columns with a page headings. If you require a more complex format then a sub-report may be required.

The following example shows you how to add a 2D-Column chart showing aged balances for each customer on a copy of the **Customer Aged Trial Balance** report.

- [Start the Report Designer](#) and [Copy a Standard Report](#) by selecting **Standard** for the **Report Type** and select the **Customer Aged Trial Balance** report.
- Name it **Customer Aged Trial Balance Sub Report** and select **Copy (F9)**.
- Drag the **Sub Report Report** tool from the [Tools](#) window onto the **SortSeq Header** section (you may need to make some room).



- The **Sub Report Wizard** will open. Select **Create from Existing Report** and add the **Customer Sales** report which you created in section [Create a New Report "From Scratch"](#).
- Link Fields** Select the fields which link the main report and your sub-report.



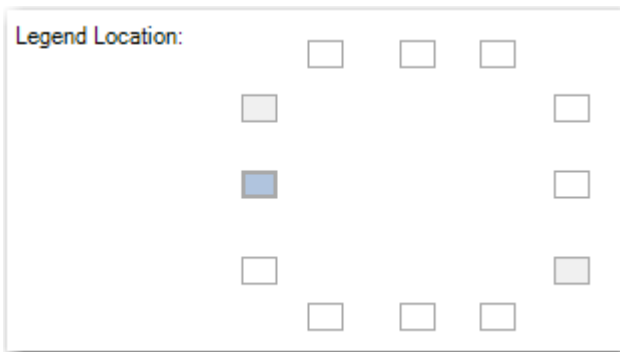
- When you are finished, press the [Preview](#) button to display to the screen. You will notice that the **Customer Sales** report now prints at the top of each section.

Add a Chart to a Report

You can add a chart to the header or footer of a report.

The following example shows you how to add a 2D-Column chart showing aged balances for each customer on a copy of the **Customer Aged Trial Balance** report.

1. [Start the Report Designer](#) and [Copy a Standard Report](#) by selecting **Standard** for the **Report Type** and select the **Customer Aged Trial Balance** report.
2. Name it **Customer Aged Trial Balance Chart** and select **Copy (F9)**.
3. Drag the **Chart** tool from the [Tools](#) window onto the **SortSeq Header** (customer code) section of the report. Before dragging it on to the report make room in the section.
4. The **Chart Wizard** will open and allow you to customise the report. Without changing any settings the Wizard will try and render a report automatically using a **2D Chart**, but this is rarely how you will want it to appear in practice.
5. **Legend** Move the Legend Location to the Left.



6. **Labels** Change the Chart Title X-Axis and Y-Axis to more suitable values.

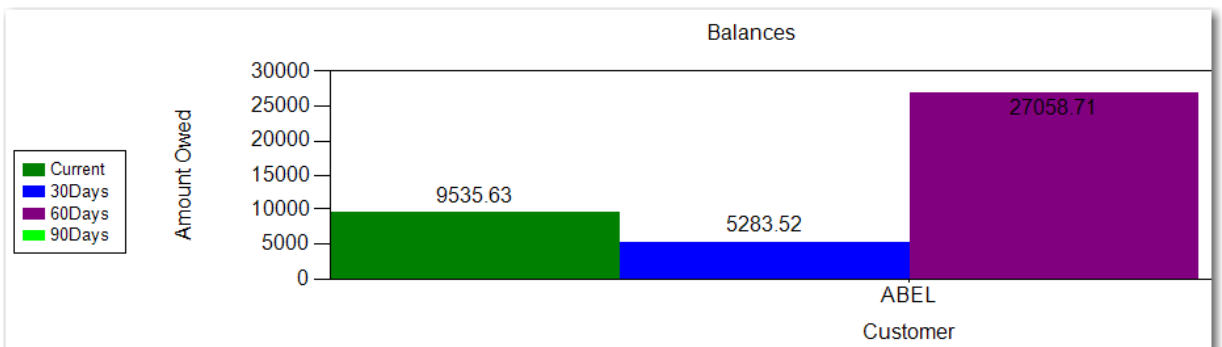
Chart Title:	Balances
X-axis Title:	Customer
Y-axis Title:	Amount Owed

7. **Data Values** The orders that the aged balances appear are random and need to re-ordered to make sense. Some can be removed altogether. Use **Remove** to remove them and then **Add** them.

Values:		Add...	Remove
CmCurrent			
CmPeriod1			
CmPeriod2			
CmPeriod3		Edit...	



- When you are finished, resize the chart to make the most of the space and press the [Preview](#) button to display to the screen.



- Edit Properties** If there is an error rendering the chart then you will need to add the chart again or edit the properties of the chart. The wizard simply builds the expression which is passed to the charting sub-system, but the properties are easy to edit. Paste the following into the properties of your chart if you are having trouble.

```
=CHART (TITLE=Balances;TYPE=Column;SUBTYPE=Plain;
XGROUPS=MergeCode;
YDATA=CmCurrent:CmPeriod1:CmPeriod2:CmPeriod3;
YDATALABELS=CmCurrent:CmPeriod1:CmPeriod2:CmPeriod3;
XTITLE=Customer;
YTITLE=Amount Owed;
LEGENDS=Current:30Days:60Days:90Days;
LEGENDPOSITION=LeftCenter;
PALETTE=Default;PLOTAREA=White;CHARTAREA=White;)
```

Add Column Sorting to a Report

You can add a column sorting to a report which is designed to be viewed on the screen.

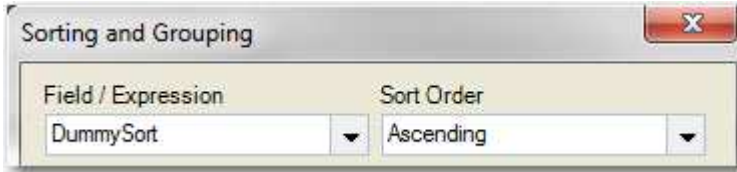
The following example shows you how to convert a copy of the **Customer Aged Trial Balance** report into a column sortable report for the screen.

This is a tricky report because it is currently sorted using a field called SortSeq which is variable. I want to replace this with a dummy sort level so that all the records are grouped together.

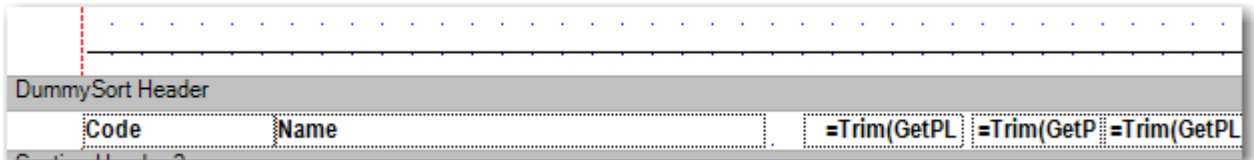
- [Start the Report Designer](#) and [Copy a Standard Report](#) by selecting **Standard** for the **Report Type** and select the **Customer Aged Trial Balance** report.
- Name it **Customer Aged Trial Balance Column Sortable** and select **Copy (F9)**.
- Select the [SQL Tool](#) button. Add **“ZZZZ” As DummySort**, to the SQL as shown below but do not change anything else.

```
SELECT
"ZZZZ" As DummySort,
CmCode As MergeCode,
```

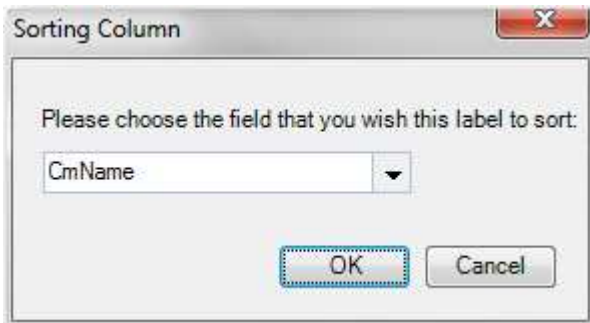
- Using the [Sorting and Grouping](#) button change the sortin to use the **DummySort** field.




- Move the column headings from the **Page Header** into the **DummySort Header** section. Note: You can do this using the [Object Selector](#) and do it with one action.



- Select the **Name** column heading and select the [Coulmn Sorting](#) button and assign the column to **CmName**.



- When you are finished press the [Preview](#) button to display to the screen. You will notice the column sorting arrows appear next to the column heading.

Code	Name 	Current
ABEL	Abel Sound Systems Pty Ltd	9535.63
ACE	Ace Kitchens Pty Ltd	0.00
HOMEHO	Home Stores Head Office	50579.10

Using a Report Parameter in Saved Query Definition (SQD)

Saved Query Definitions or an SQD is a great way of reusing a query that you have written in multiple reports. It is also a good way of speeding up reports. SQD is also commonly known as a sub-query.

Sometimes an SQD is also used to create complex reports which would not otherwise be possible or would be too slow.

For example, if you wanted a sales report which grouped sales values for each product within a date range, this could take a long time to run unless you used an SQD.

The following steps show you how to create SQDPRODSALES which returns product code and the total sales for the product in a date range which will be passed by the main report.

1. [Start the Report Designer](#) and [Create a New Report](#) called **SQDPRODSALES**.
2. Select the [SQL Tool](#) button.
3. Enter the following SQL, and press Save. Refer to the ClearView SQL and Function Reference for more information about the USEPARAMETER function.

```
SELECT OdCode As Product, Sum(OdLineTot-OdTaxAmt) As SalesValue WHERE  
(UseParameter("RngDate1",True) AND  
AccessDate(OdDocDate)>=UseParameter("FstDate1",#01/01/1900#) AND  
AccessDate(OdDocDate)<=UseParameter("LstDate1",#01/01/2099#)) OR Not  
(UseParameter("RngDate1",True) GROUP BY OdCode
```

4. The SQD named **SQDPRODSALES** has been created and is ready for use in a report.

The following steps show you how to create a report SALES BY PRODUCT which returns product code and the total sales for the product in a date range which will be passed by the main report.

1. Using the [Report Wizard](#), create a new report named **SALES BY PRODUCT**. When prompted, select the Custom Query **SQDPRODSALES**. Do not add any ranges to the report, as these will be added afterwards.



2. Open the report using the Report Designer (you can do this by selecting the option at the last wizard step).



3. Select the [SQL Tool](#) button and Select the Report Parameters tab and select (Date Range) from the Add Range Parameter... drop down list. Note that the Name for the parameters match those used in the SQD.

Data Source SQL				
Report Parameters				
	Index	Name	Type	Description
	1	RngDate1	Bit	Date Value Range
	2	FstDate1	DateTime	First Date Value
	3	LstDate1	DateTime	Last Date Value

4. Press Save and [Preview](#) the Report.

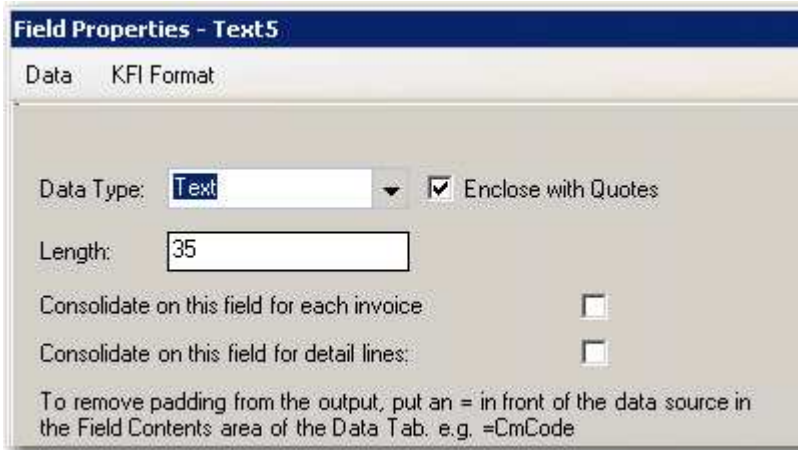
Create a KFI Report Using the Wizard

This section will show you how to create a very simple KFI report using the Report Wizard using the ODBC Customer Masterfile. The process is very similar to creating a normal [Wizard report](#).

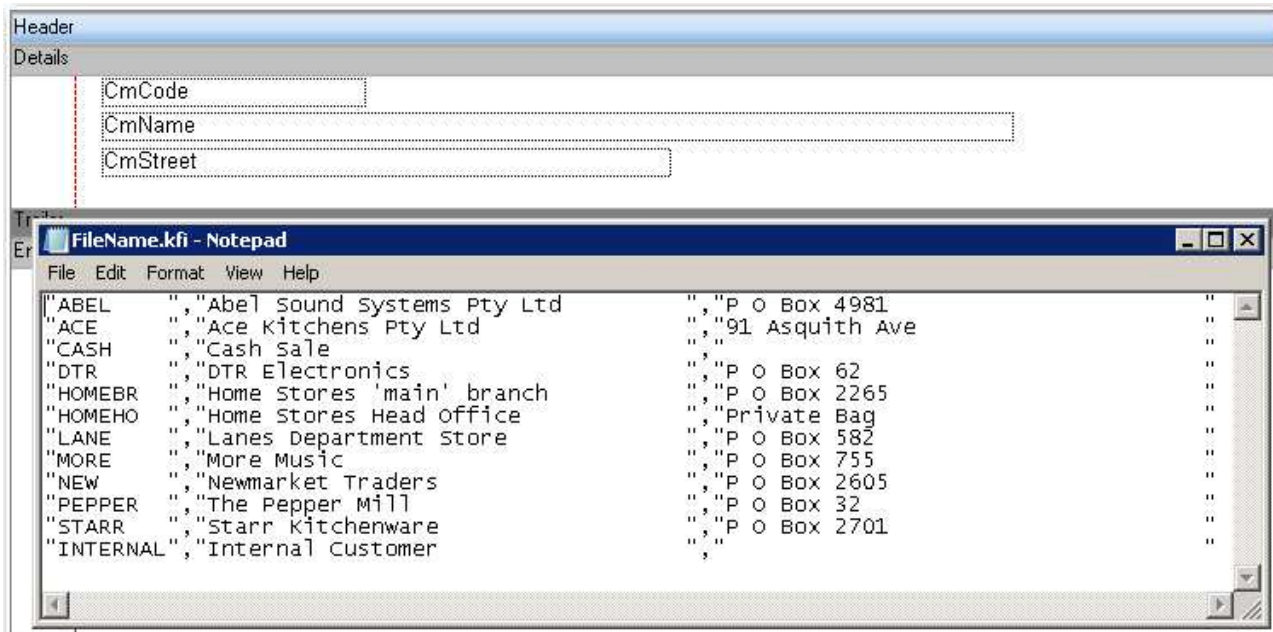
1. [Start the Report Designer](#) and [Create a New Report](#). Enter a **Report Name**, select **New** and select **Wizard** button.
2. **Select Report Type** Select **KFI Report** and press **Next**. You can create a normal **Report** or a **Label Report**.
3. **Select Report Data Source** Select **ODBC_CUSTMAST** and press **Next**.
4. **Select Fields** Select which fields you want on the report and press **Next**.
5. **Select Sorting and Grouping** Select to sort by **Code** in **Ascending** order.
6. **Select Report Ranges** Add a report range for the Customer **Code**.
7. **Press OK** to open the report in design mode to make further changes.

You may find the following tips helpful when creating KFI reports:

- **Wizard.** Always start with the Report Wizard when designing KFI reports. This will do the hard work and allow you to tweak to get the desired output.
- **Field Properties.** The field Data Type, Length and Format are controlled via the Field Properties.



- **Padding.** Fields are padded with spaces by default to ensure existing data is overwritten. To remove padding, prefix with “=”.
- **Field Output Sequence.** The order of fields in the output is Top-Left to Bottom-Right, so be careful when positioning fields. When in doubt, place fields on top of each other.



- **Special Keys.** You can add <F9>, <ENTER> and other special keys using the KFI toolbar.
- **Output File Control.** The KFI files can be controlled using the [KFI Properties](#) tab in the [Report Properties](#).

Create a Report with Page Headers and Footers

Reports with page headers and footers are similar to a normal report; however have a limitation where expressions in a header or footer can refer to only one report item. This means that you need to only refer to fields which are defined in your SQL. You can work around this limitation by adding fields to the SQL and then adding a control to the report Detail section.

Also if you want to add data fields or expressions with data fields you need to also add them to the detail section.

For example, to add a report control with an expression "=SUM (CMCURRENT+CMPERIOD1)" in footer you have to:

1. Add expression "CMCURRENT+CMPERIOD1 AS CMTOT" to the SQL.
2. Add CMTOT to Detail section
3. A control with expression "=SUM(CMTOT)" to page footer
4. Modify CmTot properties and set Height=0 and Width if you do not want the control to be displayed in the detail section on the report.

Create a Report for Export to Excel

Any report can be exported to Microsoft Excel; however the design of the report will make a big difference in how well it exports. Even the built in ClearView reports were designed for printing rather than export, so do not expect perfect exports. If you do want a report to export seamlessly to Excel, then you should create your own or customise an existing report keeping the following tips in mind:

- **Control Alignment.** Make sure fields line up exactly. Excel will add extra "gap" columns for any fields which do not exactly align.
- **Keep it Simple.** Where possible remove totals and any headings which span columns in the detail section of the report. Design an Excel export report like you would design a dashboard gadget.
- **Avoid Overlapping Controls.** Overlapping controls will be detected as multiple rows so always leave a space between the end of a control and the start of the next.

The following example will use the [report created from "scratch"](#) and convert

1. [Start the Report Designer](#) and [Create a New Report](#) with the name **Customer Sales**. Follow the steps in the section [Create a New Report "From Scratch"](#).
2. **Preview Report.** Use the [Preview Tool](#) to print the report to screen.
3. **Export to Excel.** Use the context menu (right click using the mouse) and select the Export | Excel option and save as an Excel document.

Note: If this is not visible you may need to select the Print Layout button in the toolbar (next to the Printer icon).

4. **Open in Excel.** Look at the results by opening the document in Excel.

A good indication of how suitable the report is is by looking at the number of columns in Excel. It is almost impossible to get rid of spacer columns, so the number of Excel columns should be around twice the number of report columns.

Report SQL

View SQL button displays nothing

Issue: When there is a problem with the SQL nothing will display when you press the View SQL button. While an effort is made to trap SQL syntax errors and display them to you, it is not often possible.

Solution: Check the syntax of your SQL and fix. If the SQL is complex, copy it into a text editor for safekeeping, and start removing field names until the View SQL button displays results. The last removed field will be the problematic one. Repeat until you fix all syntax problems.

Printing a Report

Error occurred during local report processing... 'Main Report' is invalid

Issue: You receive an error when printing the report "An error occurred during local report processing. The definition of the report 'Main Report' is invalid".

```
An error occurred during local report processing.  
The definition of the report 'Main Report' is invalid.  
The value of the BorderWidth property for the line 'Lne1' is negative. Negative sizes are not allowed.
```

Cause: There are several causes for this error. The most common cause is that you are using incorrect syntax within a report control.

Solution: Look at the error message for a reference to a report control. In this example, the control is LNE1 and the error relates to the BORDERWIDTH property. Use the control selector to find and fix the offending control.



Error when previewing imported PowerLink report

Issue: You receive an error when printing the report "An error occurred during local report processing. The definition of the report 'Main Report' is invalid" after importing a PowerLink report.

```
An error occurred during local report processing.  
The definition of the report 'Main Report' is invalid.
```

Cause: PowerLink report controls and SQL is not compatible with ClearView.

Solution: Look at the error message for a reference to a report control and fix each one. Before fixing report controls you should check that the SQL works first using the View SQL button. Also, in many cases it may be easier and faster to rewrite the report. If you are unsure you should ask for professional advice.

Fields output in different order than shown in layout on KFI Report

Issue: Fields may appear in a different order to what is shown in the design layout.

Cause: This normally happens if the top position of a control is slightly lower than the control beside it. Controls are processed from top-left to bottom-right and it only takes a control to be 1 pixel lower than the next for the order to be modified.

#ERROR when using a function which has same name as a field

Issue: #ERROR will display on a report when a function is used in a control which has already in the SQL of a report.

Cause: You cannot name SQL fields the same as a built-in function name. For example, there is a function called FORMAT. If you also alias an SQL field (e.g. "NUMBER" AS FORMAT) then you cannot use the FORMATfunction in a control on the report.

Solution: The solution is to avoid using function names in SQL field aliases. Refer to the SQL and Function Reference for a list of function names. When in doubt, prefix your alias names with something unique (e.g. "NUMBER" AS ZFORMAT).